DATA PROFESSIONALS SPEAK:

Trends in Data Governance and Data Quality

Results from a Survey of Data and Analytics Professionals

precisely

DREXEL UNIVERSITY
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Contents

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Executive summary

There's no question that quality data is crucial for business leaders to make confident and reliable business decisions. For business intelligence reporting and analytics to be trustworthy, the underlying data must be accurate, consistent, and complete. Data governance is a key factor in how organizations achieve the quality of data that leads to that trust.

That is one of the key findings of the recent Survey of Data and Analytics Professionals created and conducted by Precisely and Drexel University's LeBow Center for Business Analytics (LeBow). LeBow's nationally recognized Center for Business Analytics, which forms collaborations that provide expertise for companies and practical opportunities for students, led the analysis of the survey's results.

This report affords organizations without data governance, and those at the earliest stages of implementation, with reliable, data-driven reasons to invest in building or maturing a data governance program. The payoff is real and substantiated in the survey's findings.

Eight hundred and twenty-five data and analytics professionals responded to the survey, giving it a confidence level of 95% with a confidence interval of +/- 3.4%. Of those 825 respondents, 75% say data quality is a top goal. At the same time, 39% say their organizations don't measure quality across the enterprise. To address this gap and achieve data integrity, companies of all sizes and industries are turning to data governance to provide a strong framework that enables them to proactively find, understand, and manage data and realize business success.

The survey findings show that although 64% of companies represented have data governance programs, most are in the early stages of maturity and differ widely in how they are organized, operated, and funded. On the other hand, we see that some industries are more advanced in their programs, with 18% of transportation and 12% of financial services organizations reporting optimized programs.

Respondents from organizations with the most mature programs indicated that improving data quality is the greatest value realized from data governance. Organizations achieve maturity and, by extension, significant improvements in data quality, by overcoming obstacles ranging from culture and cost to understanding the best way to organize a data governance program.

Data quality and data governance, key components for achieving data integrity, work together to enable businesses to understand and trust their data for confident decision-making. This report shines a light on how data governance strengthens data quality. It also looks at the choices organizations are making today, and which appear most effective in charting a path to data governance maturity and, ultimately, data integrity.

Methodology and demographics

The Survey of Data and Analytics Professionals was conducted in June and July 2021. The online survey was jointly developed by Precisely and Drexel University's LeBow Center for Business Analytics (LeBow), with analysis of results led by LeBow in collaboration with Precisely.

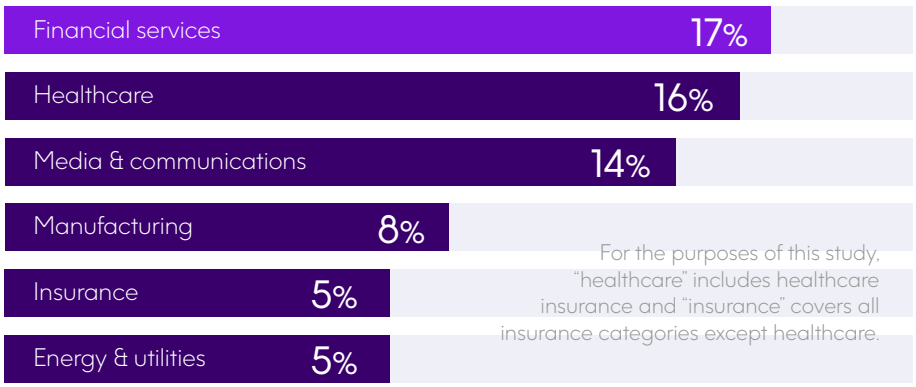
Data professionals from companies with $500 million or more in revenue were invited to participate in the survey. Their functional titles ranged from C-level executives including CDOs to line-of-business executives and managers, IT executives and managers, data stewards, data architects, data managers, and data analysts.

Respondents represented a range of industries, including financial services (17%), healthcare (16%), media and communications (14%), manufacturing (8%), insurance (5%), and energy and utilities (5%), as well as other industry verticals.

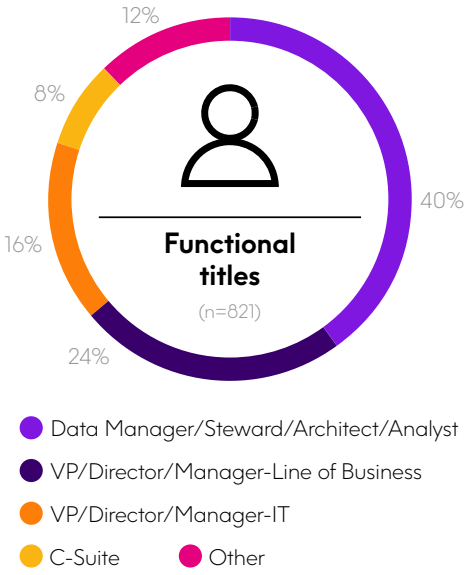
The survey asked all respondents ten questions focused on their data programs and data quality, then narrowed the field to respondents who said they had an ongoing data governance program in their organizations. Those respondents were asked an additional 17 questions specific to data governance.

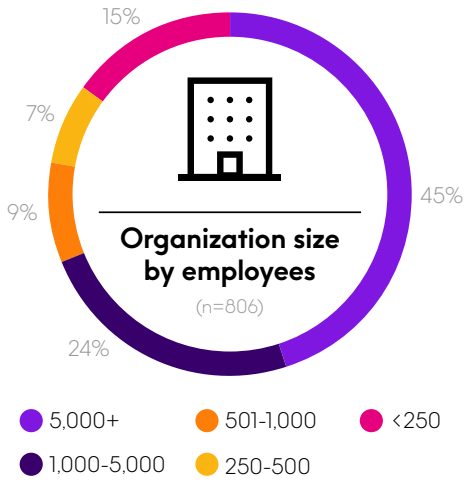
This report from Precisely and LeBow presents the results of the survey. Analysis by LeBow puts the findings into context and conveys the state of enterprise data governance today.

Primary industries (n=810)



For the purposes of this study, "healthcare" includes healthcare insurance and "insurance" covers all insurance categories except healthcare.





Contributors

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Key findings

Key findings from the Survey of Data and Analytics Professionals show the importance of data quality and data governance to respondent organizations.

65% are looking to data programs for better decision-making

64% of responding organizations have an ongoing data governance program

82% agree that data governance requires a framework of policies, people, & processes

49% say their data governance programs are jointly led by business and IT

63% say cultural awareness and adoption are the leading obstacles to data governance

57% of organizations represented have a dedicated data governance budget

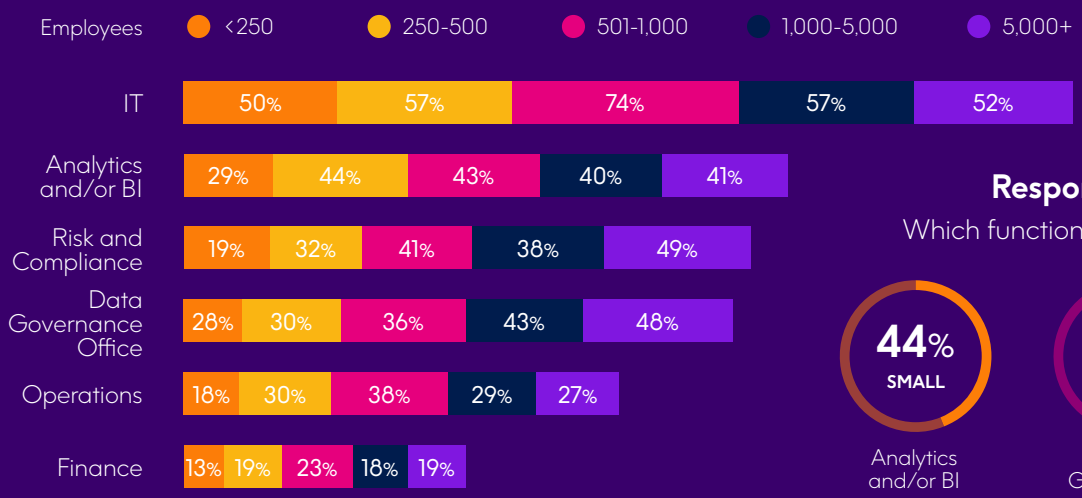
Enterprise functions share responsibility for regulatory compliance and data governance

KEY FINDING

Across the board, companies of all sizes — and those with and without data governance programs — assign responsibility for meeting data regulations to IT. But from there, responsibility varies by company size.

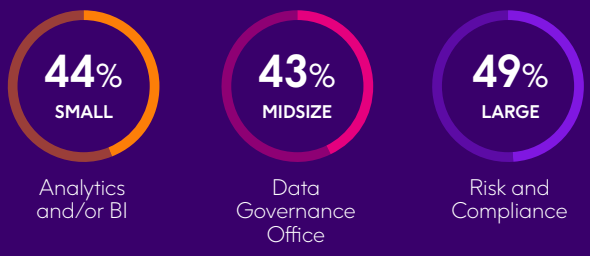
Beyond IT, size determines which functions take responsibility for regulatory compliance.

Which function(s) is responsible for the challenge of meeting data regulations in your organization? (n=822)



Responses by Size:

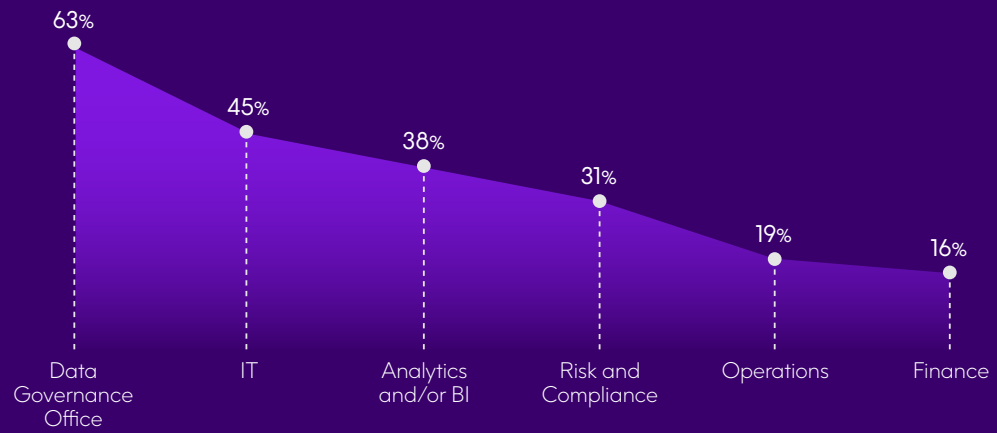
Which functions are in second place?



Responsibility for data governance programs is spread across functions.

Which function(s) are responsible for driving data governance in your organization?

(n=822)



Why organizations are investing in data programs

KEY FINDING

The most significant goal of organizations with data programs in place is to improve data quality, which in turn leads to trust in data. Trusted data with high quality leads to better decision-making.

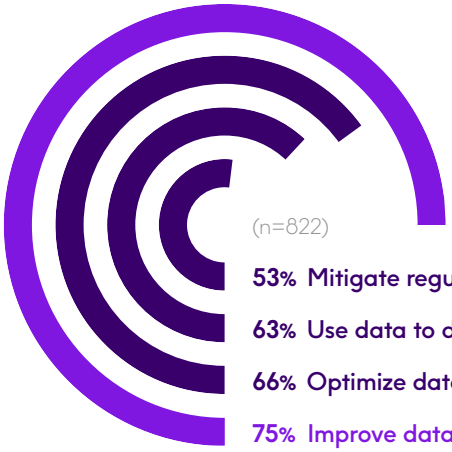
Recognizing the value of data, organizations of all sizes have put programs in place to extract that value from the data they collect. The Survey of Data Professionals, from Precisely and Drexel University's LeBow Center for Business Analytics (LeBow), asked all survey respondents to share their goals, drivers, and software used for their data programs. ▶

Improving data quality and trust is the most important goal for respondents' data programs.

The importance of data quality and trust

Three-quarters of all respondents say that improving data quality and trust is the most important goal for their data programs. As a key element in data integrity, data quality and trust deliver important business benefits, including optimizing data for operational efficiency (66%), using data and analytics to drive new business models (63%), mitigating regulatory and compliance risks (53%), and reducing costs (50%).

Looking at results by leadership roles reveals concurrence across the board that improving data quality and trust is the most important goal of data programs. However, views differ between the C-suite and the next level of leadership. C-suite respondents say driving new business models and improving customer service are high value, while line-of-business and IT leaders responsible for data are more focused on efficiency and costs.



What are your organization's goals for data programs?

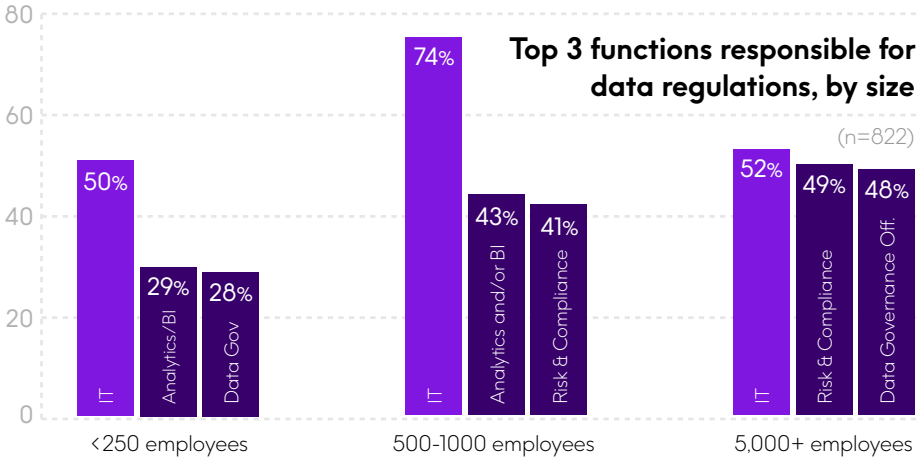
(n=822)

75% say improving data quality and trust is the most important goal

- **53%** Mitigate regulatory/compliance risks
- **63%** Use data to drive new business models
- **66%** Optimize data for operational efficiency
- **75%** Improve data quality and trust

Better decision-making is a common program driver

Looking at data programs through a different lens, the survey also asked what drives organizations' data programs. Respondents from companies of all sizes were consistent in their selections. Overall, 65% say better decision-making is the leading driver of their data programs, followed by improved operational efficiency (57%), data privacy or security (52%), regulatory compliance (51%), and customer trust and satisfaction (44%).



Data regulations: who is responsible?

Given that regulatory compliance and data privacy and security were found to be C-suite priorities, it's interesting to examine which functions are responsible for meeting data regulations. Of respondents to this multi-selection question, 54% say responsibility sits with IT, followed by the data governance office (41%), risk and compliance (39%), and analytics or business intelligence (38%).

Differences based on company size are notable and generally reflect the greater maturity of larger organizations. While IT still takes the first spot across the board, respondents from the largest companies also place responsibility with the risk and compliance office followed by the data governance office; respondents from mid-sized and small organizations say responsibility also lies within the analytics and business intelligence groups. ▶

Software deployments for data programs

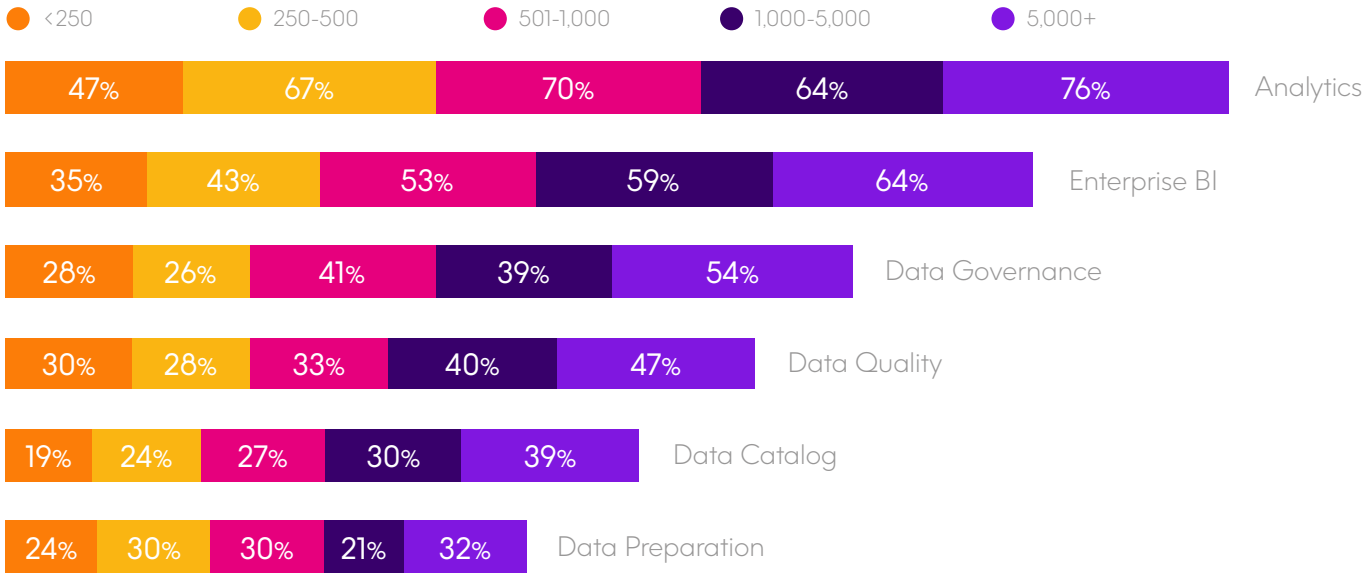
The survey asked all respondents about the software their organizations have deployed. Sixty-seven percent note they have some type of data analytics solution, followed by 55% who say they use enterprise business intelligence software. Looking past analytics and business intelligence, the third most deployed solution is data governance software (43%).

While 43% of organizations have data governance software deployed, it is interesting to note that 64% of organizations reported having data governance programs – meaning that 19% of those programs have not deployed data governance software. There are also significant differences between large and small organizations. For instance, 54% of organizations with more than 5,000 employees use data governance software. ■

While 64% of organizations have deployed data governance programs, only 43% of organizations say they have deployed data governance software — meaning that 19% have a program without data governance-specific software to support it.

Fast Fact:

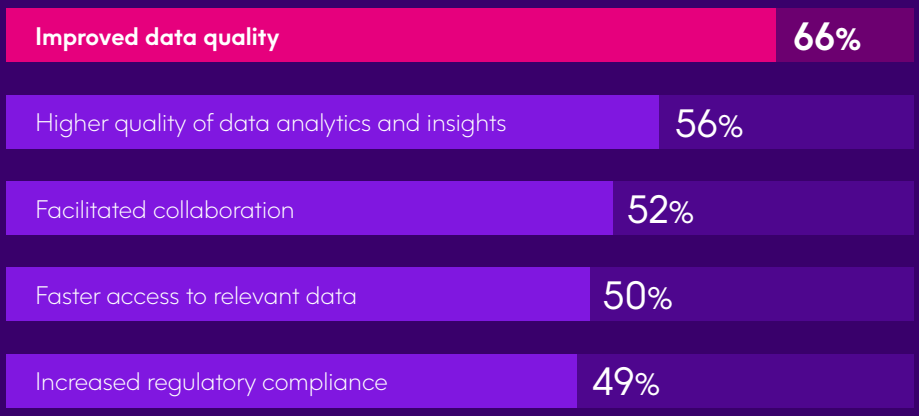
Has your company deployed any of these software solutions? (n=821)



Investments in data governance deliver added value to organizations

KEY FINDING

Improving data quality is the leading benefit organizations receive from their data governance programs, an added value that contributes to a range of critical business benefits.



Improved data quality is the leading benefit derived from data governance programs.

How has your data governance program added value to the organization?

(n=449)

Based on company size, however, data governance programs add value in different ways.

Results in ranked order.

(n=449)

<250 employees	
1	**Improved data quality**
2	Higher quality analytics/insights
3	Faster access to relevant data
4	Facilitated collaboration
5	Reduced repetitive efforts

250-500 employees	
1	**Improved data quality**
2	Faster access to relevant data
3	Self-service independence
4	Reduced repetitive efforts
5	Facilitated collaboration

500-1000 employees	
1	**Improved data quality**
2	Faster access to relevant data
3	Higher quality analytics/insights
4	Facilitated collaboration
5	Reduced repetitive efforts

1000-5000 employees	
1	**Improved data quality**
2	Facilitated collaboration
3	Regulatory compliance
4	Higher quality analytics/insights
5	Understanding of data lineage

5000+ employees	
1	**Improved data quality**
2	Higher quality analytics/insights
3	Facilitated collaboration
4	Regulatory compliance
5	Faster access to relevant data

Data governance investments deliver added value to organizations

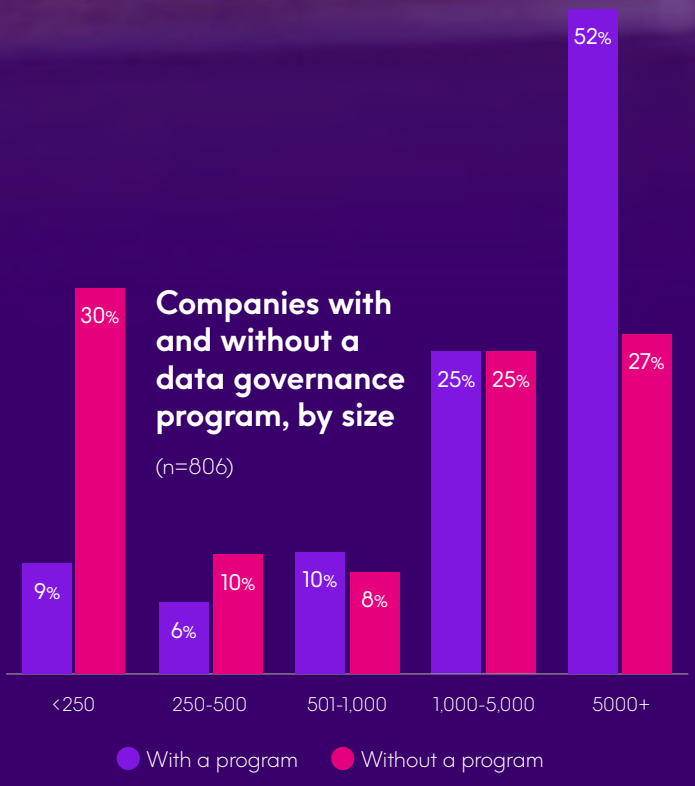
KEY FINDING

Organizations investing in data governance, primarily large and mid-sized enterprises, are realizing significant added value from their programs, starting with progress towards increasing data quality and trust.

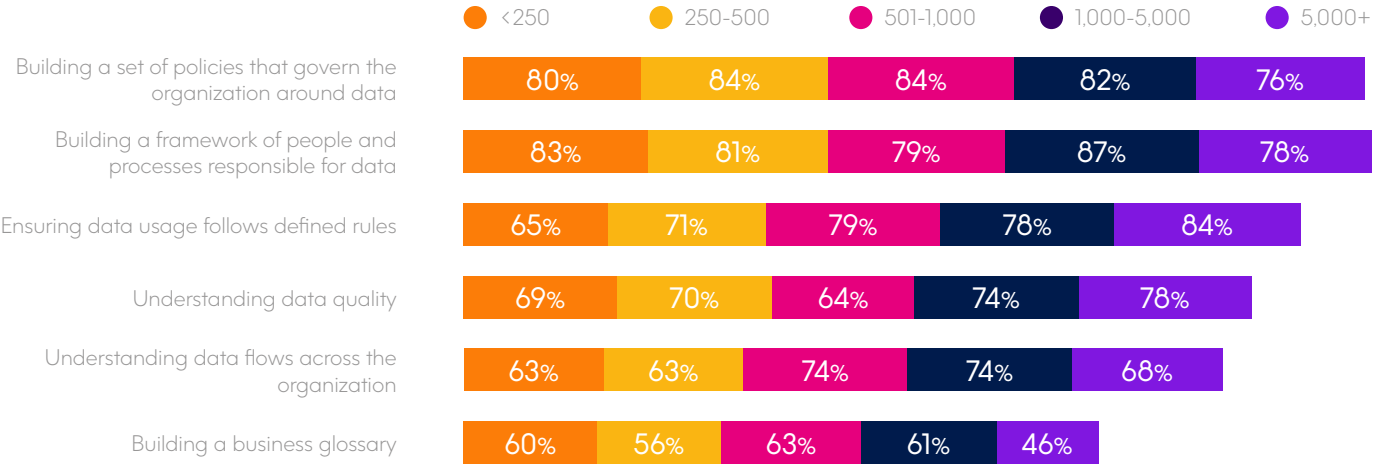
The Survey of Data Professionals, from Precisely and Drexel University's LeBow Center for Business Analytics (LeBow), explored the value that data governance programs deliver to respondents' organizations. Looking at the incidence of data governance by company size, more than half (52%) of companies with data governance programs are large enterprises — companies of 5,000 employees or more — while another 25% are mid-sized organizations that have 1,000–5,000 employees. ▶

Companies with and without a data governance program, by size

(n=806)



Which components are included in your organization's definition of data governance? (n=449)



Defining data governance: a look at what's included

The survey found broad general agreement around what respondents' organizations include in their definition of data governance, and the results provide a common frame of reference for our analysis. Some 82% of respondents agree that "Building a set of policies that govern the organization around data" and "Building a framework of people and processes responsible for data" are components of data governance. "Ensuring data usage follows detailed rules" was selected by 72%, and 70% say "Understanding data quality" is part of data governance.

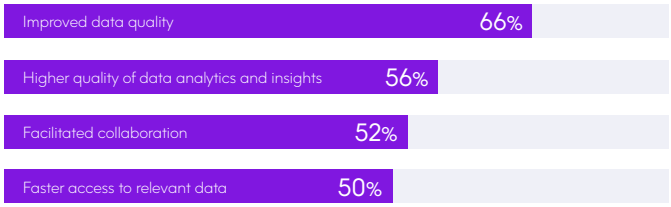
Adding value to the organization: Better data quality leads to improved analytics, easier collaboration

Survey respondents that reported having data governance programs were asked what value those programs added to their organizations. The leading selection for added value is "Improved data quality" (66%), a finding consistent with the leading driver for data programs, which is improving data quality and trust (75%). From these answers a causal relationship can be inferred between higher data quality and the second most frequent added-value selection, "Higher quality of data analytics and insights" (56%). There is also a cluster of responses for "Facilitated collaboration" (52%), "Faster access to relevant data" (50%), and "Increased regulatory compliance" (49%).

Given the universally agreed-upon importance of data quality, it was surprising to find that across organizations of all sizes, less than half of all respondents say their organizations (42%) measure data quality across the enterprise. A somewhat higher share of organizations that have data governance programs (54%) measure data quality across the enterprise, while 76% of organizations without data governance do not measure data quality. As enterprise leaders embark on programs to improve data quality and institute data governance, putting in place mechanisms for measuring results should be a priority. ■

How has your data governance program added value? (n=449)

66%
selected improved data quality



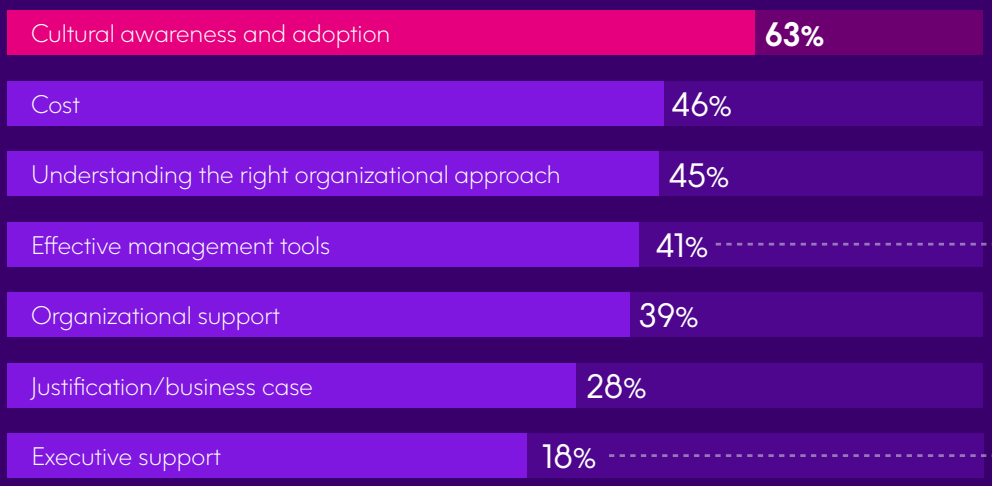
Data governance programs have executive support, but not cultural awareness

KEY FINDING

Executive support for data governance is strong, yet programs face obstacles that can interfere with effectiveness. Broad training could help solidify adoption.

Culture, cost and organization are the top three obstacles data governance programs face.

What are the biggest obstacles facing your data governance program? (n=449)



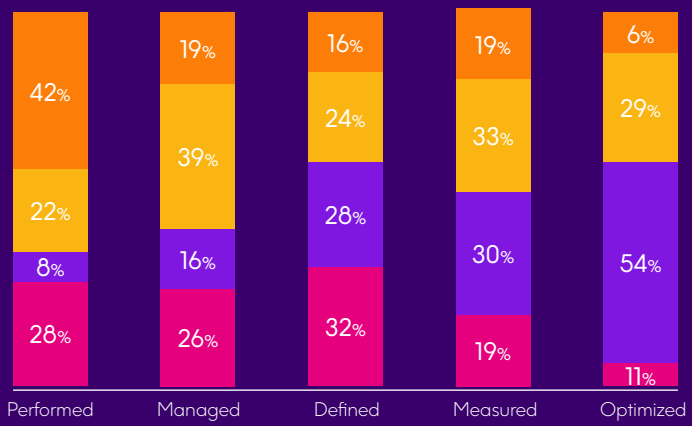
The view from the C-suite differs

51%

of C-suite respondents cited lack of effective management tools as an obstacle

0%

of C-suite respondents cited a lack of executive support as an obstacle



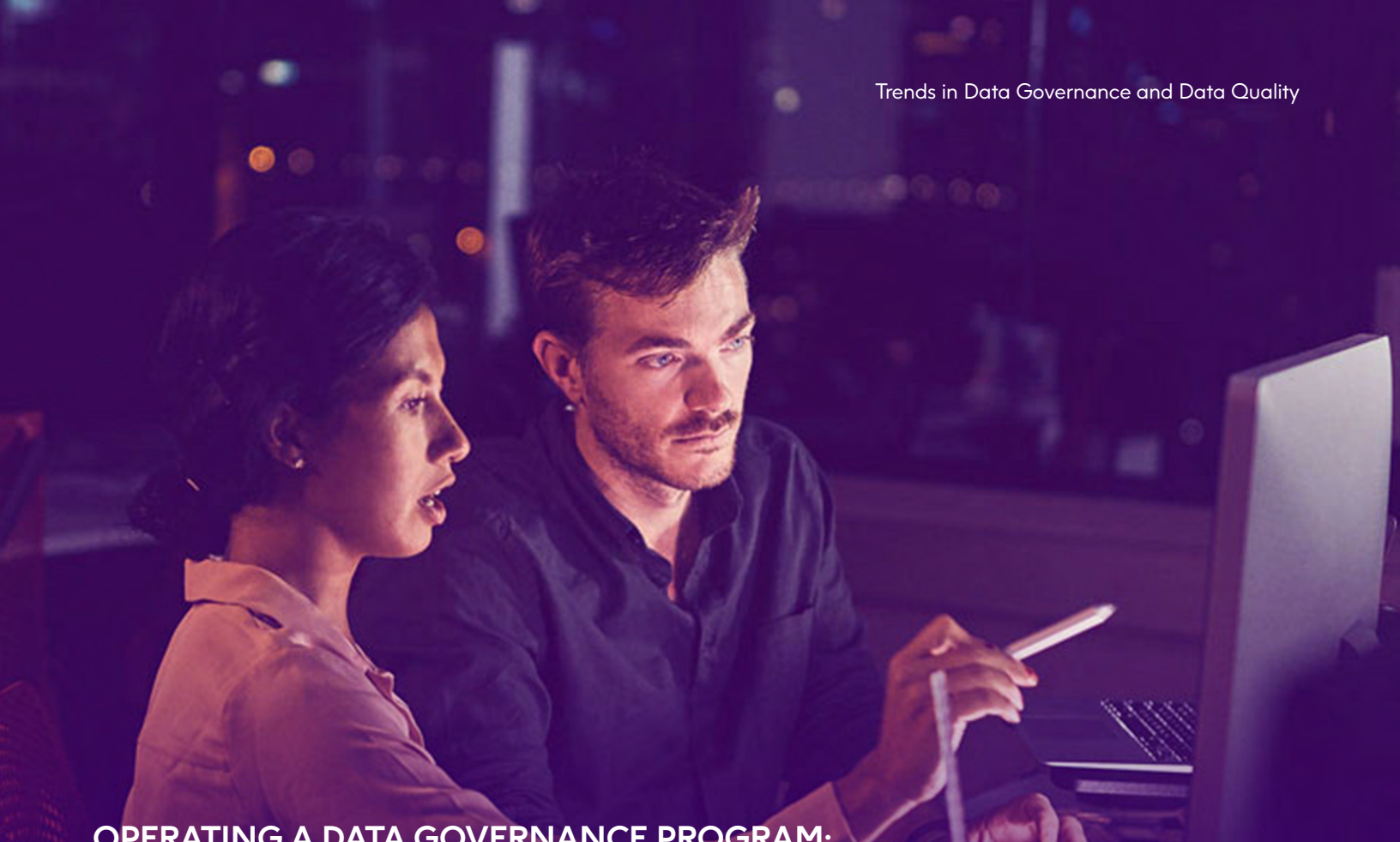
Organizations with mature data governance programs are investing in formal training.

Broad implementation of data governance training can help overcome lack of cultural awareness and adoption. (n=411)

- No program has been developed
- An informal program is in place
- A formal program is in place
- A formal program is being developed

65%

of mature companies have formal training in place or planned



OPERATING A DATA GOVERNANCE PROGRAM:

Jointly led programs deliver the most added value

KEY FINDING

Regardless of size and data governance characteristics such as maturity and structure, organizations' data governance programs face the same set of obstacles.

In conducting the Survey of Data Professionals, Precisely and Drexel University's LeBow Center for Business Analytics (LeBow) wanted to understand the relationship between the structure and operational level of data governance programs and the value they generate. The survey also explored the incidence of other operational aspects of "governing" data governance, including budgets, training, and obstacles to success.

Structure, according to **Dataversity,** refers to whether or not a data governance program is centralized, decentralized, or hybrid. Close to half of respondents (46%) say their organizations take a hybrid approach, while 35% of respondents reported that their organizations have a centralized structure and 13% have a decentralized structure. ▶

When data governance structures are segmented by industry, centralized data governance structures are most prominent within manufacturing and energy and utilities, industries that have significant investments in fixed assets. Government, healthcare, and financial services industries, with sensitive data to protect, also have a relatively high percentage of centralization. On the other hand, decentralized structure is seen most prominently in retail and transportation, which have dispersed assets.

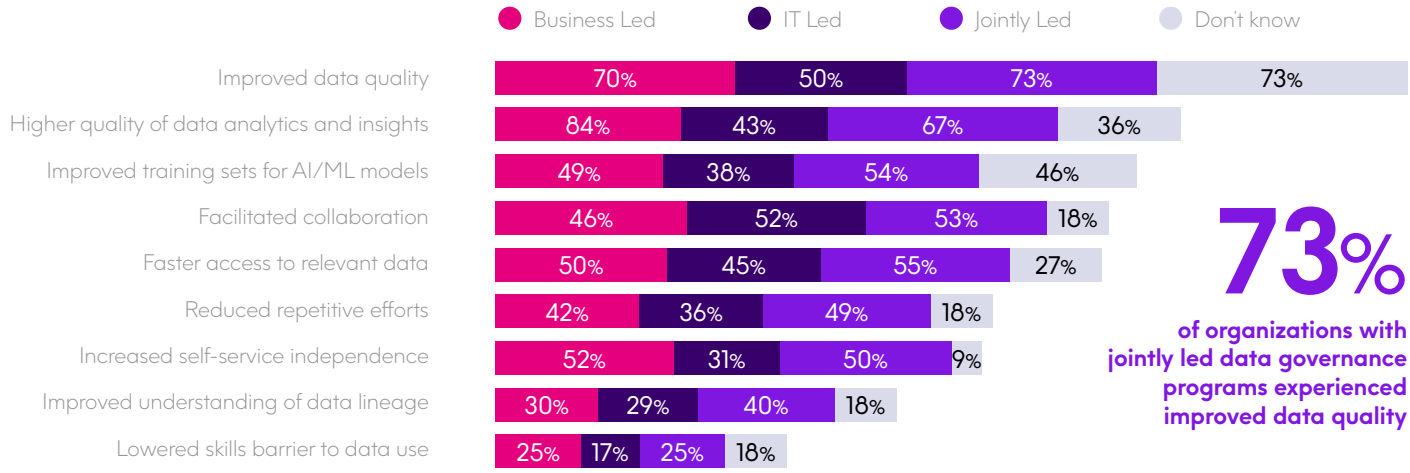
Respondents were asked whether the IT or business team drives data governance operations within their organizations or if they are jointly led. The analysis found that 49% of respondents said that their data governance programs are jointly led by both business and IT, with 24% of respondents saying their programs are business-led and 24% selecting IT-led. At the industry level, jointly led programs prevail overall and

Jointly led data governance programs reported higher added value across all value drivers.

are most common in services, manufacturing, and insurance. Business-led programs, while less frequent than jointly led ones, are higher in food and beverage, technology, and financial services. Similarly, while less frequent than jointly led, IT-led programs are more prevalent in transportation, retail, and energy and utilities industries.

The analysis also looked at the relationship between centralized, decentralized, hybrid, and business-led, IT-led, and jointly led data governance structures and the added value received from data governance programs. Respondents from organizations with decentralized data governance structures report a lower added value from data governance programs than organizations with centralized and hybrid approaches. Overall, respondents from organizations with jointly led data governance programs reported higher added value across all value drivers. Business-led data governance programs were associated with higher added value than IT-led data governance programs. ▶

How has your data governance program added value to the organization? (n=449)

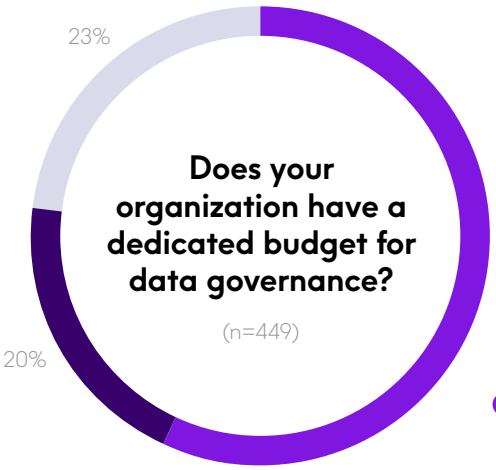


73%

of organizations with jointly led data governance programs experienced improved data quality

When asked which function(s) are responsible for driving data governance, 63% of respondents selected the data governance office, followed by IT at 45%, groups responsible for analytics and/or business intelligence at 38%, and the risk and compliance office at 31%. While these responses are not surprising, they do underscore that data governance is a shared effort across the business, with multiple functions having a stake in its success.

Another operational aspect of data governance that was examined is the application of business metrics for data governance. More than half (57%) of respondents report that business metrics are applied throughout the organization, echoing the collaborative approach most organizations are taking. However, use of business metrics is not universal — 27% of respondents said they are applied in only some areas of the organization, and 16% said they are applied rarely or not at all.



65%

of organizations with 5,000+ employees have dedicated budgets for data governance

Approaches to funding data governance programs: size, maturity, and operational level count

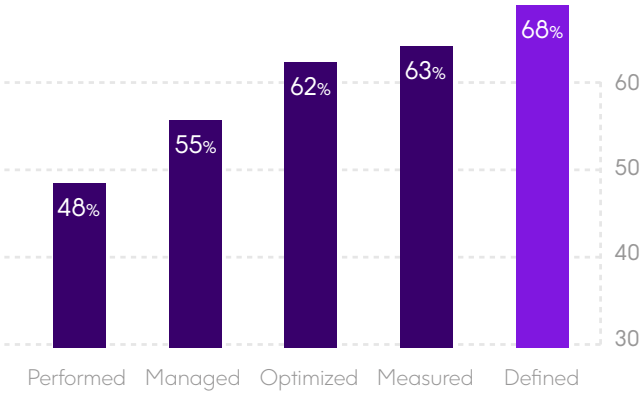
Among organizations with data governance programs, slightly more than half (57%) of respondents said they have a dedicated budget for data governance, while 20% of respondents report their organizations do not have a dedicated budget. Further, the analysis shows that there is a general upward trend toward implementing a dedicated budget as the size of the organization increases: 57% of organizations with 1,000–5,000 employees, and 65% of organizations with 5,000+ employees, have dedicated budgets.

Organizations with more mature data governance programs have higher levels of dedicated budgets for their programs. Similarly, organizations jointly led by IT and business are more likely to have dedicated budgets (64%) than data governance led by business (53%) or IT (51%) alone. This finding implies that when the data governance program is led by multiple functions across the organization, the potential for resource allocation is greater. ▶

Organizations with more mature data governance programs have higher levels of dedicated budgets.

Does your organization have a dedicated budget for data governance?
(By maturity)

(n=449)

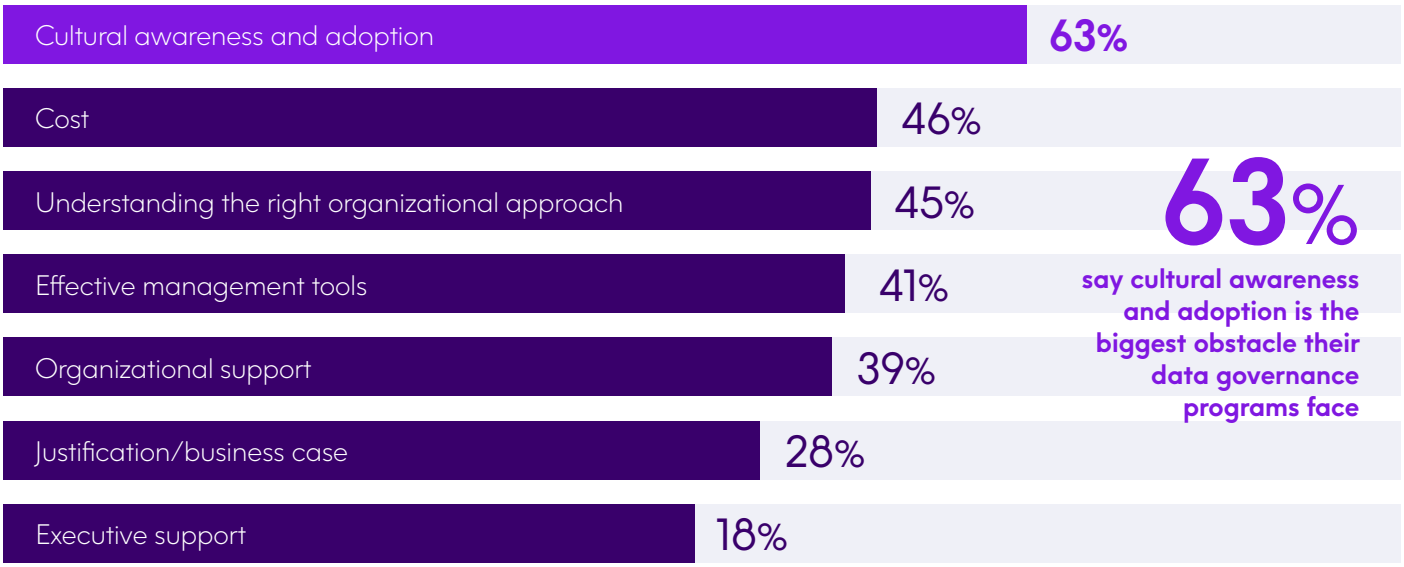


Obstacles to operating a data governance program

Survey respondents report that cultural awareness and adoption, at 63%, is the biggest obstacle their organizations' data governance programs face, followed by cost (46%) and understanding the right organizational approach (45%). These findings are similar across organizations, regardless of size and data governance characteristics such as maturity and structure. Interestingly, while C-suite respondents agree that cultural factors are the leading obstacle, they did not cite cost as one of the top three barriers and none of them cited executive support — indicating strong support for data governance from top executives.

When looking at training for data governance, which could help address cultural awareness and adoption obstacles, findings show that only 21% of respondents report a formal training program is in place in their organizations and 30% said that an informal program is in place. While 26% reported a formal program is planned, 23% report that no training program has been developed — so there is plenty of room for improvement. ■

What are the biggest obstacles facing your data governance program? (n=449)



63%
say cultural awareness and adoption is the biggest obstacle their data governance programs face

Leadership and data professionals have different views of data governance software tools

KEY FINDING

C-suite, data executive, and data professional respondents differ in the features they think are important in data governance software as well as software shortcomings.

Overall, giving business users easy access to data and integration with data quality tools lead the qualities that respondents want to see in data governance software tools.

What are the most important features of the software tools you currently use? (n=449)

C-suite	
1	**Ability for business users to easily search and find data**
2	Integration w/ data quality tools
3	Policy management
4	Business glossary
5	Technical metadata harvesting connectors

Data Executives	
1	**Ability for business users to easily search and find data**
2	Integration w/ data quality tools
3	Configurable approval workflow
4	Policy management
5	Business glossary

Data Professionals	
1	**Ability for business users to easily search and find data**
2	Business glossary
3	Integration w/ data quality tools
4	Lineage and impact analysis
5	Technical metadata harvesting connectors

The requirement for too much IT involvement is the biggest issue that respondents have with their current data governance tools.

What are the shortcomings of the software tools you currently use? (n=449)

C-suite	
1	**Require too much IT involvement**
2	Not geared towards business users
3	Take too long to implement
4	Require too much manual entry
5	Difficult to use

Data Executives	
1	Require too much manual entry
2	**Require too much IT involvement**
3	Take too long to implement
4	Difficult to use
5	Not geared towards business users

Data Professionals	
1	**Require too much IT involvement**
2	Require too much manual entry
3	Take too long to implement
4	Not geared towards business users
5	Too costly

Best practices of organizations with mature data governance programs

KEY FINDING

Large organizations — those with 5,000 or more employees — are significantly more likely to report having mature data governance programs with formal training.

The majority of respondent organizations are at the early stages of data governance maturity with 28% citing "Performed" and 30% "Managed" as their maturity levels. In the middle, 21% of respondents cited "Defined." A minority of respondents indicated that their organizations' data governance programs were at the most mature end of the spectrum with 13% citing "Measured" and 9% "Optimized." ▸

Defining the stages of data governance program maturity

For the purposes of this survey, maturity stages for data governance were defined as:

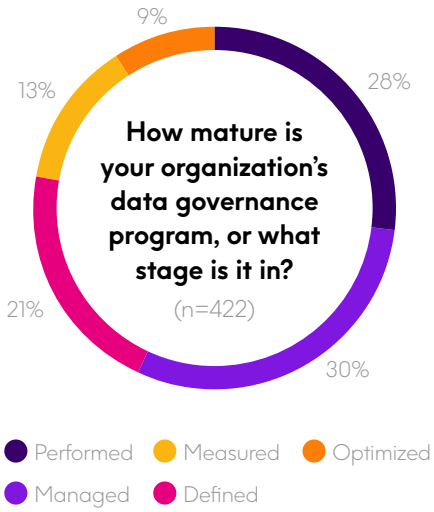
- **Performed –** Performed as part of projects, with little consistency across projects
- **Managed –** Performed consistently across projects within a business unit or line of business
- **Defined –** Performed consistently across the enterprise using established formalisms and tools
- **Measured –** Metrics and dashboards are used to communicate and ensure consistency across the enterprise
- **Optimized –** A continuous improvement program is in place.

Looking at these responses through the lens of industry, 17% of respondents in the transportation industry report having an optimized program, followed by financial services at 12% and media and communications, healthcare and government all at 11%.

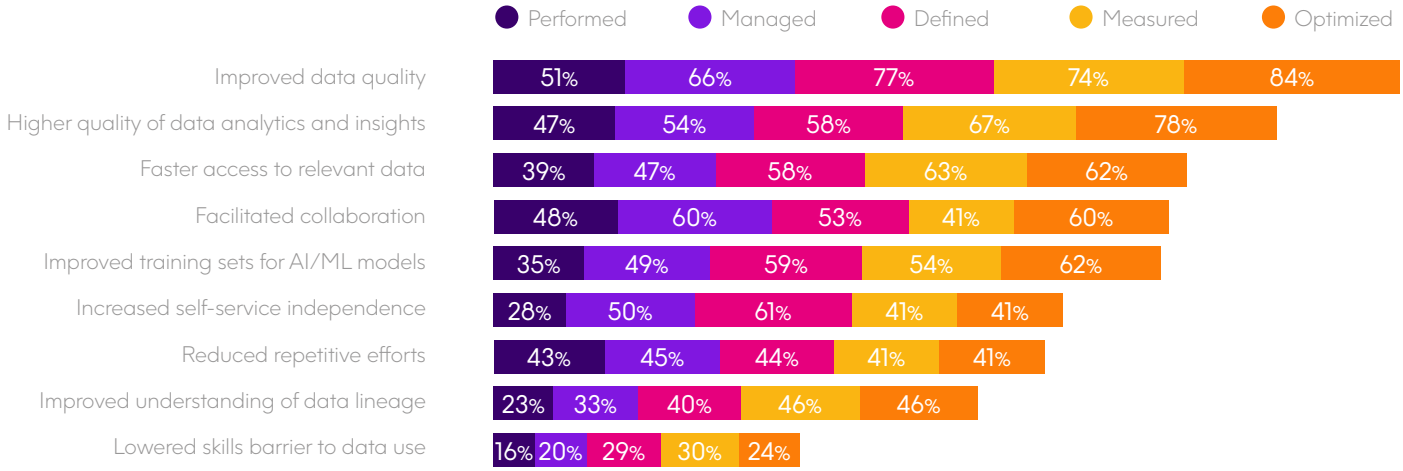
In order to determine best practices in data governance, responses from organizations that report themselves as having more mature programs were examined across other survey questions. "Mature programs" included responses from survey participants who self-identified as either "Measured" or "Optimized."

These respondents said their organizations are significantly more likely to realize added value from their programs, in particular improved data quality, higher quality of data analytics and insights, and faster access to relevant data. Organizations with mature programs are also significantly more likely to measure data quality across the enterprise and have a dedicated budget for data governance.

The most significant value derived from a data governance program selected was improving data quality. For the most mature data governance programs, 84% of respondents see value from their data governance program in improving data quality. We also found that 70% of organizations with "Managed" (less mature) data governance programs apply business metrics throughout the organization, while 64% of organizations with "Optimized" (most mature) data governance programs apply business metrics in only some areas of their organizations. This finding could imply that organizations with more mature data governance programs have a better understanding of the scope of their data and what it really means to measure business metrics. ■



How has your data governance program added value to the organization? (n=449)



Conclusion

Organizations have access to more data than ever, and the volume, variety, and velocity of data continue to grow exponentially. Without data governance, companies will find it increasingly difficult to know what data they have, where it came from, where they have it, and what's been done with it. That uncertainty, in addition to persistent problems with data quality, can not only prevent organizations from fully realizing data's value, but can also expose them to risks associated with regulatory compliance and competitive disadvantages.

Of the 825 data and analytics professionals who responded to the survey, 75% say data quality is a top concern. At the same time, 39% say their organizations don't measure quality across the enterprise. To address this gap and achieve data integrity, companies of all sizes and industries are turning to data governance. It can provide a strong framework for proactively and collaboratively finding, understanding, and managing data and realizing proven business outcomes based on trust.

Driven by the need for better data quality and trusted results from analytics and business intelligence, 64% of the organizations that responded to the survey have data governance programs. Most of those programs, however, are at an early stage of maturity, so there is ample room for improvement.

Respondents from organizations with the most mature programs indicated that improving data quality is the greatest value realized from data governance. Organizations achieve data governance maturity and, by extension, significant improvements in data quality, by overcoming obstacles ranging from culture to cost.

Data quality and data governance are essential elements for building data integrity. Together they enable businesses to understand and trust their data for confident decision-making.

This report affords organizations without data governance, and those at the earliest stages of implementation, with reliable, data-driven reasons to invest in building or maturing a data governance program. The payoff is real and substantiated in the survey's findings.

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