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# CLOUDERA ENTERPRISE DATA MATURITY REPORT:

Identifying the Business Impact of an Enterprise Data Strategy

ENTERPRISE DATA STRATEGY

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## Introduction

The pandemic has been a positive accelerant for business change, speeding up organizations' path to digital transformation driving the dominance of the digital economy. Many businesses have taken advantage of the change brought about by the pandemic to move workloads to the cloud. They are following the promise of improved operational and cost efficiencies, optimized functionalities, increased agility, flexibility and scalability, and greater security and governance. Data has the potential to fuel the organization's next transformation, through activities like improving the customer experience or opening new lines of business. Data is now recognized as what it has always been, a strategic asset underpinning the success of organizations across the world. We have seen business focus evolve from thinking of data in terms of cost, infrastructure, and centralization to understanding how data can support use cases, time-to-value, and monetization. Businesses want to know how data and its insights can affect their top-line and drive revenue growth. Because of the uncertainties and changes in the evolving pandemic and post-pandemic landscape, organizations need to examine how an integrated, holistic enterprise data strategy can help deliver positive business outcomes.

Cloudera, in association with technology market research expert, Vanson Bourne, embarked on this research project to explore the correlation between the maturity of an organization's enterprise data strategy and its business performance. The hypothesis was that organizations with mature enterprise data strategies, optimized for hybrid and multi-cloud environments, can maintain stronger security and governance, and generate better business outcomes. Organizations are doing or aiming to do more with their data. This is not surprising. Across the board, there are a multitude of requirements, processes, and capabilities in place involving current and future analytics. Regardless of which part of their data and analytics journey they are on, organizations can benefit from improved efficiencies and from making business-critical decisions with real-time data. The most innovative and successful enterprises recognize data as a strategic resource and use it to inform their decision-making, unlocking value from their data with comprehensive enterprise data strategies. In these uncertain times, the business that is prepared, agile, and able to adapt quickly will thrive. As organizations rethink the way they do business, they must also review how to continue the cycles of innovation required to sustain or accelerate their market presence.

## Maturity model classification and profiling

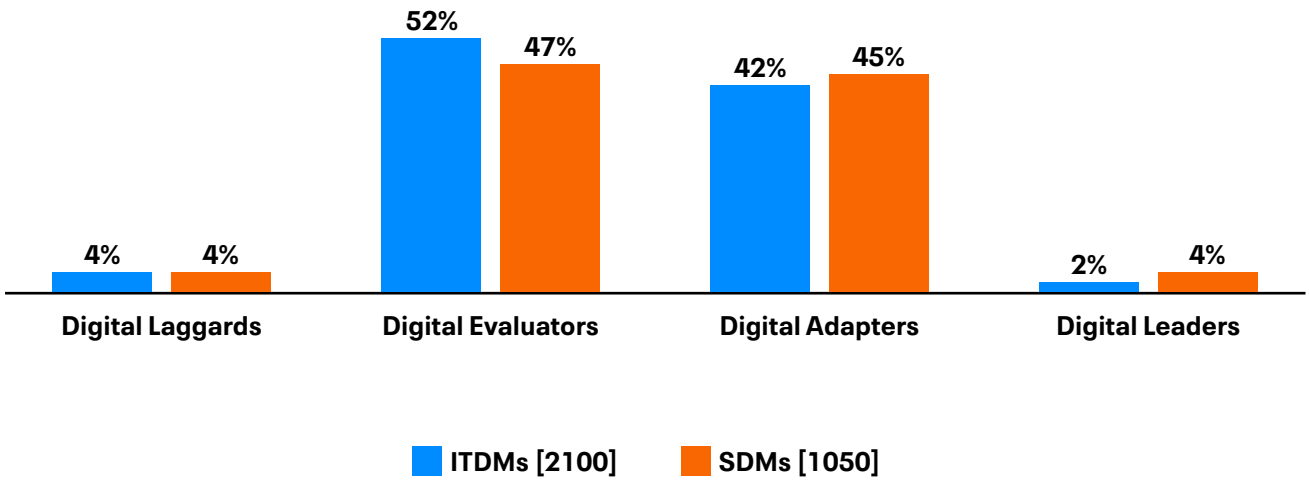
Using a series of questions and scores, we have compiled a model which assesses organizations' maturity when it comes to their current capabilities, and handling of data and analytics, across two sets of respondents—IT decision makers (ITDMs) and senior decision makers (SDMs). Questions contributing to this model center on the current use of data and analytics, parties championing the use of data and analytics, the extent to which data is used across processes, the presence of enterprise data strategies, and the extent to which capabilities relating to an Enterprise Data Cloud have been achieved.

The survey questionnaires and resulting questions contributing to the maturity model covered the following key areas:

- Sponsorship
- Data & Analytics
- Technology, Cloud & Infrastructure
- Organization & Skills
- Process Management

This analysis has allowed us to see the characteristics of organizations who are excelling (or underperforming) in terms of their use of data and analytics, their capabilities and strategies, and explore what it is that they might be doing that means they are seeing those results. Both ITDMs and SDMs surveyed are more likely to be from organizations that fall into the Digital Evaluators maturity group—so could certainly benefit from making improvements with their data in order to maximize potential. This group are less likely to be making the best use of their data across all of the key areas noted above (Sponsorship; Data & Analytics; Technology, Cloud & Infrastructure; Organization & Skills; Process Management).

**The enterprise data maturity curve can be seen below:**



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## Attribute and Maturity Breakdown—ITDMs

| | Digital Laggards | Digital Evaluators | Digital Adapters | Digital Leaders |
|---|---|---|---|---|
| Sponsorship | Least likely to be utilizing an enterprise data strategy that is key to their business resiliency | Less likely to be utilizing an enterprise data strategy that is key to their business resiliency | More likely to be utilizing an enterprise data strategy that is key to their business resiliency | Most likely to be utilizing an enterprise data strategy that is key to their business resiliency |
| Data & Analytics | Least likely to be engaging with data sources such as customer and prospect data, connected product data and customer sentiment data | Less likely to be engaging with data sources such as customer and prospect data, connected product data and customer sentiment data | More likely to be engaging with data sources such as customer and prospect data, connected product data and customer sentiment data | Most likely to be engaging with data sources such as customer and prospect data, connected product data and customer sentiment data |
| Technology, Cloud & Infrastructure | Most likely to be currently housing data and performance analytics solely on-premises | More likely to be currently housing data and performance analytics solely on-premises | Less likely to be currently housing data and performance analytics solely on-premises | Least likely to be currently housing data and performance analytics solely on-premises |
| Organization & Skills | Least likely to see the value in delivering real-time business insights, through technologies such as Artificial Intelligence | Less likely to see the value in delivering real-time business insights, through technologies such as Artificial Intelligence | More likely to see the value in delivering real-time business insights, through technologies such as Artificial Intelligence | Most likely to see the value in delivering real-time business insights, through technologies such as Artificial Intelligence |
| Process Management | Least likely to see value in having secure, centralized governance and compliance over the entire data lifecycle | Less likely to see value in having secure, centralized governance and compliance over the entire data lifecycle | More likely to see value in having secure, centralized governance and compliance over the entire data lifecycle | Most likely to see value in having secure, centralized governance and compliance over the entire data lifecycle |

## Attribute and Maturity Breakdown—SDMs

| | Digital Laggards | Digital Evaluators | Digital Adapters | Digital Leaders |
|---|---|---|---|---|
| Sponsorship | Least likely to have a very effective enterprise data strategy in place | Less likely to have a very effective enterprise data strategy in place | More likely to have a very effective enterprise data strategy in place | Most likely to have a very effective enterprise data strategy in place |
| Data & Analytics | Least likely to recognize that their organizations require data in real time in order to make business-critical decisions | Less likely to recognize that their organizations require data in real time in order to make business-critical decisions | More likely to recognize that their organizations require data in real time in order to make business-critical decisions | Most likely to recognize that their organizations require data in real time in order to make business-critical decisions |
| Technology, Cloud & Infrastructure | Least likely to have coped very well since the start of the pandemic | Less likely to have coped very well since the start of the pandemic | More likely to have coped very well since the start of the pandemic | Most likely to have coped very well since the start of the pandemic |
| Organization & Skills | Least likely to see the value in delivering real time business insights, through technologies such as Artificial Intelligence | Less likely to see the value in delivering real-time business insights, through technologies such as Artificial Intelligence | More likely to see the value in delivering real-time business insights, through technologies such as Artificial Intelligence | Most likely to see the value in delivering real-time business insights, through technologies such as Artificial Intelligence |
| Process Management | Least likely to see value in having secure, centralized governance and compliance over the entire lifecycle | Less likely to see value in having secure, centralized governance and compliance over the entire lifecycle | More likely to see value in having secure, centralized governance and compliance over the entire lifecycle | Most likely to see value in having secure, centralized governance and compliance over the entire lifecycle |

**Key differences by respondent type regarding data sources used:**

- Improving the customer experience and satisfaction – 61% SDMs; 52% ITDMs
- Improving the employee experience and satisfaction – 58% SDMs; 49% ITDMs
- Building new revenue streams – 52% SDMs; 43% ITDMs

**Digital Leaders** are the most likely to be currently engaging with data sources such as customer and prospect data **(75%)**, connected product data **(88%)** and customer sentiment data **(66%).**

## The use and value of data

### Data and analytics are central to organizations' operations

Organizations currently use data and analytics for a number of reasons—notably to improve the customer experience. It is unsurprising given how the pandemic has changed the way customers and employees interact with businesses. Expectations are at all-time high and constantly evolving. It is essential for organizations to leverage data to find out more about employee and customer sentiments as a result. SDMs report a greater use of data and analytics compared to their IT counterparts, suggesting a closer connection or at least, recognition of data and how it relates to their role within the business.

Customer and prospect data (61%), as well as connected product data (55%) and customer sentiment data (53%) are the most widely used data sources across the globe—with the public sector leading the way in the use of all of these top three data sources (34%). However, it's less likely that organizations will be using all three simultaneously, with just over two in ten (22%) currently doing so.

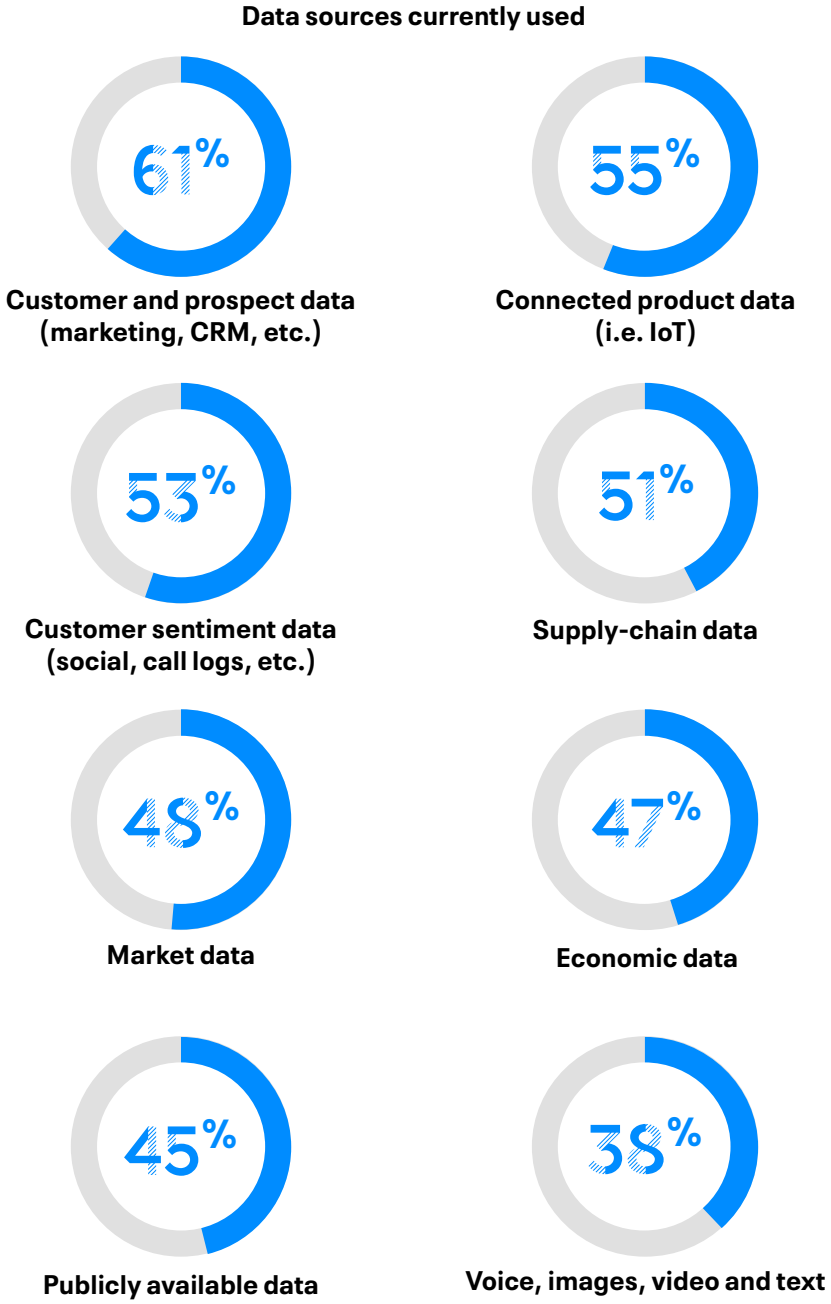



Figure one: What data sources are currently used by your organization? [2100], asked to ITDMs only, omitting some answer options.

**Digital Leaders** see the value in delivering real-time business insights, through technologies such as Artificial Intelligence

## Organizations are looking toward innovative tools and methods for their data needs

Internet of Things (IoT) and Edge device management is the most used analytical method globally in almost six in ten (59%) cases. This, alongside the use of Artificial Intelligence (AI) and machine learning algorithms suggests that organizations are keen to have visibility and control over their data needs. IoT and the system of interconnected devices which collect data from several environments is critical for organizations, particularly when considering the number of data sources currently engaged with.

IoT and AI learning algorithms allow organizations to make better, more informed business decisions through the ability to monitor and access data at speed, as well as improve time management capabilities. Having visibility over the masses of data organizations are expected to manage is important, and so it's no surprise that there's a high level of engagement across these specific areas.

Data science is another analytical tool and method used in more than half (55%) of surveyed organizations globally. Increasing business predictability is extremely valuable—particularly at a time where such unprecedented events have caused a significant level of uncertainty. Data science, IoT, AI, and machine learning can all work cohesively to carry out more precise analyses of data and enables organizations to make business decisions today which positively impact the future of their business.

On the contrary, search analytical tools and methods are the least engaged with (33%)—search consisting of services that provide basic analytical tools for search engine optimization. With this in mind, and the contrast against analytical tools and methods used the most, organizations are clearly steering away from the basics, and focusing on tools and methods that allow them to best optimize their business in the most efficient way. It can be said that search analytics aren't a fast-moving process and with nearly all (98%) surveyed organizations reporting that they need data in real-time, or at least near real-time, it's unsurprising that this analytical tool/method falls short.

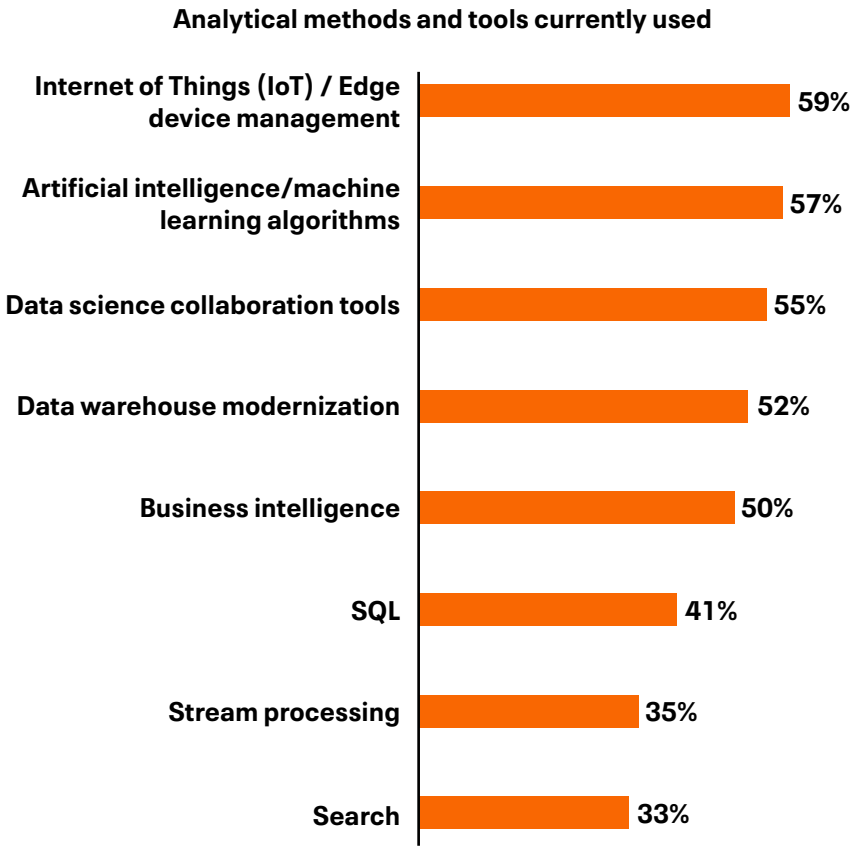



Figure two: What analytical methods and tools does your organization use? [2100], asked to ITDMs only, omitting some answer options.

**90%**

of SDMs and 87% of ITDMs report having secure, centralized governance and compliance over the entire lifecycle is valuable when handling and managing data

## Organizations would benefit from greater visibility over the entire data lifecycle process

Looking at the extent to which organizations engage with the data lifecycle process, it's evident that their processes are more likely to include data collection (64%), security and governance (62%), and data enrichment (61%). This makes sense when thinking about their likelihood to also be ahead when it comes to the use of data and analytics, as well as the analytical tools and methods used. While this is positive, and clearly shows that organizations are aware of several elements of the data lifecycle process, there are evident gaps too. Just 12% of surveyed ITDMs report their organization interacts with all stages of the lifecycle process, demonstrating a significant level of incomplete management of data lifecycles.

Without full control and visibility over every aspect of data, organizations will be lacking the capabilities required to drive innovation. Engaging and interacting with a wide range of data sources, and turning to innovative tools such as IoT, AI, and machine learning are positive steps, but not enough to ensure that all the necessary capabilities are in place to locate, access, and make the most of available data.

**Organizations' data lifecycle process**

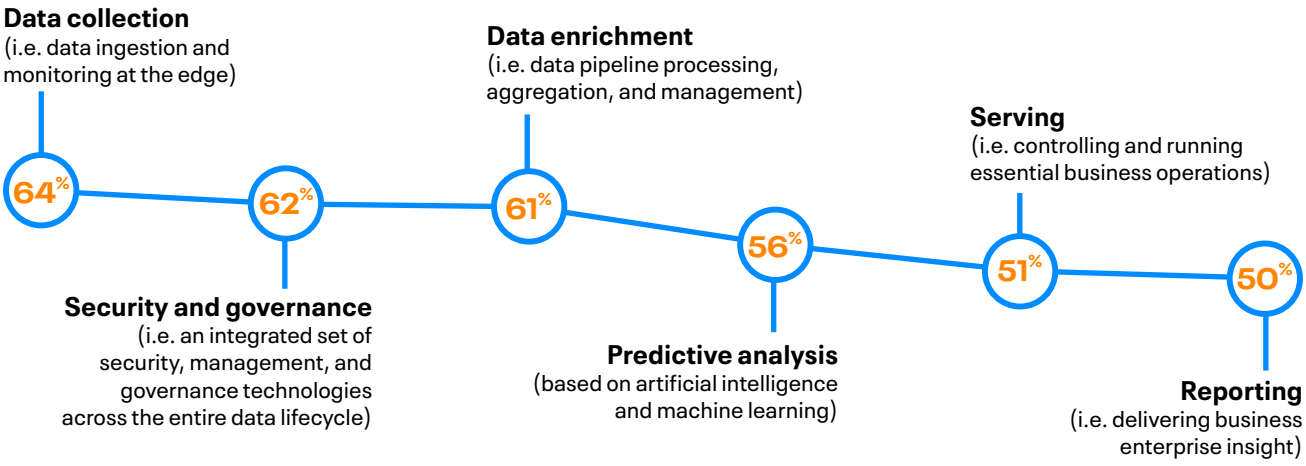



Figure three: What does your organization's data lifecycle process currently involve? [2100], asked to ITDMs only, omitting some answer options

- The **volume** of data is the amount expected to be managed
- The **variety** of data relates to structured and unstructured data
- The **veracity** of data relates to the trustworthiness, reliability and representativeness
- The **velocity** of data relates to the frequency of incoming data that requires processing
- The **value** of data relates to the ability to use data to inform business critical decisions

- **92%** of senior decision makers agree that it's important to optimize data management within organizations
- **90%** of senior decision makers report that their organization would experience more revenue-paying opportunities if it were able to manage its data more effectively
- **84%** of senior decision makers report that data management has been impacted as a result of the pandemic

## How organizations are coping with the 5Vs of data

Organizations would certainly benefit from help and guidance when it comes to the volume of data they're expected to manage, with three fifths (60%) facing issues in this area. The variety of data that organizations are faced with is also a challenge for many (60%), demonstrating the extent to which the systems and processes in place lack in effectiveness in terms of abilities to address this.

The veracity of data is also an issue for almost six in ten (58%) surveyed organizations. The trustworthiness, reliability and representativeness of data coming into question for these organizations is problematic, particularly given the effort and investments behind data and analytics to for example, improve the customer experience. The frequency of incoming data that is required to be processed, or the velocity, is another area where organizations clearly need guidance on how to better cope.

And from all of this, it's perhaps no surprise that the value of data and the ability to use data to inform business critical decisions also suffers as a result. Even more tellingly, almost all (95%) surveyed ITDMs report that their organizations either experience at least some issues or are unsure as to how their organization currently copes across all of the 5Vs of data (volume, variety, veracity, velocity, and value).

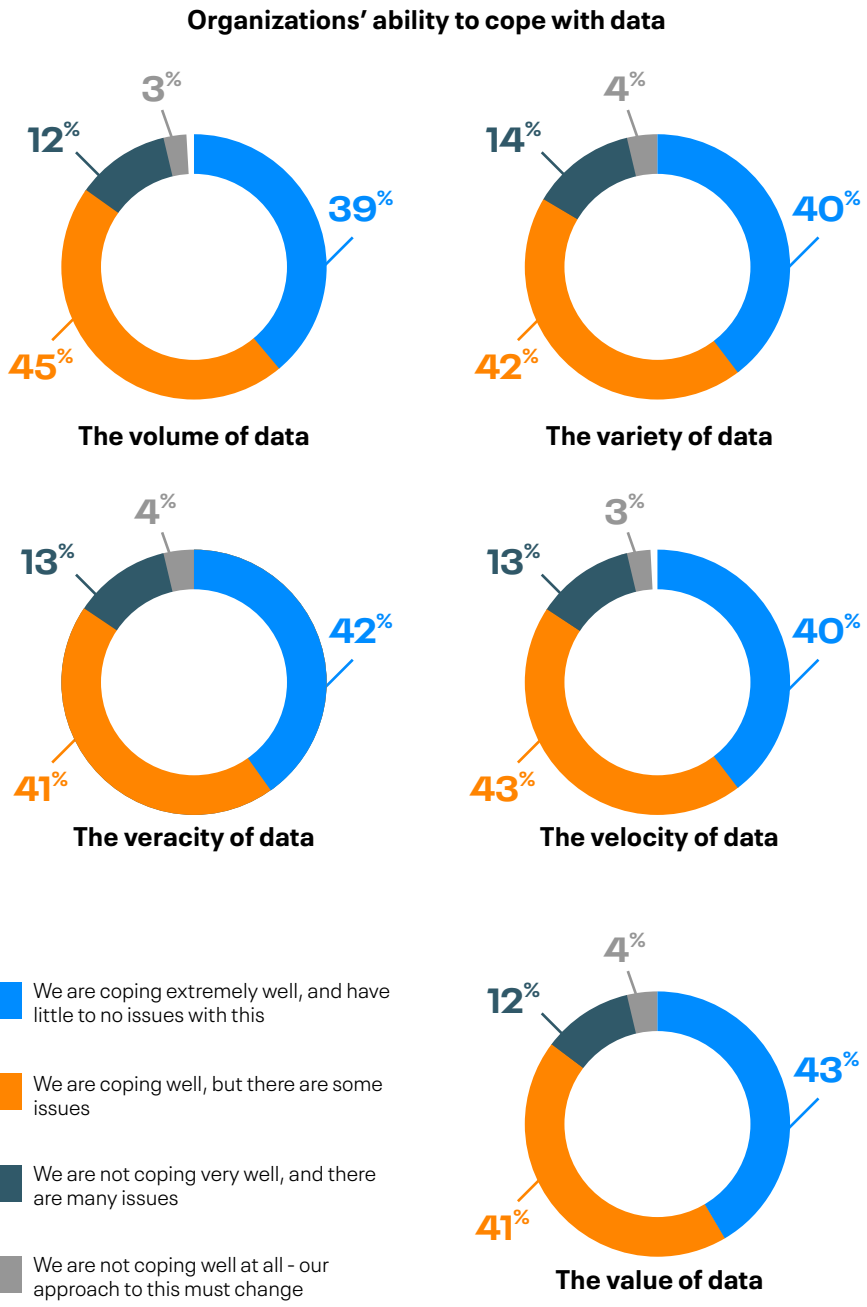



Figure four: How well do you believe your organization is currently coping in the following areas when it comes to data? [2100], asked to ITDMs only, omitting some answer options.

An enterprise data strategy is a holistic strategy across all lines-of-business across the globe within an organization to extract, consolidate, and manage the data generated across functions for use as an asset.

## Enterprise data strategies

### Organizations are still lacking in effective enterprise data strategies

Most currently have an enterprise data strategy in place, and those that don't currently, plan to in the future. This goes to show organizations' positive perceptions of such strategies and the importance of implementing them. Given the sheer volumes of data organizations are expected to manage, whilst also juggling the variety of data, the need to access and use data that is trustworthy and using such data to inform business critical decisions; it's so important to have road maps in place to help set priorities with existing data sources.

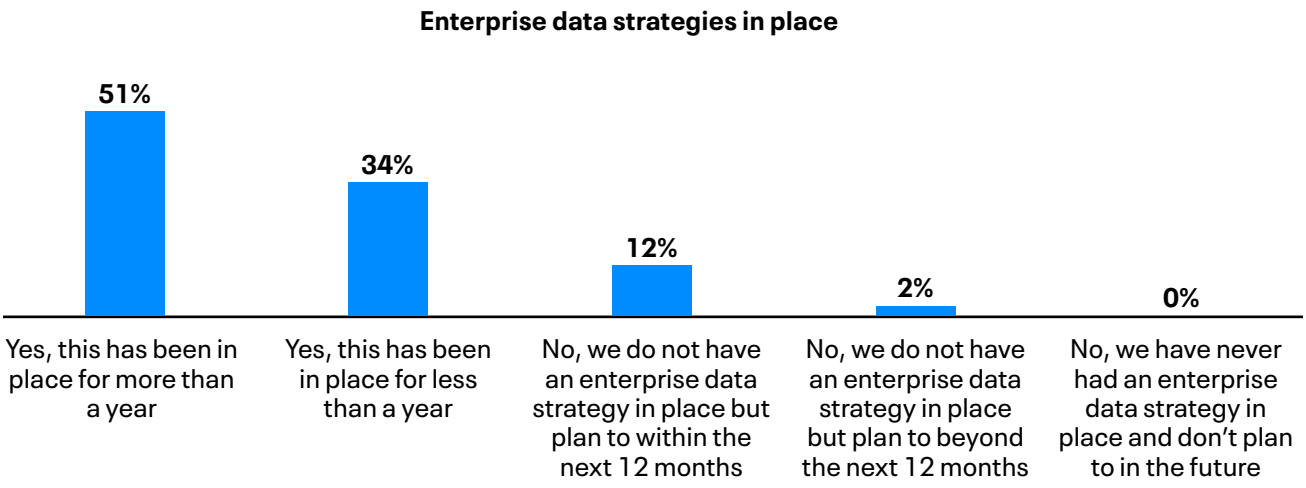



Figure five: Does your organization currently have an enterprise data strategy (or strategies) in place? [3150], combined scores for ITDMs and SDMs, omitting some answer options.

**Digital Leaders** are the most likely **(84%)** to have a very effective enterprise data strategy in place and all have reported utilizing an enterprise data strategy that is key to their business resiliency.

However, while most organizations have established an enterprise data strategy, there's still reports of a need to improve in the context of effectiveness—particularly for organizations with newer strategies in place. It's these organizations that need further guidance and advice when it comes to how to implement an enterprise data strategy most effectively. This is something that would certainly be valued considering this will be a fairly new investment for these organizations and making such investments worthwhile is something that will need to be put forward as a business case for most, if not all, following implementation.

This same trend is reported by both ITDMs and SDMs, demonstrating that this is an organizational demand, as opposed to solely a departmental one—even more reason to tackle this problem sooner rather than later.

The vast majority (97%) of IT decision makers and senior decision makers (96%) report at least one experienced or anticipated challenge when implementing an enterprise data strategy too—an area which if improved, could help organizations reap better rewards when it comes to the effectiveness of their current strategies and capabilities with their data.

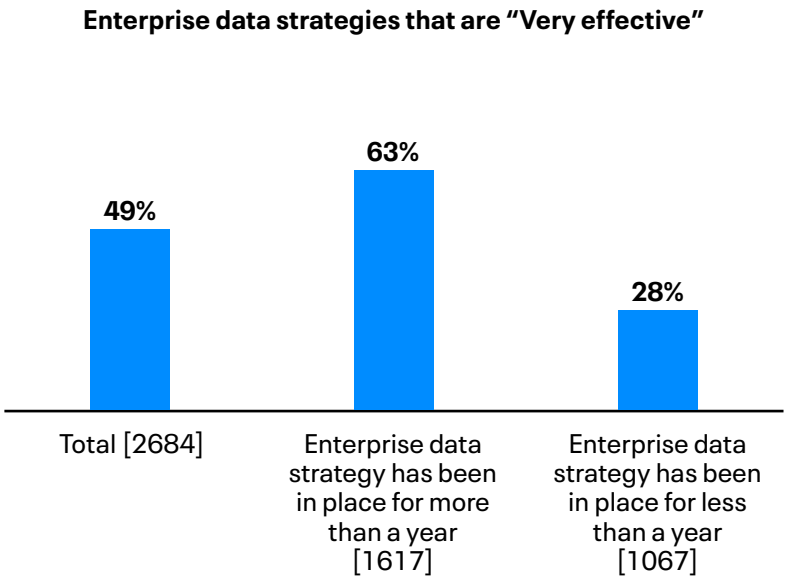



Figure six: To what extent do you believe your organization's current enterprise data strategy is effective? [Base sizes in chart], based on those with enterprise data strategies in place, combined scores for ITDMs and SDMs, split by presence of enterprise data strategies, showing data for enterprise data strategies that are "Very effective", omitting some answer options.

**Senior decision** makers are report an average of **$384,962 USD** lost annually as a result of missed opportunities involving data, with the Telecommunications industry reporting the largest average annual losses of **$6,617,348 USD**.

## Organizations with mature enterprise data strategies report greater positive impacts

Despite almost all either having an enterprise data strategy in place, or thinking about doing so in the future, it's those with more mature strategies that are seeing better progress across a range of different areas.

Organizations with enterprise data strategies that have been in place for longer than a year report higher profit growth than those with newer strategies, and those who plan to implement one in the next 12 months. This goes to show that implementing enterprise data strategies, and implementing them well, can allow organizations to see profitable benefits to the business.

There's a continual growing emphasis on a need to manage big data characterized by volume, veracity, velocity, variety, and value as previously noted. And with big data giving organizations the ability to provide better insights into, for example, what their customers want now and in the future means that enforcing an enterprise data strategy is an important responsibility for organizations.

It's evident that organizations with less mature enterprise data strategies are falling behind. Perhaps with such newer strategies, organizations are not maximizing their data awareness in terms of establishing a standardized reporting system that is not quite yet integrated across the business. It's important for organizations to be aware in terms of their level of data maturity, and where exactly their missed opportunities currently lie.

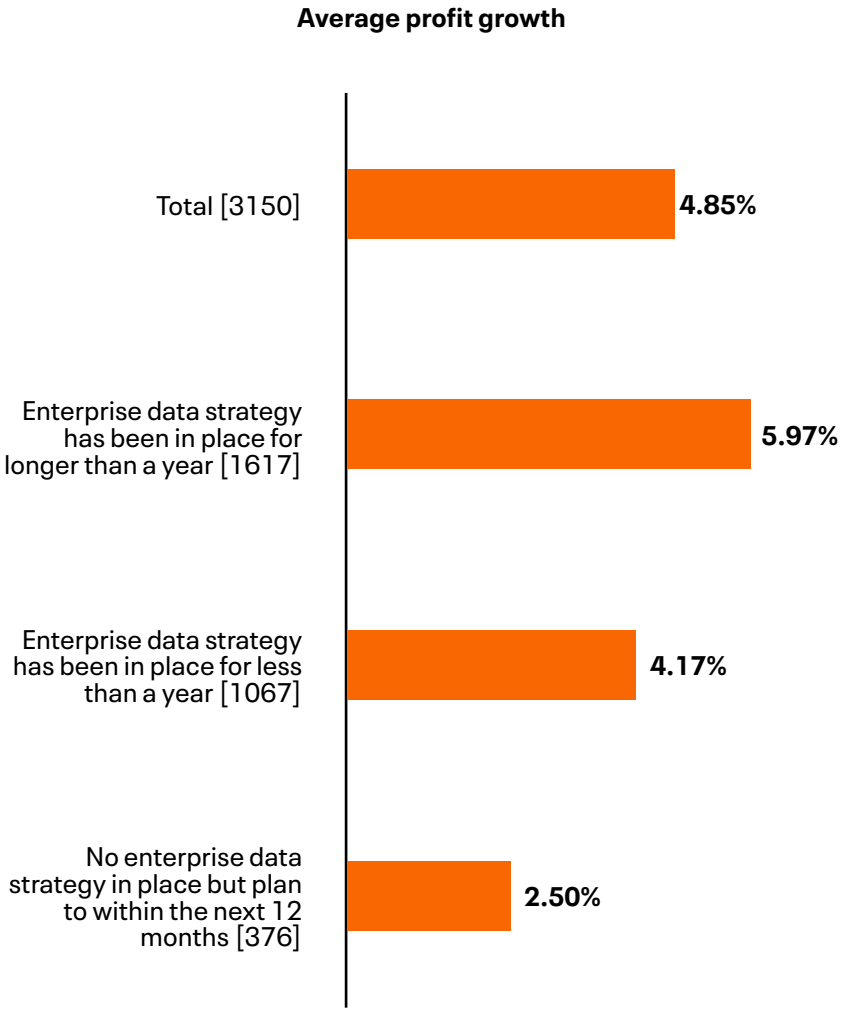



Figure seven: As a percentage of global annual revenue, what was your organization's most recent profit growth? [Base sizes in chart], combined scores for ITDMs and SDMs, split by presence of an enterprise data strategy, omitting some answer options.

Furthermore, SDMs in organizations with mature and established enterprise data strategies are more likely to report that the way in which data is handled and managed has positively impacted their organizations' performance. It goes without saying that the ability for enterprise data strategies to extract, consolidate and manage data generated across functions, can certainly help to optimize operations and performance abilities.

Perhaps it's too soon for those with newer and less mature strategies to see such positive impacts. Or it could well be that they know less about where to start and how to best implement them in order to gain performance success. Identifying gaps and data problems is a good place to start in terms of gaining an understanding of where organizations currently stand, in order to then optimize data capabilities.

**"The way in which data is handled and managed within my organization has positively impacted its performance"**

**91%**

of all surveyed SDMs agree

[1050]

**96%**

of SDMs whose organizations have had an enterprise data strategy in place for more than a year

[540]

**89%**

of SDMs whose organizations have had an enterprise data strategy in place for less than a year

[383]

**80%**

of SDMs whose organizations don't have an enterprise data strategy in place but plan to within the next 12 months

[104]

Figure eight: To what extent do you agree or disagree with the following statements? "The way in which data is handled and managed within my organization has positively impacted its performance" [Base sizes in chart], split by approach to enterprise data strategies, omitting some answer options.

**91%**

of IT decision makers whose organizations have an enterprise data strategy in place, agree that their current strategy is key to their business resiliency

**91%**

of IT decision makers whose organizations have an enterprise data strategy in place, also agree that having an enterprise data strategy in place can help their organization adopt a hybrid workforce more effectively

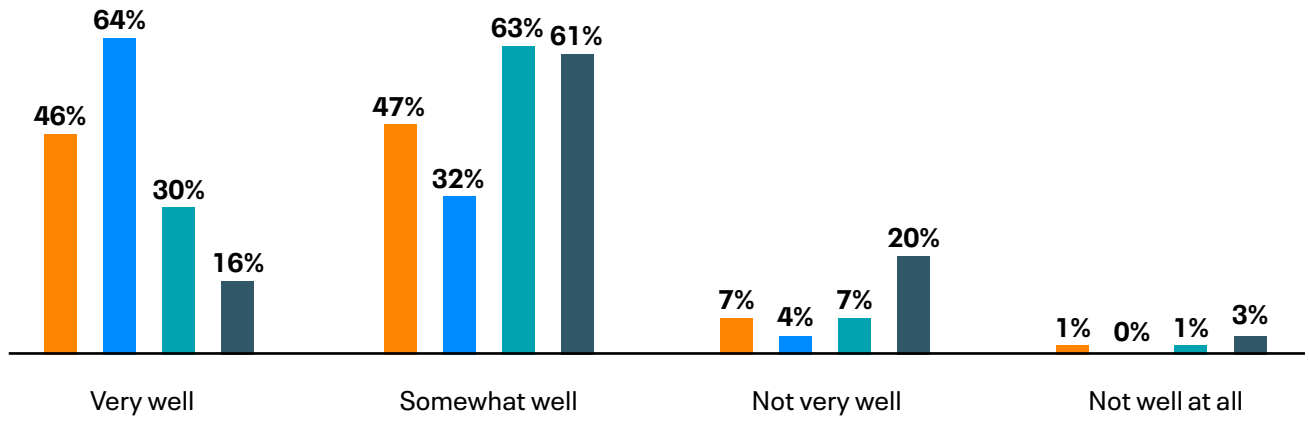
## Those with mature enterprise data strategies are more resilient following the pandemic

Senior decision makers with more mature enterprise data strategies within their organization report a much stronger level of resiliency in terms of how they have coped since the start of the pandemic. More than six in ten (64%) with mature enterprise data strategies have coped very well, in contrast to less than a third (30%) with strategies in place for less than a year and the minority (16%) with no enterprise data strategy in place yet.

With enterprise data strategies being renowned for their ability to mitigate risks with data, it makes sense that those with more established strategies are more likely to have responded better. Well established and defined enterprise data strategies can ensure that the likelihood of risks occurring are minimized, and further, the severity of events negatively impacting data is also mitigated.

Clearly adopting enterprise data strategies is something that's greatly recognized in terms of the value they can bring to organizations. However, the way in which they're utilized is also notably critical in terms of the positive outcomes that organizations can experience. There's plenty of opportunity for organizations to improve in order to best support their data strategy needs. Most (90%) IT decision makers believe that their organizations' technology and infrastructure could be improved in order to meet their existing and/or future data strategy needs.

**How organizations have coped since the start of the pandemic**




**Total [1050]**

**Had an enterprise data stategy in place for more than a year [540]**

**Had an enterprise data stategy in place for less than a year [383]**

**Does not have an enterprise data stategy in place but plans to within the next 12 months [104]**

Figure nine: How well do you believe your organization has coped since the start of the pandemic? [Base sizes in chart], asked to SDMs only, split by presence of an enterprise data strategy, omitting some answer options, and omitting some answer options from the split due to low base sizes.

## The future is hybrid

**There's an anticipated shift towards a hybrid multi-cloud in the next 18 months**

Today's world is hybrid—the way in which data, infrastructure, and work is managed ranges across a multitude of ways and there's no longer one singular approach across these areas. Leading businesses are certainly driving and embracing these changes; changes which have been further exacerbated by the pandemic. Continuing to innovate and accelerate growth are important factors in which leading organizations will be considering, if not already implementing, while keeping in mind the need to reduce both the potential risks and costs involved.

These intentions are further supported by the proportion of surveyed organizations that report an anticipated shift toward hybrid multi-cloud in the near future. In terms of where organizations currently stand with their data and performance analytics, two fifths (40%) are currently housing this hybrid but mostly on-premises. This trend is expected to change, with organizations being more likely to shift their data and performance analytics toward hybrid multi-cloud (36%).

With the hybrid data cloud, organizations can access and analyse data fast and with ease in order to be able to make smarter, data-driven decisions and more effectively meet the demands of today's hyper-competitive business climate. It goes without saying that the shift toward hybrid multi-cloud will give organizations opportunities in terms of best serving their customers, and their business strategy needs.

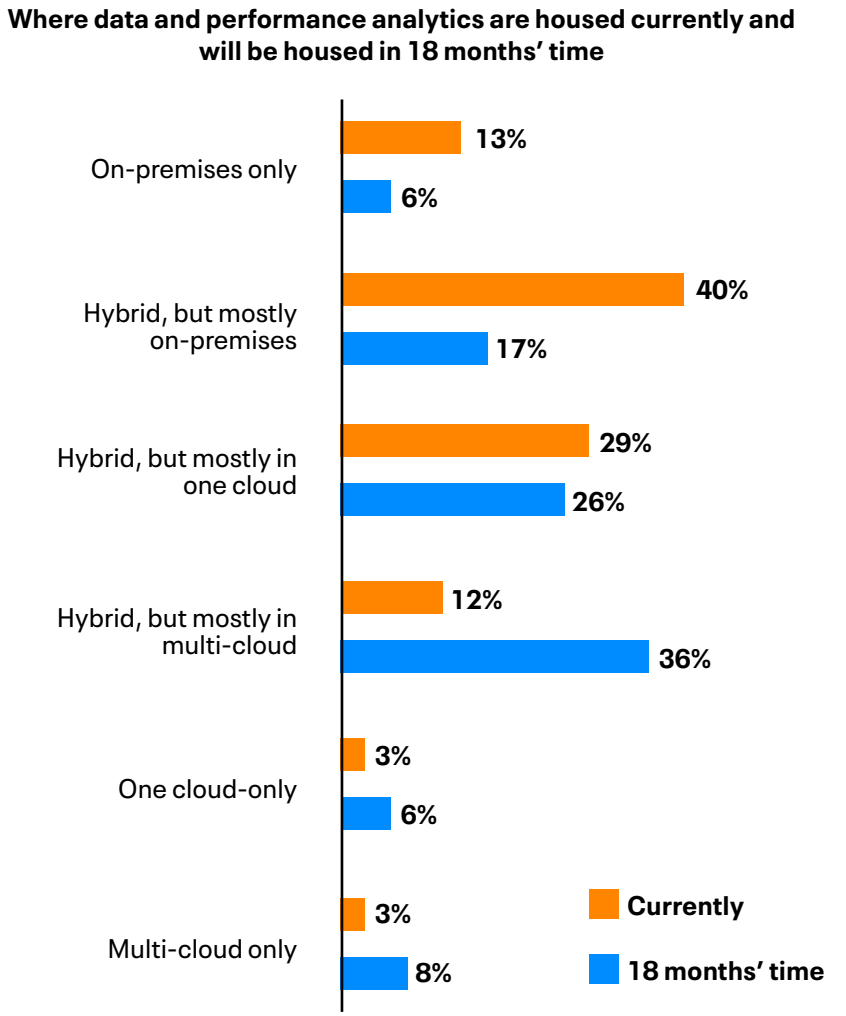



Figure ten: Where does your organization currently house its data and performance analytics, and where do you anticipate this will be housed in 18 months' time? [2100], asked to ITDMs only, omitting some answer options.

It would be fair to conclude that whilst enhancing performance capabilities will be a reason to shift towards a hybrid multi-cloud, the new world of hybrid working will have also contributed to this. Being able to access and manage data from multiple sources and locations is something that's important now more than ever and would give organizations the control and flexibility of utilizing a hybrid workforce whilst still being able to run business as usual.

The number of those remote working has more than doubled since before the pandemic, and organizations anticipate having a hybrid workforce in place 12 months from now. What is particularly telling is the fact that it's clear that a hybrid workforce is here to stay and will not be returning to pre-pandemic levels in the future.

**Proportion of organizations' staff working remotely**

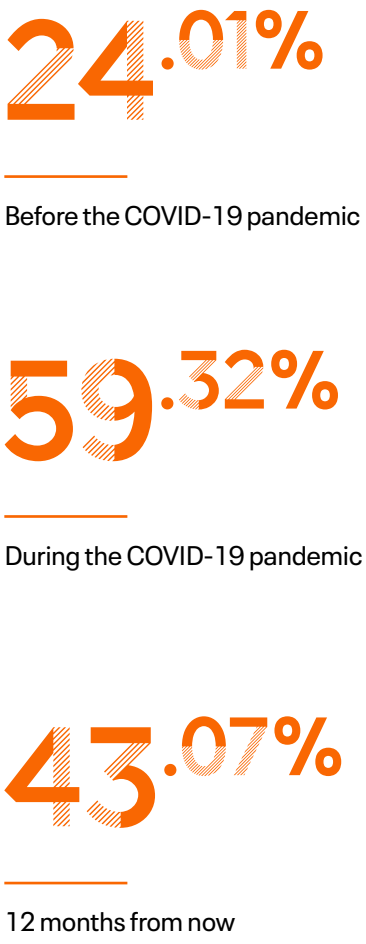



Figure eleven: Approximately what percentage of your organization's staff worked remotely before the global COVID-19 pandemic, what percentage did at the peak of COVID-19, and what percentage do you think will 12 months from now? [3150], combined scores for ITDMs and SDMs, showing average percentages, omitting some answer options.

**92%**

of senior decision makers believe that making sense of all data across hybrid, multi-cloud and on-premises architectures is or would be valuable.

**90%**

of IT decision makers report that managing data with at least some cloud capacity is a priority for their organization.

**89%**

of IT decision makers agree that organizations that implement a hybrid architecture as part of its data strategy will gain a competitive advantage.

## Investments are being made to support hybrid working and infrastructure

The importance of supporting a hybrid environment, whether that's remote/office working or hybrid multi-cloud architecture, is further reflected by organizations' investments in such areas. Given that remote working isn't expected to return to pre-pandemic levels anytime soon (if at all), it makes sense that spend allocated to support changing work environments has for the most part either increased or remained the same.

ITDMs report that their organizations have also been more likely to increase spend since the start of the pandemic, specifically in terms of supporting digital transformation initiatives such as hybrid multi-cloud architecture, and data and analytics solutions. As we have already seen, there's a noticeable planned shift to a hybrid multi-cloud in 18 months' time and so the majority (85%) either increasing or keeping spend the same is an area that is clearly prioritized in anticipation. Furthermore, organizations are dedicating time and resource to cloud migration and strategy (42%) as well as data management (38%)—further preparation in terms of a migration strategy to hybrid multi-cloud.

**Supporting changing work environments (e.g. hybrid working) to support workforce**

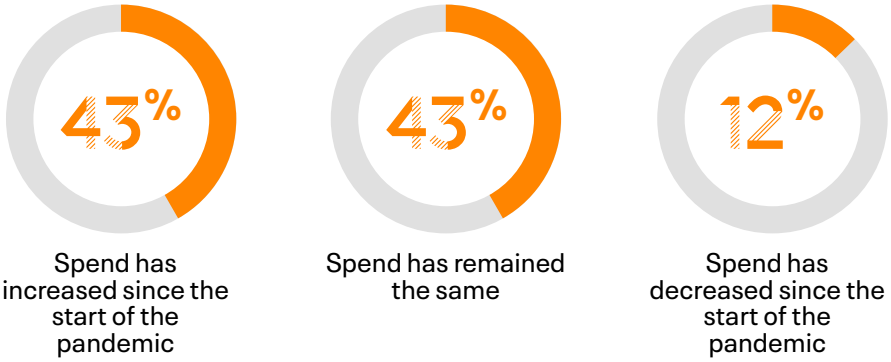



Figure twelve: How, if at all, have priorities for IT spend changed across the following areas within your organization since the pandemic? "Supporting changing work environments (e.g., hybrid working) to support workforce", [2100], asked to ITDMs, omitting some answer options.

**Supporting digital transformation initiatives (i.e. hybrid multi-cloud architecture, and data and analytics solutions)**

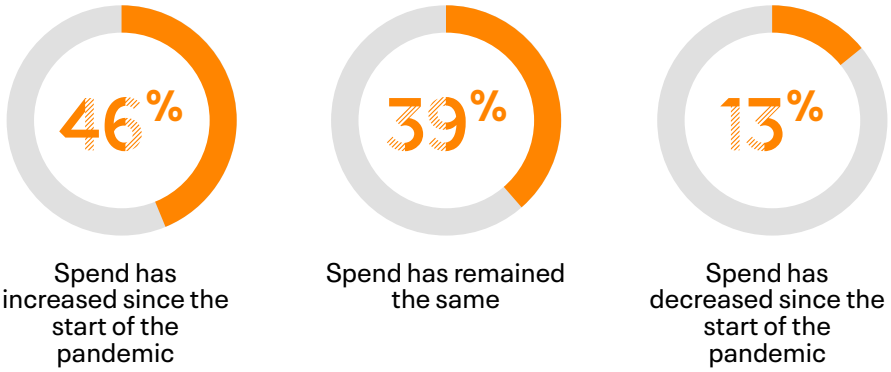



Figure thirteen: How, if at all, have priorities for IT spend changed across the following areas within your organization since the pandemic? "Supporting digital transformation initiatives (i.e., hybrid 43multi-cloud architecture, and data and analytics solutions), [2100], asked to ITDMs, omitting some answer options.

An Enterprise Data Cloud unlocks the power of organizations' data to serve customers better, operate with greater efficiency, and strengthen security to protect businesses. It is optimized for hybrid and multi-cloud environments, delivering the same data management capabilities across bare metal, private, and public clouds.

## Where do organizations currently stand in integrating Enterprise Data Cloud management capabilities?

Given that organizations are clearly thinking about ways to become more hybrid, it's positive that some acknowledge and have integrated capabilities that support an enterprise data cloud.

However, there's plenty of room for improvement, with organizations unlikely to have completely achieved a number of different capabilities. Almost seven in ten (67%) surveyed ITDMs report that their organizations have not completely achieved leveraging solutions optimized for speed and access across on-premise and public/private cloud infrastructure. In the context of business capabilities relating to this, three fifths (60%) of SDMs report that their organization has not completely achieved maintaining performance measurement standards for applying data services to their operations, and at speed.

These gaps could prove problematic for organizations, particularly when thinking about plans to migrate further toward the hybrid multi-cloud. In order to keep business as usual during this shift, and fast, organizations must put solutions in place that can better do this. This is important when considering that the majority (63%) of organizations need data fast in order to make business-critical decisions.

Other areas such as having access to centralized data and analytics for business divisions and departments across organizations is also lacking, organizations being more likely to have not completely achieved this. Falling short here will surely be causing problems, whether organizations are aware of it or not. Inabilities to centralize data and analytics mean that organizations will be unable to fully resolve the most demanding business use cases and can even prove problematic from a security and governance standpoint.

Furthermore, similar proportions of ITDMs (63%) and SDMs (61%) are from organizations that have not completely achieved having the necessary enterprise-grade standards in place for security, or even have peace of mind when it comes to security, back-up and disaster recovery. Having an enterprise data cloud in place that best supports these areas would make the world of difference to organizations and allow a more streamlined and reassured approach in place that can help to address these challenges.

| ITDMs [2100] | Completely achieved | Not completely achieved | SDMs [1050] | Completely achieved | Not completely achieved |
|---|---|---|---|---|---|
| Leveraging solutions optimized for speed and access across on-premise and public/private cloud infrastructure | 33% | 67% | We maintain a performance measurement standard for applying data services to our operations, at speed | 40% | 60% |
| All relevant business groups have access to centralized analytics tools and support ideally suited for the needs of their own analysis and reporting | 34% | 66% | Our business division/department members have access to data and are able to run data analytics and generate insights reports themselves | 40% | 59% |
| We routinely and formally evaluate and optimize our process to refine new business models that emerge from data and analytics | 34% | 66% | Our business has realized at least one new revenue stream or business model from data and analytics | 38% | 61% |
| Having big data infrastructure that is centralized and tightly integrated across the organization, allowing business divisions/departments to align priorities with the organization's data roadmap | 35% | 65% | We regularly align our business division/department priorities with the organization's data roadmap | 42% | 57% |
| Having the necessary enterprise-grade standards in place for security, back-up, and disaster recovery across all environments | 37% | 63% | Our business division/department has peace of mind when it comes to security, back-up and disaster recovery if and when is needed | 39% | 61% |

Figure fourteen: To what extent has your organization achieved the following capabilities? [Base size in table], "Not completely achieved" is based on the sum of "Mostly achieved" and "Somewhat achieved", omitting some answer options.

**Digital Leaders** are the most likely **(96%)** to currently have DEI (Diversity, Equity and Inclusion) initiatives in place.

## Beyond business initiatives—driving workforce diversity

### Without data, the success of organizations and initiatives are limited

With most IT decision makers (96%) and senior decision makers (95%) believing that data and analytics is important to ensuring successful and effective DEI Diversity, Equity, and Inclusion (DEI) initiatives it's clear that there's a well-known and defined connection in terms of how data can best serve business outcomes.

The importance and value behind DEI initiatives is supported by the extent to which surveyed organizations have already adopted them. Most (89%) report that their organizations have DEI initiatives in place, with around half of organizations having had these in place for more than a year. Positively, a tenth of the remaining surveyed respondents report that their organization will implement this in the future—with just 1% having no plans to at all.

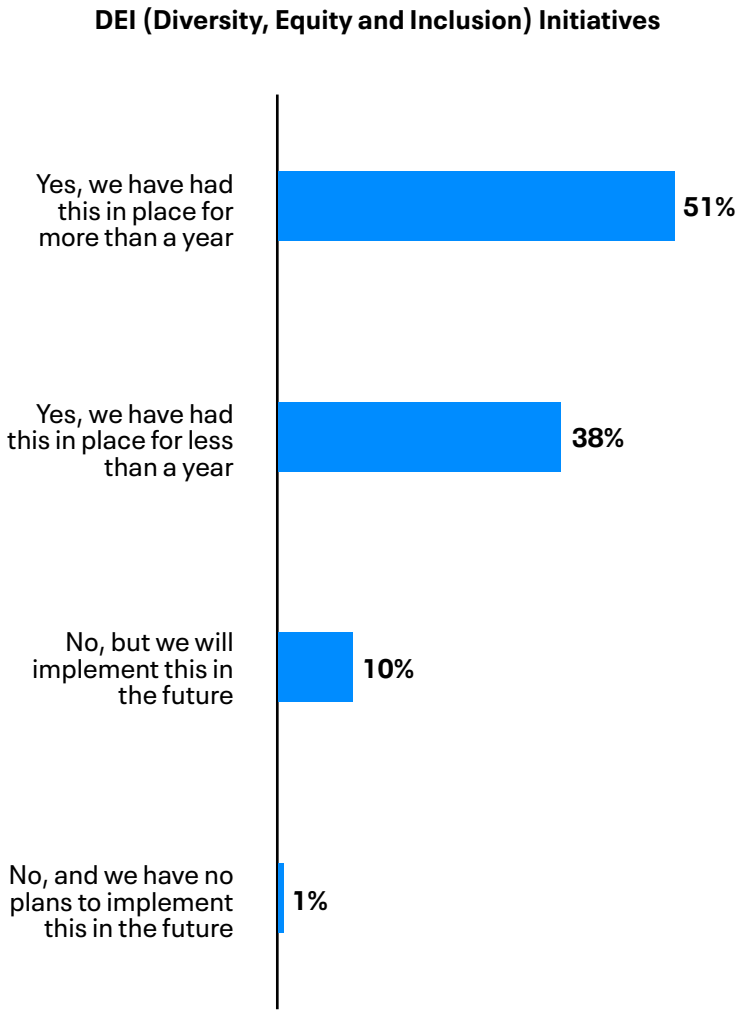



Figure fifteen: Does your organization currently have any DEI (Diversity, Equity and Inclusion) initiatives in place? [3150], combined scores for ITDMs and SDMs, omitting some answer options.

**95%**

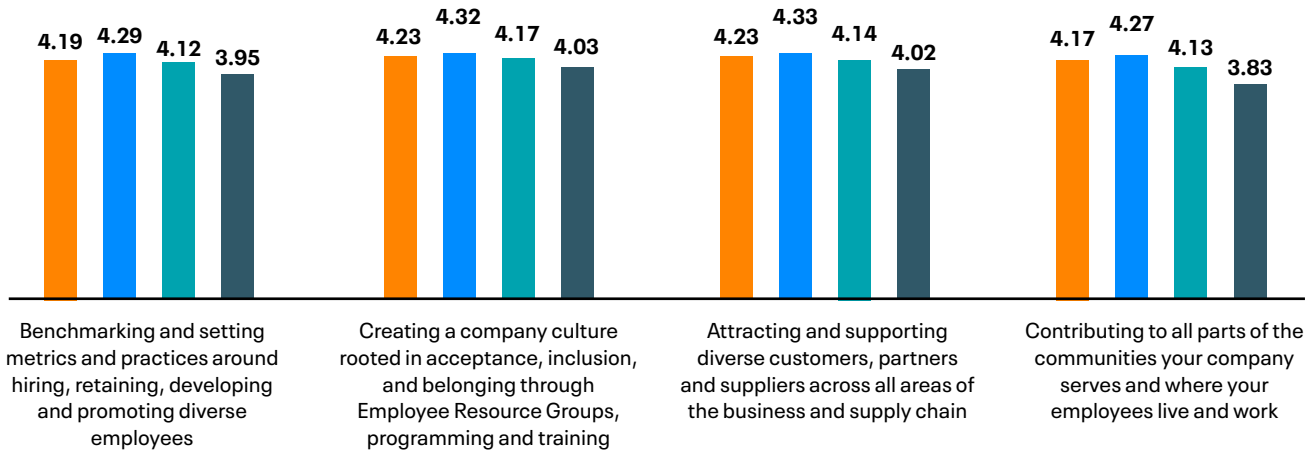
of both ITDMs and SDMs agree that DEI initiatives contribute to an organization's success.

Those with enterprise data strategies in place tend to be doing more with workforce diversity than those without. And it's those organizations with more mature enterprise strategies that are even more likely to be ahead in terms of workforce diversity as well. So clearly having an enterprise data strategy in place is a good start to begin with, in the context of workforce diversity. On the other hand, having a well-established strategy is essential in order to get the best out of data and workforce diversity practices.

Having effective enterprise data strategies in this context will enable organizations to better benchmark and set metrics and practices around hiring, retaining, developing and promoting diverse employees—data which many business divisions such as HR and marketing would benefit from. With greater visibility over diversity within organizations, comes better decision-making, greater innovation and higher engagement in the workplace.

Practices such as these not only bring benefits internally, but also have the ability to improve organizations in terms of reputation and attracting top talent to aid fulfillment of wider business strategies. It goes without saying that enterprise data strategies can streamline these practices and ensure that they are implemented consistency across the business.

**Current workforce diversity practices**




**Total [2801]**

**Had an enterprise data stategy in place for more than a year [1532]**

**Had an enterprise data stategy in place for less than a year [965]**

**Does not have an enterprise data stategy in place but plans to within the next 12 months [249]**

Figure sixteen: On a scale of 1-5, where 1 is not at all and 5 is extensively, to what extent is your organization currently doing the following when it comes to workforce diversity? [Base size in chart], combined scores for ITDMs and SDMs, based on those with DEI initiatives in place, split by presence of an enterprise data strategy, showing average scores where scoring was based on a score of 1 to 5 (1 being not at all and 5 being extensively), omitting some answer options from the split due to low base sizes.

## Conclusion

Surveyed organizations report a high level of engagement with data and analytics within their organizations which is promising, but there are improvements that could be made. Receiving guidance and support in terms of being able to most effectively use and extract value from data would bring considerable benefits.

Most also have enterprise data strategies in place or plan to in the near future. However, those with newer strategies (or none at all) appear to lag behind across a number of key areas. Implementing enterprise data strategies that are effective and well established will enable organizations to better handle their data, have greater visibility, and use data to gain traction in the market.

In terms of getting ahead in a competitive context, and to better support the growing requirements for hybrid working, there's a noticeable anticipated shift towards hybrid multi-cloud in the next 18 months—with figures more than doubling compared to recent use. Hybrid is the future, and it's so important for organizations to consider how to best make this change, while being able to continue business as usual, and continue to use data and analytics to drive innovation.

Furthermore, data and analytics are not solely utilized for the purposes of gaining a competitive advantage and best supporting infrastructure. Most report using digital transformation to engage with their business strategy, recognize the important link between DEI initiatives and organizations' success, and how data and analytics contribute to the success of such initiatives themselves.

Data is everywhere, and the sooner organizations recognize how to best explore its potential, the better.

## The future of the digital world

The results of this research highlight an urgent need for organizations to adopt an Enterprise Data Cloud (EDC) approach, one that allows them to harness the power of data for faster speed to insights, regardless of where the data resides. Ultimately, this will increase the organization's ability to distil critical business insights while creating more room for innovation and cross-functional collaboration.

Because at Cloudera, we believe that data can make what is impossible today, possible tomorrow. Hybrid cloud matters. Multi-cloud matters. Integration between lifecycle analytic functions matters. Consistent security and governance matters.

With the ability to derive real-time insights from data that are compelling enough to provoke action, we believe that businesses can achieve greater agility and resilience – both critical capabilities in today's ever-evolving digital world.

**About Cloudera**
At Cloudera, we believe that data can make what is impossible today, possible tomorrow. We empower people to transform complex data into clear and actionable insights. Cloudera delivers an enterprise data cloud for any data, anywhere, from the Edge to AI. Powered by the relentless innovation of the open source community, Cloudera advances digital transformation for the world's largest enterprises.

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## Methodology

These quantitative studies surveyed 2,100 IT decision makers and 1,050 senior decision makers between July and September 2021.

**IT decision makers were based in the following countries and regions:**

**US (400)**

**EMEA (1000)**—UK (200), France (200), Germany (200), Italy (100), Spain (100), South Africa (100), UAE (100)

**APAC (350)**—Singapore (100), Australia (100), South Korea (100), Indonesia (100), India (100), China (100) Japan (100)

**Senior decision makers were based in the following countries and regions:**

**US (200)**

**EMEA (500)**—UK (100), France (100), Germany (100), Italy (50), Spain (50), South Africa (50), UAE (50)

**APAC (350)**—Singapore (50), Australia (50), South Korea (50), Indonesia (50), India (50), China (50) Japan (50)

Respondents were from organizations with 1,000 or more employees across both public and private sectors.

All interviews were conducted using a rigorous multi-level screening process to ensure that only suitable candidates were given the opportunity to participate.