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From Data Backup to Data Intelligence

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OCTOBER 2021

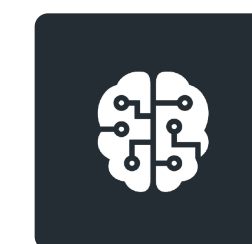


Research Objectives

Intelligent data management solutions and use cases are transforming the traditional data protection and storage spaces. As end-users continue on their digital transformation journeys, the need to efficiently reuse compliant data is adding data management challenges to an already complex IT infrastructure landscape. At the same time, significant business benefits can be derived from successful intelligent data management implementations.

In order to understand the benefits and challenges of IT initiatives in this space, establish the current state of deployments, identify gaps, and highlight future expectations, ESG surveyed 360 IT professionals at organizations with 250 or more employees in North America (US and Canada) personally responsible for data protection and data management technology decisions for their organization. This research aimed to understand IT professionals' grasp of and sentiment toward intelligent data management, including the identification of the most successful business and technical use cases for data reuse.

THIS STUDY SOUGHT TO:



Identify features and buying differentiators of intelligent data management solutions.



Assess IT professionals' understanding of and sentiment toward data management

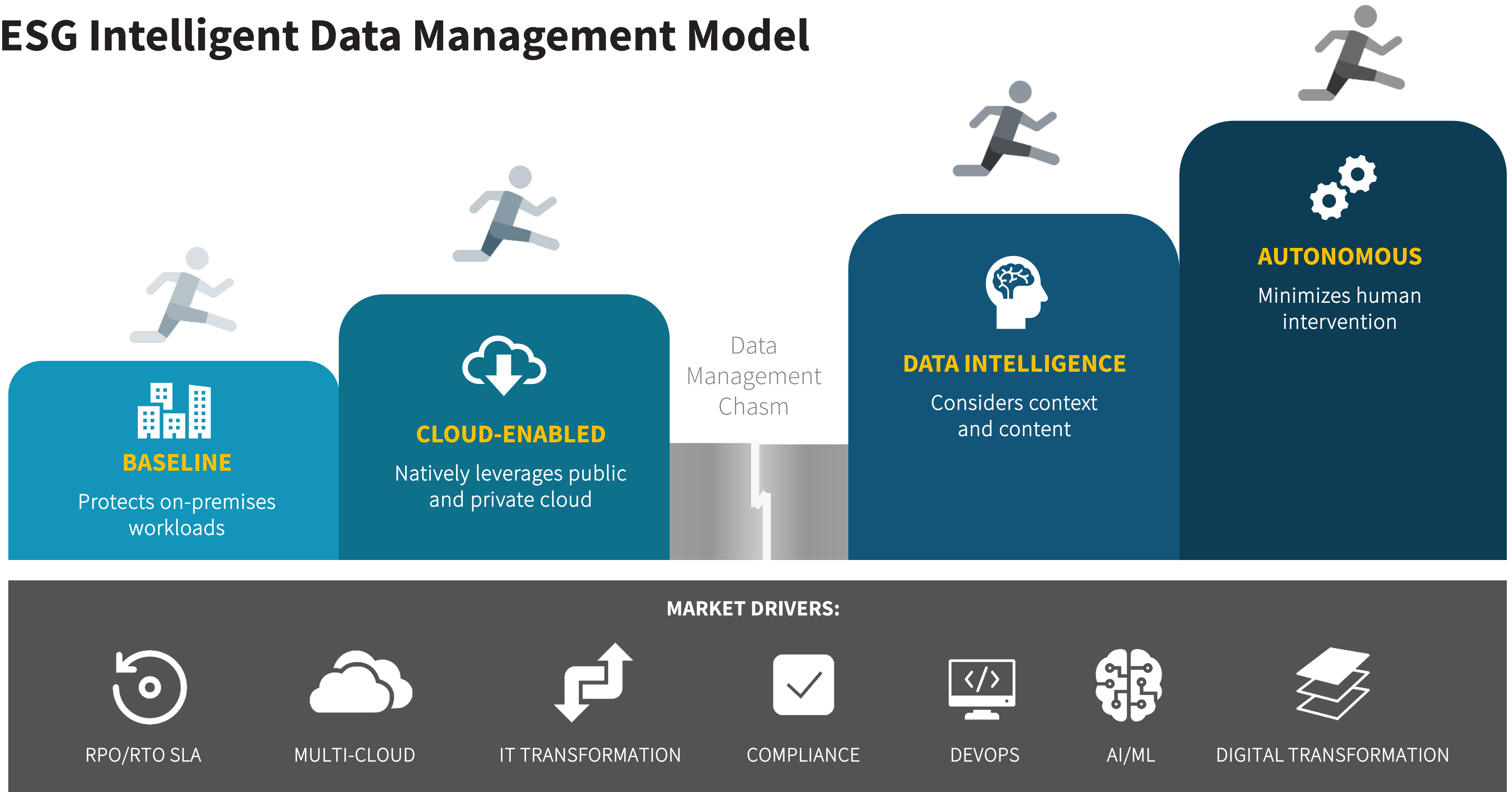


Explore key technology attributes of successful intelligent data management solutions.



Determine the infrastructure topologies that organizations deploy to support intelligent data management strategies.

The ESG Intelligent Data Management Model



KEY FINDINGS

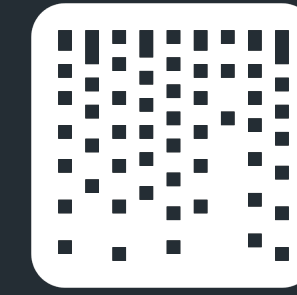
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**Most Now Better Understand
Data Management**



**In the Data Deluge,
Cloud Is King**



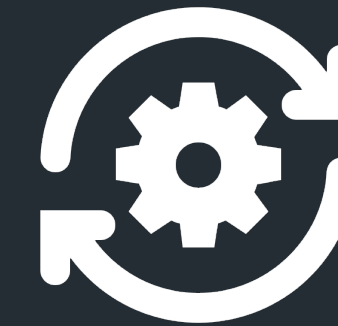
Data Is the Business



**Compliance Management
Is Gaining in Confidence**



**Data Classification Is Maturing
and Data Reuse Is Getting Better**



**Intelligent Data Management
Is at the Heart of
Digital Transformation**

A person's hands are shown typing on a laptop keyboard. The scene is overlaid with a futuristic digital interface featuring glowing blue folders and document icons connected by white lines, suggesting data management or cloud storage. The background is dark blue with a grid pattern.

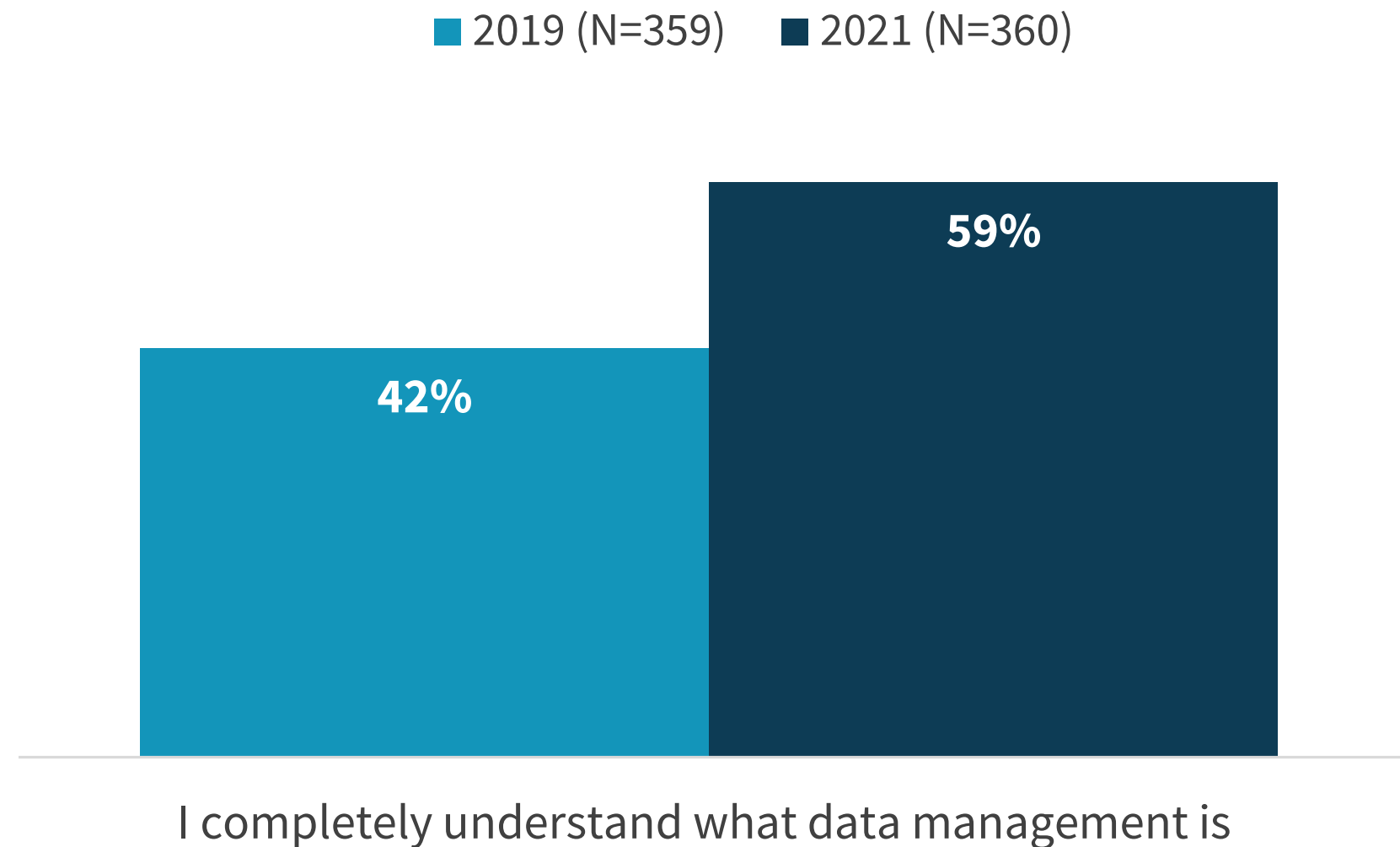
Most Now Better Understand Data Management

Most Understand What Is Meant by ‘Data Management’...Which Many Associate with Cloud

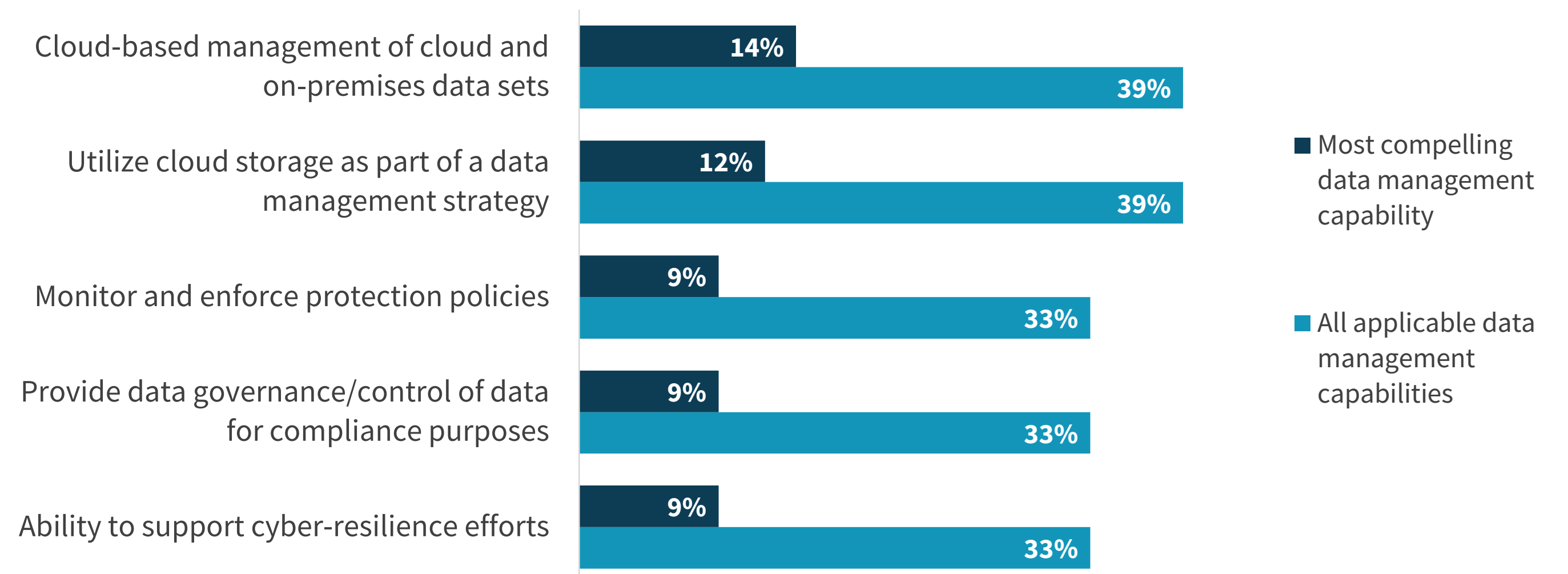
In a significant change from 2019, most IT professionals now report that they understand the concept of data management. ESG believes this is a consequence of increased exposure to digital transformation initiatives, which squarely place the focus on data and data-related processes overall. Likely another reason for this marked improvement, vendors have increased efforts to educate end-users and the market at large during this timeframe (2019-2021). In 2018, ESG introduced its Intelligent Data Management model, which has been leveraged in numerous vendor-led educational efforts.

Data management solution selection can be a complex and multidisciplinary effort across IT since many parts of the organization “touch” data during its lifecycle, including within the context of data reuse. Among the “must have” capabilities, cloud-based management and storage decisively shine, which is not only a reflection of the broader evolution of IT toward hybrid and distributed cloud topologies, but also a suggestion that modern/intelligent data management is at a minimum hybrid in nature. This means that end-users should integrate intelligent data management initiatives into their cloud strategy, and that providers of such solutions must be cloud-friendly.

Increased understanding of data management.



Most applicable data management capabilities.





In the Data Deluge, Cloud Is King

The Data Deluge

Data growth has become a constant in modern IT. But it is not just data growth that is an issue; it is data “multiplication” (i.e., copies of production data that are used for other purposes). This combination of accelerating data growth and copies of that data is creating a deluge, inundating the IT infrastructure with more complexity, cost, and cyber risk from an expanded attack surface.

ESG expects to see technology vendors not only continue to innovate with technologies that optimize the management, cost, and placement of this existing pool of data, but also provide data reduction solutions. While it makes sense that there should be more than one copy of data, do end-users really need to multiply their production data endlessly?

“ It is not just data growth that is an issue; **it is data ‘multiplication’ (i.e., copies of production data that are used for other purposes).**”

ON AVERAGE, ORGANIZATIONS HAVE:

7.7 PB

total volume of data

35%

overall data growth
(up from 27% in 2019)

5 TB

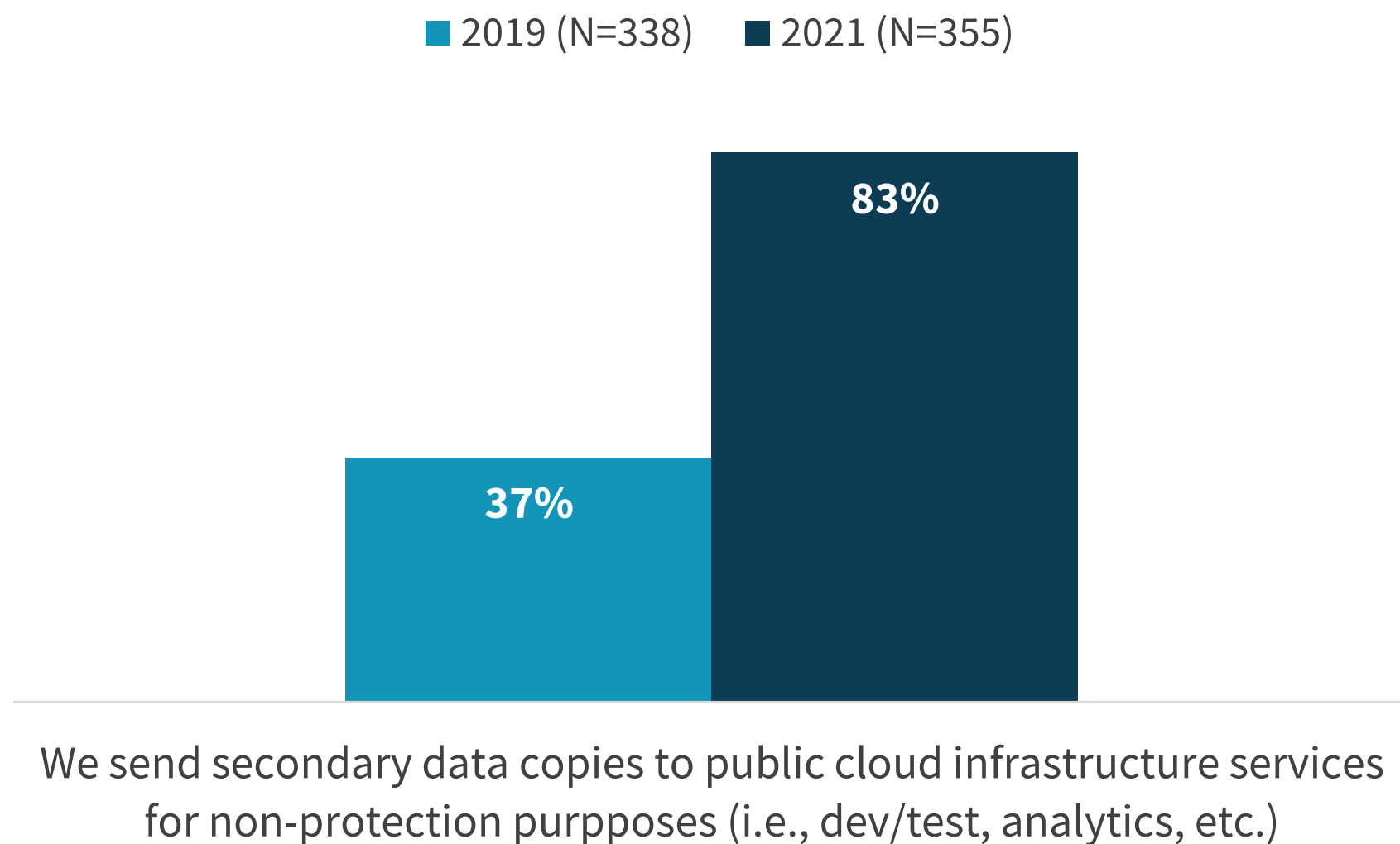
of secondary data generated
by 1TB of production

Cloud Is Being Used Extensively for Data Reuse and Intelligent Data Management

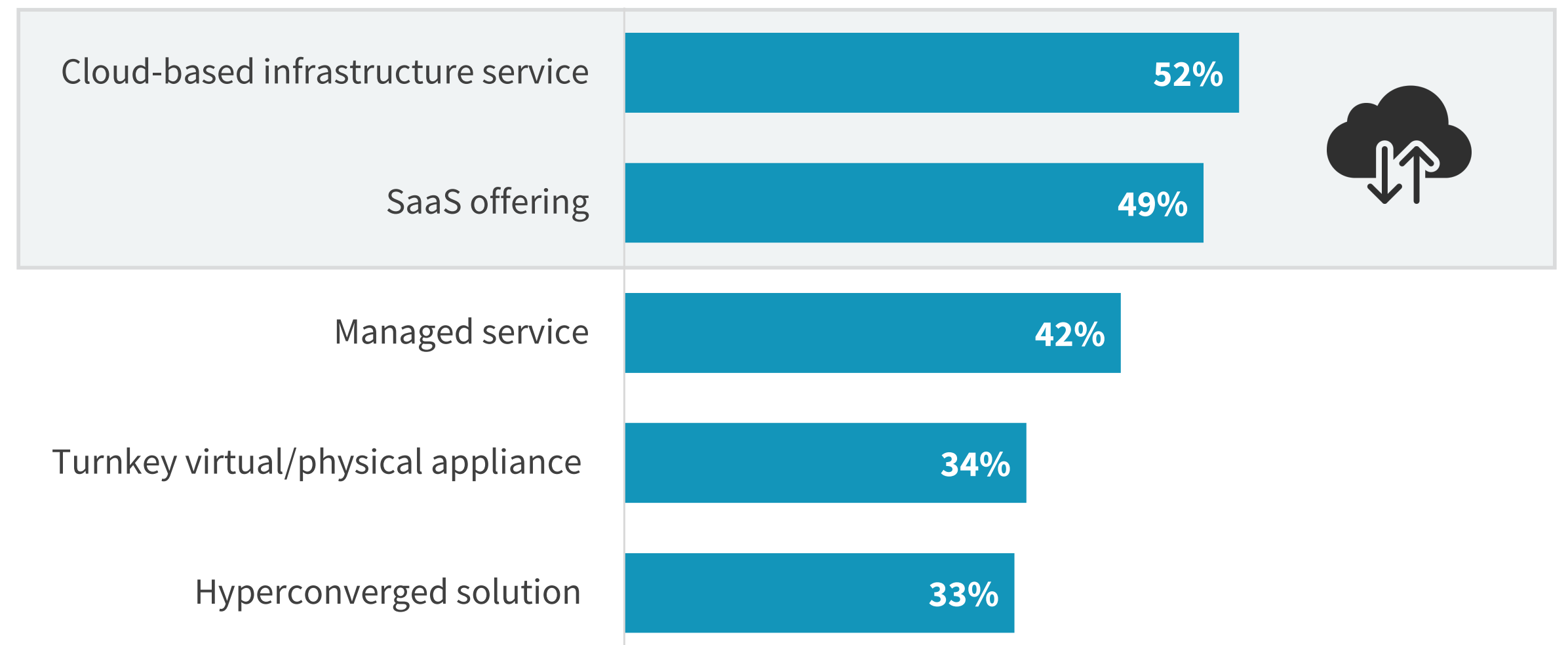
In only two years, the market for cloud adoption as a secondary data copy destination has gained significant traction. This extreme acceleration is consistent with the top solution requirements outlined earlier and confirms that data reuse (for non-backup/protection purposes) and public cloud are intertwined. This also means that topologies and solutions that will be deployed by organizations for secondary data use will be vastly cloud-based. It is ESG’s view that this dramatic shift is a likely consequence of accelerated digital transformation efforts and support for the broader trends around accelerating cloud adoption.

As organizations deploy more sophisticated data management solutions, multiple options exist. The massive and accelerated adoption of public cloud is evident, but its emergence at the top of preferred deployment methods is also to be noted. Indeed, leveraging a SaaS offering for data management is the second most popular methodology right behind cloud infrastructure. The adoption of as-a-service solutions across many IT and business functions has been accelerating and is, not surprisingly, also present in data management. The ease of use and outsourced nature of an as-a-service or managed service solution make these offerings attractive given the amount and complexity of data to manage. While cloud solutions top the list, organizations still have appetites for “traditional” hardware and software. This means that vendors in this space that want to deliver hybrid solutions should consider offering their technology with different deployment options, including some flavor of a cloud service.

Cloud is increasingly a secondary data target.



Preferred data management deployment solutions.

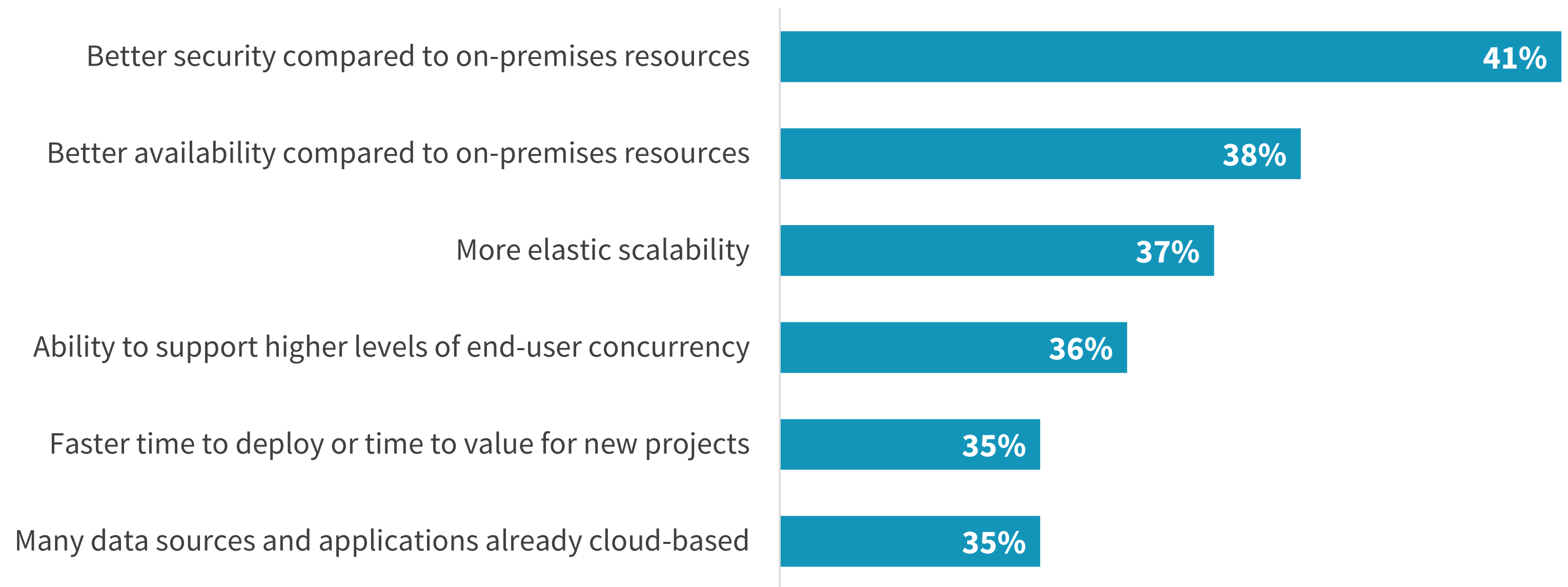


Cloud Benefits Abound

Cloud topologies can deliver against expectations at scale. IT professionals have spoken: Leveraging cloud for intelligent data management (for example, using secondary copies for analytics) provides organizations with many compelling benefits of an operational nature. Data management must be as dynamic as the data volumes it handles, which is why availability, elasticity, and performant end-user support at scale are all atop the list of realized benefits. While there may be ambivalence on security matters at times in IT, in the case of cloud-based data reuse, the general sentiment is that organizations have realized better security compared to on-premises environments. As such, ESG expects to see a continuing reallocation from on-premises deployments to cloud platforms for intelligent data management. This being said, due to varying governance and compliance mandates, not all secondary data will ever be in cloud.

“IT professionals have spoken: **Leveraging cloud for intelligent data management provides organizations with many compelling benefits of an operational nature.**”

| Benefits realized from sending non-protection secondary copies of data to the cloud.



Data Is the Business



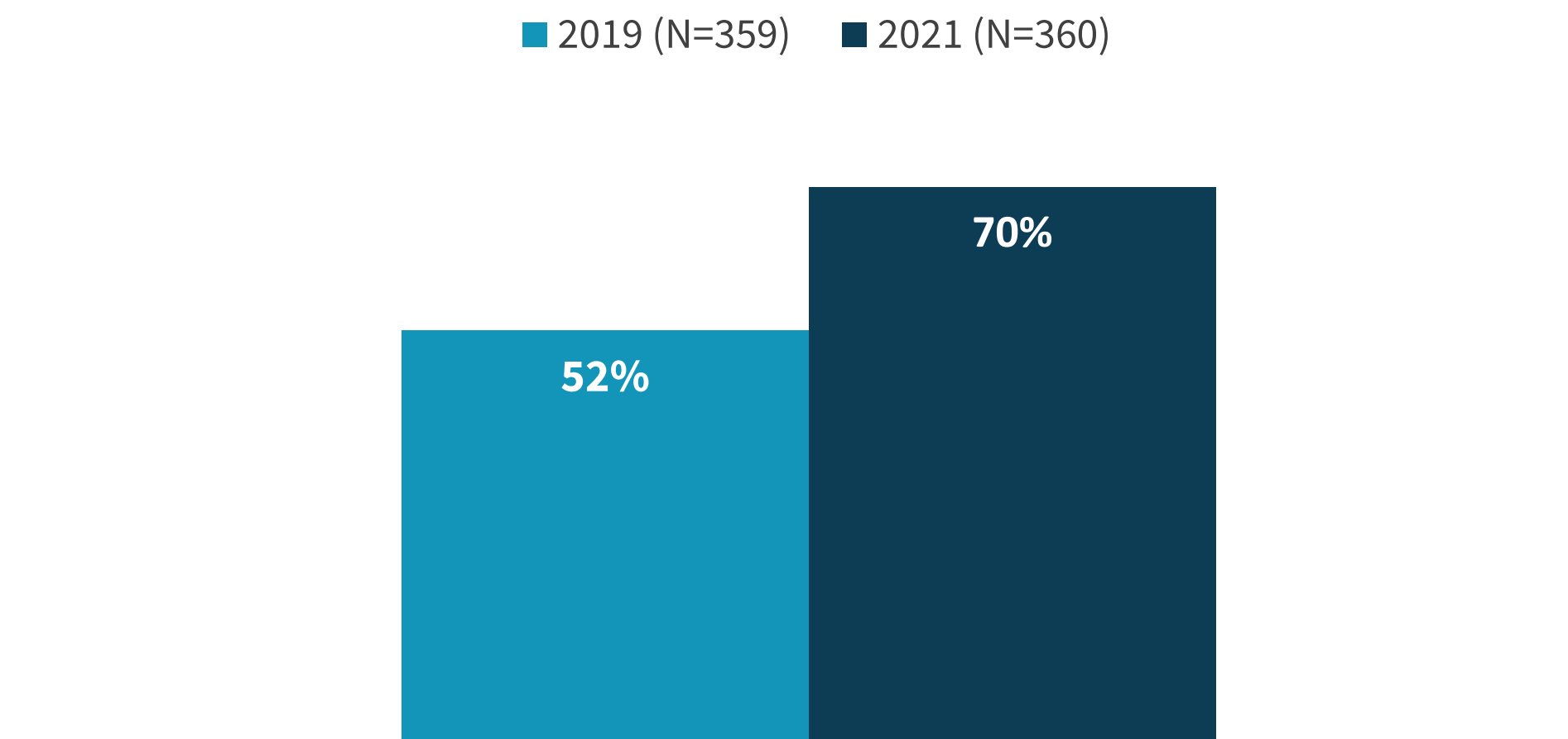
New Data-centric Products and Services Accelerating

As organizations continue on their digital transformation paths, it has become obvious that data is central to all businesses in one form or another, with one in five organizations being purely data-fueled as their core business. If data is the business, then organizations should treat data as an asset that must be de-risked, protected, made compliant, and leveraged. Data centrality should therefore drive decisions and investments, both for IT and at the business level. Data management has never been as important.

In this most recent research effort, ESG identified that the creation of new data-centric offerings is showing a significant uptick in the past two years, reinforcing the notion that digital transformation is in full swing. This in turn generates more demands on the data infrastructure and highlights the need to deploy solutions that can support business growth objectives. This presents a tremendous opportunity for vendors in this market.

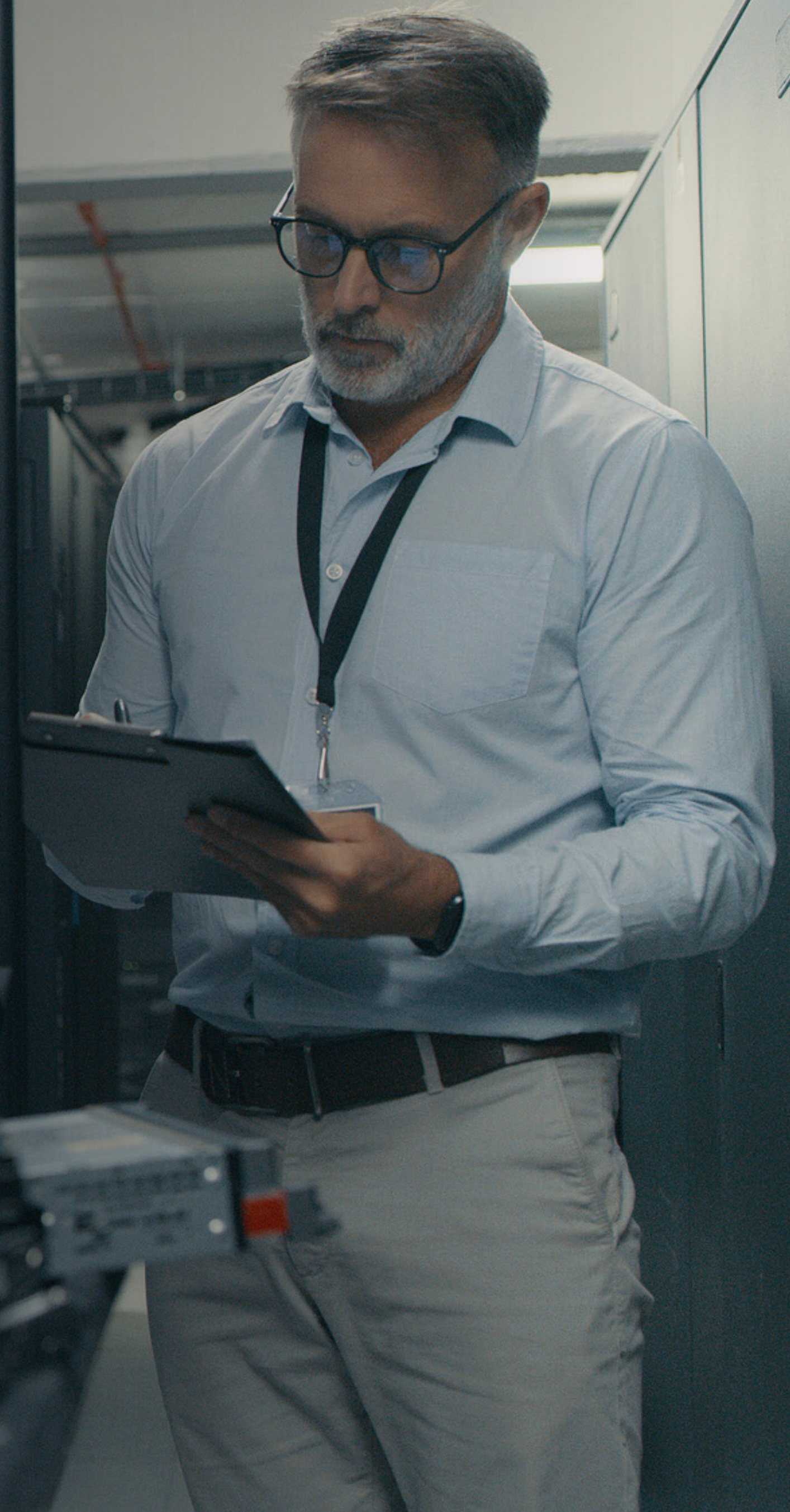


| Data-centric products and services are increasingly being offered.



We plan to develop and offer new data-centric products and services (i.e., either selling data or insights based on that data) in the next 24 months

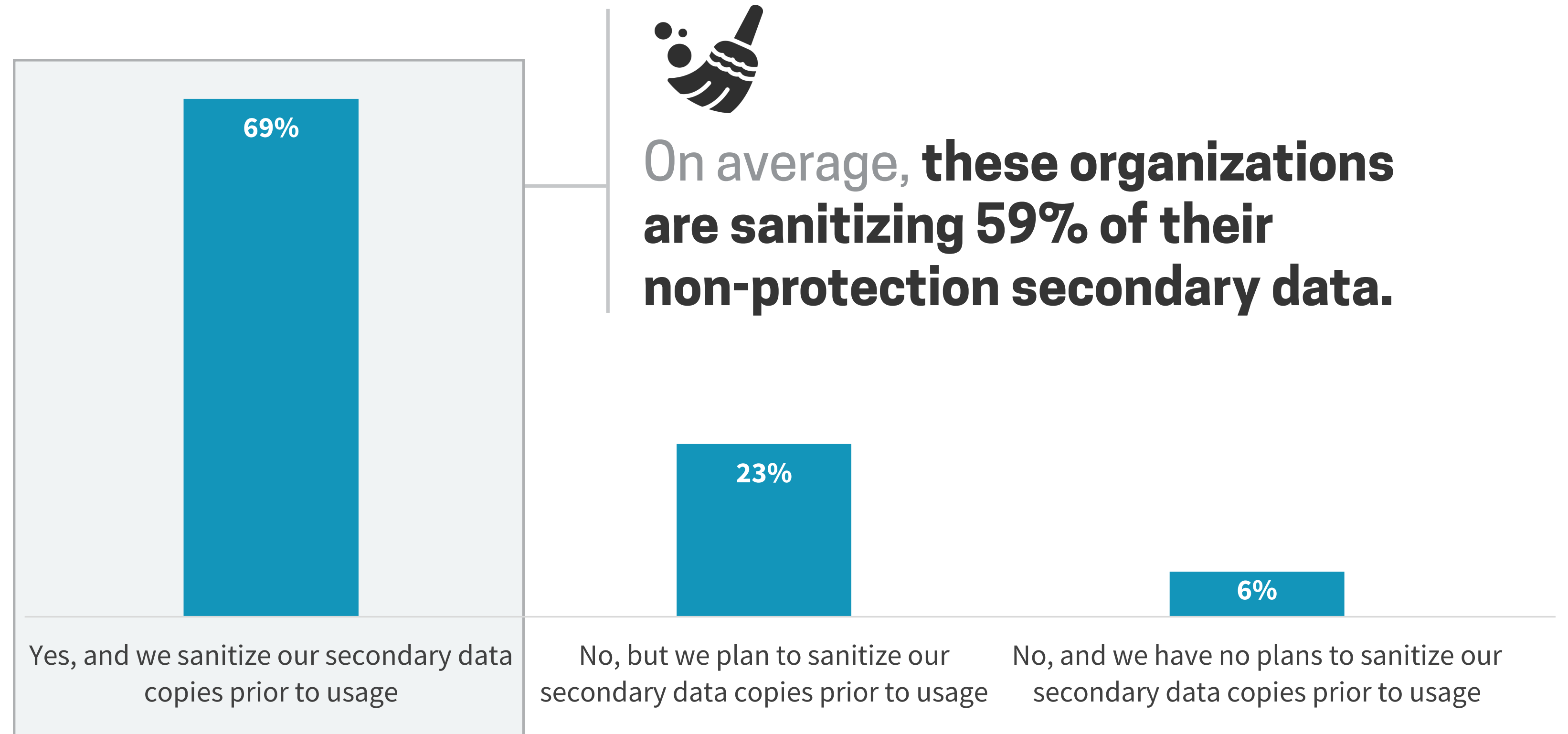
Compliance Management Is Gaining in Confidence



More Organizations Are Using Data Sanitization

The ability to cleanse data for the purpose of compliance or privacy mandates is critical. Put simply, you can't reuse or leverage data that is not compliant as that could perpetuate non-compliance exposures across the organization. Data sanitization is therefore a key step before secondary data usage, and most organizations are doing it today. Given the incredible pressures recent privacy regulations are placing on public and private entities around the world, there is still more to do.

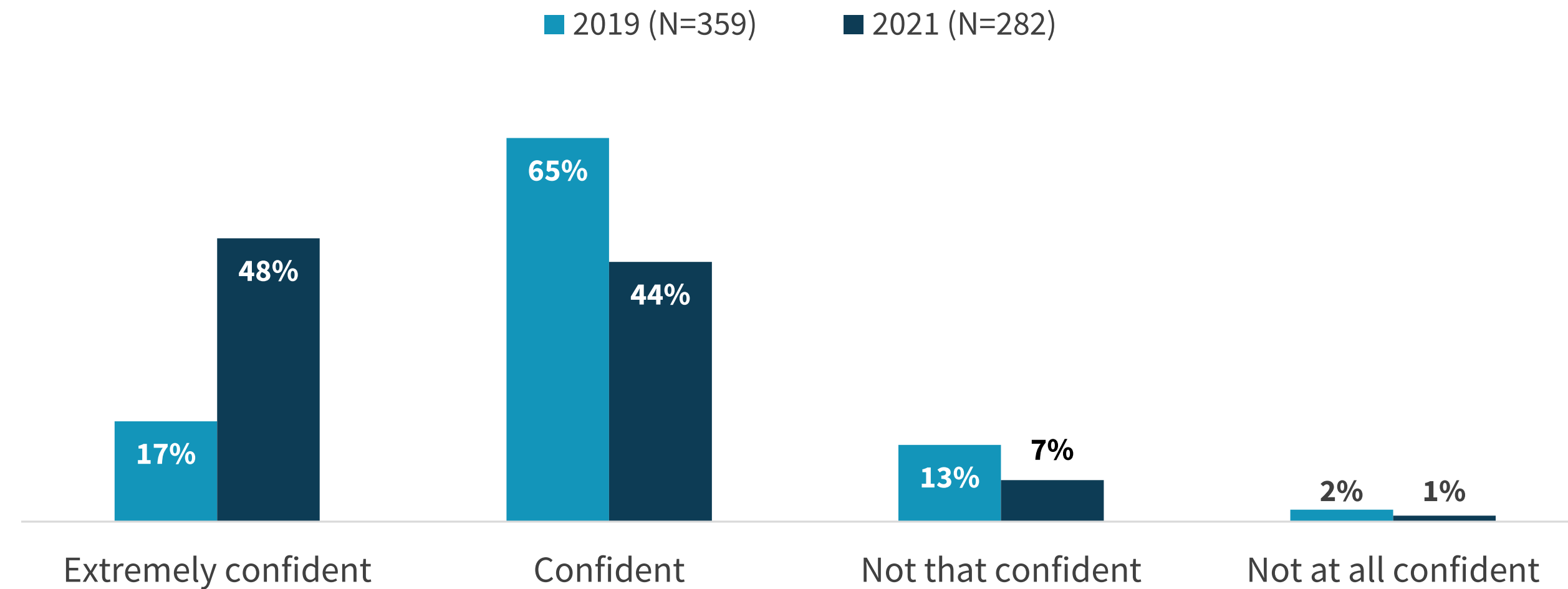
Do organizations sanitize their secondary data?



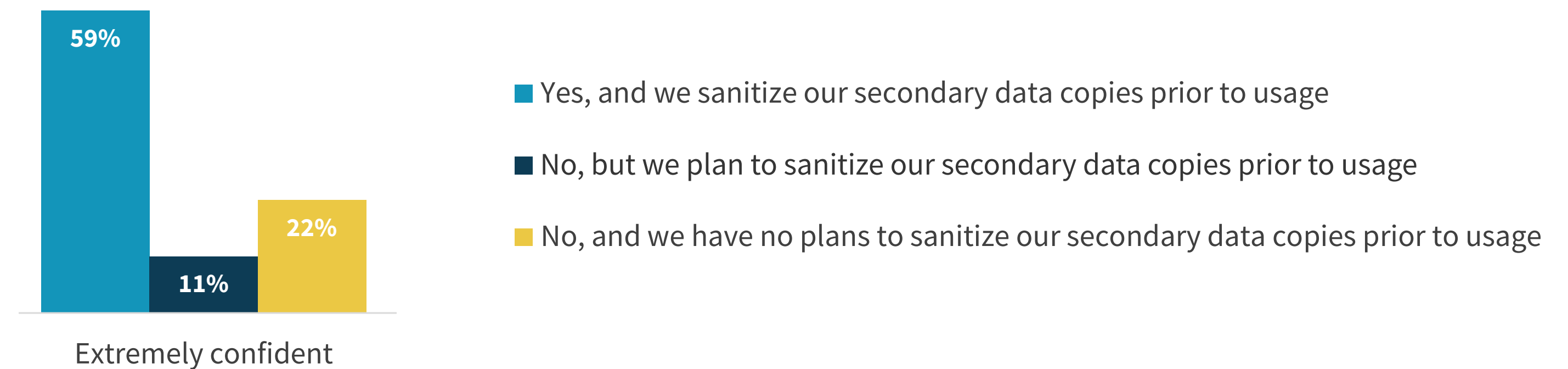
Markedly More Confidence in Regulatory Compliance Aptitude, Especially among Data Sanitizers

Organizations are becoming more focused on making data compliant, including for data reuse. In only two years, ESG has observed significant improvements in the levels of confidence organizations have in their ability to pass a compliance audit, which can often result in significant fines should issues be uncovered. Since data sanitization yields direct benefits in terms of the ability to satisfy dreaded compliance audits, it follows that these confidence levels are even more pronounced among those organizations that actively sanitize their secondary data. This means less risk for the organization and reduced financial exposures to fines and other consequences of non-compliance.

| Confidence in ability to pass compliance audits is higher YoY...



| ...and notably higher among organizations that sanitize their secondary data.



Data Classification Is Maturing and Data Reuse Is Getting Better

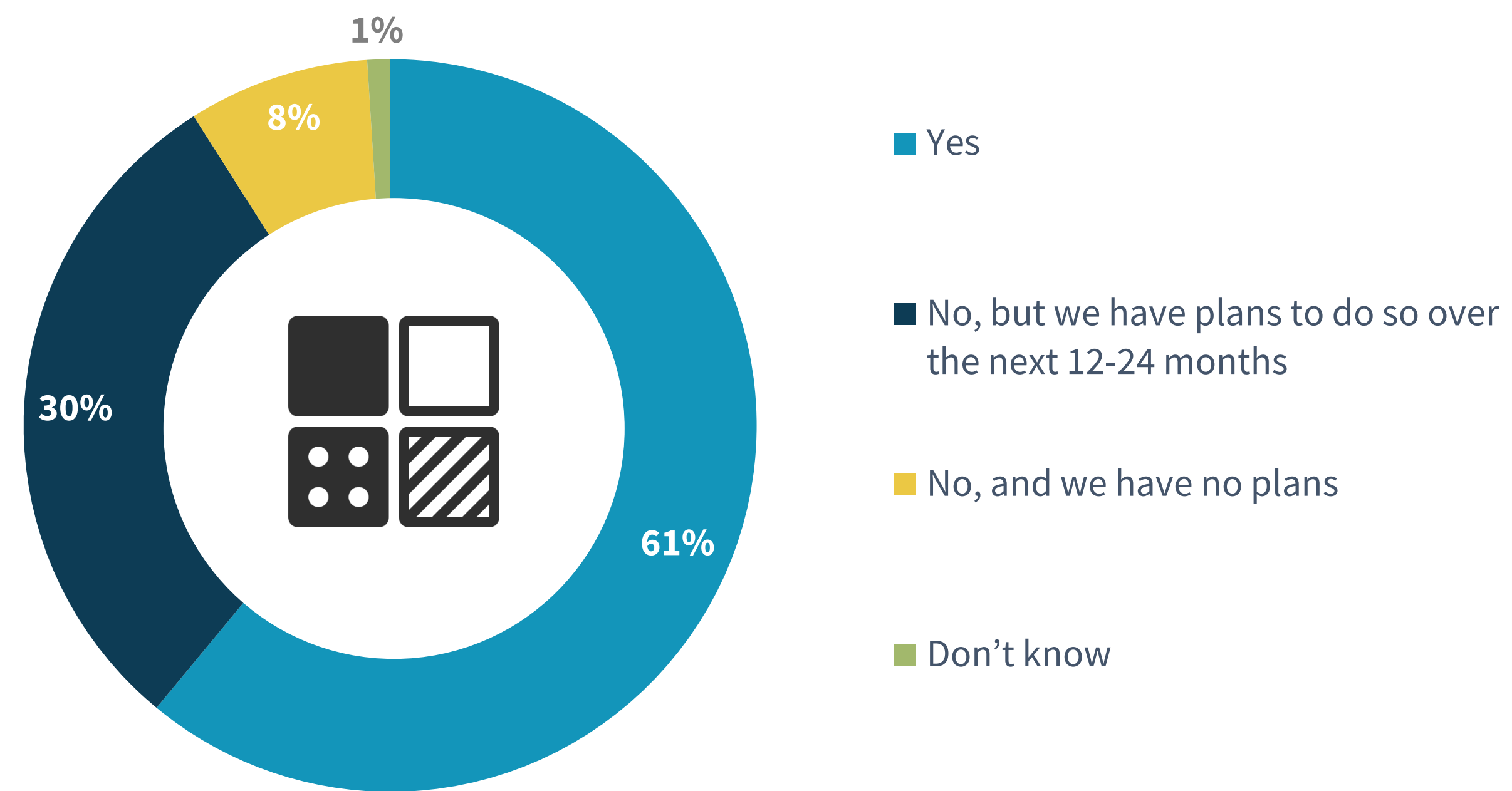


A Growing Interest in Data Classification

Understanding data is key not only for compliance risk mitigation, but also to identify what should be done about it. That's why data classification is becoming a best practice among more organizations. If businesses understand the context of the data and its content, then it becomes manageable, able to be sanitized, reusable, or a candidate for deletion to offset costs and improve efficiencies. Based on the research, ESG expects that the vast majority of organizations will be classifying data within 24 months. Furthermore, as is often the case in technology conversations, the devil is in the details and not every classification effort may be equally well executed.

“ESG expects that the vast majority of organizations will be classifying data with 24 months.”

| Do organizations classify their data?



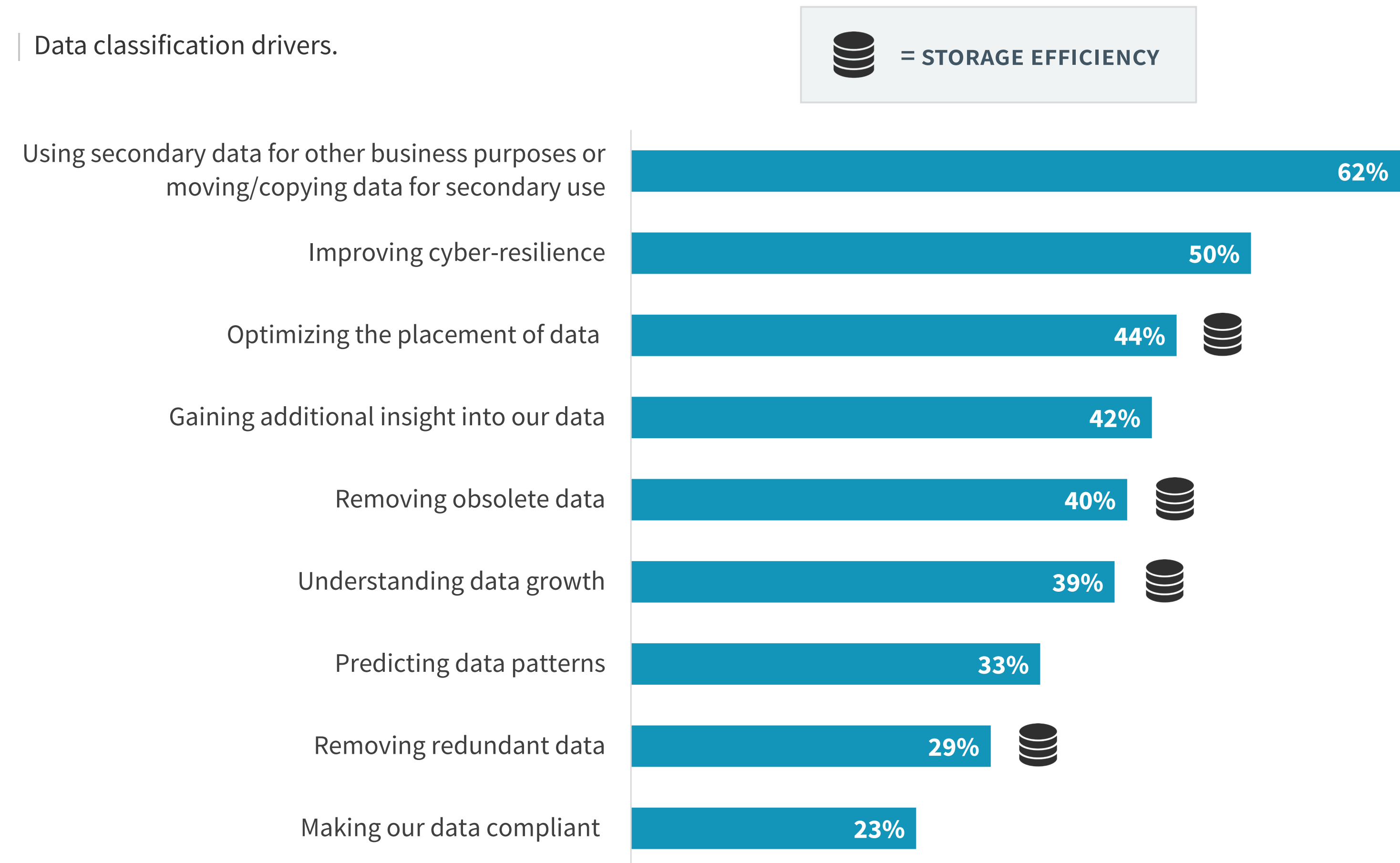
The Wide Range of Data Classification Use Cases

Data classification opens up many opportunities to add value to IT and the business at large, with a wide range of options. It can help with basic storage optimization, it can be a tool for cyber-resiliency, and it is the fundamental function to get to data reuse and intelligent data management. A common theme that keeps percolating in the news and in our research is cyber-resilience. Data classification also helps in understanding the cyber protection side of the complex data equation.

This research shows that there are multiple storage efficiency-related uses cases, denoting the tremendous pressure IT is under to manage the “data deluge,” while data reuse is the most sought-after use case that data classification can enable. This duality of “meta” objectives is key to understanding the complexity of truly enabling intelligent data management: Data is needed, but there is too much of it, and it must be managed and understood.

Given the many use cases data classification enables, ESG believes that it is going to be one of the most important capabilities that vendors that want to partake in the evolution of the market must invest/partner in. For end-users, it is a discipline to keep developing and building on.

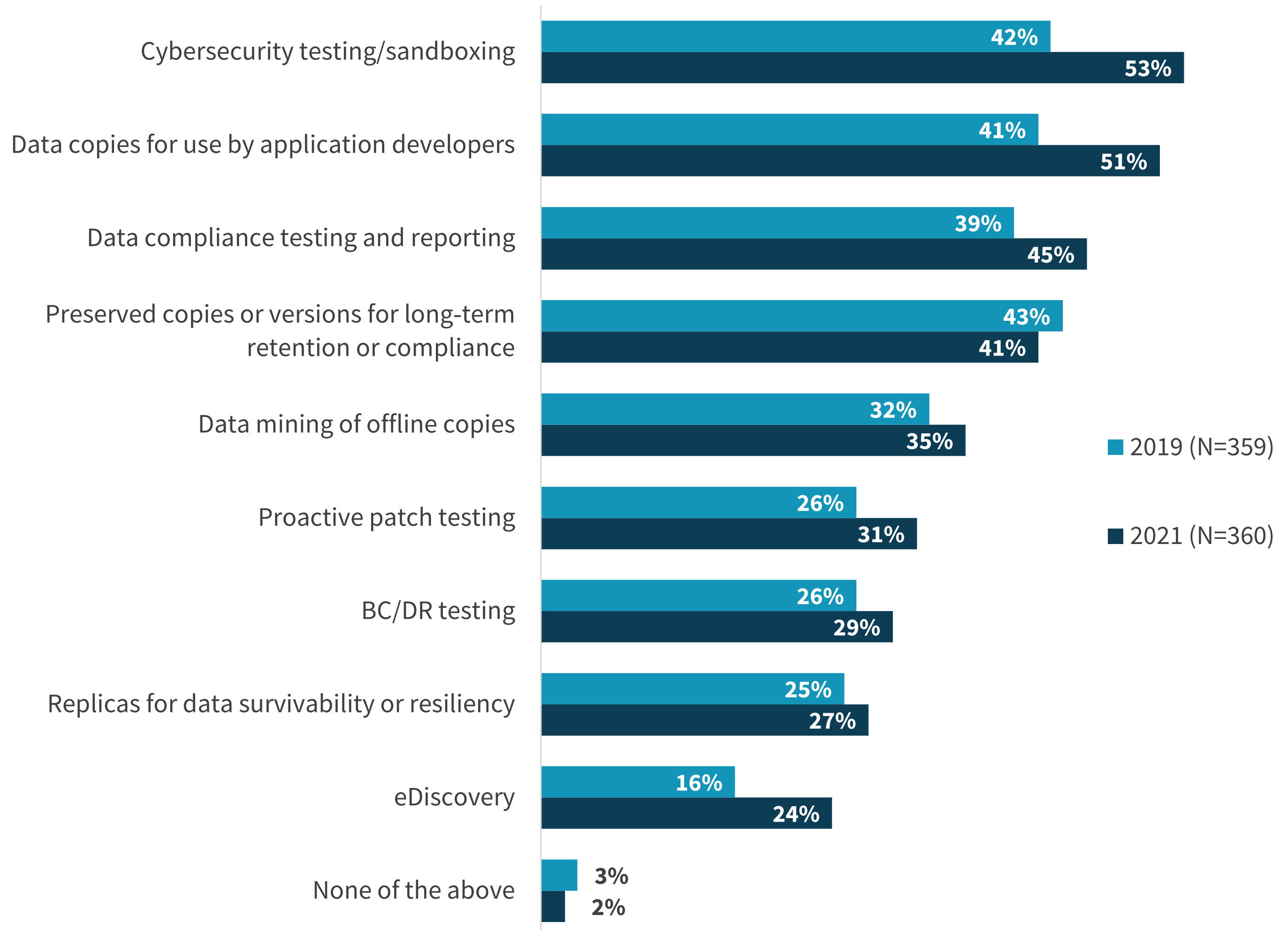
Data classification drivers.



Data Reuse Increasingly Dominated by Preparing for Cyber Threats

Data reuse is evolving with a notable emphasis on cyber-resilience. Taking a step back, one should notice the variety of use cases for data reuse because it helps in understanding how complex it can be to deploy intelligent data management across an enterprise since supporting DevOps is vastly different from supporting the security operations or analytics teams (let alone the BC/DR team). Many different personas, as well as different technical and business objectives, can easily lead to competing priorities within IT. It is also challenging for vendors that seek to supply intelligent data management solutions: They have to deal with different and sometimes competing buyer personas, while trying to be a unifier across data reuse initiatives. ESG expects that this dynamic is in its infancy and will keep maturing in the next few years with the potential to generate an evolution of ecosystem and channel partnerships to cover a wider spectrum of solutions.

Business or technology purposes for which organizations currently use secondary data.



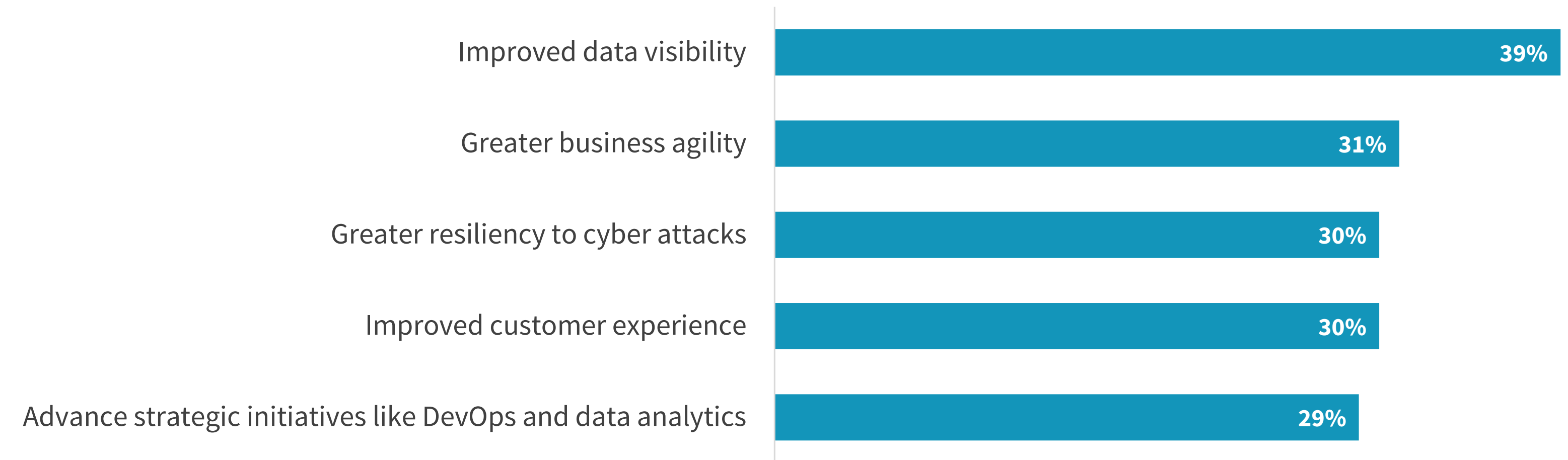
Significant Improvements in Secondary Data Reuse Generates Broad Business Benefits Including Cyber-resilience

Secondary data reuse generates broad benefits that are not just for IT. While it may not be surprising to expect and confirm that improved data visibility is a top benefit, the strategic nature of the top 5 benefits must be highlighted. In a context of heightened global competition, digital transformation, and a pandemic-challenged economy, delivering more agility to the business and improved customer experience is fundamental.

It's also worth noting the impact of cyber criminals, which have generated a defensive posture for many organizations. Every day, the news reminds us of this existential data risk. Secondary data reuse can be used *offensively* to proactively generate more business intelligence or new data-based products, or *defensively* for advanced cyber-resiliency use cases.

This makes intelligent data management much more than a data asset optimization effort. It makes it a de-risking initiative in terms of both compliance and cyber-resilience.

Business benefits of data reuse.



Level of satisfaction with usage of secondary data for business (i.e., non-protection) purposes.



The intelligent data management category is showing signs of becoming more mature as a market, with most respondents reporting significant improvements in satisfaction for secondary data reuse since 2019. This suggests more maturity in tools and practices, and better visibility of the value of intelligent data management.

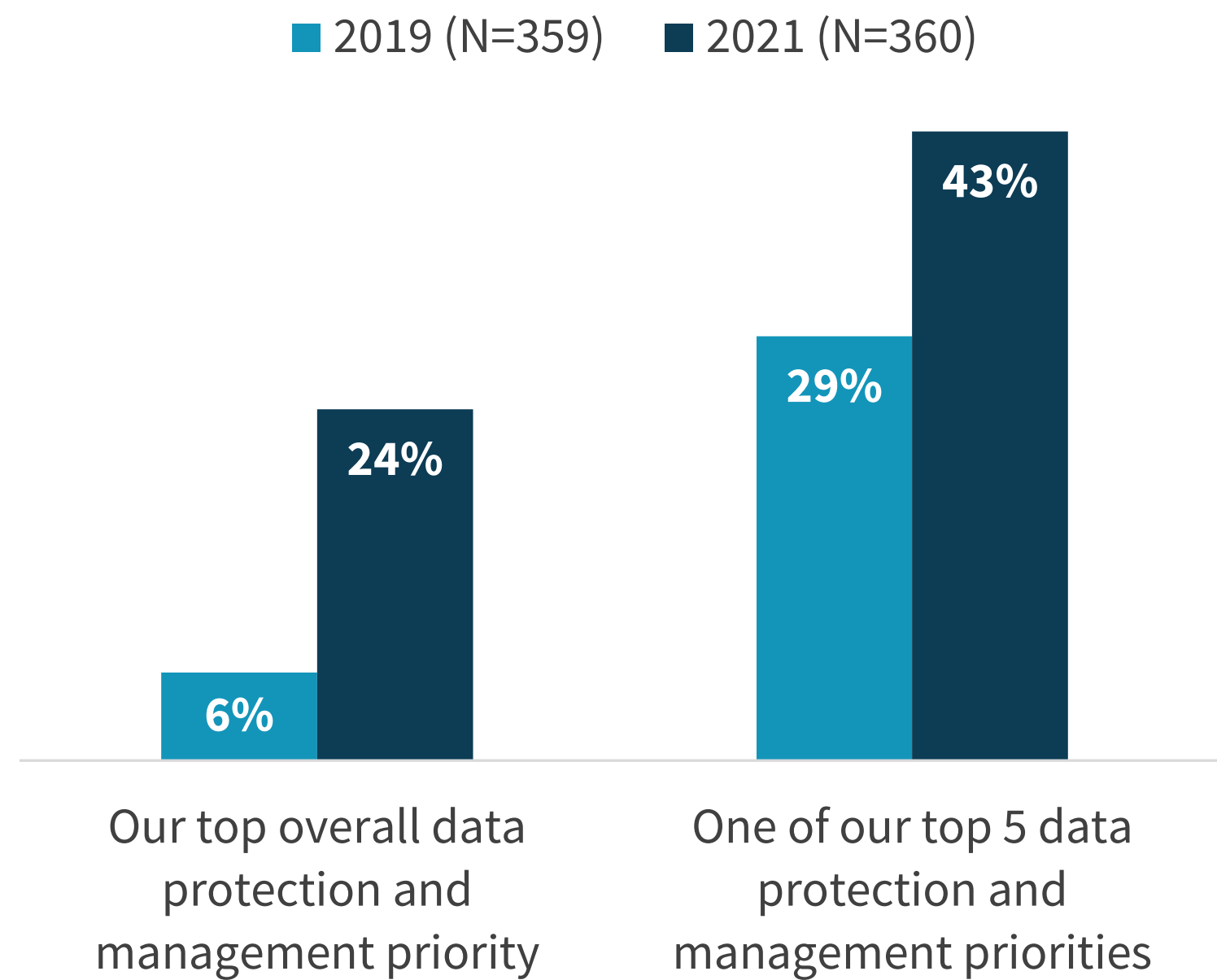


**Intelligent Data Management
Is at the Heart of Digital
Transformation**

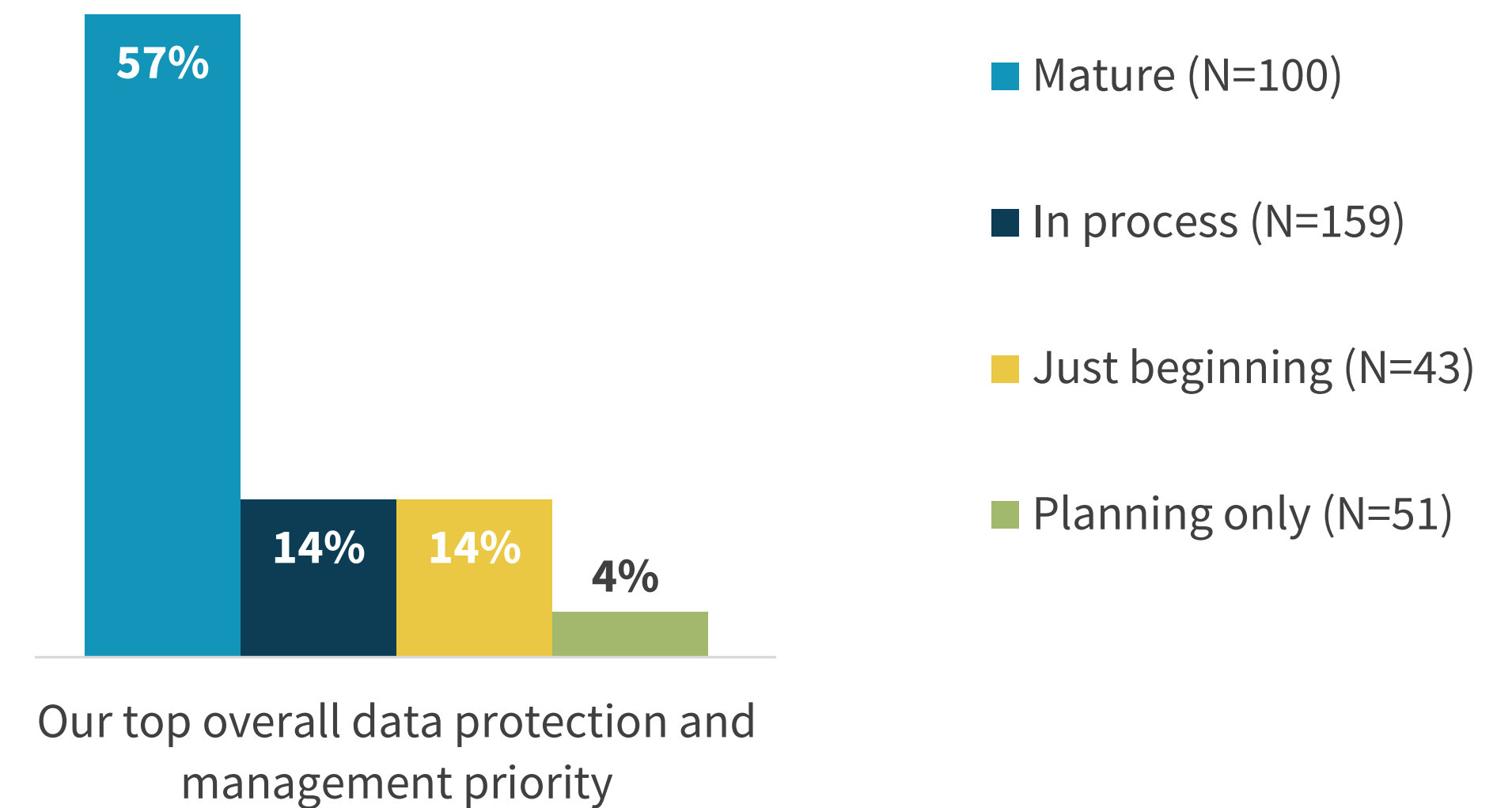
Intelligent Data Management Is a Top Priority, Especially among More Digitally Transformed Organizations

In only a matter of a couple of years, intelligent data management has become a top five priority for two-thirds of organizations compared to other data protection and management initiatives. This prioritization is even more pronounced among those organizations that report having mature digital transformation initiatives in place. This confirms the tremendous opportunity end-users are seizing to transform their business, often accompanied by service providers and key vendors that are adding capabilities to their solutions. This acceleration is real and consistent with ESG’s predictions and model.

Investment prioritization of intelligent data management/data reuse strategies.



Investment prioritization of intelligent data management/data reuse strategies by digital transformation maturity.

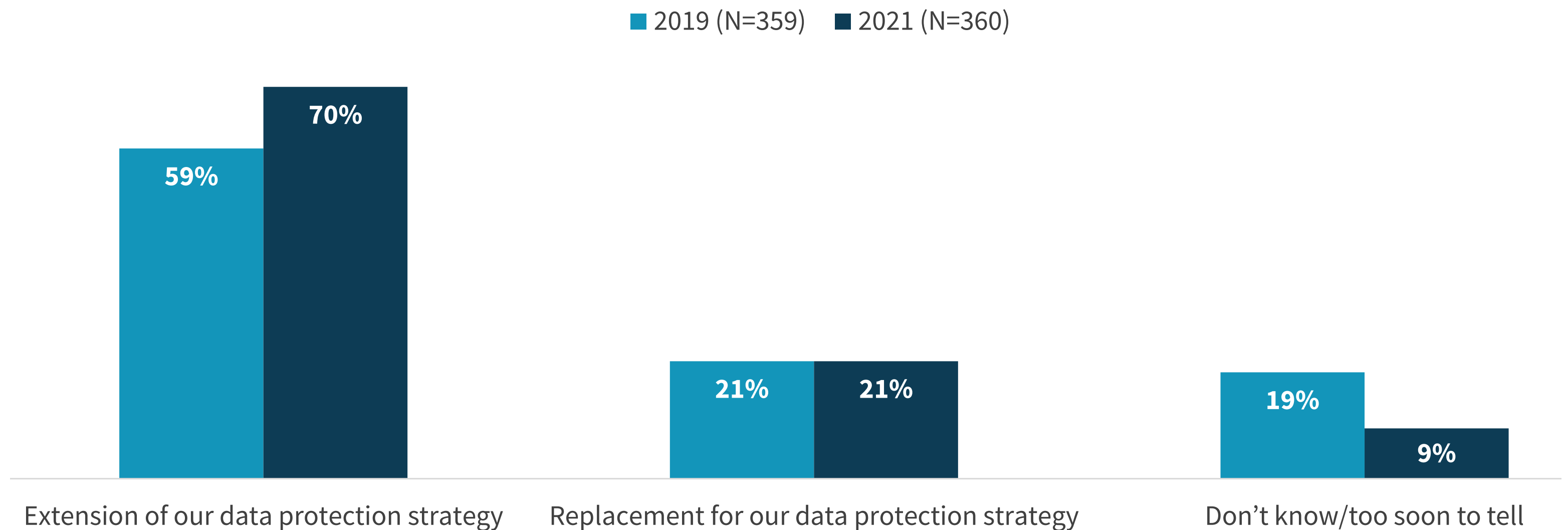


More Perceive Intelligent Data Management As the Next Stage of Data Protection

As the intelligent data management market matures, organizations are adjusting their technology choices to business requirements and learning how to “get it done.” An interesting shift has happened in just the past two years that has the potential to affect vendors and end-users deeply for years to come. A decisive majority is now looking at leveraging existing data protection investments and strategies to effectively deliver intelligent data management. This should send a strong message to storage and backup and recovery vendors.

“An interesting shift has happened in just the past two years **that has the potential to affect vendors and end-users deeply for years to come.**”

| Is data reuse an extension or replacement of overall data protection strategies?





Conclusion

The past two years have fundamentally changed our society and its relationship with technology. They have accelerated the digital transformation of most private and public entities, resulting in a focus on data—protecting it better, making it more compliant, and reusing it to generate more value and business opportunities.

These trends combined and accelerated against a backdrop of seemingly unstoppable data growth to get us across the chasm of intelligent data management. But there is still much work to do on both the vendor side and the end-user side.

This data deluge does not help, yet it is a motivation to improve IT infrastructure, enable better processes for data classification and sanitization, and leverage the power of data in support of the business. Looking ahead, ESG sees intelligent data management as the next stage of data protection, with a strong “flavor” of cyber-resilience.

From Data Backup to Data Intelligence



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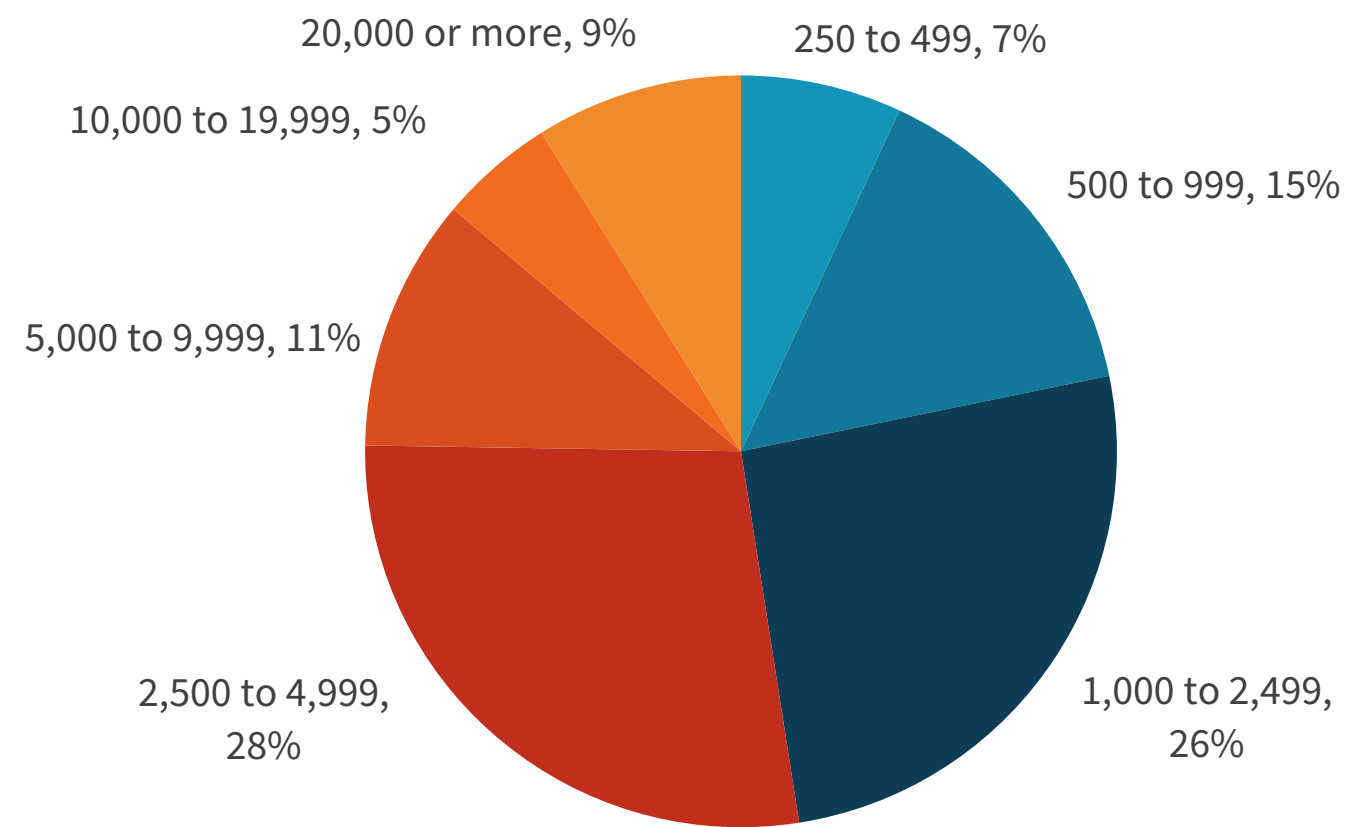


Research Methodology and Demographics

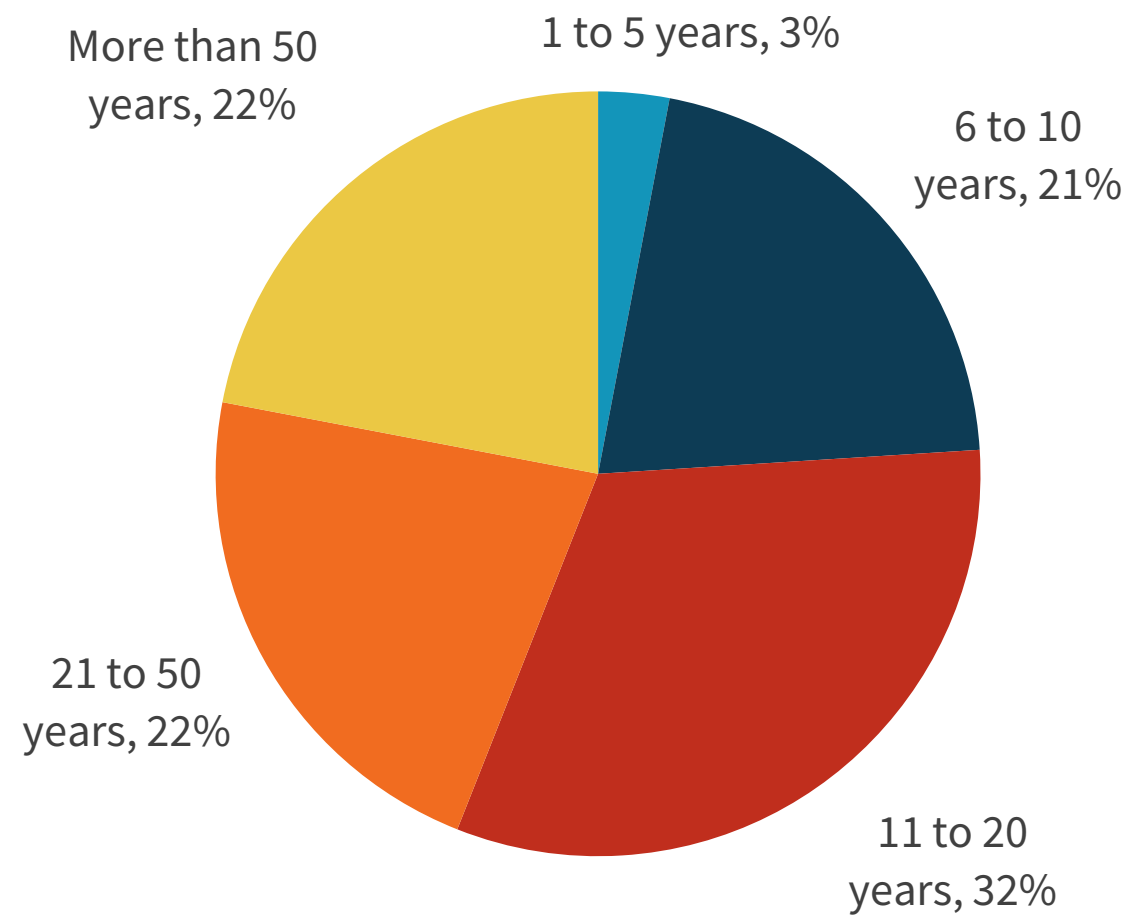
To gather data for this report, ESG conducted a comprehensive online survey of IT professionals from private- and public-sector midmarket (250 to 999 employees) and enterprise (1,000 or more employees) organizations in North America (United States and Canada) between August 3, 2021 and August 14, 2021. To qualify for this survey, respondents were required to be IT professionals personally responsible for data protection and data management technology decisions for 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 a number of criteria) for data integrity, we were left with a final total sample of 360 IT professionals.

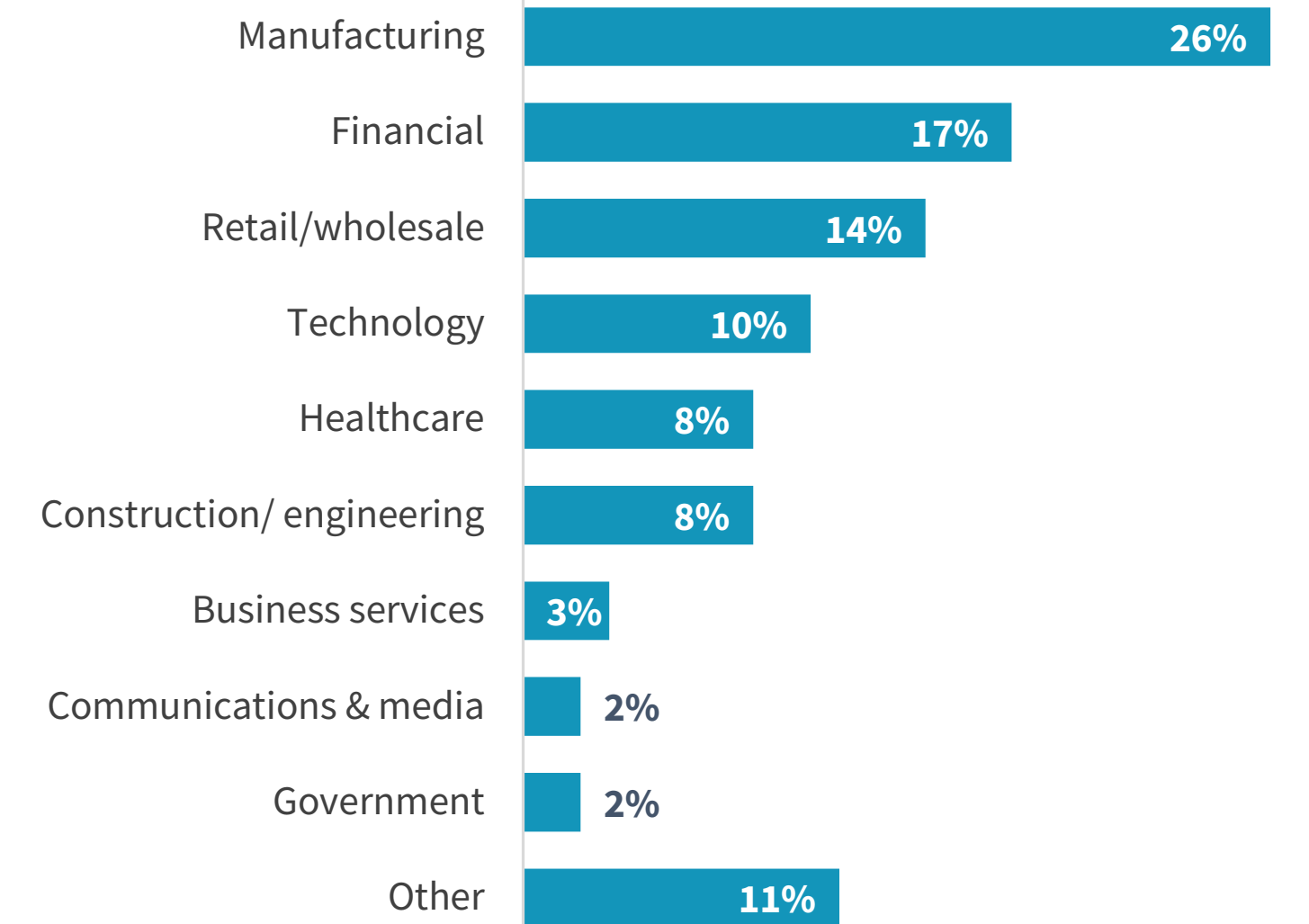
RESPONDENTS BY NUMBER OF EMPLOYEES



RESPONDENTS BY AGE OF ORGANIZATION



RESPONDENTS BY INDUSTRY



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