

# DIGITAL BUSINESS MODELS AND THE ROLE OF CLOUD

Authors:

Archana Venkatraman

Carla Arend

December 2020

Sponsored by

IDC #EUR147025920

**citrix**™



# Digital Business Models and the Role of Cloud

## Executive Summary

The digital future is here. We are at the tipping point of becoming a digital economy that is shaped by digitally transformed enterprises that exhibit business agility, a culture of innovation, and resilience in the face of unprecedented challenges. IDC predicts that by 2022, 65% of GDP will come from products and services delivered by these digitally transformed organizations. The impact will be enormous; enterprises not able to compete in the "digital" portion of the economy will miss out on half the opportunity in their core markets and eventually lose their relevance.

What the global pandemic has revealed is that organizations that were early adopters of cloud, digital, and collaborative technologies were better positioned for crisis recovery. IDC research shows that investments in cloud, collaboration, and security have remained resilient in 2020, despite a decline in overall spending.

**The pressure to transform is amplified in the current crisis. According to IDC's research, 80% of CEOs in Europe admit that they are under tremendous pressure to digitally transform and deliver value.**

Successful digital transformation isn't only about infrastructure and application modernization. It requires organizations to transform many aspects of the business, including workforce, operations, data strategies, security and governance, processes, and business models.

The hallmarks of a digital enterprise include speed, agility, resilience, customer-centricity, and the ability to become a software producer, accelerating digital innovation and the generation of new digital revenue streams. These hallmarks are delivered by a world-class technical foundation built on cloud-centric infrastructure, autonomous operations, next-generation security, embedded intelligence, and self-service.

Modernizing business models and operations while aligning these with a cloud-centric IT foundation can help to get the most from technology investments and deliver the key business outcomes.

IDC believes that as IT organizations turn their focus to resilience and cost efficiency in current times, the adoption of as-a-service delivery models will be critical. Business and IT leaders that

### AT A GLANCE

#### WHAT'S IMPORTANT

Successful digital transformation isn't only about infrastructure and application modernization. It requires organizations to transform many aspects of the business, including workforce, operations, data strategies, security and governance, processes, and business models.

#### KEY TAKEAWAYS

Cloud is the engine for digital transformation. IDC's COVID-19 survey showed that more than 90% of organizations plan to change their long-term IT strategy to include a more aggressive push to the cloud. Cloud migration is not just a technology transition, but is transformative for organizational setup and processes. It is vital to adapt the business model to the cloud to optimize benefits.

But the journey to the cloud need not be daunting. It can be taken step-by-step. Take one service to the cloud at a time, assess the benefits of cloud financial models, and subsequently evolve the operational model to the cloud with new skills and culture. For example, moving to a subscription-based model for on-premises services allows organizations to update their processes to a cloud operating model even before migrating data to the cloud.

embrace as-a-service models benefit from the enhanced visibility, transparency, and flexibility of these models and bring in efficiencies.

Digital business models truly enable an enterprise to not just compete but also shape the digital economy. They benefit from agility, resilience, improved information flows, efficiency, and security. These benefits help them deliver the customer and employee experiences that people expect in the era of cloud and IT consumerization.

Any CEO under pressure to demonstrate successful digital transformation needs to appreciate that without transforming how they buy, consume, and deliver technology, their success is going to be limited. Shifting from traditional methods of IT consumption such as perpetual licenses to a more agile and dynamic as-a-service or subscriptions model can contribute to digital success and help navigate through the current crisis.

In fact, IDC predicts that by 2022, spending on managed cloud services will touch \$30 billion, driven by enterprise needs to optimize ROI, reduce budgets, and cope with skills scarcity (*IDC 2019 Cloud Predictions – European Implications*).

## In This White Paper

---

In this paper, we will assess the factors that are adding pressure to traditional IT delivery and consumption models and analyze the value of transforming to a cloud-friendly digital business model.

## Introduction

---

Digital businesses are dynamic and agile. To support that dynamism, organizations need to ensure their IT foundation, processes, business models, operations, and culture are equally agile and dynamic.

These digital businesses want to be in control of business logic, data, their IP, and competitive differentiation. At the same time, they want to free up staff from day-to-day operational tasks. Consuming IT as a service across their technology spectrum frees them from management complexities to focus on what matters the most for the business.

Let's assess some drivers of business model transformation starting with Future of Work — one of the top agenda items for CEOs looking to build a digital enterprise.

IDC defines the Future of Work framework as a fundamental change to the work model to one that fosters human-machine collaboration, enables new skills and worker experiences, and supports an intelligent and dynamic environment, unbounded by time or physical space. The Future of Work is an enterprisewide imperative driven by senior executives and executive boards and requires technology, policy, operations, and business model evolution for success. About 62% of organizations worldwide rated the Future of Work agenda item as a top focus for the next 5 years, according to IDC's 2020 CEO Priorities Survey (IDC #US46201920).

## Future of Work as an Important Agenda Item in the Digital Economy

---

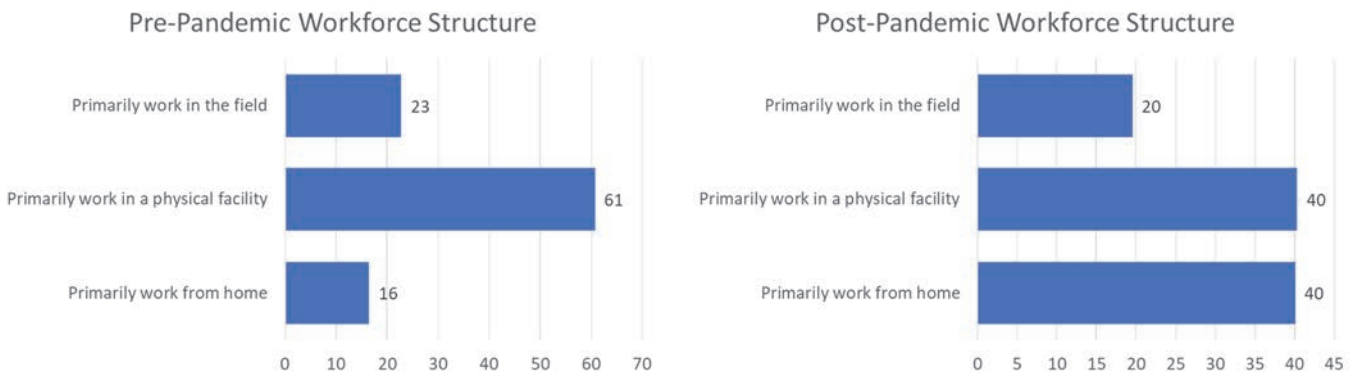
Current market conditions have accelerated the journey toward becoming a digital enterprise. The immediate focus is on digitizing the workplace to improve workforce productivity, engagement, and collaboration and adapt security strategies to the new reality.

*IDC predicts that in the next 2 years, an extra \$2 billion will be spent on DaaS and workspace-as-a-service by the G2000, as 75% of them incorporate employees' home network/workspace as part of the extended enterprise environment.*

The Future of Work paradigm is transforming all three areas — workplace, workforce, and work culture.

There is a rise of the **hybrid working environment** (a combination of office, field and home working). The COVID-19 crisis has emphasized that flexibility and agility are key to responding to unforeseen circumstances. These features will be at the heart of the workplace of the future. In the new normal, about 40% of employees will work from home primarily, compared to just 16% before the pandemic.

FIGURE 1  
Workforce Structure Evolution



Source: IDC COVID-19 Impact Survey, Internal, Wave 10, August 5 - August 14, 2020

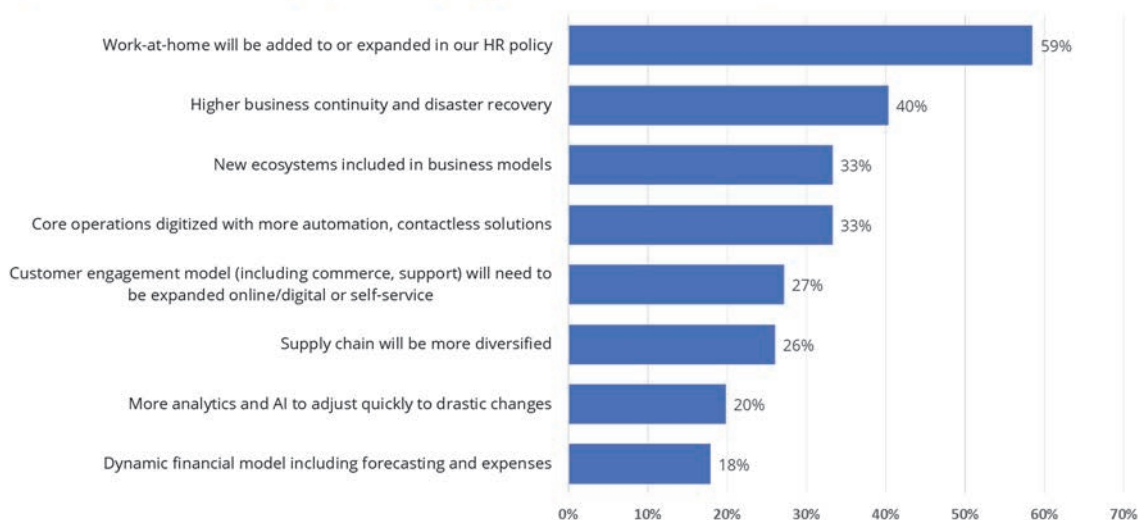
The workplace is becoming fluid and hybrid working will become the norm in the new reality. For instance, Barclays CEO Jes Staley said that "*... the notion of putting 7,000 people in a building may be a thing of the past.*"

FIGURE 2

## Hybrid Workplace is the Consistent Priority Across all Verticals

## The Next Normal Will Vary Depending on the Industry, but a Hybrid Workplace is the Consistent Priority

Q. Which of these areas will likely be permanently changed as a result of the COVID-19 pandemic?



Source: IDC COVID-19 Impact Survey (Wave #5, May 2020)

## The Role of Cloud in Enabling Remote Working

Cloud is becoming the de facto technology to support digital transformation. According to IDC's COVID-19 survey, more than 90% of organizations are planning to change their long-term IT spending to include a more aggressive push to the cloud. This is because many organizations see cloud as fundamental to delivering on digital hybrid workspace mandates at record speed.

This investment is primarily triggered by:

**Rising Employee Expectations in the Digital Workspace.** Employee productivity is at the center of business success. Employees want tools and services that are easy-to-use, secure, and enable collaboration. They also want uninterrupted access to the applications, data, and infrastructure resources they need to do their work.

**Trigger to Exit Datacenter Business.** The pandemic has forced organizations to review their business continuity and disaster recovery strategies. Many organizations with a heavy datacenter footprint found themselves disrupted because of physical access constraints. IT teams realized that the capital-intensive and management-intensive datacenters were not agile, scalable, or cost efficient to meet the productivity needs of the new reality.

But at the same time, IT operations, security and governance, management silos, and cost efficiency considerations aren't going anywhere.

**Security by design and by default.** Securing the workplace is becoming challenging across multiple angles. Increasing hybrid models (with countless mobile access points), the pervasiveness of cloud services (security no longer confined within corporate firewalls), and an expanding IoT infrastructure (even more points of access for potential threats) inevitably led to

more security vulnerabilities. Locking down all systems might give peace of mind, but it is not a viable long-term solution.

So how can IT teams successfully deliver on Future of Work objectives without compromising on their core IT principles of resilience, performance, security, compliance, and cost efficiency?

## Time to Challenge the Business Model Status Quo

---

Until now, IT has managed and delivered applications, data, desktops, and devices in an ad hoc fashion and managed all these through different systems, which is proving inflexible, complex, and time-consuming. It is also exposing the organization to new vulnerabilities as the apps and data continue to sprawl.

From an operations perspective, the traditional approach is for IT to second guess the workforce's needs and license necessary software upfront. It then develops the skills and certifications to implement, monitor, manage, and optimize it on a day-to-day basis. This strategy is time-consuming and doesn't meet the agile needs of employees.

IT departments need a thorough assessment of the current state of their technology and the desired future state. Cloud is the enabler of a new paradigm of work across the workplace, workforce, and work culture, and bring about the transformation needed for a company to thrive in the next normal.

When looking to implement new technology it is important to maintain a holistic view of the workplace and avoid technological silos.

And that means that adapting the business model, delivery, operations, and management of productivity suite as well as complementary services such as data management, access controls, and analytics, to the cloud world is imperative for success.

## Cloud Platform Approach

---

Savvy organizations have already started on this journey.

*IDC expects that by 2023, more than 40% of enterprise IT operations spend will be consumption based, opting for a cloud platform as a lower-risk option to manage complexity and align cost to revenue.*

With a platform in the cloud, IT can deliver a unified experience to employees across workspace tools, data, applications, and services. They will have the management plane in the cloud to simplify operations, administration, management, and security controls.

Using the cloud to simplify the creation, delivery, and management of workspace technologies means IT can be a business enabler, because they can deliver the required services at speed and to any destination (any infrastructure) of choice, while leveraging automated cloud services and retaining control of the environment.

It also brings modularity, meaning IT can scale the estate dynamically, adding the necessary components as workspace needs grow or shrink, without incurring huge capital expenditure upfront.

According to IDC research, enterprises are investing in cloud capabilities with a view to delivering four modern IT principles:

- Collaboration
- Automation
- Connectivity
- Intelligence

## The Role of Cloud in Enabling Digital Business Models

---

Cloud in its various forms (on-premises private cloud, public cloud, hybrid, and multicloud) has become the de-facto architecture for modern IT and digital transformation across Europe to provide agility, flexibility, scalability, security, and innovation.

Virtually all digital transformation initiatives are dependent on the cloud services delivery model — for scale, access to key technologies (e.g., AI services), and access to digital supply and distribution networks. As such, the growing enterprise focus on digital transformation initiatives will fuel expanding demand for cloud services delivered via the subscription business model.

Cloud services adoption to deliver workspace services usher in a flexible operating model or digital business model with immediate payback. As workspace services directly touch employee experience, there is instant feedback to demonstrate the value of a cloud service model approach.

## Planning the Cloud Migration Journey

---

The move to cloud is not just a technology transition; it is equally disruptive for the organizational set up and processes, and to optimize the benefits of the cloud it is vital to adapt the business model to the cloud too.

Rather than taking an "all-in" approach to the cloud, the hybrid cloud approach is becoming a natural evolution. Especially for late adopters of the cloud, making a measured migration from on-premises to cloud for key services and using cloud as an extension of an on-premises environment can be a good starting point before migrating core applications to the cloud.

By taking one service to the cloud at a time, organizations can assess the benefits of cloud financial models and create a segue into the cloud and subsequently evolve the operational model to the cloud over time and develop new skills aligned to the cloud operating model.

For example, moving to a subscription-based model for on-premises services allows organizations to update their processes to a cloud operating model even before they use public cloud services. This can help them assess their appetite and use cases for public cloud adoption and continue in their cloud journey by mitigating risks.

Such incremental digital and operating model strategies can make the cloud journey sustainable and manageable.

## Benefits of Moving to a Cloud Model for Service Delivery

---

As cloud enters the mainstream, a one-size-fits-all public cloud is not the only choice available to enterprises. Cloud adoption is more geared towards a hybrid and multicloud approach, especially in Europe, where security, data protection, and data sovereignty concerns are high.

Business and IT leaders should see the cloud model as aligned to the broader shift to "as-a-service" technologies that reduce management burden and bring agility, scale, and speed.

This can bring a cloud-like experience to IT users.

In IDC's opinion, moving the management plane to the cloud can bring instant benefits because traditional on-premises license procurement, deployment, and management tasks are cumbersome and error-prone and require specific expertise. It is the most complex layer, delaying the delivery of resources to customers and making IT a cost center rather than a business enabler. Besides, the management of workspace solutions is not a revenue-generating or high value task. But adopting a unified cloud platform is key to avoiding management silos and complexities or lost visibility. A unified cloud management plane also enables IT to set up policies, security guardrails, and access parameters. They also leverage cloud-based innovation such as AI and ML functions to analyze end-user behavior to detect any anomalies and address them before they become operational issues.

You can learn the new cloud skills without losing control of your business-critical apps and data; they can stay in place and you are still in control.

## Case Study: Centrica

---

Centrica plc is an international energy services and solutions company serving 26 million customers in the UK, Ireland, and North America. The business has 30,000 employees in locations all around the world, ranging from customer contact centers to energy traders working in the financial markets.

The business used a virtual desktop solution running on physical servers in its datacenters. The solution functioned well though was difficult to scale at speed or cost-effectively.

---

*"The need for flexibility and scalability was a big driver for change. Whenever we had to expand the platform, it took four months to go through the paperwork, purchase and deploy the hardware. It was costly and not very agile," explains Patrick Babic, Service Owner for Centrica's End User Computing (EUC) team. This made it impossible to flex capacity in line with business seasonality, such as the greater demand on contact centers during the UK's winter period.*

As server hardware was nearing end of life, the team saw an opportunity for a new approach. Centrica has a cloud-first strategy, and moving the virtual desktop to the cloud allowed the business to simplify and standardize its desktop while also bringing greater flexibility, cost savings, and carbon reductions.

### Key Benefits for Centrica

- Citrix Cloud Services delivers a secure, scalable, and energy-efficient desktop for 18,000 users
- Citrix ADC provides secure, remote access to corporate resources from any device, anywhere
- It secures business continuity plans, allowing employees to work from anywhere in strict observance of security requirements that are specific to the industry



*Darren Miles, Centrica's Vice President of Enterprise Services, says, "With Citrix, we implemented a robust set of controls, globally. We have the certainty of a common set of controls, messaging, and ways of working. Citrix enables us to serve our customers in a secure and consistent way."*

There are several immediate and strategic benefits of a cloud business model.

### Immediate Benefits

#### Cost efficiency:

It helps organizations pivot to an operating cost model to demonstrate how in the long run the cloud business model brings in lower TCO while delivering speed, scale, agility, and expected digital customer experience.

It enables a combination and flexibility of licensing models including hybrid models where organizations can continue to use their existing licenses as they pivot to a full cloud-based operating model.

Starting with a smaller footprint and low-risk cloud strategy such as only moving the management plane to the cloud can help a company to understand the benefits that cloud can bring to its unique business and can help upskill or reskill IT staff. It can also help free up on-premises resources and datacenter footprint.

FIGURE 3

### Potential Cost Savings and Strategic Benefits of Cloud Transition



Source: IDC, 2020

### Strategic Benefits

#### IT Efficiency

A cloud business model enables simplified troubleshooting of end-user incidents and reduces user downtime. It also simplifies application lifecycle management, increases the speed of deployment, and makes admin strategic to employee productivity.

Overall, admin can ensure faster provisioning of resources, proactive management and trend analysis, and significantly reduced management overheads.

### **Simplification**

The adoption of multiple cloud resources in an ad hoc fashion by different line of business departments makes IT management complex and costly for IT teams that need to ensure the security, availability, and resilience of applications at all times. Having a cloud management plane to ensure visibility and management of all services can simplify management, thereby closing security loopholes and ending licensing issues.

### **Keeping Data Secure**

Having a unified management plane in the cloud that integrates and connects with multiple sources brings a unified view of all applications and data, enabling IT teams to monitor, regulate, and manage risks. They can also implement advanced security controls and restrict practices such as copy/paste or downloading of sensitive data and block risky websites and apps.

### **Operational Resilience**

For regulated industries such as financial services, the regulatory body Financial Conduct Authority (FCA) recommends operational resilience considerations. The resilience of operations is the ability to prevent, adapt, respond to, and recover and learn from operational disruptions. According to the FCA, operational disruptions and the unavailability of important business services has the potential to cause wide-reaching harm to consumers and market integrity, threaten the viability of firms, and cause instability in the financial system.

With the COVID-19 pandemic and the ongoing recovery, what is common across many regulated industries is the concern about operational resilience. Operational resilience has become ever more prominent across all sectors of the economy, but first and foremost in the regulated industries that needed to continue to provide uninterrupted crucial services to the population, and global cloud technology has proved a sustainable and resilient solution. Adopting a multicloud strategy and modular platform is emphasized not only for choice, but also for a more robust approach to guarantee the resilience and business continuity of critically important processes.

The FCA [recommends that enterprises consider and assess third-party service providers](#) to ensure operational resilience can be maintained in the event of disruptions or cloud outages, including when taking steps to remain within impact tolerances.

IDC believes that while operational resilience is particularly important for regulated industries, it is emerging as best practice among many digitally transforming organizations that rely on consistent services and business continuity.

### **Risk Mitigation**

Cloud services can help with risk mitigation. One of the key values of a unified cloud management plane is peace of mind for IT because a cloud plane allows them to deliver robust SLAs and instant vulnerability patching remotely. Many organizations also view cloud's logical and infrastructural security as more sophisticated than their antiquated datacenter IT. IDC's research from 2019 suggests that about half (49%) of organizations had suffered an unrecoverable data event within the past three years. 69.2% of organizations had suffered a successful malware attack within the past 12 months; 39.2% of these involved ransomware.

The widescale adoption of public cloud by lines of business is resulting in a concentration of the risks raised by regulators. One key concern related to cloud usage in financial services is "having all eggs in one basket." What happens if all financial services organizations are using the same public cloud services provider and they have an outage? Cloud would be the single point of failure for the whole sector and the critical financial services IT infrastructure would be brought down.

The key concern relating to cloud usage in the public sector is the concern about vendor lock-in, where tax-payer money is spent on cloud services provided by a single public cloud services provider and there is no leverage to negotiate the price down or switch provider.

A cloud control plane that integrates with hybrid infrastructure and multiple cloud platforms minimizes this concentration risk.

## Sustainability

---

Moving from running software on your own premises to a cloud service instantly helps with achieving your sustainability goals. Cloud services are running on a significantly more efficient infrastructure with much higher utilization rates, which helps reduce energy consumption and carbon footprint. When you are moving to a cloud service, you can reduce your own hardware and datacenter footprint and energy consumption for running the software, as this is taken care of by the cloud provider. An additional benefit is that you don't need to report carbon emissions for the cloud service, as it is counted as a Scope 3 indirect emissions, and organizations only need to report on Scope 1 and Scope 2 emissions. By migrating to a cloud service model, companies can reduce their carbon footprint and get closer to meeting their carbon emission reduction goals.

## What are the Challenges Organizations Need to Overcome?

---

2020 has brought in some profound changes to IT with remote working, business continuity, and adaptability taking centerstage. According to IDC's research, more than 50% of organizations plan to leverage the cloud more aggressively because of the value that cloud models bring in the crisis recovery journey. The value includes resilience and agility, a modern and collaborative experience, speed, access to innovation, and scale. By the end of 2021, based on lessons learned, 80% of enterprises will put a mechanism in place to shift to cloud-centric digital infrastructure twice as fast as before the pandemic.

Moving to the cloud is not a sprint, it is a marathon and requires strategy, due-diligence, and multi-stakeholder buy-in. For about 52% of European organizations IDC surveyed in 2020 in our multicloud survey, success in public cloud is elusive for several reasons. Most prominent of the reasons for unsuccessful deployments are security and trust issues, performance and reliability, lack of integration, and cost concerns.

Companies can overcome these barriers by using the cloud for management and service delivery without the need to move apps and data to public cloud.

## *How to Move to Digital and Cloud-Based Business Models*

A large percentage of a digital enterprise's revenue depends upon the responsiveness, scalability, and resilience of the infrastructure deployed within its own facilities as well as its ability to take advantage of third-party provided and operated infrastructure resources delivered as a service. The emerging digital infrastructure ecosystem, increasingly built on a cloud

foundation, focuses on ensuring ever faster delivery of innovative infrastructure hardware, software, resource abstraction, and process technologies to support the development and continual refinement of resilient digital services and digital experiences.

Digital infrastructure does not just reside in a central enterprise or cloud datacenters. It includes the assets/resources that enable the shifting of applications and code for enhancing customer experiences (CXs), embedding intelligence/automation into business operations, and supporting ongoing industry innovation at edge locations. These locations include network multi-access edge computing (MEC) nodes, campuses, buildings, and metro colocation facilities.

Given these requirements, the most significant development over the next several years is the acknowledgement that the future of infrastructure when it comes to a CIO's priorities is cloud everywhere. The transition to cloud-centric digital infrastructure, which is already underway and will accelerate following the pandemic, depends upon commitment to a digital strategy. It enables timely access to and consumption of innovative infrastructure technologies to support digital business models. It also aligns technology adoption and IT operational governance with business outcomes.

Cloud is certainly an enabler of a future enterprise in the digital economy. But the vision for cloud has to evolve from seeing it just as an infrastructure target to migrate data and apps, to a vision in which cloud becomes the operating model, the business enabler and the management plane platform to deliver services from any infrastructure to any employee in a secure, agile, fast, and cost-effective manner. Change management programs also need to be implemented alongside in using technology to create culture change.

### *Using the Cloud Business Model to Fuel Future Innovation*

Having a unified console to deliver heterogeneous sets of applications to employees — such as Windows, Linux, web, and SaaS applications or full virtual desktops from any cloud (public, on premises or hybrid) is a powerful proposition to win boardroom sponsorship for cloud migration. It will also act as the right anchor point to start the cloud journey and demonstrate results.

Make it the basis for digital Innovation. The cloud services platform needs to be integrated with all the popular cloud platforms in use. Once an organization starts using one cloud, it will need the ability and provisioning to add other cloud capabilities, other regions, on-premises infrastructure, private cloud instances, container instances, and so on.

Once you procure in the cloud model, you can procure a lot more services from the cloud as a continuous journey.

With cloud trends on the rise, enterprise IT must also evolve to a cloud operating model and adopt a secure digital workspace platform for managing apps, devices, and data. This will give IT administrators streamlined insight into how SaaS, web, and even local apps are secured and presented to users.

### *Key Factors to Consider on the Journey*

- Changing business model and organizational structure
- SaaS best practices
- Cloud continuous journey — start small, keep growing, day 1 and day 2 innovation and operations
- Cost brings immediate business value, also in face of COVID-19

- Gradually increase cloud footprint to increase benefits and innovation
- Cloud journey is not just a technical journey but also an organizational and operational change
- Change management is needed

## Conclusions and Recommendations

---

Business and IT leaders need to develop digital capabilities to be relevant in the digital economy. For this, they should consider:

- Moving to a digital business model
- Enabling a hybrid workplace to empower employees and ecosystems
- Using cloud to underpin the digital and hybrid workplace strategy
- Preparing to start small, train cloud skills across the organization, and add as you become more mature
- Ensuring that along the way, they stay in control of data, security, and compliance with a management plane they can operate and monitor

Supporting hybrid workforces and ensuring that remote and work-from-home employees have the same sets of connectivity and productivity tools as their in-office counterparts will be essential to long-term success.

According to IDC's 2021 Digital Transformation predictions, direct digital transformation investment spending will nearly hit \$7 trillion between 2020 and 2023. The investment will be directed to make businesses agile, trustworthy, empathetic, informed, responsive, resilient, innovative, and connected. Embracing cloud and digital workplace capabilities, and modernizing business processes can help realize these goals.

## MESSAGE FROM THE SPONSOR

**Today's employees are spending more time than ever working remotely, and it's causing companies to rethink and restructure how IT services are delivered.**

With the increased availability of public clouds, businesses can harness the power of cloud services to simplify the management of their existing deployments.

Citrix Cloud services simplify the delivery and management of workplace technologies on-premises, in the cloud, or both. Create and deploy secure digital workspaces in hours, not weeks, while placing your sensitive app, desktop, and data resources where needed.

- **Faster time to value:** Deploy Citrix workloads faster from any cloud, on-premises datacenter, or hybrid scenario.
- **Deployment flexibility:** Adopt public clouds at your own pace, support new workloads and business continuity expansion, or move into the cloud as needed.
- **Simplified management, security, and business continuity:** Integrated cloud services simplify the management of on-premises and cloud-hosted resources, reduce public cloud costs, streamline business continuity and disaster recovery planning, and help protect sensitive intellectual property.

## About the Analysts



[Archana Venkatraman](#), Associate Research Director, Cloud Data Management, IDC Europe

Archana's primary research coverage is cloud data management. She covers multiple topics including data protection, edge to cloud data trends, application and data availability, compliance, data integration, intelligent data management, DataOps, data quality, and multicloud priorities and trends.



[Carla Arend](#), Senior Program Director: Lead Analyst, Cloud in Europe

Carla Arend is a senior program director with the European software and infrastructure research team and heads up IDC's European cloud research. Arend provides industry clients with key insight into market dynamics, vendor activities, and end-user adoption trends in the European cloud market. As part of her research, she covers topics such as how European organizations are adopting cloud, how cloud drivers and inhibitors are evolving, cloud management, cloud security, data management in the cloud, IoT and cloud, AI and cloud, DevOps and cloud, as well as GDPR impact on cloud and cloud code of conduct.

## About IDC

---

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

### **IDC UK**

5th Floor, Ealing Cross,  
85 Uxbridge Road  
London  
W5 5TH, United Kingdom  
44.208.987.7100  
Twitter: @IDC  
idc-community.com  
www.idc.com

### **Global Headquarters**

5 Speen Street Framingham, MA  
01701 USA  
P.508.872.8200  
F.508.935.4015  
www.idc.com

## Copyright and Restrictions

---

Any IDC information or reference to IDC that is to be used in advertising, press releases, or promotional materials requires prior written approval from IDC. For permission requests contact the Custom Solutions information line at 508-988-7610 or [permissions@idc.com](mailto:permissions@idc.com). Translation and/or localization of this document require an additional license from IDC. For more information on IDC visit [www.idc.com](http://www.idc.com). For more information on IDC Custom Solutions, visit [http://www.idc.com/prodserve/custom\\_solutions/index.jsp](http://www.idc.com/prodserve/custom_solutions/index.jsp).

Copyright 2020 IDC. Reproduction is forbidden unless authorized. All rights reserved.

