

THE CLOUD CLUB

# ROADMAP TO A CLOUD FUTURE

Industry report

IN PARTNERSHIP WITH AWS AND CLUDERA

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# Contributors

The contributors to this report are senior executives of large-scale public and private organisations across a number of functional areas including Data, Cloud, Architecture and Technology. Some were happy to be named or quoted. Others preferred to contribute anonymously. We thank all of them for their input.

Alongside the creation of this report, we also held a private roundtable with our partners, Cloudera, to explore the issues raised by the contributors and gain consensus on the outcomes.

# Synopsis

Can cloud enable a better approach to data?

"By the end of 2021, most enterprises will put a mechanism in place to accelerate their shift to cloud-centric digital infrastructure and services twice as fast as before the pandemic"

Rick Villars, Group VP, Research at IDC

## Hybrid Shift

Currently, 94% of enterprises use cloud services and the adoption rate shows no sign of slowing down. By next year Gartner predicts more than \$1.3 trillion in IT spending will be cloud-related. The Cloud enables enterprises to set up projects faster, without the constraints of access and hardware delays, or the limitations of legacy data centres.

As we shift to more hybrid ways of working, there will be a consistently growing demand placed on resource and infrastructure requirements. The Cloud allowed us to respond to the crisis and it's clear that it's here to stay - but to cope with tomorrow's demands, it's going to have to evolve.

The Cloud enables enterprises to set up projects faster, without the constraints of access and hardware delays, or the limitations of legacy data centres. It also allows them to innovate - letting them construct, trial, and tweak or completely restructure their approach, so they can drive change at a rapid pace.

"By the end of 2021, based on lessons learned in the pandemic, most enterprises will put a mechanism in place to accelerate their shift to cloud twice as fast as before the pandemic. Spending on cloud services will surpass \$1 trillion in 2024"

IDC, 2020

# #01 The Shift

Can cloud enable a better approach to data?

“Moving to the cloud will unravel a wealth of agility and infrastructure. Most importantly, it will give firms greater agility when it comes to their data, which will lead to more efficiency”

## Upside, Downside

Numerous organisations are discovering that rather than a fully cloud based solution, they require a hybrid fix, as some key processes simply must stay in on-site data centres. Currently, most firms are, on average, leveraging 5 different cloud platforms.

This hybrid approach creates silos of data spread across various systems, including legacy, public and private cloud, which contributes to disjointed data sets and decreased accuracy of insights. Public cloud models are also vulnerable and can create serious security weaknesses.

Data will be crucial to digital transformation and is vital to gaining the customer insight needed to differentiate and offer better value. But there's never been more data to manage, as well as a proliferation of fresh data types to understand, sort and analyse - from images, to video, and smart objects. Plenty of organisations are still wrestling with their data, attempting to better control and organise it.

This task is made even more difficult if data is in multiple cloud environments, as well as physical legacy sites, while increasing regulations and rising cloud costs further impact business's ability to cope. Everyone wants to get the most out of their data, so how can enterprises do more with the data they've already gathered?

# #01 The Shift

Can cloud enable a better approach to data?

“The next challenge is getting everything into the cloud, so firms can get a 360 view of all the organisation data”

What's the solution?

To get better value from their data and combat the aforementioned issues associated with silos, firms need solutions that can support the advanced tech they'll have to incorporate, if they want to improve their insights.

Enterprise Data Clouds (EDC) help firms get more out of their data - without the need for extensive investment in research and development - allowing them to perform analytics in any cloud model, with identical data management capabilities. This gives businesses far greater control over where they store their data. They also offer reliable data security, and consistent governance, enabling firms to stay compliant and safeguard privacy, via a unified, agile approach that can run across multiple environments.

When it comes to their Cloud solution, companies must consider what they will need tomorrow, as well as what they require now.

Putting a flexible cloud around data centres, with workloads and analytics placed around that virtual infrastructure, will give organisations the ability to prioritise, based on the business needs. Alongside this, they'll need regular reporting and access to accurate insights, so that at every stage of the journey, they have full visibility and a holistic view of all the organisation's data.

Getting solutions like this in place today will prepare organisations to compete tomorrow, allowing them to respond rapidly and deploy solutions where they're most needed - whether they want to cut costs, perform better, or gain greater resiliency.

CIOs expect to see the proportion of total workload done on-premise drop from 59% in 2019 to 38% in 2021, a reduction of 41%.<sup>6</sup> Moreover, they expected public cloud's proportion of total workload to grow from 23% to 35% in the same timeframe.

Deloitte, 2021



# #02 Future Ready

Is the current cloud infrastructure ready for the future?

“It’s important to note that the usage and adoption of cloud that served enterprises well during the ongoing crisis will not look the same in the coming years”

[Gartner, 2021]

## Cloud Crisis

The Cloud has been a vital part of the response to the present crisis, and for the most part it’s performed well, scaling quickly as enormous sections of businesses were suddenly shifted over to digital, cloud-based infrastructure.

Despite this, the future demands that will be placed on infrastructure mean that in the coming years, we will not be using the same cloud as we are today. The way that firms use the Cloud will change, as data becomes a more central driver of the organisation. The companies that can extract the most value from their data will be the ones who wield the best insights - and the Cloud will have to adapt to meet these requirements.

Adopting a multi-cloud strategy won’t be enough. A future proof Cloud must be able to incorporate distributed solutions like Edge, so firms can improve their response times and save bandwidth. It must also be synergistic, so data warehouses and data science tools can mesh. And as data privacy will be a major concern, a coherent, secure approach that doesn’t limit productivity or push up costs is vital.

EDCs can meet these needs, offering access to multiple environments from one central point and unifying disparate data sets, whether they’re in data centres, in the public cloud, or at the Edge. If firms want to apply complex machine learning algorithms or run analytics on all their data sets, they’ll require flexible solutions like this, so they can meet shifting demands and gain more streamlined access.



# #02 Future Ready

Is the current cloud infrastructure ready for the future?

“Integration is massive, so you have a coherent business solution, but it can be a huge technical risk. File transfer, utilities, managing events and APIs needs to be spot on”

## Future Proofing the Infrastructure

For companies looking to boost their efficiency and integration, EDCs are an ideal solution, as they provide equal data management abilities across on-site legacy, private, and public clouds. They ensure stringent data security, governance, and control across multiple workplace settings, allowing numerous analytic functions to work simultaneously on data, eradicating expensive, inefficient silos.

As EDCs are built on open-source frameworks, with open computing and storage, firms are not locked to vendors, and have complete transparency, so innovative features can be developed faster.

All this flexibility offers greater freedom and customization for organisations, which is important, as improving processes is crucial to handling information better. Having the infrastructure to design data processes with the business's goals in mind, and being able to run these securely, will help firms represent and interpret their data much better.

According to a March 2020 report, more than 90% of global enterprises will rely on hybrid cloud by 2022. 97% of IT managers planned to distribute workloads across two or more clouds,

[Deloitte, 2021]

# #03 Data as Driver

Is data the primary driver of greater cloud adoption?

“Before you can use it, you have to get the data in the right format first – so processes have to be designed for valuable outputs”

## Levelling Up

Automating how they analyse data will let enterprises sort, handle, and understand large data sets more precisely, leading to more in-depth, accurate insights. To fully incorporate tools such as artificial intelligence and machine learning, having an agile cloud infrastructure in place will be a strategic necessity.

Firms that have achieved this are now using data to make better decisions and are speeding up the process of bringing products to market, as Research and Development teams can access all the data the company has. Companies such as GlaxoSmithKline have successfully used EDC solutions to combat data silos and fast forward their data assembly and analysis process. Doing this allowed them to unlock new insights across multiple R&D processes, helping them to achieve greater efficiency, as well as decrease both costs and time-to-market.

Employing the right cloud solution will let organisations advance their analytics process, without having to navigate the obstacles associated with traditional on-site systems. Bringing artificial intelligence and machine learning to production must be done at scale - businesses often want to implement these technologies instantly, but they need to prepare the data to make these tools effective.

# #03 Data as Driver

Is data the primary driver of greater cloud adoption?

“Everyone’s trying to add in those things that will provide greater agility”

How do we do Data better?

According to Gartner, poor data quality costs businesses \$15 million every year and impacts productivity by up to 20%. 61% of firms access data stored on at least four platforms and 15% access 11 or more different systems [IDC] - that’s a lot of time being spent accessing non-integrated data.

EDC solutions allow companies to solve these problems, combining centralized, integrated access and sharing, with cloud-native analytics and automation. This greatly helps to mitigate the problems of data movement between on-site data centres and public cloud. It gives firms the ability to access powerful analytics algorithms, without having to have dedicated business analytics or costly enterprise intelligence software.

As they let companies leverage all of their data, wherever it is stored, EDC solutions can be a key tool in enabling enterprises to become data driven, helping them to unify raw unstructured and structured data and offering instant access, organisation wide. Firms can have near-total elasticity, plus a kit bag of tools they can rely on - so they can respond agilely and apply the best solution for each unique situation.

# Conclusion

The current market conditions are complicated and in a state of flux. As well as navigating through the disruption, leaders have to focus on improving the customer experience and increasing efficiency, while also maximising profit. To achieve these goals many companies have had to level up, adopting advanced tech like automation, and AI.

But are they getting the value yet?

Without infrastructure in place that allows them to access and use their data properly, organisations can't leverage the potential of the technology they've already adopted, let alone implement more advanced tools going forward.

Businesses must do more with their data, and the tools and infrastructure that can enable this will be the differentiators that give firms an edge. With increasing cyber-security threats and spiralling compliance demands, public cloud is leaving companies far too vulnerable. Then there's the reality of where data lives - firms can't do everything in one place, and they shouldn't try to.

By rethinking their approach to data, and the Cloud, and opting for a hybrid EDC solution that's driven by data, organisations can manage their IT infrastructure and analytic workloads from a central, intelligent platform. This will help combat silos, allowing enterprises to access data from multiple sources, and combine it with machine learning and AI, so they can access all their data, and unlock its true value.

Being able to do this will pay dividends - in the future, data will be key to staying relevant and gaining a larger market share. Switching to infrastructure that allows them to harness data better will allow firms to use the information to their benefit - from cutting costs and delivering a more personalised customer experience, to hasten the pace of innovation.

[end]

# Roadmap to a Cloud Future

## The Cloud Club

The Cloud Club is an exclusive network of senior technology & transformation leaders operating within enterprise-scale organisations. Our mission is to accelerate innovation and the pace of change through cloud technologies. On a regular basis we meet for confidential meetings and produce industry reports. Learn more about the Club, access content and apply to join up-coming events via our website.

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## Cloudera

The Cloud Club grows thanks to the support of our members and our partner, Cloudera. Cloudera contributes their time and knowledge as well as commercial support to allow us to deliver great content, reports and events.

[www.cloudera.com](http://www.cloudera.com)

## Amazon Web Services

Amazon Web Services provides a highly reliable, scalable, low-cost infrastructure platform in the cloud that powers hundreds of thousands of businesses in 190 countries around the world.

[aws.amazon.com](http://aws.amazon.com)

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