

# The Impact of COVID-19 on Businesses and the Role of Cloud Platforms in Business Continuity

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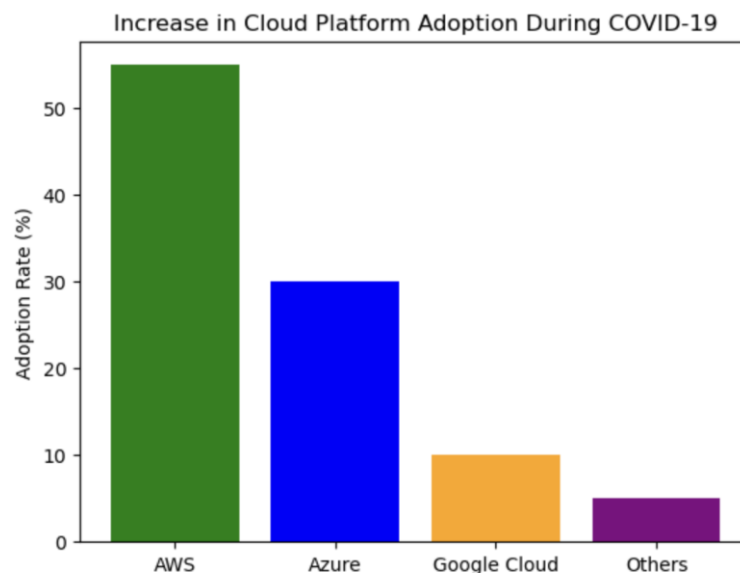
**Abstract:** *The COVID-19 pandemic turned the whole world “upside down” and it would be accurate to say that businesses have never known a better time to rise and make those instant adaptations. Whether it was network operations, collaboration or service delivery, the need for the switch was immense. COVID-19 made sure of it. Cloud platforms saw to it that many businesses that went remote whether just for a couple of weeks or forever were up and running almost immediately. This paper critically examines the stark effect of COVID-19 on businesses, focusing on how cloud computing solutions or platforms have facilitated the swift adaptation of businesses and what it would have become for employees (and employers!) if not for this lockdown-friendly technology. This paper researches the advantages of cloud platforms, provides a few interesting uses cases in different industry sectors, and gives visual examples of how businesses had to switch to remote workforces during one of the most monumental events in their histories.*

**Keywords:** COVID-19 impact, business adaptation, cloud platforms, remote work, technology solutions

## 1. Introduction

The COVID-19 pandemic of 2020 was an unexpected shock to the global system, sparking a media frenzy on lockdown, travel restrictions and the closure of physical workplaces. At one stroke, the usual way of conducting the economic life of many businesses was thrown into chaos: how could firms continue to run when its members couldn't go to their usual places of work to continue their tasks? An answer arrived in the form of cloud platforms.

Cloud platforms helped make the transition to remote working seamless, enabling companies' employees to effectively work from home, without having to immediately alter their business operations. A dramatic example is the difference between companies that kept their data on private, in-house infrastructure and those that adopted cloud technologies. The former found it hard to adapt quickly to the sudden need for remote work, whereas the latter were already primed for the sudden shift to remote work.



## 2. Problem Statement

The COVID-19 pandemic triggered business disruptions on a global magnitude. Most of the companies were unable to continue their business as usual. Organizations who were operating on-premises data centers were unable to shift gears quickly. Financial organizations were unable to transact electronically. Companies that rely on physical customer support or physical field services were unable to continue to operate. Key human resources processes like onboarding, training, performance assessments, managerial meetings, travel planning, scheduling and payroll got disrupted.

Organizations found it difficult to continue business without an infrastructure which enabled access from any remote location, flexibility to collaborate and a business that was resilient to disruptions. The pandemic creates its own level of new challenges: the sales and marketing team could not contact their customers or prospects, the accounts team could not collect payments, compliance teams could not inspect images, managers were unable to communicate with their team members. Suddenly, employees were required to work from home. Many unscheduled processes were required to enable remote work. Applications which need network were moved to the cloud, a few tools were hastily put together.

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### 3. Solution Statement

Cloud platforms became the key to maintaining business operations during the pandemic by helping companies transition to work from home environments virtually overnight. Companies were able to stay in communication, manage collaboration and continue to deliver services for their customers using cloud services such as the AWS, Microsoft Azure, Salesforce, and Google Cloud. These platforms allowed employees to use Zoom, Microsoft Teams and Slack to stay in touch, as well as access cloud storage and SaaS solutions to access critical data and applications remotely and securely. Because cloud platforms met the immediate needs of the pandemic and continue to support businesses' efforts to increase flexibility over the long term and further growth opportunities.

#### The Shift to Remote Work: Enabling Business Continuity

Long before COVID-19 dictated a shift towards remote work, putting technology at the forefront of business continuity, 'remote working' was often seen more as a nice-to-have luxury perk for those people lucky enough to have access to it, rather than an enabler of business operations accessed by most of the world's workforce. Innovative cloud platforms such as Amazon Web Services (AWS), Microsoft Azure and

Google Cloud became crucial, enabling businesses to get back up and running and work remotely from day one.

#### Cloud Platforms for Communication and Collaboration

For those companies, simply staying in touch was an initial requirement – as in cloud-based collaboration tools (e. g., Microsoft Teams, Zoom, Slack) that took off almost overnight.

#### Formula: Cloud Platform Adoption Growth Rate

This tremendous jump in cloud platform numbers can be represented by this compound annual growth rate (CAGR) equation:

$$CAGR = \left(\frac{V_f}{V_i}\right)^{\frac{1}{t}} - 1$$

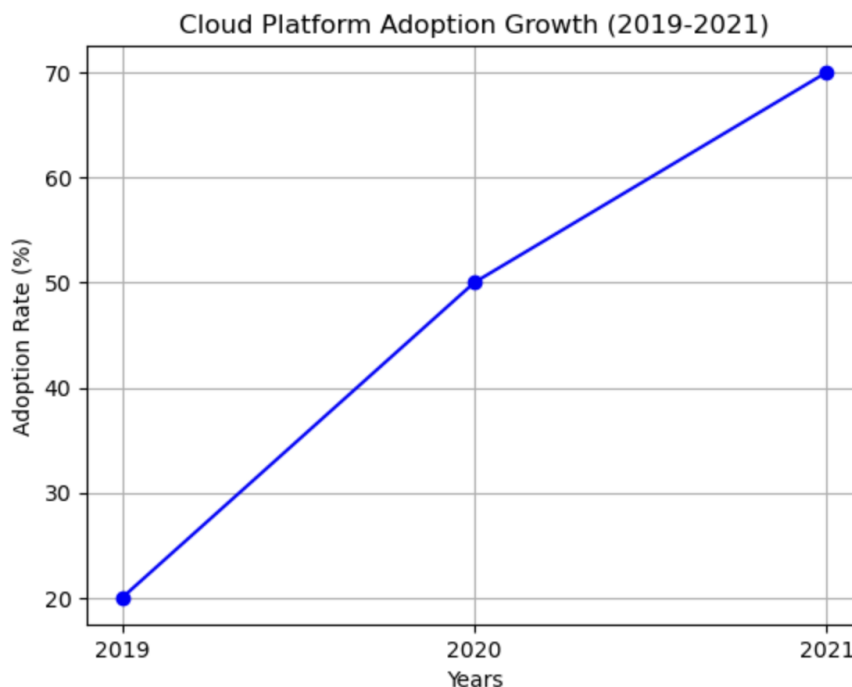
Where:

$V_f$  = Final Value (adoption rate post- pandemic)

$V_i$  = Initial Value (adoption rate pre- pandemic)

$t$  = time in years

Using this formula, we can track the growth of cloud platform adoption from the start of the pandemic to its peak in 2021.



#### Example: Microsoft Teams Adoption Surge

One landmark example of this shift in a single feature is the rapid rise of Microsoft Teams, whose daily active users went from 44 million in March 2020 to 75 million in April 2020, according to Microsoft reports. This enabled companies to stay in sync, have meetings and even run events.

#### Cloud-Based Solutions for Business Operations

Beyond communications, cloud also underpinned operations for businesses that shifted to hosted applications, including cloud-based human resources management, project management, enterprise resource planning (ERP) and all types of customer relation management (CRM) applications, as a SaaS (software-as-a-service) service.

#### Cloud Computing in Financial Services

In the financial services industry, Cloud services decentralized services that had been previously centralized. Banks, insurance firms and other investment companies used Cloud services for providing remote access to customer information, securing data and complying with regulatory standards.

**Example:** Cloud in the Financial Sector For instance, Capital One was already using cloud technology when the COVID-19 pandemic hit, making it easier for them to shuttle their entire workforce home without disruption to service. As Capital One moved to home offices and mass, they used AWS to make sure that customer data stayed safe, and employees

were able to do work on confidential financial transactions remotely.

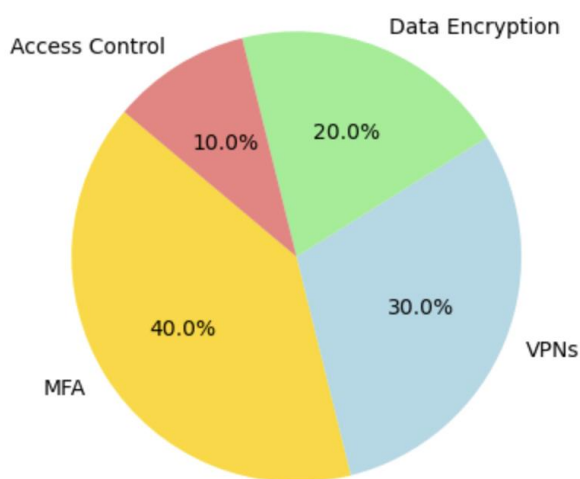
### Cloud Storage and Data Management

For businesses that required massive amounts of data storage, the cloud enabled scalable means of handling the work of storing and retrieving that data. Business users needed to access presentations, documents and other files stored on local servers across various locations. If there was an internet connection, business users could access this information anywhere they needed it. Well-known services, such as Dropbox, Google Drive, OneDrive and other cloud storage platforms, found themselves inundated with business travelers.

### Cloud Security During the Pandemic

One of the fears related to this rise in remote work has been that it could open the door to greater cybersecurity threats. Cloud vendors responded to these security concerns by improving their offerings – for instance providing multi-factor authentication (MFA), encryption and virtual private networks (VPNs), which give network-level security so that staff can securely access company resources from home.

#### Cloud Security Adoption During COVID-19



### How Cloud Platforms Helped Various Industries Adapt

#### Retail and E-Commerce

COVID-19 was particularly damaging to the retail sector, particularly brick-and-mortar stores. However, the use of cloud platforms allowed retailers to rapidly migrate to e-commerce platforms, implement online order processing and payments, and ship customer goods efficiently.

**Example:** Amazon's Pandemic-Powered Growth Amazon, already one of the largest companies in the world and a monolith in the e-commerce space, attracted even more

consumer dollars during the pandemic, in large part due to its AWS infrastructure. This allowed it to quickly expand its operations in response to increased demand for e-commerce while still moving transactions smoothly on the back end via its cloud infrastructure.

#### Healthcare

Its cloud platforms enabled hospitals and clinics to provide telemedicine services, so that patients could consult with doctors remotely, thereby relieving hospitals and taking pressure off the Covid-19 situation.

**Example:** Telemedicine on the Cloud Teladoc, Amwell and other telemedicine services used the cloud structure to enable video consultations, documentation and connecting to electronic health records (EHRs) so that patients could receive seamless remote care.

#### Education

Educational institutions embraced cloud platforms, too, by using services like Google Classroom, Zoom and Microsoft Teams to deliver schooling at a distance. Cloud platforms meant that people stuck at home with minimal contact could stay on task.

**Formula:** Cloud Adoption Growth in Education We can obtain the growth rate of cloud-platform adoption in education using the CAGR formula below:

$$CAGR = \left(\frac{V_f}{V_i}\right)^{\frac{1}{t}} - 1$$

Where:

$V_f$  = Final Adoption rate of cloud platforms in education (post-pandemic)

$V_i$  = Initial Adoption rate (pre-pandemic)

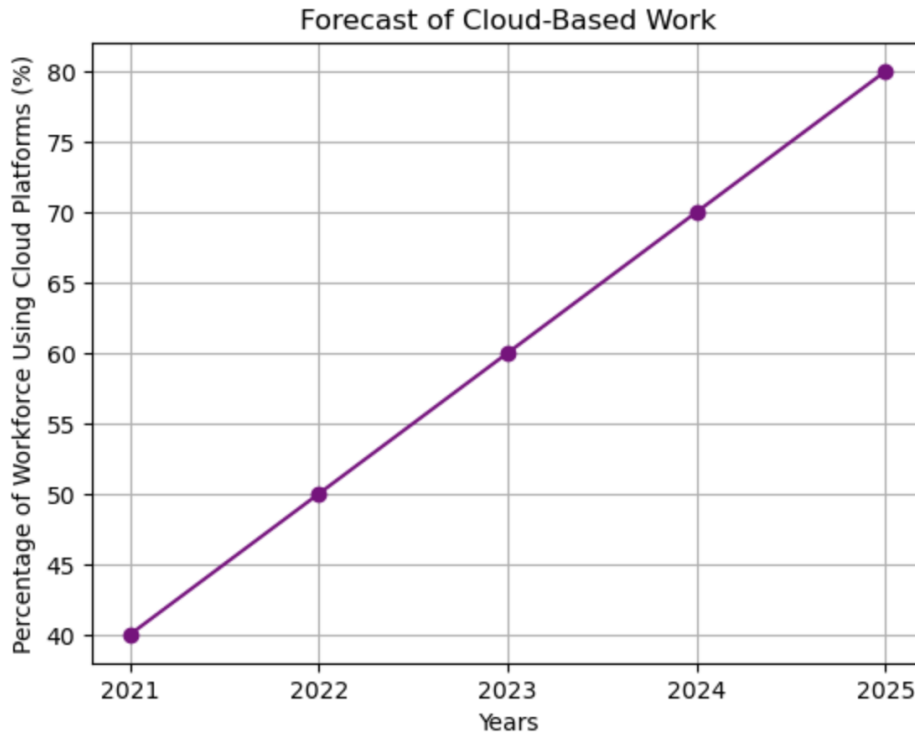
$t$  = time in years

#### The Long-Term Impacts of Cloud Adoption

While the pandemic accelerated the adoption of cloud platforms, the implications will span the coming years. The vast majority of businesses having found the benefits of cloud-based working, are likely to shift to a hybrid work model wherein people work from home as per business needs, or from the office.

#### Benefits of Continued Cloud Use

- **Scalability:** Cloud platforms provide virtual infinite scalability, letting any business increase their use without owning physical infrastructure.
- **Cost Efficiency:** Cloud-based services reduce a business's need for on-premises hardware and IT staff, thus cutting costs.
- **Agility:** Cloud platforms allow businesses to make rapid changes to their product offerings, reflecting changes in the market and customer needs.



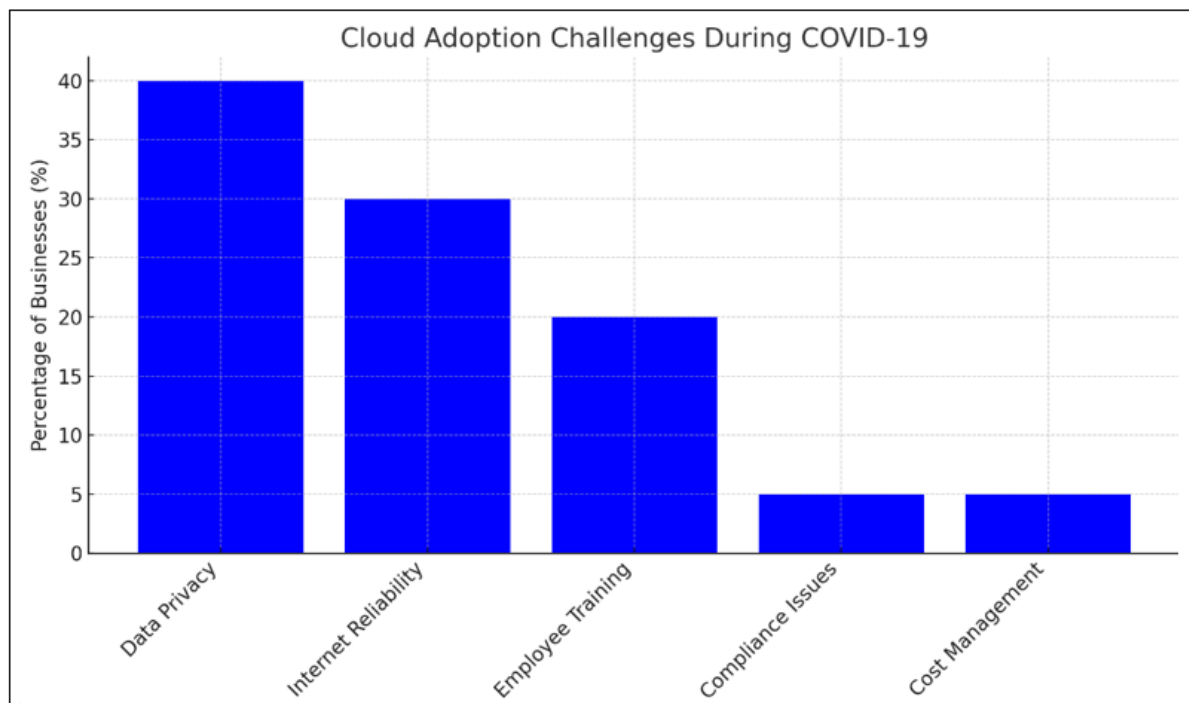
**Hybrid Work as the New Normal**

Embracing the cloud, enabling remote work from any device and location, often leads to a hybrid model, in which employees can choose whether to work from home or attend the office. As a result, offices are being transformed from traditionally private places into open and socially active spaces, with many companies adopting remote-first policies that decrease the necessity for office space.

**Challenges of Cloud Adoption**

Although there were several advantages to cloud adoption during the pandemic, it also brought some challenges to the table. The most annoying issues while adopting the cloud by businesses were:

- **Data Privacy Concerns:** As more apps run on cloud platforms, companies had to assure their customers that their data wasn't breached and in compliance with GDPR, HIPAA and other laws.
- **Dependence on Reliable Internet Access:** remote working using cloud platforms necessitated steady internet connections, which was not always feasible in rural or underserved areas.
- **Training and Onboarding Employees:** The move into the cloud meant that many employees needed extensive training. This was true especially for companies who were accustomed to on-premises software.



### The Future of Cloud Computing Beyond the Pandemic

Beyond the pandemic, too, it is obvious that cloud computing has now truly entrenched itself at the heart of how all business is done. With the pandemic forcing the retail, hospitality, business travel, music and entertainment sectors into turmoil, and crisis-mode for others, cloud platforms enabled the survival of these businesses, if not their sustained success in the new normal.

### Cloud as a Driver of Innovation

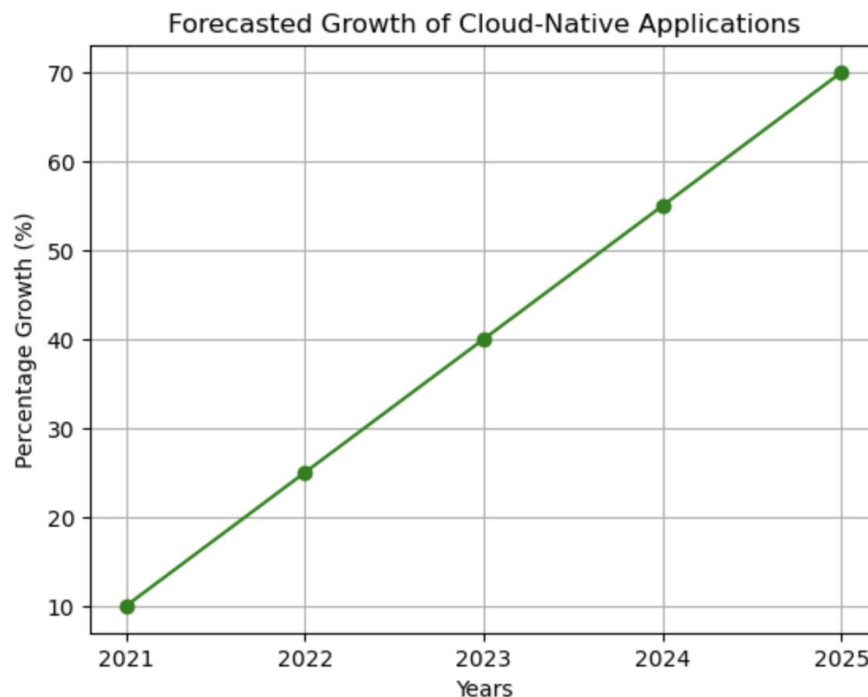
When it comes to innovation, the increasing use of cloud platforms is driving innovation across industries as well. When businesses get more used to the cloud services, it will pave the way for the utilization of more advanced cloud solutions like AI, ML or IoT. They will be able to streamline

processes, derive key insights from data and offer better customer experiences.

**Example:** Chatbot Customer Care Replacing actual customer support staff with AI-powered chatbots connected to a company's cloud-based systems is increasingly common. Google Cloud, Amazon's AWS, and other platforms will facilitate your innovative solution.

### Cloud-Native Applications and Services

With more businesses adopting a cloud-first strategy, enterprises' appetite for cloud-native applications also continues to rise. That is, applications that have been specifically built to run on cloud infrastructure, to maximize scalability benefits, reliability and security in the enterprise cloud ecosystem.



Cloud-native services will enable businesses to maintain agility and remain competitive in an increasingly digital marketplace.

## 4. Conclusion

The COVID-19 pandemic has pulled one of the most disruptive 'punchdrunk hook' key changes of our lifetime. During a pandemic, businesses needed to rapidly change the way they operate, such as switching to working remotely from home and guaranteeing business continuity. Cloud platforms were a key component of this overnight transformation, enabling these businesses to accelerate their workforce transformation and improve overall operational efficiency. As more businesses adopt cloud platforms, the focus is shifting from cost savings to innovation to fuel the next wave of digital transformation, leading to a more agile, scalable and secure environment for business growth.

Although the shortcomings persist, data privacy, internet reliability and employee training continue to hinder the adoption and expansion, the long-term benefits of the cloud platforms are undeniable. Moving ahead, as the economy

returns to normal after the pandemic, cloud computing will continue to be a linchpin of business operations driving the continuity and innovation.

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