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ACCELERATING CLOUD MIGRATION FOR THE POST-COVID WORLD

The economic and business challenges posed by the current COVID-19 pandemic have lit a fire under decision makers to speed up their cloud journey. Traditional office-based workflow processes have been upended, and supply chains disrupted, pressuring IT leaders to accelerate their efforts to enable remote work, reconfigure supply chains, and digitize key business processes, all under budgetary constraints.

To address the needs created by the pandemic, businesses need to quickly take some short-term initiatives, while at the same time, set the foundation for a longer-term strategy to accelerate their move to the cloud. In this way, organizations will be prepared for the next business disruption and well-positioned for success in the post-COVID world.

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ENTERPRISE IT HAS BEEN STEADILY MOVING TO THE CLOUD AS A FOUNDATION FOR DIGITAL TRANSFORMATION

Over the past two decades, enterprise IT has been steadily moving to the cloud as a foundation for digital transformation. Whether it be digitizing business processes, electronically connecting with customers and suppliers, introducing new digital products and services, or coming up with new business models—cloud computing is an essential foundation for digital transformation.

Many organizations began their move to the cloud by dabbling with software-as-a-service (SaaS), often for departmental applications, such as expense reporting or salesforce automation. Then, as they became more comfortable, they began to virtualize their on-premises infrastructure—creating a private cloud—and moving parts of it to the public cloud as well, creating a truly hybrid cloud environment and reaping the benefits in terms of scalability and agility, as shown in Figure 1.

Figure 1: Examples of Organizations with Hybrid Cloud Environments

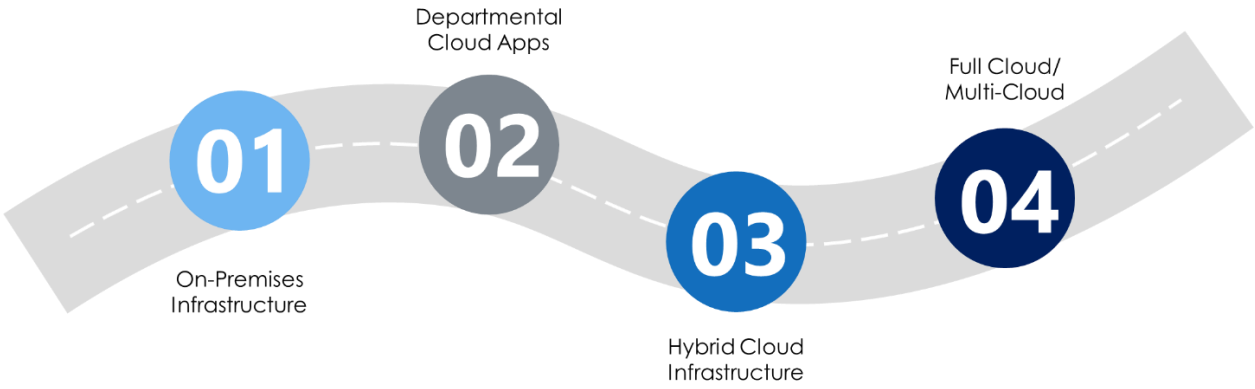
Organization	AWS	Azure	Google	Private Clouds	Comments
Unilever	✓	✓	✓	✓	• Uses a host of public and private cloud platforms, including Google Cloud AI tools, Cloud Vision APIs, AWS, and Azure IoT platform
Ford	✓	✓		✓	• Uses AWS cloud for its Autonomic Transportation Mobility cloud and Microsoft Azure for its vehicle infotainment system and to connect with its private cloud
JPMorgan Chase & Co.	✓	✓	✓	✓	• Tansitioned its data center workloads to three public cloud providers and launched its Gaia private cloud for internal use and as a developer platform
Kroger		✓	✓	✓	• Split its cloud investments between Microsoft, Google, Pivotal, and internal private cloud, with a cloud enablement team for private and public cloud.
Fortis	✓	✓			• India's largest healthcare provider, uses multi-cloud integration for its Hospital Information System, Microsoft Azure for hosting other existing systems, and connectivity between AWS VPC to Azure and its MPLS network.
AVIVA	✓	✓			• Aviva, a UK insurance firm, migrated its on-premise workloads to AWS, and uses Microsoft Azure to track customer behavior and collect telematics data
	✓		✓		• Uses Amazon S3 and GCP to store data for its iCloud services; converted from Microsoft Azure to GCP for user media storage

Source: *Avasant Hybrid Enterprise Cloud Services RadarView™ 2019-2020*

Most IT organizations today are somewhere in the middle of their cloud journey, as shown in Figure 2. Large organizations, with major investments in legacy systems, may only be at Stage 1, with core systems running on-premises, or hosted by managed service providers. Others may be at Stage 2, adding departmental cloud applications to surround those core legacy systems. Others have reached Stage 3—replacing those core legacy systems with modern cloud applications and running the few remaining systems on a highly virtualized software-defined infrastructure (SDI). Finally, some are at Stage 4, the destination of their cloud journey, running all of their systems and infrastructure seamlessly between their private cloud and the public cloud, even multiple clouds, encompassing a full cloud environment. These organizations realize the full

benefits in terms of scalability, agility, and business resiliency, and the greater their opportunity for digital transformation.

Figure 2: Four Stages of the Cloud Journey



Our research over the past several years has been tracking IT organizations on this journey. One result is that IT capital spending as a percentage of total IT spending has been on a steady decline. Spending is shifting from data centers to cloud applications and cloud infrastructure. Most large organizations that have reached Stage 4 are still making investments in their private cloud infrastructure, but their use of public clouds to manage spikes in demand means that they can achieve higher utilization of their equipment, effectively shifting from Capex to Opex.

COVID-19 Has Made the Cloud Journey More Urgent

> *IT organizations are having to double or triple the number of VPN connections into their data centers to handle the large number of suddenly-remote workers.*

Now, the economic and business challenges posed by the current pandemic have lit a fire under decision makers to speed up their cloud journey. Traditional on-premises infrastructure has shown that it is simply not up to the task of quickly and easily supporting remote workers. For example, in our annual Computer Economics survey we are hearing reports of IT organizations having to double or triple the number of VPN connections into their data centers to handle the large number of suddenly-remote workers. Organizations that have reached Stage 4, a full hybrid cloud environment, enjoy secure and open web access, with fewer such obstacles.

Our survey also found that organizations that are still working with on-premises infrastructure are having a more difficult time managing through the pandemic. The need to quickly support remote workers has exposed the inflexibility of their IT environments. One respondent wrote, "The switch to mostly remote work was challenging on our infrastructure." Another wrote, "It is a challenge to go from 15 daily teleworkers to close to a thousand. Plus, even after this is over, work-from-home will most likely stay. So, we need to adjust!

On the other hand, organizations that have reached Stage 3 or 4 appear to be much better able to manage through the pandemic. One respondent wrote, "We're in a relatively good spot. Most of our services are cloud-based and our workforce largely mobile-savvy so working from home was not hard on IT beyond an initial support bubble." Another wrote, "All our back-office functions, with a couple of minor exceptions, operate on SaaS. Our software development environment is a private cloud spanning four locations globally, and it has proven resilient."

Finally, all this strain on the traditional IT infrastructure is taking place under severe economic conditions, with the pandemic ushering in a global recession. Just as IT leaders are being asked to accelerate their efforts to enable remote workers and provide 24/7 availability, with a secure and resilient infrastructure, they are having to work under budgetary constraints.

One thing is for certain, the move to the cloud is no longer something that traditional IT organizations can undertake at a leisurely pace. But facing these challenges, how can they accelerate their cloud journey?

Formulating a Short-term and Long-term Strategy

IT leaders may be wishing they had moved more quickly in their cloud journey. But as the saying goes, we are where we are. What should we do about it? The answer is that we need to take some short-term actions to address the immediate urgent needs created by the pandemic, while at the same time, we should be laying the groundwork for a longer-term strategy to accelerate our move to the cloud. In this way, we will be prepared for the next business disruption and to position ourselves for success in the post-COVID world.

So, what are some of those short-term urgent initiatives? Our current survey, now in progress, gives us some hints.

1. **First, many IT organizations are temporarily cutting Capex budgets and non-essential IT spending**. With the precipitous drop in market demand, many organizations are deferring major ERP replacement and modernization projects in favor of short-term upgrades. Most, however, are indicating that such projects are not being cancelled outright, especially when they are part of a cloud strategy. Cost cutting here is not just to save money, but to free up money for other short-term critical priorities, such as anything needed to enable business continuity, system resiliency, security and remote access. This is also precipitating the shift towards an Opex intensive and cloud-centric IT asset portfolio which enables agility and dynamic scalability of IT infrastructure based on demand and market conditions
2. **Next, service providers are becoming a critical backbone for business continuity.** In the current environment service providers not only have to meet their service level agreements, but are also expected to keep up with the increased demand and need for flexibility. Organizations are increasingly relying on providers for rolling out virtualized infrastructure, applications, desktop support, and network services. The heightened need for on-demand computing and responsive application services necessitate a hybrid cloud environment.
3. **Enabling a remote workforce is a priority for most organizations.** As noted earlier, those that have already reached Stage 4 with a fully hybrid cloud infrastructure are most able to support a remote and flexible workforce. The ability to securely and reliably access cloud-hosted resources and applications from

distributed locations and multiple devices is now a critical necessity. Those highly dependent on fixed on-premises infrastructure are at a significant disadvantage and should be accelerating their journey to hybrid cloud.

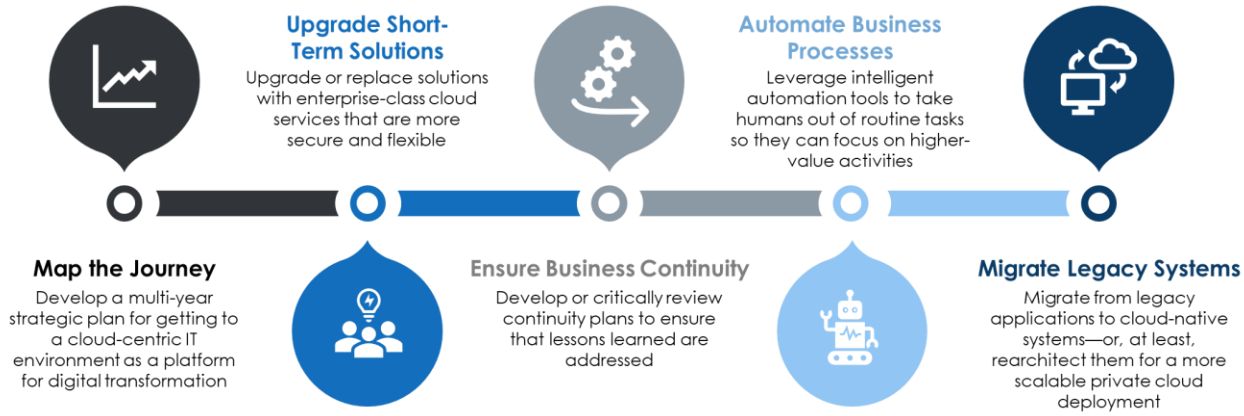
4. **Finally, IT leaders may need to accelerate digitization and automation of IT and physical processes so they can be executed by employees working remotely.** Even in the middle of the crisis, some respondents are indicating increased spending on automation of core IT and business processes. With teams working remotely, maintaining a fault-free IT operating environment requires leveraging AI - enabled autonomic systems and cloud orchestration tools.

RACING TO THE CLOUD IN THE POST-COVID ECONOMY

What about the longer-term strategy? Those organizations that emerge from the recession will be in a stronger position to accelerate their adoption of digital technologies. IT organizations that have been contemplating a cloud strategy or were in the process of migrating to the cloud should now plan to accelerate their journey to the cloud and embrace a full-hybrid cloud approach.. In this way, they will not only survive but thrive in the post-COVID economy with increased need for on-demand and scalable IT.

Although every organization is at different stages in their journey, there are five broad themes in leveraging the cloud to thrive when the pandemic is past.

Figure 3: Five broad themes in leveraging the cloud to thrive when the pandemic is past



1. **Map the Journey.** Coming out of the pandemic, it will be essential to have a multi-year strategic plan for getting to a cloud-centric IT environment as a platform for digital transformation. However, most traditional IT organizations cannot jump directly to a pure cloud environment. Realistically, they will need some sort of hybrid cloud infrastructure for the foreseeable future, perhaps with a combination of on-premises or hosted private cloud and one or more public cloud services. This should not be a piecemeal strategy. IT leaders should lay out this architecture along with a roadmap showing the stages on the way to reach the goal with a multi-year series of digitally-focused IT initiatives.

2. **Upgrade Short-term Solutions.** During the pandemic, many organizations were caught flat-footed and were forced to implement quick-and-easy solutions to enable remote access to platforms and applications. After the crisis is past, it will be time to upgrade or replace those solutions with enterprise-class cloud services that are more secure and flexible. Now is the time to migrate on-premise systems to cloud-based platforms, modernize applications through cloud-native applications, and enable an agile organization.
3. **Ensure Business Continuity.** The current pandemic exposed the weakness or lack of business continuity plans of many organizations. Our research shows that in 2019, only 57% of IT organizations in North America had any level of business continuity planning, a rate that was essentially unchanged for the past three years. Even worse, fewer than half of those organizations say they are planning for business continuity formally and consistently. And, of these, many of those plans did not account for pandemic scenarios. Once the crisis is past, all organizations should develop or critically review their continuity plans to ensure they address the lessons learned from the current crisis. Once again, organizations with a scalable and resilient cloud infrastructure will be in a much stronger position to ensure business continuity.

4. **Automate Business Processes.** Process automation and workflow management is another area that is ripe for cloud deployment. These capabilities will better equip the organization to provide quick response to supply chain disruptions and more easily interoperate with customers, trading partners, and suppliers. Leverage intelligent automation tools to take humans out of routine tasks so they can focus on higher-value activities. The most effective workflow automation solutions operate seamlessly across the organization's public and private clouds. Instead of creating islands of automation within individual business applications or workgroups, there is a high degree of process orchestration that is managed across a hybrid cloud infrastructure. When done right, this can facilitate the use of AI and machine learning to drive extreme automation.

5. **Migrate Legacy Systems.** As noted earlier, many traditional IT organizations have only dabbled with the cloud for non-core applications, leaving aging core systems in on-premises data centers. Where appropriate, migrate from those legacy applications to cloud-native systems—or, at least, rearchitect them for a more scalable private cloud deployment. For major enterprise systems, like ERP or CRM, this may be a multi-year program, and it will be a large investment. Migration of major legacy applications can create challenges in organizational change management and operational readiness. But if it accelerates the cloud journey, it can deliver long-term value.

GAINING COMPETITIVE ADVANTAGE

The emergency response of many organizations in the current crisis has been admirable, showing how business leaders and front-line workers can rise to the occasion. They are doing in days or weeks what would normally take months, whether it be rolling out new capabilities for remote work, finding alternative sources of supply or new distribution channels, or ramping up online sales volume.

But recent experience shows that an organization's ability to quickly react and adapt to a crisis is much easier with a cloud infrastructure. Those organizations that have made the transition are showing their rapid ability

to respond to shifting market conditions and balance their baseline costs to handle financial impact. Those that have fallen behind will now need to catch up or risk going out of business.

Those organizations that have or can establish the foundation of a cloud infrastructure will be in a much stronger position to capture market share when the economy recovers. They will have the scalability and agility to shift work from one world region to another, accommodate surges in business volume, and bring strategic acquisitions on to the same cloud platform.

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About Avasant

Avasant is a leading management consulting firm focused on translating the power of technology into realizable business strategies. Specializing in digital and IT transformation, sourcing advisory, global strategy, and governance services, Avasant prides itself on delivering high -value engagements through industry focused innovation and flexible client based solutions.

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