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WHITE PAPER

DECODING THE NEW DIGITAL WORKPLACE

FINDING SUSTAINABILITY IN THE RAPID ACCELERATION OF DIGITAL TRANSFORMATION

Executive Summary

Today, COVID-19 introduces an unprecedented level of workplace disruption. Almost overnight, entire professional workforces shifted to working remotely, forcing organizations to accelerate their digital transformation strategies.

Digital transformation was here first, offering organizations the ability to change business models and engage with customers, partners, and employees in completely new ways. With it, businesses provide better customer experiences and achieve new revenue opportunities in ways that lower costs and improve operational efficiencies.
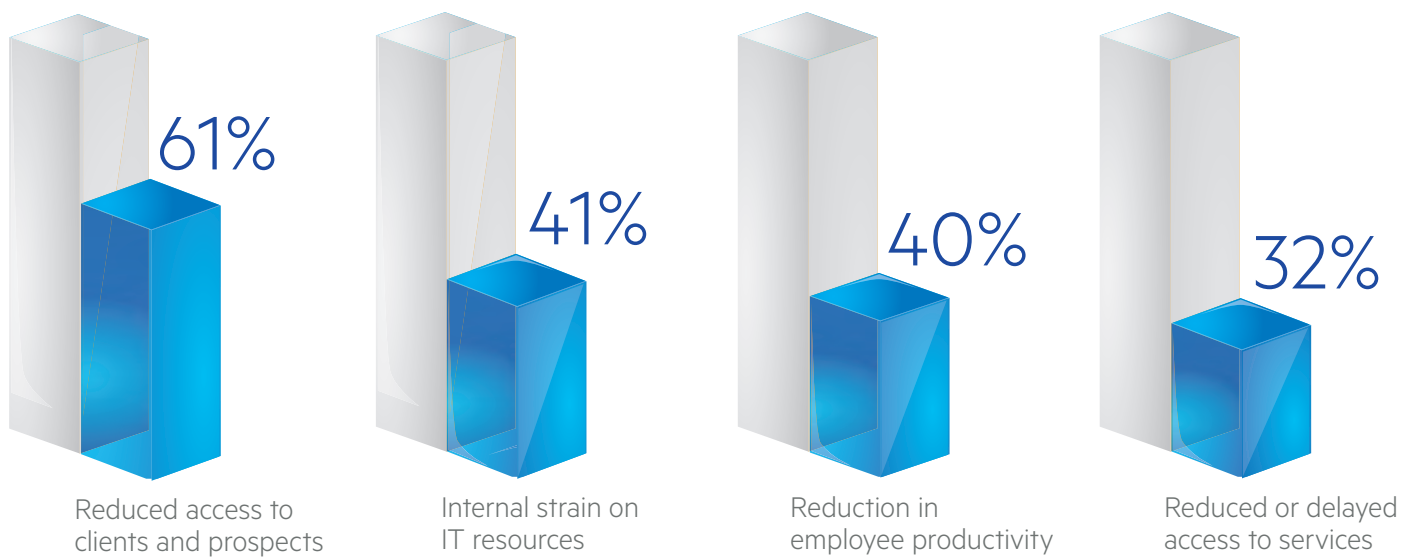
However, as with any major disruption, significant challenges come with moving to a digital workplace. Even before the COVID-19 pandemic, many workers sought the option to work remotely, but not all businesses responded. Now work-from-home mandates have forced the hands of businesses and increased employee demands for a work-from-home opportunity.

While IT infrastructure is a critical enabler of a digital workplace, it's challenged with network latency and scale, a lack of agility and flexibility, and potential cybersecurity gaps. This white paper explores these issues through the lens of the CIO, marking the challenges while mapping out ways to overcome them.

"Expected" Doesn't Always Mean "Prepared"

In our Infrastructure Imperative Webinar, 451 Research reported that most enterprises expected a significant disruption to their business back in March of 2020. However, those who said they were prepared to operate indefinitely without disruption dropped from 41% to 21% in 10 days.[1]

As if that weren't enough, the immediate fears included:

61%

Reduced access to
clients and prospects

41%

Internal strain on
IT resources

40%

Reduction in
employee productivity

32%

Reduced or delayed
access to services

Enterprises can't go back in time and some of the remote-workforce-imposed changes could remain permanent. So, what do you do?

Well, 451 Research also reported that everlasting changes in workplace operations is likely. This means a new set of continuous challenges on IT resources. Over half of the respondents in their remote workplace survey said they expected an increased strain on internal IT resources between March and June.

Before this chain of events took place, remote work and digital transformation were already hot topics. As a result, some organizations were planning their digital transformation initiatives for a future day. For example, the latest Flexera report on the "State of Tech" tagged *digital transformation* as the top technology priority for 2020. Over half of the respondents in its annual survey named digital transformation as their most important technology priority.[2]

Yet, the future came to them, and everything changed.

Without digital transformation strategies, businesses are suddenly "dead in the water," unable to interact, service, and sell to their customers. Businesses that laid a solid digital foundation find themselves at a competitive advantage—both as the COVID-19 global shutdown plays out and as businesses plan to emerge in a post-COVID-19 world.

COVID-19 Bolted Business Into a Digital Workplace

Until COVID-19, many businesses mapped their digital workplace strategies through a one to three-year phase. As the realities of the pandemic registered, these approaches were quickly discarded. Meanwhile, business and technology leaders rewrote, or in some cases, wrote from scratch for the first time their digital roadmaps.[4]

In other instances, digital leaders and innovators capitalized on their digital head start to put further distances between themselves and the competitors that lacked certain digital capabilities. Their advantages include gaining market share, increasing customer engagement, and driving operational efficiencies.

For those who were slow to adapt to digital transformation, it's now or never. COVID-19 is forcing early adopters to fully accelerate their plans and make everyone else take action or put the business's survival at risk.

In the new COVID-19 world, even the digital leaders are discovering their advanced digital transformation capabilities still require further evolution. Now is the time for organizations to fast-track their digital transformation.

Digital Transformation is the Past, Present and Future

Certainly, the concept of digital transformation is not new. It dates back to 1995 when it was introduced by the founder of the MIT Media Lab, Nicholas Negroponte, in a book titled *Being Digital*.[5] Yet, despite all of the attention around digital transformation over the past several years, there is much work to be done.

"Those companies able to use technology well to keep going and rethink their business model for the future by fast-tracking digital transformation will be the ones ahead of their competition."[3]
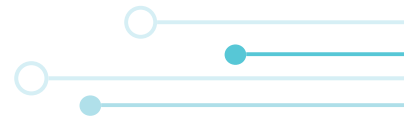
Digital initiatives touch in a range of different areas—from growth opportunities to customer engagement and from lower costs to enhanced efficiencies. In these cases, businesses recognize the growing importance of digital transformation in their industries.

Another McKinsey study found that fewer than half of digital leaders—namely, businesses that have embraced digital transformation—report digital innovation at scale. For businesses in nascent phases of digital adoption, the number falls to a mere 21%.

Use of AI tools is even worse: only 22% of digital leaders say they have achieved scale and 11% of businesses in the early phase of digital transformation claim to have done so.[8]

Attempting to implement digital transformation initiatives and actually succeeding with them are not the same. Research findings from multiple sources reveal that businesses struggle with their digital undertakings.

According to McKinsey, although 80% of organizations have attempted a digital transformation project, less than one-third say it actually improved company performance.[9] The Standish Group found that 84% of digital projects "partially or completely fail."[10] Bain & Company uncovered that just 5% of companies with digital transformation report that they achieved or exceeded expectations they set for themselves.[11]

Digital interactions with customers were already important to B2B companies, but after COVID-19, it's even more critical. In a recent global survey of 3,600 B2B decision-makers, McKinsey reported that respondents valued digital interactions with customers **2 to 3 times more** than traditional interactions.[6]

A Gartner study shows that **54%** of businesses say the objective of their digital transformation strategy is transformational, whereas **46% say** the objective is optimization.[7]

Digital Workplace Mandates

While COVID-19 has thrust other areas of the business into the spotlight, such as customer engagement, the workplace is undoubtedly a critical focus for digital transformation. Businesses affected the most could be those that opposed a digital workplace and mandated employees to work from a physical workplace five days a week.

Those businesses not only found themselves in unexpected circumstances, but one that runs counter to the core tenets of their business: a **100% digital workplace**. The work-from-home disruption of COVID-19 equally presented challenges for organizations with a partially remote workforce. For example, the combination of work-from-home employees and other factors like spouses also working from home and children home from school accentuated the challenges.[12]

While some organizations may return to work-in-office policies following COVID-19, many others may discover that having all of their employees in a fixed physical location at all times is unnecessary—and in many cases, a disadvantage. ServiceNow's CEO Bill McDermott believes COVID-19 will prompt companies to lean into a permanent digital workplace transformation. Indeed, he boldly predicts that $7.4 trillion will be invested in digital transformation by 2023.[13]

Now that the workplace has experienced work-from-home environments for a few months, the number of employees wanting the option to work from home has gone up. In fact, 43% of full-time employees say they want to work remotely more often after the economy has reopened, and 20% of them indicate their employer is actively discussing how they can offer a remote work option in the future.[14]

Gartner predicts that by increasing the number of remote staff, organizations can support **40% more employees** in the same amount of office space they currently use today.[15]

Digital Workplaces Struggle to Fulfill Expectations

Digital adoption remains a struggle for a majority of organizations. A mere 5% of organizations indicate digital transformation initiatives achieved or exceeded expectations for those projects.[16]

The Digital Workplace and Jobs

While not every job function and industry are suitable for remote work, many of the functions can be performed with little or no difficulty. A study conducted by Slack found that upwards of **75%** of the jobs in the following industries fall into that category – accounting and finance, arts and design, business development, consulting, IT and security, marketing, media and communications, product management, and program and project management.[20]

Having a more digital workplace extends tangible benefits to businesses as well. Reducing permanent office space translates into lower capital expenditures (CapEx).

A digital workplace has operational expenditure (OpEx) benefits as well. For example, research shows that remote employees work an average of 16.8 more days per year than their in-office counterparts.[17] They are 22% happier in their jobs and 13% more likely to stay with their employer.[18]

In McKinsey's global B2B survey, 95% of respondents took COVID-19 measures by partially transitioning to a virtual sales model. In that time, 55% of respondents view this change to be as or more effective than their traditional model, proving that accelerated change can be a good thing.[21]

Ready or Not: The Digital Workplace Era Has Begun

COVID-19 dismantles the remaining vestiges of the belief that a productive workforce must work from a fixed workplace during roughly assigned hours to be productive. It changes how employees are measured from time spent doing "work" in a physical office to business outcomes for many organizations. This necessitates new workplace policies and processes—ensuring that employees and their managers have a shared understanding of expectations.[22]

CIOs already recognize this market movement. "COVID-19 has been the largest experiment of testing the need for a flexible, remote-ready workforce," says Jason James, CIO at Net Health. "Post-crisis,

Nearly half of the workforce indicates they want to work remotely more often after COVID-19 mandates expire and the economy reopens.[19]

Businesses Will "Lean Into" the Digital Workplace

"People are going to get much more comfortable working in a virtual world. This social distancing is not gonna go away anytime soon, and companies that aren't already digitally transformed and able to pull this off—they have a burning platform now. They have to lean into this."

**Bill McDermott
President and CEO
ServiceNow**

many workers will continue to embrace remote work, rather than long commutes. Digital transformation projects post-pandemic will focus on improving the remote work experience."[23]

Jeff Fields, the CIO at Servpro, concurs with James: "We realize that this pandemic will serve as a catalyst for more remote opportunities, and we believe the world could be forever impacted in a way that these technologies will be critical for any part of a business."[24]

Yet, even with an acknowledgement of the opportunities a remote workforce offers, challenges still exist. The following are some of the foremost obstacles facing CIOs when it comes to IT infrastructure and a remote workforce.

Networks Pushed to the Limit

The challenges associated with the transition to a digital workplace also extend to IT infrastructure. Remote employees are further away from network access points, and application latency can become a serious issue. As the use of online services such as streaming media, virtual private networks (VPNs), online gaming, and cloud applications skyrocket—not only from remote workers but an influx of unemployed workers and school children who are now at home—many networks are being pushed to their limits.

According to 451 Research, IoT and other applications must have near-real-time responsiveness and low latency, requiring data storage closer to the network edge or device. As such, the direct-to-cloud model is insufficient or uneconomical.[25]

Design a decentralized IT infrastructure that removes data gravity barriers while accommodating distributed workflows in support of digital business with our Digital Workplace Blueprint.

The maximum number of daily meeting participants using Zoom in December 2019 was **10 million.** In March, the number of daily participants hit **200 million.**[26]

AT&T reported that use of its virtual private network (VPN) **skyrocketed 700%** after COVID-19 shelter-in-place mandates were enacted.[27]

Applications delivered through on-premises, colocation, or cloud platforms can become a bottleneck due to degradation in application performance without the right infrastructure architecture. Though originally intended to enable workers to collaborate, communicate, and manage projects more effectively, these applications can have an adverse impact on employee engagement, operational efficiencies, and customer experience.

## Hybrid IT Infrastructure Can Simplify Complexity

Certain businesses have fared well during COVID-19 lockdowns. Video conferencing applications, collaboration platforms, social media, security solutions, streaming media, and video games have skyrocketed in use. Other businesses, such as transportation, retail, and hospitality have seen historic drops in revenue.

Agile infrastructure solutions provide the flexibility organizations need during the dynamic market fluctuations that come with COVID-19. In this case, businesses need an IT infrastructure that can grow and shrink to automatically meet changing demands in real-time.

Legacy workloads, shifting patterns of network access and cloud sprawl, and multiple cloud security deployments are complex enough to manage during non-COVID-19 circumstances. The demands of the digital workplace, including the provisioning of new cloud services and applications, create variances in infrastructure requirements.

A hybrid IT infrastructure gives organizations the flexibility and scale to accommodate fluctuations in workloads and network traffic. As businesses look past the pandemic and the likely workforce and workplace permutations that take place, the ability to choose between public, private, or hybrid infrastructure environments will be driven by the unique commercial environments.

Eran Brown, the chief technology officer for EMEA at INFINIDAT, explains the relevancy of hybrid infrastructure in the face of COVID-19: "The strain on IT during COVID-19 has exposed every IT organization's unique breaking points, and all organizations will learn and adapt based on their own challenges. Since the customers already working in hybrid models suffered the least, they will come out with the upper hand and others will align with their model."[29] Hybrid infrastructure deployments will be
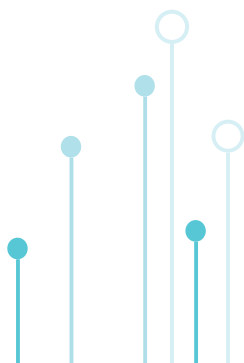
influenced by business processes, customer engagement models, and support for mass remote working in a post-COVID-19 world.

The Need for Agile Infrastructure + Digitally Savvy Skillsets

Companies that are able to act boldly and embrace digital innovation during disruptive environments like COVID-19 achieve greater success. A study by McKinsey, for example, reveals that top economic performers have a much higher tendency to build entirely new digital offerings as compared to their counterparts (46% vs. 28%).[30] It also causes a need for unprecedented business acceleration. Nearly three-quarters of IT and DevOps leaders indicate they plan to accelerate or maintain digital transformation spending through COVID-19.[31]

"As employers see that productivity can be maintained outside of a physical office, working remotely will be extremely popular for the foreseeable future," observes Sanjay Malhotra, CTO at Clearbridge Mobile. "With this in mind, I've been dedicated to investing in resources that accelerate the speed at which Clearbridge Mobile adopts digital communication technologies to adequately allow staff to stay connected, engage in company culture, and most importantly, ensure they can do their job as efficiently as they would be able to in our physical office."[32]

A digital workplace requires an evolved application toolset. "Learning how to maintain productivity—even as we return to office buildings after the lockdown ends, and even as companies continue to automate activities—will be critical to capturing the most value from this real-world experiment that is occurring."[33] To do so necessitates a hybrid infrastructure that serves digital innovation across multiple fronts— whether a new Software-as-a-Service (SaaS)-based tool, an application residing on a Platform-as-a-Service (PaaS), or Agile or DevOps application development initiatives powered by Infrastructure-as-a-Service (IaaS).

One of the challenges of the resulting distributed, hybrid IT architecture is infrastructure distribution. For example, market intelligence firm Intricately finds that enterprises utilize 27 cloud products, which are deployed and consumed across eight points of business presence globally.[31]

Further, as CIOs focus their teams on digital innovation, it is important to remember that not all team members may have the digital

Peak traffic across Comcast's network surged **32%** nation-wide, reaching as high as **60%** in metropolitan areas such as Seattle and San Francisco.[28]

| 68%	53%	50%	47%
IT Financial Analysts	Cloud Architects	DevOps Engineers	Data Scientists
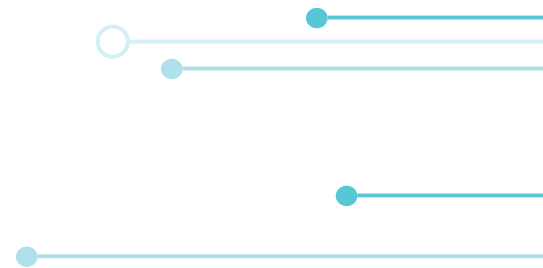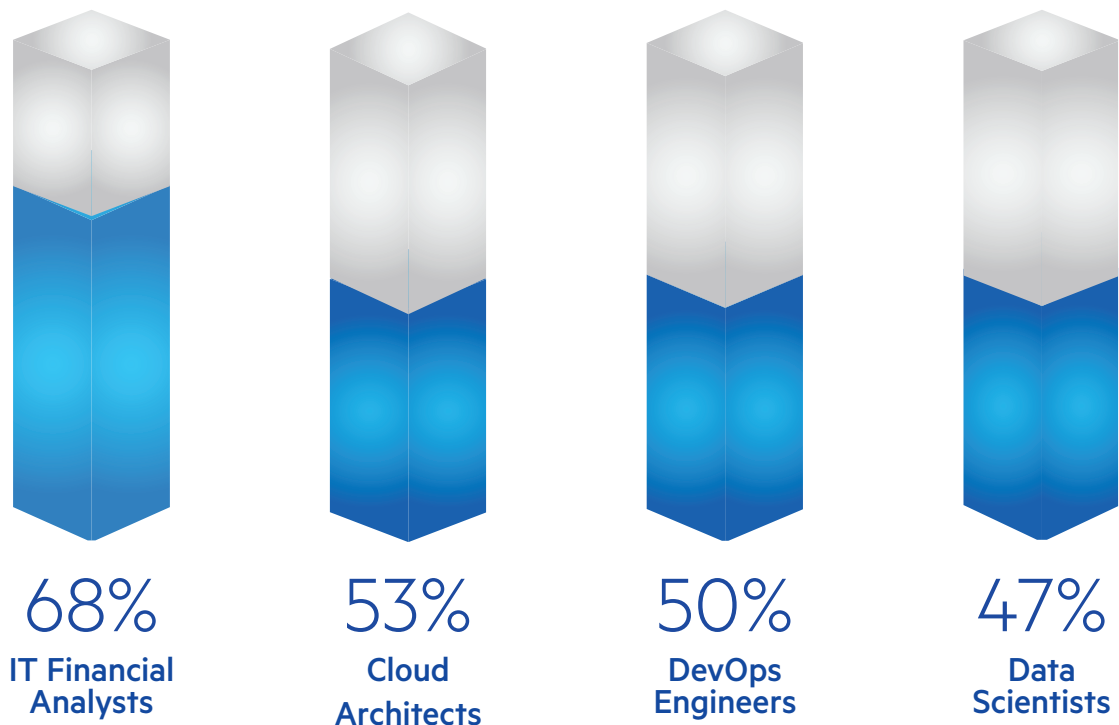
While most sectors in the marketplace are experiencing dramatic job losses or hiring freezes, IT leaders are planning to hire more staff in certain digital skill-set areas.[36]

transformation skills needed to succeed. Gary Beach explains this nuance in a recent Wall Street Journal article.[32] "[CIOs] should leverage the current business slowdown imposed by the Covid-19 pandemic to assess the digital transformation skills of every individual on their IT staff," he says. "They should build a 'digital transformation skills matrix' designed to identify IT staff members who possess the essential skills needed to implement digital transformation platforms in the post-Covid-19 era."

Cybersecurity Must Evolve and Scale

IT leaders want to optimize data exchange, but their data center provider has to keep it secure. In a 2019 451 Digital Realty IT Survey, respondents listed secure data exchanges between users, networks, clouds, and IT providers on a single DC platform as a top priority.[37]

Cybercriminals have not hibernated during the COVID-19 pandemic, but have taken this opportunity to instigate **more attacks**.[38] The U.S. Federal
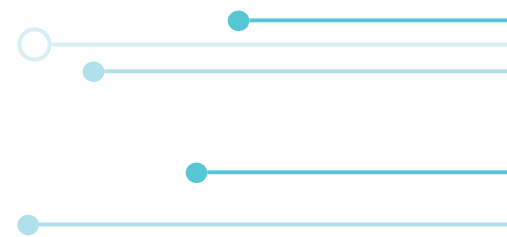
Security and compliance are near the top of IT leader priorities.[43]

Bureau of Investigation (FBI) reports a more than **400% increase** in online crime since the beginning of the COVID-19 pandemic.[39]

When it comes to infrastructure, one of the biggest areas of concern is the level of access that remote workers have to sensitive data. As many home-based workers are connecting via a weak network or without a virtual private network (VPN) when connecting to the corporate infrastructure, there is a heightened risk of bad actors hacking into their communications or connections. To help protect against malicious attacks on infrastructure vulnerabilities, CIOs need to ensure that all remote access points and endpoints are protected.

According to Kelly Bissell, a global senior managing director at Accenture Security, one upside of the security challenges of COVID-19 is that "business leaders understand the enormity of the job that their CIOs and CISOs face and the importance that these functions have on their business. For many organizations, their business runs off their digital capabilities—if the digital capabilities aren't available, the business cannot operate."[40]

Some assume a reduction in the volume of cyberattacks once COVID-19 subsides when the opposite is more likely. Many business leaders and board of directors witnessed how many of their systems failed or observed how the lack of systems created huge obstacles. They see an opportunity for massive levels of change and improvement that will release a massive wave of disruption.

This period of disruption will "present opportunities for hackers," and the digital workplace is certain to be one of the targets in their crosshairs. The cybersecurity risk gap "between threats and defensibility isn't going to close naturally; that curve isn't flattening," observes Accenture Security's Bissell. "New cybersecurity risks are going to continue to emerge, and defensive capabilities have to continue to try to stay ahead."[41]

IT leaders understand this challenge, with investments in information security and compliance near the top of their list of priorities during the COVID-19 pandemic.[42]

Digital Disruption of the Workplace Means the Future is Now

Organizations with digital transformation strategies have been able to weather the COVID-19 storm better than those that had failed to plan. The near real-time shift from full in-office workspaces to work-from-home environments will merely accelerate the digital transformation of the workplace.

For too many others, their remote worker architectures are not suited to the modern digital workplace. Using the classic centralized infrastructures of the past prevents the optimization of latency-sensitive and data-intensive modern application workflows.

The design of today's digital workplace experience provides opportunities and challenges. It requires a decentralized IT infrastructure that optimizes workflows and scales digital business. Our **PDx™ Digital Workplace Blueprint** is designed by practitioners and for practitioners to accelerate deployments and improve infrastructure precision on a global scale. With it, you'll learn how to achieve an optimized remote workplace with a performant, ubiquitous, always-on, and secure access to applications and data.
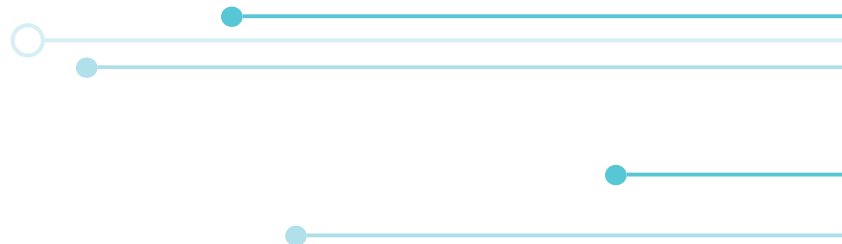
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About

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