

RESEARCH REPORT

Data Distrust

The impact of data distrust on analytics projects
and decision making

In part two of our data series, new research commissioned by SnapLogic and conducted by Vanson Bourne uncovers the challenges of data analytics and the mistrust in data this causes

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Introduction

Becoming a data-driven enterprise, one that puts data at the heart of everything it does, is a requirement of modern business success. But in an age of swiftly changing market conditions and thousands of new software applications and technology systems - all holding or even generating massive amounts of business-critical data - having trusted, reliable data to use within the organization is often easier said than done.

Based on new research commissioned by SnapLogic and conducted by Vanson Bourne, who surveyed 500 IT Decision Makers (ITDMs) at medium and large enterprises across the US and UK earlier this year, this whitepaper explores the data analytics challenges organizations are facing and the proliferation of distrust that has occurred when it comes to accessing, analyzing, and using data.

Key findings

- **77%** of ITDMs don't completely trust the data in their organization for accurate, timely business-critical decision making
- **83%** don't always have access to the data needed to inform timely decision making
- **84%** agree analytics projects are delayed within their organization due to data not being available in the required format
- **82%** have had to rework data analytics projects after they have been completed due to poor data quality
- **91%** believe work is needed to improve the quality of data within their organization
- An average of **4** working hours is being lost per employee per week in the IT department or data team due to the need to resolve issues related to preparing data for analysis
- Lack of timely, accurate data insights impacts organizations' top line, with **76%** of ITDMs reporting that revenue opportunities have been missed due to a lack of data insights
- **72%** are seeing a negative impact on customer engagement and satisfaction due to missing or incomplete data
- **53%** of ITDMs who do not completely trust the quality of their organization's data to make accurate, business-critical decisions believe data silos are to blame
- Still, **66%** of those surveyed have continued or accelerated data analytics projects during the COVID-19 pandemic

The power of data

As we uncovered in our previous research report, 'The State of Data Management - Why Data Warehouses Fail', data plays an increasingly critical role within organizations. Nearly all of those we surveyed (98%) reported that data is reviewed and analyzed on a weekly basis by teams across the enterprise, so it's unsurprising that data analytics is seen as very important to organizational success for 82% of respondents (Fig.1).

Importance of data analytics

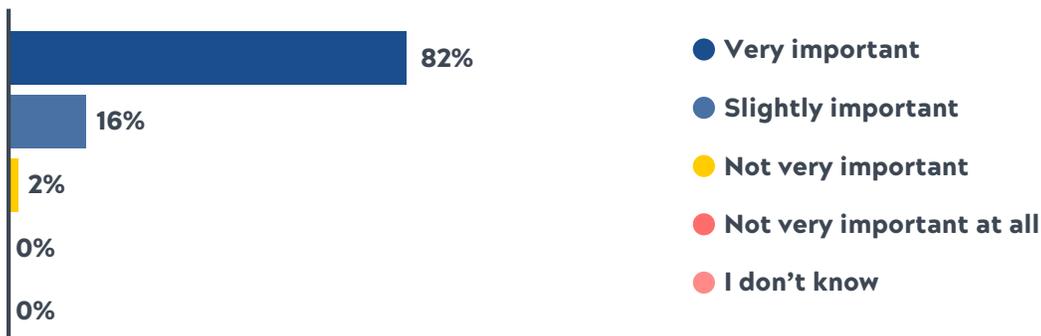


Figure 1: How important is data analytics to your organization? [500]

This could be seen as good news for many, with data analytics promising to deliver new insights that inform decision making and actions. But when we dig deeper, a startling picture of data mistrust emerges. In fact, an alarming 77% of ITDMs don't completely trust the data in their organization for accurate, timely, business-critical decision making (Fig.2).

Trust in data within organizations



Figure 2: To what extent do you trust the following in your organization? [500] excluding respondents who selected "Don't know"

Beyond a lack of trust in data for decision making, 72% don't completely trust that the right data is accessible for those who need it within the organization, and more than three-quarters (76%) of ITDMs do not completely trust that their current data strategy and processes will enable them to accomplish their data-driven goals (Fig.2).

So why is this happening?

Distrust in data

Organizational distrust in data can be broken down into three main areas: accessibility, accuracy and timeliness, and strategy and process.

Unfortunately, it's almost become commonplace for organizations to acknowledge problems with their data and analytics projects. Over eight in ten (82%) of those surveyed stated that employees in their organization had to rework data analytics projects after they had been completed due to poor data quality (Fig.3).

Data analytics challenges in organizations

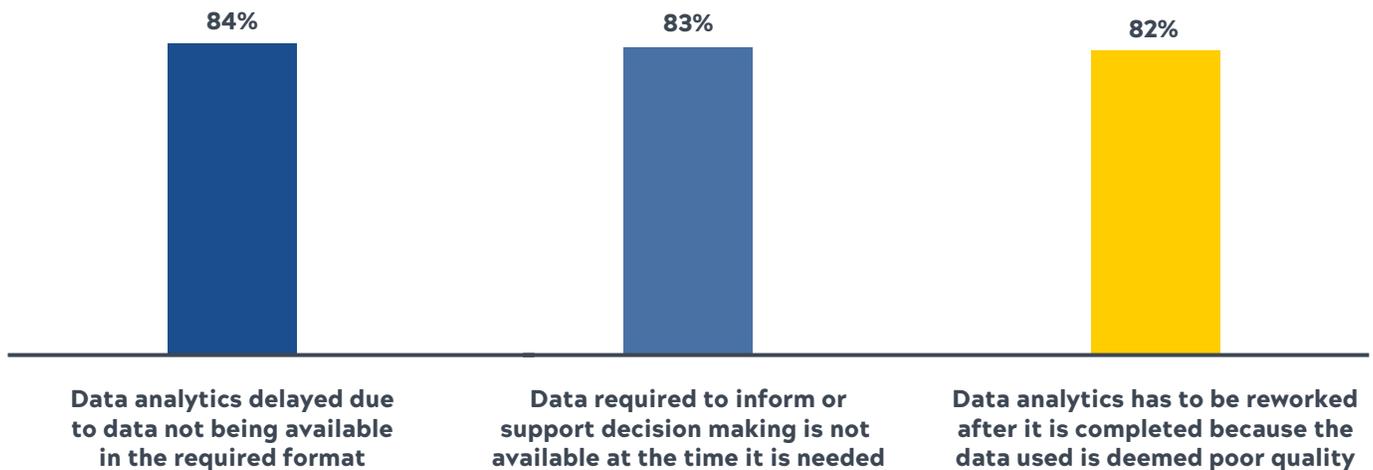


Figure 3: Proportion of respondents reporting that the following occur in their organization at least "Sometimes" [500]

Reworking projects due to poor data quality on a regular basis is bound to cause delays, but it's not the only factor causing a slowdown. Inconsistent or poorly formatted data is also causing timing problems for teams, with 84% stating that analytics projects are delayed due to data not being in the required format for analysis (Fig.3).

When data analytics is delayed, the potential of data to inform timely decisions and actions is negatively impacted, with market opportunities potentially missed or once-held competitive advantage lost. As a result, the potential value their data could provide to move the business forward isn't being reached.

So, with initial projects running behind due to data quality and formatting issues, it's no surprise that 83% feel they don't have the trusted data they require to inform accurate decision making at the time it is needed, likely reducing their ability to take fast action (Fig.3).

Speed vs quality

When given a choice, respondents generally lean towards wanting their data to first be of good quality over it simply being accessible quickly (Fig.4). Although for most, having one without the other is of little use (Fig.5). Nonetheless, with most agreeing that neither speed nor quality are beneficial without the other, it is clear that organizations need to ensure that their data is both accessible and of good quality.

Quality of data is more important than speed of data

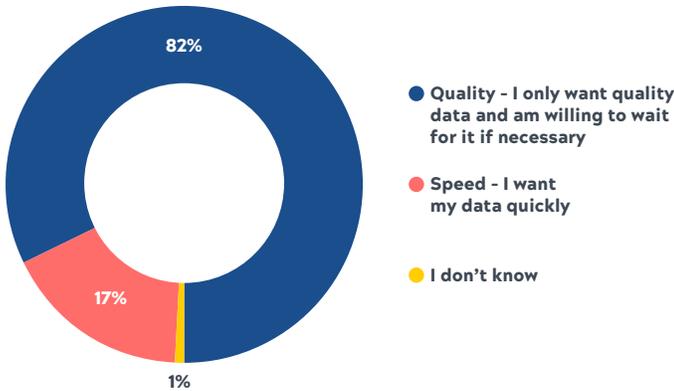


Figure 4: What's more important to users of data in your organization, speed (getting data quickly) or quality (the data received is accurate)? [500]

Speed and quality are needed together

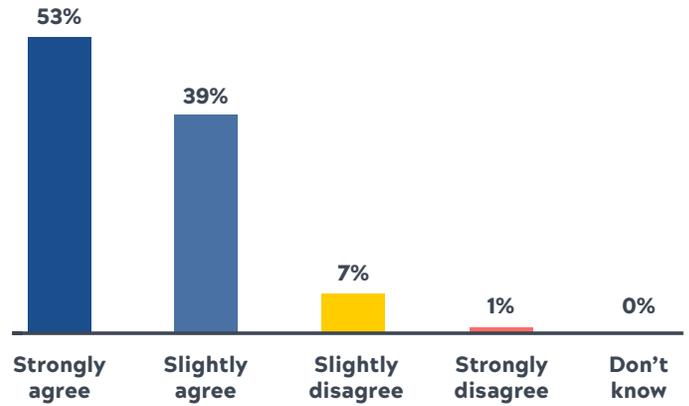


Figure 5: To what extent do you agree or disagree with the following statements? "Speed and quality are both important when it comes to accessing and using data, and having one without the other offers little benefit" [500]

Most (91%) believe there are improvements that need to be made to improve the quality of data analysis. That only a small minority believe there are no improvements required to improve the quality of data analysis demonstrates the scale of the problem that organizations are facing. This, along with the improvements required in collecting and managing data is perhaps one of the biggest indicators that data analytics projects aren't fully delivering on their promise (Fig.6).

Improvements in approaches to collecting, managing, and analyzing data

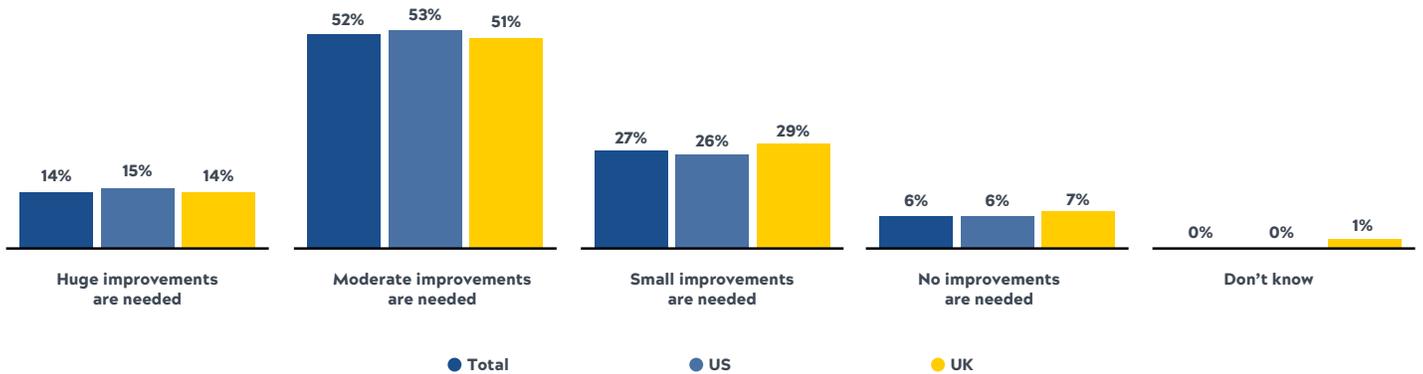


Figure 6: To what extent does your organization need to improve its approaches to collecting, managing and analyzing data? [500]

The impact of data distrust

In addition to organizations not being able to make timely and well informed decisions, which could help them differentiate from their competitors, both time and money are also being lost by organizations where data analytics has to be reworked due to data quality and formatting issues.

Currently, an average of 4 working hours is being lost per employee per week in the IT department or data team, due to the need to resolve issues related to preparing data for analysis. In addition, of those we surveyed, more than three quarters (76%) report that revenue opportunities have been missed in their organization due to a lack of data insights (Fig.7).

Impact of poor quality data and analytics

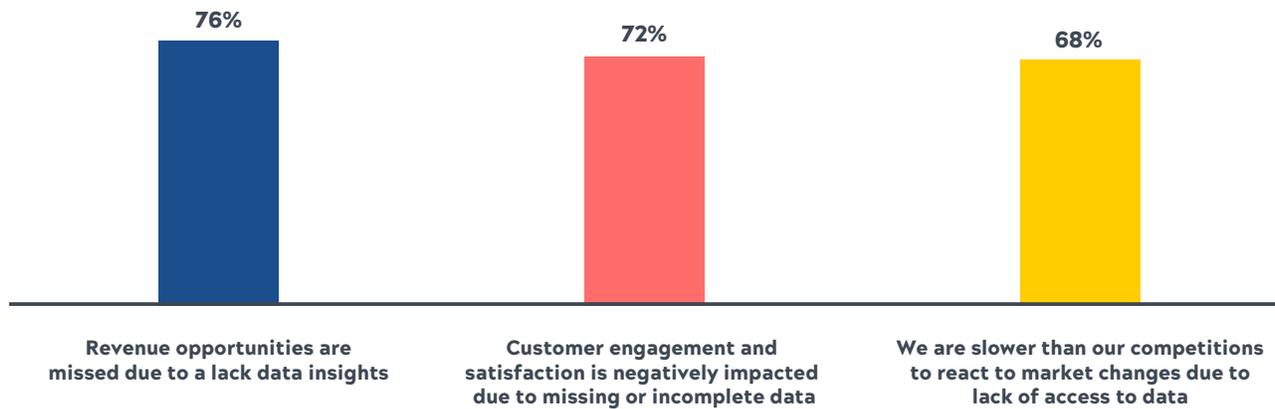


Figure 7: Proportion of respondents reporting that the following occur in their organization at least "Sometimes" [500]

Beyond this, sub-par data analytics is impacting customers too, as 72% are seeing a negative impact on customer engagement and satisfaction due to missing or incomplete data (Fig.7).

Decision making with poor data

Worryingly, even where trust in the quality of data to make accurate, timely, business-critical decisions is low, this data is still driving the majority of decision making (Fig.8).

Decision making using trusted or untrusted data

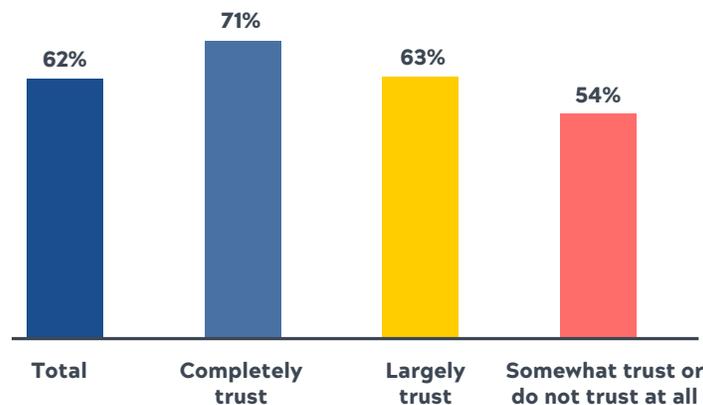


Figure 8: Average percentage of strategic decision making within organizations that is driven by data [500] Split by the level of respondent's trust in their organization's data quality to make accurate, timely, business-critical decisions

Over half of decision making is driven by data in organizations where decision makers only somewhat or do not trust at all the quality of their data to make accurate and timely decisions. If the data that is driving decisions is not to be trusted, then the decisions themselves may be flawed and hinder, rather than help, organizations in achieving their goals.

The trust that respondents report is not just a metric through which to measure the quality of the data their organization possesses. Trust is also a value which influences the usefulness of the data to the organization. If employees aren't able to trust their data, it follows that they are unlikely to take calculated risks based upon it. With almost two thirds (64%) agreeing that this is occurring in their organization (Fig.9), it is apparent that a lack of trust in data may be causing organizations to move forward cautiously and in turn miss opportunities that may put them ahead.

Distrust leads to an unwillingness to take risks

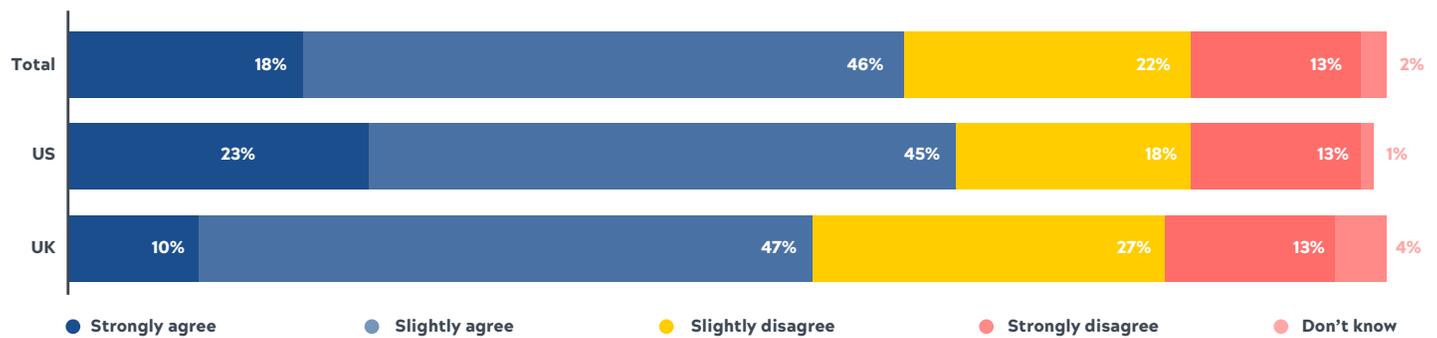


Figure 9: Agreement with the statement "Lack of trust in data means decision makers in my organization are unwilling to take bold action or calculated risks which could put us ahead of the competition" [500] Split by respondent country

However, as the level of trust in the quality of data for business-critical decisions in the organization increases, the level of concern about falling behind competitors when it comes to managing and using data drops, illustrating the value of getting data analytics right.

Data disconnect

Data silos and disconnected data are the most reported cause for this lack of data trust, particularly in larger organizations, with 53% of ITDMs who don't completely trust the quality of data in their organization noting it as a problem (Fig.10).

Reasons for distrust in data for decision making

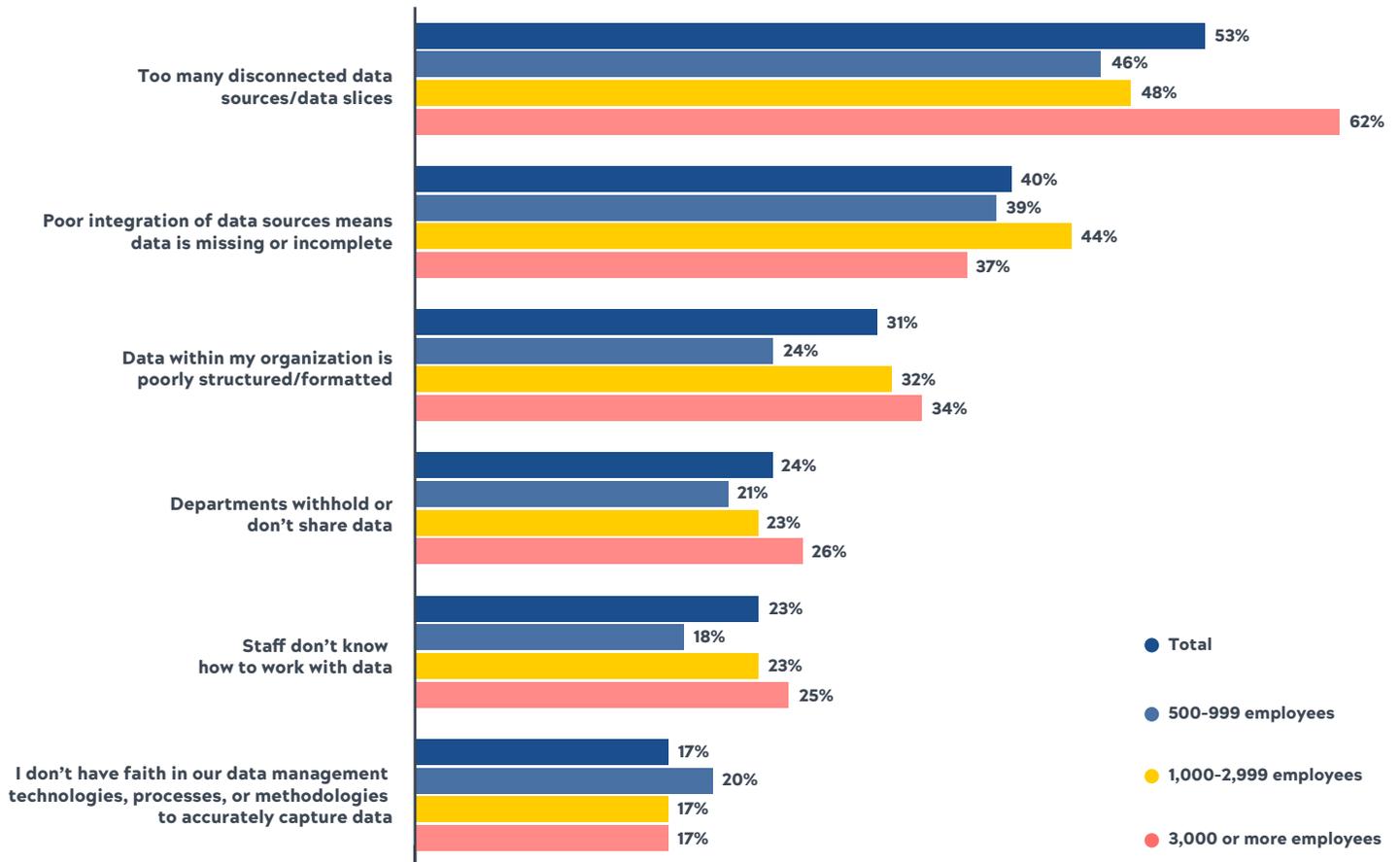


Figure 10: Why do you not completely trust your organization's data when using it to make accurate, business-critical decisions? [384] Respondents who do not completely trust the quality of the data in their organization to enable them to make accurate, timely, business critical decisions, split by organization size, omitting some answers

Data silos are an issue which directly impacts the trust that is held in business decisions. Where data silos exist, it is possible that data that should be used in analytics is missing or incomplete, meaning decisions based upon the analytics are fundamentally flawed. It may even be the case that business analysts and decision makers aren't aware that they are missing data, making it even harder to judge the reliability of decisions they are making. It's this disconnected data which is also leading to poor quality data and incorrectly formatted data, which as previously highlighted is another cause for distrust.

In 'The State of Data Management - Why Data Warehouses Fail,' we uncovered that organizations are on average using 115 different applications or data sources, a number that only increases in line with the size of organization - on average, organizations with more than 3,000 employees use 159 different applications or data sources. It's therefore unsurprising that the higher proportion of respondents from larger organizations expressing the view that data silos are a top factor in data distrust (Fig.10) may reflect the larger number of disconnected applications and data sources they are dealing with. Finding ways to overcome data silos should be top of mind for these larger organizations when assessing their data strategies around analytics.

Rebuilding trust

So how do organizations build a reliable data analytics foundation which can help to close the data trust gap?

Without a doubt improvements are needed in the data analytics process. That only a small minority believe there are no improvements required to improve the quality of data analysis demonstrates the scale of the problem organizations are facing.

When asked what exactly needs to happen to improve data quality, respondents noted better data cleaning and better data management as the most critical areas to focus on (Fig.11).

Requirements to improve the quality of data analysis

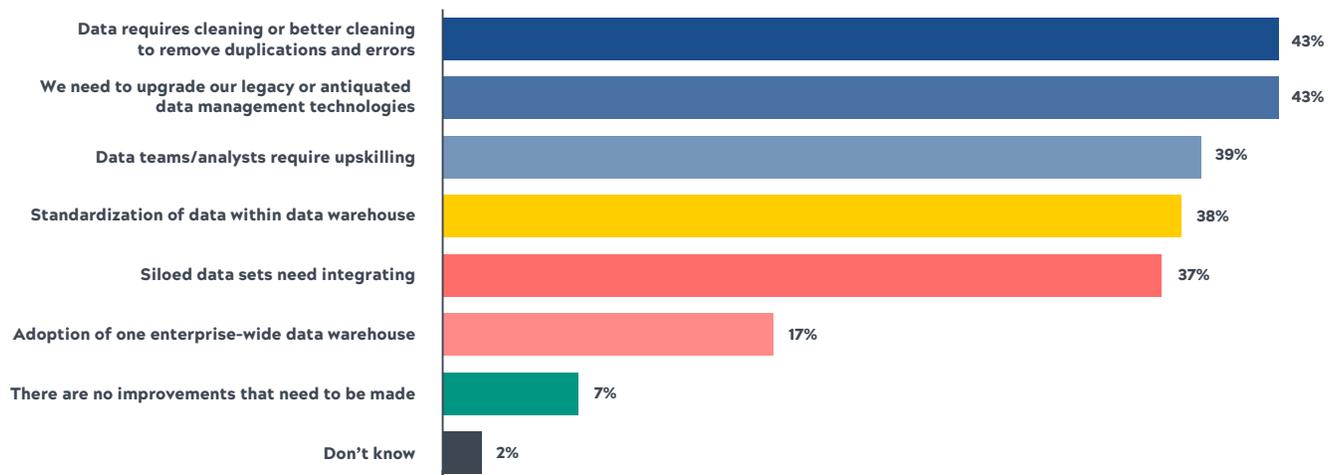


Figure 11: Which of the following do you believe needs to happen in order to improve the quality of data analysis in your organization? [500]

Time to integrate

While disconnected data sources and data silos were identified as the biggest cause of data distrust, interestingly, integrating those siloed data sets were in the middle of the pack in terms of priority improvement areas.

But by integrating siloed data sources, it is likely that those using data in organizations will face fewer issues accessing, analyzing, and using it effectively. In doing so, it is more likely that analytics can be based on full datasets, thus trust in the decisions made upon these analytics tasks is higher. Better awareness and integration of data sources therefore seems to raise the standard of actionable decisions taken in an organization, and consequently the trust and confidence in them (Fig. 12).

Good integration leads to better trust

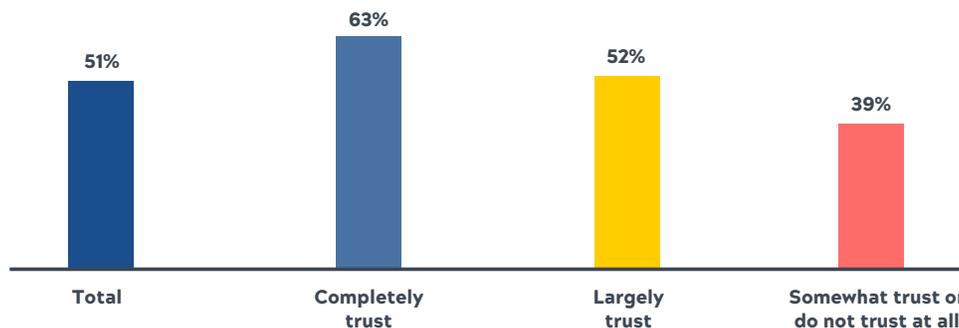


Figure 12: Average percentage of an organization's applications and data sources that are integrated and work seamlessly together [483] Respondents who know how many applications and data sources exist in their organization, split by the level of respondents' trust in their organizations' data quality to make accurate, timely, business-critical decisions

Modern integration systems also enable easier migration of data held in legacy infrastructure over to modern data warehousing platforms. These systems can also help to standardize and de-duplicate the data through the integration process, which means that far less time needs to be spent cleaning data before it can be used to generate reliable insights.

It is clear that the difficulties organizations have locating, integrating, and moving their data could cause them to lose trust in the data itself. If data isn't well integrated into an enterprise storage or warehousing solution, employees won't be able to find the accessible and usable data they need in order to conduct proper analysis on it.

Invest in data automation

Automation also plays a key role in better enabling analytics success and data trust within organizations. Currently, for every process that is being done manually but could be automated, valuable time is lost. If IT and data teams are able to better automate the tasks involved in data management, they will regain lost employee time and can put it towards more strategic projects.

When asked, 94% of respondents noted that existing processes surrounding their data storage, management, and analytics systems could be more automated. In fact, ITDMs estimate that on average, 42% of the processes currently done manually could be automated (Fig.13), which would free them up to apply their hard-earned skills elsewhere.

Manual processes that could be automated

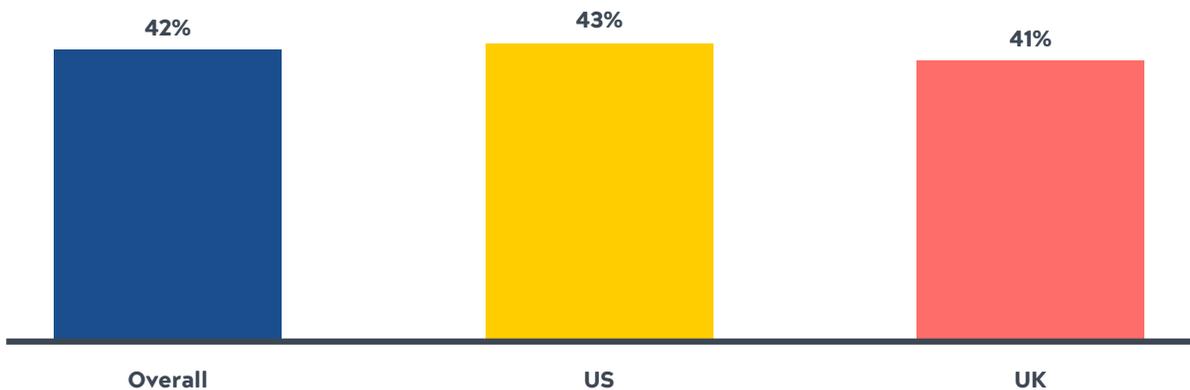


Figure 13: Average percentage of an organization's data management and storage solutions that could be automated [494] Respondents who know how many applications and data sources exist in their organization.

As well as saving employee time, by automating these processes data is likely to be loaded into systems more efficiently and with less error. This would mean that accurate, quality data would be ready for analytics faster, as well as being less resource draining, directly addressing one of the key reasons for lack of trust.

Beyond the speed of quality data delivery and freeing up employee time, automation can also help to address challenges in the identification and integration of new data sources, as well as the migration of data from legacy systems. It can automatically detect duplicate, erroneous, or missing data, or identify structures or formats that don't match the data model. In doing this it means the delivery of data for analytics is more reliable and efficient, ultimately enabling a better data-to-decisions process.

Survival of the fittest

The importance of data analytics projects to organizations is reinforced by the high proportion who have continued - or even accelerated - their data warehousing and analytics projects in spite of, or perhaps because of, the disruption caused by COVID-19.

For many ITDMs it would appear that data analytics has been incredibly valuable throughout this period. Of those surveyed, more than a quarter (26%) stated that they have accelerated their data analytics projects as a direct result of COVID-19 (Fig.14), and a further 40% have continued to progress their analytics projects as normal.

Use of analytics during COVID-19

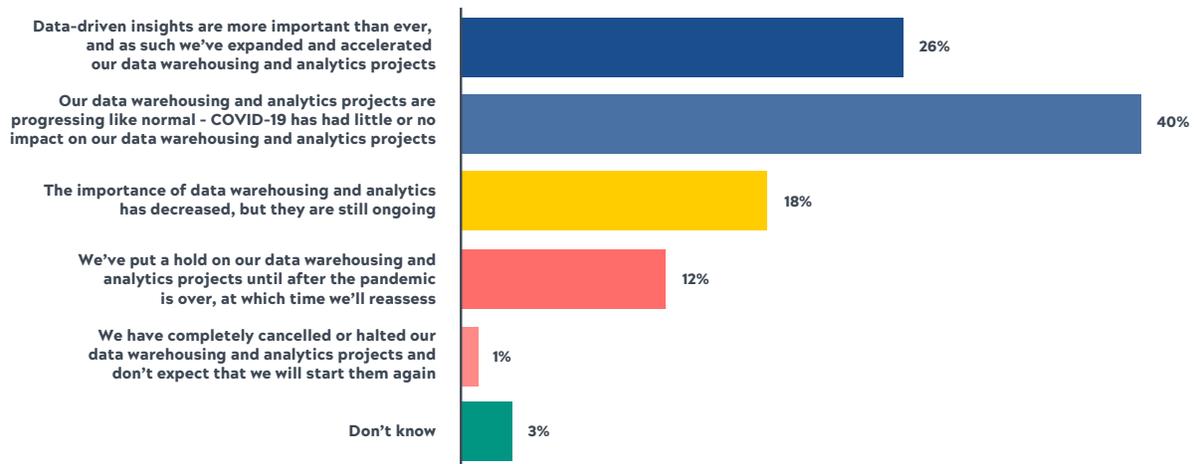


Figure 14: Has COVID-19 had an impact on your organization's approach to data warehousing and analytics projects? [500]

It's worth noting, those who already completely trust their data were more likely than any other group to accelerate their analytics initiatives during this period (Fig.15).

Trust in data leads to acceleration of analytics during COVID-19

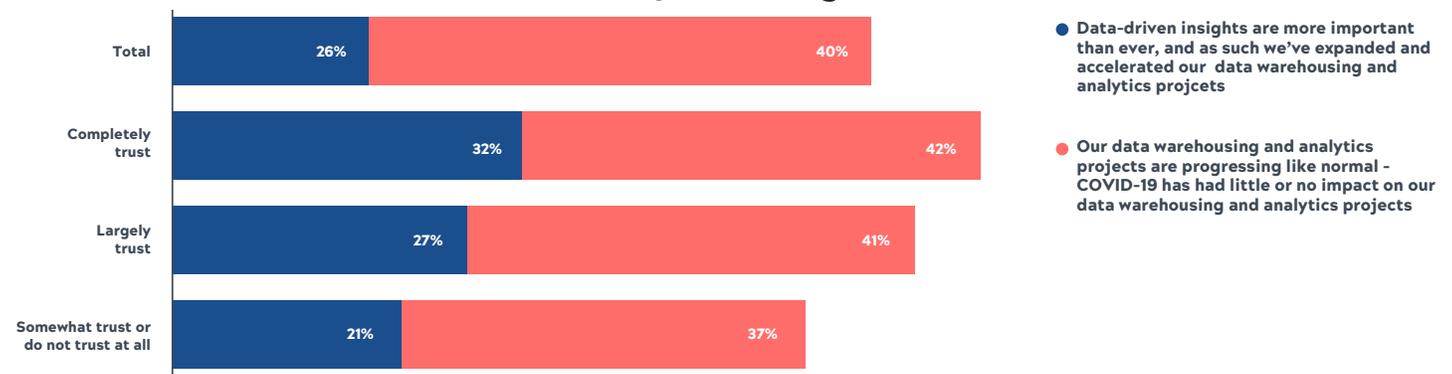


Figure 15: Has COVID-19 had an impact on your organization's approach to data warehousing and analytics projects? [500] Split by the level of respondents' trust in their organization's data quality to make accurate, timely, business-critical decisions, omitting some answers

As organizations continue to navigate an uncertain business landscape, an effective data and analytics strategy is paramount. Businesses need to rebuild their trust in data by breaking down data silos, bringing all data together in an efficient and reliable way, minimizing time spent preparing and readying data for analysis, and automating as much of the process as possible. Only then will teams across the business fully trust the data they are working with to make timely decisions and take fast actions that deliver meaningful business value.

Next steps

For more information about how integration and automation can support your data management and data warehousing strategy, visit snaplogic.com.

Research scope and methodology

The research was conducted by Vanson Bourne, an independent specialist in market research for the technology sector in May 2020.

500 interviews for this research were conducted with IT Decision Makers. To qualify for the research, respondents' organizations could be from any sector and their organization had to have at least 500 employees.

Respondents came from the US and UK:

- US - 300 interviews
- UK - 200 interviews

Respondents were interviewed using an online methodology and a robust multi-level screening process was used to ensure only appropriate respondents participated in the project.



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