



# Innovation Begins with Transformation

VMWARE IT PERFORMANCE ANNUAL REPORT 2021

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## From the CEO



“We find ourselves at a pivotal moment in a world struggling with so many challenges, new and old, and our goal at VMware is to contribute fundamental platforms to move us all forward. We achieve this by delivering a trusted foundation that accelerates innovation for our customers. This requires engineering, and our IT department plays a big part.

Beyond its role as customer zero, VMware IT enables our own internal SaaS transformation, allowing us to deliver innovation at the speed our customers need to accelerate their business today and in the future.”



Raghu Raghuram  
CEO, VMware

## From the CIO

There's a well-known saying from the Middle Ages: "The king is dead; long live the king." While the phrase seems contradictory, it's making a point about continuity: As one phase ends, the next begins.

It's the same with business transformation. As a CIO, I've seen one transformation-digitization-modernization project after another in a line that stretches to the horizon. So, while it's true that transformation is a journey, I think it's more useful to say that the business transformation of today is more of an attitude.

What I mean by this is that transformation is a choice we make every day. As business and IT leaders, we are called on to model this mindset so that it permeates our organizations.

Like many other enterprises, we at VMware are managing multiple transformations at once. We're modernizing our application portfolio, readying employees for the hybrid work future, and working to deliver customer services faster. We're improving how we partner with our product teams and deliver value to the business, and transitioning to a software-as-a-service (SaaS)/subscription model to better serve our customers. And, like you, we want to run faster, better and smarter while making a minimum of trade-offs.

Despite the pace of change, I'm optimistic about our ability to manage these transformations. The past year showed us how responsive and resourceful we can be in the face of unexpected events. It also proved that IT is a key enabler and driver of the business. The adoption of distributed work has also given us a wider pool of talent to choose from.

To those realities, I'd add these guiding principles:

- Focus on delivering a great experience to customers and colleagues. We made **delight** our measure of success because it pushes us to go past the expected.
- Balance the strategic and technical with **empathy and humanity**. No one cares how much you know until they know how much you care.
- Take the time to **get the foundation right**. Given that VMware is a multi-cloud platform company, you might expect this from me. But in the broadest sense, a little extra time and effort upfront—the right plan, buy-in from key stakeholders, a clear focus on outcomes—is a critical investment.

Last year's report noted that "2019 was a wildly transformative year" for us, our customers and our partners. That certainly applies to 2020 and 2021. With transformation as an attitude, we can say the same thing about every year to come.

Please read on to learn more about the projects we're pursuing and the progress the team has made. I'm honored to be heading an IT organization of such talent and accomplishment. And I hope you're as energized as I am about the many opportunities for IT teams to lead our businesses into the future.

The transformation is complete; long live transformation!



**Jason Conyard**  
CIO, VMware

## VMware IT Today

At VMware, transformation touches on every aspect of our workplace. Like many enterprises, we are navigating what that means for our business. It means we're embracing new ways of operating, such as modernizing our apps to create a more agile enterprise. It also means we're employing new technologies and launching innovative projects to make it easier for colleagues to access the tools they need. We're adopting advanced solutions that anticipate technical issues and accelerate problem resolution. And we're optimizing sales and marketing efforts with technologies that help us transition to a SaaS model. This level of change can feel chaotic for some and has others grappling with the realities of brittle infrastructure and old ways of doing business.

Our goal in VMware IT is to create an agile, resilient and scalable IT foundation to help our business navigate the various transformations we, and the industry, are facing.

In this report, we share observations from the past year through the lens of several of these transformations: cultural transformation, cloud transformation, workspace transformation and security transformation.

# Cultural Transformation



The future is calling:  
How do you answer?

# Cultural Transformation

For many large enterprises, digital transformation is no longer just about going digital. The digital customer experience has become the standard for many—a reality that will likely continue as health concerns and other circumstances continue to redefine commerce. For this, we focused on expanding our transformation lens to customer and employee experiences, and a culture of innovation.

## Ensuring an innovative culture

Innovation is necessary to solve new technical and business challenges. For this reason, VMware IT emphasizes a culture of innovation that has net-positive effects on every aspect of the business.

A shining example of our commitment to cultural transformation is our AI and machine learning (ML) center of excellence (CoE). This was created to extend the VMware data-driven vision by using AI and ML organically to streamline internal processes, create better products, and improve customer success engagements. Within the CoE, we created an ML marketplace to provide an area for uploading and sharing AI and ML tools and application enhancements, and to encourage the development and growth of innovative solutions.

One example spawned from this data-driven vision is the use of natural language processing to reduce internal and external customer engagement times.

Another example of our culture of innovation is the IT-focused efforts on patent submission awareness. This came about because leaders wanted to challenge the mindset held by many IT professionals—that patents are reserved for research and development (R&D). And so began the journey to break down internal silos. Teams were encouraged to submit their ideas to a group of IT subject matter experts (SMEs) acting as reviewers. To further motivate innovators and build talent, the top ideators were included in a VMware IT version of *Shark Tank* and were given targeted problem statements with competitive events to accelerate problem resolutions. These efforts encouraged innovation and resulted in a 216 percent increase in submission of invention disclosures and 87.5 percent year-over-year (YoY) growth in the number of approved applications for filing patents—all supported by the VMware Legal and Patents teams. Additionally, due to a higher sense of work autonomy, employee satisfaction improved.

# 216%

increase in submission of invention disclosures from the IT team in just two years

# 87.5%

YoY growth

## The power of human inclusion

At VMware, we celebrate our people from a wide variety of dynamic backgrounds, experiences and perspectives. We deliver transformative IT solutions by harnessing the power of human difference and building a community that is inclusive and diverse. VMInclusion, our diversity and inclusion initiative, is a business-led effort to attract and engage the multinational, multicultural talent critical to our globally connected business. To learn more about how VMware values and supports the diversity of our colleagues, check out our diversity, equity and inclusion [report](#).



“VMware IT enables our employees to work from anywhere, securely and with increased flexibility, which provides VMware with access to a greater pool of talent from around the world. It is a very compelling, strategic and systemic approach to creating equal opportunity and inclusion. And I think it’s a true proof point to VMware IT accomplishments in diversity, equality and inclusion.”

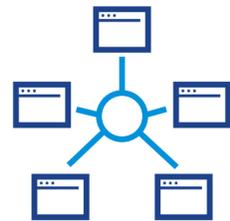
Nicola Acutt  
VP of Environmental, Social, Governance  
and Sustainability, VMware



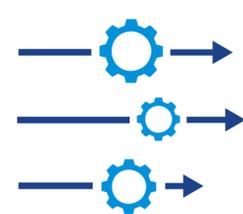
## Enabling SaaS transformation through data science

Fostering a culture of innovation helps bring many ideas to life. One of these is the VMware enterprise data science platform. This end-to-end ML platform is built on and uses VMware products, and offers elastic compute for running graphics processing unit (GPU)-enabled ML loads. Elastic compute is a web service that provides more secure, resizable compute capacity in the cloud. It is designed to make web-scale cloud computing easier for developers. The platform also provides an isolated development workbench, no-code and low-code model development and deployment, and run-model monitoring.

The platform is used to develop and deploy models that enable:



Positive impacts for key business functions and key performance indicators (KPIs), including customer success, sales, marketing, finance and human resources (HR)



Better design of products and services



Data-driven decisions, operational efficiencies, and risk management

As SaaS transformation continues to influence the VMware IT innovation culture, we're pivoting in several key areas to drive organic adoption of operational and business changes. The beginning of our digital transformation was tied to evolving from the legacy model of creating and selling perpetual software to a SaaS and subscription approach. To enable this transformation, VMware IT owns products and technologies designed to improve the customer lifecycle experience and positively affect the Net Promoter Score (NPS) and other subscription business metrics.

These products and technologies include:

- Unified customer identity
- Digital marketing
- Order-to-cash (O2C) commerce (including self-service)
- Issue-to-resolution processes

Our continuing SaaS transformation requires a redesign, not just of our internal systems (including ordering, billing and support), but also of expectations around cloud service-level agreement (SLA) and service-level objective (SLO) products as a critical dependency for offering end-user license agreements and terms of service.

Incorporating concepts—such as fail fast systems, which immediately report any condition likely to indicate a failure, and product customer experience (CX) methodology—helps us be more agile and more cost effective by minimizing technical debt. We also continue to focus on design thinking and the end-to-end user experience with our own products as well as other vendors' SaaS applications.

# Cloud Transformation

What do cloud economics tell us?

# Cloud Transformation

Businesses increasingly deploy on public clouds, but many of the decisions are still based on CapEx/OpEx metrics previously used for on-premises data centers. To truly leverage the benefits of cloud transformation, VMware IT envisions a sea change in the way our business operates by rethinking the art of the possible.

One example is how critical business applications used to be deployed. In the not-so-distant past, large monolithic database and enterprise resource planning (ERP) applications required combined efforts of external vendors, partners and consultants, as well as in-house SMEs and IT staff. The specialization of each app deployment created IT silos. There were long test cycles and even longer deployment cycles, and achieving the desired performance often necessitated significant hardware upgrades. The business cost of these cycles was tremendous, and by the time the new system was deployed, the next updates were already being planned.

Compare this to today, where in-house application developers can make updates to business-critical systems as soon as requirements change. Cloud platforms are malleable and resilient, as they have inherent business continuity and disaster recovery (BC/DR) features. Transforming to the cloud changes

the velocity of business, allowing faster response to changing market conditions and using new technologies much faster to prepare for the next wave of growth.

A single operating model across the data center, public cloud and edge exemplifies the benefits of cloud and multi-cloud economics by:

- Reducing operating costs by 41 percent (CapEx and OpEx)<sup>1</sup>
- Improving IT responsiveness to the business by 29 percent for faster time to value<sup>1</sup>
- Improving the ability to serve customers by 28 percent, resulting in greater customer satisfaction<sup>1</sup>
- Accelerating the delivery of application features and releases by 28 percent for increased business velocity<sup>1</sup>

The capabilities of cloud platforms continue to grow. Meanwhile, hybrid data centers and edge computing can ease the cloud transition and allow for localized systems that have specific performance or security requirements.

1. [VMware. "How to Achieve Cloud Success with Hybrid Cloud Management." September 2020.](#)

41%

reduced operating costs (CapEx and OpEx)<sup>1</sup>

29%

improved IT responsiveness to the business for faster time to value<sup>1</sup>

## Controlling multi-cloud cost and compliance

In a survey from [Flexera](#), 750 global cloud decision-makers and users of the public, private and multi-cloud market shared their current and future cloud strategies.<sup>2</sup> Ninety-three percent of respondents have a multi-cloud strategy, and 83 percent are either at the intermediate (apps running in the cloud) or advanced (heavily using cloud) stage of deployment. The biggest challenge for all: controlling cloud spend.<sup>2</sup>

In 2017, not long after VMware signed our partnership with Amazon Web Services (AWS) to build VMware Cloud™ on AWS, our public cloud use began its rapid, organic growth trajectory. Internal users across VMware began to experiment. The cost of this experimentation was mostly hidden in expense reports. We realized we needed to embrace public cloud as a legitimate source of computing resources for our users, and enable them to consume public cloud safely and responsibly. We identified the need

for a CoE to quickly adapt to public cloud management and enable the rest of the organization along the way. The VMware Cloud Business Office was created.

Growing from small beginnings, we combined all of our public cloud consumption to fall under the Cloud Business Office, highlighting areas for optimization and making it all visible through a new service from CloudHealth Technologies. The CloudHealth® platform impressed us for many reasons, including the high dollar value of assets under management, the strength of the platform’s features, and the willingness of the professional services team to walk the journey with us. A year later, VMware acquired the company.

2. [Flexera. “Flexera 2021 State of the Cloud Report.” March 2021.](#)

## The biggest challenge for all: controlling cloud spend

28%

of 750 respondents improved the ability to serve customers, resulting in greater customer satisfaction and accelerated delivery of application features and releases, increasing business velocity.<sup>2</sup>

83%

of those surveyed are either at the intermediate (apps running in the cloud) or advanced (heavily using cloud) stage of deployment.<sup>2</sup>

93%

of cloud decision-makers have a multi-cloud strategy.<sup>2</sup>



VMware is by nature an engineering-led, decentralized organization when it comes to decision-making, so we put CloudHealth to work to tackle the problem of how to put cloud waste cleanup on autopilot while acknowledging our decentralized culture.

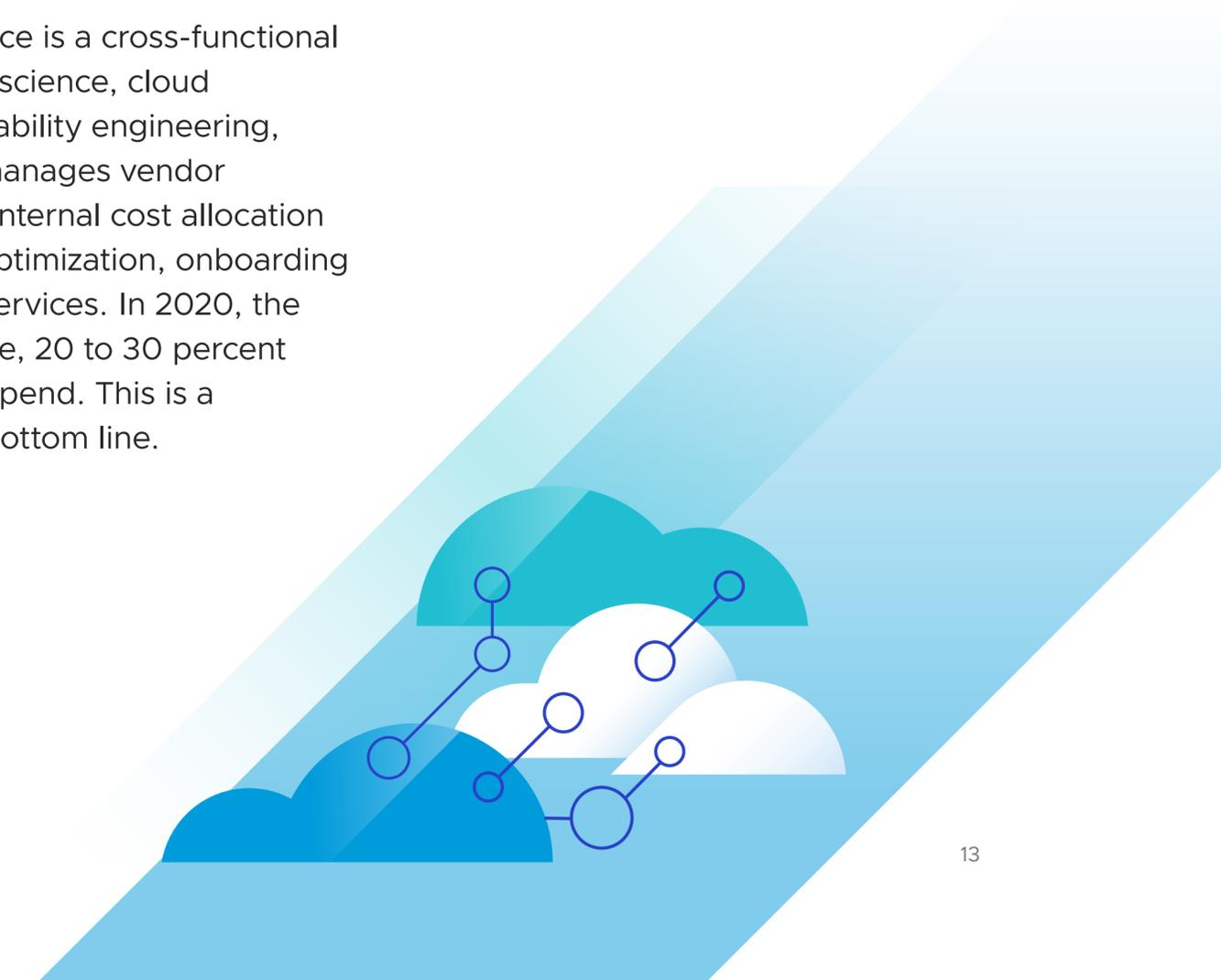
Fortunately, timing was on our side. There was a top-down mandate to slow the growth of public cloud spend. Our CloudHealth initiative was a solutions library for cloud and Kubernetes. We made sure to “inner source” the library (think open source except released only within VMware) so people would be comfortable with our solutions, and so we could enable all engineering contributions and collaboration. Our engineering community rallied around the shared objective to develop better automation for cloud waste management. The Cloud Business Office gained respect and reputation as an engineering organization—essential for acceptance in the VMware engineering-driven culture.

With reputation established, we pushed further into the business with monthly interlock meetings. The goal of these meetings was to highlight cloud cost insights and optimization opportunities, and drive accountability to take the necessary actions. Compiling the data was manual and time-consuming, so we built a custom view on top of CloudHealth to automate the insights. This work led to a new multi-cloud feature in CloudHealth called FlexReports, which enabled the insights for the interlock and also helped build our equitable chargeback capability.

Today, the VMware Cloud Business Office is a cross-functional team with diverse skills in finance, data science, cloud architecture, strategic sourcing, site reliability engineering, and development. The team centrally manages vendor relations, contracts, accounts payable, internal cost allocation (chargebacks), cost optimization, rate optimization, onboarding and offboarding, and cloud advocacy services. In 2020, the Cloud Business Office drove, on average, 20 to 30 percent savings over unmanaged public cloud spend. This is a significant dollar value to the VMware bottom line.

# 20–30%

The average savings the Cloud Business Office drives over unmanaged public cloud spend. This is a significant dollar value to the VMware bottom line.



While the Cloud Business Office has an advisory capacity when it comes to choosing a vendor for a use case, they do not make the final decision. The Cloud Business Office enables our business units with information and advice, and they choose the platform(s) that best meet their needs. Similarly, we do not get involved in the workload deployment process. However, it is imperative for accurate cost allocation and optimization that workloads have certain mandatory tags. Tagging is difficult to get right, particularly when the control of how tagging is applied is distributed so broadly (basically, anyone who can create a resource can apply whatever tags they like). We focus on what we can control, which is tags at the cloud account level. Creation and deletion of cloud accounts is easier to govern and happens far less often than creation and deletion of resources.

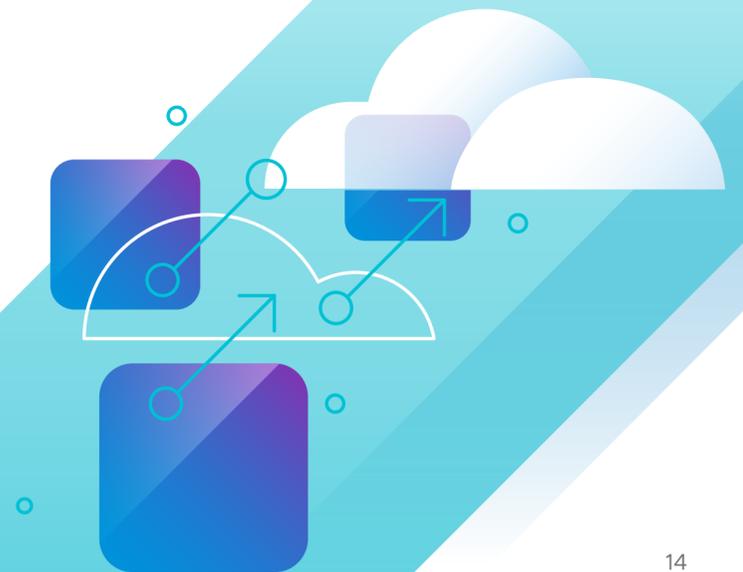
## Multi-cloud at VMware

Additionally, we see both disaster recovery and vendor sensitivity as leading reasons to offer the same service from multiple clouds. Multi-cloud at VMware means we have production workloads on multiple cloud vendors, but we typically do not deploy any single workload (think application) across different clouds (or deploy various parts of one application on different clouds) unless we have interface consistency.

Interface consistency is the key enabler for smooth and efficient service operations on multiple clouds. VMware vSphere® is one such interface that exists in private cloud, AWS, Google Cloud Platform, and Microsoft Azure. Kubernetes is another consistent interface across clouds, providing container orchestration.

However, to reduce all public cloud capabilities to only those with common interfaces would devalue each vendor's unique selling point. This is why we encourage our colleagues to explore each cloud vendor on their individual merits and create a business case based on the best choice for our needs.

Multi-cloud is mainstream. Most enterprises recognize that the key to optimizing public cloud for business benefit is to centralize the cloud business management function. The VMware Cloud Business Office should enable safe, efficient and effective use of public clouds while offering choices for us to take full advantage of the unprecedented landscape of vendors that can run our workloads.



# Workspace Transformation

A decorative diagonal line starting from the bottom left and extending towards the top right, transitioning from a light blue color to a green color.

How do we design an enriching  
and collaborative work environment  
for the new hybrid world?

# Workspace Transformation

The pandemic is a collective example of how enterprises across the globe, in every industry, had to suddenly focus on strategies for recovery instead of growth. Facing global office closures, VMware IT responded by supporting future readiness and alignment with an “employees first, customers always” mindset.

## Three phases to being future ready

**Responding** was the first of three phases designed to rapidly equip colleagues to thrive in a secure, distributed environment. We then **adapted** with targeted investments to increase automation and flexibility, new models for collaboration, and zero-touch onboarding. We also transformed data center operations to support a remote workforce, labs and the distinct requirements of R&D, all while keeping the essential onsite team safe and available.

Next, we **accelerated** how IT introduces new technologies in the workplace. This includes operational refinement, the expansion of SaaS offerings to support customer cloud journeys, and a continued push to drive growth and innovation.

Throughout these phases, IT created a virtual reality at work service to turn colleague communication, onboarding, sales enablement, and other business interactions into dynamic and immersive live experiences. This included the use of virtual whiteboarding tools to improve collaboration for productive problem-solving and design discussions. Additionally, using AI and ML, we identified user preferences through predictive analytics and adaptive learning to personalize future experiences. For example, voice-first technology uses simple voice commands to connect colleagues with the people and applications they need.

VMware IT is actively engaged with thousands of customers globally to address their unique challenges. We continue to work closely with cross-functional teams to define and activate our strategy for the future with frictionless onboarding, a people-first strategy, and by embracing the hybrid workspace via immersive technologies.

## Frictionless onboarding

As work is continuously redefined, onboarding for new hires is greatly affected. Historically, managers do most of the work for onboarding new hires. To speed things up, VMware IT moved to VMware Workspace ONE® and token-based authentication, simplifying the process and preventing unauthorized access. Now, new hires receive a token authentication link, create a password, enter an email address, and set up a token.

These easy steps provide a frictionless, secure experience that has new employees set up and ready to start working within one hour—without visiting an office or contacting the different people involved in onboarding. After setting up Workspace ONE Verify with a fingerprint, individuals no longer need to enter a code for multifactor authentication (MFA) on the Workspace ONE portal. To finalize the enrollment of their smartphones, they simply install the Workspace ONE Intelligent Hub app and sign in with their credentials. They immediately have access to the same applications and resources on their laptops.

Employee experience improvements include:



SD-WAN for working from home to improve internet connection quality for colleagues when outside a VMware office



Online visual collaboration through whiteboarding, storyboarding, brainstorming and agile management



Mail and calendar analytics to help colleagues better manage their time, priorities and work/life integration

## People-first strategy

Even before 2020, VMware had made improvements to prepare for the future of work, including transitioning from on-premises to SaaS tools and enhancing our network and virtual private network (VPN) architecture and virtual desktop infrastructure (VDI) capacity. In addition, our internal community platform, VMware Social, provided a place for VMware groups to converge online. We also created a global online IT help desk, Oasis Online, for delivering in-person, video, telephone and chat support to our colleagues. Once we shifted to 95 percent of colleagues working from anywhere with no hiccups, we moved to fill gaps in our services and portfolios. We reinvented our device support and new hire onboarding process and launched several new capabilities.



“The ease of it all makes Workspace ONE a must-have for every environment. The VMware onboarding experience is unlike anything I’ve ever been a part of. I give it 5+ stars. In less than an hour, I had everything set up and was ready to start my new career. With the onboarding made so simple, I already felt connected to VMware. When my first day arrived, it felt like coming home.”

New engineer for a VMware partner

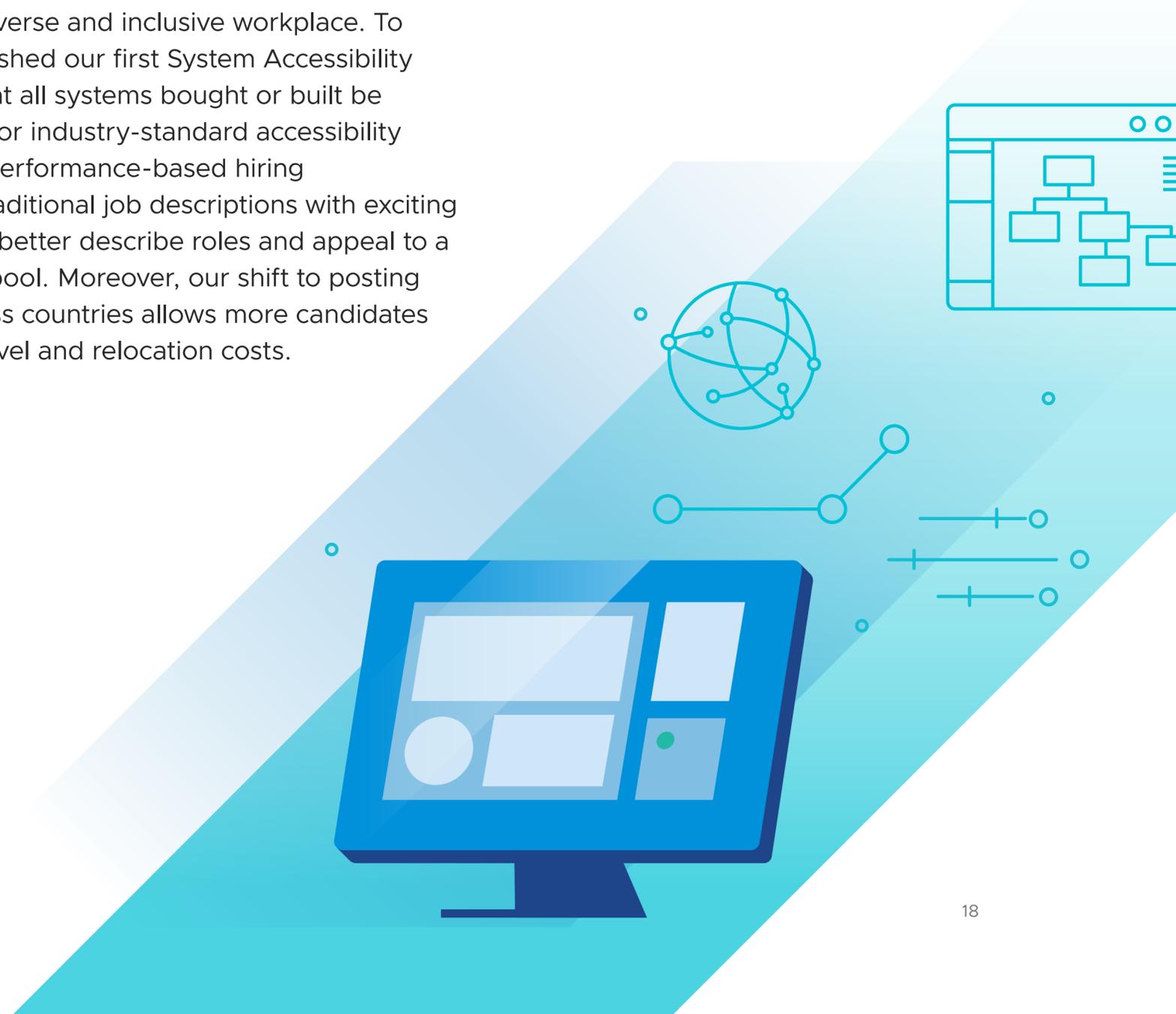
Beyond just providing tools, the role of IT expanded to include a focus on best practices, meaning helping colleagues understand and adopt hybrid work behaviors. We even published a set of work practices that includes advice for hosting effective meetings, collaborating asynchronously, and shortening meeting times. IT also supported VMware's people-first strategy by building homes for new Regional Communities on the VMware internal social platform. Our 11 Regional Communities replace the outdated thinking that communities are tied to office locations, shifting instead to groups of colleagues who share experiences and interests based on wider geography and business unit presence.

Pushing the envelope, we took our virtual reality (VR) investments out of the lab and into production. Colleagues can now borrow VR headsets to participate in virtual meetings, workshops, offsites and fun social events. The Workspace ONE platform allows us to manage these headsets like any other mobile device, ensuring a safe and secure experience for all.

To provide better support in the hybrid workplace, we shifted our Oasis Tech Bars from offering in-person support to being completely remote. Online chat quickly became the most popular way to request support, and we deployed chat across all major collaboration platforms, including our intranet, Microsoft Teams, Slack and VMware Social. We also onboarded Oasis Online teams in new countries in

Central America and Asia, and began offering local language support in Spanish, Mandarin and Japanese to better meet our colleagues where they are. The response has been enthusiastic.

As so much of our work is now online, it's essential for VMware to continue enabling a diverse and inclusive workplace. To answer this call, we published our first System Accessibility Policy, which requires that all systems bought or built be reviewed and approved for industry-standard accessibility requirements. Our new performance-based hiring methodology replaces traditional job descriptions with exciting employment visions that better describe roles and appeal to a more diverse candidate pool. Moreover, our shift to posting jobs as remote-first across countries allows more candidates to apply, and reduces travel and relocation costs.



Going forward, we plan to focus less on adding commodity IT services and more on rationalizing the ones we have. We hear our colleagues who want us to reduce duplication in commodity services so we can increase investment in emerging capabilities. This means we'll need to make tough decisions as we revise our IT portfolio, but the result will be a more cohesive IT landscape with tighter integration, reduced overlap, and a more seamless collaboration experience. Technology innovation will be the glue that binds us together rather than a wedge that keeps us apart.

We look forward to continued collaboration and parity of experience between the office and remote locations. To guide this work, we rely on the tenets of privacy, sustainability, accessibility and colleague satisfaction.

## Frictionless = Delightful



“I spent the last six years in various technology leadership roles, focusing on creating a frictionless and delightful employee technology experience. Onboarding a new employee is one of those ‘first-impression moments’ that matter—where an employee sees firsthand the tools and resources they will use as part of their job. I wanted to experience our onboarding process firsthand and challenged myself to be completely self-service, with no assistance.

With very little instruction, which came in the form of one email, I was able to log on to my laptop, get my iPhone and iPad set up, and was off to the races. I know I broke the rules—I was supposed to wait until the new hire orientation for someone to walk me through it—but VMware passed my onboarding test of being intuitive and frictionless with flying colors!”

**Jennifer Manry**  
Industry Solutions Group VP, VMware

## Enhancing the hybrid workplace via immersive technologies

Throughout 2020 and 2021, our Colleague Experience Team was busy delivering thought leadership, user experience (UX) research, UX/user interface (UI) design, and facilitation services for creative sessions. We focused much of our efforts on exploring how to enhance the hybrid work experience through immersive technologies.

In 2020, we launched the Work 2.0 research campaign, which later became the global VMware Future of Work program. The program's early adopters provided valuable end-user work/life insights, resulting in internal colleague personalization profiles being updated and extended to meet emerging remote work and management needs. Additional findings were translated into our work practices resources and shared with our global distributed workforce. We continue to engage with colleagues through surveys, focus groups and interviews regarding ways to improve VMware IT products, systems and services.

In conjunction with our shift to remote work, we supported the efforts around using the AV Events portal to completely reimagine the VMware events management experience. With the AV team, we delivered an immersive VR experience and training capability.

## The three pillars of the Anywhere Workspace

### Workspace



- Get near-instant access to tools and equipment.
- Implement the Anywhere Workspace for ubiquitous access with all necessary technical requirements: connectivity, quality of service (QoS), data security, and regulatory.
- Ease the transition back to hybrid or onsite with pre-pandemic methodologies.

### Workforce

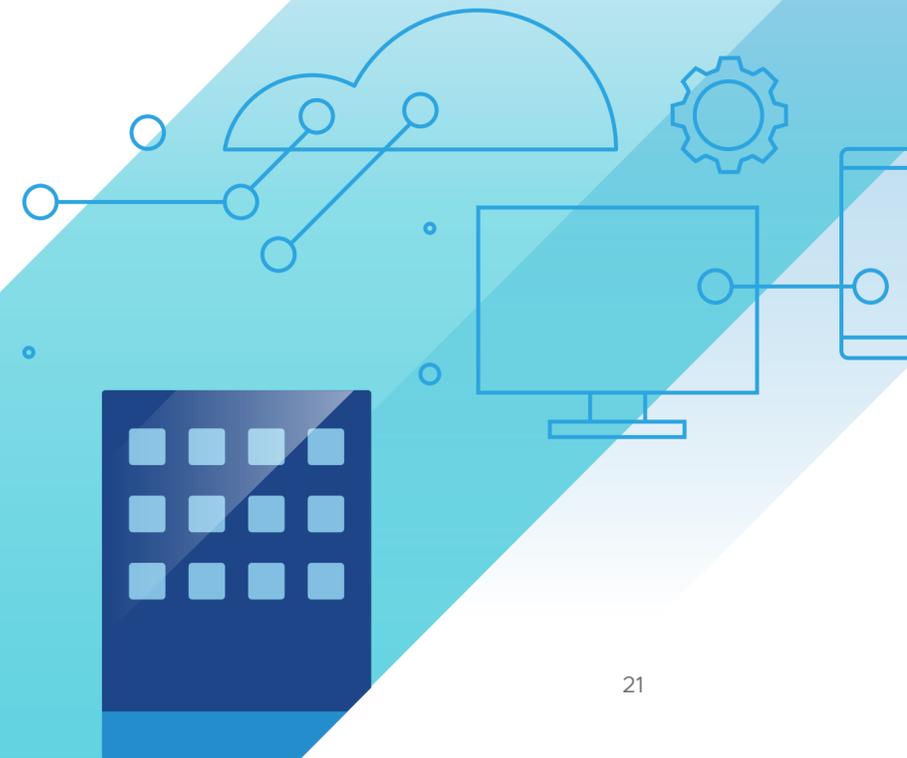


- Lead with empathy.
- Foster an inclusive culture encompassing remote, local and hybrid workers.
- Actively promote work/life balance and help ensure remote worker satisfaction with additional paid time off, virtual happy hours, and other social events.
- Provide hardware and software tools that boost productivity and create a healthy, ergonomic workspace.

### Work practices



- Create new processes to enhance remote and in-person collaboration, such as deploying virtual whiteboarding.
- Encourage a culture of innovation and thought leadership, generating more freedom to pursue intellectual property.
- Provide IT on demand to ensure remote requests are handled promptly, working with suppliers and partners to achieve this goal.
- Continue using analytics and tools such as our Digital Employee Experience Management application, which helps organizations gain insights into colleague experiences with their digital workspaces by analyzing usage and performance trends with a goal of reducing meeting fatigue and keeping people more productive and engaged.



# Security Transformation

A decorative diagonal line starting from the bottom left and extending towards the top right, transitioning from a dark purple color to a light cyan color.

We don't trust just anyone.  
Why should you?

# Security Transformation

In the past year, VMware IT was challenged to run all business operations remotely. From closing the books to keeping data centers going, we met that challenge without compromising security.

## Trusting Zero Trust

That's why we're focusing on Zero Trust, a security model that, by default, trusts no one. In a Zero Trust model, anyone trying to access the network must be continuously verified through mechanisms such as MFA. Zero Trust architectures use such technologies to tightly control access and protect against data breaches. The implementation of Zero Trust requires a complete change of perspective in the way IT thinks about security. Passwords and hardened perimeters are legacy

Some security highlights include:



VMware IT is creating micro-segmented blast chambers to allow R&D and support teams to conduct testing and replication that could potentially harm the corporate network.



Default VPN will soon be turned off as role-based access control lists (ACLs) and Workspace ONE determine which resources a colleague may access without the need for a VPN tunnel.



VMware IT took steps to isolate administrator activity by either authenticated API access or the required use of stateless desktops provided by VMware Horizon®.

concepts in the modern world of intrusion. Our IT team successfully implemented a Zero Trust architecture using a combination of VMware products and leading-edge security concepts. By using a phased and manageable approach to implementing a Zero Trust model, we were able to enhance our overall security infrastructure, while still ensuring a positive experience for our colleagues. Finally, we also set up a tertiary data center for all of VMware. All service uptimes for IT systems are consistently at or more than 99.95 percent. Further, even when data center staff were impacted by COVID-19, these uptimes remain unchanged. Likewise, all engineering (R&D) services, infrastructure and internal (private) clouds achieved their availability targets.

99%

consistent service uptimes for IT systems

## Additional security highlights in the past year



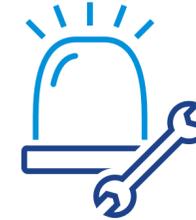
- Switched all devices to use VMware Carbon Black Cloud™ solutions.
- Remotely upgraded the entire Hong Kong office network infrastructure.
- Implemented our Digital Employee Experience Management solution to provide QoS to remote team members.



- Onboarded 123 additional apps through internal automation tools, such as AccessNow.
- Made Wi-Fi the default network topology. This enables a better user experience, increases security, and helps achieve sustainability goals by eliminating the need for Ethernet dongles and cables.



- Replaced all certificates on all devices.
- Improved QoS for remote users through VMware SD-WAN™.
- Responded to security-related issues 10 times faster than the industry average.



- VMware devices are administered with a full security stack, managed applications, and certificates with modern push authentication.
- Non-IT managed devices must use MFA and will soon be limited to only email access via Workspace ONE Boxer and VDI for connectivity requirements.



- VMware NSX® and Workspace ONE are used to micro-segment applications and control all manageable endpoints.
- All in-office colleagues will soon connect with internet-only access. This will allow for a single set of access rules with no need for direct access to the corporate network.

# Continuing the Transformation



How do we continue  
with transformation  
that leads to innovation?

## Continuing the Transformation

Keeping employees productive through great experiences is a key performance indicator for IT teams and leaders, especially as organizations navigate systemic changes in how work gets done. Employees are already working in a distributed manner, but there are still challenges to delivering a consistent experience on any app, on any device, from anywhere, at any time—all while maintaining security. VMware IT continues to meet these challenges in diverse ways:

- Ensuring remote employees stay productive from onboarding through offboarding
- Helping IT staff scale to manage and measure distributed employee experiences
- Carefully considering what's needed to bring colleagues back to a more flexible work future

### Rising to the challenge of global change

2020 was a year of challenges driven by the pandemic. Post-pandemic shifts in the workplace accelerated planned efforts and inspired innovative solutions to serve a remote workforce. Our VMware operations teams pivoted to keep our colleagues connected to one another and to customers and partners.

We also focused on ensuring continuity so colleagues could do their best work and feel supported across this unprecedented year.

Consider that when the pandemic hit, 95 percent of VMware colleagues transitioned to working remotely over just one weekend. The degree of communication and logistics required to make this happen is mind-boggling, but we rose to the occasion. The IT team has been providing remote-only support for more than a year, yet colleague satisfaction rates have remained largely unchanged at 94 percent.

# 94%

colleague satisfaction rates for remote-only support for more than a year



So, what's next? 2021 is pivotal for VMware and VMware IT. We have a new CEO (Raghu Raghuram), new Chief Digital Transformation Officer (Mike Hayes), and a new CIO (Jason Conyard), and the company is navigating a major change in our primary selling model, shifting from a perpetual software model to a SaaS and subscription model. This requires a complete redesign of many of our systems and processes. To meet the challenge, we plan to focus on transformation across the board.

As VMware continues to grow, change will remain the one constant. To keep pace with such change, we need to connect colleagues while giving them workplace choices, and this means delivering reimagined business solutions more quickly and securely.

## Always Transforming



“No organization will ever be fully digitally transformed, just like it’s impossible to ever be done managing your people or maintaining your financial records. Leaders must always be out front and in forward motion.”



**Mike Hayes**  
Chief Digital Transformation Officer,  
VMware

## We're proud of our accomplishments throughout 2020 and 2021. Here are just a few of them:

- Computerworld: Best Places to Work in IT 2020 and 2021 (No. 16)
- Computerworld: Best Place to Work in IT for access to training and skills (No. 9)
- Forbes Best Employers for Women ([No. 174](#) – Overall; No. 6 – IT Software & Services)
- Forbes Best Employers for Diversity ([No. 11](#))
- Forbes America's Best Large Employers ([No. 53](#))
- Forbes Just 100 ([No. 57](#))
- Glassdoor Best Places to Work (No. 57)
- Newsweek America's Most Responsible Companies ([No. 64](#))
- [Valuable 500](#) member, driving disability inclusion in the workplace
- Zinnov Titans in Technology 2020: Inclusion & Diversity; Gender and Beyond: VMware Software India; WM Global Technology Services India
- Zinnov Titans in Technology 2020: Building an Institutional Leadership Culture: Continental Technical Center India—VMware Software India

COMPUTERWORLD

Forbes

glassdoor

Newsweek

The Valuable 500

zinnov

# VMware Runs on VMware

The VMware on VMware program has two main goals. The first is to deploy VMware product releases into various environments throughout the development process. By implementing our own products, we provide invaluable feedback to R&D and product development by reporting bugs and recommending feature enhancements based on our experience with the product.

Secondly, as first adopters of VMware technology, our global IT SMEs are uniquely positioned to share stories with customers on our operational experience, including the benefits and challenges of using VMware products globally at scale. We partner with the field and sales organizations to share our wealth of knowledge and best practices as IT professionals with customers via Zoom webinars, 1:1 customer meetings, and small group roundtable discussions.

IT professionals respect the credibility and experience of their peers, our SMEs, who already use the products and services they plan to buy and implement. This gives customers more confidence to use our products, overcome concerns about getting started, and better understand how to implement them.

We publish key findings in our IT Performance Annual Reports, our microsite, blogs, Twitter and YouTube channels, as well as presentations for industry events.

## Contact Us

To learn more about VMware IT and our work, contact [vmwonvmw@vmware.com](mailto:vmwonvmw@vmware.com) or check out these VMware on VMware resources:

