

Building a business case for data quality



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Foreword

By Thomas Schutz



Data is at the heart of every organization. Actions taken by employees and customers create a wealth of information that businesses can collect.

Savvy companies are the ones

that are able to turn these insights into action through initiatives like business intelligence, predictive analytics, and targeted marketing or advertising impressions. In fact, 79 percent of organizations say data clearly ties into their business objectives.

Underpinning the success of these business initiatives is the quality of the data collected. While most organizations indicate that data supports their business plans, on average, organizations believe a third of their data is inaccurate, which can undermine their ability to make strategic decisions.

This summer, we conducted a global research project to understand the challenges organizations face with regard to their data quality programs and see how they went about building a business case to support these initiatives. We found that while a majority of organizations see the benefits of a data quality program, more than half of businesses still struggle to build a business case for it.

Despite initial hurdles, there are ways to create a strong business case for data quality initiatives. Organizations might just need to think differently about their business metrics or communicate more effectively across typically siloed groups. By thinking in ways that link data quality initiatives to

business drivers, they can position a quantifiable and evidence-based business case to their leadership teams.

Throughout this report, we will explore some of the themes that we see when organizations are building a business case for data quality. These include a look at data quality maturity today, the impact of bad data on organizations, common challenges when building a business case, and some strategies for developing a successful proposal.

By gathering data points from so many different organizations about their wins and their challenges, and also applying our own expertise from working with many different types of businesses at varying levels of maturity, we hope to enable you to expedite the process of putting forth a business case for data quality initiatives.

After the report, we have provided a great perspective from one of our experts on the front lines of helping clients achieve their data quality goals. Rishi Patel provides valuable advice for securing interest from business leaders for funding a data quality program. We have also provided a unique business impact worksheet to help you utilize the techniques we have discussed throughout this report.

Methodology

Experian Data Quality has conducted a global survey to understand how organizations are building a business case for data quality. This study looks at the current state of data quality in organizations, the tangible impacts of bad data, the challenges businesses face when quantifying the effects of bad data, and how successful organizations develop a proposal for sustainable data quality.

Produced by Loudhouse for Experian Data Quality in July 2016, the study polled 402 management-level professionals from around the globe. A variety of roles from all areas of the organization were surveyed, including information technology, finance, marketing, customer service, sales, operations, and more. Respondents were chosen based on their visibility or knowledge about their organization's customer or prospect data management practices, and if they have built or presented a business case to justify an investment in data quality or if they have evaluated the impact of bad data on their business.

Organizations that were surveyed came from a variety of industries including IT, telecommunication, manufacturing, retail, business services, financial services, healthcare, public sector, education, utilities, and more. Of the 402 total respondents, 25 percent represent the financial services sector.

Introduction

As more organizations seek to leverage data to increase revenue and improve operational efficiencies, the quality of that data becomes even more mission-critical. A lack of confidence in the business's data can undermine their ability to meet key organizational objectives. To that end, our study revealed that one in four organizations lack confidence in the quality of their data, and 41 percent indicate that the growing volume of information is the biggest challenge to achieving trust in their data.

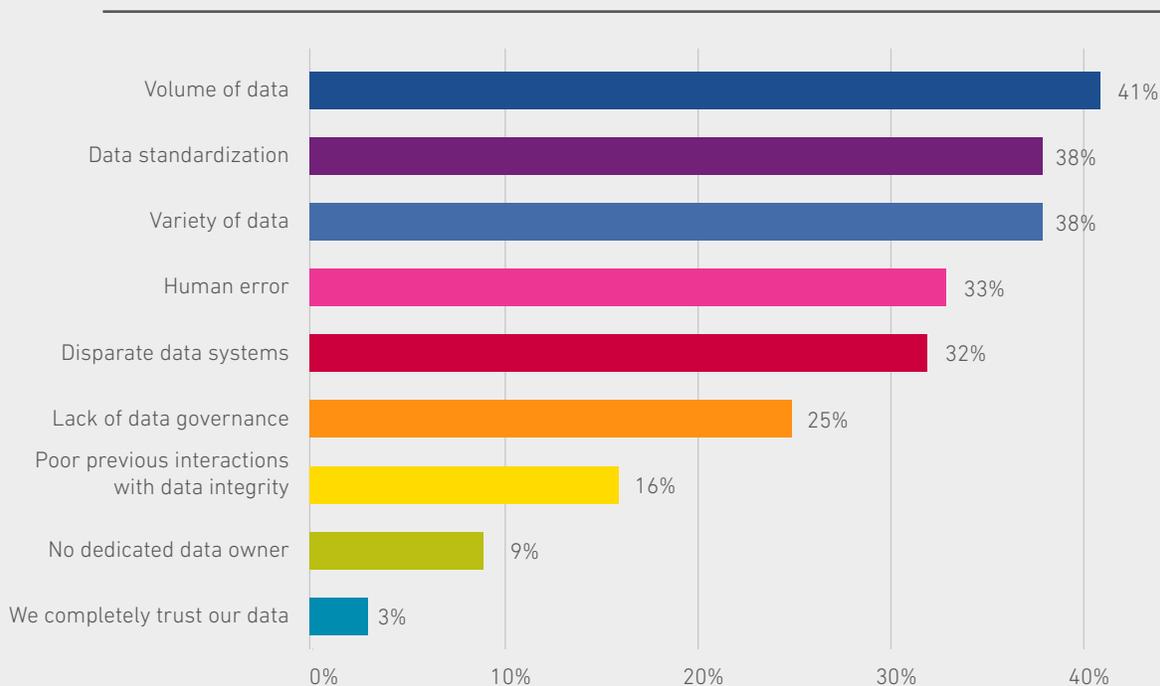
The following chart represents the primary challenges that organizations face in establishing confidence in their information. Not surprisingly, human error (33 percent) is also identified as a

top challenge for organizations—a finding that is consistent with our 2016 global data management benchmark report.

If businesses are going to increase confidence in their information, they will need to implement permanent, enterprise-wide data quality programs to standardize and validate the information in their databases. To ensure that business leaders see data quality as an integral component of an ongoing data management program, it's likely that stakeholders will need to build a business case for it.

While 75 percent of organizations we surveyed say senior management has a clear understanding of the benefit of a data quality program, building

Chart 1
Biggest challenges to achieving trust in data



a business case can often be challenging at best. In fact, 80 percent of those we surveyed indicate that the process of building a business case for data quality tends to become over-engineered, involving too many stakeholders and taking far longer than it should. The good news is that we've identified the best ways to turn that challenge into a competitive advantage.

We also found that most organizations struggle to associate a business cost with their data quality program, making it difficult to prove a return on investment (ROI) to business leaders. Often, acquiring evidence of poor data quality

and making it relevant to a business objective is seen as a barrier. This can be influenced by the lack of exposure to an underlying problem such as difficulty converting anecdotal evidence to hard facts or linking the facts to a more specific business objective that impacts growth, retention, or brand value.

By delving into the problems related to data quality as well as both qualifying and quantifying the impacts, your business case will tell a much more compelling story to leadership.

The state of data quality maturity

The majority of organizations today see the importance of data quality from an anecdotal perspective. However, what organizations believe and how they act are two different things.

The main organizational objectives that data quality and data management initiatives apply to typically fall into two categories: those that meet business needs and those that focus on the consumer. Objectives such as master data management, regulatory compliance, decision making, and security fall into the category of meeting business needs. Initiatives that focus on consumers of that company's product (whether that's business-to-business or business-to-consumer) include marketing, advertising, and e-commerce projects related to customer experience, customer loyalty, and digital business.

People, processes, and technology

Despite being tied to clear business objectives, our study shows that current approaches to data quality in terms of people, processes, and technology are lagging behind. Organizations today demonstrate some level of sophistication in these areas, but only around 1 in 5

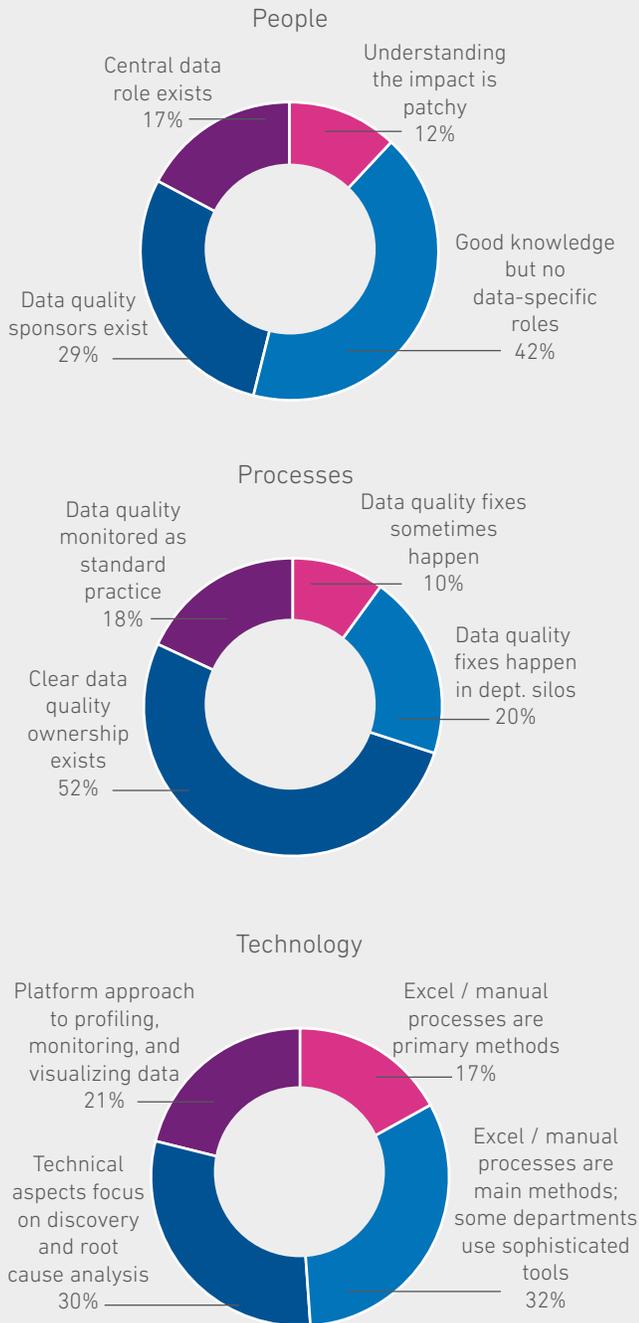
companies is operating at the most sophisticated level in any of these pillars. The following charts represent the distribution of organizations according to their current approaches to data quality.

The majority of organizations today see the importance of data quality from an anecdotal perspective. However, what organizations believe and how they act are two different things.

Interested in more insights? Check out our global data management benchmark report.

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Chart 2
People, processes, and technology on data quality approaches



Of the three areas, businesses tend to be weakest around people. Only 17 percent of respondents indicate that a centralized data quality role exists at their organization, and another 29 percent have data quality sponsors. The majority of organizations (over 50 percent) have no data-specific roles or have a patchy understanding of the impact of data quality. These organizations should aim to develop data steward roles for each business unit within the organization. These employees are responsible for owning the quality of the information their department creates.

As part of our study, we spoke with Michele Koch, Director of Enterprise Data Management and Barbara Deemer, Chief Data Steward from Navient, an organization that supports student loan programs across the United States. Together, they developed a successful data quality program at Navient. According to Koch, "Data quality is really a partnership between the business and IT." To that end, they have subject matter experts from both departments, in addition to data stewards for every line of business in the corporation. From a data quality perspective, the data stewards are the day-to-day owners of business rules related to the quality of the data. They're responsible for looking at any records that go beyond a set quality threshold, identifying the root cause of issues, and having those records corrected.

When it comes to processes around data quality, many organizations seem to be much further along. Fifty-two percent of respondents indicate that there is clear data quality ownership in their organization, and 18 percent go beyond that by monitoring data quality as standard business practice. Data quality fixes happen some of the time in only 10 percent of organizations. It's important to have policies and processes in place and to follow a strict methodology to ensure consistency across the organization.

With regard to the complexity of tools, organizations appear to be more evenly distributed: 17 percent use Excel or manual processes as their primary methods of data quality, 32 percent use Excel or manual processes with some sophisticated tools at the department level, 30 percent focus on discovery and root cause analysis, and 21 percent

use a platform approach to profiling, monitoring, and visualizing their data. It's interesting that while 52 percent of those surveyed have clear data quality ownership when it comes to processes, only 21 percent have a platform approach to managing data quality (i.e. have the best tools in place). The rest seem to rely on technical teams or manual processes, which can make the process of clearly monitoring the evidence for a business case difficult – and in some cases impossible.

An example of this could be a lack of communication or collaboration between business users who can articulate the impact of poor data quality and the technical users who are analyzing or mining the data in a clear position to produce the evidence.

Departmental responsibility for data quality

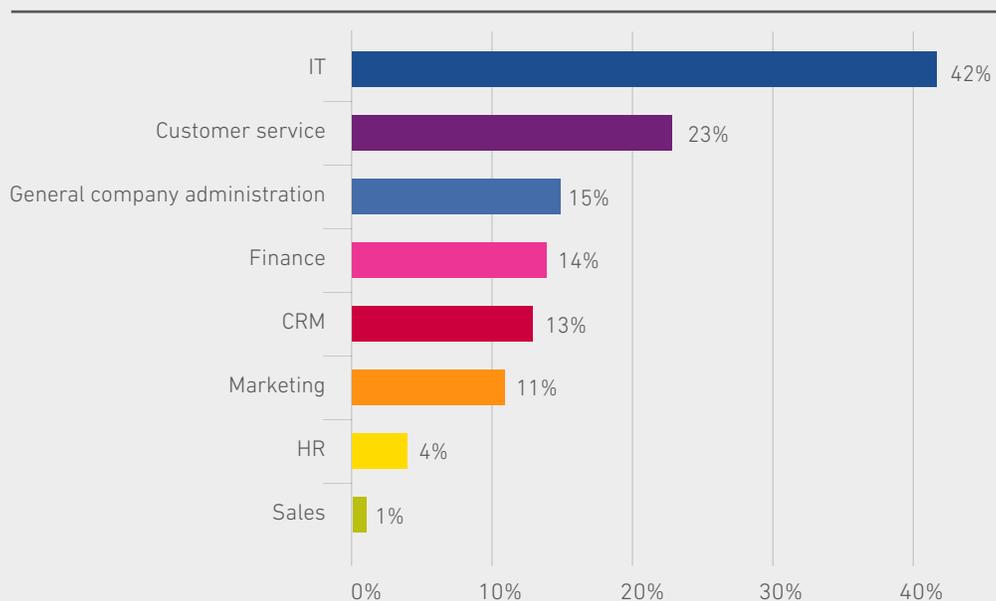
While data quality is often considered an enterprise program, 20 percent of respondents indicate that the responsibility for data quality is held at the department

level. Generally, whatever group is responsible for bringing the data into the source systems is considered the business owner of the data. For example, the customer service department typically owns the data related to customer contact information. For many organizations, this means departments like finance, marketing, or sales have a responsibility to own the quality of their data, even if the IT department happens to be the custodian of that data. It's important to ensure that this expectation is clear to all stakeholders within the business.

The following chart represents the distribution of departmental responsibility for data quality.

It's clear that a majority of the individuals responsible for data quality are in IT-related positions. Yet, business-related roles also represent a large percentage of the data quality responsibility. Departments such as customer service, general administration, finance, CRM, and marketing often have a responsibility to maintain the quality of the data under their purview.

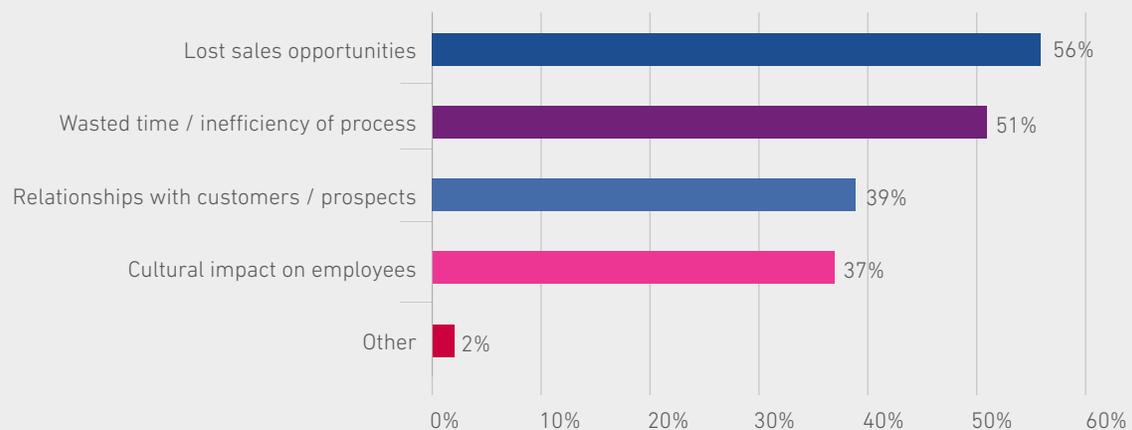
Chart 3
Departmental responsibility for data quality



The impact of bad data on the business

Leveraging data can be a boon for businesses; however, bad data can be a big problem. Eighty-three percent of businesses agree that poor data quality actually hurts their business objectives, and 66 percent say that bad data quality has negatively impacted their organization in the last twelve months. The following chart shows the impact that bad data can have across an organization, including lost sales opportunities, wasted time from inefficient processes, diminished relationships with customers and prospects, and a negative cultural impact on employees.

Chart 4
Areas where impact of bad data has been quantified

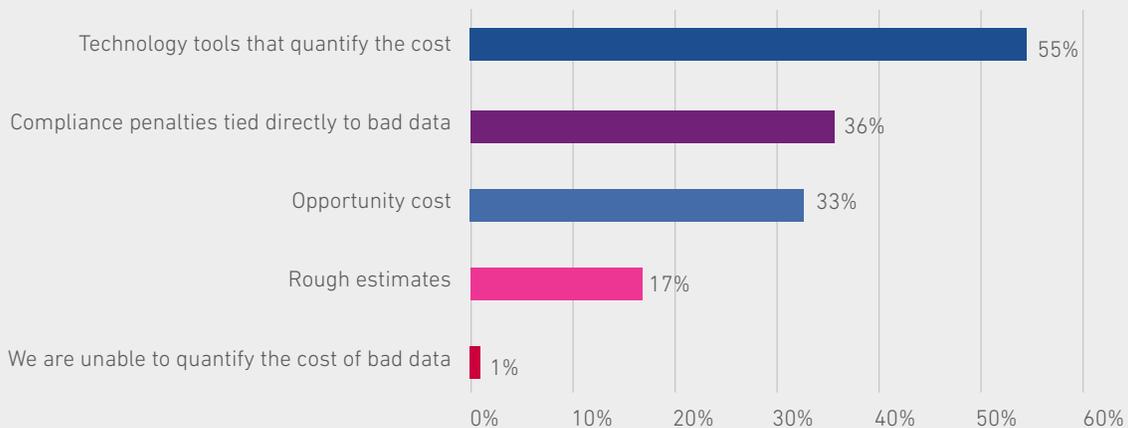


Although the anecdotal impact of bad data can be felt across the organization, how exactly do businesses determine the cost of their bad data when building a business case? We found that 43 percent of organizations say that they struggle to quantify the cost of bad data in their organization. The ones that do, however, report that they are able to put a dollar amount on bad data by using technology tools that quantify the cost, tracking compliance penalties tied directly to bad data, and analyzing the cost of lost business opportunities.

In each of these examples, organizations have been able to link poor data quality to a business problem. This is a crucial step when it comes to building a business case because, although you might hear about issues from your team, if you don't have insight into the prevalence of the problem, it makes it hard to quantify the issue to business leaders.

According to Koch, Navient was able to tie their data quality initiative to a business impact by working collaboratively with the business users. To help determine the value of the data quality, or lack thereof, for the business's specific needs, they asked the business units to prioritize the data fields that are most important to them. The business units identified over 2,000 critical data elements that have enterprise impact. Over time, these fields are being standardized and the state of data quality of each is being assessed. The IT team is able to profile and actively monitor a subset of these data elements on a weekly basis once the fields have been standardized.

Chart 5
Quantifying the cost of bad data



Below are two other examples of businesses that we've encountered. In the first example, the customer was unsuccessful in fully deploying a data quality program because they struggled to quantify its value. In the second example, the customer was very clever with how they attributed the impacts of bad data and was able to build a quantifiably successful program.

Business 1:

The head of data governance for a real estate association was hired, but given a very small budget and no support team. This person went from team to team within the organization and listened to conversations about what data-related challenges each department was facing. All of the evidence he collected was purely anecdotal, and thus, he struggled to show the impact of bad data on the organization. With no significant value or quantification of the issue, his only option was to focus on training the organization's employees on improving aspects of data quality.

Business 2:

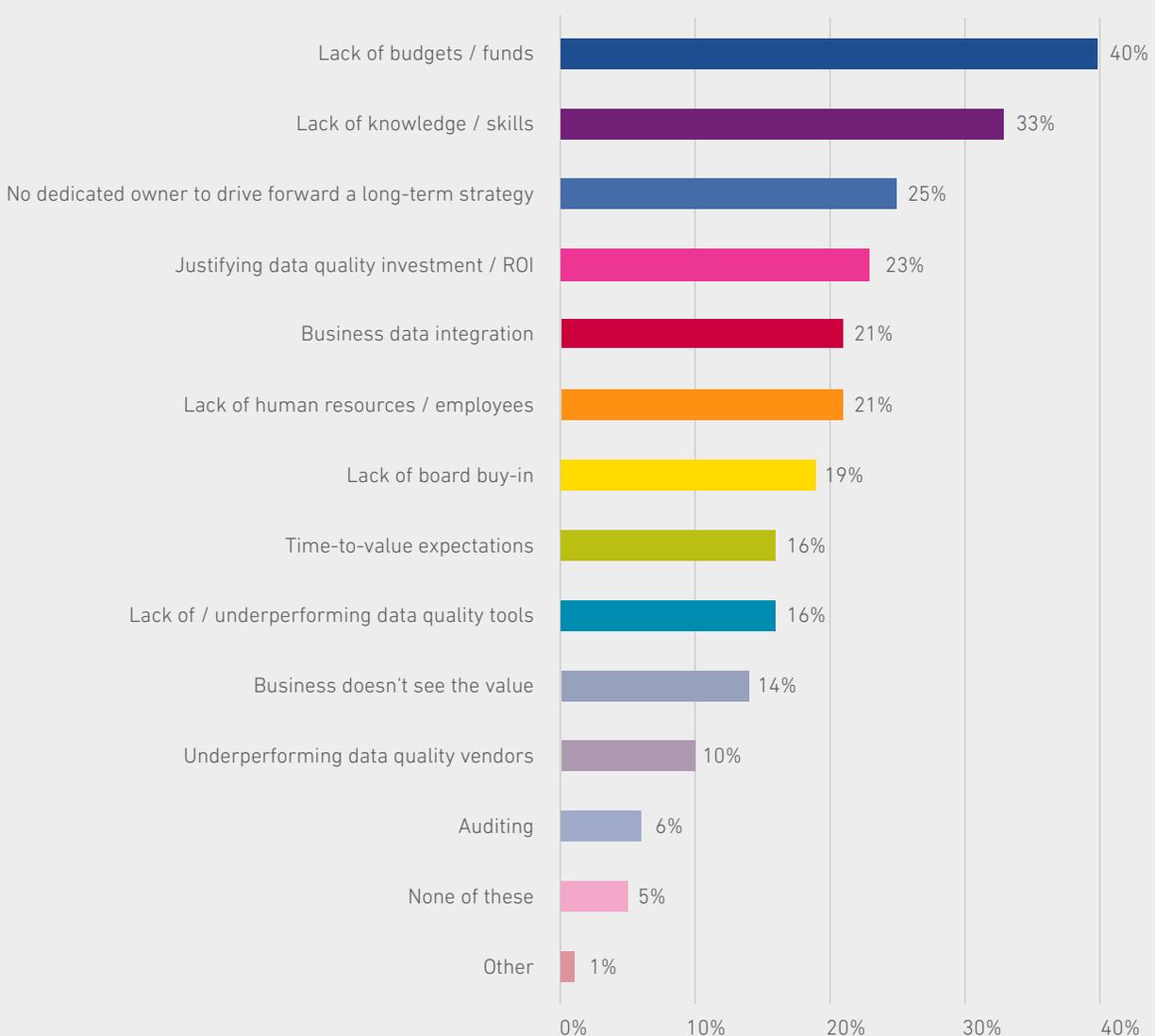
The head of business intelligence for a small bank is responsible for reporting to regulators on an ongoing basis. She hired a data analyst to produce these reports, but with limited technical skills she had to rely on the IT department to generate the reports. So the IT department needed to process and fulfill dozens of ad-hoc requests each month as unbudgeted projects. The head of BI was able to quantify the number of requests, how long it takes for IT to prepare a report, and the cost of IT resources. This enabled her to show how data quality technology can reduce the time it takes to perform these unbudgeted projects. As a result, her business case was approved, and overall IT time spent on data preparation projects was reduced from 80 percent to 5 percent.

Building a business case for data quality is essential—but often challenging

Considering the adverse consequences of bad data, making data quality a permanent part of your data management program is critical. And, more often than not, building a business case for data quality will likely be the first step. However, putting together a proposal is often easier said than done, as 54 percent of organizations say they found making a business case for data quality to be difficult.

There are many reasons for this. The following chart shows some of the biggest challenges organizations face when putting together a business case or implementing an initiative to improve data quality. At the top of the range, a lack of budget or funds is the biggest challenge facing organizations today. Somewhat related, justifying a data quality investment proved to be a significant challenge for

Chart 6
Biggest challenges in building a business case



23 percent of organizations. Both of these challenges are likely due to the organizations' inability to quantify their data challenges in a meaningful way to business leaders.

Another challenge to developing a business case is that the process tends to become overly complicated. According to our study, 80 percent of respondents say too many stakeholders are involved in building their business case for data quality. This often leads to unclear messages or competing messages in the organization. For example, if a current data quality process is embedded within a current function (however inefficient or manual), then there might be resistance by the department to changing it.

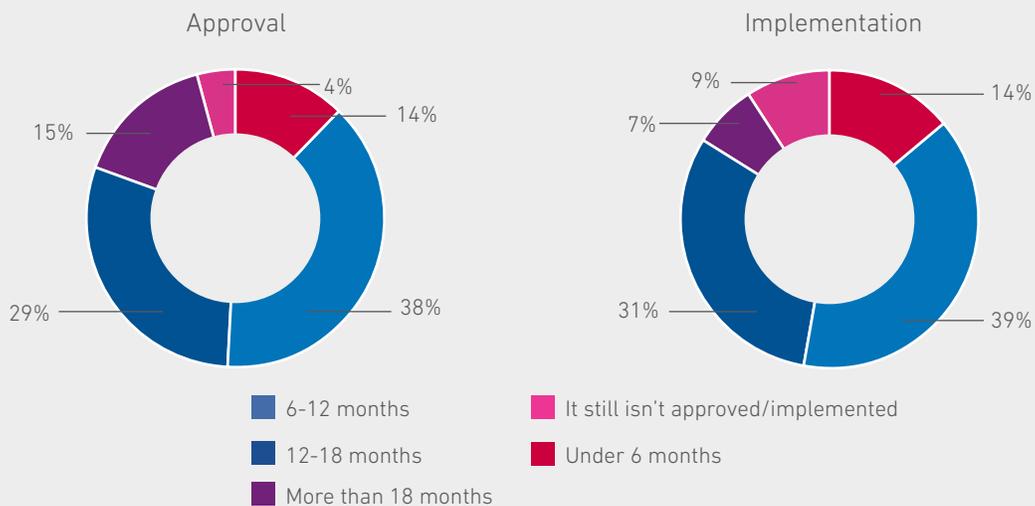
In this case, it's important to be able to overcome resistance by leveling expectations. For instance, Navient was able to secure buy-in from business users by first conducting a pilot program. In their pilot project for data governance, they brought together vice presidents and leaders from the business lines who also included the people who know their data best. They held a two-day session to go over how the data element would or would not support what they were trying to do based on the known data deficiencies. According to Deemer, "It was a real eye-opener for people to see how the different departments need to use the data."

The pilot program enabled their business users to see value in the data quality program and reduced resistance going forward.

The timeline for getting a business case approved and implemented can create another barrier to success, in some instances taking 18 months or longer. It's likely the case that those developing the business case need to collect quantifiable evidence of the business impact, present the business case to the board or senior leaders for consideration, and overcome any internal politics. However, the length of time it takes to develop the business case can lead to diminished interest from business leaders and lower engagement from stakeholders. This is especially troubling given that only 1 in 7 organizations (14 percent) is able to get a business case either approved or implemented within 6 months.

The following charts represent the length of time it takes organizations to get approval and implement their business case.

Chart 7
Approval and implementation of data quality initiative



What stakeholders are involved?

As part of our study, we looked at who within the organizations assisted with or would assist in compiling a business case for data quality or measuring impact of bad data. In addition, we also identified who had or has the biggest influence in approving a business case for data quality. We found that data analysts (87 percent) and IT staff members (69 percent) play heavy roles in developing the business case. The following chart shows the roles most often involved with building a business case for data quality.

While it's not surprising to see data- and IT-related roles assisting in building a business case, the much smaller involvement of departments such as finance (33 percent) and marketing (30 percent) may help to explain why developing a business case is often so challenging. The business users who are most likely impacted by bad data quality and who could offer tangible and quantifiable impacts tend to be left out of the conversation.

As a lack of budget (40 percent) and a lack of knowledge (33 percent) are cited as the top two challenges to implementing a data quality initiative, it would make sense to leverage these departments to help secure funding and provide the required subject matter expertise.

Chart 8
Most influential

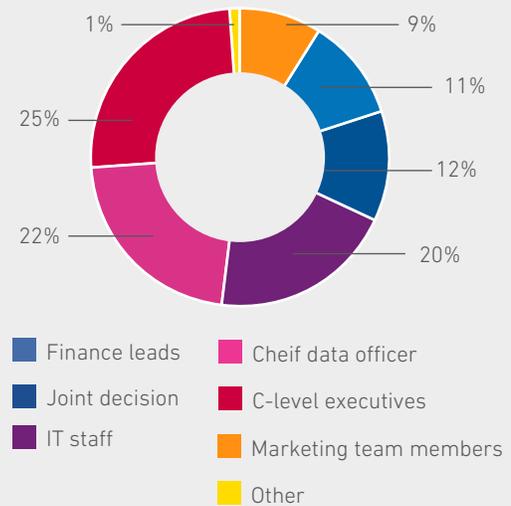
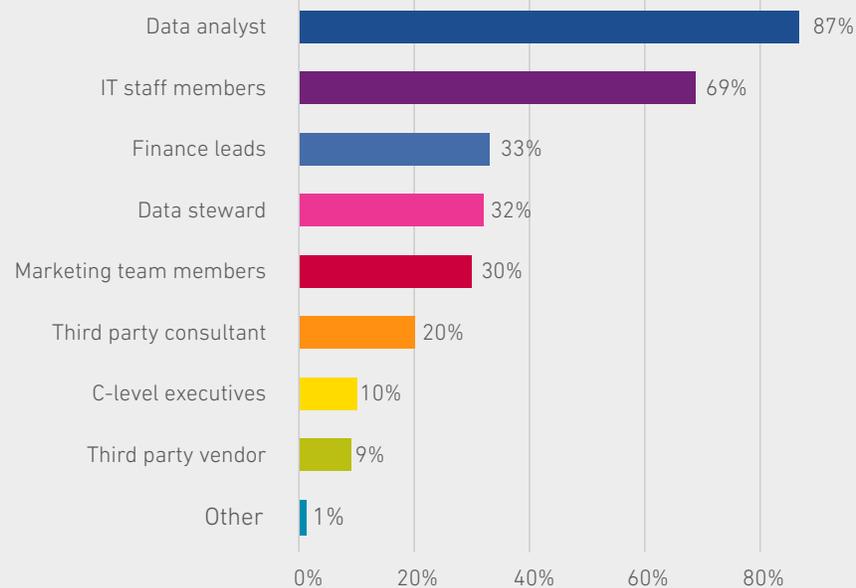


Chart 9
Assisted in building case



While many departments assist with building a business case, overwhelmingly, the decision makers tend to be at the C-level (25 percent) and, specifically, the Chief Data Officer (22 percent). This is important to consider when framing the tangible impacts of your data quality business case. Leaders at the C-level want to see clear metrics relating your data quality program to specific priorities for the business. Examples of priorities include operational performance, financial performance, customer experience, and regulatory compliance.

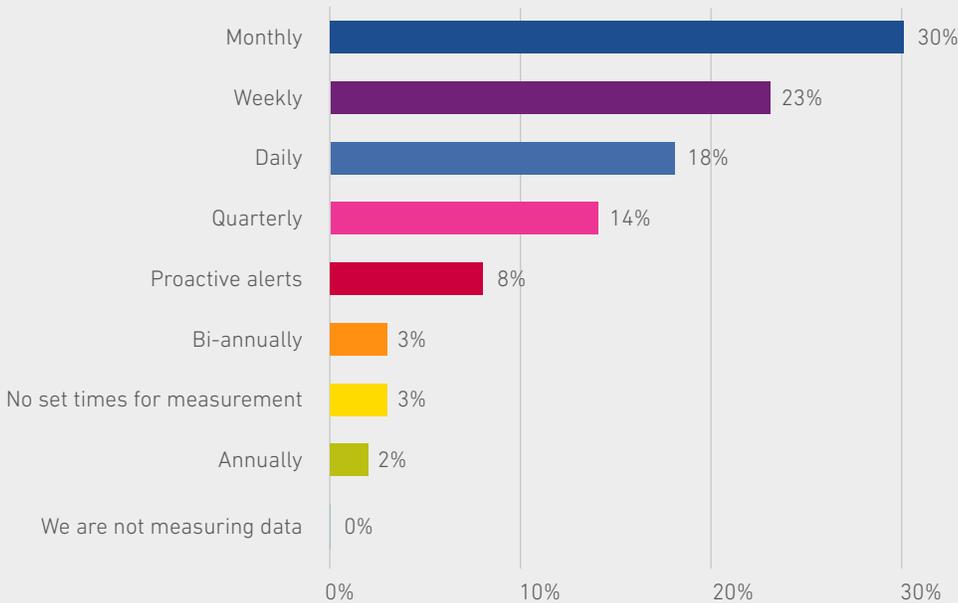
Business case outcomes and measuring success

A large part of the planning that will go into your business case will focus on how you intend to measure performance using predefined success metrics. According to our study, 74 percent of organizations use a consistent measurement to track the success of tools and programs around data quality. If you were able to successfully tie your data quality business case to specific business objectives, measuring success should be relatively straightforward.

We found that 72 percent were able to benchmark existing performance prior to starting their data quality initiative. Having a starting point to compare against is critical in proving the value of your data quality program. But, just how frequently should you measure your data quality against this standard? While all organizations are measuring success around data quality tools and programs, we find that the intervals at which these organizations take measurements can vary greatly. Most organizations take data quality measurements on a monthly basis (30 percent), followed by weekly (23 percent) and daily (18 percent) measurements.

One proven way to demonstrate success is to build data quality dashboards, showing current quality levels across the data you're monitoring. As you begin to link the data in your dashboards to the business objectives that you set out to improve, this becomes a powerful visual tool for communicating impact with business leaders. The dashboards should live in an accessible location, which stakeholders can access when they want to have a window into their data quality.

Chart 10
Frequency of data quality measurements



In addition, it's crucial to the success of your program to communicate regularly with all stakeholders. Whether that's to remind them to do their root cause analysis, or to provide business stakeholders with status updates on projects that are underway, the constant communication will help to keep your data quality program at the top of their minds.

In addition to measuring performance against business objectives, adding headcount can be another positive result of a business case for data quality. In fact, 57 percent of organizations hired data analysts as part of their data quality initiative, and 25 percent of businesses hired a Chief Data Officer as part of the program. Other key roles that have been hired include data scientists (21 percent), data stewards (20 percent), data warehouse specialists (19 percent), information architects (15 percent), and ETL developers (14 percent).

As businesses tend to be weakest around their people (more than 50 percent say they have no data-specific roles), it's encouraging to see the attention to hiring data-related positions as a result of their business cases.

Conclusion

Data is at the heart of your organization, and the quality of that data underpins the success of your business initiatives. Therefore, implementing a successful data quality program is imperative to your organization's future.

But building a business case for data quality is often a lot harder than it seems. Given the amount of anecdotal evidence that circulates in organizations, generating quantifiable proof of a business impact can often prove quite difficult. Yet, if you are able to successfully tie the results of your data quality program back to your business's strategic objectives, you can unequivocally articulate its value to your business leaders and win their support.

Check out our worksheet to start building your business case today!

[Get started](#)

IN PERSPECTIVE

Building interest in your business case

By Rishi Patel, Senior Sales Engineer,
Experian Data Quality

When building a case for data quality, it's extremely important to make it relevant to the business stakeholders. One of the challenges I see with clients is their inability to separate facts from emotions, which can make it very difficult to articulate value back to business leadership. Managers hear about certain issues from their teams, but they don't necessarily have hard evidence as to the impact that issue is having on the business. What they need to do is show not only the time that is wasted, but also how they could invest that time into something more useful for the business.

It's also important to be careful in how stakeholders approach those conversations. The point is not to make people angry or to jeopardize their jobs. It's about evaluating inefficient, manual processes that have become part of the business model, and then finding ways they can be optimized to help each employee work more effectively. It's important to note that any changes should be tested, rather than assuming that they will have an impact, which is a key step that many organizations skip.

Speaking a common language with the business is also crucial, I believe, to presenting a business case. In order to make the business leadership care about your data quality program, both parties need to see the data the same way. Remember, it's how you present the data that matters, so you'll need to link them in ways that make a business leader care about the data. Typically, this involves connecting data quality to key business objectives that are specific to your organization.

For instance, listening to someone explain the uniqueness and completeness of data is probably boring to business leadership. But, if you're able to relate it to a business problem, it becomes much more compelling. For example, if 80 percent of your email address fields are complete, then 20 percent are incomplete. However, what if 50 percent of those incomplete email addresses represent the highest value customers? How will your sales and marketing teams communicate to those customers? Given the possible impact on revenue, it matters much more to the business to fix it.

When building a business case, it's your job to make the data interesting and relevant to key stakeholders.



Connect data initiatives with business drivers. Learn more
in our white paper.

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Worksheet instructions

This worksheet is designed to help data quality stakeholders delve into the underlying problems related to data quality and both qualify and quantify the impact. It also provides the opportunity to evaluate any proposed solutions and project the positive impact they can have on the underlying problems.

Key components of the worksheet are broken down into the following six impact areas that can either be directly or indirectly quantifiable. It is important to present both types of impacts to show that the business case has evaluated the qualitative and quantitative aspects of poor data quality impacting the business.

Directly quantifiable

- Time – Can data quality issues can be linked to wasted time?
- People – Do data quality issues directly impact the resources who work with data?
- Money – Do data quality issues cost the business today or have the potential to do so down the line?

Indirectly quantifiable

- Process – Do data quality issues make your business processes inefficient or unachievable?
- Strategic business objective – Can data quality issues prevent the start of or successful completion of strategic projects or objectives the business has planned or has already embarked on?
- Risk – Can data quality issues increase risk to the business, such as regulatory risk, or negatively impact brand value?

The problems linked to poor data quality may span across these six areas, so try to maximize these to show a domino effect of data quality. For example, identifying data quality issues retrospectively during a migration to a single digital platform could be linked to:

1. Time: Manually fixing data quality will extend the timeline to deliver the project by X months.
2. People/Resource: The business will have to contract 3 new members of staff to complete the unanticipated work.
3. Money: The new members of staff will cost the business \$Y0,000.00 and \$Z0,000.00 of additional infrastructure (hardware, fees), and these costs are unbudgeted.
4. Strategic Business Objective: The single digital platform project is at risk.

Business impact: Time

Can data quality issues be linked to wasted time?

For example:

The time taken to discover data quality problems, and in getting to the root cause of a problem, such as manual analysis of data can take some users weeks before they realize there is a problem, which in the interim may have snowballed into a critical state.

Action:

Measure the time taken in inefficient data processes. Can this be reduced by implementing change?

Use this area to document the impact data quality issues currently have in your organization.

Use this area to map the benefits of the any proposed solutions to the problem.

Cost-benefit analysis

Total time wasted:

Total time saved:

Business impact: Resources

Do data quality issues directly impact the resources who work with data?

For example:

Additional resources have to be brought in to remediate data quality issues, often requiring specialist skills. Customer satisfaction is negatively affected due to poor quality data resulting in a poor customer experience.

Action:

Map the resources that are either required to manage data quality or are dependent on good quality data to correct quality problems.

Use this area to document the impact data quality issues currently have in your organization.

Use this area to map the benefits of the any proposed solutions to the problem.

Cost-benefit analysis

Total resources used:

Total resources saved:

Business impact: Money

Do data quality issues cost the business today, or have the potential to do so down the line?

For example:

Additional costs incurred in remediating data quality issues that were not previously budgeted for, such as having to secure additional budget outside planned contingencies in a data migration.

Action:

Understand the negative impact that current data quality processes (or the lack of) can have on financial bottom-line.

Use this area to document the impact data quality issues currently have in your organization.

Use this area to map the benefits of the any proposed solutions to the problem.

Cost-benefit analysis

Total money spent:

Total money saved:

Business impact: Process

Do data quality issues make your business processes inefficient or unachievable?

For example:

Poor quality data can slow down or stop critical business transactions, requiring complex workarounds that make the business inefficient, such as order data failing to meet requisite data checks, requiring manual workarounds to understand what is missing and fixing them reactively.

Action:

Map data quality issues to your business process, identifying specific workarounds that are costing the business.

Use this area to document the impact data quality issues currently have in your organization.

Use this area to map the benefits of the any proposed solutions to the problem.

Cost-benefit analysis

Number of inefficient processes:

Number of processes:

Business impact: Strategy

Can data quality issues prevent the start of or completion of strategic projects the business has planned or already begun?

For example:

Poor quality data can cause failures in the successful implementation of business transformation projects that are driven by data, such as the digitization of the customer experience hampered by the inability to link customer records across channels.

Action:

Map data quality issues that may directly impact the success criteria of any strategic initiative, either directly or indirectly related to data assets held by the business.

Use this area to document the impact data quality issues currently have in your organization.

Use this area to map the benefits of the any proposed solutions to the problem.

Cost-benefit analysis

Number of strategic business objectives impacted:

Number of strategic business objectives assured:

Business impact: Risk

Can data quality issues increase risk to the business or negatively impact brand value?

For example:

Poor quality data does not allow users to deliver critical data that is expected by external regulators, resulting in fines due to inadequate or delayed deliverables, such as those incurred in the financial services sector for incomplete information. This increases the regulatory risk and chance of incurring fines.

Action:

Map data quality issues that may negatively impact the risks to the organization either directly or indirectly related to data assets held by the business.

Use this area to document the impact data quality issues currently have in your organization.

Use this area to map the benefits of the any proposed solutions to the problem.

Cost-benefit analysis

Negative impact to risk score:

Positive impact to risk score:



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