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Foreword
By Thomas Schutz

Good data is part of building a robust business strategy. This is a statement that most organizations who use data to make informed decisions can agree with.

For years, organizations have wanted good data for simply operational efficiencies and cost savings, but now a shift has taken place where businesses are using data for nearly every aspect of their organization. In fact, the majority of sales decisions are expected to be driven by customer data by 2020. Driving sales is just one reason for businesses to get behind data management. Other factors for wanting to turn data into actionable insight are the need to find new customers, increase customer retention, better understand their needs, and increase the value of each customer.

At first glance, this is a step in the right direction. Rather than relying on instinct, businesses are focused on using the power of analytics and the information they have before them to better serve customers and optimize business processes.

However, we see again this year that the majority of organizations are not in possession of the high quality data needed for these decisions. About a quarter of information is believed to be inaccurate and that poor quality data is affecting a company’s ability to provide an excellent customer experience.

Data management is often fragmented and driven by multiple stakeholders rather than by a single, data specialist. This legacy mindset typically places the responsibility of data in the hands of IT users.

But that legacy mindset is starting to change. While a quarter of data is believed to be inaccurate, that figure has decreased from last year’s results. In addition, we are seeing more organizations advancing their data management strategies to include a central data owner. Finally, we see a number of organizations looking to execute data management projects, especially around data integration, data cleansing, and data migration.

The biggest problem organizations face around data management today actually comes from within. Businesses get in their own way by refusing to create a culture around data and not prioritizing the proper funding and staffing for data management. Many businesses know they need to improve their data quality, but often have a hard time defining why an investment is needed in the current structure.

Ultimately, organizations should, in time, transfer the ownership of data quality and data management from the IT portion of the business to the business users. Business stakeholders can often better quantify the need for accurate data and leverage data in daily operations. With that in mind, this benchmark report will look to the trends in data management as it relates to better customer-to-business interactions, overall data quality within businesses today, and what organizations should do to prepare for the evolution of data management.

I hope you enjoy this report, and that it helps spark ideas for data management change within your business.
Methodology
Experian has once again conducted a survey to look at
global trends in data quality. This study looks at how
data practitioners are leveraging and managing their
data to generate actionable insight, and sees how data
management practices are changing over time.

Produced by Loudhouse for Experian in November 2015,
the study polled more than 1,400 people across eight
countries around the globe. A variety of roles from all areas
of the organization were surveyed, including information

Building customer understanding through
better data insights
An evolution in data usage is taking place in all businesses,
no matter the size or vertical. Data is essential to
decision-making around customer sales, organizational
effectiveness, and ultimately, a business’s overall strategy.
Eighty-four percent of businesses believe data to be an
integral part of forming a business strategy.

The increase in data usage is due to the belief that the
key to consumers’ hearts—and subsequently the key to
increased sales—is accomplished by providing exceptional
customer service. The mantra of ‘customer first’ will only
continue to grow in relevance.

It should come as no surprise that a good customer
experience drives revenue, helps with customer retention,
increases existing customer revenue, and attracts new
customers through positive word-of-mouth. Poor data
quality, however, negatively affects a company’s ability
to provide the level of personalization and quality of
experience that consumers are now expecting as the
standard.

In fact, 75 percent of organizations believe inaccurate
data to be undermining their ability to provide an excellent
customer experience.

Therefore, data strategies are ultimately put into place to
turn data into actionable insight. Not surprisingly, given the
tie to revenue, the biggest drivers for better data practices
are very customer-focused. Respondents named finding

new customers, retaining customers, understanding
customer needs, and increasing the value of each customer
as important reasons to leverage data.

75% of organizations believe inaccurate
data is undermining their ability to provide
an excellent customer experience.

Outside of these drivers, however, the need for better data
analytics and management lie in very business-oriented
factors. Increasing business growth, securing future
budgets, reducing risk, and complying with government
regulations are among the business-oriented factors
compelling organizations to focus more on better data
management.

Data collection processes
Data collection is key to any data insight. The information
collected from an individual can vary dramatically by
channel and the quality of information can be different
depending on the collection processes in place.

Keeping in line with what our previous research studies
have revealed, U.S. organizations collect data through an
average of three different channels. The most common
channels used to collect customer data are email, website, point of sale, and call centers. Over the next five years, organizations plan to increase their activity even more in digital channels, such as websites, mobile devices, mobile applications, and social media. Mobile usage is expected to increase the most.

More respondents expect their point of sale and call center channel usage to remain the same as compared to any other channel. This can be attributed to the fact that growth and originality in traditional channels has stagnated to the point where businesses are loathe to funnel energies from innovation in digital channels to improve those that have ceased to progress.
These findings reflect the big data obsession as well as the permeation of technology in today’s consumerist environment. As people are presented with more choices and more ways to consume, opinie, and live in the digital sphere, businesses must shift their attentions to optimizing data strategies to reflect those changes.

**Striving for big data analytics**
The methods for data collection are changing, as is the variety, volume, and speed at which that information is collected. The increasingly complex data environment is causing organizations to hone in on big data initiatives. Now, however, businesses are not just talking about it, they are investing in it.

Over half of the U.S. businesses surveyed currently have a big data strategy in place to analyze large sets of data, with a third planning to introduce one in the next 12 months. Still, nine percent have no plans to introduce a strategy.

For those that do plan to introduce a big data strategy, the majority have assigned part of their IT budget towards it. In some organizations, we see almost a quarter of budget being allocated towards big data projects.

When looking across the globe, the U.S. and Singapore have the highest number of self-reported big data projects, while Spain has the lowest.

That said, we believe that a limited percentage of the total budget is coming from a central IT source. Like many investments in data, a budget for big data may be made department by department, which means much of this budget could be wasted on duplicate efforts.

**Biggest reasons for maintaining a high-quality data strategy**
There are a number of reasons organizations maintain high-quality data. In 2016, they are related to increasing efficiency, improving customer satisfaction, and enabling more informed decisions. As the usage of data has shifted, so have these motivations. In years past, we saw heavy motivations related to costs and operational efficiency. While those are still present, we see a shift now more towards business objectives related to the customer and informed decision making.

While some of these areas are ranked higher than others, they are all important for businesses and their usage of data. Critical business objectives such as making more informed decisions, protecting the brand and reputation, reducing risk and fraud, and capitalizing on new opportunities all depend on the maintenance and management of good data.
Overcoming data quality challenges

While most businesses have a desire for data-driven insight, many are not realizing that ambition. The bulk of businesses think profits can increase if their data was of the highest quality, which has been the case for years. Organizations still deal with a high degree of inaccurate data because there are a number of challenges to maintaining it. Some of them are external forces, but many are internal challenges.
The sheer amount of data being created and the numerous collection channels make good data quality an important, yet elusive, goal. Seventy-five percent of businesses say they can detect and resolve data issues in a timely manner. However, 65 percent wait until there are specific issues with their data until they address and fix them.

This reactive approach to data management leads to internal and external problems. When businesses wait until employees have uncovered an issue, poor data analysis and decision-making, drops in efficiency, even lowered morale, can occur as undesirable consequences. And when businesses wait until consumers discover issues, consumer dissatisfaction with the overall business and reluctance to return can occur, negatively impacting your bottom line.

Improved data quality brings with it tangible commercial benefits. And in accordance with more businesses moving onto the cloud, 74 percent of U.S. organizations would use a SaaS solution to identify and resolve data issues. On average, organizations believe they could increase overall sales by 29 percent if all their data was fully

Chart 4
Most common data errors within businesses

- Incomplete or missing data: 51% (2015), 60% (2016)
- Outdated information: 54% (2015), 51% (2016)
- Duplicate data: 32% (2015), 51% (2016)
- Inconsistent data: 30% (2015), 37% (2016)
- Typos: 22% (2015), 28% (2016)
- Spelling mistakes: 19% (2015), 26% (2016)
- Data entered in the incorrect field: 27% (2015), 27% (2016)
- Other: 1% (2015), 2% (2016)
- None of the above / we don’t have any inaccuracy: 2% (2015), 3% (2016)
- Don’t know: 1% (2015), 1% (2016)
accurate and to the highest quality. Increasing sales combined with providing a positive customer experience means there is a high desire among businesses to utilize data and to get it right.

**Struggles with inaccurate data**
A strong desire for accurate insight exists, but most organizations still struggle with ensuring the quality of their data for those accurate insights. Almost a quarter (23%) of customer data is believed to be inaccurate. In addition, there has been a sizeable increase in virtually all types of data errors over the past year.

The only data error to have decreased slightly was entering data into incorrect fields, from 27 percent in 2015 to 26 in 2016. The types of errors listed should come as no surprise; however, it may be worth noting the considerable increase of these errors in just a year. Duplicate data, in particular, jumped from 32 to 51 percent.

Over half of the organizations we polled attribute these data errors to human mistakes. However, a lack of internal manual processes, inadequate data strategies, and inadequacies in relevant technologies also contribute to inaccurate data. With multiple obstacles to good data...
quality existing within the business, it is challenging to predict when the next data problem will arise. Interestingly enough, while human error is still the largest contributor to inaccurate data, we are increasingly seeing the lack of technological know-how as a limiting factor to leveraging high-quality data.

**Internal data quality challenges**

Organizations face many challenges when it comes to maintaining accurate data, but the most difficult seem to be the challenges where organizations cannot invoke enough support to improve data culture.

In general, our research shows that organizations often lack the knowledge or skills around data management and the human resources required to manage data properly. In addition, they have unrealistic time-to-value expectations of their data quality tools. What is interesting is that those expectations are also causing organizations to state they don’t have enough data quality technology, or that the technology they have is underperforming.

These internal challenges are not just central to large organizations. A whopping 94 percent of companies, across all levels, have experienced internal challenges when trying to improve their data quality.

**Chart 6**

**Biggest internal challenges to improving data quality**

- Lack of knowledge / skills
- Lack of human resources / employees
- Time-to-value expectations
- Lack of / underperforming data quality tools
- No dedicated owner to drive forward a long-term strategy
- Lack of budgets / funds
- Justifying data quality investment / ROI
- Auditing
- Business data integration
- Lack of board buy-in
- Underperforming data quality vendors
- Other
- None of these / no challenges
- Don’t know
As stated earlier, finding new customers, increasing customer retention, understanding customer needs, and increasing the value of each customer are the biggest drivers for wanting to turn data into insight. Organizations will continue to emphasize getting to a single customer view as the competition to stand out amongst other businesses grows tougher. Understanding what consumers want through the data collected and knowing how to apply that data is what will differentiate laggards from leaders.

It is interesting to note that the top three challenges listed in the graph are very knowledge- and resource-oriented. This shows that improvements to internal data quality challenges are indeed limited by the organization’s ability to hire the right people and have realistic expectations of data projects.

Achieving a single customer view is another major internal challenge—one that is very important for businesses today to overcome. Why? The level of understanding gained from tracking consumer interaction across various channels drastically helps businesses provide a seamless consumer-to-brand experience. There are clear leaders in excellence in customer experience that have set the bar for other businesses to follow. As a result, consumers expect a degree of personalization and relevance from the businesses they interact with. Those that do not meet expectations lose a lot more than revenue—negative word of mouth and loss of the customer as a returner are examples of far-reaching consequences in not meeting consumer expectations.

Therefore, it makes sense that the vast majority (97%) of U.S. businesses are looking to achieve a complete view of their customer. Increasing customer loyalty, increasing customer sales, and improving strategic decision-making are the biggest drivers of creating or optimizing their single customer view strategy. Twenty-two percent of U.S. respondents also cite adhering to legal requirements as a reason to understand their customers better.

As stated earlier, finding new customers, increasing customer retention, understanding customer needs, and increasing the value of each customer are the biggest drivers for wanting to turn data into insight. Organizations will continue to emphasize getting to a single customer view as the competition to stand out amongst other businesses grows tougher. Understanding what consumers want through the data collected and knowing how to apply that data is what will differentiate laggards from leaders.
External data quality challenges

Challenges to optimizing data usage also stem from external sources. These are challenges not related to company culture, data staffing, etc. That being said, data capture and validation, security or governance risk, and data profiling are the biggest challenges to external data management.
As seen from the graph below, almost a quarter of businesses struggle with managing either the volume or variety of data collected.

These two challenges are only expected to increase over the coming years, making businesses more likely to emphasize their importance in response. These external challenges are often easier to tackle if the right data culture and staffing is in place. Processes and technology can then be implemented to improve the capturing, monitoring, and profiling of data on an ongoing basis. The technology already exists today to address these challenges; organizations simply have not implemented it in a centralized fashion with the right oversight to ensure success.

Data management evolution

Over the next five years, U.S. businesses believe data management will evolve to improve the overall customer experience, protect customer security, and inform decision-making. While a large portion of the data management initiatives focus on providing exceptional customer service, businesses also require them to make better, smarter decisions.

The changes in channel usage listed above are not just isolated to a particular area of the business nor are they overly technical in nature. They look at how data can serve to drive key business objectives forward. The age where data was just an ancillary thought for business improvement has passed.

However, for this shift to take place, organizations need to sift through the large amounts of data they have and isolate what is useful and accurate to achieve a given outcome. Today, this is a challenge that few are equipped for without a proper data quality strategy.
People, processes, and technology

The way organizations manage the quality of their data is evolving. At Experian, we look at the level of sophistication of a data management strategy based on the people, processes, and technology surrounding data.

We see four different levels of data management sophistication: unaware, reactive, proactive, and optimized. These are described in the data quality sophistication curve (Figure 1).

Most U.S. organizations (42%) have a long way to go. They see themselves as reactive, with some sophisticated data management tools, but having no specified data-oriented roles or business-wide technological tools in place. A lesser proportion of businesses (24%) say they are proactive, with data quality sponsors in place, defined success criteria, and clear ownership between the business and IT.

Only 19 percent say that their business approach is optimized—a CDO is in place, data quality is monitored as a standard business practice, and a technology platform is in place to profile, monitor, and visualize data. The remaining 16 percent describe themselves as unaware, with little understanding across the business as to the impact of data quality, and data quality is addressed in an ad hoc, manual way.

While the level of data management sophistication still has a long way to go, it has improved in the past year. As more organizations adopt a central data stakeholder, this level of sophistication will increase at a rapid pace.

Only 24% of U.S. businesses describe their data management maturity level as proactive, having defined success criteria and clear ownership for their data quality strategy.

Want to see where your organization sits on our data quality sophistication curve?

Take the quiz
It is important to note that we are seeing an overall shift in data management control. While data used to be managed centrally by IT, it has moved to disparate departments due to a general lack of trust in IT. There is a belief that the IT portion of an organization moves too slow or does not understand overall business requirements.

Centralized data ownership and management
As we reviewed previously, the internal challenges related to data management are often the most difficult to overcome. In order to benefit from data, organizations need the people, processes, and technology in order to maintain high quality, accessible information.

Staffing is one of the key shortfalls for most organizations. Data responsibility is still predominately fragmented, with the management of data quality driven by multiple stakeholders and is measured at a department-by-department level three out of four times, rather than across the business as whole.

Around a third (31%) review and maintain their data quality strategy centrally. Over half (51%) of the respondents adopt some centralization, but allow individual departments to control their own strategy. A small minority of companies (14%) just allow individual departments to adopt their own strategy for data quality. We recommend that while individual departments need to have control of data for their specific departmental goals, a central data owner is required to provide governance, standardization, and accessibility to data assets.

Around a third (31%) of organizations review and maintain their data quality strategy centrally.

It is important to note that we are seeing an overall shift in data management control. While data used to be managed centrally by IT, it has moved to disparate departments due to a general lack of trust in IT. There is a belief that the IT portion of an organization moves too slow or does not understand overall business requirements.

While only 37 percent of U.S. respondents say their data is managed under a single director, it is more than any other country surveyed. The individual in charge of data, though, can vary. Chief Information Officers are the most likely to be responsible for data, followed by Chief Data Officers, Chief Financial Officers, and Chief Digital Officers. The responsibility of data is now starting to shift towards a single owner; however, stakeholders do not want that management to go back to IT.
Seventy-seven percent of U.S. respondents believe that the responsibility for data quality should ultimately lie within the business with occasional help from IT. This is where a role like the Chief Data Officer can provide a great deal of benefit. They are focused on business objectives and serve as a bridge between the business and its data.

In addition to a more central data owner, organizations are beginning to employ more data-centric roles in general. Eighty percent of U.S. organizations are hiring people like data analysts, data scientists, a Chief Data Officer, and data warehouse specialists.

Interested in implementing a CDO role at your organization? Check out our research study.

Download
Chart 12
Head of departments responsible for data quality

- CIO / CTO: 35%
- Chief Data Officer: 23%
- Chief Digital Officer: 17%
- Chief Financial Officer: 17%
- Chief Marketing Officer: 5%
- Data Governance Officer: 4%
- Chief Customer Service Officer: 3%

Chart 13
New data-centric roles to support a centralized data management strategy

- Data analyst: 42%
- Data scientist: 28%
- Chief Data Officer: 22%
- Data warehouse specialist: 22%
- ETL developer: 14%
- Information architect: 13%
- Data steward: 12%
- Predictive analytics developer: 9%
Data management projects in the next 12 months

The need for data management has clearly increased and will only continue on this trend. As companies begin their shift to that of a more data-centric organization, they are undertaking more and more data management projects.

As observed from the graph, the top four data management initiatives revolve around cleansing, integration, migration, and enrichment.

These data management projects are occurring for very clear reasons. First, data cleansing has been a popular project for a number of years, but is still prevalent because of the high degree of human error. Until organizations can put consistent technology in place to curb human error, data cleansing will continue to be a high priority project.

Data integration projects are occurring as organizations work to combine disparate platforms and various forms of data into a usable format. Having multiple disconnected systems collecting what may or may not be the same data should no longer be the way businesses operate.

Organizations need data that can move from system to system easily.

Consolidation continues to take place across organizations as new systems and technologies are being released. Data migration will take place as many companies consolidate their data environments and move to cloud infrastructure.

Enrichment projects are driven by the need to better understand the consumer as well as address the increasing demand for personalization. Organizations are looking to third-party sources to gain a deeper understanding of preferences, habits, and trigger events. Data enrichment can allow them to send the right message, to the right consumer, at the right time.

Other popular data management projects include data preparation, business intelligence, and holistic data quality. All of these areas are about making data more complete, accessible, and accurate for analytics and other intelligence efforts.

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**Chart 14**
Planned data management projects over the next 12 months

<table>
<thead>
<tr>
<th>Project</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data cleansing</td>
<td>37%</td>
</tr>
<tr>
<td>Data integration</td>
<td>37%</td>
</tr>
<tr>
<td>Data migration</td>
<td>31%</td>
</tr>
<tr>
<td>Data enrichment</td>
<td>31%</td>
</tr>
<tr>
<td>Data preparation</td>
<td>27%</td>
</tr>
<tr>
<td>Business intelligence</td>
<td>27%</td>
</tr>
<tr>
<td>Holistic data quality</td>
<td>26%</td>
</tr>
<tr>
<td>Master data management</td>
<td>26%</td>
</tr>
<tr>
<td>Analytics</td>
<td>25%</td>
</tr>
<tr>
<td>Single customer view</td>
<td>19%</td>
</tr>
<tr>
<td>Governance</td>
<td>9%</td>
</tr>
</tbody>
</table>
Conclusion
Organizations across the globe recognize both the importance of quality data and having a more sophisticated approach to managing data. From building better customer relationships to overcoming internal and external data quality challenges, organizations are going to make a big push to overhaul and evolve their data management practices.

As businesses continue to shift toward a centralized data management strategy, they will be able to take on more sophisticated data projects in the coming year. Continuing to rely on manual processes to cleanse, validate, profile, and enrich data is not going to cut it in today’s fast-paced business environment.

The ability to use high-quality data to make critical business decisions and improve your bottom line should be a huge focus in the coming months. Data is your organization’s most valuable asset, so put the right people, processes, and technologies in place to help ensure it is fit for purpose.

Interested to learn how Experian can help you better manage your data? Get in touch with us today.
About Experian

Experian is a global leader in providing data quality software and services to organizations of all sizes. We help our clients to proactively manage the quality of their data through world-class validation, matching, enrichment, and profiling capabilities. With flexible software-as-a-service and on-premise deployment models, Experian software allows organizations around the world to truly connect with their customers by delivering intelligent interactions, every time.

Established in 1990 with offices throughout the United States, Europe, and Asia Pacific, Experian has more than 13,500 clients worldwide in retail, finance, education, insurance, government, healthcare, and other sectors.

For more information, please visit: www.edq.com.