Enterprise Strategy Group™ by TechTarget

The State of Data Intelligence

OCTOBER 2024

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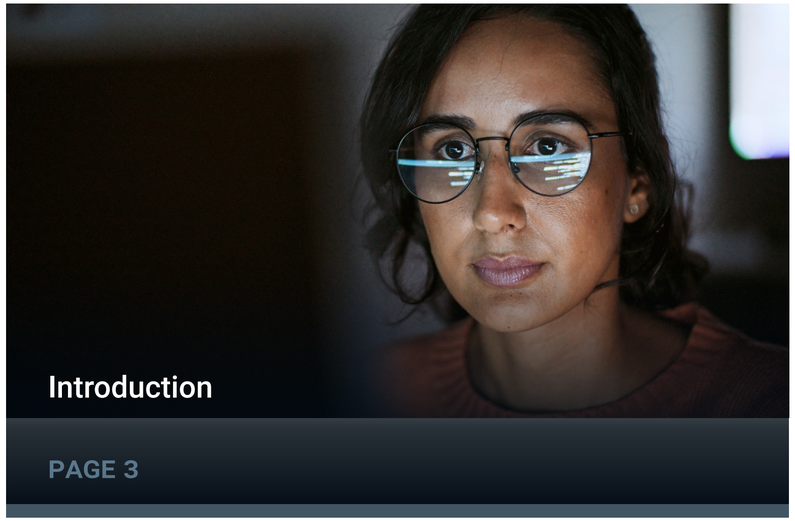

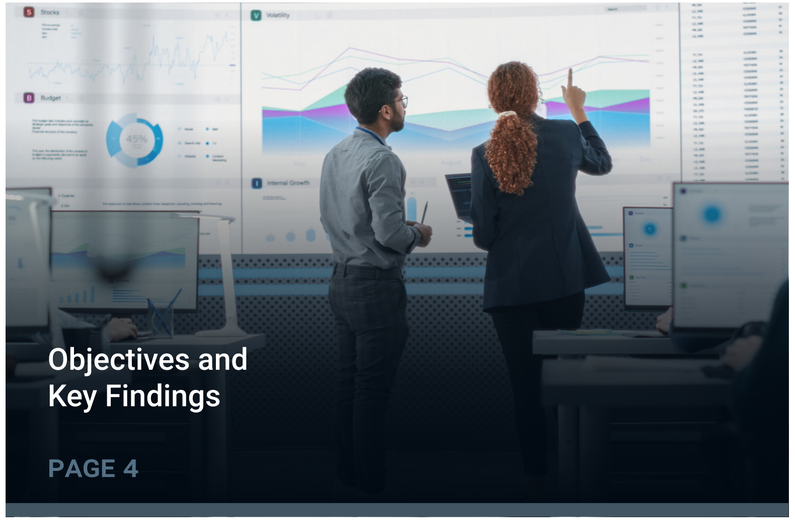

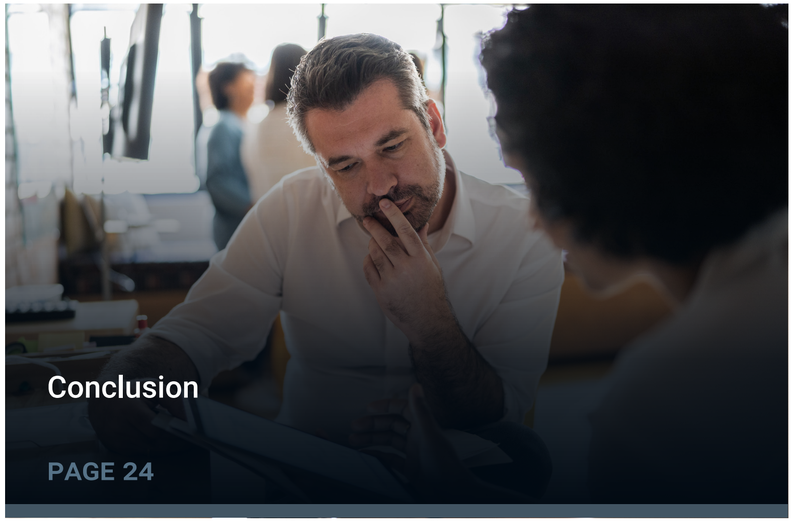

"To tackle a changing set of priorities, organizations are **adopting comprehensive strategies** that encompass both offensive and defensive components of governance."

Introduction

In 2024, the data intelligence landscape has evolved once again, with not only a strong continued emphasis on data governance, but also a quickly emerging focus on AI governance and ensuring AI data readiness. To tackle a changing set of priorities, organizations are adopting comprehensive strategies that encompass both offensive and defensive components of governance. Offensive governance emphasizes data literacy, accessibility, and self-service, empowering users and democratizing data across the enterprise. On the other hand, defensive governance focuses on managing risks, enhancing enterprise-wide data visibility, ensuring data reliability, and optimizing the cost-effectiveness of data management. This year's research mirrors these dual priorities, offering insights into how businesses are driving innovation while supporting robust governance in today's dynamic data environment.

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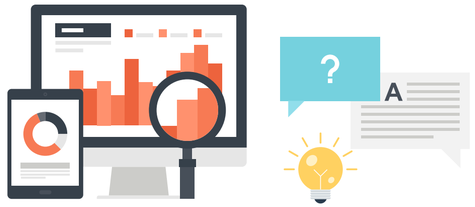
Objectives and Key Findings

Objectives and Key Findings

Objectives

This study expands on previous State of Data Intelligence research and investigates additional emerging challenges and trends. New strategies and tools examined include the prevalence and use of data modeling, data product pervasiveness, the strategic shift from data governance to AI governance, navigating challenges created by today's data-intensive environments, and the need to approach data governance and intelligence in a holistic manner. Business and IT professionals should use these findings to inform their technology choices, work process and practices, and strategy for supporting and mapping the components critical to successfully executing data intelligence initiatives and strategies.

Key Findings

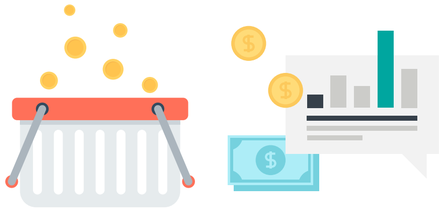


Data modeling is the foundation for data product delivery and collaboration:

Today, 84% of organizations are delivering data products, with 86% modeling their data. Of these, 71% view data modeling as crucial or transformative for enhancing data product delivery and fostering collaboration.

AI is firmly in sight for governance teams and data intelligence initiatives:

Improving data quality (42%), security (40%), and analytics (40%) remain top data governance drivers. But, in 2024, ensuring data readiness and quality for AI (34%) debuted as the fourth most cited driver of data governance programs. The focus on AI governance efforts and AI data readiness needs permeated this year's findings.



Continued data marketplace and data product investments yielding strong business benefits:

Data marketplace adoption has surged by 71% compared to one year ago, with 95% of organizations either planning to develop or already having a self-service data marketplace; 78% have stated the benefits as being significant to game-changing. Additionally, 86% plan to invest in data products in the next 12 to 24 months.

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Data Intelligence Challenges, Strategies, and Impacts

New Data Intelligence Challenges: Tackling AI Governance, Data Readiness, and Reliability Hurdles

As organizations tackle new complexities and threats of emerging technologies, such as AI, growing data volumes, evolving business needs, and more robust data intelligence strategies are needed.

AI governance topped the list of current data intelligence components organizations have found most difficult to manage, with metadata management—also key to AI data readiness—rising 21% in responses since 2023. Data quality monitoring, data quality remediation, data profiling and quality scoring, and data policies and control rounded out the top six components organizations are wrestling with in the new AI era.

What is Data Intelligence?

Data intelligence is the active use of metadata to gain visibility and a deeper and broader understanding of your organization's data, its quality, its context, its usage, and its impact. Data intelligence enables you to discover, trust, manage, and leverage your trusted high-value data for better decisions and outcomes and to better protect against risk. (see more here)

Figure 1. Organizations Integrating AI Into the Data Value Chain Face Shifting Challenges

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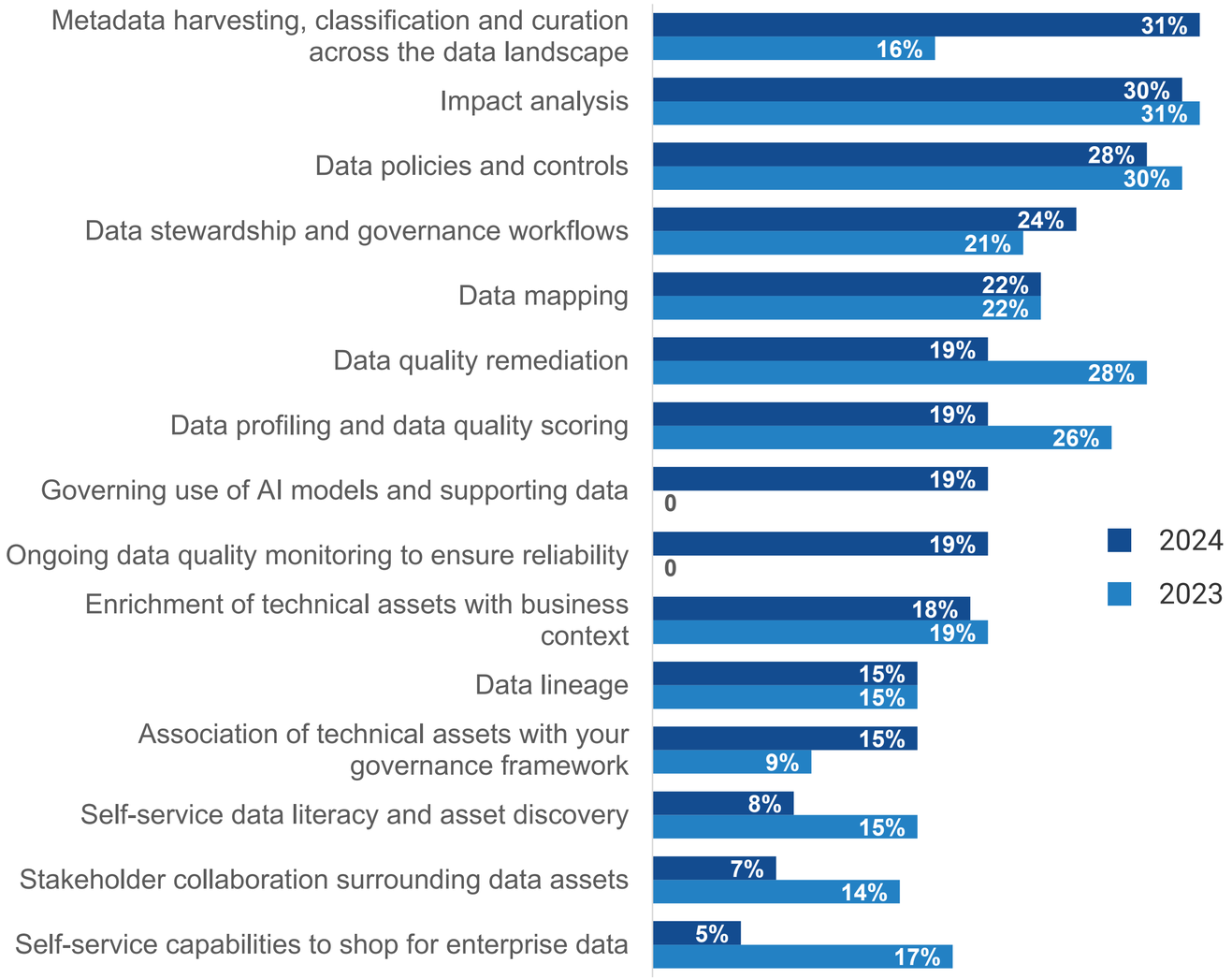
"Metadata harvesting, classification, and curation saw a **94% surge in response between 2023 and 2024 as organizations prepare for future AI initiatives."**

Metadata's Rising Influence: Driving Data Intelligence and AI Readiness in 2024

While cited as the second-most challenging component of data intelligence to manage, metadata management ranked No. 1 as the component with the most impact within organizations.

Metadata harvesting, classification, and curation saw a 94% surge in response between 2023 and 2024 as organizations prepare for future AI initiatives.

Figure 2. Components of Data Intelligence Most Impactful to Organizations



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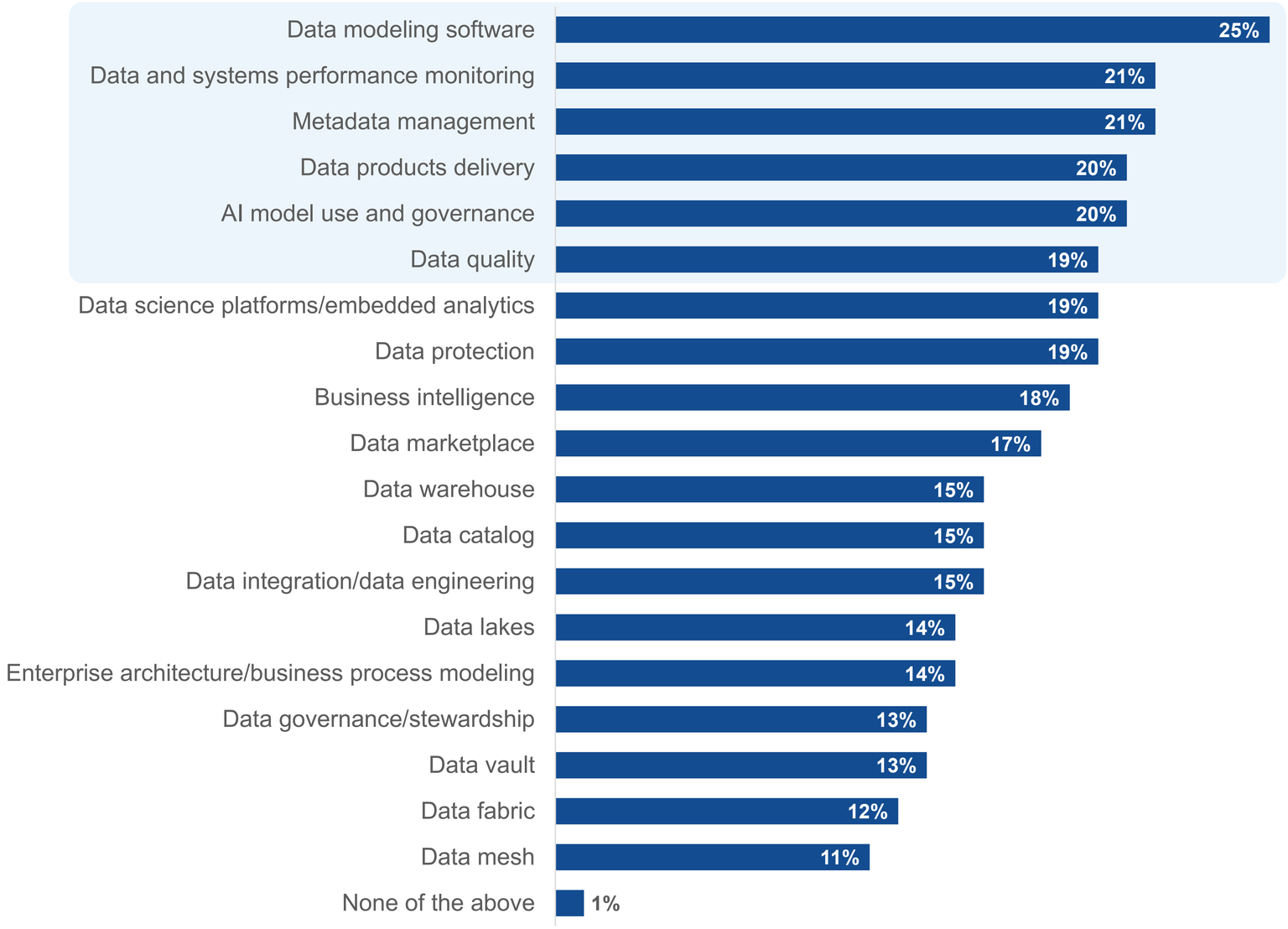
Data Modeling: An Essential Component to Data Intelligence

Data modeling plays a crucial role in data intelligence strategies by structuring data, enabling governance, facilitating integration, and supporting the design of data products. One in four organizations said they are planning to integrate data modeling in their data intelligence initiatives in the coming 12-24 months.

Additionally, about one in five organizations said they plan to integrate data and systems performance monitoring, metadata management, data products delivery, AI model use and governance, or data quality as their next priority to enhance data intelligence.

Figure 3. Data Intelligence Initiatives Rely Upon Data Modeling and Enhanced DataOps



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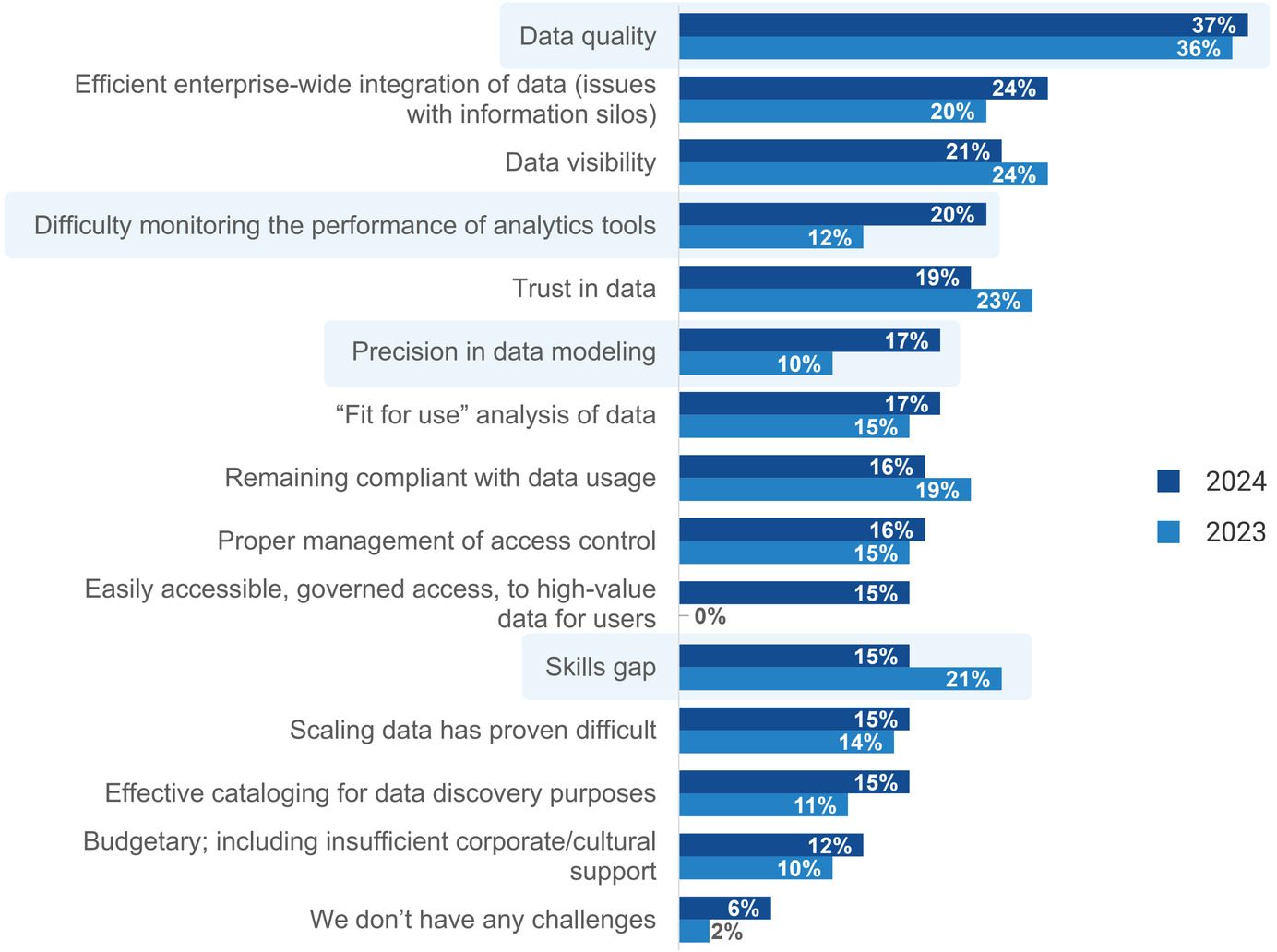
Data Quality Is Top Obstacle to Strategic Data Use, but Data Modeling and Analytics Performance Monitoring Challenges Are Rising

Data quality remains at the top of the list of challenges organizations face in supporting the strategic use of data, but the precision of data modeling and the performance monitoring of analytics tools each saw a sizeable increase in responses. In 2024, respondents were 70% more likely to face data modeling issues and 66% more likely to struggle with monitoring analytics tools.

However, there is good news: 28% fewer respondents reported a skills gap relative to the use of strategic data, thanks to advances such as increased data marketplace adoption. Respondents also reported a decrease in data trust as an organizational issue, down by 21% in 2024 (see Figure 4).

Figure 4. Evolving Challenges in Data Strategy: Modeling and Monitoring Complexity Rise; Skills Gap Shrinks



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Rapid Data Marketplace Adoption Sharply Reducing the Skills Gap

Adoption of internal data marketplaces increased 71% between 2023 and 2024. During the same period, the research showed that, of the organizations using data marketplaces, there was a 2.6x decrease in the number of respondents citing a skills gap as a top challenge to strategic data use (see Figure 5).

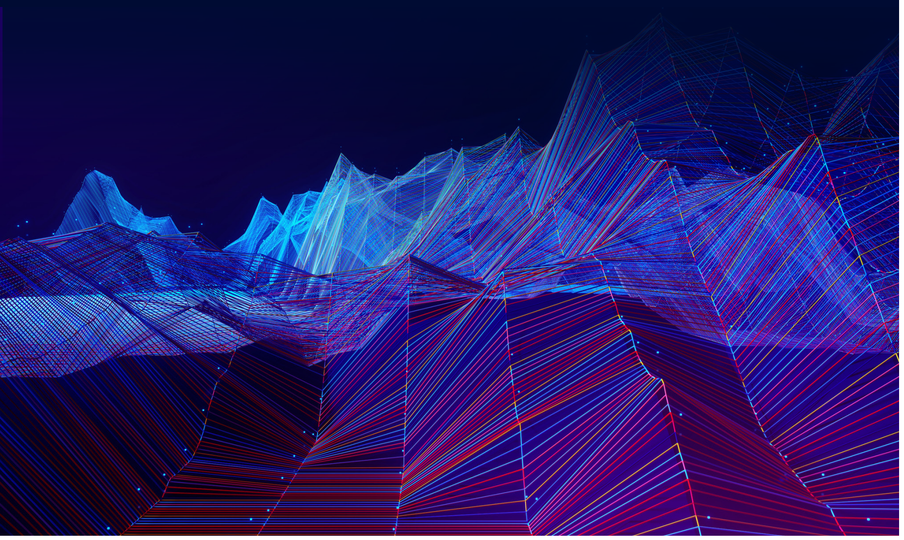
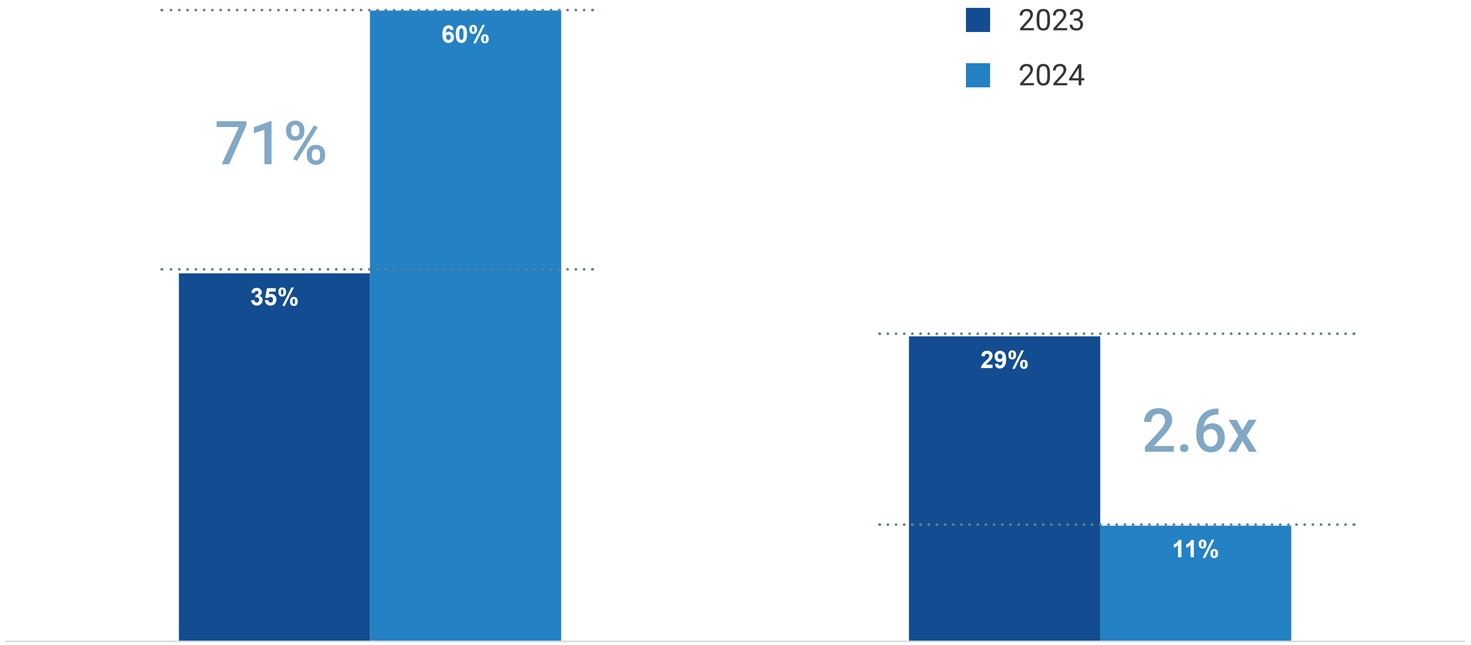


Figure 5. Data Marketplaces Are Bridging the Skills Gap in Strategic Use of Data



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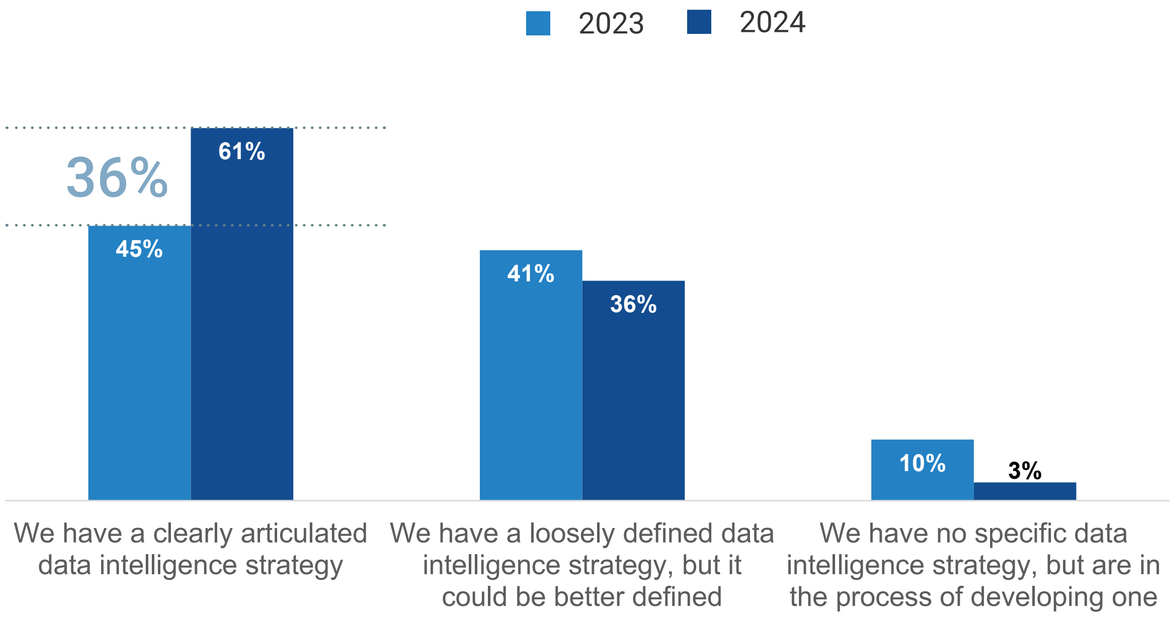
The Rise of Effectively Articulated Data Intelligence Strategies Is Paying Off

The proven benefits of a well-articulated data intelligence strategy are translating to increased implementation rates. In 2024, organizations were 36% more likely to report having adopted well-defined data intelligence strategies, compared to 2023 (see Figure 6).

Implementing data intelligence strategies has shown clear benefits, with 42% of organizations reporting improved employee productivity, and 40% attributing revenue growth to better decision-making augmented by data insights. One-third of respondents also experienced gains in data visibility, risk mitigation, and customer satisfaction, all realizing ROI from data intelligence efforts.

Figure 6. Data Intelligence Strategies Are Gaining Traction, Translating to Positive ROI



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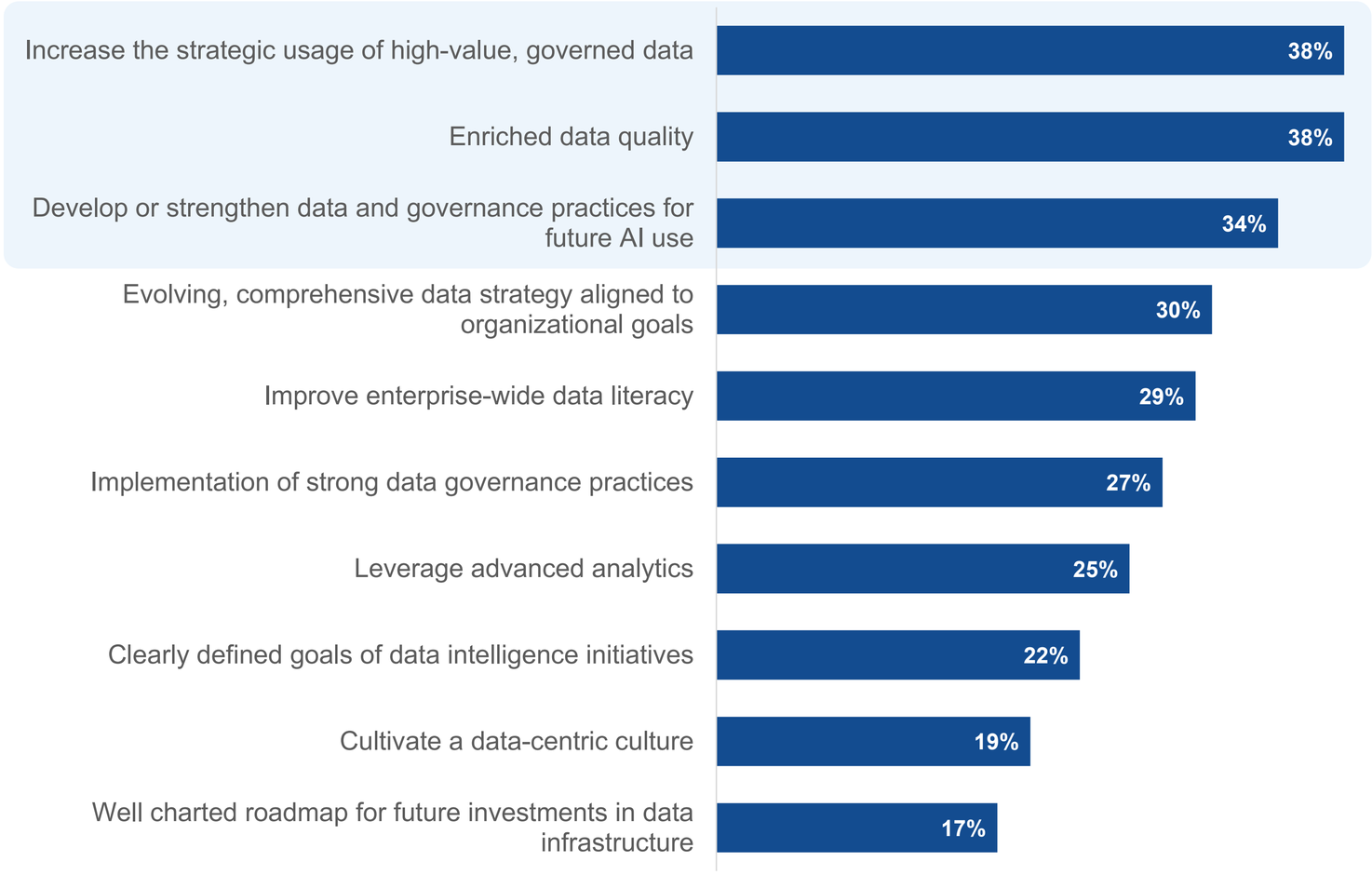
Data Intelligence Priorities: More Use of High-value, Quality Data Today While Preparing for Tomorrow's AI-driven Success

Where are organizations focusing their data intelligence initiatives? When it comes to top data intelligence strategy priorities, organizations are pursuing robust data use across their organizations today (38%) and increasing data quality (38%), while at the same time developing the foundations and governance for AI use tomorrow (34%, see Figure 7).

Figure 7. Data Intelligence Priorities Look to Build Toward Continuous Optimization



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The Emerging Impact and Importance of AI Governance

Data Governance: Evolving from Legal Compliance to AI-ready Strategies

In 2024, IT respondents were 62% less likely to define data governance as primarily focused on legal compliance, compared to 2023. This shift likely reflects growing attention toward ensuring data readiness for AI use, a new priority introduced in the 2024 survey (see Figure 9).

Data quality remained the top focus for IT respondents (49%) when defining data governance, whereas understanding data and its flows across the organization (47%) slightly edged out ensuring sensitive data is classified and meets regulatory compliance (46%) as well as ensuring data quality (46%) for respondents in line-of-business roles.

Figure 8. Organizations Are Redefining Data Governance With AI Preparedness in Mind

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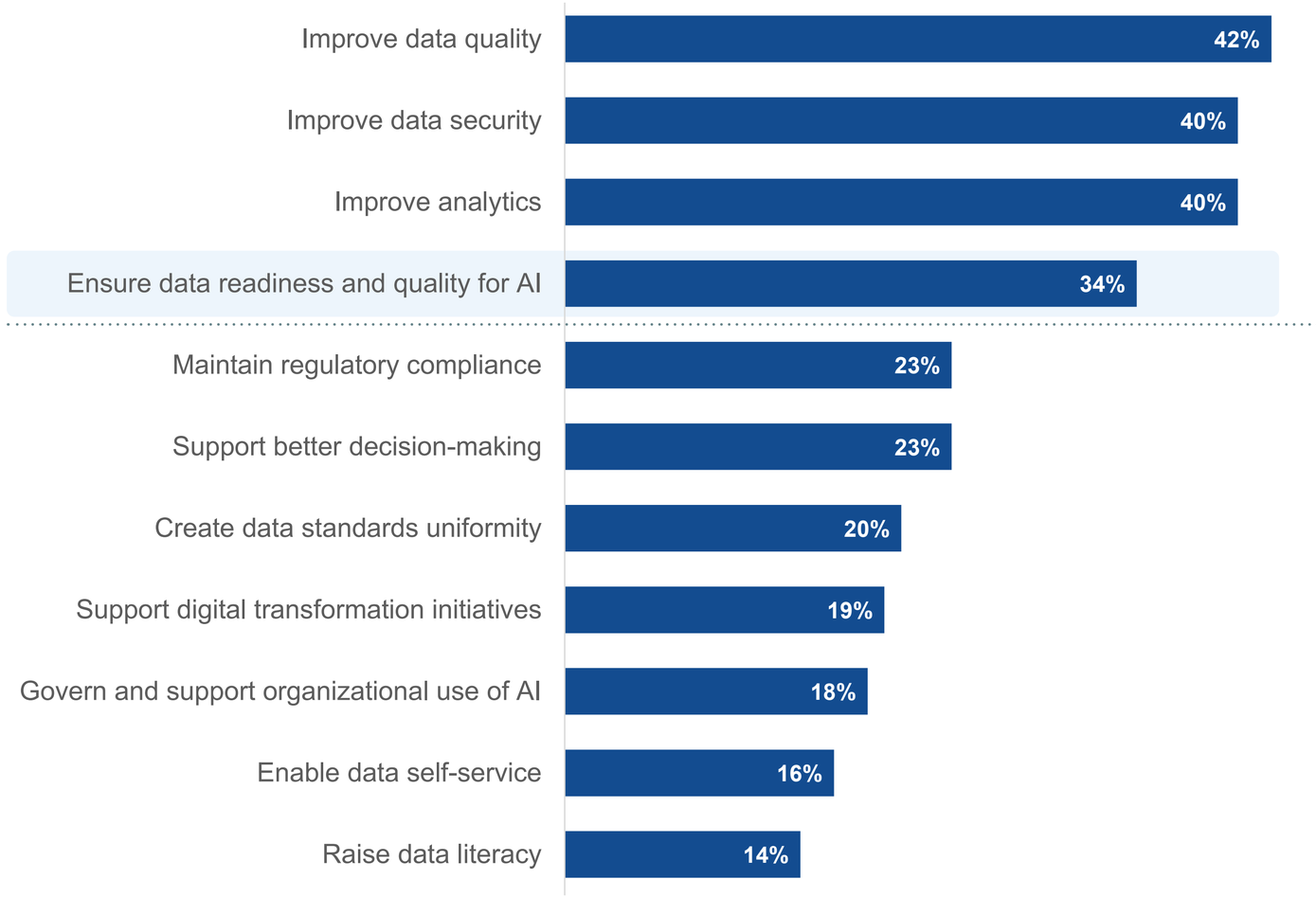
Ensuring Data Quality and Data Readiness to Support AI Use Are Governance Priorities

Unsurprisingly, improving data quality (42%), security (40%), and analytics (40%) continue to be top drivers of data governance efforts. However, appearing for the first time in this annual research, ensuring data readiness and quality for AI specifically (34%) ranked among the top four responses, highlighting the growing importance of AI in strategic discussions (see Figure 9).

Figure 9. AI Is a Hot Topic and Emerging Driver of Data Governance Programs



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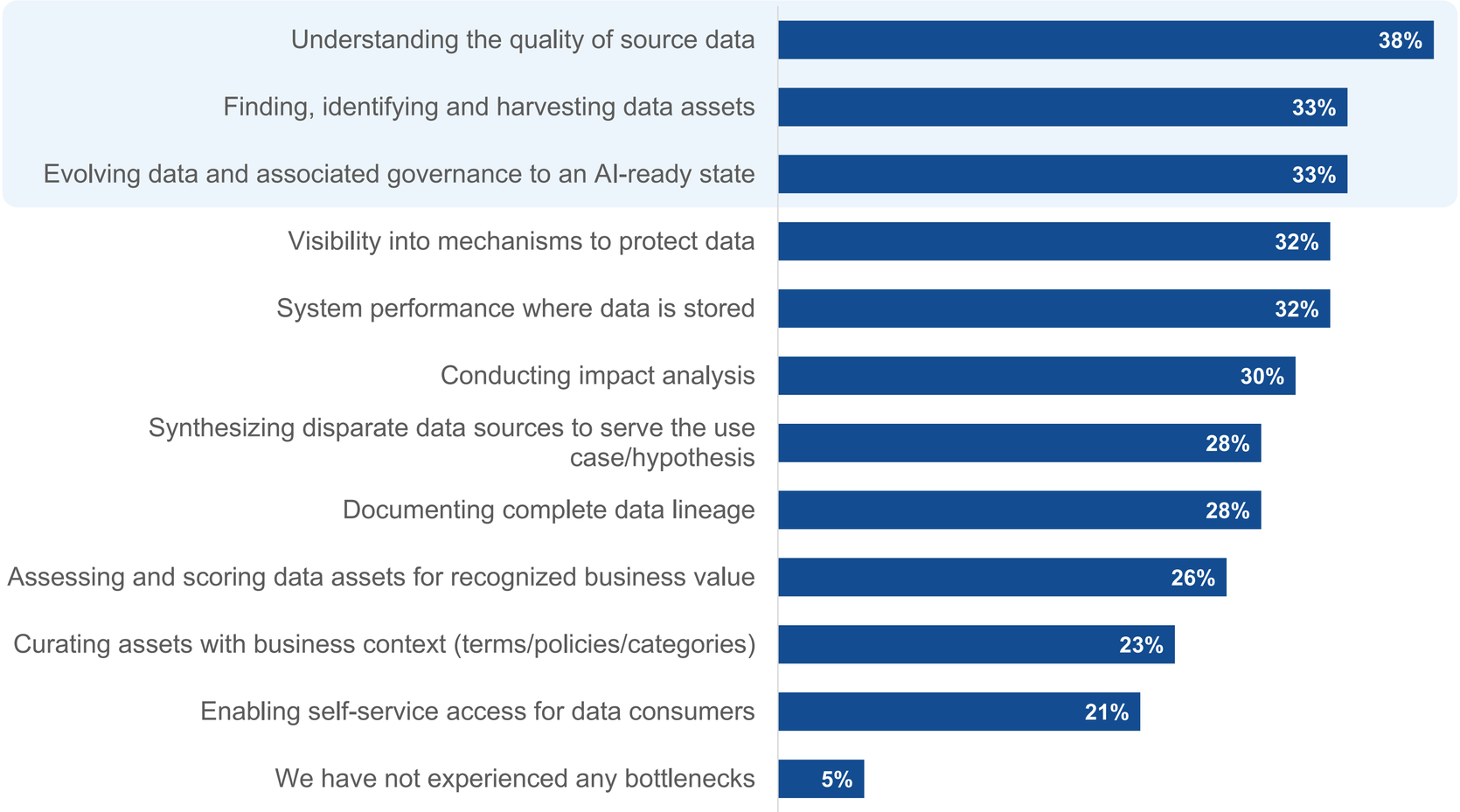
Data Quality Visibility: Top Bottleneck to Data Value but Improving

Understanding the quality of source data is the most serious bottleneck impacting an organization's data value chain. But as adoption of data intelligence strategies and governance initiatives increases, and as supporting technology improves, visibility into data quality is less of a hindrance.

Organizations in 2024 were 29% less likely to report understanding source data quality as a serious bottleneck, compared to 2023, when 54% reported it as an issue (see Figure 10).

Collectively, the top three most serious bottlenecks highlight the importance of seeing and trusting in the quality of data—a task that itself is becoming more difficult—while keeping lockstep in the pursuit of AI-ready data.

Figure 10. Data Value Chain Bottlenecks Appear in Numerous Process-workflow Scenarios



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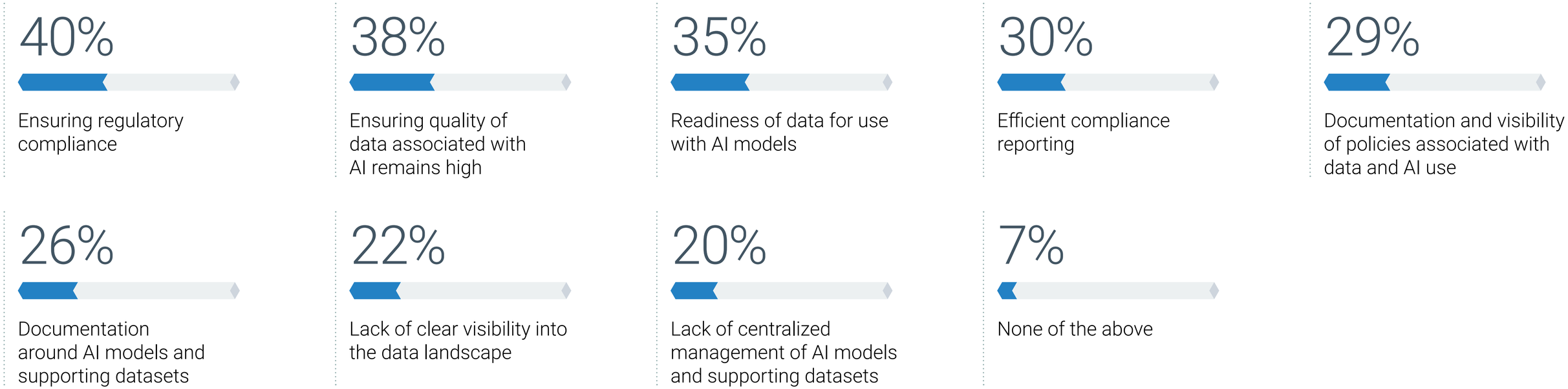
Navigating the AI Frontier: How Governance Is Shaping the Future of Responsible AI Adoption

To many, the introduction of AI can seem like wandering into the Wild West. With technology and adoption moving at a frenetic pace, establishing solid AI governance practices now will set organizations up for future optimization of these capabilities and establish regulatory good habits that will better position organizations for the inevitable guidance and mandates.

Organizations understand the importance of preparing for regulatory compliance, with 40% citing this as a top challenge when it comes to AI governance (see Figure 12). Ensuring AI data quality and reliability (38%) and data readiness efforts (35%) round out the list of respondents' top three concerns.

Figure 12. Compliance Readiness and Data Reliability Reported as Top Challenges and Concerns Related to AI Governance



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Transforming Data Delivery Through Data Products

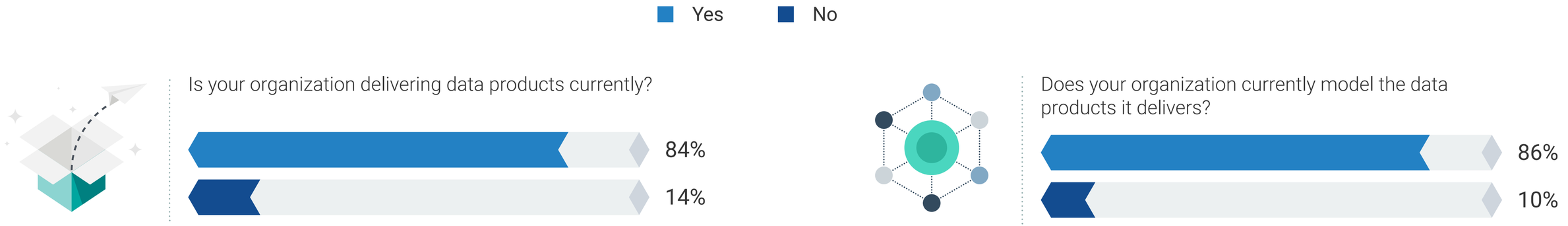
"84% of organizations now **deliver data products to increase the consumption of high-value, trusted data** across their organizations, with 86% of these **modeling the data products provided.**"

Data Modeling: The Starting Point for Data Products

84% of organizations now deliver data products to increase the consumption of high-value, trusted data across their organizations, with 86% of these modeling the data products provided. Respondents reported a wide variation in the number of data products offered, ranging from less than 10 to more than 300, with an average of 155 products.

The high use of data modeling in data product delivery demonstrates it is a vital component of modern business strategies, ensuring data is well structured, relevant, and primed for analysis. (see Figure 12).

Figure 12. Most Organizations Model the Data Products They Deliver

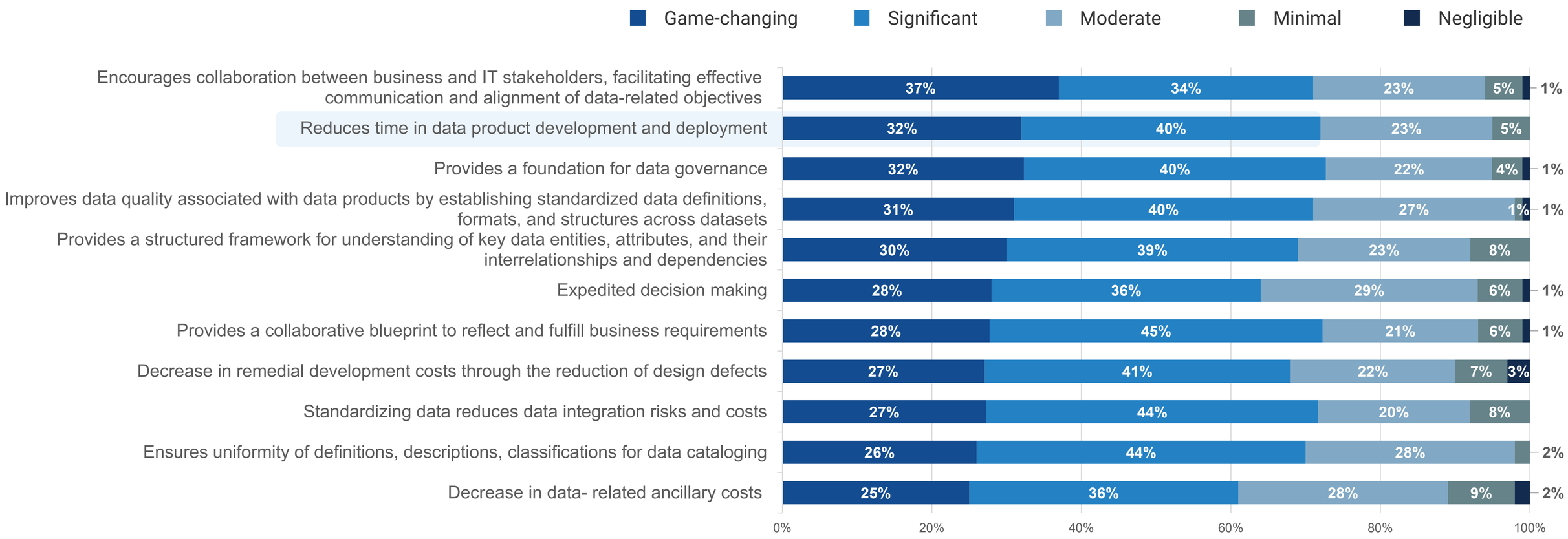


Data Modeling Speeds Data Product Delivery, Among Other Benefits

Of the respondents using data modeling to deliver data products, 72% cited its ability to reduce time in data product development and deployment as significant or game-changing.

Other top data modeling benefits with a significant or game-changing impact included its ability to serve as a collaborative blueprint for business requirements (73%); its means of providing a data governance foundation (72%); and its potential to encourage collaboration among IT and line-of-business teams (71%, see Figure 13).

Figure 13. Data Modeling ROI Surfaces in a Wide Variety of Business Benefits



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Data Products ROI: Quality, Unified Data Delivered With Business Context Yields High Value

Fundamentally, data products can extend the strategic use of high-value data across an organization by delivering better data quality along with the business context and governance to know how to best use it—all of which translates into business benefits. Respondents cited improved decision-making due to higher-quality data (51%), improved collaboration across the enterprise (49%), improved data analysis (47%), and greater trust in data itself (43%) as the top four benefits (see Figure 14).

Figure 14. Data Products Build and Enhance Trust in Data for Better Analysis and Decision-making

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Figure 15. Will Organizations Without Self-service Data Marketplaces Adopt This Technology?

The Rise of Self-service Data Marketplaces: A Game Changer for Data Delivery

Self-service data marketplaces are an attractive vehicle for delivering data products. This is reflected by the 95% of organizations that reported having plans to develop (35%) or having already implemented self-service data marketplace capabilities (60%). Of those respondents, 78% found these capabilities to be either significant or game-changing. Yet for those with no self-service marketplace currently deployed, nearly three-quarters of these respondents said they anticipate adoption in the next 12 to 24 months (see Figure 15).

Primary drivers for adopting a data marketplace include increasing self-service access to data (43%), ensuring available data is high-value and can be trusted (42%), and increasing collaboration around data (39%), among others.

The effective use of data products results in improved ROI through better decision-making and enhanced collaboration. Additionally, the increasing popularity of data modeling as well as self-service data marketplaces underscores the growing importance of efficient and accessible data delivery solutions.

43%
Increased ease of access to datasets and data products

42%
Create a centralized catalog of high-value, trusted data

39%
Drive data-oriented collaboration

38%
To support self-service provisioning

38%
Empower interdepartmental use of data

38%
Elevate data visibility across the organization

35%
To establish better business context around data to guide consumption

35%
As a component of data governance initiatives

33%
Establish foundation for (potential) future data monetization

33%
Foster a data-driven culture

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Conclusion

2024 has been a transformative year for data intelligence as organizations adapt to the growing demands of AI, governance, and innovation. A dual focus on proactive empowerment and protective risk management is driving businesses to democratize data access while safeguarding against emerging risk and regulatory compliance needs. Data intelligence has become a key enabler of AI data readiness, operational efficiency, and growth.

Metadata management, a continued focus on data quality, and the integration of data modeling within data intelligence efforts show the increasing sophistication of data strategies, helping businesses handle rising data complexities. The surge in self-service data marketplaces and data product delivery reflects a commitment to innovation, closing the skills gap and boosting collaboration, productivity, and decision-making.

With stronger ROI from data intelligence, 2024 is a pivotal year for businesses to leverage data as a strategic asset. This year's findings reaffirm the critical role data intelligence plays in unlocking value, optimizing resources, and building resilient, data-driven enterprises ready for tomorrow.

RESEARCH METHODOLOGY AND DEMOGRAPHICS

This study—fielded between June 6, 2024, and July 3, 2024—included business (39%) and technology (61%) professionals responsible for/familiar with their organizations' data governance, data management, and data operations strategies, initiatives, objectives, and/or technology implementations.

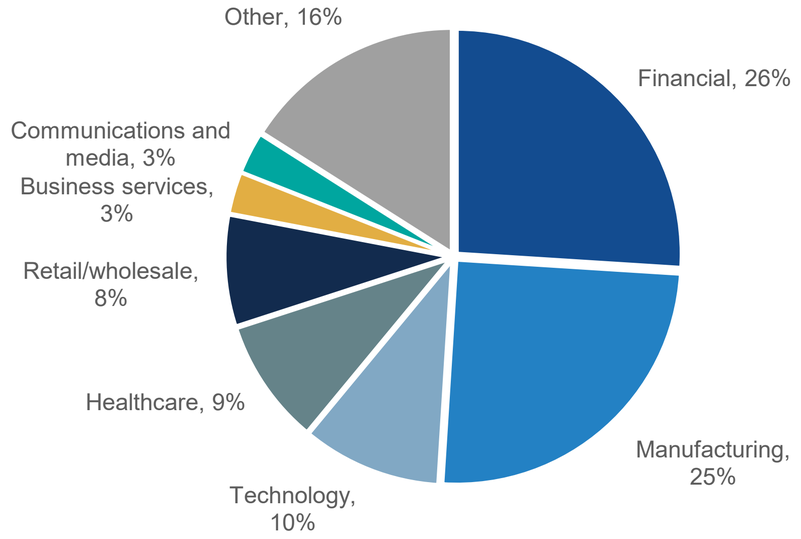
Respondents in the study came from organizations with 1,000 or more employees and $100M+ annual revenue. These organizations were based in North America (U.S. and Canada).

After applying data quality control best practices and screening the remaining completed responses (on several criteria) for data integrity, a final sample of 220 respondents remained. All respondents were provided an incentive to complete the survey in the form of cash awards and/or cash equivalents.

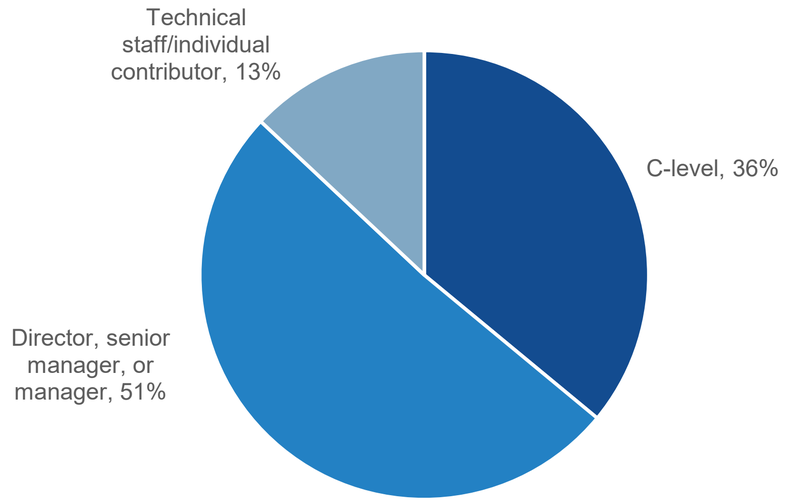
Survey confidence level is 95% with a margin of error of +/-6.5%.

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

Respondents by Industry



Respondents by Seniority



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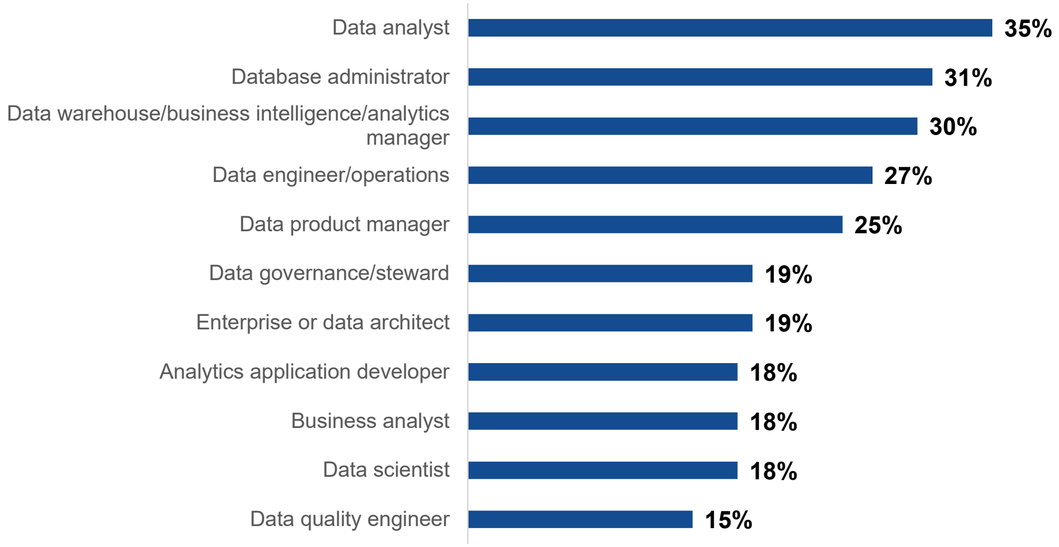
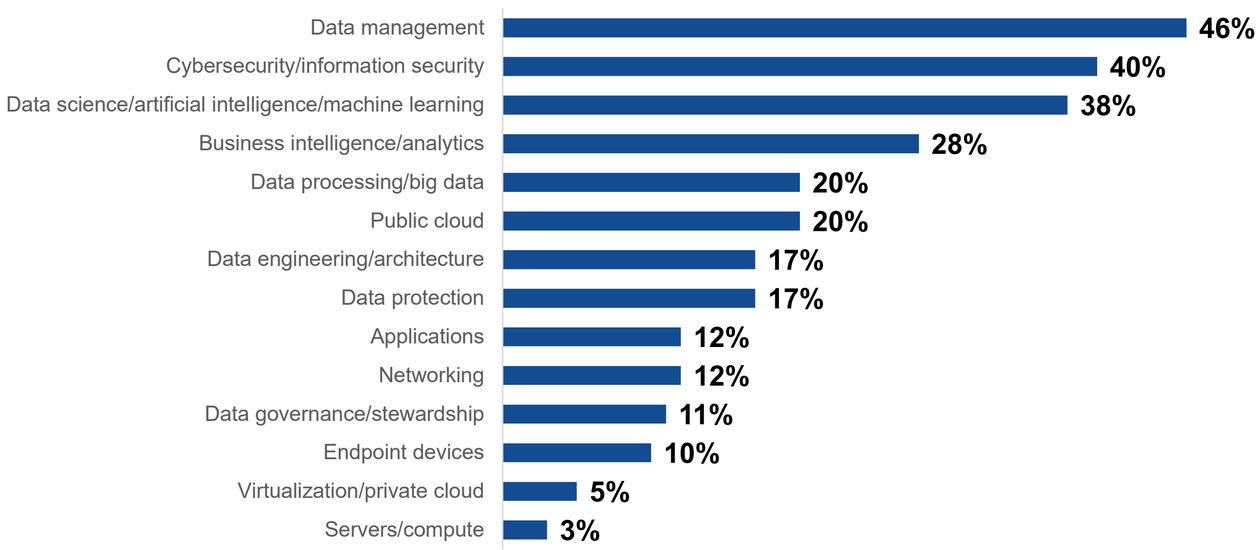
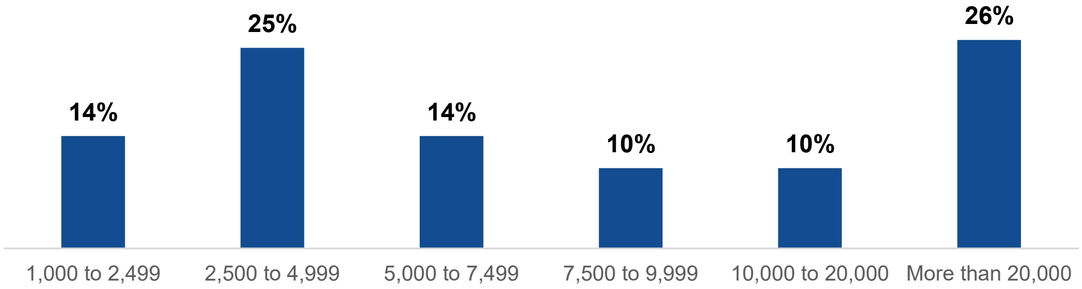
Respondents by Primary Job Function(s)/Focus Area(s)



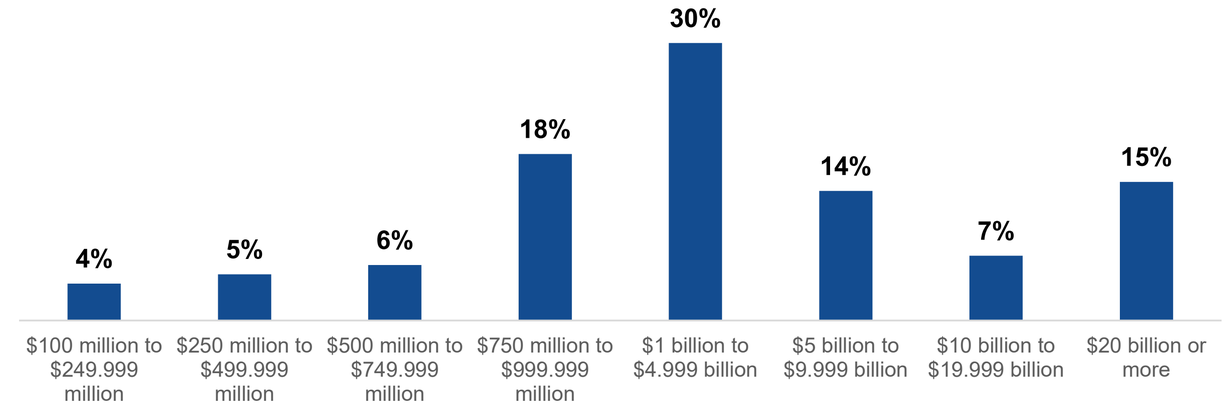
Respondents by Areas of Technology Involvement



Respondents by Number of Employees



Respondents by Annual Revenue



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ABOUT

erwin by Quest offers an integrated, automated platform that unites data modeling and data intelligence software to make it easier to ensure AI-ready, trusted data for your enterprise. From data model to data marketplace, erwin by Quest can help you govern and drive the use of high-value, reliable data and AI models widely across your organization. Advance data and AI governance, data platform modernization, data product delivery, regulatory compliance, and more. erwin provides the foundation to expand data visibility, raise data literacy, protect against data and AI risk, and turn valuable data into business opportunity.

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