

# CAPCO

**WILL THE PANDEMIC SPARK A  
NEW ERA OF CLOUD ADOPTION?**

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# FOREWORD

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The disruption wrought by the COVID-19 pandemic changed the behaviour of businesses and consumers alike, increasing focus on supporting a remote workforce. One primary transformation enabled by this level of disruption was how firms focused transformation opportunities within cloud services, as working remotely and adjusting to the new standard became embedded within the workforce strategy. A mindset shift toward incorporating the cloud, driven by innovation and a reduced need of infrastructure, is evident and came into the spotlight during the current crisis. Lastly, with disruptions from COVID-19 and the probability of future disruptions, there has never been a more urgent time to move to the cloud.

Previously, as other industries started focusing on cloud services to suit their business needs, banks were expected to do so, as well, but with increased vigilance. For example, security categorization, which helps organizations identify potential injuries that could result from compromises, is a fundamental step in protecting against the risks associated with the use of cloud computing. From a customer-centric angle, banking has become more sophisticated than ever before, pushing existing and new players to constantly innovate and

provide a frictionless customer experience.<sup>®</sup>

New players find it easier to start their business applications on the cloud as they can start off with a cloud-based solution rather than having to gradually shift from an on-prem<sup>4</sup> to a cloud-based one. This transformation slowly started to materialize within the banking industry before 2020 but has fully catapulted to one of banking's top priorities as they reimagined a remote environment for the customers and employees alike. One point of concern for the banking industry is the continued dependence on legacy systems. These older systems still play a vital role in the day-to-day business of every financial institution. Moreover, the criticality and confidentiality of data present in banking requires protection, as it is transferred from one system to another. Amidst the COVID-19 pandemic, companies have realized the importance of a digital business model which includes the usage of cloud technologies. Although the shift toward the cloud was delayed at the start, organizations are looking at considerably speeding up their progress by focusing investments on business units that can operate in a cloud-focused operating environment to provide the highest business value.

# WHY SHIFT ?

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Cloud technology is increasingly becoming a major point of focus for most industries and is also a key part of the digital strategy of most organizations. This is primarily on account of banks starting to realize the benefit of this shift. Moreover, the advent of multiple cloud service providers has given financial institutions the option to pick and choose the type of service that appeals the most to their business and additionally, allowing banks to mitigate risks by having a multi-cloud strategy without having to be solely dependent on a single cloud provider.

The first benefit to consider is cost savings. Cloud solutions provide varied amounts of optimization, including scalability and load balancing. This feature provides high amounts of durability and availability for data, which indicates that businesses will not need to provision resources beforehand and will be charged only based on their usage. Moreover, the cloud has different storage classes where businesses can store and access data at will. For example, Google Cloud Platform (GCP) has four types of storage classes within their cloud storage offering that offer varying capabilities and prices, which businesses can select based on their specific requirement. This offers more flexibility at a better price point compared to on-prem<sup>4</sup> data banks. Cloud solutions provide different storage options to their clients. So, the cloud provider is the one responsible for the data being processed or stored. This factor would allow banks to gain higher degrees of data protection at comparatively lower prices. Moreover, they can store data depending on their need as different storage options have different usages. However, the primary benefit of cloud data processes lies in the cloud bearing immensely parallel processing

of very complex data analysis problems at a significantly reduced cost – pay as you go for that parallel compute time as compared to paying for an entire server farm to stay idle most of the time.

The second benefit is an agile business plan. Cloud solutions provide a variety of services including SaaS<sup>1</sup>, PaaS<sup>2</sup>, and IaaS<sup>3</sup>. Banks can use SaaS solutions to forego the overhead of deploying and managing their own applications. If, on the other hand, they want to run in-house developed solution, these can be run on a PaaS, where the infrastructure is taken care of by the cloud provider, allowing the institution's developers to focus solely on the software solution. And should the bank still want to manage both the infrastructure and software, cloud offers IaaS which gives banks complete control of their virtual infrastructure with no need to be concerned about hardware procurement. These cloud-based services will generally provide more efficient solutions that benefit from on-demand capacity management and do not require lengthy hardware infrastructure setups.

Apart from the ones mentioned earlier, there are additional benefits in shifting to the cloud, such as scalability, security, disaster recovery, sustainability, mobility, and compliance. During the pandemic, the move to remote workforce enablement technologies, such as VDI (virtual desktop, or desktop as a service), allows organizations to run the equivalent of a powerful desktop from a users' web browser with the advantage of performing on a fully isolated, secure banking network with no ability to exfiltrate data. That being said, a sustainable business model is required to be in place to invest and drive value from cloud technologies.

# THE OMNICHANNEL EXPERIENCE

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The new age consumer is drawn toward having the freedom to research and select products/services from organizations across multiple channels – digital, phone, or assisted. An omnichannel strategy within a bank refers to the bank's ability to meet such requirements while providing a frictionless customer experience. Basically, customers should be able to fulfil their banking needs at any time and on any connected device.

Nowadays, consumers tend to navigate between multiple interactive channels and personal touchpoints before deciding on a specific product or service. This propensity multiplies as the number of customers increases, thereby emphasizing the need for seamless integration across different channels. The omnichannel approach connects these channels, bridging technology communication gaps that may exist in multichannel

solutions. This is where cloud technology plays an enabling role in supporting and enhancing the omnichannel experience.

An omnichannel customer experience requires an efficient cloud computing foundation to be successful. In the omnichannel world, each channel transforms into an individual, connected access facilitating interactions between customers and the organization. To support such interconnected interactions, organizations initially needed major investments in infrastructure and software solutions. Cloud computing and cloud services have allowed organizations to make massive savings on traditional infrastructure and software costs and create a competitive advantage by enabling the rapid prototyping and delivery of innovative solutions.



# TRENDS IN CLOUD SERVICES

Previously, most organizations were moving specific units of their systems to the cloud in an incremental fashion. Such incremental change has undergone a shift since the pandemic. More organizations are trying to migrate many of their systems to the cloud and this demand is being absorbed by cloud providers (current and upcoming). Moreover, cloud providers are ramping up capacity to allow for mass migrations (if they do not have it already).

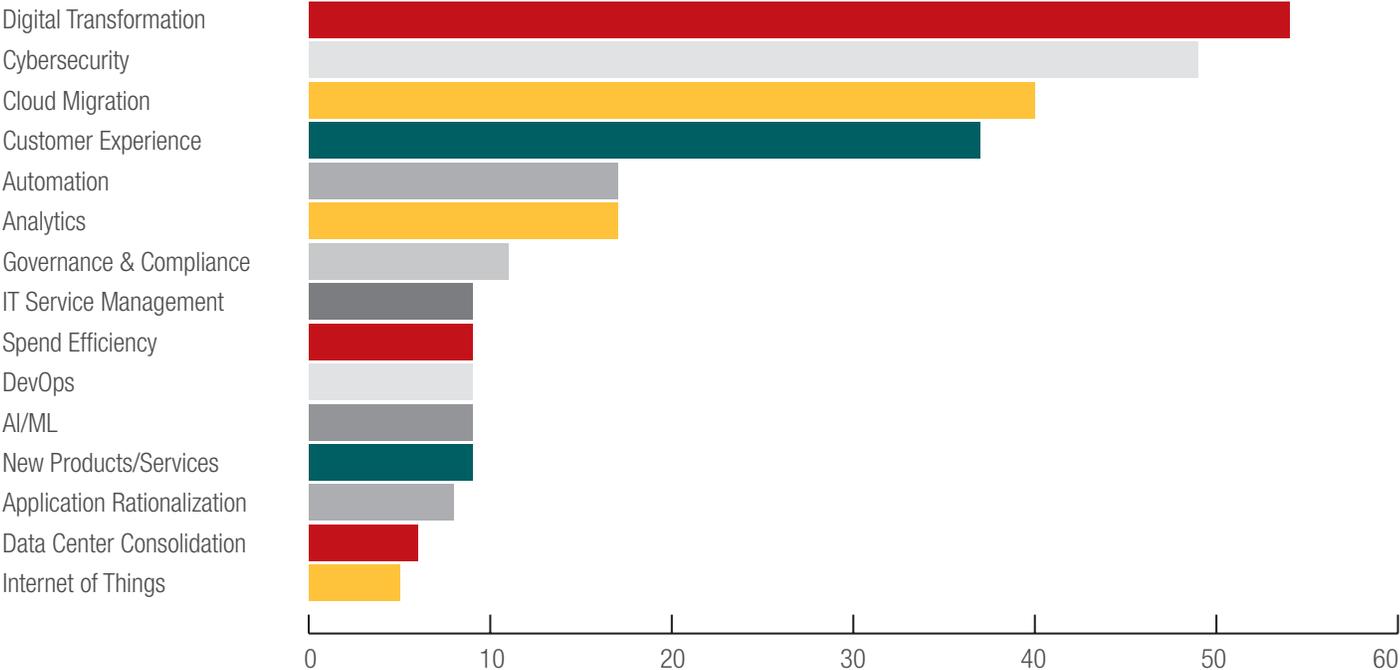
Based on recent surveys conducted by an IT asset management firm, 82% of respondents agreed to ramping up their use of cloud in direct response to the pandemic. Despite lockdown restrictions continuing to ease across the globe and workers returning to their workplaces, 66% of respondents said they will continue increasing their overall use of cloud for the foreseeable future. Specifically, 76% of respondents said Covid-19 has increased investments on cloud technologies and infrastructure services. By 2022, 75% of all databases are assumed to be migrated to a cloud platform (according to Gartner Inc.). These trends suggest

a greater change in the enterprise cloud strategy as IT leaders face challenges in facilitating a remote workplace and 91% respondents said they are altering their cloud strategy to enable a more remote-based environment. Regarding the economic disadvantage caused by the Covid-19 outbreak, 32% said they had requested extended payment terms from their cloud providers & 31% said they have ongoing renegotiations around their cloud contracts.<sup>(ii)</sup>

The primary reason for the shift in trends results from cloud services allowing companies to increase capacity without an investment in hardware. Also, cloud provider/s maintain the infrastructure and extend the existing abilities of the organization, leading to further reduction in overall costs.

Lastly, the top three initiatives for IT spending trends indicate that digital transformation, cybersecurity, and cloud migration are the ones respondents agreed to. A graph for the complete list is displayed below:

## Priorities for Technology Initiatives



# THE CLOUD – WHAT’S NEXT?

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Even with the ongoing pandemic, the cloud computing market continues to grow as organizations shift toward cloud technology adoption which will allow new business models to develop and flourish. As organizations begin talking about the future of cloud computing, many believe the future is a hybrid one – wherein a combination of cloud and on-prem4 systems will be used to create end-to-end solutions.

## **Innovation as a Service**

As cloud computing continues embedding itself within the organization, the rise of digital businesses goes beyond support and maintenance and helps companies accelerate their business transformation. Companies are considering the creation of an original environment that facilitates continuous business

innovation powered by the cloud. With the capabilities provided by cloud technologies, innovation is becoming part of a company's corporate culture.

## **Enhanced Customer Experience**

Cloud computing is set to deliver higher degrees of customer experience. Organizations can deploy intelligent systems (Internet of Things, Machine Learning, Artificial Intelligence, etc.) using cloud services and upgrade their overall customer experience suite faster than ever before. With fast moving companies now offering a wide range of customer experience management solutions enabled by cloud technologies, financial institutions can now receive quasi-instantaneous feedback on the effect of their customer interactions across all channels.



# FUTURE OUTLOOK FOR THE CLOUD

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With physical interaction trending toward a new normal where parts of the population may elect to remain distanced and interact mostly through electronic means, organizations have shifted to digital solutions to ensure continued productivity. A study on Post-Coronavirus Workplace (Forbes magazine, 2020) mentioned only 20% of workers preferred to work from home all or most of the time before the pandemic. But as of late 2020, more than 70% of workers preferred to work from home all or most of the time.

Most organizations, including software companies, are reworking existing technologies around being remotely enabled by adding a remote access layer on top of the existing architecture – making it a hybrid model. To continue aligning with key differentiators in the market, organizations can start leveraging their data-driven attributes to deploy the latest technologies available in the market and allocate necessary investments to migrate existing infrastructure and application suite to the cloud.

However, to begin migrating to the cloud, organizations need to develop an operating model that supports and compliments operations in the cloud. This would need to be supplemented by applicable investments stakeholder agreement around the need

for moving to the cloud. As of 2021, 92% of enterprises have a multi-cloud strategy and 82% have a hybrid cloud strategy. Moreover, 36% of enterprises spend more than \$12 million per year on public clouds and 90% of enterprises expect cloud usage to exceed prior plans due to COVID-19.<sup>(iii)</sup>

Additionally, unlike previous years, cloud providers and enterprise solution providers are currently collaborating instead of competing against one another. This increased collaboration would enhance levels of customer experience offered and would allow both parties to tap into new age technological advancements. Other organizations, such as Oracle and SAP, are building out their own cloud and will probably attract a niche market.

Lastly, critical businesses were mostly considered an on-prem<sup>4</sup> solution. As organizations get more familiar with cloud computing and as cloud solutions further evolve, companies will start looking at some of the more business-critical solutions (core banking, for example) that still reside in their on-prem<sup>4</sup> data centres. Moving these more sensitive assets to a cloud environment will result in higher ROI once all supporting business models have been developed.

# SUMMARY

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Cloud computing benefits, such as cost savings, agile business modelling and increased computing prowess, far outweigh the costs associated with migrating to the cloud, thereby resulting in a positive ROI. With the pandemic, many organizations have started realizing the need to digitally revamp their organization, and cloud computing is the primary element in those discussions. The degree of cloud adoption is prevalent as cloud providers report associated increases in new sales and overall organizational cloud usage. A favoured long-term tracker of enterprise cloud sentiment is the annual Flexera - State of the Cloud Survey 2020/21 which, includes a question about COVID-inspired changes to cloud usage. Previously in 2020, the Flexera survey's demographic exhibited large enterprises and early

cloud adopters, with 53% respondents identified as advanced cloud users. The survey validates several trends over the years, including a shift in application environments from VMs to containers, increasing popularity of cloud-managed containers, cloud expertise and cloud consulting services, lack of cost controls and management.

Advanced processing in the cloud does not come with its fair share of risks. However, mitigating those risks by performing due diligence of cloud providers and establishing robust solutions with active risk assessments, can help organizations establish trust in cloud computing and enhance operational efficiency at reduced costs.

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## Abbreviation of terms mentioned:

1. SaaS - Software as a service (SaaS) is a software distribution model in which a cloud provider hosts applications and makes them available to end users over the internet.
2. PaaS - Platform as a service (PaaS) is complete development and deployment environment in the cloud, with resources that enable you to deliver everything from simple cloud-based apps to sophisticated, cloud-enabled enterprise applications.
3. IaaS - Infrastructure as a service (IaaS) is a type of cloud computing service that offers essential compute, storage, and networking resources on demand, on a pay-as-you-go basis.
4. On-prem - On-premises software is installed and runs on computers on the premises of the person or organization using the software, rather than at a remote facility such as a cloud.

## REFERENCES

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- I. "Guidance on the Security Categorization of Cloud-Based Services." Canadian Centre of Cyber Security (2020) [Link](#)
- II. "2020 State of Tech Spend: IT Spending Benchmarks and Trends." Flexera (2020). [Link](#)
- III. "2021 State of the Cloud Report." Flexera (2021) [Link](#)

## ADDITIONAL RESOURCES

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- "The Future of Cloud Computing." Forrester (2019). [Link](#)
- "Enterprise cloud adoption accelerates in face of Covid-19." Caroline Donnelly (2020) [Link](#)
- "Pre & Post COVID-19 Market Estimates." Technavio Research (2020) [Link](#)
- "Cloud Services Industry 2020-2027." Cision PR NewsWire (2020) [Link](#)
- "Cloud Computing Market 2020." MarketWatch (2020) [Link](#)
- "COVID-19 Impact on Cloud Adoption." David Ramel (2020) [Link](#)
- "Re-imagining cloud computing in a post-COVID world." Shreeranganath Kulkarni (2020) [Link](#)
- "COVID-19 driving a bigger boom in cloud adoption." Todd R. Weiss (2020) [Link](#)
- "Enterprise cloud usage post-COVID-19." Kurt Marko (2020) [Link](#)
- "Cloud Computing: Darker Skies Ahead?" Capco (2020) [Link](#)

## AUTHOR

**Arun Kumar**, Senior Consultant

[Arun.Kumar@capco.com](mailto:Arun.Kumar@capco.com)

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## ABOUT CAPCO

Capco is a global technology and management consultancy dedicated to the financial services industry. Our professionals combine innovative thinking with unrivalled industry knowledge to offer our clients consulting expertise, complex technology and package integration, transformation delivery, and managed services, to move their organizations forward.

Through our collaborative and efficient approach, we help our clients successfully innovate, increase revenue, manage risk and regulatory change, reduce costs, and enhance controls. We specialize primarily in banking, capital markets, wealth and asset management and insurance. We also have an energy consulting practice in the US. We serve our clients from offices in leading financial centers across the Americas, Europe, and Asia Pacific.

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