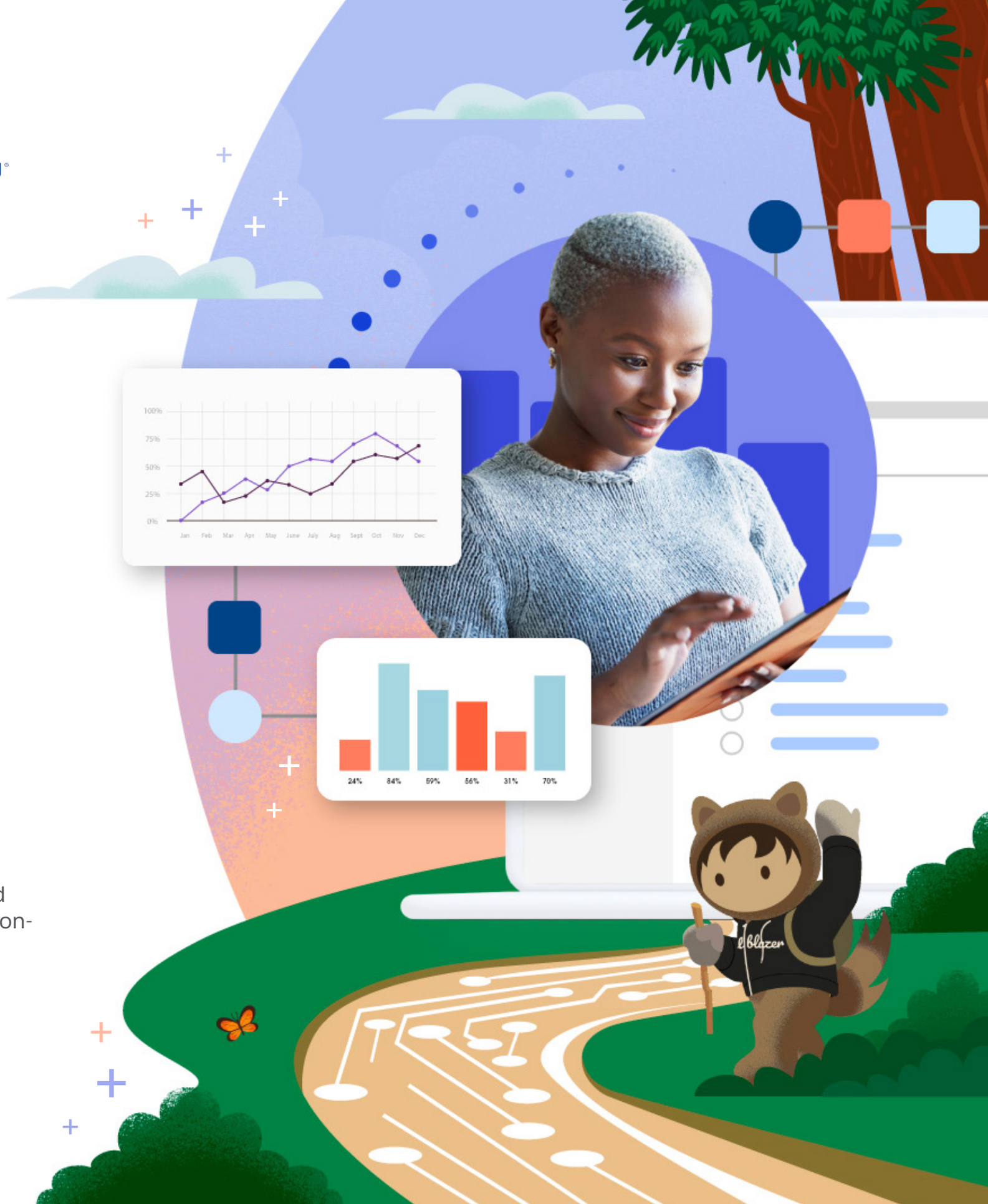
State of Data and Analytics

Global insights from over 10,000 analytics, IT, and business leaders on data management and decision-making in the age of artificial intelligence.



Executive Letter

Wendy Batchelder
SVP, Chief Data Officer

AI isn't new, but its fundamental role in the future of business is. AI, especially generative AI, is one of the most transformative advancements we'll see in our lifetime, but it's not enough to invest in just the technical capabilities of AI. Organizations must prioritize a comprehensive and reliable data foundation to help guide decision-making and strategy development.

As companies rapidly embrace AI and realize its benefits, trust must be their top priority. And to instill trust in AI, they must first instill trust in the data that powers it. Think about data as a well-balanced diet for AI – you're healthiest when you avoid junk food and consume all the proper nutrients. Simply put, organizations can only harness the full power of AI when it is fueled by accurate, comprehensive data.

Our State of Data and Analytics report highlights this vital connection and the urgent need for trusted data now more than ever. However, business leaders are nearly unanimous in their belief that they aren't unlocking their data's full potential.

I hope you find this report a valuable reference point as you navigate how to establish a strong data foundation, manage increasingly complex volumes of data, and capitalize on AI's ever-evolving capabilities.

Wendy Batchelder
SVP, Chief Data Officer

Contents

What You'll Find in This Report

For the "State of Data and Analytics" report, Salesforce surveyed 5,540 analytics and IT decision makers and 5,540 line-of-business leaders worldwide to discover:

- Strategies used to navigate rapid advancements in artificial intelligence (AI)
- Challenges organizations face in realizing the full potential of their data
- Tactics analytics and IT leaders employ to manage increasingly extensive and complex data

Unless cited otherwise, data in this report are from two double-anonymous surveys conducted from June 16 through July 31, 2023. The first survey generated 5,540 responses from analytics and IT decision makers across North America, Latin America, Asia-Pacific, and Europe. The second survey generated 5,540 responses from line-of-business leaders from the same regions. See page 25 for further survey demographics.

Due to rounding, not all percentage totals in this report equal 100%. Comparison calculations are made from total (not rounded) numbers.

Australia
Brazil
Canada
France
Germany
India
Israel
Italy
Japan
Mexico
Netherlands
Singapore
South Korea
Spain
Switzerland
United Arab Emirates
United Kingdom
United States

5,540 analytics and IT leaders surveyed worldwide

5,540 line-of-business leaders surveyed worldwide

Flag icons: Getty Images

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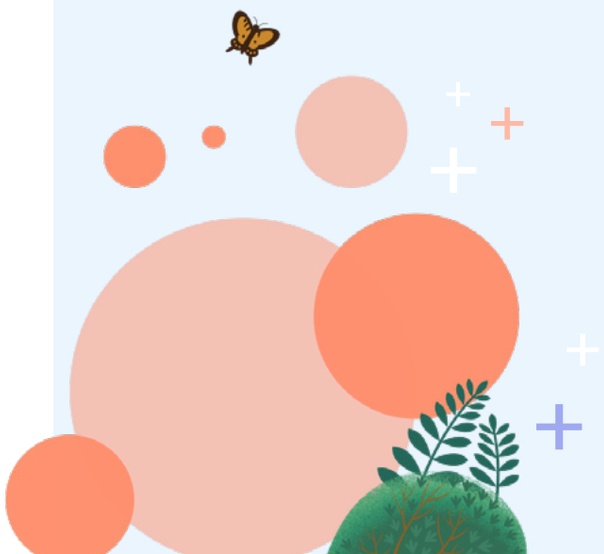
Executive Summary

Behind transformative breakthroughs powered by generative AI, advanced analytics, and real-time personalization, is the quiet reliance on trusted data. Nearly all analytics and IT decision makers surveyed (92%) say trustworthy data is needed more than than ever before.

How can business, IT, and analytics leaders harness data to fuel these opportunities and overcome roadblocks that are derailing data-driven strategies? This report uncovers the obstacles leaders are facing and the tactics they're focusing on to maximize their data's volume.



01 A Strong Data Foundation Fuels AI

Advances in AI are fast-moving, putting pressure on data management teams to supply algorithms with high-quality data. **Eighty-seven percent of analytics and IT leaders say advances in AI make data management a high priority.**

02 Data's Full Potential Remains Elusive

Analytics, IT, and business leaders all cite security threats as the top barrier to successful data management. However, misalignment between data strategy and business goals complicates efforts. Meanwhile, **the amount of data that companies generate is expected to increase 22% on average over the next 12 months.**

03 The Road to Data and AI Success Is Winding

To secure and scale data and analytics capabilities, analytics and IT leaders use a combination of strategies, like reimagining data governance, strengthening internal data culture, and deploying cloud technologies. **Simplifying IT management is the biggest driver for moving apps and analytics to the cloud.**

Introduction

AI Puts Trusted Data in the Spotlight

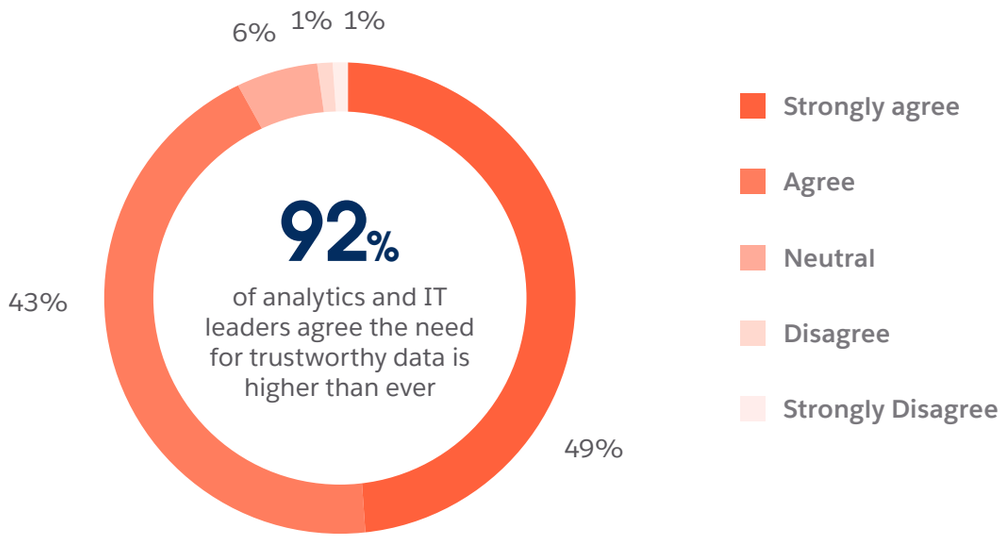
AI Stokes Demand for Trusted Data

The need for trusted data is not new, given longstanding calls for real-time personalization and increased business efficiencies. Generative AI is intensifying these demands, and analytics and IT leaders are racing to fortify their data foundations. **Eighty-six percent of analytics and IT leaders agree that AI's outputs are only as good as its data inputs.**

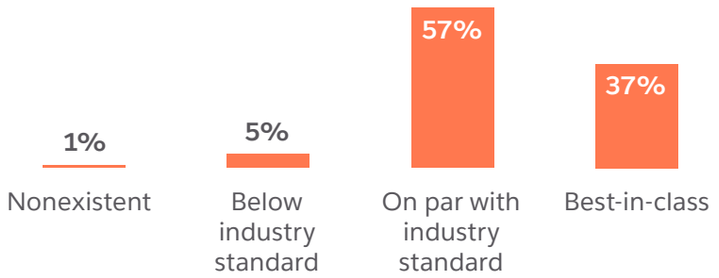
The good news? Technical leaders are upbeat about where they stand. When considering a variety of factors like data capabilities, processes, sponsorship, investment, and vision, more than one-third of analytics and IT leaders classify their data maturity as best-in-class.

However, only 6% of these leaders describe their data maturity as below industry standard or nonexistent, representing at best the difficulty of benchmarking maturity against peers, or at worst, overconfidence in data strategy and capabilities.

Analytics and IT Leaders Examine Data Maturity Amid Rising Need for Trusted Data



Analytics and IT Leaders Who Assess Their Company's Data Maturity as Follows
Considering capabilities, processes, sponsorship, structure, investment, and vision for data



Leaders Focus On Data Trust and Utilization

Despite generally positive self-assessments by IT and analytics leaders, over nine in 10 business leaders (94%) believe they should be getting even more value from their data – signalling room for improvement.

To meet this need, analytics and IT leaders are focused on the fundamentals: Data quality, stronger security, and AI-readiness.

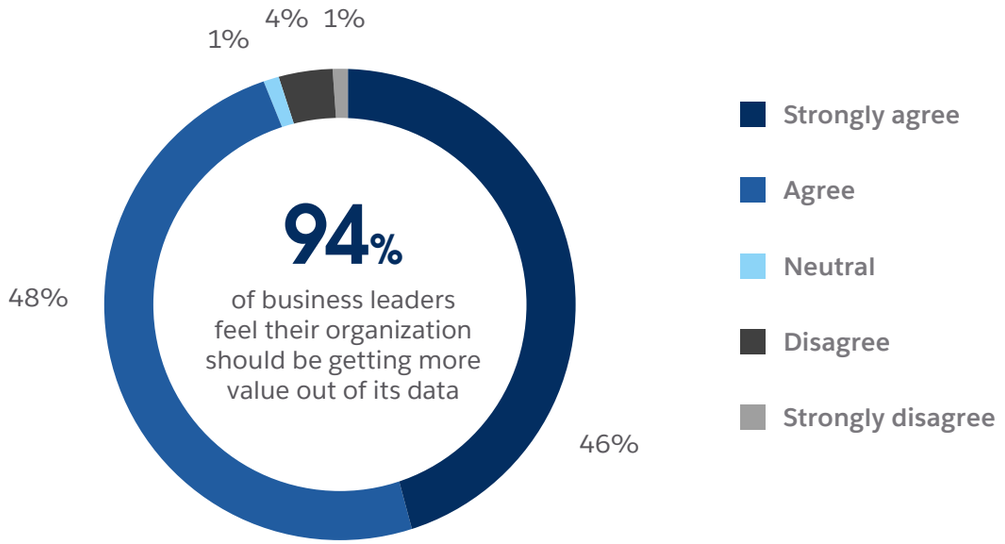
The problem? While leaders' goals are straightforward, the path to achieving them is anything but.

> "[AI's] potential is immense. You don't have to sell people on the potential. What you have to sell people on is: How do we go about it? What is a short-term strategy? What is a long-term strategy?"

DEEP SRIVASTAV

MEMBER OF TABLEAU'S DATA LEADERSHIP COLLABORATIVE AND HEAD OF AI AND DIGITAL TRANSFORMATION, FRANKLIN TEMPLETON

Leaders Stress Need for Improved Data Trust and Utilization



Analytics and IT Leaders' Top Data Priorities

1	Improve data quality
2	Strengthen security / compliance
3	Build AI capabilities
4	Improve company-wide data literacy
5	Modernize tools and technologies

01

A Strong Data Foundation Fuels AI

01

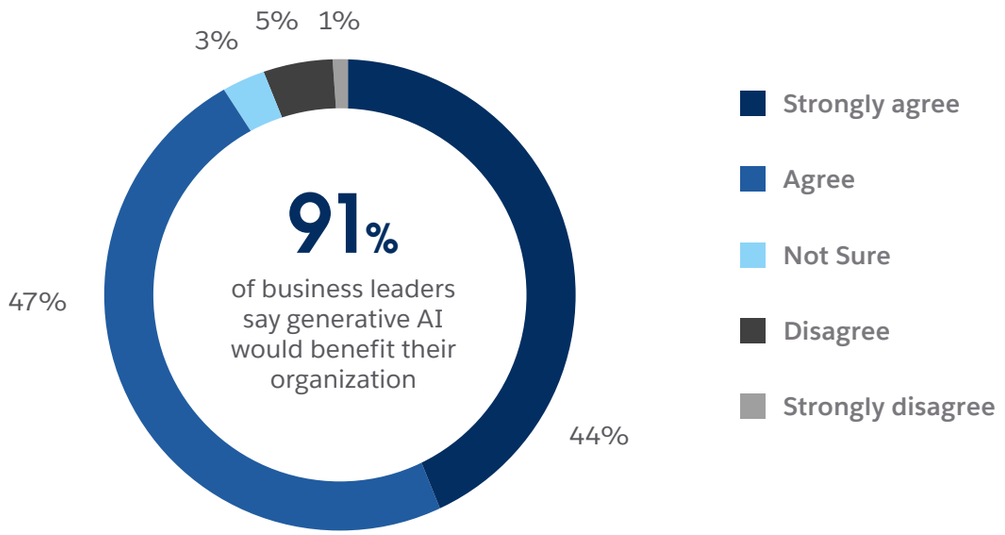
Business Leaders Are Concerned About Capturing Generative AI Value

Generative AI is a significant leap beyond more established iterations of related technologies like predictive AI, and business leaders are embracing its promise. Over nine in 10 (91%) see generative AI as providing a major advantage given appealing use-cases ranging from content creation to software development.

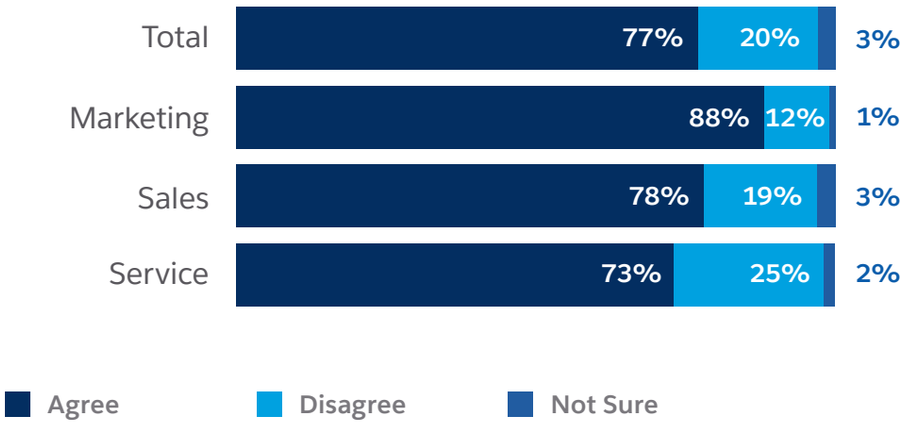
Despite its novelty, generative AI is advancing quickly. Over three-quarters of business leaders already fear they are missing out on generative AI's benefits.

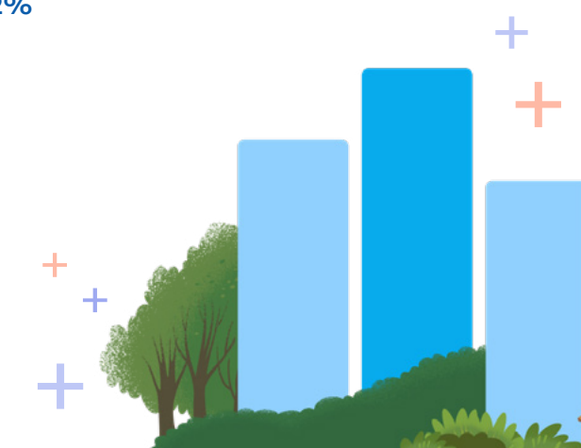
Marketing leaders are especially nervous they aren't fully harnessing generative AI in workflows, with 88% concerned their companies are falling behind.

Business Leaders Eager To Benefit from Generative AI



Percent of Business Leaders Worried Their Company Is Missing Out on Generative AI's Benefits





SPOTLIGHT: Generative AI Spurs Data Ethics and Equity Concerns

Taking advantage of generative AI requires complete, unified, and accurate data, according to over half of IT leaders. Yet roadblocks remain.

A recent survey found most IT leaders don't have a unified data strategy and can't integrate generative AI into their current tech stack.

Technical requirements aside, generative AI also surfaces serious ethical considerations.

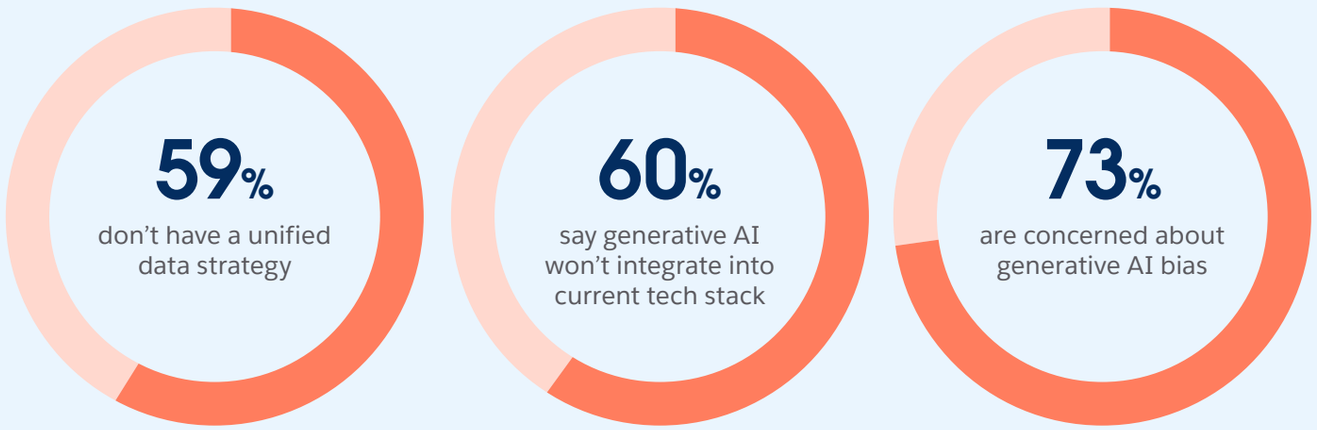
83% of IT leaders think companies must work together to ensure generative AI is used ethically.

Nearly three-quarters of IT leaders are wary of biased or inaccurate results, yet fewer than a third consider ethical use guidelines critical.

Successful AI Use Requires Proper Data Foundation and Ethics

IT Leaders' Requirements for Successful Generative AI Use

IT Leaders' Concerns with Generative AI



Source for all data on this page: **"Generative AI Snapshot Series,"** Salesforce, March 2023.

01

AI Shines Light on Data Management

Generative AI may be getting all the buzz, but more established applications of AI, like predictive analytics and chatbots, have benefitted organizations for some time.

Technical leaders using AI report noticeably faster decision-making and operations. Speed isn't the only perk: analytics and IT leaders say they have more time to tackle strategic challenges, rather than getting bogged down in mundane tasks.

Customers, too, stand to benefit. Technical leaders describe significant improvements to customer satisfaction thanks to AI.

Given the dependence of AI's outputs on the quality of underlying data, it's no surprise that nearly nine in 10 analytics and IT leaders say new developments in AI make data management a high priority.

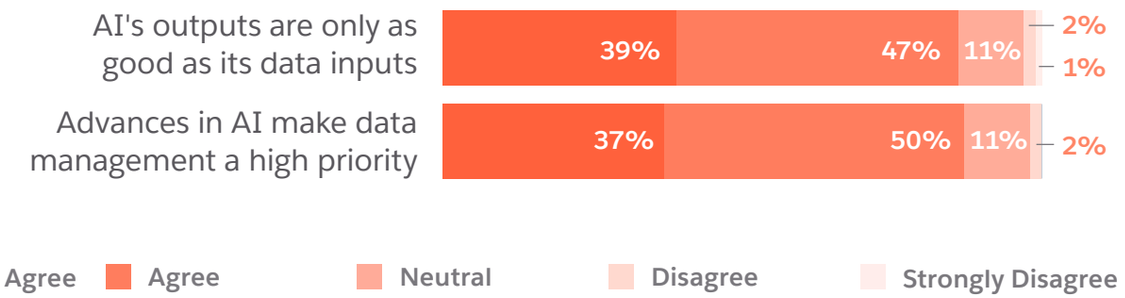
Analytics and IT Leaders' Top Data Priorities

Analytics and IT Leaders' Top Realized AI Benefits
Ranked by "significant" benefit

1	Faster business decision-making
2	Operational efficiencies
3	Free up time for valuable work
4	Automated workflows
5	Improved customer satisfaction

Base: analytics and IT leaders who use artificial intelligence

Extent to Which Analytics and IT Leaders Agree with the Following



01

Data Maturity Is a Sign of AI Preparedness

Data maturity is a building block of successful AI adoption, with high-maturity organizations citing superior infrastructure, strategy, and alignment compared to low-data-maturity organizations.*

Differences between high- and low-maturity companies are stark when it comes to data quality.

High-maturity respondents are 2x more likely than low-maturity respondents to have the high-quality data needed to use AI effectively.

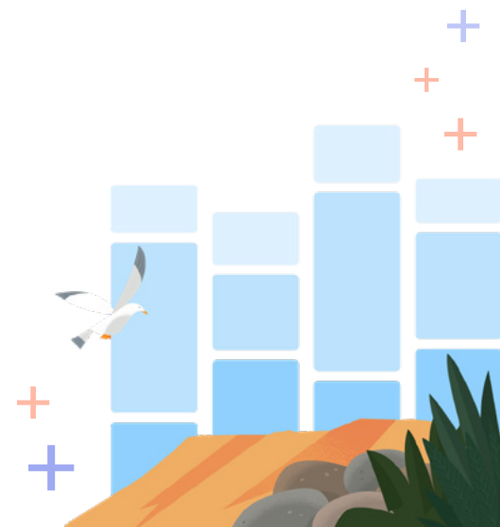
*Low-data-maturity organizations are defined as respondents who report *nonexistent* or *below industry standard* data maturity.

High-data-maturity organizations are defined as respondents with self-reported best-in-class data maturity.

High-Maturity Organizations Feel Better Prepared to Harness AI

Analytics and IT Leaders Who Assess The Following as Excellent at Their Company

	LOW DATA MATURITY	MODERATE DATA MATURITY	HIGH DATA MATURITY
Data quality	30%	39%	59%
Technology infrastructure	36%	40%	57%
Artificial intelligence strategy	32%	36%	56%
Technical talent / skills	33%	36%	56%
Business stakeholders alignment	34%	36%	55%
Security / compliance capabilities	32%	39%	55%



02

Data's Full Potential Remains Elusive

02

Data Strategies Are Disconnected from Business Goals

Getting a handle on organizational data may not pay off until business and technical stakeholders agree on core objectives.

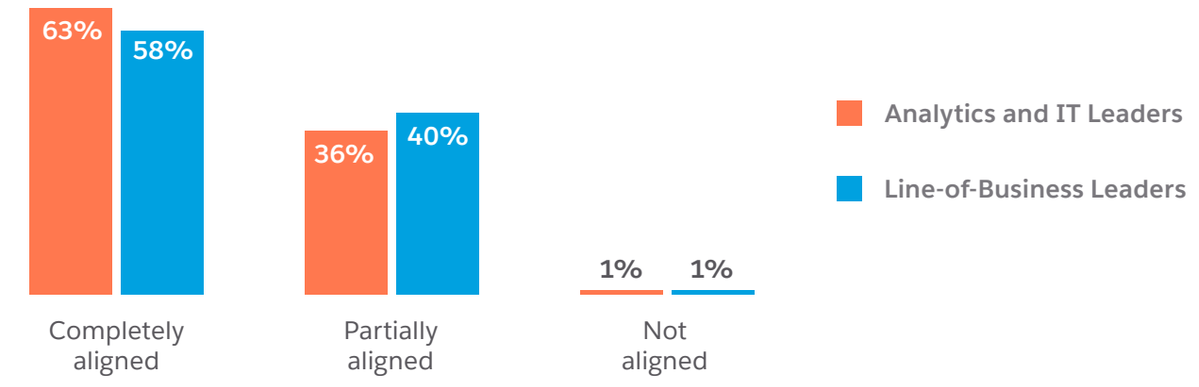
Many leaders admit they need tighter alignment: Forty-one percent of line-of-business leaders say their data strategy has only partial or no alignment with business objectives. Similarly, 37% of analytics and IT leaders see room for improvement.

Part of the disconnect may stem from a lack of shared KPIs. Over six in 10 analytics and IT leaders are in the dark about line-of-business teams' data utilization or speed to insight, for example.

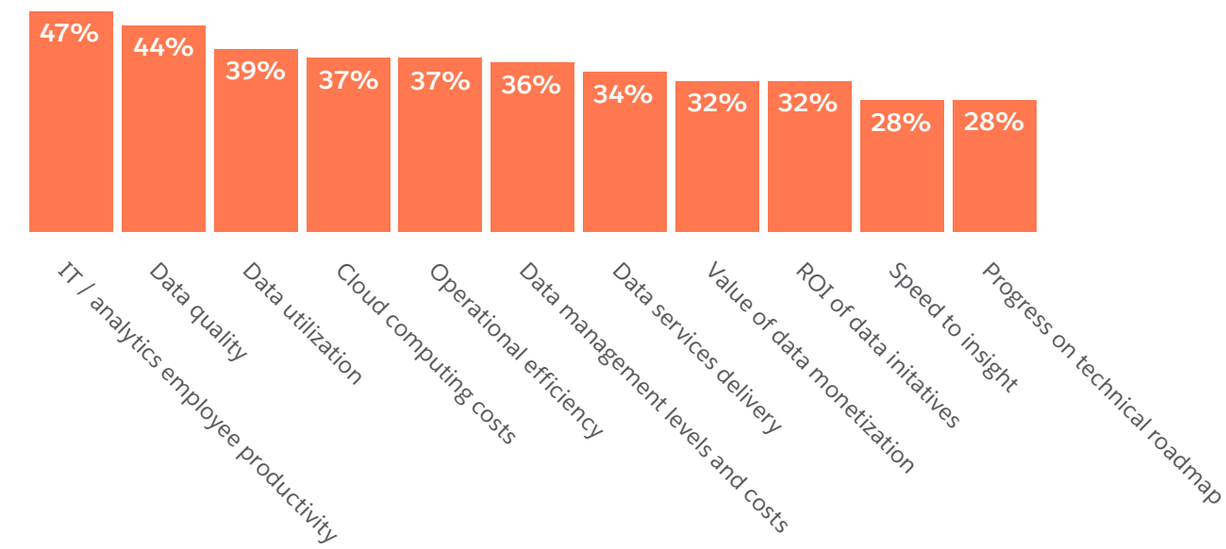
Furthermore, fewer than one-third of analytics and IT leaders track the value of data monetization. This raises the issue of whether the majority of teams can effectively quantify the ROI of data initiatives for business stakeholders in the first place.

Leaders' Lack of Alignment Highlights Need for Data Strategy and Performance Measures

Extent Data Strategy Aligns with Business Objectives



Analytics and IT Leaders Who Track the Following Metrics



02

Security Is Top Roadblock to Achieving Data Goals

With 94% of business leaders believing they should get more value from their data, what's stopping them?

78% of analytics and IT leaders say their organizations struggle to drive business priorities with data.

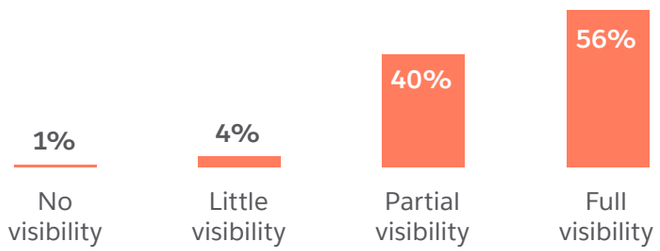
The top culprit for both technical and line-of-business leaders is the same: security threats. As opportunities to integrate new data sources and leverage new technologies proliferate, so do vulnerabilities.

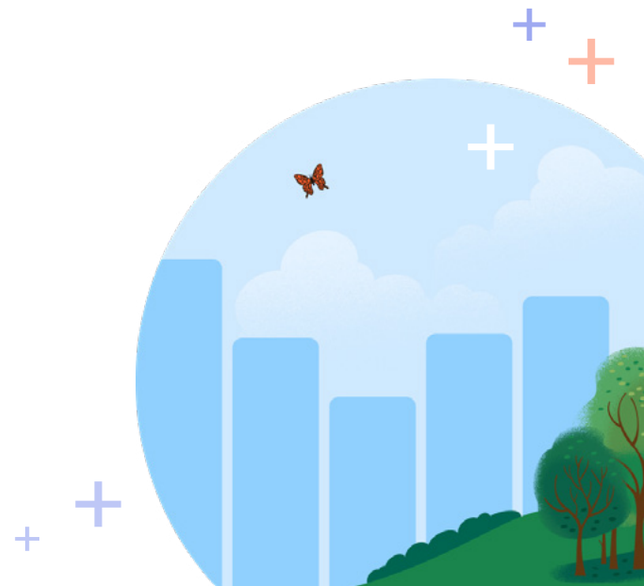
Part of these vulnerabilities may stem from a lack of data visibility, defined as the ability to see, monitor, and manage data collection and use across disparate sources. Nearly half of analytics and IT leaders say they have a partial to no view into how data is used within their companies.

Security Threats Are Top-of-Mind for All Leaders

	Business Leaders Top Data Challenges		Analytics and IT Leaders Top Data Challenges
1	Security threats	1	Security threats
2	Volume of data is overwhelming	2	Lack of data harmonization
3	Lack of training	3	Difficulty ensuring data accuracy / quality
4	Takes too long to get insights	4	Budget constraints
5	Lack of a single source of truth	5	Challenges migrating data architectures

Analytics and IT Leaders Who Assess Their Visibility Into Data Collection and Usage as Follows





02

Data Quality Remains a Top Priority

Data accuracy – and confidence in data accuracy – is a key component of trusted data.

Departments closest to the data, like data and analytics teams, have the highest confidence in their data accuracy. Confidence among line-of-business leaders is lower, revealing an opportunity to instill data confidence across marketing, sales, and service teams.

57% of data and analytics leaders have complete confidence in their data's accuracy.

Overall, there is room for improvement. Increased tracking of critical metrics, such as data quality, data utilization, data management and costs, data services delivery, and the ROI of data initiatives, could be one giant leap forward in making such an improvement.

Line-of-Business Leaders Are Less Confident Than Technical Leaders in Their Data

Departments Completely Confident in Data Accuracy

02

Surging Data Overwhelms Users – And Poses an Opportunity

Business leaders' second biggest data challenge, dealing with overwhelming volumes of data, shows no signs of abating.

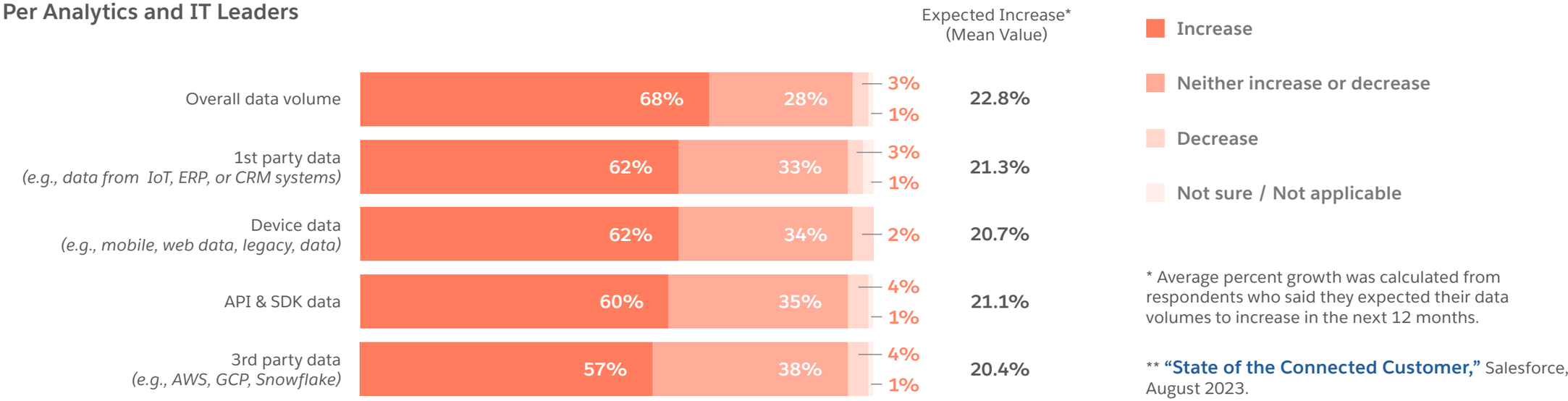
Over two-thirds of analytics and IT leaders expect data volumes to increase 22% on average over the next year.* They expect similar growth rates across a variety of sources including third-party data and device data.

For data leaders, increasing and diverse data sources require more effort to standardize data. This is likely to worsen a major challenge for analytics and IT leaders: lack of data harmonization (i.e., standardizing data from different sources).

Overcoming this challenge presents an opportunity for differentiation. Almost two-thirds (65%) of customers say they expect companies to adapt experiences to match their changing needs,** yet 80% of business leaders say personalization is difficult to scale. For companies looking to serve more tailored experiences, mature data management capabilities are a key competitive advantage.

Data Volumes – And Complexity – Expected to Grow

Expected Data Volume Changes Over the Next 12 Months Per Analytics and IT Leaders



* Average percent growth was calculated from respondents who said they expected their data volumes to increase in the next 12 months.

** **"State of the Connected Customer,"** Salesforce, August 2023.

03

The Road to Data and AI Success Is Winding

03

Data Culture Spurs Data-Driven Decisions

Improving trust in data is more than a technical fix; culture is critical to driving confidence and adoption.

Data culture is the collective behaviors and beliefs of people who value, practice, and encourage data usage to improve decision-making. It equips everyone in an organization with insights for tackling complex business challenges.

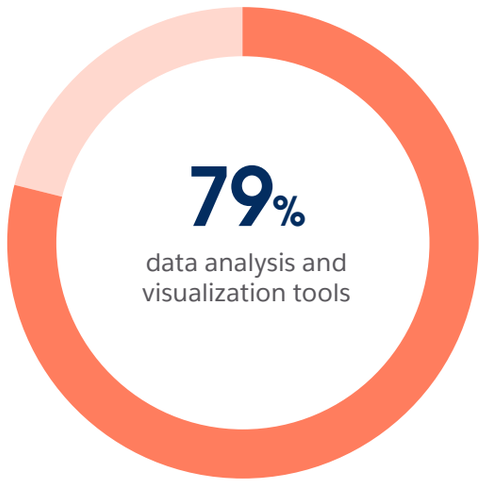
To cultivate a strong culture, teams must overcome key barriers including security concerns, insufficient tools, and training. The good news is that analytics and IT leaders are taking action. Over seven in 10 are increasing budgets for data analysis tools and training.

A Strong Data Culture Benefits Employees and Customers Alike

Analytics and IT Leaders' Top Barriers and Benefits to a Strong Data Culture

	Barriers		Benefits
1	Privacy and security concerns	1	Greater productivity
2	Data quality issues	2	Innovation
3	Limited budget	3	Better customer service
4	Insufficient data analysis tools	4	Confident decision-making
5	Insufficient training	5	Cost savings / Fast decision-making

Analytics and IT Leaders Who Plan to Invest More in the Following



"Untapped Data," Salesforce February 2023.

SPOTLIGHT: Redefining Data Governance

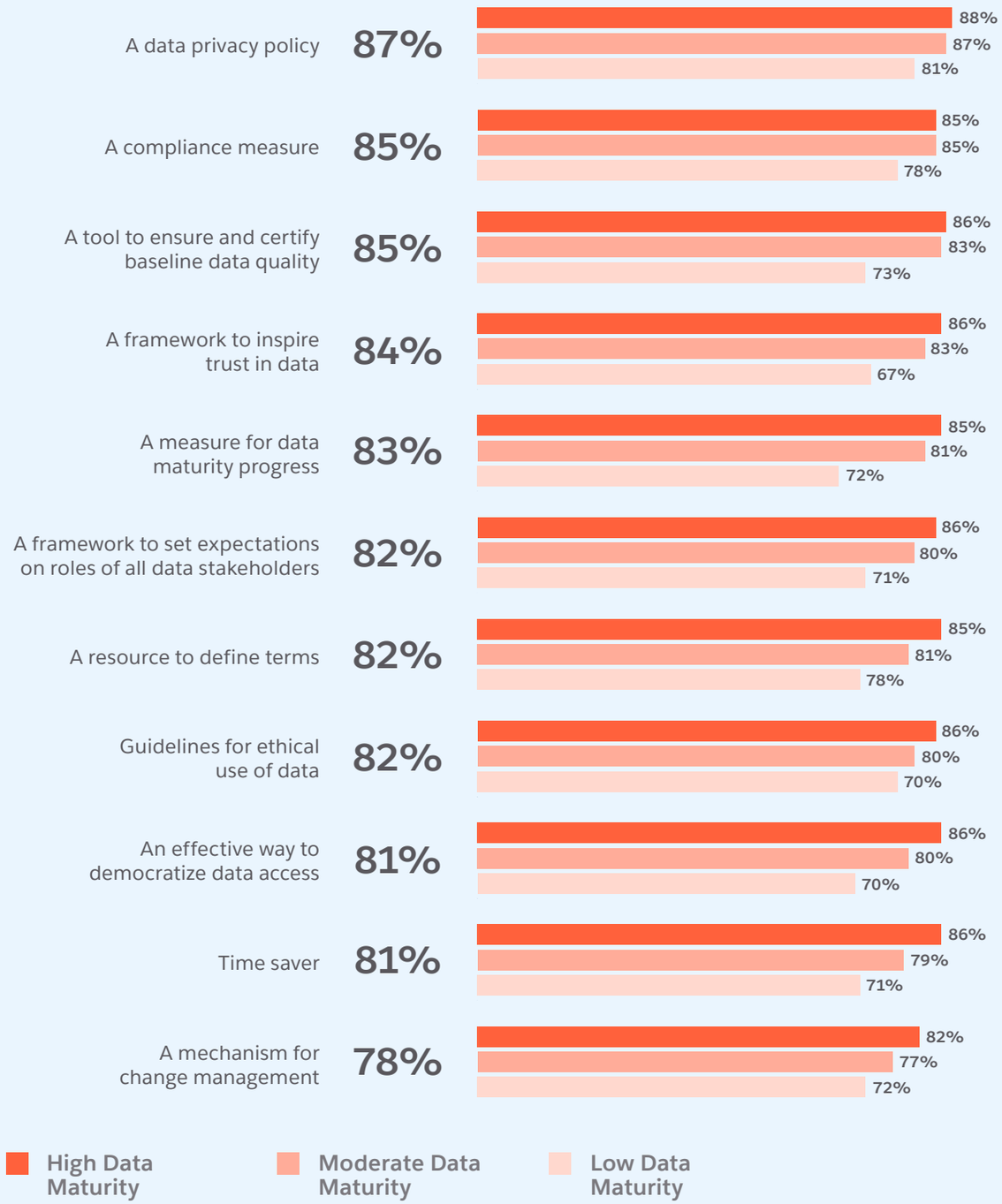
Data governance is more than a list of rules and restrictions. Used strategically, it can help bolster data trustworthiness. In fact, 85% of analytics and IT leaders use data governance to ensure and certify baseline data quality.

Data governance is the set of rules or policies by which information is collected, managed, stored, measured, and communicated. It establishes parameters for data access, accuracy, privacy, security, and retention.

Governance plays a multi-faceted role within analytics and IT organizations, particularly those with high data maturity. For instance, 86% of high-maturity organizations use governance to democratize data access, compared to 70% of low-maturity organizations.

Data Governance Serves Many Functions

Analytics and IT Leaders Who Say Data Governance Plays the Following Roles at their Company



03

A Multi-pronged Approach Helps Leaders Defy Data Gravity

Analytics and IT leaders lean on a variety of tactics to mitigate data gravity.

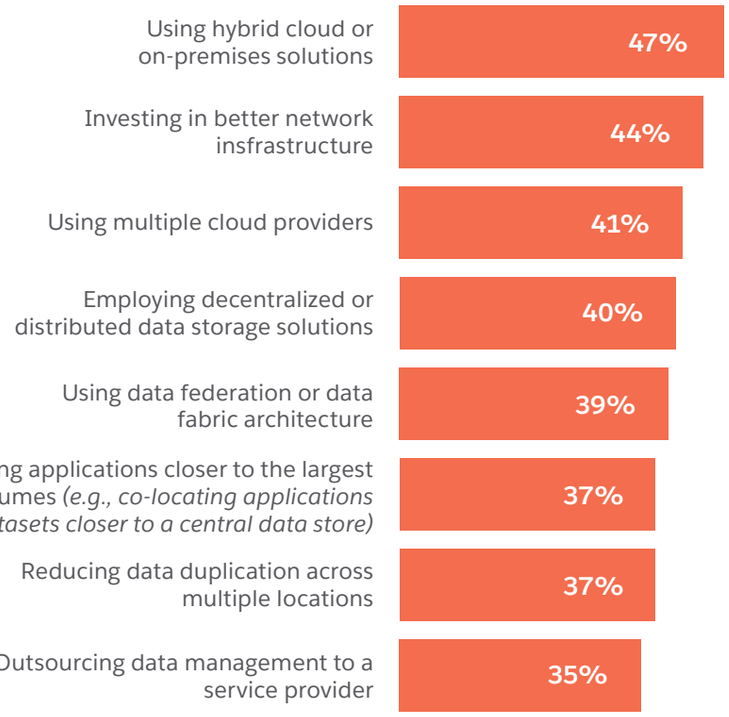
Data gravity refers to the idea that as large amounts of data amass in a location or system, they attract additional applications and services, making data relocation more difficult and more expensive.

The popularity of cloud solutions – whether using hybrid cloud or multiple cloud solutions – suggests that organizations want the flexibility to adapt and choose where their data resides, rather than being locked into a single environment.

Instead of relying on a single tactic, respondents are taking a multi-pronged approach, deploying an average of 3.2 different strategies to cope.

Analytics and IT Leaders Lean on Cloud Solutions to Mitigate Data Gravity

Managing Large Volumes of Data: Analytics and IT Leaders' Strategies to Address Data Gravity



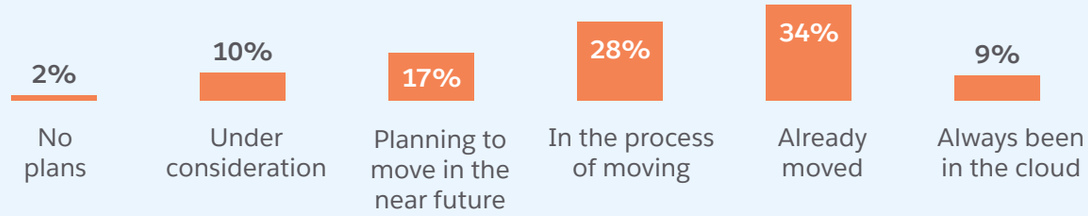
SPOTLIGHT: Technical Leaders Aim to Simplify IT Management

The overwhelming majority of analytics and IT leaders are moving their applications to the cloud. Nearly three-quarters of analytics and IT organizations have already started their cloud migrations, or have always been in the cloud, and an additional 17% plan to make the move.

What's driving this shift is a desire to simplify IT management in the face of increasing data volumes and complexity. And with rising cybersecurity threats, the cloud's promise of enhanced security provides a strong draw for technical leaders.

Organizations Move to the Cloud to Simplify IT and Strengthen Security

Analytics and IT Leaders' App Migration Plans



Analytics and IT Leaders' Top Reasons for Cloud Migration*

1	Simplified IT management
2	Enhanced security
3	Increased flexibility
4	Improved scalability
5	Greater capability for innovation

*Base: Analytics and IT leaders who have moved, or plan to move, their analytics and applications to the cloud

LOOK AHEAD

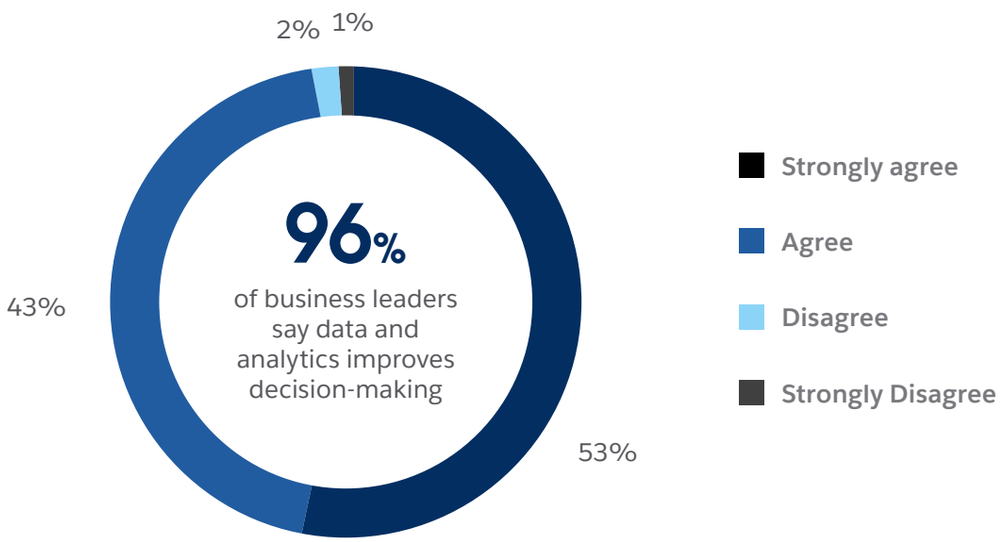
Unlocking the value of data is no small feat. Fortunately, analytics and IT leaders can lean on data and analytics platforms for help. Technical leaders want a solution that eases technical demands, seeking out cloud solutions compatible with existing tech stacks.

That's not all. Analytics and IT leaders want solutions that pave the way for growing AI capabilities.

Yet technical leaders crave platforms that address the needs of the business. Non-technical, user-friendly solutions ensure that data-driven decision-making is democratized across the organization – not just confined to tech experts. Business leaders are nearly unanimous: data and analytics improves decision-making – provided the data results are accurate and accessible.

Companies have their work cut out for them, but the benefits of maximizing their data's value is well worth it.

Technical Leaders Seek Platforms That Keep Up with New Demands



Analytics and IT Leaders' Top Data and Analytics Platform Considerations

1	Cloud Deployment
2	AI capabilities
3	Speed / ease of deployment
4	Ease of use for business users
5	Compatibility with existing tech stack

Survey Demographics

Analytics and IT Leader Demographics

Country

Australia 5%
Brazil 5%
Canada 5%
France 5%
Germany 5%
India 5%
Israel 3%
Italy 5%
Japan 5%
Mexico 5%
Netherlands 5%
Singapore 5%
South Korea 1%
Spain 5%
Switzerland 5%
United Arab Emirates 3%
United Kingdom 5%
United States 18%

Industry

Architecture, engineering, and construction 3%
Automotive 3%
Communications 3%
Consumer goods 5%
Energy and utilities 4%
Financial services 11%
Government / public sector 2%
Healthcare 5%
Life sciences and biotechnology 4%
Manufacturing 12%
Media and entertainment 3%
Professional and business services 6%
Retail 12%
Supply chain and logistics 3%
Technology 19%
Travel and hospitality 2%
Other 1%

Department

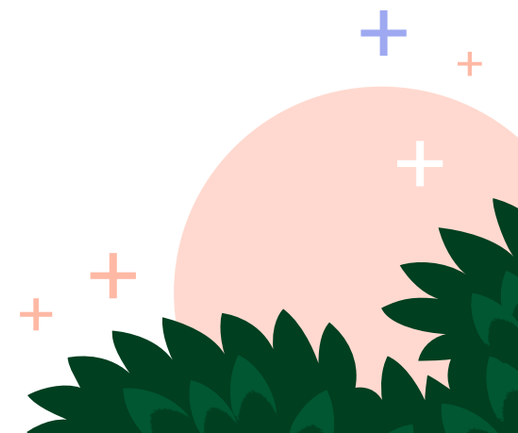
Data and Analytics 18%
IT or Tech related 82%

Seniority

C-Suite 21%
Vice president or equivalent 19%
Director or equivalent 42%
Senior manager or equivalent 18%

Title

Chief Information Officer 6%
Chief Data Officer, Chief Analytics, Chief Data and Analytics 4%
Chief Digital Officer 1%
Chief Technology Officer 10%



Line-of-Business Decision Maker Demographics

Country

Australia 5%
Brazil 5%
Canada 5%
France 5%
Germany 5%
India 5%
Israel 3%
Italy 5%
Japan 5%
Mexico 5%
Netherlands 5%
Singapore 5%
South Korea 1%
Spain 5%
Switzerland 5%
United Arab Emirates 3%
United Kingdom 5%
United States 18%

Industry

Architecture, engineering, and construction 4%
Automotive 5%
Communications 2%
Consumer goods 6%
Energy and utilities 4%
Financial services 17%
Government / public sector 2%
Healthcare 7%
Life sciences and biotechnology 3%
Manufacturing 11%
Media and entertainment 3%
Professional and business services 8%
Retail 15%
Supply chain and logistics 4%
Technology 4%
Travel and hospitality 3%
Other 2%

Department

Accounting and finance 24%
Human resources / shared services 19%
Marketing 22%
Purchasing 9%
Sales 17%
Service 9%

Seniority

C-Suite 24%
Vice president or equivalent 21%
Director or equivalent 37%
Senior manager or equivalent 19%

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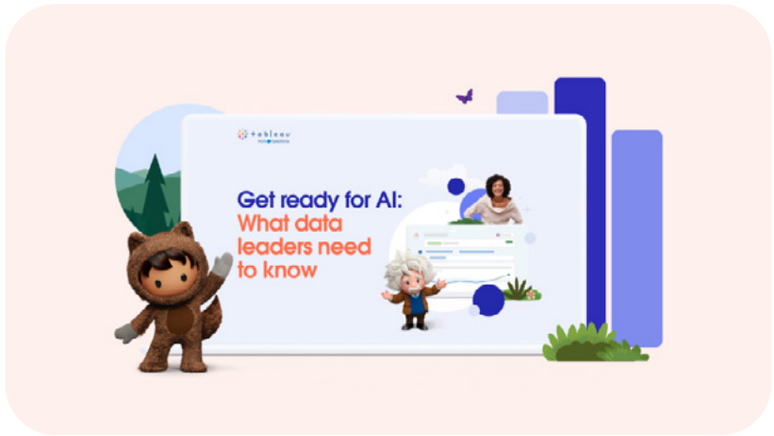

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