

# A MODERN DATA CENTER IS ESSENTIAL FOR THE DIGITAL ECONOMY

## ARE YOU READY FOR DIGITAL BUSINESS?

A Gartner, Inc. survey found that 59% of surveyed IT professionals believe their IT organizations are unprepared for the digital business of the next two years.<sup>1</sup>

## WHAT'S DRIVING IT TRANSFORMATION?

IT leaders are under more pressure.

- 39% seek to reduce IT infrastructure costs
- 32% want to improve security
- 32% want to improve IT service levels
- 28% seek to respond to new business requirements<sup>2</sup>

## The Digital Economy Gains Momentum

The digital economy is transforming every industry, driving rapid, fundamental changes in businesses and their operating models. These changes aren't simply a passing trend, but the new reality. Today's companies need to deliver on the service expectations of their digitally empowered customers. The expectations go beyond ease of use; it's the customer experience that really matters. Consumers demand proactive, personalized experiences—whenever, wherever, and however they do business.

Organizations are looking to new business and operating models to meet these changing expectations. Digital disruptors are shaking up the rules, using fast innovation to gain market share and pull ahead of challengers who are still clinging to traditional business models. Companies like Uber, Airbnb, and Spotify are transforming their markets and putting huge pressure on competitors across their industries.

In this environment, companies that can bring new applications and services to market fastest will have an edge over their competitors. That means their IT leaders must embrace change to keep up with a dynamic marketplace.

## Digital Transformation is Impacting IT Priorities

To meet the ever-increasing demand for faster innovation, business stakeholders are asking more from the IT teams that support their initiatives. Organizations need a more agile, service-oriented IT model that employs both private and public clouds, and the data center is at the heart of this new approach. However, IT executives and managers like you face major challenges in building data centers that support the demands of agile businesses, modern applications, and integrating the public cloud.

### Managing Complexity

As your IT environment grows and evolves, chances are it has become much more complex. You might be running a diverse mix of environments and devices in different infrastructure siloes that you've built up over the years. This complexity is a huge challenge if you're trying to make your operations more efficient and agile. Managing disparate parts of the infrastructure is resource-intensive, and forces your employees to waste time on operational problems instead of focusing on more strategic projects.

<sup>1</sup> "Gartner Survey Finds That Two-Fifths of IT Professionals Consider Their IT Organisation Ready for Digital Business," Gartner press release, July 13, 2016.

<sup>2</sup> "IT Execs Are Challenged by Digital Transformation," Karen Frenkel, CIO Insight, December, 2016

You may have not yet automated the secure, standardized delivery of resources like networking, security, and the infrastructure that supports application development. Without automation, your technical teams are saddled with manual processes, cumbersome scripting, and multiple hand-offs between teams to get new applications to market.

### Keeping Up with the Latest and Greatest

Accelerating technology changes present opportunities but can present challenges as well. You're under constant pressure to support the latest hardware, tools, and cloud services—while continuing to leverage your existing investments and avoiding vendor lock-in. And you need to be able to run not only traditional applications, but newer technologies like cloud-native applications, containers, and micro-services based architectures.

### Getting the Most From Limited Resources

Not all IT issues involve technology alone; operational concerns can also create real challenges. In a world where your budgets are static or even shrinking, traditional infrastructure environments may be too expensive to purchase, costly to maintain, and difficult to scale. Acquiring and keeping top IT talent isn't easy, and keeping resources focused on strategic projects is also challenging. It's difficult to focus on growth and innovation when your best engineers are spending most of their time putting out fires.

To overcome these challenges, you need a modern data center that gives you the agility you need to meet the new demands of the digital economy—together with the flexibility to be more proactive and shift resources to strategic initiatives.

### WHAT IS A MODERN DATA CENTER?

A modern data center is highly virtualized, software-defined, automated, and extensible to the public cloud.

### Getting on the Path to a Modern Data Center

A modern data center gives you the agility and scalability you need to support rapid business innovation and growth. It's based on a highly virtualized, software-defined, automated platform that's extensible to the public cloud. Elastically scalable and enterprise-ready, it provides a consistent operational model across hybrid clouds. With a modern data center approach, you gain the security, compliance, and availability required to support traditional and new cloud-native applications and business requirements. Every digital transformation journey is unique, so best practices recommend you proceed at the pace that best aligns with your strategic IT priorities to meet business needs.

### Virtualize for Agility and Flexibility

The primary step in data center modernization focuses on virtualizing compute, storage, and networking, to abstract the data center resources from the hardware into the software layer. Management and automation tools reside on top of the stack, to create one common software-defined platform that can easily extend to the public cloud.

The emergence of hyper-converged infrastructure (HCI), where the three tiers of the stack (compute, storage, and networking) all converge in one software-defined, integrated solution provide one way to modernize the data center. HCI lets you employ industry-standard x86 servers with directly attached storage as cost-effective, highly scalable building blocks with software-defined compute and storage—which can be seamlessly extended with virtual networking.

#### ARE YOU USING AUTOMATION?

55% of surveyed organizations plan for automated infrastructure and application deployment.<sup>4</sup>

You can progress toward a modernized data center by deploying all three tiers of the infrastructure stack as part of an HCI integrated platform. Or you can take an evolutionary approach, and virtualize the compute, storage, and network layers independently over time. Adding a unified management solution lets you automate infrastructure and application delivery, as well as effectively manage performance, availability, capacity, and the cost of IT services across heterogeneous and multi-cloud environments.

#### Automate to Streamline

Automation is a key advantage of a software-defined approach to the data center. Automating the delivery and ongoing management of a modern infrastructure and applications enables your IT organization to become a more agile, strategic business partner. Instead of building and delivering infrastructure and application resources individually, you can model them as blueprints, with embedded automation and policies. You can streamline provisioning of production-ready infrastructure and application components from weeks down to minutes, and manage them more easily through their lifecycle. And you can help your organization roll out apps more frequently and quickly, with security and control.

#### Delivering Benefits That Span the Entire Organization

It's clear that the pathway toward a modernized data center provides a high level of flexibility through a software-defined approach based on virtualization and automation. It lets you lay the foundation for a more agile, scalable, cost-efficient organization.

#### Deliver the Agility Your Business Needs

Agility is top of mind in our digital economy, and a software-defined approach helps you deliver it by powering faster deployment, streamlined operations, and improved scalability of the IT resources and applications that your business stakeholders need. When you automate the delivery and management of production-ready infrastructure and application components, you reduce provisioning time, improve resource utilization, and eliminate error-prone processes. The result is faster response to business needs, and more rapid time to market for the entire organization.

#### Scale Easily for Change

Moving forward on the data center modernization journey is the smart way to help scale your IT resources more effectively to meet fast-changing market needs. With automation capabilities, you can provide full application stacks on demand, with robust governance capabilities. Employing a hybrid cloud as part of your strategy lets you keep pace with change as well, by scaling from the data center into public clouds for infrastructure scale, consolidation, migration, and application modernization. At the same time, your organization can continue utilizing the same tools, processes, and skillsets.

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<sup>4</sup> Multi-Cloud Environments are Becoming the New Normal for IT, Dimensional Research, February 2016

### ARE YOU ACHIEVING RETURNS ON YOUR INVESTMENTS?

According to a Forrester Total Economic Impact Study, organizations increased operational efficiency by 20% and reduced unplanned downtime by 75%.<sup>5</sup>

### TRUSTED LEADER

IDC has named VMware the leading market share vendor in both Data Center Automation and Cloud Systems Management for three consecutive years.<sup>6</sup>

### Take Control of CapEx and OpEx

In an environment of tight budgets, it's not easy to modernize your data center while keeping costs in line. Virtualizing and automating the data center lets you do both. A virtualized environment lets you reduce capital expenses by taking advantage of server-side economics and on-demand scaling. Instead of investing in expensive traditional infrastructure components, you can employ a software-based approach to rapidly scale up or scale down resources when conditions change.

You can also save money on operating expenses by automating manual tasks to improve productivity, consolidating management tasks, and improving IT resource utilization. With a more agile environment in place, you can help your developers be more productive and efficient by delivering open APIs, infrastructure, and application environments sooner. This level of development support is key for today's cloud-native apps that employ container technologies and microservice based architectures, and change frequently—sometimes in hours or minutes.

### Tapping the Potential of Digital Transformation

The fundamentals of business are changing, and digital transformation is setting up exciting opportunities for IT leaders. To deliver the agility and innovation your business stakeholders demand, you need to modernize the data center to meet increasing demands.

With a cost-effective, evolutionary approach to modernizing the data center, you can rapidly unleash the efficiencies you need to stay competitive in a digital economy—while continuing to utilize your existing investments in tools, skills, software, and hardware. With a modern software-defined data center that extends across private and public clouds that is secure and scalable, you'll be able to meet the speed and agility needs of the business through faster, on-demand delivery of infrastructure and applications.

VMware offers a rich set of offerings to modernize the data center, including solutions to enhance the infrastructure through best-in-class compute, storage, and network virtualization; and automate IT operations with industry-leading cloud management technologies.

### LEARN MORE

Get on the fast track toward a fully modernized data center.

[www.vmware.com/go/modernize](http://www.vmware.com/go/modernize).

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<sup>5</sup> Forrester Total Economic Impact Study, "The Total Economic Impact™ Of vRealize Intelligent Operations - Cost Savings and Business Benefits Enabled By VMware's Cloud Management Platform" Nov 2016

<sup>6</sup> IDC, Worldwide Datacenter Automation Software Market Shares, 2015: Year of Suite Success, June 2016 IDC, Worldwide Cloud Systems Management Software Market Shares, 2015: Year of Continued Expansion, June 2016