

# Active Archives in the Age of **AI/ML**

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# Introduction

Active archives are a groundbreaking tiered storage solution that is revolutionizing the way organizations access and utilize data. This storage topology provides end users or other IT systems with a common, unified file system that automatically retrieves and places data on the appropriate storage tier. The storage system utilizes several media types, such as SSDs/flash drives, HDDs, cloud storage, and magnetic tape, to ensure that data is always available and accessible. By leveraging this cutting-edge storage solution, businesses can streamline their data management processes and improve operational efficiency.

In recent years, artificial intelligence (AI) and machine learning (ML) have emerged as powerful technologies with the potential to transform organizational operations. However, implementing AI/ML in enterprise use cases can pose significant challenges for many organizations. That is where active archives can help.

This eBook addresses how these technologies impact each other synergistically and the role that active archives can play in the success of AI/ML initiatives against a backdrop of constant data growth. We also look at the essential characteristics organizations should consider when leveraging active archiving to best support AI/ML deployments.

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## RESEARCH OVERVIEW

The data featured in this eBook is derived from a comprehensive primary market research survey commissioned by the Active Archive Alliance and conducted by TechTarget's Enterprise Strategy Group. This multifaceted survey examined various aspects of active archive technology adoption in the market with a focus on AI, encompassing challenges encountered and AI's influence on overall business outcomes.

Particular emphasis was given to the general state of data archiving environments, highlighting the benefits and challenges that shape modern strategies. We also explored how active archiving integrates into modern data archiving practices and its role in determining the success of AI/ML initiatives. Furthermore, the research sought to gain insights into how organizations strategically design their solutions to enable seamless scaling of AI across their broader business landscape.

The survey conducted by Enterprise Strategy Group was an anonymous online study involving 100 participants. Respondents were IT decision-makers and IT professionals responsible for data protection technology decisions, specifically data archiving and long-term retention strategies, for their organization. All participants were based in the United States or Canada.

The organizations represented in the survey are midmarket (500 to 999 employees, 11%) and enterprises (1,000+ employees, 89%) spanning various industry verticals, including, but not limited to, manufacturing, financial services, retail/wholesale, and technology sectors.

The margin of error of a survey of this size is around  $\pm 10$  percentage points at a 95% confidence level. Additionally, due to rounding, the totals in figures and tables within this eBook may not always equal 100%.



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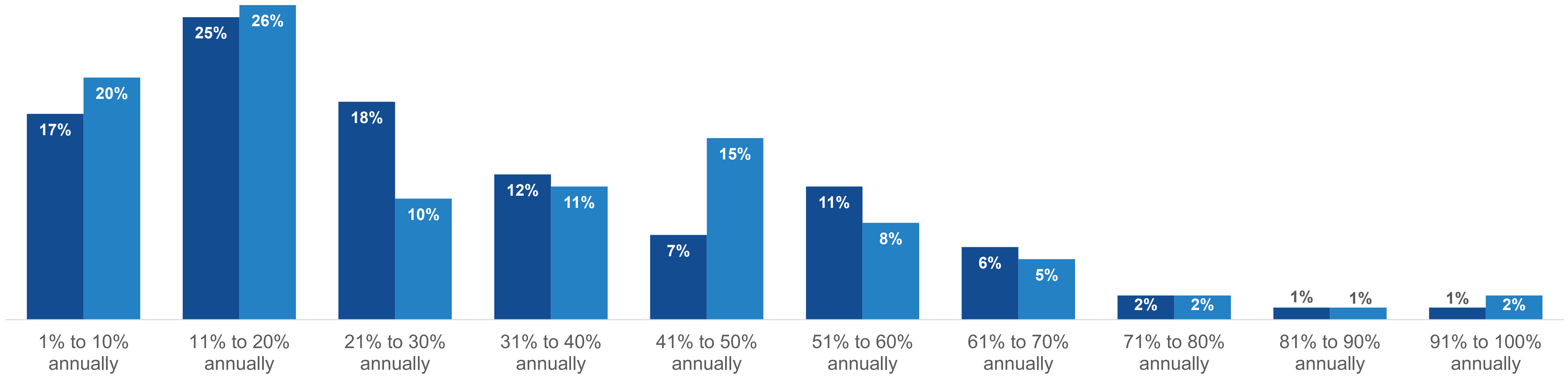
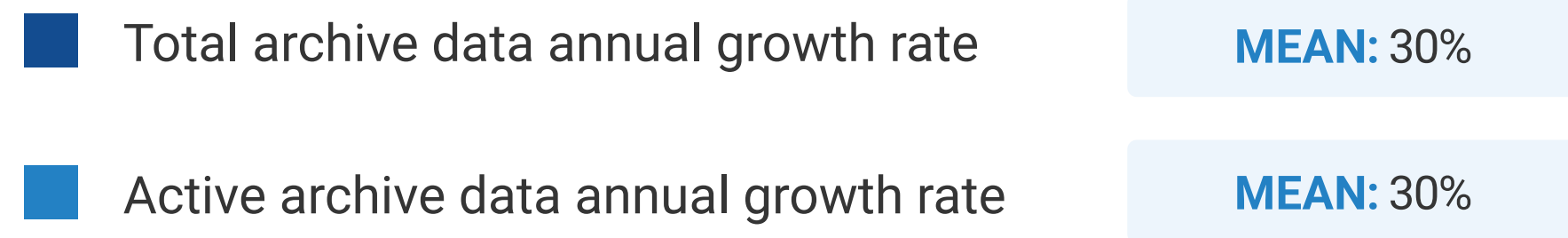
# Active Archiving Landscape



## Archive Data Growth

In today's digital age, data has become the backbone of businesses, and its growth seems unstoppable. The ever-increasing amount of data generated by individuals and organizations has fueled the growth of the digital economy, creating unique opportunities to turn data into valuable assets. Therefore, it is not surprising that active archives are becoming increasingly important in this digital landscape. Active archives are a type of data management system that allows organizations to keep their data accessible and secure. The active archive system is designed to store large amounts of frequently accessed data, making the data easy to retrieve and use. With the exponential growth of data, active archives are growing in lockstep with overall data growth rates and are doubling roughly every 3.5 years. As active archives play a crucial role in storing and managing data, they are becoming increasingly important for businesses of all sizes, as they help organizations optimize their data storage and retrieval processes, reduce costs, and improve their overall efficiency. With the continued growth of data, active archives are expected to become even more critical in the coming years.

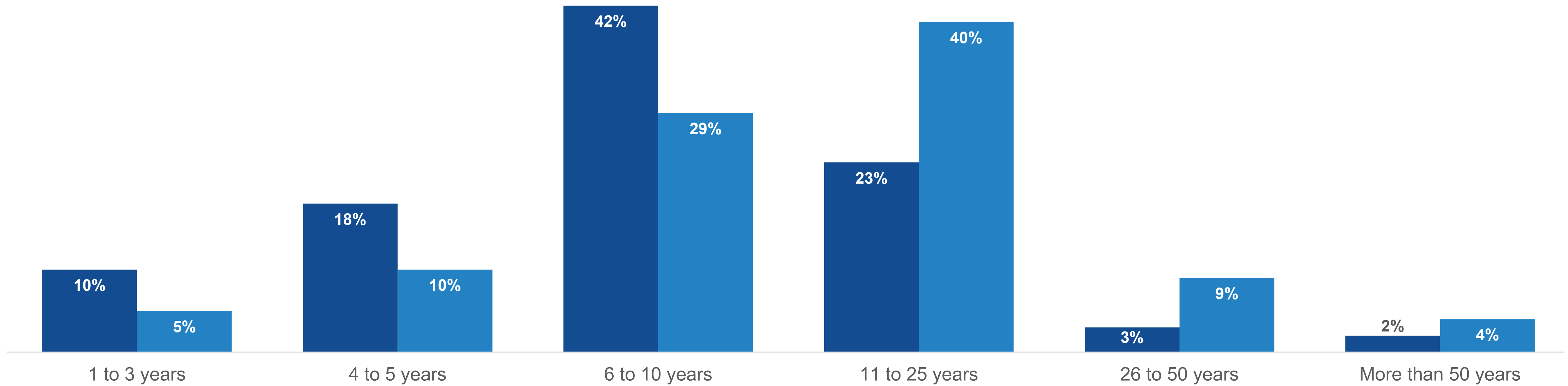
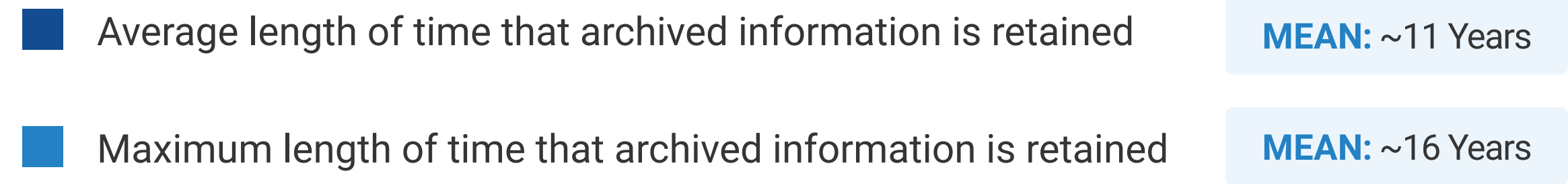
Total Archive and Active Archive Annual Growth



## Data Retention Timespan

While there is a significant amount of data growth overall, the data itself is retained for many years—11 years on average—for a variety of reasons associated with compliance to retention regulations, corporate data governance programs, and business process requirements. This combination of volume, growth, and retention makes it critical to adopt an archiving topology that performs at scale and retrieves data efficiently. On average, data is retained for over a decade.

Average Archive and Maximum Archive Retention Time



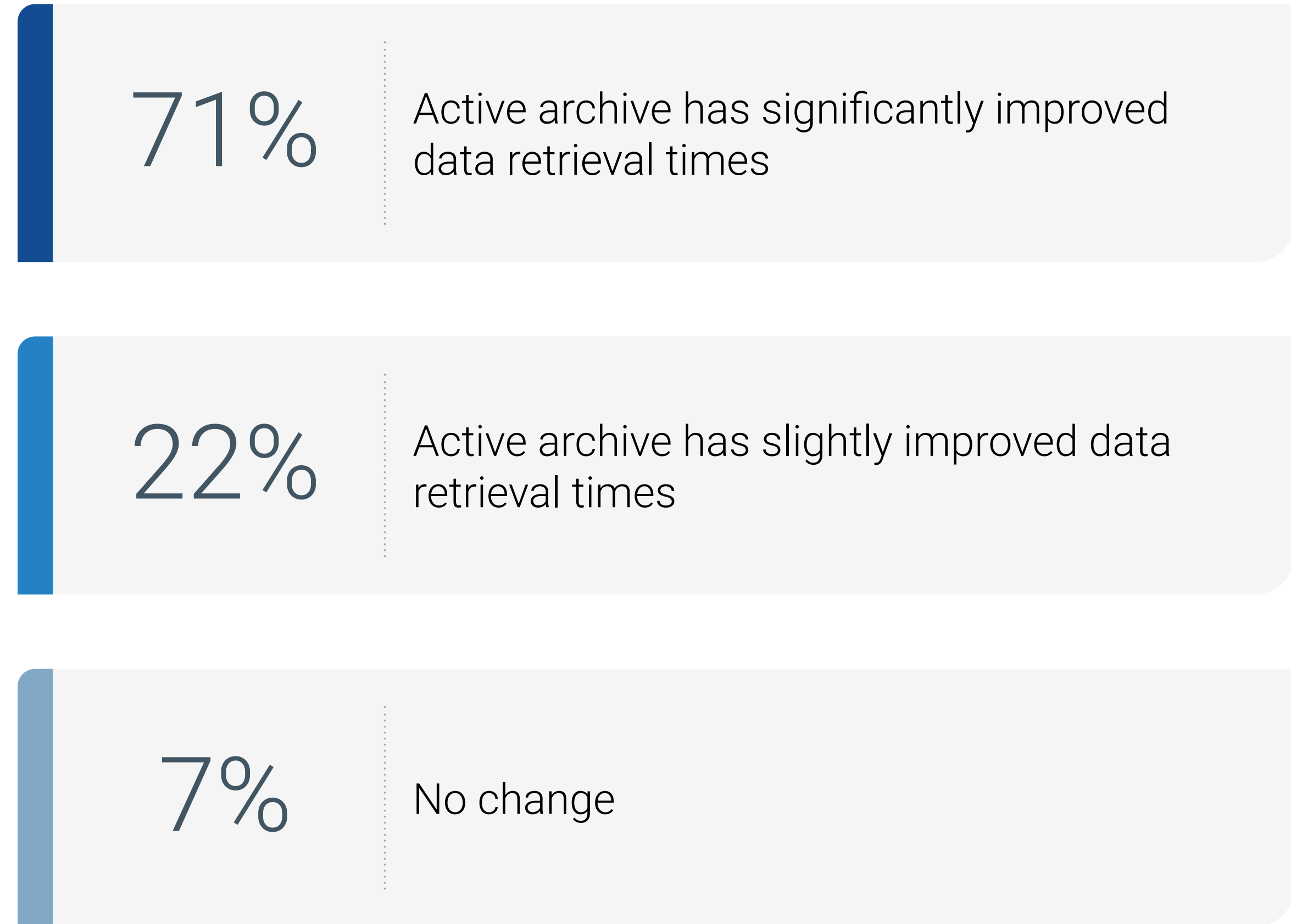




## Active Archives Are Improving Retrieval Times

Time is of the essence. Overall, almost all respondents recognized that active archives have improved retrieval times, with a vast majority recognizing significant improvements. This amounts to a strong market endorsement of one key characteristic defining an active archive versus “static,” traditional archives.

### Impact of Active Archives on Data Retrieval Times







# Active Archiving's Evolving Role and Use Cases



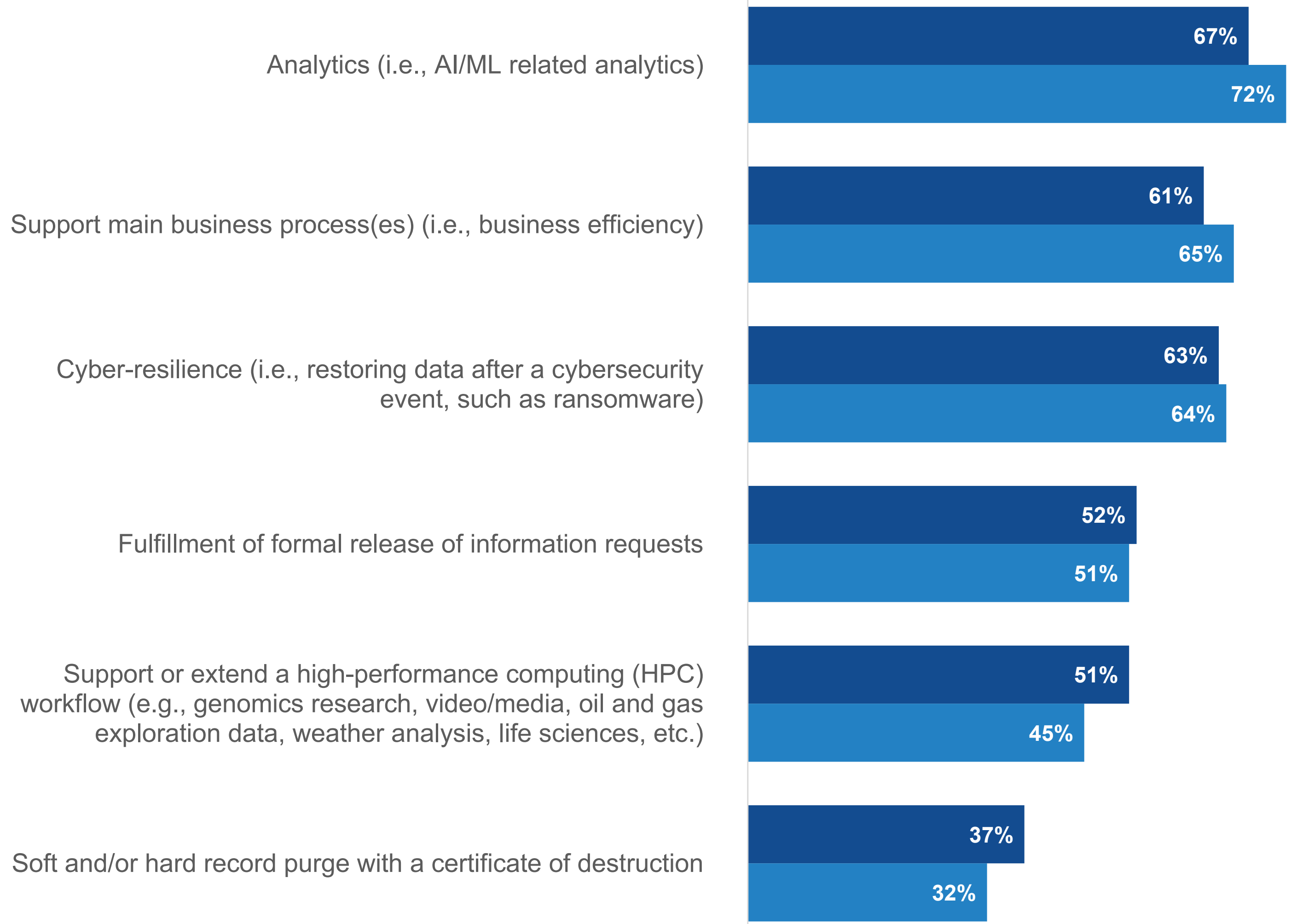
“Support for the top three active archive use cases **has grown directionally.**”

### Key Use Cases: Analytics on the Rise

Enterprise Strategy Group researched active archiving in both 2021 and late 2023, allowing us to see how the market evolved during this period. While most use cases remained generally at the same level, support for the top three active archive use cases has grown directionally. AI/ML-related data analytics stood apart as fueling active archiving deployments. It should also be noted that cyber resilience is surprisingly high on the list as compared with “traditional” use cases—a sign that organizations are leveraging all the tools at their disposal to combat cybercriminals.

#### Active Archive Use Cases

■ 2021    ■ 2023

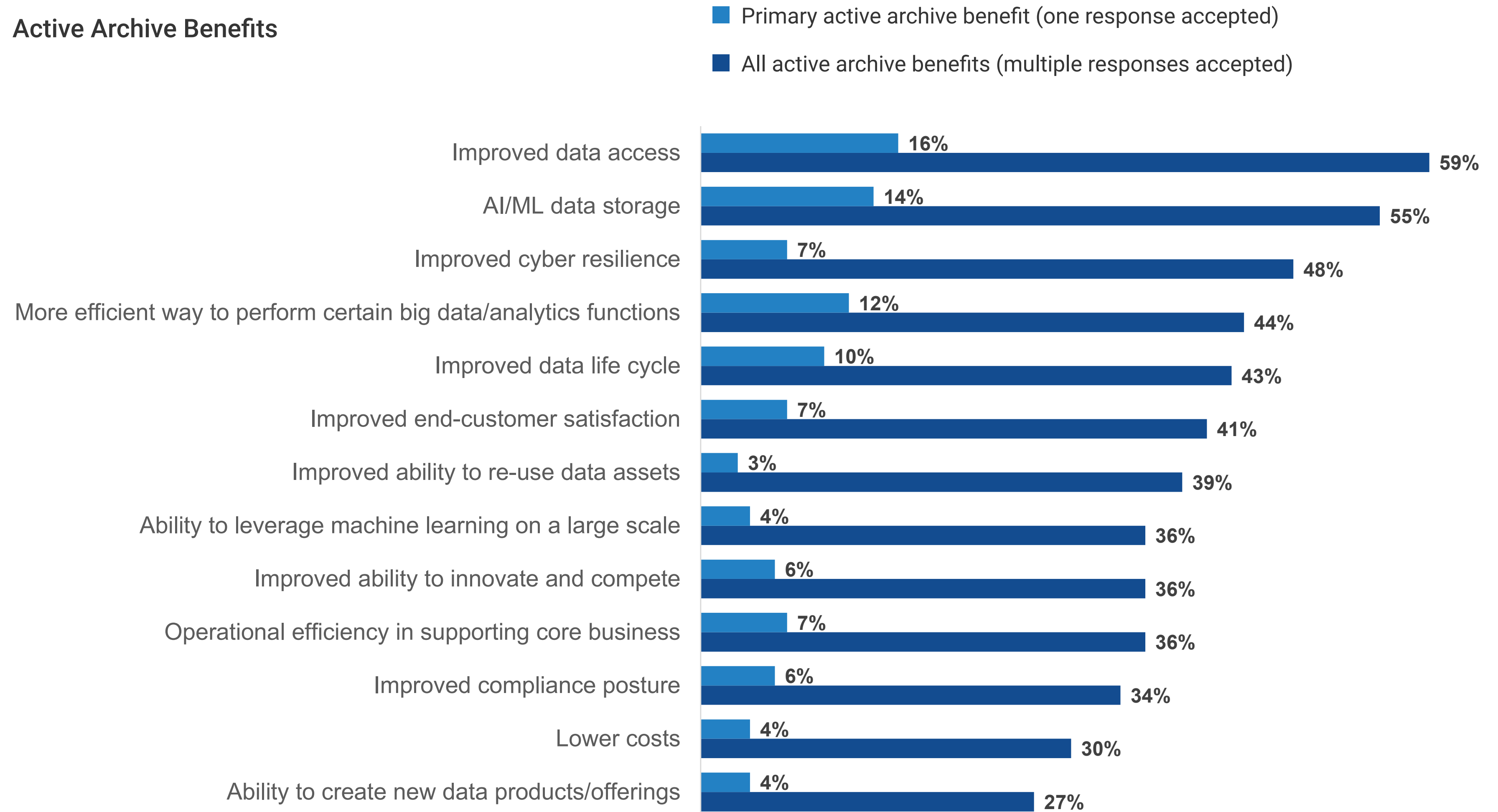




## Improved Data Access Is a Key Benefit of Active Archives

One of the most frequently cited advantages of active archives is the ability to access data more efficiently and effectively. This is not only the most commonly reported benefit, but it is also considered the primary advantage of implementing active archive solutions. It is worth noting that another significant benefit of active archives is their ability to support AI/ML data storage, underscoring the growing synergy between these two technologies. The benefits of active archives are far-reaching and can significantly affect businesses of all sizes. The benefits encompass everything from improved cyber resilience, to an improved ability to compete, to improved customer satisfaction.

### Active Archive Benefits






# Active Archiving and AI/ML



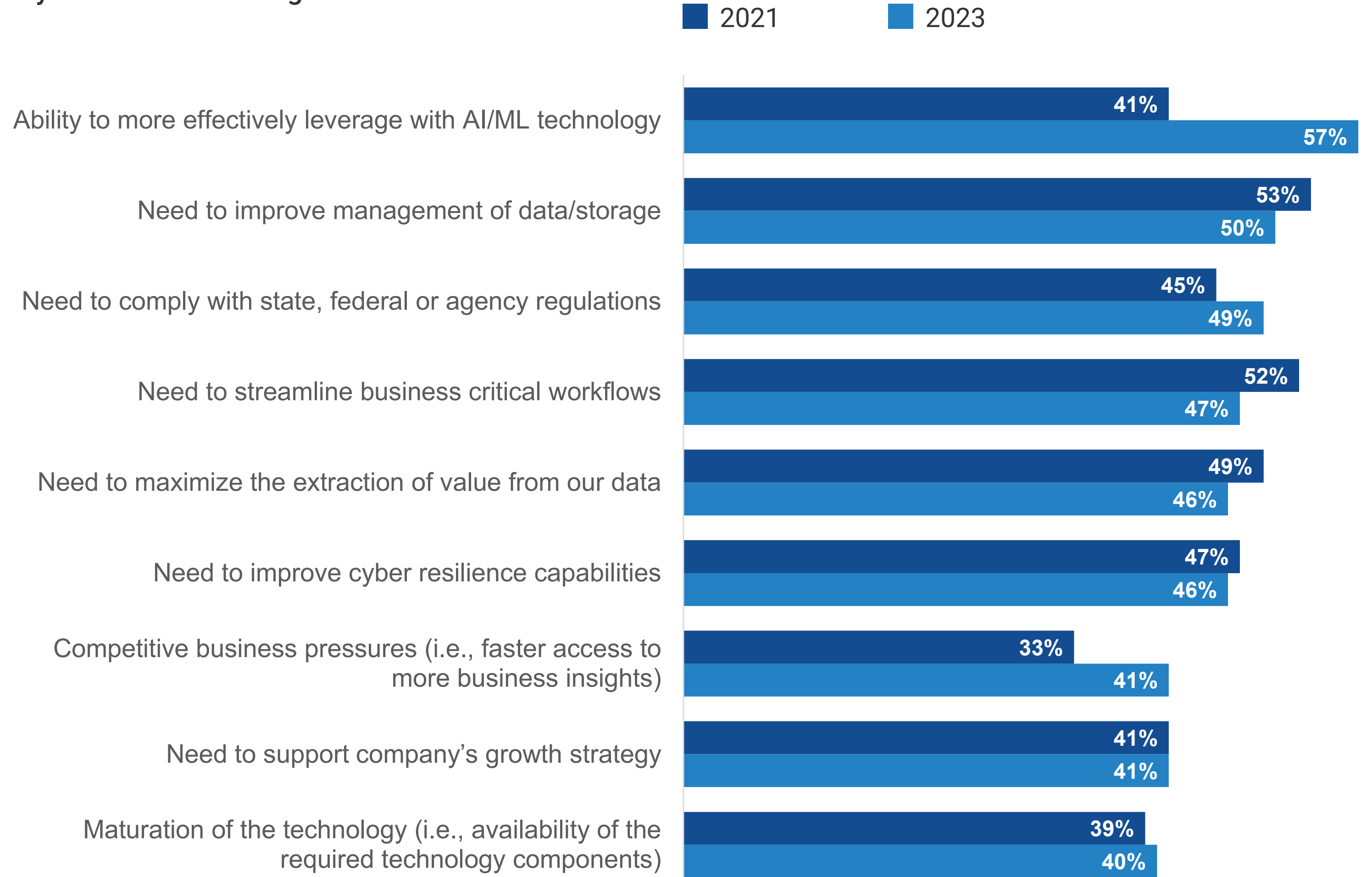




## AI/ML and Active Archiving Are Intertwined

It is evident that AI/ML technology has emerged as the most influential and rapidly advancing technology in recent times. However, when it comes to other key decision factors for building or leveraging an active archive, there appears to be little change between 2021 and 2023. This reaffirms the fact that active archives and AI/ML technology share a synergistic relationship. In other words, the use of active archives can significantly enhance the performance and efficiency of AI/ML systems, while AI/ML can, in turn, provide valuable insights to optimize active archives. This interdependence between the two technologies is expected to drive innovation and transform numerous industries in the coming years.

### Key Factors for Building an Active Archive





“The majority of organizations that have active archive systems in place indicate that their active archives are **very important to the success of their AI/ML initiatives.**”

## Organizations Acknowledge the Importance of Active Archives in AI/ML Initiatives

Need success for AI/ML? Invest in an active archive.

According to our research, the majority of organizations that have active archive systems in place indicate that their active archives are very important to the success of their AI/ML initiatives. This highlights the criticality of investing in active archive systems as a way to ensure the success of AI/ML initiatives in organizations.

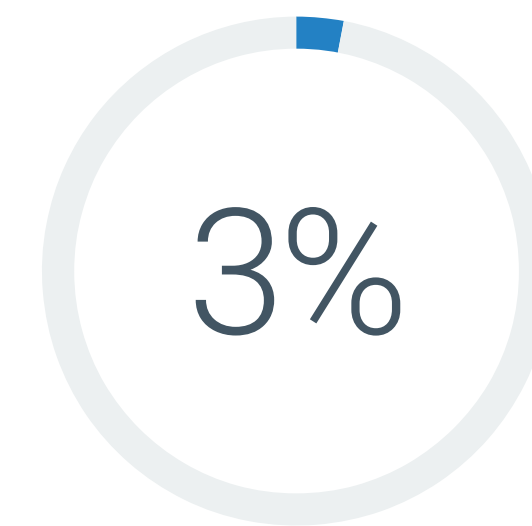
### Active Archive and AI/ML Initiatives



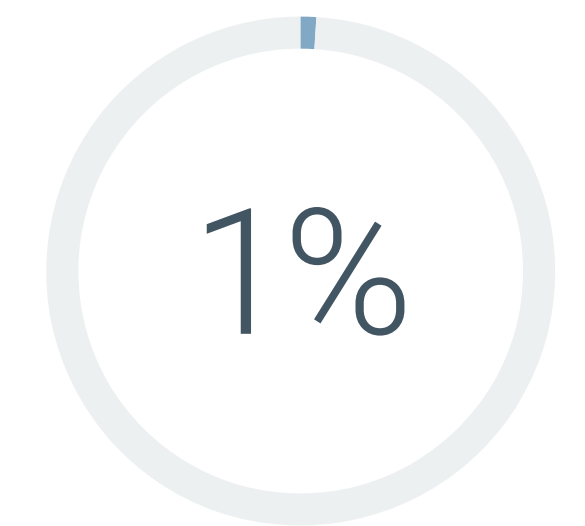
We believe active archives are very important to the success of our AI/ML initiatives



We believe active archives are somewhat important to the success of our AI/ML initiatives



We believe active archives are not very important to the success of our AI/ML initiatives



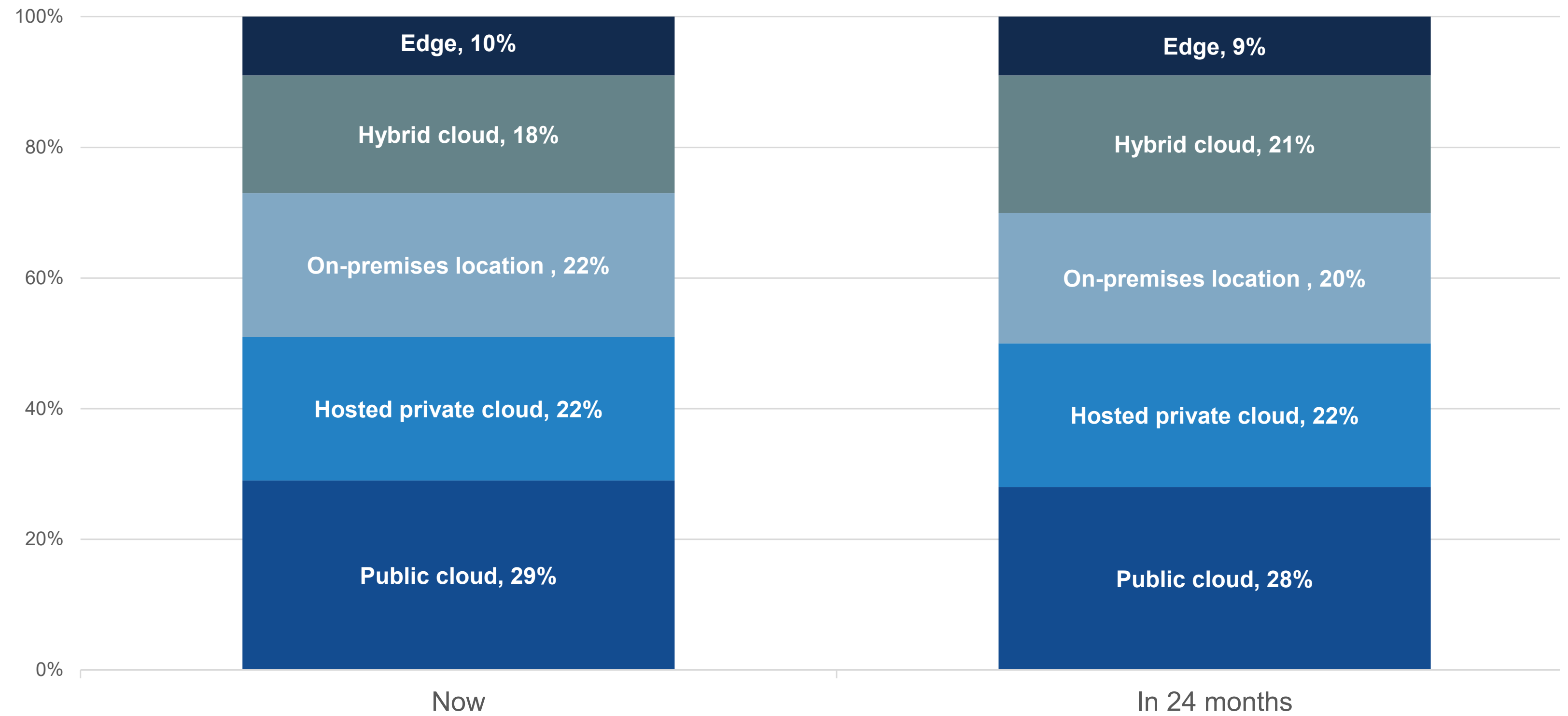
We believe active archives are not important at all to the success of our AI/ML initiatives



## Distribution of Archive Data Used in AI/ML Initiatives Will See Minor Changes

When it comes to establishing the optimal topology for active archives, the distribution of data plays a crucial role. Through our research, we have found that active archive data in the context of AI/ML use is currently very hybrid and distributed. This means that the data is spread out across various locations, such as across different systems or even different geographic regions. Moreover, based on our analysis, we predict that, wherever the data is currently located, it is likely to remain there for at least the next 24 months. This highlights the importance of designing a flexible and scalable active archive system that can efficiently manage and access distributed data.

Active Archive Topology Distribution (Now and in 24 Months)







# Conclusion



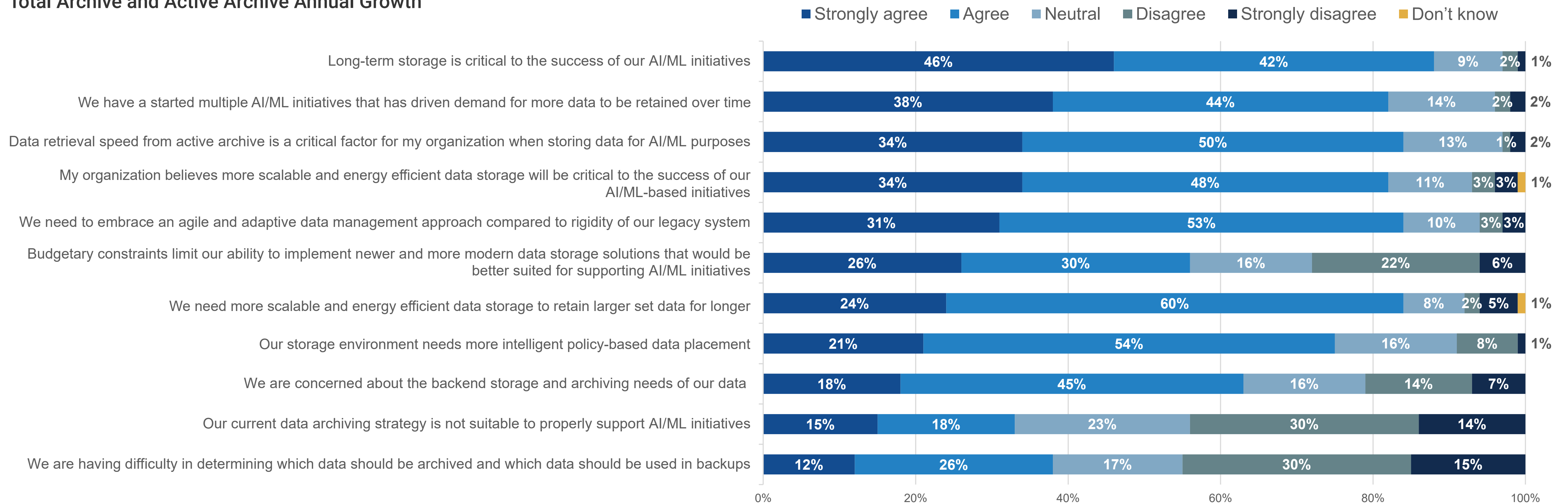
# Connecting the Dots Between Active Archives and AI/ML

Data management is becoming increasingly complex and challenging in today’s digital age. The exponential growth of data is overwhelming traditional storage topologies, making it difficult for organizations to manage and retrieve data efficiently to support AI/ML initiatives. This is where active archives come into play.

Our research indicates that more and more people are recognizing active archives as a critical component for AI/ML deployments. Investing time and effort into adopting these modern technologies is essential against budgetary constraints.

By adopting active archive solutions, IT leaders clearly recognize that they can efficiently manage vast amounts of data, at scale and at low cost, with minimal energy consumption and quick retrieval times. This is crucial for ensuring the success of any business in the digital era, even if many organizations need help with the rigidity of legacy systems today.

## Total Archive and Active Archive Annual Growth







#### ABOUT ACTIVE ARCHIVE ALLIANCE

The Active Archive Alliance serves as a vendor-neutral, trusted source for providing end users with technical expertise and guidance to design and implement modern active archive strategies that solve data growth challenges through intelligent data management. Active archives enable reliable, online, and cost-effective access to data throughout its life and are compatible with flash, disk, tape, optical, or cloud as well as file, block, or object storage systems. They help move data to the appropriate storage tiers to minimize cost while maintaining ease of user accessibility. Members and sponsors include FUJIFILM Recording Media USA, MediQuant, Spectra Logic, Arcitecta, Folio Photonics, IBM, Iron Mountain, Overland Tandberg, PoINT Software & Systems, QStar Technologies, Quantum, SullivanStrickler, Western Digital, and XenData.

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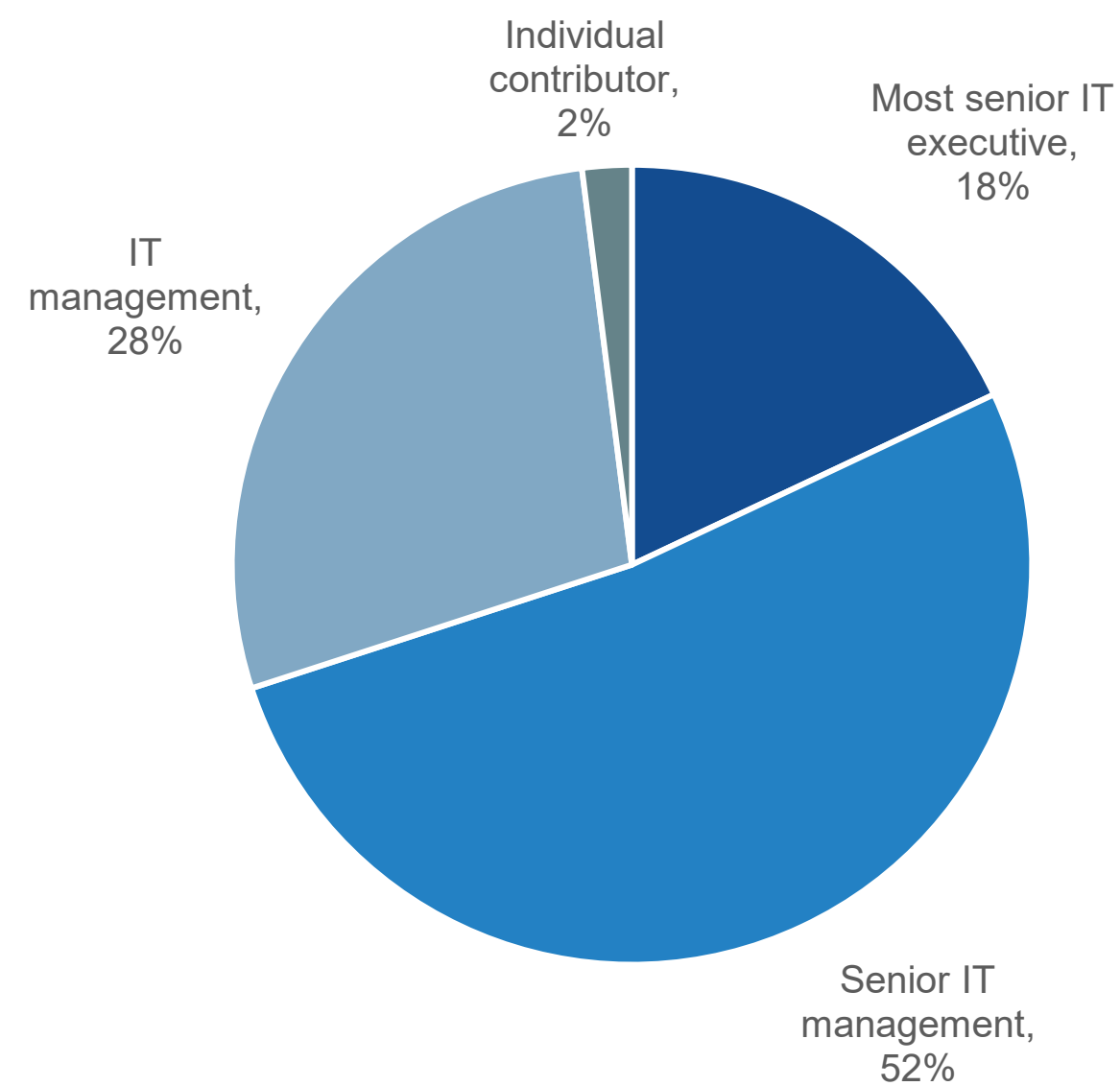
## RESEARCH METHODOLOGY AND DEMOGRAPHICS

To gather data for this eBook, Enterprise Strategy Group conducted a comprehensive online survey of 100 IT professionals responsible for data protection technology decisions, specifically data archiving and long-term retention strategies, for their organization.

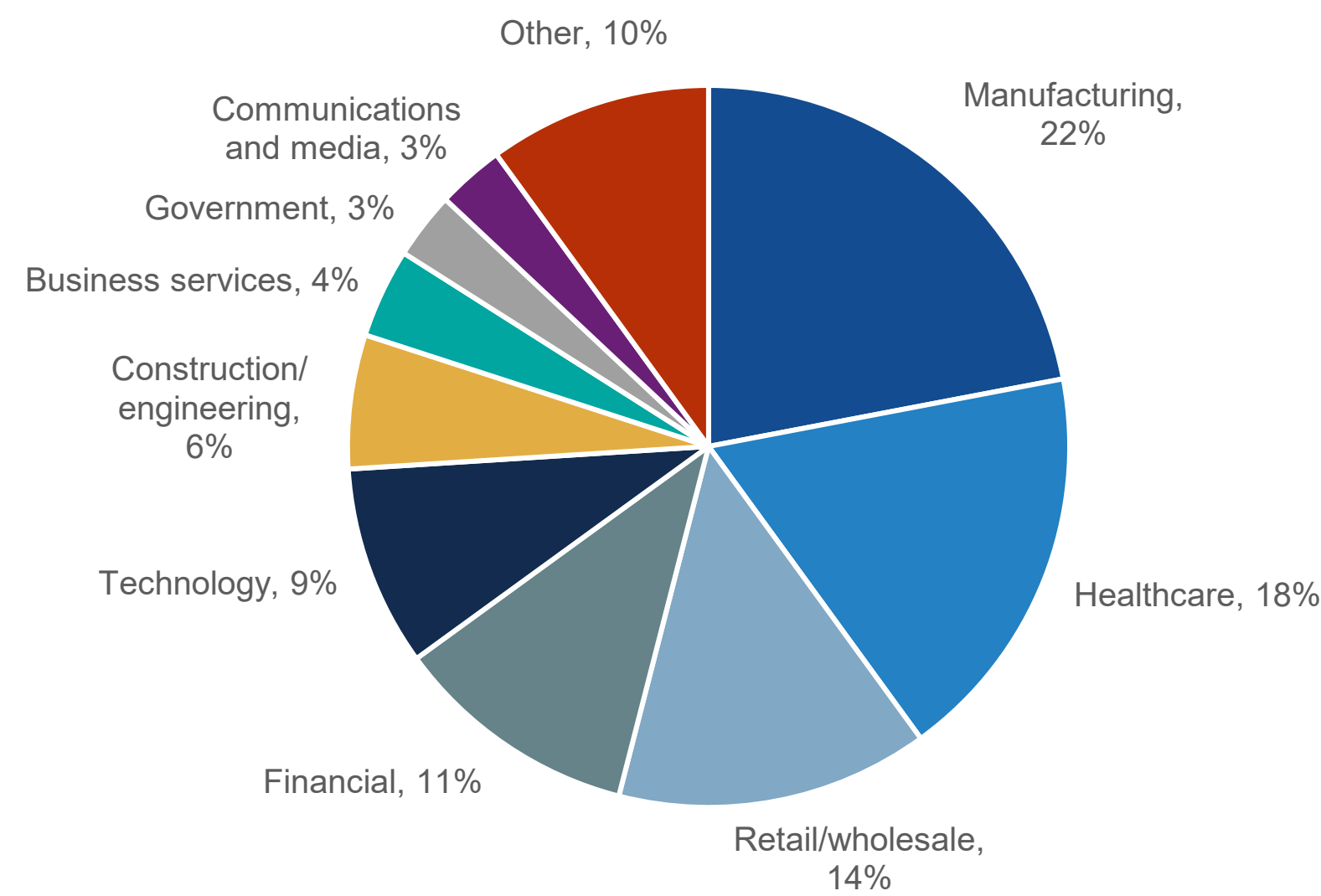
Organizations represented span all private- and public-sector organizations, and respondents were based in North America. The first wave of research referenced in this eBook was fielded between May 6, 2021, and June 1, 2021, and the most recent survey was fielded between December 4, 2023, and December 24, 2023.

Note: Totals in figures and tables throughout this report may not add up to 100% due to rounding.

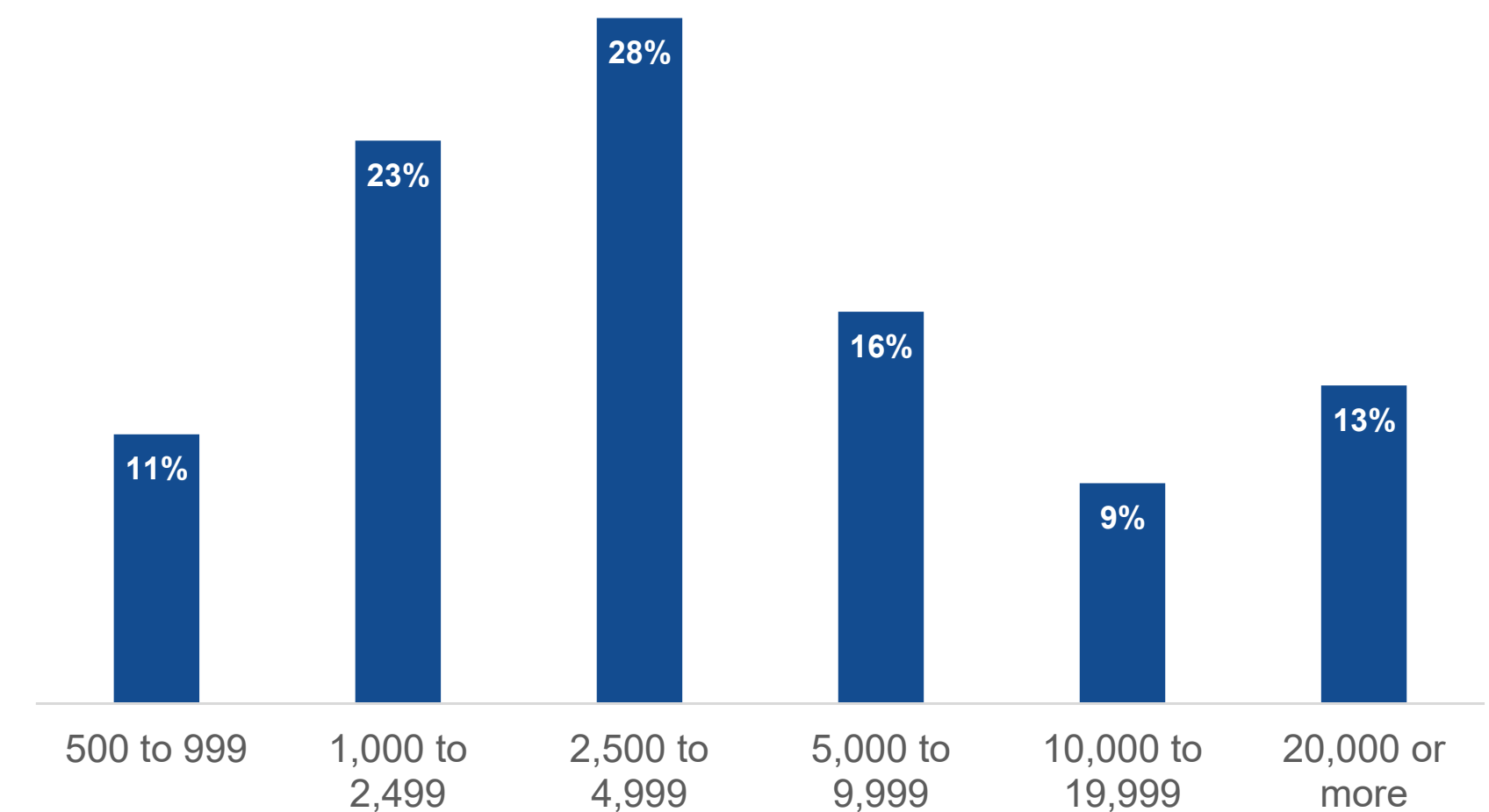
### Respondents by Seniority



### Respondents by Industry



### Respondents by Company Size (Number of Employees)





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