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The 2018 global data management benchmark report

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Methodology

Experian has once again conducted a survey to look at global trends in data management. This study looks at how data practitioners are leveraging their data to generate actionable insight and how data management practices are changing over time.

Produced by Insight Avenue for Experian in November 2017, the study surveyed more than 1,000 people across four countries around the globe: The United States, the United Kingdom, Brazil, and Australia. Organizations that were surveyed came from a variety of industries including IT, telecommunications, manufacturing, retail, business services, financial services, healthcare, public sector, education, utilities, and more.

A variety of roles from all areas of the organization were surveyed, including information technology, data management, marketing, customer service, sales, operations, and more. Respondents were chosen based on their visibility into their organization's customer or prospect data management practices.

Foreword

Data is quickly becoming a key economic driver in the United States and around the globe. As organizations face unprecedented demands from consumers, critical needs for product innovation, and growing concerns around fraud and cybersecurity, many are looking to their data to power strategic decisioning that can solve these challenges. For the first time in recent history, data is no longer being thought of as an IT resource, but as a monetized business asset.

Business leaders can agree that the digital economy is changing their business models and creating unique opportunities for growth. The vast majority of C-level executives we surveyed this year (87%) say that data has greatly disrupted their organization's operations over the last 12 months. As leaders continue to rethink their strategies and identify additional opportunities to use their data, we expect the level of disruption to remain consistent for years to come.

Despite the obvious value that data can deliver to many organizations, we can see that businesses are struggling to put their data to good use. Organizations large and small are dealing with a deluge of information that is putting a critical strain on existing processes for managing and governing data. To survive in this digital economy, organizations will need to implement processes and technology solutions that scale with the demands of data-driven business.

Building confidence in data assets is at the heart of this agenda. The ability to make strategic decisions, to reduce risk, and to bring innovative products to market require data that is trustworthy. Do you trust your data? It's a question many business leaders are unable or unwilling to answer.

This report is our latest endeavor to shine a spotlight on issues and opportunities throughout the data management and data quality spaces. While many in our study indicate that data plays a pivotal role in achieving their business priorities, our initial findings also suggest that organizations have much work to do to reach an ideal level of data management maturity. Still, organizations across the U.S. are planning data management projects in much greater numbers than in prior years.

By discussing the latest advancements and challenges within our industry, we hope to empower all organizations to better leverage their data and to thrive in the digital economy.

Thomas Schutz
SVP and General Manager
Experian Data Quality

Introduction

Digital business demands trustworthy data. In today's increasingly sophisticated marketplace, having access to quality information can make or break an organization. While nearly every business collects and manages data, only those that are able to leverage their information to accelerate innovation, improve customer experiences, and spend more effectively will see themselves with true competitive advantage in the coming years.

Data is quickly becoming a fundamental part of doing business today. Nearly all of the C-level executives in our study (95%) believe that data is an integral part of forming their business strategy—a sentiment that has grown by 15 percent over the prior year. It is critical to remember, however, that only high-quality data is advantageous, as data that contains errors or is otherwise outdated can lead to undesirable outcomes. With that said, it is clear that today's business leaders understand the impact data can have on unlocking and enabling business opportunities.

95% of C-level executives believe that data is an integral part of forming their business strategy.

Unlocking business opportunities

The role that data plays in strategic initiatives cannot be understated, and organizations across industry verticals are looking to their data as a primary driver of business opportunities. The largest data-driven opportunity we see in the next five years is around analytics, as shown in **Chart 1**. More than half of the organizations in our study (52%) say that data and analytics will provide a key source of opportunity in the coming years. As more organizations rely on their data for strategic decision-making, their ability to derive actionable insights will be fundamental to their success. This is a trend we've seen for several years now, as businesses are doubling down on investments in hiring analyst roles.

Chart 1
Top data-enabled business opportunities

Legend:
- Analytics
- Real-time processing
- Data as a Service (DaaS)
- Internet of Things (IoT) and connected devices
- Automation
- Machine learning and artificial intelligence
- Open data
- Software as a Service (SaaS)
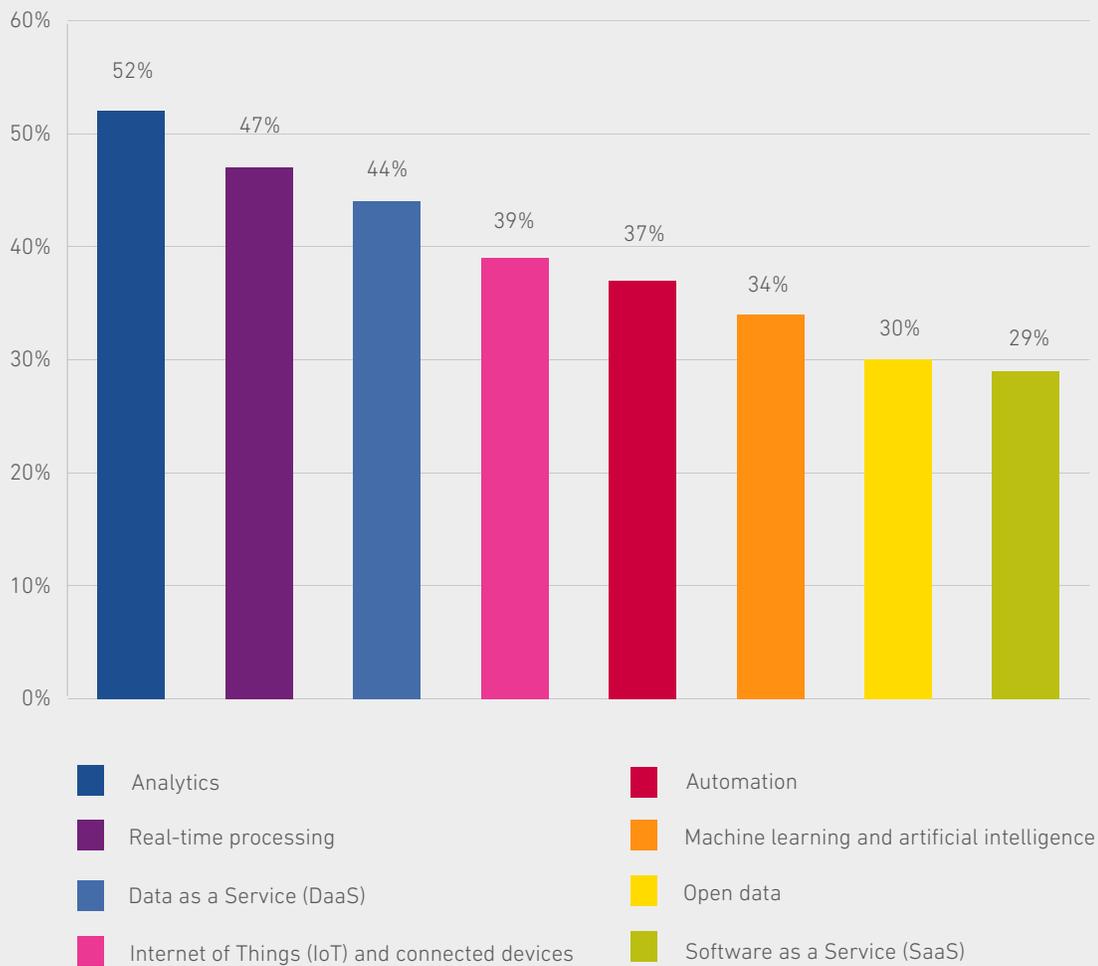
U.S. data, 2018

Other key areas of opportunity that businesses identify include real-time processing (47%), Data as a Service (44%), Internet of Things and connected devices (39%), automation (37%), and machine learning and artificial intelligence techniques (34%). The ability to process data in real time is a growing need for organizations as cloud-enabled offerings and volumes of data expose the underlying limitations of traditional data processing technology. Organizations that are able to harness the steady stream of incoming data for immediate decisioning can unlock the potential for improved services, better customer experiences, and reduced fraudulent activity, among others.

Data as a Service (DaaS) and the Internet of Things (IoT) are enabling business possibilities for roughly 40 percent of organizations. As businesses look to identify ways of managing increasingly complex data assets across the enterprise, cloud-enabled services can be an appealing solution. DaaS offloads the burden and expense of managing data from an organization onto a third-party cloud provider. This cloud-based approach means that data quality is maintained from a central repository, and users can access data when they need it from anywhere in the world. IoT devices, meanwhile, continue to proliferate in the market, and organizations will benefit greatly from the insight they can derive from consumers' everyday habits and preferences.

The focus on machine learning and artificial intelligence are particularly prevalent in the financial services industry, in which 52 percent cite it as a significant opportunity. Machine learning and AI can hold tremendous value, especially when it comes to algorithmic and trend-based initiatives, such as detecting fraudulent activity and making risk-based lending decisions. Beyond that, machine learning can be deployed to perform data preparation, which has the potential to substantially reduce the amount of employee time spent on menial tasks.

Strategic business priorities

Achieving these business opportunities in the next five years means prioritizing business objectives in the near term. Over the next 12 months, the success of key business priorities will require the ability to mobilize data assets effectively. From a global perspective, improving the customer experience is the most mentioned business priority for the coming year, which was cited by 60 percent of respondents. This holds true in the U.S., as well, where a majority of respondents (60%) see customer experience as a priority, as shown in **Chart 2**.

A likely result of ongoing digital transformation efforts, evolving customer expectations are changing the ways in which organizations interact with consumers. This is a trend we have seen for several years now,

with organizations investing in single customer view initiatives and omnichannel experiences. We are seeing organizations endeavor into virtual and augmented reality as the next frontier of digital customer experiences. We've also seen a shift toward proactive customer success models that place an emphasis on quality customer data as a means to provide excellent service. While many of these programs began in earnest, we are seeing organizations start to prioritize customer experience within their data strategies over the next 12 months.

Another key business priority for more than half of the organizations we studied (52%) is managing talent and workforce development. We often talk about data management programs in terms of

Chart 2
2018 critical business priorities, global versus U.S.

Priority	U.S.	Global
Improve the customer experience	60%	60%
Manage talent and workforce development	52%	47%
Gain cost efficiencies	51%	51%
Grow globally	46%	44%
Move through digital transformation	45%	47%
Put data at the center of the company	43%	38%
Enhance risk management	39%	39%

■ U.S.   ■ Global
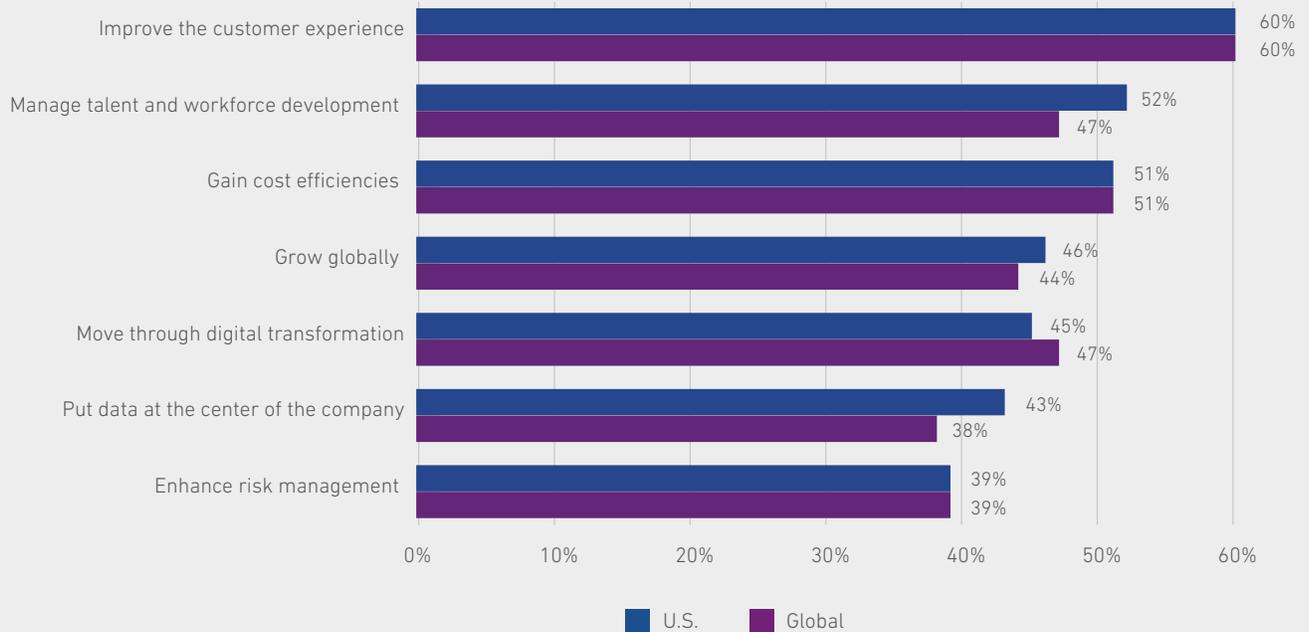
Chart 3
Areas of strategic competitive advantage

Category	Percentage
Better relationship with customers	61%
Better insight for decision-making	59%
More efficient business practices	57%
Improved marketing efforts	49%
Compliance with regulations	43%

0%   10%   20%   30%   40%   50%   60%   70%   80%
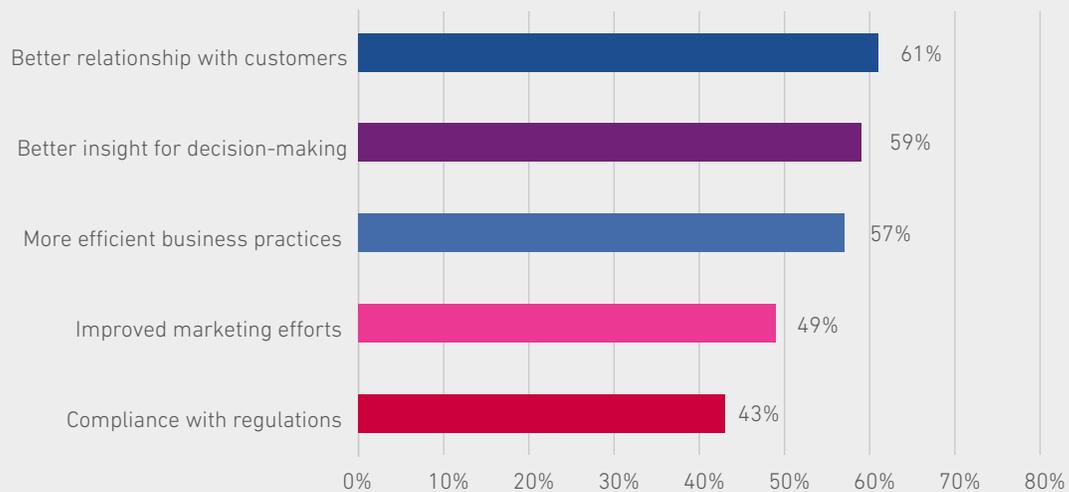
U.S. data, 2018

people, processes, and technology, and that holds true across the organization. While processes and technology are typically the easiest areas to control from an investment standpoint, the people who work for a company ultimately dictate whether processes are followed or technology is implemented. It goes without saying that having a focus on managing talent and developing a workforce is a critical priority for a maturing business. That's why C-level executives in our study cite this as their number one priority—above all else, they need to develop their talent.

Other areas of focus this year include gaining cost efficiency (51%), growing globally (46%), and moving through digital transformation (45%). It is not surprising to see the focus on gaining cost efficiencies come through in this year's study. Any organization that is looking to increase revenue will want to operate as efficiently as possible, and a large part of that agenda is identifying where costs can be reduced or

optimized. This is an area in which data can provide valuable insight. Likewise, moving through digital transformation is a growing trend across industries that is disrupting existing business models and placing data at the center of strategies.

Maximizing competitive advantages

Being data-driven can help organizations unlock true competitive advantages, as shown in **Chart 3**. A vast majority of the organizations we studied (61%) say that leveraging their data can help to improve their relationships with customers, which undoubtedly can help to give them an edge in a competitive situation. By using customer data to improve audience profiling or to perform targeted marketing campaigns, organizations can improve the customer experiences and boost retention rates. In a competitive situation, a proven track record of customer satisfaction is essential, and leveraging data appropriately can help to deliver that.

Those we surveyed also say that getting better insight for decision-making (59%) is a key source of competitive advantage. Depending on the maturity of the market in which a business operates, competitive organizations may not have the sophisticated capabilities—or clarity around their data assets— to take full advantage of available data resources. We've seen this through the disruption that agile financial technology (fintech) companies have had on the financial services industry. Not surprisingly, this focus on data-driven decisioning is most prominent in the financial services industry, in which 72 percent of organizations say that it can be a key competitive advantage.

In the coming years, we predict that organizations who are eager to remain a step ahead of the competition will be turning to their data assets to fuel their strategies. Other key competitive advantages that are the result of data-driven processes include making business practices more efficient (57%) and improving marketing efforts (49%). These areas align with the need for data analytics and demonstrate how organizations are looking to implement learnings from their data to improve existing practices.

Data-driven business requires people who understand all that data can do. Learn what roles organizations are investing in over the next 12 months.

Tell me more

Achieving a single customer view

Improving the customer experience requires a deep understanding of their needs and motivations. While businesses today all claim to have data on their customers, silos between databases and duplicated information can make it nearly impossible to have a single source of truth. In recent years, we have seen an increased focus on single customer view (SCV) initiatives, and this year is no exception. While less than 5 percent of organizations today can say they have a consolidated view of their customers, our study revealed that one-quarter of organizations (25%) plan to undergo a single customer view project within the next 12 months.

Achieving a golden record, a single customer view, or any other singular source of truth can benefit organizations in a number of ways. As shown in **Chart 4**, half of the organizations we surveyed say that increasing customer revenue and improving customer retention and loyalty are the primary drivers of their SCV initiatives. This is followed closely by advancing strategic decision-making (47%), improving customer experience (47%), and reducing costs (41%). In addition, there appears to be an increased focus on predicting future customer behavior this year, which has increased by 6 percent over the prior year.

Despite these benefits, a number of factors are preventing businesses from gaining a single customer view, which are depicted in **Chart 5**. The leading factor preventing SCV initiatives is the sheer volume and variety of information that organizations are dealing with. This is followed by the expense of technology (35%) and too many disparate sources (32%).

Chart 4
Drivers for single customer view initiatives

Driver	Percentage
Increase customer sales or revenue	50%
Increase customer retention or loyalty	50%
Improve strategic decision-making	47%
Improve customer experience	47%
Reduce costs	41%
Predict or forecast future customer behavior	33%
Legal requirements to understand customer base	33%
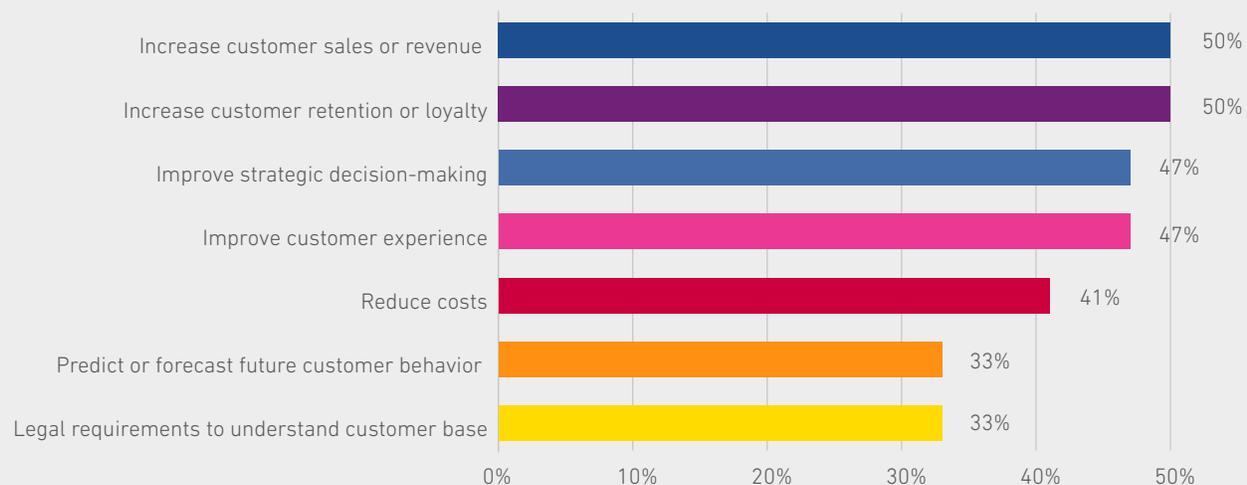
U.S. data, 2018

Chart 5
Primary factors preventing single customer view initiatives

Factor	Percentage
Volume of information	41%
Variety of information	36%
Expense of technology	35%
Too many disparate data sources	32%
Lack of data standardization	31%
Lack of data oversight	25%
Lack of technology	23%
No senior owner driving the project	18%
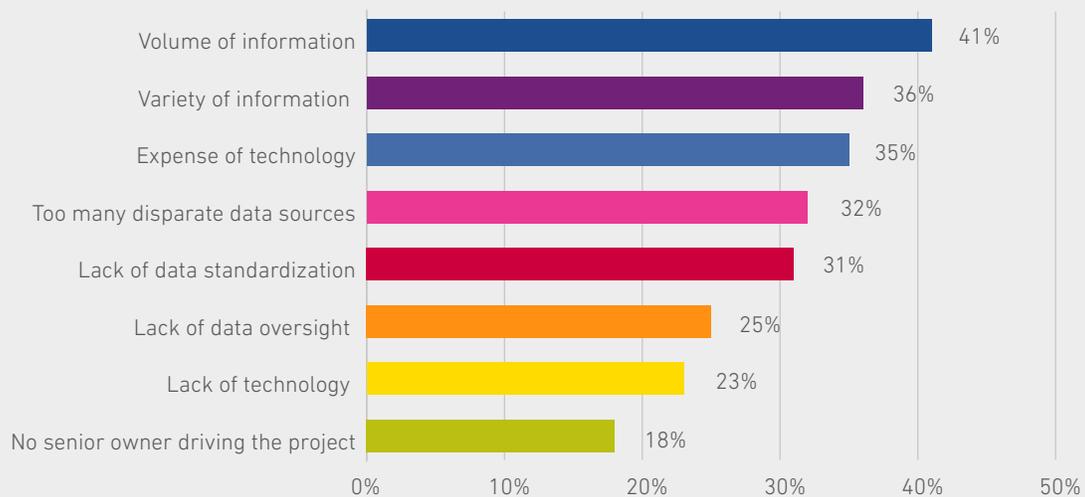
U.S. data, 2018

Maintaining high-quality data

Achieving these business priorities will require access to data, which should ultimately be governed and managed to maintain its integrity. This means developing a data strategy will be critical to an organization's ability to achieve its goals within the next year, and by extension, its five-year plans. As **Chart 6** demonstrates, more than half of the organizations we surveyed (52%) indicate that their strategies to maintain high-quality data are primarily driven by the need to increase efficiency, and another 40 percent of respondents cite cost savings.

With big data comes big responsibility. In today's always-on, always-connected world, organizations will need to drastically improve their cybersecurity and fraud prevention tactics in order to protect their data—and their customers' data—from malicious attacks. Any failure to protect this data can undermine consumer confidence and cause irreparable damage to a brand's reputation. That's why two in five respondents say that protecting their organization's reputation and brand is a key driver for their data strategy, while reducing risk and preventing fraud have increased 11 percent over the prior year.

Chart 6
Strategic drivers for maintaining high-quality data

Driver	Percentage
Increase efficiency	52%
Improve cost savings	40%
Protect the organization's reputation and brand	39%
Enable more informed decisions	37%
Reduce risk or fraud	37%
Enhance customer or citizen satisfaction	37%
Capitalize on opportunities with customer profiling	36%
Accelerate data initiatives	31%
Create a single customer view	30%
Comply with regulation	29%
Help the environment	20%

U.S. data, 2018

That said, there are some important aspects to consider when it comes to shaping a data strategy. A majority of organizations (57%) say that data security is the biggest consideration for them. In light of the increased cybersecurity concerns that organizations now face, we are not surprised to see that data security is top of mind when developing data strategies. Other key considerations are customer experience (48%)—a common theme we have identified this year—and the speed at which data is needed by the business (43%).

This last point is particularly interesting because we are now seeing an acknowledgment by organizations that traditional ways of managing and reporting on data cannot meet the demands of today's business users. Legacy processes by which business users requested reports from IT could often take days, or even weeks, to prepare and are no longer feasible. For the past year, the industry has been calling for solutions that empower business users with self-service capabilities. Now, we are seeing organizations beginning to build their data strategies around enabling business users to access data the moment they need it. In fact, when choosing data management technology, 43 percent of customers say ease of use by business users is a key consideration.

52% of organizations maintain high-quality data to increase efficiency and improve cost savings.

The state of data management

Each year, we ask organizations to rate themselves based on their current practices around people, processes, and technology, as they relate to their data management programs. Their responses, in turn, determine their placement on our data management maturity curve, which you can see in **Figure 1**.

Figure 1
Data management maturity curve
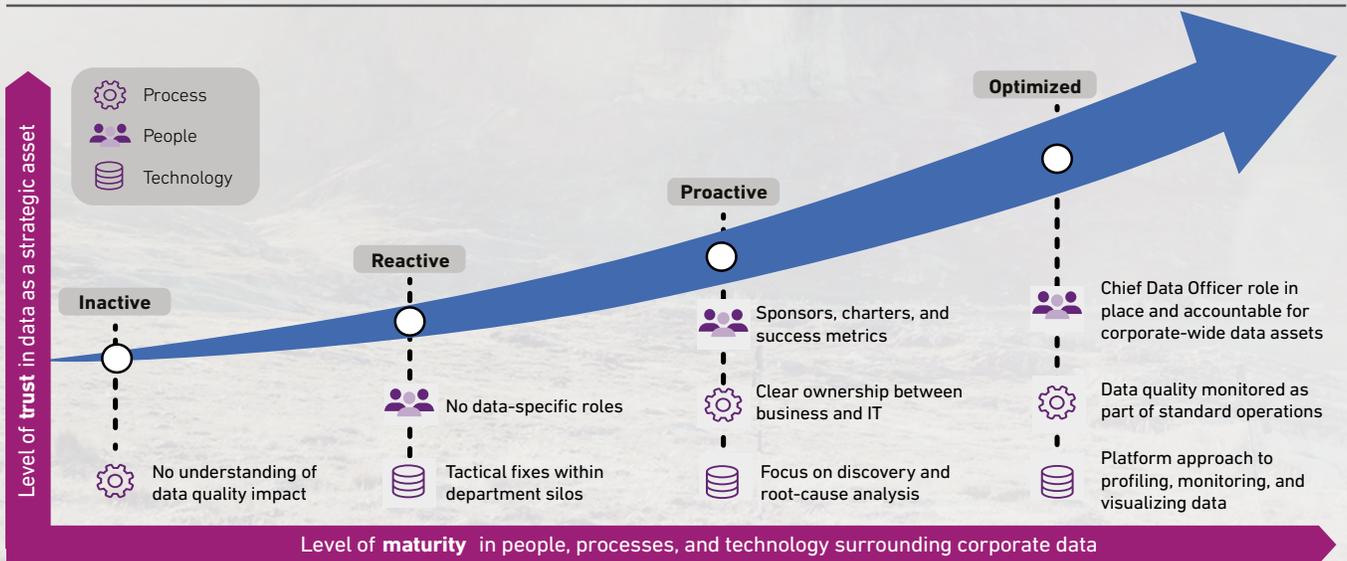
Current data management approaches

What stands out this year is that, despite much of the talk about data management initiatives in recent years, many organizations appear to be falling behind when it comes to the sophistication of their approaches to data management.

As shown in **Chart 7**, the number of organizations that rate themselves among the highest level of data management sophistication (optimized) has increased by two percent over the prior year. Organizations in this bracket have a central data role in place, such as a chief data officer (CDO), who is accountable for corporate-wide data assets; they monitor data quality as part of standard business practices; and they have a platform approach to profiling, monitoring, and visualizing data. It is encouraging to see the number of organizations who rate themselves at this level continue to grow annually.

The number of organizations that rate themselves in the second most sophisticated bracket (proactive) has decreased by four percent from the prior year. Organizations in this bracket have data quality sponsors and clearly defined success metrics; they have clear data quality ownership between business and IT; and their tools enable them to focus on discovery and root cause analyses. Although organizations in this bracket are not at the most advanced level of data management maturity, they are well on their way to taking full advantage of their data assets.

Those who rate their organization's data management approach in the third most sophisticated bracket (reactive) also decreased by 11 percent from the prior year. Organizations in this bracket demonstrate a good knowledge of data quality impacts, but they

Chart 7
Trends in data management maturity
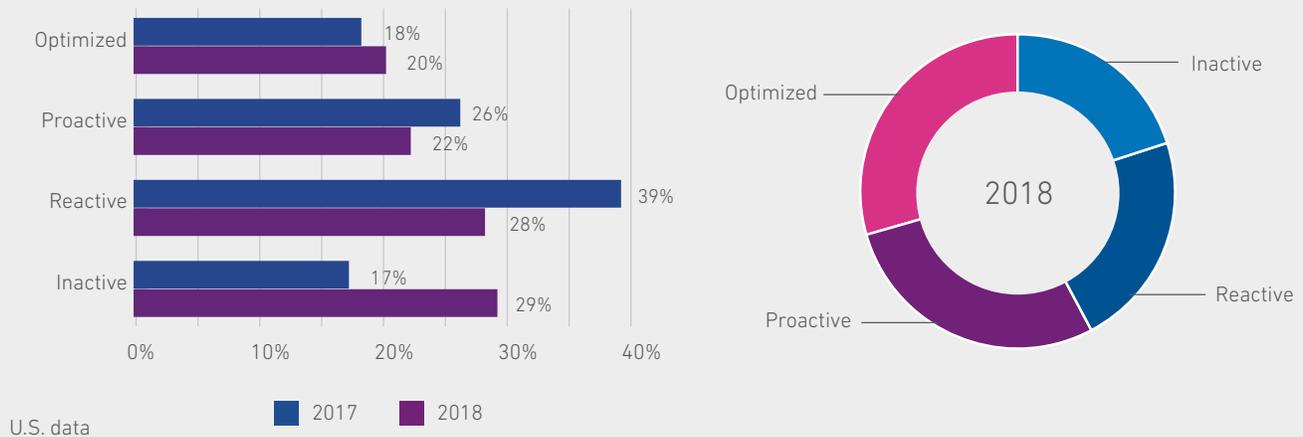
U.S. data

have no data-specific roles within their businesses; data quality fixes happen in departmental silos; and Excel or manual processes are the main methods for managing data, although some departments might have more sophisticated tools. This is traditionally the bracket in which we see a majority of organizations rate themselves.

Lastly, the number of organizations that rate themselves in the least sophisticated approach (inactive) increased quite substantially over the prior year—an increase of 12 percent. Organizations in this bracket have a patchy understanding of data quality impacts around the business; data quality fixes sometimes happen, but they cannot be relied upon; and Excel or manual processes are the primary methods for data management. This result aligns with our finding that U.S. organizations believe 33 percent of their customer and prospect data is inaccurate in some way—a figure that has increased by 5 percent in just one year.

Organizations seem to be falling behind in their approaches to data management for a number of reasons. It is well known that big data presents challenges unlike anything organizations have dealt with before. And while this disruption can be a positive change agent, organizations are seeing their current processes and technologies bend under the pressures of modern data demands. To address this issue, organizations have been investing heavily in master data management (MDM) solutions and governance programs, and they have been hiring chief data officers (CDOs) to drive their data strategies.

U.S. organizations believe 33% of their customer and prospect data is inaccurate in some way.

However, we have seen through our own research that CDOs are rarely set up for success in their roles, and they are churning at high rates. Less than half of the CDOs we spoke to say they were given a clear remit when joining their organizations, and few were given the necessary budgets and authority over data to enact corporate-wide change. We have also seen organizations investing in expensive MDM solutions to solve their data quality problems, but due to the amount of time, costs, and complexity of many of these solutions, organizations are not seeing the expected return on investment.

While the data management industry has matured substantially over the last several years, we predict that the coming years will bring a focus on point solutions that meet specific data quality needs. These offerings can be implemented in much faster time frames and for a fraction of the cost of traditional MDM solutions. To that point, more than 40 percent of organizations we surveyed say the speed of installation is a key consideration when choosing data management technology. We will also see CDOs continue to work through the problems at hand and to solidify their big data strategies with increased budgets and authority over data. While current efforts around data management programs are well-intentioned, and absolutely necessary, they will serve to make future endeavors more efficient.

Data is a precious resource, and under the care of a chief data officer (CDO), it can become a valuable asset.

See for yourself

Prevalent data-related challenges

Despite its potential to positively transform businesses, data that is untrustworthy can have the opposite effect on an organization. In fact, while customer experience is cited repeatedly as a top priority for organizations, 89 percent of C-level executives agree that inaccurate data is undermining their ability to provide an excellent customer experience. Furthermore, another 84 percent of C-level executives agree that the increasing volumes of data make it difficult to meet their regulatory obligations. Clearly, bad data is bad for business.

Just how much data is inaccurate? On average, respondents in the U.S. believe that 33 percent of their customer and prospect data is inaccurate in some

way—a figure that has increased from 28 percent just one year prior. In financial services, where some might believe the highest-quality data resides, our study revealed that the percentage of customer and prospect data believed to be inaccurate increases to 39 percent, on average.

What is the cause of inaccurate data? As shown in **Chart 8**, the biggest contributor to data inaccuracy is human error (49%). This is a perennial issue for organizations, and it has increased from 33 percent to 49 percent in just one year's time. Human error is a tricky problem to pinpoint because data is generated, accessed, and manipulated by people every day, and with the growing volumes and variety of data,

Chart 8
Top factors contributing to data inaccuracies

U.S. data

■ 2016   ■ 2017   ■ 2018
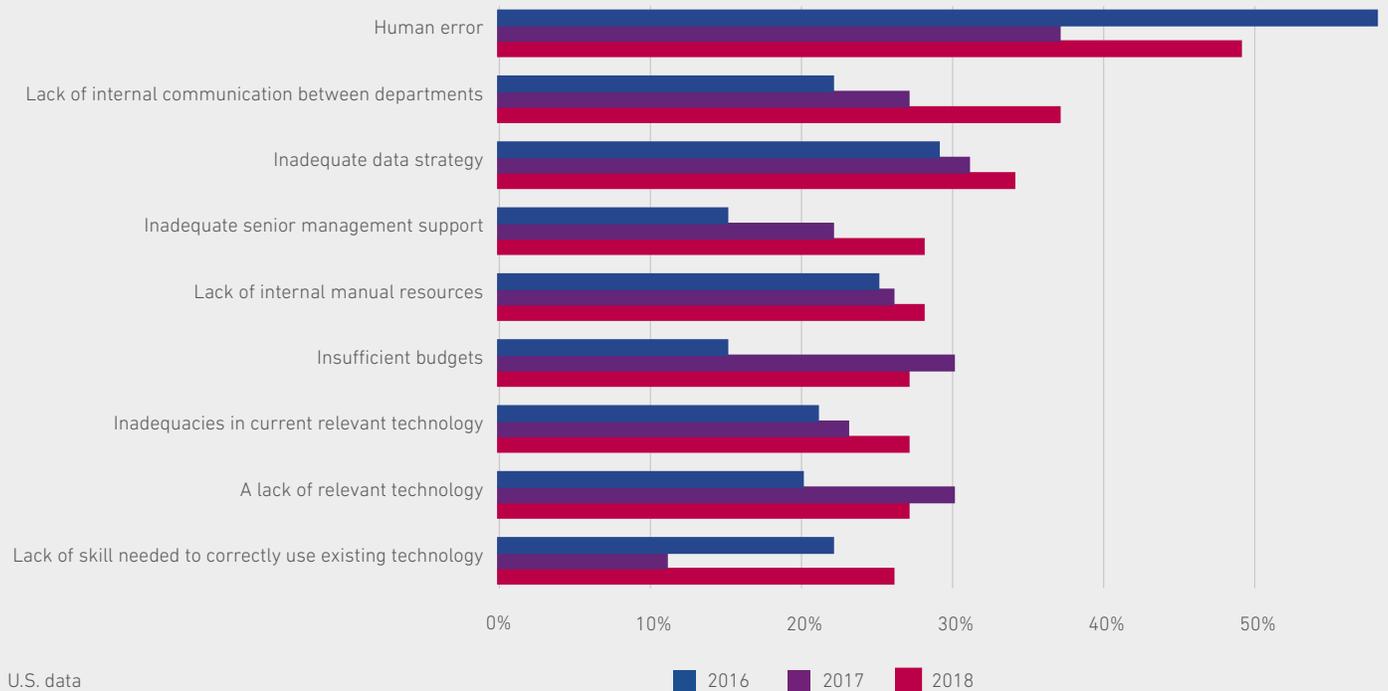
opportunities for human error are increasing. To solve for this, organizations will need to implement the adequate governance programs to ensure rules are being followed, as well as invest in the necessary data quality technologies that can help identify and prevent errors that are introduced during entry or transformations.

Other sources of data inaccuracies include a lack of internal communication between departments (37%), inadequate data strategies (34%), and inadequate senior management support (28%). Poor communication between departments further pronounces the need for governance around corporate data assets. If business definitions for data fields vary between departments or are interpreted differently, data can be transformed or analyzed in inappropriate ways and then passed downstream, which contributes to its inaccuracy and sentiments of mistrust. Further, when communication between lines of business and IT break down, identifying and resolving erroneous data can become nearly impossible.

Data ownership

Unclear ownership of data and a lack of authority are compounding the data-related challenges many organizations face. A defining conversation within the industry is the concept of data ownership, as businesses are asking themselves, "who owns our data?" While many argue that IT owns the stewardship and storage of data assets (which has been the case historically), the volumes of data and the shift to cloud-based storage services are changing this model. More and more, organizations are asserting that business users should own the data because they have the subject matter expertise to understand the context around data creation and, therefore, to know when and how it should be analyzed.

Chart 9 shows the distribution of data ownership at organizations today. More than half of those we surveyed (51%) say that their data is owned by their IT departments. This finding is not terribly surprising, as legacy ways of managing data depended heavily on IT resources. However, in recent years we have seen

Chart 9
Distribution of data ownership

IT department	51%
Chief Executive Officer (CEO)	31%
Chief Information Officer (CIO)	20%
Distributed across departments	18%
Data governance organization	14%
Chief Data Officer (CDO)	10%
There is no data owner	5%
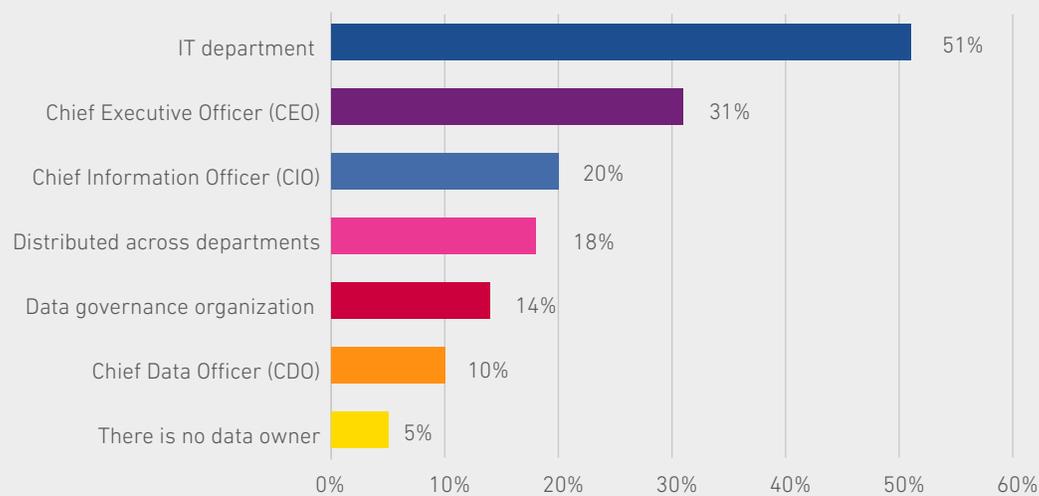
U.S. data, 2018

this model buckle under the pressures of big data and the need for real-time analytics. We expect to see the number of organizations that rely on IT for data ownership to decrease over the next several years, and the fact that almost half of organizations today no longer believe their IT departments own their data is evidence that the tides are beginning to turn.

For nearly one-third (31%) of organizations here in the U.S., the ownership of data resides with the chief executive officer (CEO). This is an important finding to call out because it is another example of how data has achieved asset-class within organizations today. Similar to how a CEO might own the responsibility for a company's strategy or P&L, they are now responsible for their data as another asset under their purview. Likewise, ensuring that data is protected from cyber threats and is in compliance with applicable regulation becomes the CEO's responsibility because they ultimately answer to shareholders and the

public when there is a lapse in any of these areas. Compared to other members of the C-suite, such as chief information officers (CIOs) and chief data officers (CDOs), CEOs are reported to have much greater ownership over data.

Nearly one in five organizations (18%) say that the ownership of data is distributed across departments, which is problematic when cross-departmental communication is cited a primary source of data inaccuracies. Managing and governing data in departmental silos can be appealing: the volumes and variety of data are more manageable, there are fewer stakeholders involved, and it's easier to develop a governance program in the short term. The problem with this approach—and it's a critical flaw—is that data rarely stays within the confines of a single department. And when departments define data differently or have different processes for managing their data, confusion and mistrust can ensue.

Chart 10
Data owner ability to enact change

5%
8%
53%
34%

U.S. data

- Data owners have budget and authority to enact data policies
- There is some authority, but they are limited in certain areas
- There is some authority, but data is not a key priority
- Data owners have very limited authority
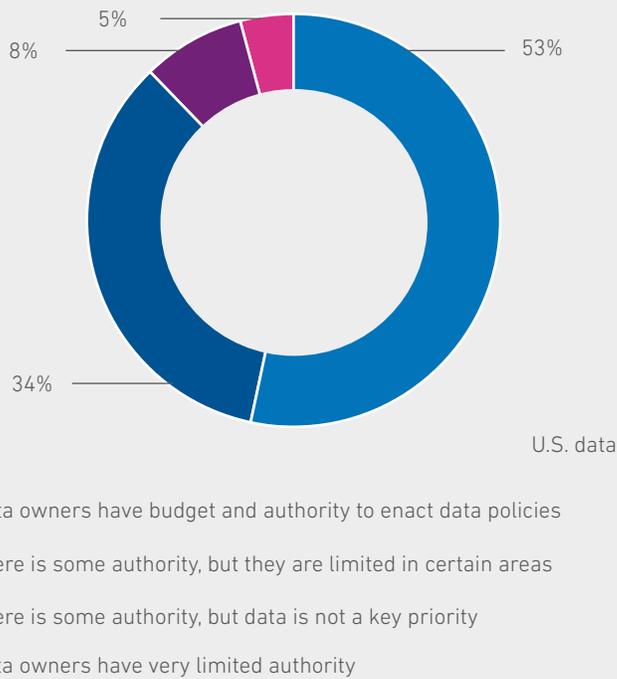
91% of C-level executives believe the responsibility for data quality should ultimately lie within the business with occasional help from IT.

Owning the data and being empowered to govern that data across an organization don't always go hand-in-hand. As shown in **Chart 10**, slightly more than half of the organizations we surveyed (53%) indicate that their data owners have the budget and the authority needed to enact new policies. In nearly as many organizations (47%), the authority that data owners have is limited in some way, which can make it difficult to enact necessary control over data. Organizations have a long way to go in empowering their data owners to implement the necessary policies to ensure data is governed and managed appropriately.

While ownership of data can be a somewhat complicated matter, it is fair to ask these organizations where the responsibility for data quality should ultimately reside. After all, having the ability to differentiate the good data from the bad really calls for a deep understanding of the data in question, and it is not something a centralized owner could realistically determine. It's not very surprising, therefore, to see 91 percent of C-level executives saying that they believe the responsibility for data quality should ultimately lie within the business with occasional help from IT. Further to that end, even 90 percent of respondents who work in IT agree that business users should retain responsibility for data quality programs.

Planned data management projects

Digital business demands data that is trustworthy. Organizations that recognize this reality will be doing their utmost in the coming year to implement data management programs to overcome many of these challenges. In this section, we have identified the top data management projects that organizations are planning in the next 12 months, as shown in **Chart 11.**

Compared with our findings from one year ago, it is encouraging to see that organizations are planning data management projects in much greater numbers. Across the board, the number of respondents saying they are planning projects increased by nearly ten percent, with the highest percentages around data integration and data analytics.

Chart 11
Trends in planned data management projects, 2017-2018

Category	2017	2018
Data integration	34%	50%
Analytics	24%	46%
Data migration	35%	38%
Master data management	19%	38%
Data preparation	27%	36%
Data enrichment	26%	35%
Data governance	18%	32%
Data cleansing	31%	30%
Holistic data quality	19%	28%
Single customer view	30%	25%

U.S. data

■ 2017   ■ 2018
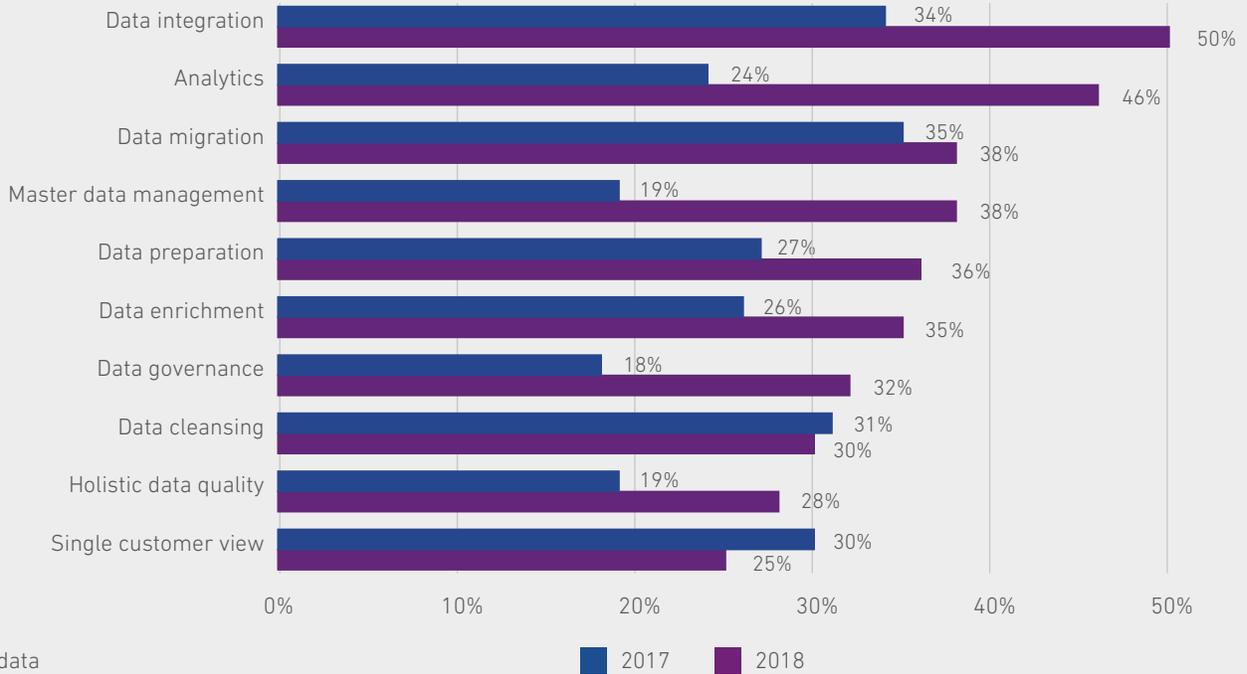
Data integration

Half of the organizations in our study say that they plan to undergo a data integration project in the next 12 months. Data integration projects involve leveraging existing assets to derive additional insight. Typically, an integration project will join together two or more previously disparate systems in order to enhance information with related data.

For example, a retailer might integrate a customer relationship management (CRM) system with an order fulfillment system to better understand the impact of shipping delays on high-value customers. In this instance, the systems were enabled to work together to provide a net new analytics opportunity.

It's no wonder that the number of businesses saying they plan to undergo an integration project is up from only 34 percent the prior year.

Data analytics

Data only becomes insight when you analyze it. Achieving many of the business priorities discussed earlier, such as improving customer experience and gaining cost efficiency, will require organizations to leverage their information for strategic decision-making. That's why 46 percent of organizations say that they are planning data analytics initiatives in the next year—an increase from 24 percent in the prior year.

While traditional data analytics tools required technical expertise in SQL and Python, we are seeing an increased trend toward self-service business intelligence and business user-friendly solutions that enable anyone to analyze data. Given the substantial increase in organizations looking to do data analytics in the next year, we expect to see a larger push toward more user-friendly analytics options.

Data migration

In a data migration, information is moved from one system to another through a process known as extract, transfer, and load (ETL). There are a number of reasons why an organization might undergo a data migration, including an effort to modernize systems or to consolidate systems during a merger and acquisition. Over the next 12 months, 38 percent of organizations in our study say they are planning to undergo a data migration.

While migrations can have tremendous benefits for an organization, they are tricky things to get right. **Chart 12** shows many of the top obstacles that organizations face during a data migration. The unplanned challenges plaguing data migrations include data quality issues (38%), the number of systems (35%), and limited skills and expertise (30%).

These unforeseen challenges can result in project delays (47%), duplicate information (45%), poor data quality in new systems (45%), and require additional budget (44%). In 36 percent of cases, challenges during a data migration resulted in the complete inability to use a new system.

While the number of systems in a migration cannot be helped, an area where many organizations struggle is with data quality. Before beginning a migration, it's important to profile your data for underlying issues and to resolve them with help from the appropriate business stakeholders. Validating the quality of your data before and after a migration will ensure any new system suits the needs of those who will be using it.

Chart 12
Top challenges data migrations face

Challenge	Percentage
Data quality issues	38%
Number of systems	35%
Limited staff skills and expertise	30%
Ineffective tools	27%
Lack of budget	26%
Lack of management support	25%
Lack of planning	22%
Not enough man power	22%
Too many stakeholders	21%
Underestimate project timeline	20%
Ineffective product scoping	20%
No link to business objectives	13%

U.S. data, 2018
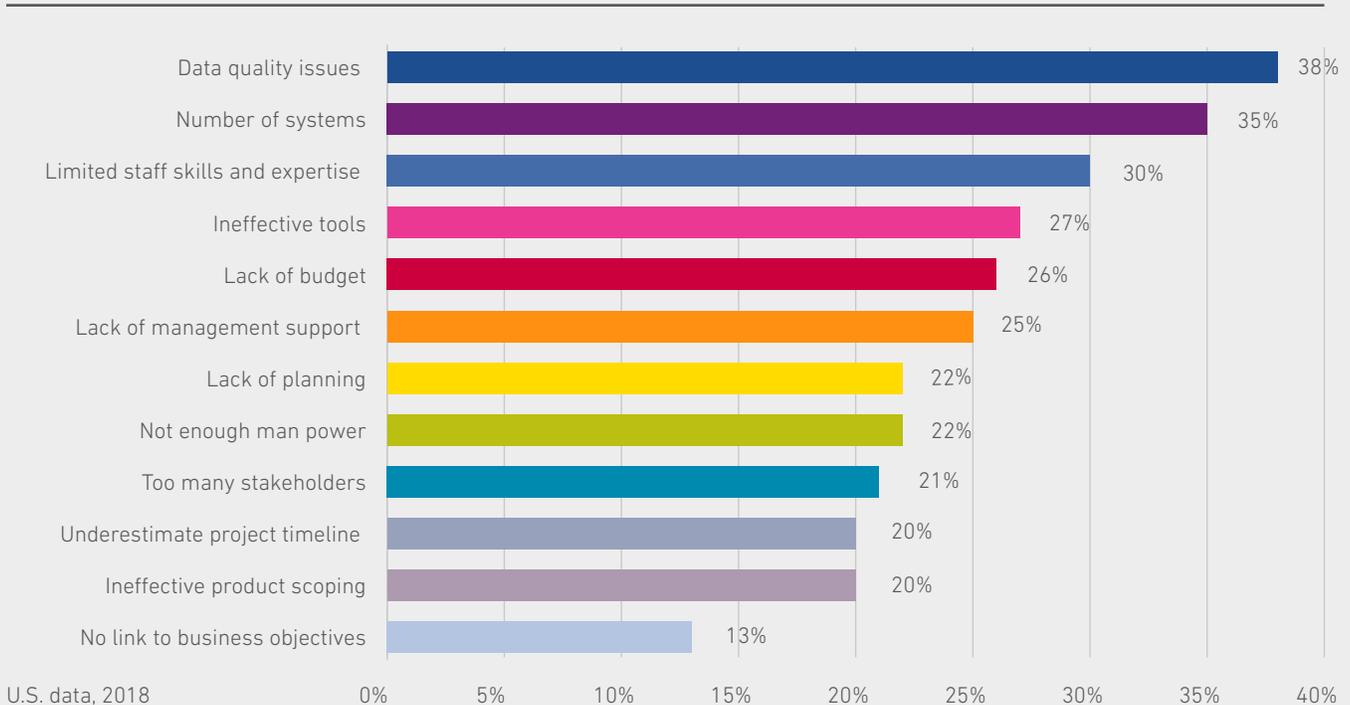
Master data management

Master data management (MDM) focuses on the processes and technology around data to create a golden record from which a single source of truth can be derived. In the next 12 months, 38 percent of organizations we surveyed are planning to undergo a project related to master data management, which is up from 19 percent just one year prior.

While the search for truth continues to dominate conversations in the MDM space, many organizations are finding that they might be better off with simpler solutions for their needs. For instance, many may look to a data matching solution to achieve a single customer view, rather than spending vast amounts of business time and resources setting up a comprehensive MDM solution. Still, MDM represents a big focus for organizations in the upcoming year.

Data preparation

Data is rarely in an appropriate condition to be used for analytics when it is extracted from a source repository. Before a business user can begin building dashboards and generating reports, the data needs to be cleansed, standardized, deduplicated, and otherwise transformed so that it can be used in the analysis. This is known as data preparation, and 36 percent of organizations in our study say they are planning data preparation projects in the next 12 months (up from 27% the prior year). As shown in **Chart 13**, data is most likely to be prepared for analytics (48%), operations (45%), financial reporting (44%), and business intelligence (40%).

While it may seem as if data preparation is the easiest data-related project, it may surprise you to learn that 91 percent of C-level executives believe that preparing data for insight ultimately costs their business in terms of resources and efficiency. That's because employees spend up to 44 percent of total project time preparing their data for insights, rather than spending that time on more meaningful work. We predict that in the coming years, organizations will begin to adopt cutting-edge technology, such as artificial intelligence and machine learning, to accelerate routine tasks like data preparation.

Chart 13
Strategic initiatives requiring data preparation or wrangling

Initiative	Percentage
Analytics	48%
Operations	45%
Financial reporting	44%
Business intelligence	40%
Marketing efforts	36%
Customer insight	36%
Compliance	34%
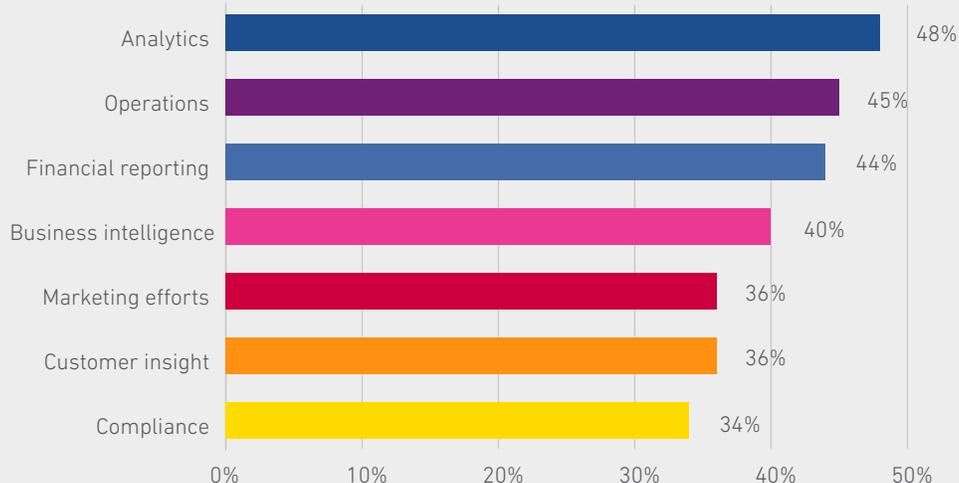
U.S. data, 2018

The responsibility for data preparation often falls to IT departments (60%), followed by departmental data analysts (39%), and organization-wide data analysts (36%). In 20 percent of cases, this responsibility lies with data scientists, and in 19 percent of the cases with the CDO's team. Within the financial services sector specifically, a majority of the responsibility for preparing data (60%) resides with departmental analysts.

Data enrichment

The saying "one plus one equals three" can certainly be applied to your organization's data assets. A leading conversation within the data community today centers around monetization, specifically how a dollar amount can be assigned to certain data elements. By augmenting existing data with purchased third-party information, a process known as data enrichment, organizations can unlock opportunities for analytics that may not have been possible before.

Incorporating third-party information is a common practice for organizations, and it highlights their intent to leverage data for strategic decision-making. Over the next 12 months, 35 percent of organizations are planning to undergo a data enrichment project, which is up from 26 percent the prior year. Whether they're trying to gain better insight into their customer segments for improved marketing, to increase enrollments into their services, or to make improved lending decisions, third-party data can dramatically increase the value of the existing information organizations have.

We see the most plans for data enrichment projects in financial services. According to our study, 44 percent of organizations in financial services are planning to undergo data enrichment projects, compared to the average of 35 percent. As fintech companies continue to disrupt the business models of large financial institutions, we are seeing the ability to leverage data becoming a true competitive advantage. In

today's battleground for digital wallet share, financial institutions are leaning on data enrichment services to power customer experience initiatives, reduce and prevent fraudulent activity, and drive product innovation.

Data governance

Data needs to be trustworthy to be of value to an organization. Data governance, like data quality, is critical to ensuring an organization's information assets can be used with confidence. Organizations looking to implement data governance should focus on the policies and procedures for using and managing data by building enterprise-wide data glossaries and establishing governance committees to solve ongoing challenges. As the demands for trusted data continue to increase, we are seeing the number of organizations planning data governance projects increase by 14 percent year-over-year.

When it comes to implementing a governance program, however, there can be some challenges. Notably, establishing consistency around the organization is the primary challenge for 42 percent of those we surveyed. This is followed by determining which data to govern (34%), justifying the investment (32%), deciding which tools to purchase (32%), and forming a governance team (29%). A growing number of organizations are struggling with generating momentum for their long-term programs (23%, up from 9% in the prior year).

Data governance programs tend to be bespoke to every organization, and often they are developed slowly over a number of years. This can result in processes that are slow to adapt to critical market drivers. The Achilles' Heel for any data governance program is the inability to scale with the growing volume and variety of data. We predict that in the coming years, organizations will be implementing data governance in tandem with data quality strategies so that the development of trusted data can happen as the demands of the businesses change.

Data transparency:
A global perspective on GDPR

Kevin McCarthy, Global Product Management, Experian

General Data Protection Regulation (GDPR) has been a leading topic of conversation among organizations for the past 12–24 months. The regulation is designed to safeguard the personal data of EU citizens, and when it takes effect in May 2018, organizations must have processes in place to ensure compliance. At the heart of GDPR is data transparency, as it specifically calls for organizations to receive consent from consumers prior to using their data and to implement reasonable measures for safeguarding consumer data. This includes the hiring of a new position known as the data protection officer (DPO). While the brunt of GDPR is being felt overseas, any U.S. organization that deals with the data of EU citizens will need to comply with the law.

Adapting to the requirements of GDPR has placed a tremendous burden on organizations globally, especially those that are from traditionally unregulated industries; however, many see this as a positive change agent. Specifically, the increased attention and budget that data management programs have received as a result of GDPR is enabling organizations to make much-needed improvements to their programs. Nearly all of the C-level executives we surveyed (94%) agree that the GDPR legislation presents an opportunity to refine their data management strategies.

When it comes to data transparency, our study shows that more than half of U.S. organizations (56%) say that their customers are fully aware of how they use their data and trust them to use it responsibly (as depicted in **Chart 14**). Compared with the other regions included in our study, organizations in the U.S. and Brazil appear to be much further along with data transparency initiatives. With that said, the remaining organizations either say there is some level of transparency into how their data is used or they do not inform customers at all. Interestingly, in the UK

Chart 14
Trends in global data transparency

Total   United States   United Kingdom   Australia   Brazil

- Our customers are fully aware of how we use their data and trust us to use it responsibly
- There is some awareness, but we could do more to explain it further
- Our customers have limited knowledge around what we do with their data
- We do not inform our customers about how we use their data
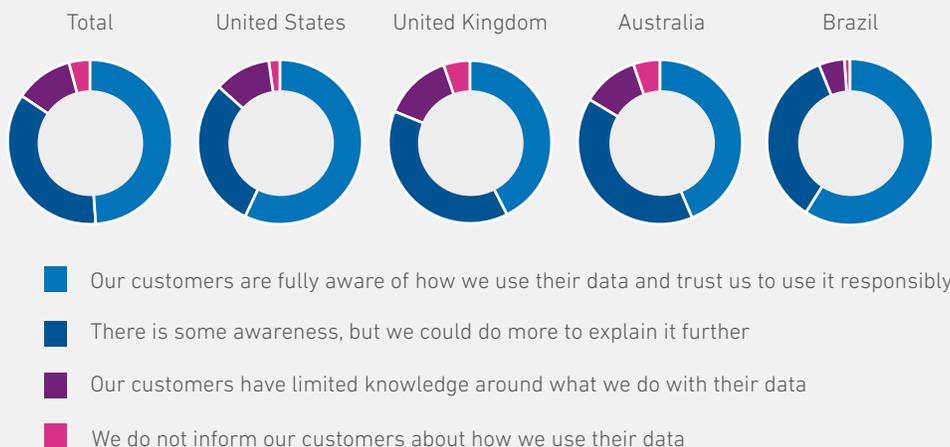
where GDPR is most impactful, organizations appear to be trailing behind. I believe that this finding is likely a result of UK businesses becoming more aware of the work they have to do around improving data transparency practices, and not necessarily that they are worse than other regions.

Organizations around the globe are working quickly to implement processes and technology to comply with GDPR. As shown in **Chart 15**, initiatives to demonstrate data transparency include informing customers about how they use data at sign-up (43%), updating customers with clear communications around data use, service updates, and changes to privacy policy (41%); and updating privacy policies to make them easier to understand (41%). While these practices are worthwhile in theory, they require robust data management and governance programs to ensure they are not only communicating with the correct customers, but also that they are able to track and report on this activity as part of GDPR requirements.

Chart 15
Global data transparency practices
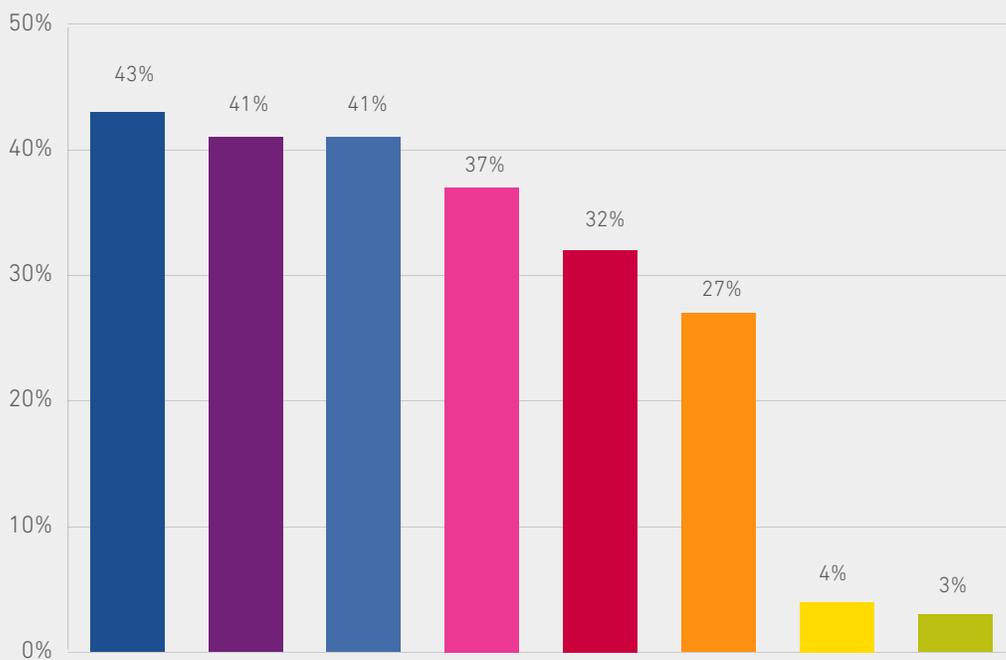
- ■ (dark blue) We inform customers about how we use their data when they sign up to our services
- ■ (purple) We update customers with clear communications around data use, service updates, and changes to privacy policy
- ■ (blue) We've updated our Privacy Policy to make it easier to understand
- ■ (pink) We remind customers at regular intervals as part of other marketing/communications
- ■ (red) We have a dedicated team/contact to manage this for customers
- ■ (orange) We've made visual aids such as videos and graphics to explain how we use customer data
- ■ (yellow) We don't have any initiatives in this area but plan to in the next 12 months
- ■ (olive) We have no plans in this area

Global data, 2018

Conclusion

Data is quickly becoming the currency of the emerging digital economy. Organizations that are able to mobilize their data assets to power critical business initiatives will see a distinct advantage in the years to come. As digital transformation efforts proliferate and become commonplace, data will take center stage as a critical driver of these initiatives. Yet as the reliance on data deepens, the need for trustworthy and reliable data assets will become increasingly important.

This year's global study highlighted several important trends in our industry. First and foremost, organizations across the globe are planning data management projects in much greater numbers in past years. At the heart of these initiatives is the desire to improve customer experiences and drive efficiencies across the organization. Secondly, a growing number of C-level executives are placing an emphasis on leveraging data when developing their strategies. Finally, despite efforts in recent years to become more sophisticated at data management, organizations seem to be falling a bit behind.

In the coming years, we expect to see organizations recalibrate their expectations around data management. Many will begin to look toward point solutions to solve specific business needs. Many more will look for solutions that are tailored to business users. As organizations continue to grapple with the challenges of digital transformation, we expect to see them rise to the occasion and use their data to thrive in this digital economy.

Thriving in the digital economy means using your data effectively. Learn how we can help.

Get started

About Experian Data Quality

Experian Data Quality enables organizations to unlock the power of data. We focus on the quality of our clients' information so they can explore the meaningful ways they can use it. Whether optimizing data for better customer experiences or preparing data for improved business intelligence, we empower our clients to manage their data with confidence.

We have the data, expertise, and proven technology to help our customers quickly turn information into insight. We're investing in new, innovative solutions to power opportunities for our people, clients, and communities. To learn more, visit www.edq.com.

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