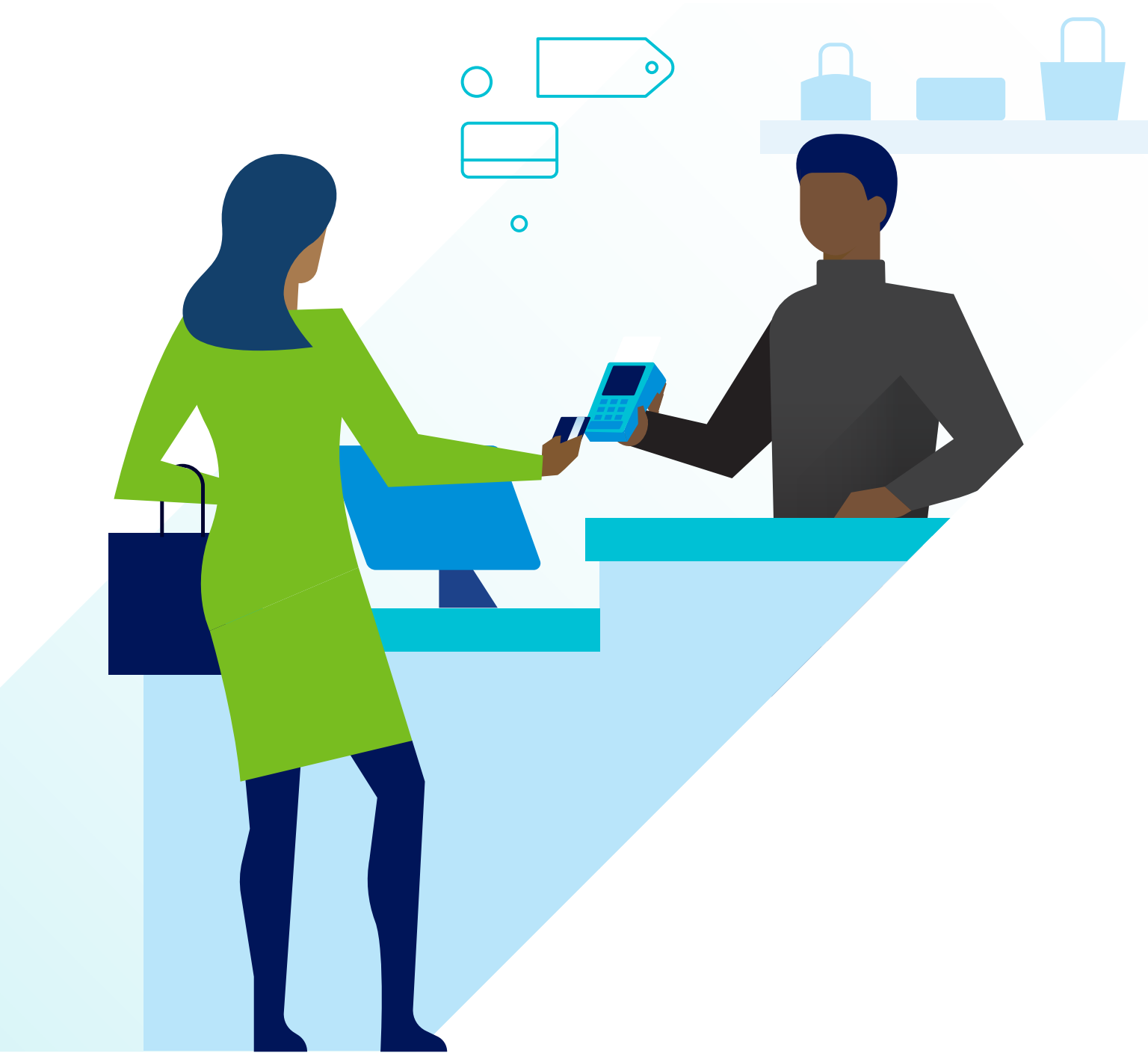


Empower Frontline Workers with VMware Workspace ONE Unified Endpoint Management (UEM)





The Critical Role of Frontline Workers

Frontline workers make up the majority of the global workforce and can be found across essential and nonessential industries, including retail, healthcare and supply chain sectors such as manufacturing, warehousing, and logistics and distribution. Unlike desk-based knowledge workers, frontline workers aren't tied to a desk, are typically shift-based, and must report to a jobsite or are out in the field. They also rely heavily on mission-critical technologies, which enable frontline workers to access the information, applications and people they need to do their job.

Overnight, task and service workers became the unsung heroes of 2020. As shutdowns and shortages disrupted the global supply chain, frontline workers continued providing the necessary goods and services essential for society to function and stay safe during the pandemic. In addition to the healthcare workers and first responders on the true front lines of the pandemic, other frontline workers—warehouse workers, delivery drivers and grocery store workers—continued manufacturing, stocking and moving the personal protective equipment (PPE), food and other essential items communities needed.

The global pandemic also amplified the urgency for all organizations—especially those with frontline workers—to become more agile and resilient. The solution? Increased investment in digital transformation and employee experience (EX), with mission-critical devices proving to be one of the most important factors in navigating disruption, building long-term resilience, and accelerating growth, efficiency and innovation.



According to IDC, frontline workers will account for 60 percent of the U.S. workforce by 2024.¹

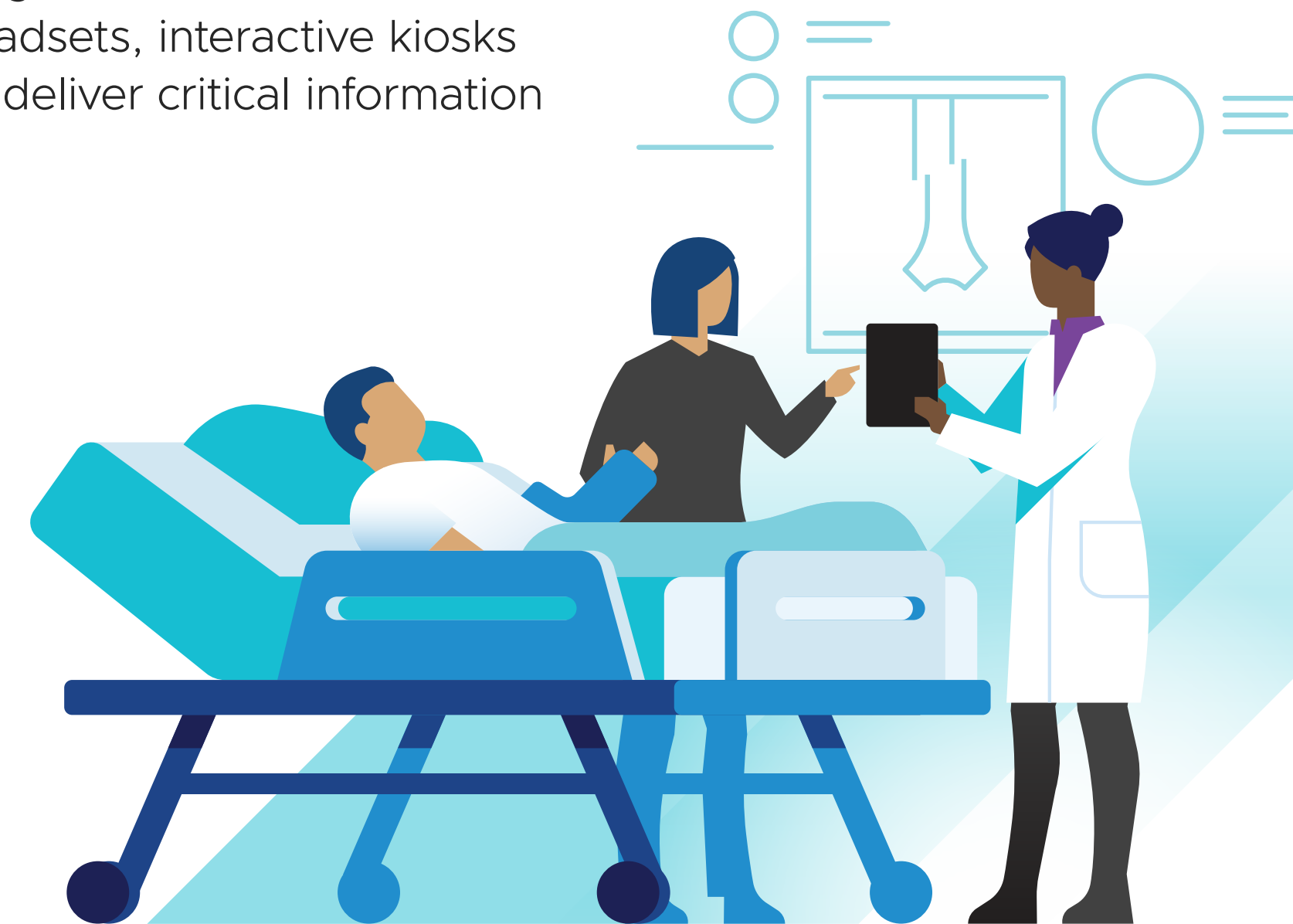
How Frontline Workers Use Mission-Critical Mobile Devices

Frontline workers have drastically different job responsibilities and technology requirements than those of their knowledge worker counterparts. They rely heavily on a variety of mission-critical mobile devices—from rugged mobile computers to mobile point-of-sale (mPOS) devices and head-mounted wearables—to access line-of-business (LOB) applications required to complete a well-defined task or set of tasks. Mission-critical devices are typically corporate-owned and shared by multiple workers but can be personally-owned in specific use cases, like food delivery or rideshare services. These devices are considered mission-critical because they are essential to the success of the task or operation at hand. And when they fail, the workers who rely on them can't do their jobs, which can immediately impact an organization's bottom line.

Mission-critical devices play a crucial role in an organization's ability to become more agile and build long-term resiliency. Therefore, it's vital that business leaders redefine their digital strategy and determine which device types and IT solutions are best suited for boosting efficiency, transforming workflows, improving employee experience, and minimizing downtime across all use cases within their supply chain. In addition to traditional mission-critical tools like rugged and consumer devices, leading organizations are also adopting innovative technologies like virtual reality (VR) headsets, interactive kiosks and IoT. Amid the pandemic, many frontline worker employers also started allowing BYO to safely deliver critical information to workers' personal devices onsite, in the field, and at home.

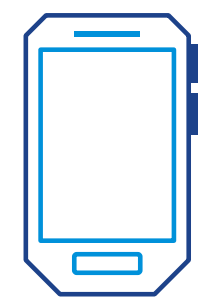
Every company has its own unique use cases to address, and business leaders shouldn't be afraid to redefine their digital strategy and experiment with new endpoints and initiatives that enable them to be more adaptive, innovative and able to scale to support the needs of their workers, partners and customers.

 Mission-critical device and app downtime can cost companies millions of dollars a year in support and lost productivity.



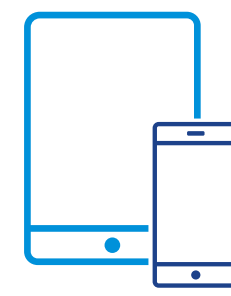
The Mission-Critical Devices Used by Frontline Workers

The mission-critical devices frontline workers rely on to do their jobs and deliver exceptional customer experiences, include the following.



Rugged Devices

Rugged barcode scanners, handheld mobile computers, and tablets designed to withstand extreme environmental conditions and optimized for dedicated, line-of-business operations.



Consumer Devices

Consumer smartphones and tablets used for line-of-business applications, typically in customer-facing scenarios, used as-is or in ruggedized cases to augment their durability or functionality.



Mobile Printers

Portable, wireless printers used for printing barcodes, labels, receipts, tags or tickets.



Head-Mounted Wearables

Assisted reality smartglasses and augmented reality (AR) or virtual reality (VR) headsets that deliver static, interactive or fully immersive computer-generated content directly to the end user's line-of-sight.



Interactive Kiosks

Mounted or standalone touchscreen devices deployed as workstations, self-service point-of-sale (POS) terminals, and info or check-in kiosks.



Digital Signage

Monitors or displays deployed to promote and inform.

THE LINE BETWEEN CONSUMER AND RUGGED DEVICES HAS BLURRED

Historically, with a limited device market for frontline workers, organizations had to choose between traditional, purpose-built rugged devices that were not consumer-friendly or consumer devices that, while easy to use, weren't built for the frontline. Fortunately, the market has evolved significantly over the past several years, as manufacturers expand their breadth of device offerings across design, features and price points. The newest generation of rugged devices offers the sleekness and ease-of-use typically associated with consumer devices, but with the durability, design, battery life, screen sensitivity and value businesses require for frontline worker deployments. Furthermore, consumer devices have become increasingly more enterprise-ready with improvements in security and the availability of APIs, and accessories and peripherals that add functionality (like pin pads, magnetic stripe readers, or barcode scanners).


Deployments in Retail

Digital transformation, combined with the changes in how goods are bought and sold due to the pandemic, has significantly disrupted the retail sector and unlocked new opportunities for companies. To stay competitive, retail organizations are reevaluating their digital strategy to boost operational efficiency and deliver seamless, insight-driven omnichannel experiences that raise customer satisfaction.

While the retail industry has seen a significant uptick in digital sales, brick-and-mortar stores remain vital to business success. Stores not only provide a physical location to purchase and return goods but act as a fulfillment center, leveraging local inventory to fulfill orders quickly. To elevate the in-store shopping experience, industry leaders are implementing flexible fulfillment options like in-store and curbside pickup and cashierless checkout. Retailers are also investing heavily in modern point-of-sale (POS) and interactive kiosks to track consumer identities and habits and empower shoppers with self-checkout and loyalty programs.

To successfully deliver the omnichannel experiences today's consumers expect, retailers must equip their store associates with the right mobile technologies and invest in the digital employee experience (EX). For mobile or mobile point-of-sale (mPOS) devices shared by managers and store associates, this means customizing the end-user experience. With employee turnover at an all-time high across all retail sectors, companies are turning towards BYO to boost EX and reduce procurement costs. BYO demonstrates a culture of trust and enables workers to remotely access company resources, like shift scheduling apps, onsite or at home.

While digital signage is still being used to promote products to shoppers in the front-of-store, innovative brands are using digital signage in the back-of-store to improve internal communications and foster a positive workplace culture. Forward-thinking retailers are also leveraging virtual reality (VR) headsets to quickly onboard new hires and train existing store associates without disrupting store operations.

 According to RIS's 31st Annual Retail Technology Study, 60 percent of survey respondents report that they are increasing their IT budget this year.²

EMPOWER FRONTLINE WORKERS IN RETAIL

- Implement flexible fulfillment options like in-store and curbside pickup
- Promote new products and create purchase impulse among shoppers with interactive kiosks
- Enable store associates to communicate, support in-store fulfillment options, access product and customer info, and process payments with mobile devices
- Elevate the shopper experience with cashierless payment options using cameras and sensors
- Modernize point-of-sale (POS) to track consumer identities and habits and empower shoppers with self-checkout and loyalty programs
- Equip front- and back-of-store workers with mobile printers to print barcodes, labels and receipts
- Keep workers engaged and foster a positive workplace culture with digital signage
- Allow employees to bring their own device to work and securely access necessary info
- Provide workers with immersive training with virtual reality (VR) headsets

Deployments in Healthcare

For years, healthcare organizations have been facing extreme pressures due to the aging population, staffing shortages, and rising costs. The global pandemic further exacerbated these issues, placing enormous strain on the industry and forcing healthcare systems to adapt and innovate at a record-breaking speed. The adoption of mobile technologies has played a pivotal role in healthcare digital transformation. Clinical mobility enables healthcare organizations to decrease human error, streamline processes and adopt new ways of working, and improve visibility and the quality of patient care.

To improve the quality of patient care, health leaders are investing in digital technologies that redefine the way healthcare is delivered. Telehealth and other virtual technologies enable organizations to make healthcare more convenient and accessible. Within healthcare facilities, organizations are also implementing self-service kiosks to save administrative staff time and improve patient privacy and wait times. Innovative healthcare providers are also turning to smartglasses and augmented reality (AR) head-mounted wearables to improve clinician-patient interactions and empower workers to focus on what matters most.

At the heart of clinical mobility are the healthcare workers—from nurses and doctors to pharmacists and lab technicians—who leverage mobile devices and other digital technologies to provide always-on care and exceptional patient experiences. Mobile devices, like rugged handheld computers and printers, enable workers to improve staff communication, collect and access important patient information at the point-of-care, increase efficiency, and reduce error. The adoption of cloud computing technology and modern electronic medical record (EMR) systems is also transforming clinical workflows and how healthcare workers access patient data. The combination of cloud-based, modern EMRs and BYO enables authorized clinicians and staff to securely access sensitive information on any device, over any network as they move from location to location.

EMPOWER FRONTLINE WORKERS IN HEALTHCARE

- Improve access to quality care and cut costs with telehealth services
- Save admin staff time and improve patient wait times with self-service kiosks
- Collect key info and provide real-time access to patient vitals, diagnostics, imaging and more at the point-of-care with mobile devices
- Increase efficiency and reduce error by labeling specimens and samples at the point of collection with mobile printers
- Improve the patient experience and reduce error with smartglasses and augmented reality
- Enable BYO to deliver critical info to workers' personal devices onsite, in the field, and at home
- Modernize EMR systems and enable seamless access to clinical apps and data regardless of device or location

 According to Zebra Technologies, mobile device usage in healthcare is expected to grow up to 40 percent by 2022.³



Deployments in Supply Chain Sectors

The world of supply and demand is globally interconnected and complex, and the global pandemic posed significant challenges and exposed vulnerabilities across the entire manufacturing process. Digital transformation enables businesses to improve their supply chain operations of today and build long-term resiliency for tomorrow by future-proofing their ability to quickly adapt and recover from disruption. An end-to-end digital strategy should account for every use case, need and vulnerability across a business's entire ecosystem—from planning and procurement to manufacturing and logistics—and consider investments needed in people, not just technology.

While advanced Industry 4.0 technologies like blockchain, artificial intelligence (AI), drones, machine learning and industrial IoT are still evolving and several years away for many organizations, mobile and wearable devices remain an easy and cost-effective way for supply chains to quickly accelerate digitization efforts. Unlike paper-based systems and fixed computer terminals, mobile and wearable technologies give supply chains real-time visibility across their inventory, assets and people. Mission-critical devices that enable mobile computing, scanning and printing enhance workforce performance and empower frontline workers across the supply chain to efficiently and accurately capture data and track goods throughout order-fulfillment processes. Increased adoption of rugged handheld computers, barcode scanners, and mobile printers will also help supply chains improve employee experience (EX) and be more competitive in attracting and retaining talent.

Leading supply chain organizations are also combining traditional and cutting-edge technologies to create seamless omnichannel experiences across their ecosystem. For example, smartglasses and augmented reality (AR) head-mounted wearables are being used to improve manufacturing processes by delivering hands-free instructions, visual diagrams and reference materials directly to workers' line-of-sight. Organizations are also leveraging AR and virtual reality (VR) headsets to provide new or less-experienced workers with easy access to remote experts and immersive, hands-on training.

EMPOWER FRONTLINE WORKERS ACROSS THE SUPPLY CHAIN

- Track the location and status of all assets for greater productivity and cycle count efficiency with mobile devices
- Consolidate cumbersome training guides and other required documents and manuals into a single device
- Print barcodes and labels to quickly sort materials and increase visibility with mobile printers
- Deliver instructions, visual diagrams and reference materials directly to workers' line-of-sight with smartglasses
- Deploy IoT endpoints, like sensors, to monitor equipment and production conditions

 According to MHI, 85 percent of supply chain leaders expect digital to be the predominant supply chain model over the next 5 years, with 49 percent already accelerating their spend on digital technologies.⁴



Top IT Challenges for Frontline Worker Device Deployments

Enrollment and Configuration



Mission-critical devices for frontline workers are almost always deployed outside of the corporate office and away from IT teams. Additionally, frontline workers located in remote areas often struggle with limited wireless coverage and data, latency issues, and low network bandwidth.

Device Downtime



Technological problems are inevitable, and when a mission-critical device or app fails or is interrupted by software or security updates, battery failure or network issues, the worker relying on it can't do their job. This downtime can cost businesses millions of dollars a year due to decreased employee productivity, lost sales, and customer dissatisfaction.

Employee Experience



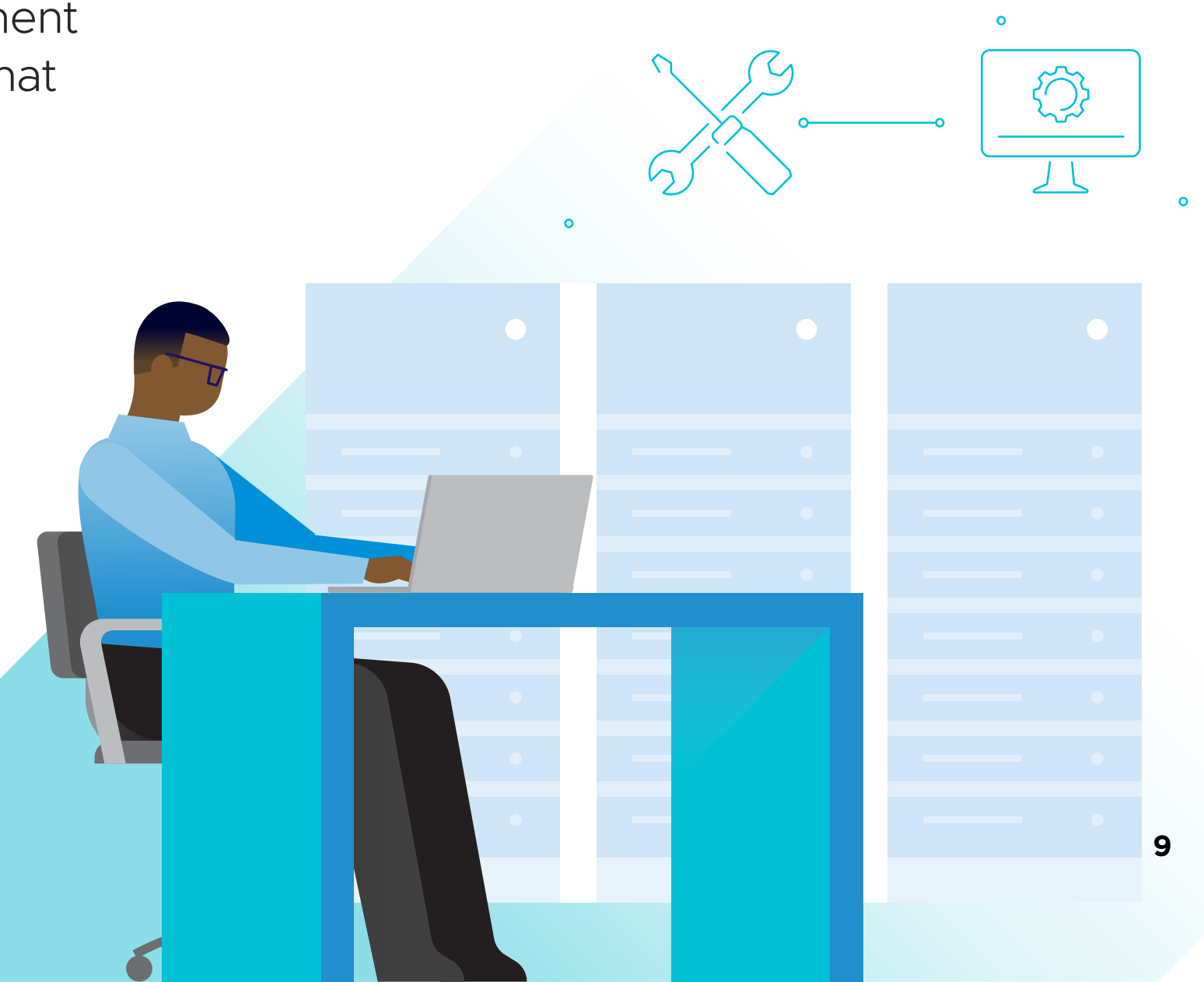
While the average annual turnover rate sits at 19 percent, frontline worker occupations have a much higher turnover, with some industries experiencing 50–100 percent turnover. Employee disengagement is the number one cause of turnover, and the biggest culprit of employee disengagement is technology.

The Case for Unified Endpoint Management

The global pandemic amplified the urgency for all organizations—especially those with frontline workers—to become more agile and resilient. In response, businesses across all industries were forced to rapidly address existing problems, redefine their digital strategy, and increase investments in digital transformation and employee experience (EX).

However, mobilizing a distributed frontline workforce spanning a diverse ecosystem, across geographies and use cases, can be challenging. Furthermore, increased connectivity and reliance on third-party partners, subcontractors and suppliers adds to this complexity and can create security and compliance vulnerabilities. While cloud computing and a flexible IT infrastructure allows supply chains to scale to support changing market demands, a unified digital-first management platform enables IT to reduce operational complexity, maximize worker EX, and protect assets and streamline compliance.

A unified endpoint management (UEM) strategy allows IT to consolidate existing management silos, reduce cost, and improve security across digital technologies deployed across their business. By combining mobile device management (MDM) and enterprise mobility management (EMM) capabilities, UEM provides a holistic management framework that enables organizations to manage any endpoint across a single platform for maximum visibility and security. With a UEM platform, IT teams can not only deploy and support mission-critical device deployments but help frontline workers be more productive and improve the digital employee experience.



Empower Frontline Workers with Workspace ONE UEM

VMware Workspace ONE® Unified Endpoint Management is an intelligence-driven digital workspace platform built to meet the unique management requirements of mission-critical devices used by frontline workers, at scale. With Workspace ONE, organizations can quickly and easily stage, manage and support any device—from rugged handheld mobile computers and self-service kiosks to wearables and BYO—alongside existing mobile and laptop deployments, from a single console.



Workspace ONE is the only platform consistently recognized as an industry leader by analysts.

Boost efficiency and transform workflows

Simplify management of mission-critical device deployments with low-touch enrollment and configuration, shared device management, device and app analytics, and remote worker support.

Improve employee experience

Deliver a seamless, consumer-like end-user experience across shared devices by giving workers access to only the apps, content and settings they need to stay productive and engaged.

Minimize downtime

Give IT and help desk staff the ability to provide real-time remote support to quickly assist workers with device tasks and issues before they impact your bottom line.

Support any use case at scale

Support new and innovative technologies that improve productivity and enable exceptional customer experiences at scale—like BYO, wearables, peripherals and interactive kiosks.



Why Workspace ONE for Frontline?

Single pane of glass across every device and use case

Manage mission-critical endpoints alongside other device fleets for improved visibility and security.

One platform for management, identity, analytics and support

Intelligence-driven platform that integrates access control, app and multi-platform endpoint management and support.

Shared device management

Easily customize multi-user device UI, configure devices in single or multi-app mode, and enable multi-user devices with check-in and check-out.

Extensive API support

Give non-IT personnel control of specific functions without giving them full console access.

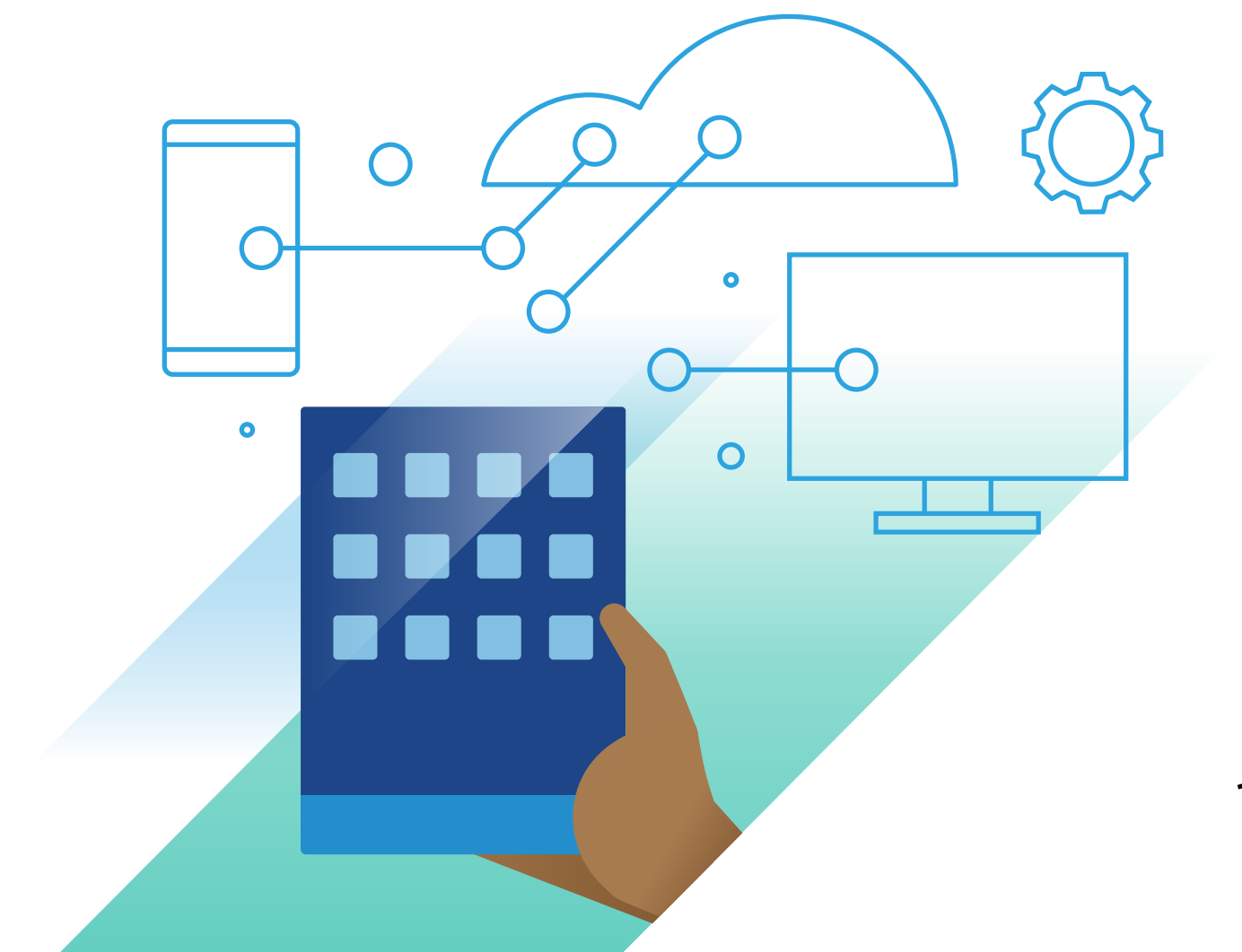
Support for IoT endpoints

Easily support lightweight IoT-type endpoints such as wearables, mobile printers, peripherals and interactive kiosks.

LEARN MORE

For more information about how VMware Workspace ONE can help your organization boost efficiency, transform workflow, improve employee experience, minimize downtime, and scale to support any use case, contact a VMware sales specialist or visit vmware.com/go/whyworkspaceoneforfrontline.

1. IDC. "U.S. Mobile Worker Population Forecast, 2020-2024." Bryan Bassett. August 2020. (Doc #US46774020)
2. RIS. "31st Annual Retail Technology Study: Building the Future-Proof Enterprise." Tim Denman. 2021.
3. Zebra Technologies. "The Future of Healthcare: 2022 Hospital Vision Study."
4. Deloitte Development LLC. "2021 MHI Annual Industry Report: Innovation Driven Resilience." 2021.



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