



The Big Pivot

RESEARCH PAPER | DIGITAL INSIGHTS

From Data Islands to Data Insights
Data Leaders chart a course from the great
lockdown through the great unknown

JULY 2020



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About the research

NTT DATA Services, in partnership with Longitude, a Financial Times company, conducted two online surveys of 500 executives in total. Respondents are employed at the senior manager level and above and based in the U.S. and Canada. The first survey was conducted between January 13 and 22, 2020; the second from March 10 to 16, 2020.

Of the total sample, 88% is split among the banking, insurance, manufacturing and healthcare industries, as well as the public sector, with the remaining 12% falling in the "other" category.

Chart your way to profits; let data be your guide

COVID-19 has disrupted the world. Organizations have never had to chart a course through a global pandemic like this. Companies must now navigate an entirely new territory, including recovery and finding a path to growth and opportunity.

Data and analytics are critical to assessing complex and uncertain business situations. Whether it's adapting to new customer expectations, creating new delivery models, altering supply chains or mitigating risk from redefined processes, business leaders need to rely on data for decision-making more than ever before. No matter what path your organization is on, having a data-first strategy plays a pivotal role in defining success.

According to research by NTT DATA Services, most organizations recognize the strategic value of data, but their efforts to use it are hindered by fundamental challenges that have existed for decades. Until senior leadership values data at the highest levels and overcomes these challenges, they will be unable to capture opportunities from the great unknown or stake a claim in the new frontier.

The results of our study reinforce the need for organizations to act quickly and decisively on their data strategies as the world adjusts to what's next. Our study shows that most organizations claim to be confident and effective data users. In fact, nearly six in 10 (58%) indicate they're ahead of their competitors in deriving value from their data. However, only a small group of firms (10%), which we refer to as Data Leaders, are transforming their organizations through data. What sets them apart is their cultural approach to data governance — a vital behavior necessary to making critical data-driven decisions quickly.

Data Leader or not, companies continue to face a range of obstacles in managing and deriving value from their data. Along with stricter data privacy regulations and rising consumer expectations, the pandemic will continue to create unprecedented challenges.¹ Public sector, healthcare and manufacturing organizations are under increasing strain, where fast and easy access

to data insights is crucial to delivering necessary services today and tomorrow. Manufacturing firms, for example, have had to quickly rethink their operations, scaling up production of essential products or repurposing production lines altogether.² Healthcare, one of the industries that has had to speed up its digital transformation, is finding new uses for data in artificial intelligence (AI) algorithms designed to predict patient outcomes, the number of beds required in intensive care units and the areas where potential outbreaks may occur. The public sector has had to use data quickly to support testing, tracing and mapping of outbreaks.

In this fast-changing environment, organizations have had to overcome their data challenges so they can rapidly pivot operations and serve customers better — today and tomorrow.

This paper explores how organizations use data, why some excel and transform their organizations through data, and the continued challenges organizations face as they seek to manage their data and maximize its value from the great unknown to the new frontier.



79%

of organizations say they understand the value of their data, yet only 10% are using data to transform their organizations.

Data Leaders come out ahead when navigating uncertainty



Our study reveals that 79% of organizations understand the value of their data and see it as key to their business strategies. The COVID-19 pandemic has tested organizations to use their business data to act quickly and responsively to citizen and customer needs. Some organizations have been able to support customers in an entirely new way by providing contactless experiences and new digital apps to make the customer experience better — all while relying on data and digital solutions to transition employees to the best virtual work experience available.

These actions align almost one to one with what our study revealed about how organizations say they currently use their data. A large proportion of respondents say they are very effective at using data to improve the customer experience (48%), for product innovation (39%) and to enhance the employee experience (35%), as identified in Figure 1.

Q How effective is your organization at using data for the following purposes?

How organizations currently use their data

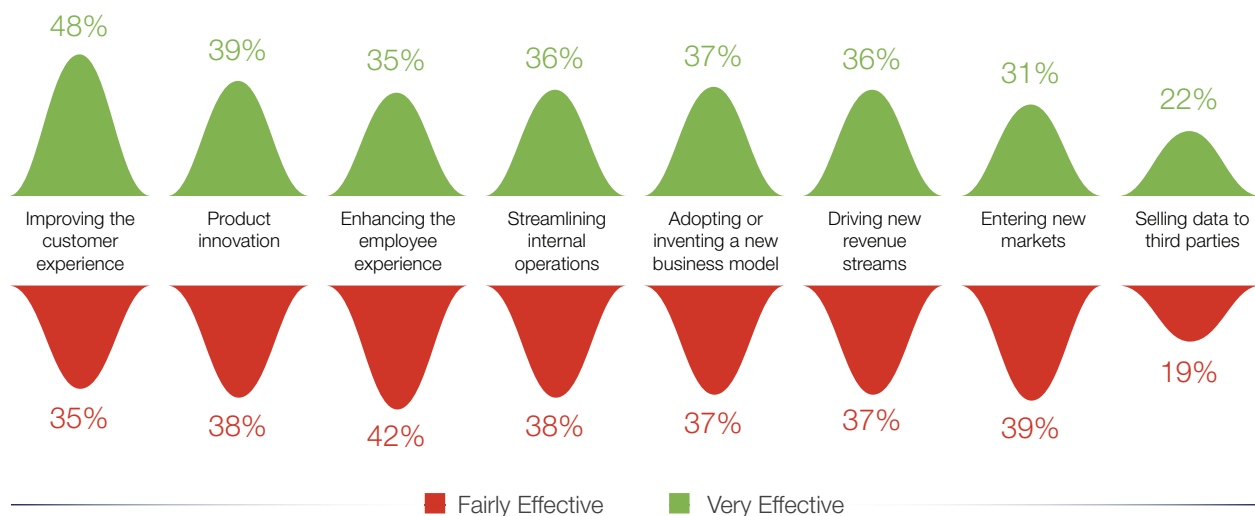


Figure 1. The customer experience is the biggest beneficiary of data use
("Very effective") Total n=400

However, when it comes to some of the more transformational uses of data, our study shows that businesses aren't performing as well. For example, less than 40% are very effective at adopting or inventing new business models and driving new revenue streams — key success factors when navigating through uncertainty, both during and after the current pandemic.

Of the total sample of organizations, only 10% — the Data Leaders — uses data very effectively across three key transformational processes: adopting or inventing new business models, entering new markets and selling data to third parties. Their ability to use data in these ways will

be key to navigating the post-COVID-19 reality, as many businesses will need to adapt quickly and adopt new business models indefinitely because they understand the value of their data. Leaders who are able to sell or share data with third parties will also help private businesses, the public sector and the healthcare industry coordinate their response during and after the pandemic in a way that benefits everyone.

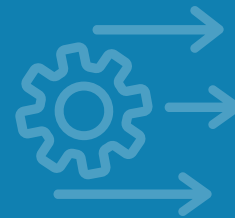
Meanwhile, 19% of respondents say they're not using data effectively at all for one or more of the areas measured in Figure 1.

Who are the Data Leaders*?

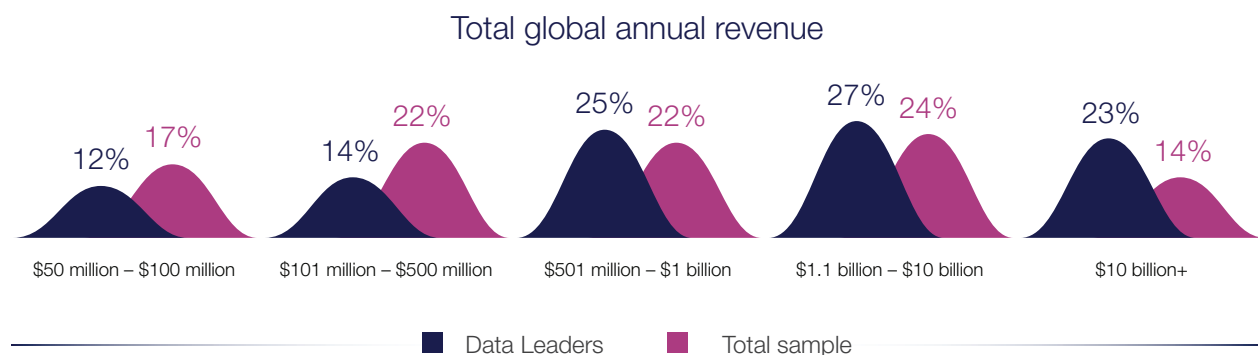
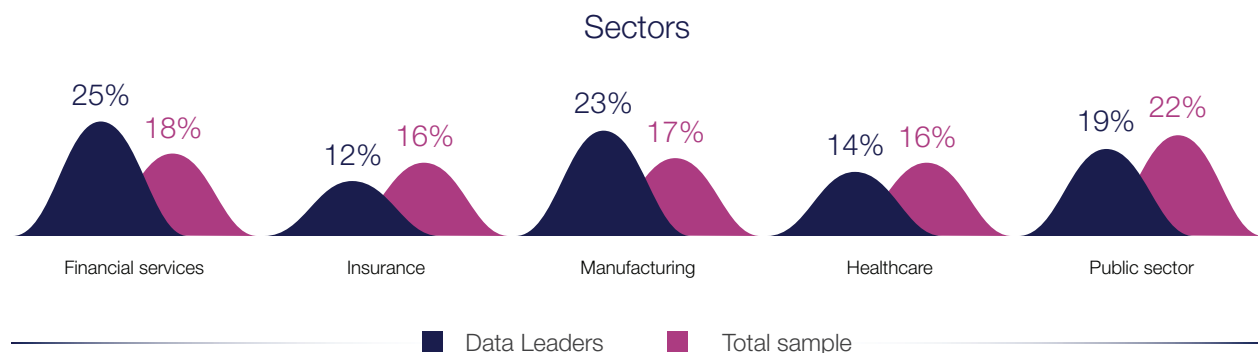
We define Data Leaders as organizations that say they're very effective at using data in three key areas:

- To enter new markets
- To adapt or invent a new business model
- To sell to third parties

These organizations are more likely to be from the financial services and manufacturing sectors and have revenues of more than \$1.1 billion.



Data leaders are more likely to be from the financial services and manufacturing sectors — >\$1.1 billion revenue



Build and maintain trust today and tomorrow

Strong relationships are built on trust. A strong data governance culture supports collecting, managing, securing and storing data in a way that enables solid trusted relationships with consumers, customers and suppliers — a critical need in times of crisis, as most organizations have experienced recently.

This culture will be critical post COVID-19. For instance, innovative solutions for contact tracing are causing controversy around the use of public data, as well as compounding an existing mistrust in data use and ownership.³ Businesses and those in the public sector will

need to work even harder to gain consumer and citizen trust, especially when preparing to enter new markets and build new business models.

Our research reveals that Data Leaders are much more likely than Data Laggards to have a strong data governance culture. How organizations approach data governance is one of the key behaviors that could help them manage their data to get the most value from it — and ultimately sets them apart from the rest of the competition.



What do we mean by strong data governance culture?

In a company with a strong data governance culture, **everyone understands and appreciates the influence of data in decision-making processes**. These companies put data at the heart of their operations by following principles that support data quality and accountability, as well as the lineage and traceability of data.



How would you define your organization's approach to data governance?

How organizations approach data governance

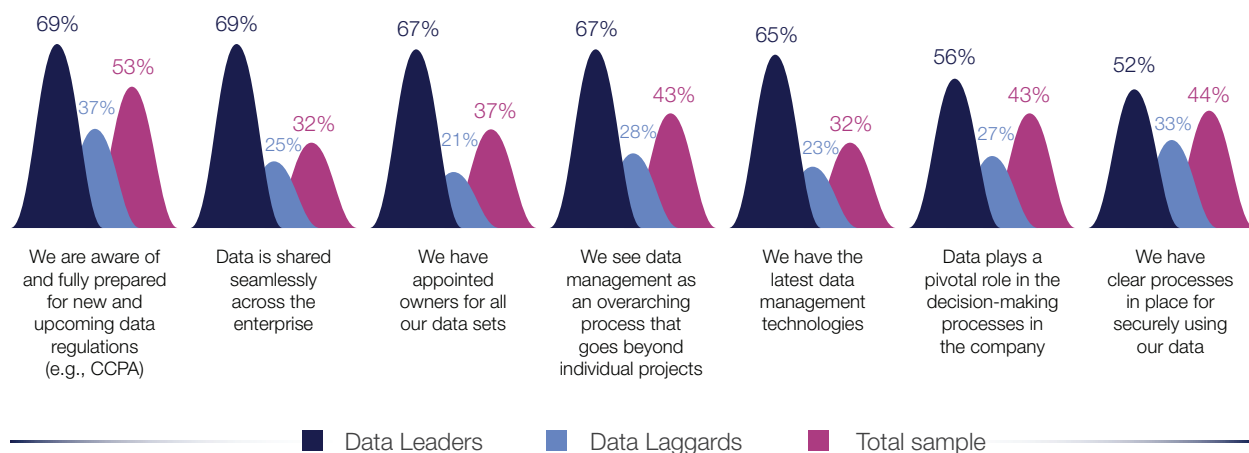


Figure 2. Data Leaders forge ahead with data governance
("Slightly agree" and "strongly agree") Leaders n=52; Laggards n=83; total n=500

Data Leaders are prepared for data privacy regulations

Although the spotlight has dimmed briefly on data privacy regulations, such as the European Union's General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA), these and other regulations will become top of mind and put businesses under pressure as they struggle to understand what they need to do to comply.^{4,5} NTT DATA expects this to be a much greater focus as we lean into recovery mode post COVID-19.

Our study shows that Leaders are almost twice as likely as Laggards to say they're prepared for new data regulations (69% versus 37%) and about three times more likely to say they've appointed owners for all their datasets (67% versus 21%).

"Who owns the data in the company?" is a question that organizations must be able to answer to communicate a consistent message to customers, a task that has grown in importance with the recent pandemic.

Around nine in 10 Data Leaders (87%) say they clearly communicate to customers how their data is stored, used and protected, compared with only about half (51%) of the Laggards (see Figure 3).

Without ownership clearly defined, many organizations will lose customers and suppliers. Emergencies like the current coronavirus pandemic amplify these losses when companies suddenly can't respond fast enough to banking customers who require overdraft protections or vendors that need extended payment terms.



To what extent do you agree with the following statements?

Organizations' approaches to privacy regulations and compliance

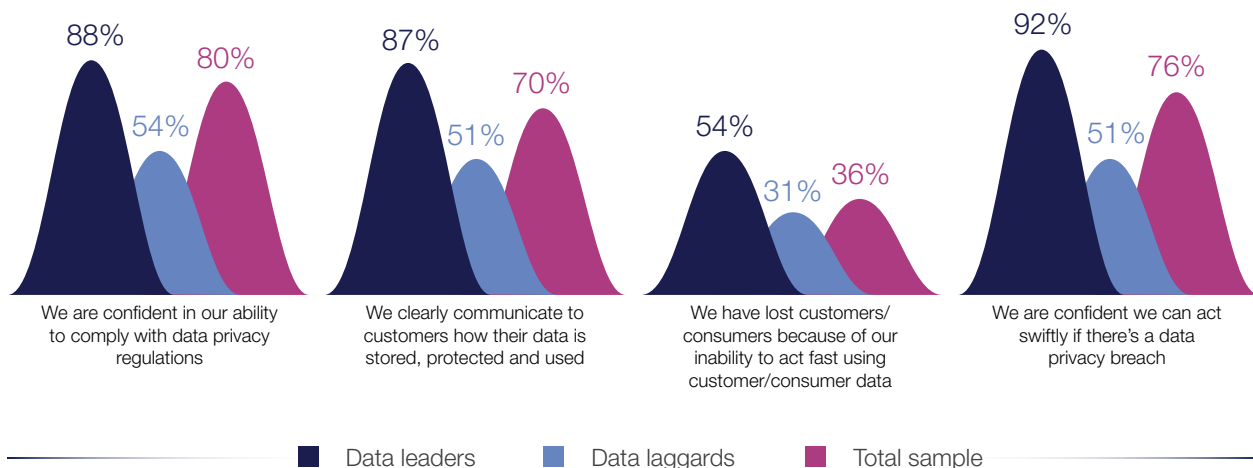


Figure 3. Data Laggards lack confidence and customer communication
("Slightly agree" and "strongly agree") Leaders n=52; Laggards n=83; total n=500

Let data finally help build a bridge across the chasm

Every sector has accelerated digital adoption for customers and employees at a stunning, historic pace — one that highlights how much organizations need quality, integrated data to be most effective.

The time is now to make sure data drives your business strategy. Data that helps you move forward and better manage the bottom line. Data that helps establish positive brand perceptions for future generations. Data that helps you rethink the customer journey and deploy digital customer experiences. Data that helps you forecast, manage assets and improve operations. Data you trust to make real-time decisions about new operating models to deliver digital solutions at scale and pivot quickly when necessary.

“Now more than ever, organizations must listen to customers and use that feedback to drive decisions about business strategy, customer experience and technology needs.”

— Lisa Woodley
Vice President, Customer Experience
NTT DATA Services

However, our study reveals that Data Leaders and Data Laggards alike still face a range of obstacles as they try to get the most from their data. The challenges both groups report aren't surprising. What is surprising is that among them are technical and human issues that organizations have faced for the past two decades and that continue to hinder agility and efficiency during times of crisis — namely, data silos and leadership.

Islands of data and lack of support from leadership hinder data value

Whether it's been “too difficult to implement,” “not the right time” or “too costly,” now is the time to bridge the chasm or risk falling into it. COVID-19 has exposed the importance of solving these issues once and for all to support a data-driven strategy. For example, this pandemic has put pressure on companies to continue communication not only to their employees and customers but to their suppliers, as well — something made difficult with poor data quality and silos of disparate data.

Many respondents say the quality of the information they rely on is unsatisfactory. As part of the crisis, organizations faced a set of critical questions, including: Do you know which employees can work from home? Can you predict which customers might need extended payment terms? Do you know which of your suppliers are manufacturing products in the hardest hit regions of the world? Access to this data, or lack thereof, will affect the bottom line.

For decades, data silos have prevented many businesses from answering these questions successfully. So has leaderships' lack of buy-in. As Figure 4 shows, both Leaders and Laggards report data silos, or “islands of data,” among their top challenges (25% and 19%, respectively). Nearly a quarter of Laggards (23%) and almost a fifth of Leaders (19%) also report their senior leaders don't see the value of data, and these respondents rank this among their top barriers.

So, it doesn't matter how far along in their data journeys they are, businesses continue to be held back by the old problems of data silos and lack of senior leadership support. It's time for leaders to get on board and cross the data chasm — no more excuses and gut-based decisions.



What barriers does your organization face when attempting to derive value from its data?

Top challenges when deriving value from data

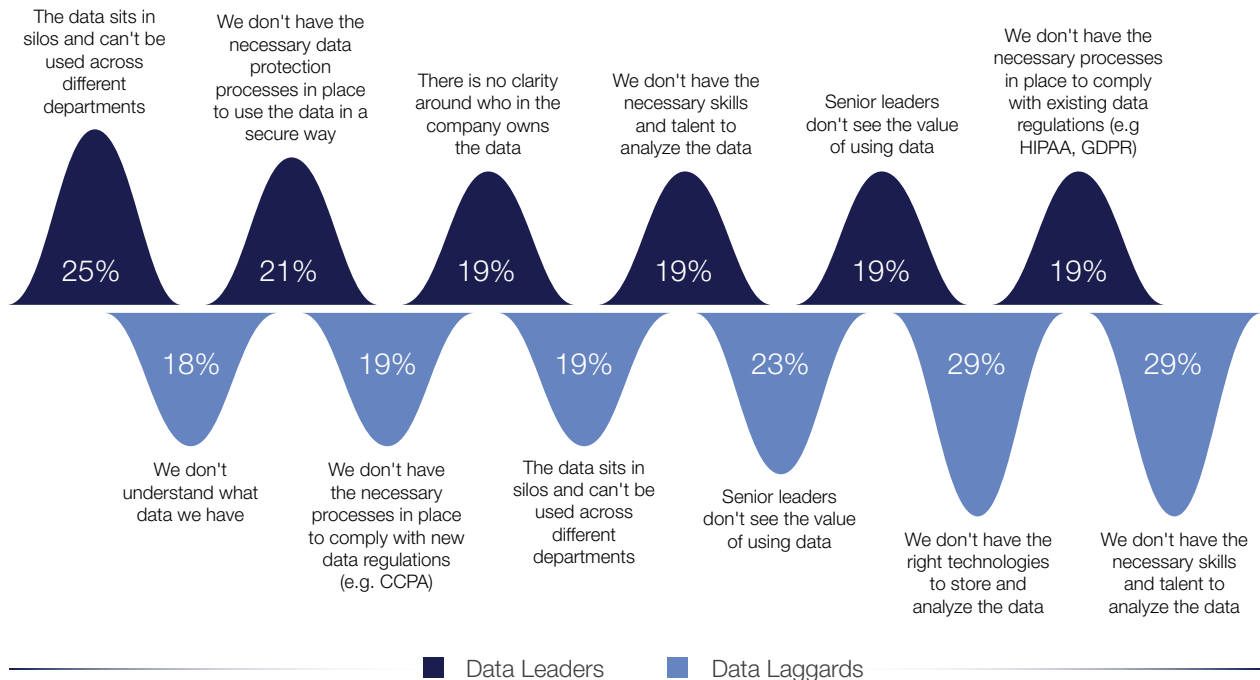


Figure 4. Seeking value from data, businesses grapple with skills, silos and the C-suite
Leaders n=52; Laggards n=83; total n=500

Our study analyzes key differences between Leaders and Laggards. Laggards, for example, struggle the most in two areas: lack of talent and skills (29%) and lack of the right technologies to store and analyze data (29%). Leaders also struggle with data skills (19%), but on the whole they have moved on to more complex issues: a lack of both data protection processes (21%) and clarity around data ownership in the company (19%). Leaders report a stronger data governance culture, but they're also more aware of how challenging it is to implement such a culture — particularly the processes related to data security and data ownership.

“Business leaders who understand and trust the value of their data are the difference-makers for companies seeking to transform and realize that it’s now a do or die situation,” says Theresa Kushner, Consultant, AI/Analytics, at NTT DATA. **“In a data-driven culture, executive leaders demonstrate daily the value of data. They understand it, they use it, and they champion — through actions and funding — those who curate and care for data.”**



Data quality, integration and security obstruct the path to effective data management

When they manage their data, neither a Leader nor a Laggard is immune to a range of difficulties, but Leaders have moved on to more complex challenges.

They report their biggest challenge as getting in place a data security approach and framework (40%, compared to 24% of Laggards). This is consistent with Leaders'

more sophisticated approach to data governance and concerns around protecting their data. It could also indicate that Leaders are thinking of adopting advanced technologies such as AI and machine learning (ML).

Leaders struggle primarily with data security and regulation compliance. Laggards, on the other hand, are concerned about improving the quality of their data (30%) and defining a clear data strategy and governance framework (27%) — both of which are steps taken by companies just starting out on their data journeys.

Q What are your organization's biggest challenges with managing your existing data?

Organizations' challenges to managing their existing data

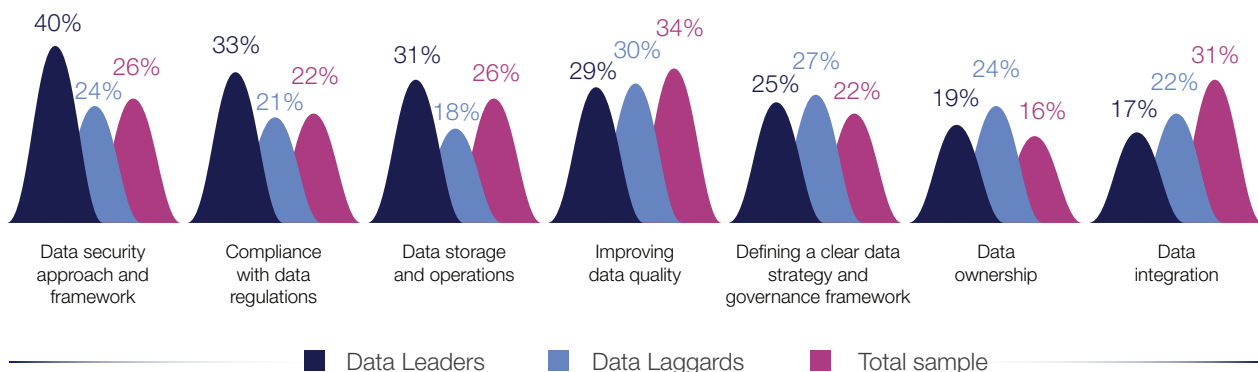


Figure 5. Data Leaders are far more likely to report they struggle with data security, while Laggards need quality data and a data framework
Leaders n=52; Laggards n=83; total n=500

Leader or Laggard: Are you paving the way or trailing behind?



Is your industry a Data Leader or a Data Laggard? We explore five key sectors in more detail — financial services, manufacturing, insurance, healthcare and the public sector — and discuss their perspectives on and behavior toward

data. Financial services and manufacturing organizations are the clear frontrunners and provide valuable examples for other sectors to consider.



In which sector does your organization operate?

Data Leader sector breakdown

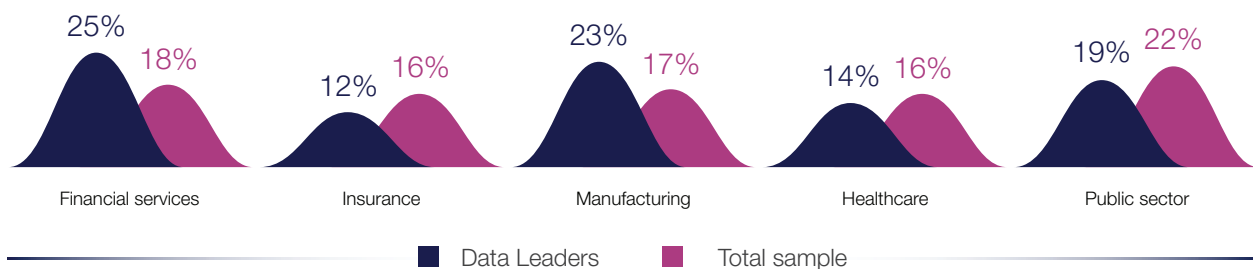
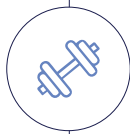


Figure 6. Five key sectors weighed in on data governance
Leaders n=52, total n=500



Spotlight on financial services:

Has the highest percentage of Data Leaders



Strength:

Data regulation compliance. Six out of 10 of respondents say they're aware and fully prepared for new data regulations.



Opportunities:

Data security. FS firms are the least likely to report they have clear data security processes in place.

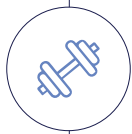
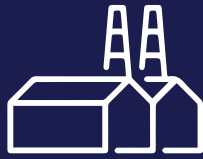
The financial services (FS) sector accounts for 25% of the Data Leaders, making this the sector with the most Leaders.

Data is integral to helping these organizations manage and control their operations. FS operations are often overseen by a large number of governmental and industry organizations. As a result, they seem to have developed a strong approach to data. FS executives also seem more involved than those in other sectors in their companies' data strategies.

Our survey shows that roughly six in 10 (59%) FS organizations report being aware of and fully prepared for new data regulations — unsurprising, perhaps, in this highly regulated industry. About a third (34%) report data is shared seamlessly across the enterprise — the second highest percentage of all surveyed sectors.

However, FS firms are among the least likely to say they have clear processes in place for using their data securely — only 43% report this. They're also the most likely to have lost customers/consumers because of their inability to act fast on customer/consumer data (44%).

The FS sector's key challenges explain some of these issues. Three in 10 respondents (30%) indicate they don't have the necessary skills and talent to analyze data, which is the highest percentage of all surveyed sectors. And when it comes to managing data, FS companies struggle the most with improving the quality of their data — 44% indicate this, which is also the highest among the sectors.



Strength:

Data privacy. More than 8 out of 10 respondents say they can act swiftly if there is a data privacy breach.



Opportunities:

Data silos. This ranks as the number 1 challenge for manufacturers when trying to derive value from data.

Spotlight on manufacturing:

Shows strength in data regulation and privacy

The manufacturing sector boasts 23% of the Data Leaders, making this the sector with the second-highest number of Leaders.

The manufacturing sector has been among the worst affected by COVID-19; some plants have closed, while others producing essential products have been overwhelmed by demand. Access to real-time data, which flows freely between different partners in the supply chain, will enable manufacturing firms to make fast decisions during and after the pandemic — and maintain their competitive edge. Some firms are already adapting quickly by prioritizing the production of essential products or shifting to the production of new ones altogether. French tire manufacturer Michelin, for instance, has adapted some of its factories to produce its own health supplies, including masks and hand sanitizer.⁶

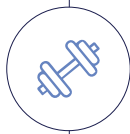
Our survey shows that manufacturing organizations perform better than most in terms of data regulations and security. They're the most confident in their ability to comply with data regulations (89%) and act swiftly if there is a data privacy breach (88%). More than half (56%) report they're fully prepared for new and upcoming data regulations. And, they're doing a good job of communicating to customers how their data is stored, used and protected (73%).

As with other sectors, when they attempt to derive value from their data, manufacturers struggle the most with data silos (24%), and they lack the necessary skills and talent to analyze their data (19%). Data integration (33%) and improving data quality (33%) are their top two data management challenges.



Spotlight on healthcare:

Lacks data literacy skills



Strength:

Regulatory compliance planning. Among respondents, 60% say they're aware and fully prepared for new and upcoming regulations. Approximately eight out of 10 (87%) say they're confident they can comply with data privacy regulations.



Opportunities:

Data silos and data literacy. Using data across different departments ranks as the number 1 challenge for healthcare.

Data quality and integration. These rank as the top two data management challenges.

The healthcare sector claims 14% of the Data Leaders, which makes it the sector with the second-lowest number of Leaders.

This industry has been put under tremendous pressure due to COVID-19. Access to real-time, high-quality data has never been more important. Healthcare organizations must tackle data silos, legacy systems and lack of talent to utilize the rich data they own. Data security will be critical, too.

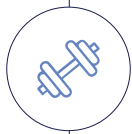
Healthcare organizations are the most likely to report they're aware and fully prepared for new data regulations (60%). However, this sector is among the least likely of all the sectors surveyed to report it can act swiftly if there is a data privacy breach (74%).

As in other sectors, the biggest challenge healthcare companies face when deriving value from their data is data silos (24%). This sector ranks first in its lack of data literacy skills — about a fifth (21%) of respondents report they don't know how to read their data. When managing data, the top healthcare sector challenges are improving data quality (33%) and establishing a data security approach and framework (29%).



Spotlight on public sector:

Needs better data management



Strengths:

Trusting data. Only 7% of respondents say they don't trust their data quality and accuracy.

Protecting data. Nine out of 10 respondents say they have the necessary data protection processes in place.



Opportunities:

Data quality. This ranks as the number 1 data management challenge for the public sector.

Data management. Only one out of 10 respondents believes there are no challenges with data management.

The public sector includes 37% of the Data Laggards, which makes this the sector with the highest number of Laggards.

Perhaps due to outdated processes and operations, as well as limited funding and legacy technology, this sector struggles to utilize data effectively. The public sector needs to keep up with increasing demand for data insights and provide the support society needs. This will be crucial during and after COVID-19, as more people rely on access to public services online.

Public sector respondents are the least confident of all those surveyed in their ability to use data effectively.

Similar to other sectors, lack of talent and skills (21%) is the public sector's biggest barrier when attempting to utilize and derive value from data. When managing their existing data, organizations in this sector struggle the most with improving data quality (30%) and data integration (24%).



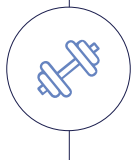
Spotlight on insurance:

Struggles with data silos

The insurance sector covers 12% of the Data Leaders, which makes it the sector with the fewest Leaders.

Insurance companies are among the most likely to report they're aware and fully prepared for new data regulations (58%) and have clear processes in place for securely using their data (50%). Our data shows these firms are clearly ahead of the rest in their data protection and compliance processes, so communicating this point to customers should be a priority. Yet, insurers are the second least likely, after public sector companies, to report they clearly communicate to their customers how their data is stored, used and protected (66%).

When it comes to deriving value from data, insurance companies struggle the most with data silos (29%) and the lack of the right technologies to analyze their data (24%). This is also the most likely among the sectors to report data integration as its biggest challenge to managing existing data (36%).



Strengths:

Data regulation compliance. Among respondents, 58% say they're aware of and fully prepared for new and upcoming data regulations and 86% say they can comply.

Data security. Five out of 10 respondents say they have clear processes in place for securely using data.



Opportunities:

Data privacy and customer communication. Although ahead of other industries in data protection, only six out of 10 respondents say they communicate to customers how data is stored and protected.

Data integration. This ranks as the top data management challenge for insurers.

Data: Stake your claim in the new frontier



This pandemic has been a rude wake-up call, showing businesses they can no longer postpone resolving the age-old data challenges our study highlights. COVID-19 has forced organizations to stand up digital solutions and data analytics capabilities in weeks — rather than months or even years — to address the necessary online engagement requirements of citizens, customers and employees in response to the pandemic. As those digital and online experiences increase, the quality and integration of data must be addressed for the long haul.

Trusted data must be the true north. If the data can't be trusted, nothing else matters. To build an agile foundation for whatever is next, organizations must proactively champion a data-driven culture, build a high standard of data governance and use the right data technologies to successfully transform and capture opportunities from the great unknown.

The Big Pivot

Make the big pivot with data:



A data-driven culture starts at the top

Data is hard. Data Leaders and Laggards both struggle with leadership commitment, data silos and a talent gap when it comes to using data. For organizations to turn the great unknown into the new frontier, it's time for the C-suite and other leaders to rely on trusted data over instinct and use it as their compass for business decisions. During the pandemic, leaders across the world have taken different approaches to providing guidance. Some are driven by “gut instincts,” others by data. Data-driven leaders, like Dr. Anthony Fauci, Director of the National Institute of Allergy and Infectious Diseases, have earned credibility around the world because their recommendations are based on thoughtful analysis of trusted data.

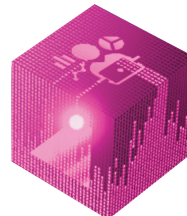
- **Be a data advocate.** The best way to demonstrate support of data is for senior leaders to use data actively in their decisions and to communicate that use throughout the organization.
- **Eliminate silos and “islands of data.”** Break down organizational barriers and promote cross-team collaboration by sharing and using data seamlessly across the enterprise.
- **Find, and keep, the right talent.** To effectively unlock the value from data, organizations need to think about their long-term talent strategies. Expecting data literacy skills and data-driven decisions across the enterprise creates opportunities for development. Outside resources that support key data functions can also help senior leaders begin to integrate key data skills.



Establish strong data governance to secure collaborative relationships

Our survey's Data Leaders show not only that a strong data governance culture is the backbone of a thriving data-driven organization, but that a solid governance approach and framework is critical to ensuring trusted citizen, customer and supplier relationships. That governance will help manage changing regulations, such as those associated with the CARES Act, and it will continue to be critical post COVID-19.

- **Appoint data owners.** Organizations need to appoint data owners for all key datasets across the enterprise and establish clear data management processes. They should also treat data management as an overarching process that goes beyond individual data projects and has, at its core, transparency and accountability.
- **Ensure data privacy.** Businesses that sell data must understand how their data is collected, curated and transferred to third parties. To ensure the security and privacy of that data, these companies must also understand how data is collected, managed through systems, exported to partners, and transformed for reporting and analytics.



Accelerate investments in the right technologies for your data objectives

As COVID-19 continues to march across the globe, many companies indicate they don't have the right technologies to store or analyze their data. Those that haven't been able to pivot quickly are, and continue to be, at a distinct disadvantage. Tapping into the cloud and next-generation architectures, analytics and AI will be critical as digital/online experience expectations continue to increase. More data will be readily available to anticipate and predict customer behavior, sentiment and loyalty over time. But to use that data effectively, companies will need to be able to harness it to react quickly and to store and analyze it safely for predictive insights.

The pandemic offers companies a chance to rethink their business and reinvent themselves.

New consumer expectations and new models of business can only be addressed through data-driven decision-making. Senior leaders must create a sense of urgency across the enterprise to tackle data challenges once and for all. Turn the great unknown into the new frontier by letting data guide you in whatever is ahead.



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