

WHITE PAPER

# GETTING BACK: HOW TO ENABLE THE NEW NORMAL

A variety of technologies can help businesses, schools and others operate safely.



## EXECUTIVE SUMMARY

The COVID-19 pandemic has challenged businesses, schools and organizations in myriad ways, and their journey is not yet over. The drive to return to work and to school — to bring colleagues, customers and learning communities back together — while protecting public health is a daunting, yet essential task. It is one that business and education leaders are tackling with focus, commitment and a deep willingness to embrace new ideas.

Indeed, one of the lingering hallmarks of the pandemic may be the resulting spark of innovation, adaptability and creative

problem-solving. Those qualities will be key as leaders determine the best ways to resume in-person operations.

As they do so, leaders must address two priorities: preventing sick people from coming in contact with healthy people and destroying the virus wherever possible. A new set of technology solutions has emerged to help organizations achieve these aims, and they typically can be supported by existing IT infrastructure.

## A Massive Impact on Operations

If figuring out how to work, learn and deliver services remotely amid the coronavirus pandemic has been a challenge, determining how to resume these activities with some degree of in-person operations may be even more complicated. As businesses, organizations and institutions create their "return to work" and "return to school" plans, leaders are confronting new scenarios — and new solutions — that are, in many cases, unfamiliar.

Indeed, in many organizations, long-term remote operations may not even be an option. In a [McKinsey survey of executives](#), 40 percent said that permanent remote work was not possible for the vast majority of their employees. Moreover, many employees require childcare to return to work — 27 million Americans, according to the [American Community Survey](#) — a dilemma that necessitates effective, large-scale strategies to resume both work and educational activities in person.

Technology vendors have quickly stepped up to address these needs, developing new solutions and repurposing existing ones to facilitate a safe resumption of onsite work and learning. Yet this massive influx of technologies also poses a challenge, as leaders must determine the right solutions for their environments, deploy them for optimal effect, and train employees in new policies and procedures.

Meanwhile, leaders in nearly every industry continue to manage the pandemic's extraordinary impacts on the economy.

## Pervasive Impact

At the macro level, the pandemic's global effect has been drastic: a [5.2 percent](#) contraction in this year's GDP, according to World Bank projections. In the United States, beginning in March, household spending fell by approximately [50 percent](#) overall, but especially in the restaurant, retail, travel and transportation sectors.

U.S. [unemployment](#) has averaged 10.5 percent across industries, with staggering highs in sectors such as leisure and hospitality

(25 percent), oil and gas (15.6 percent), and transportation and utilities (13.8 percent). Some estimates project that it will [be 2022](#) before employment recovery takes hold. Small to midsize businesses have been hit especially hard, with declining revenue and a greater likelihood [of reporting reduced headcount](#). For many SMBs, temporary closures may become permanent.

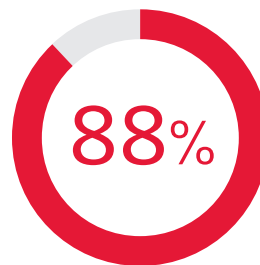
Research indicates that women and low-income workers have borne the brunt of these effects. Workers without a college degree, for example, were [four times more likely](#) to experience a loss of employment. Research also suggests that stay-at-home restrictions have led to a wave of early retirements, pushing older individuals out of the workforce sooner than planned.

The education sector continues to reel, with this fall's first back-to-school and back-to-campus attempts leading to rapid infection spikes among students. Higher education, which faced financial pressures before the pandemic, is now being challenged to justify high tuition as students receive, at best, blended instruction combining online and face-to-face instruction. K-12 education, as a whole, lacks a coordinated direction, with each district forced to determine (and experiment with) its own strategy.

The healthcare industry, which leveraged technology to adapt quickly to the needs and the limits of the pandemic, may be a useful beacon for other fields. Hospitals and other health facilities have already deployed many of the tools other organizations can now use to reopen safely.

All these shifts, of course, will continue to reverberate in ways that are difficult to predict. What leaders do know is they must find ways to adapt, to carry on the important work of business and education, and to do so in ways that allow them to protect health, pursue financial recovery or stabilization, and achieve organizational objectives — simultaneously.

The challenge is that most organizations lack a clear blueprint for how to manage all of these essential objectives. As the world moves toward the one-year mark on the



The percentage of employees who companies expect to be back at work by the end of December<sup>1</sup>

pandemic, developing such a blueprint is a must. Long-term pauses on commerce, education and services are neither feasible nor realistic. Moreover, even when this pandemic is contained, many public health experts see a growing risk of new pandemics in the future.

Preparing for these outcomes — and determining how best to mitigate risks so that business and learning can continue — is now part of the leadership responsibility in every industry. Organizations must navigate this landscape with the mindset that, with the right tools and procedures in place, it is possible to safely work and learn together.

## Solutions to Get Back to Business

Solutions for safe, in-person operations comprise four main categories: temperature screening, sanitization, social distancing (occupancy counting and contact tracing) and protective shields. Together, these provide a layered defense for the whole cycle of employee, customer and student engagement: before they enter an environment; while they are in the environment, interacting with others or using devices; and after they leave the environment.

### Temperature Screening

The Centers for Disease Control and Prevention identifies temperature screening as a preventive measure, best used

in concert with social distancing. Thermal screening is a no-touch solution that makes it possible to screen more people by measuring infrared radiation emission, which registers as heat on the skin surface.

As the CDC notes, thermal screening may not detect an elevated temperature, nor does it definitively indicate infection. It does, however, provide a first line of defense to identify individuals who may require additional screening. If individuals register an elevated temperature, staff should pull them aside for a secondary screening with a medical-grade thermometer before permitting them to enter the building.

Mounted thermographic cameras, affixed to a wall, ceiling or kiosk or transported on a cart for mobile checks, automate temperature screening for greater speed and capacity. Cameras are effective at 5 to 20 feet and can scan 20 to 30 people per minute. Organizations can increase their accuracy even more, particularly in environments where it is hard to control ambient temperature, by incorporating thermal reference devices or ambient temperature sensors. Cameras may be stand-alone or integrated into an access control or visitor management system, where they can augment security and surveillance efforts.

Other temperature screening solutions include:

- **Noncontact infrared thermometers:** These produce highly accurate results. However, they are relatively slow (screening an average of five to 10 people per minute) and require the screener to be within a few inches of individuals being screened.
- **Handheld thermographic cameras:** This manual solution is significantly faster than a thermometer (10 to 12 people per minute) and effective at a distance of 2 to 6 feet.
- **Thermal scanners at kiosks:** Self-service scanning eliminates the need for close-proximity staff involvement and offers a screening pace of 10 to 12 people per minute. Kiosks can also support functions such as attendee check-in and digital signage integration.

Schools and colleges, which rely on shared transportation and common areas, present unique challenges from a screening perspective. K–12 students, for example, sit close together on school buses before they ever reach a school. Some districts have considered enlisting bus drivers or parents to conduct temperature screening before students board.

### Sanitization

An effective sanitization plan reduces risk and addresses operational efficiencies, ensuring that processes are consistent without overly burdening staff or hampering the customer experience.

In a device-intensive environment, such plans should include a systematic way to manage the disinfection of shared computers, headsets and other objects. For example, K–12 districts using cart-based one-to-one Chromebook programs should establish processes for collecting and disinfecting these devices before distributing them to new users.

UVC sanitizing devices and hand-sanitizing stations help achieve these aims. UVC radiation, delivered by a lamp or



## Future Uses for IT Investments

Although some business leaders are focused on the immediate benefits of public health technologies, others take the long view on these investments. They recognize, for example, that there are a multitude of ways to derive value from tools designed to help businesses understand and, to a degree, control the movement of employees and customers in their environment.

Retailers can use occupancy counting and data-driven analytics to gain insight into customer behavior that, in turn, can inform business decisions and improve the customer experience. This data can help retailers align staffing with peak hours, improve marketing and promotion campaigns, and compare occupancy with sales data to understand purchase patterns.

Facilities managers can use occupancy counting to drive optimal use of space; for example, in commercial real estate developments. When public gatherings resume, these tools can improve decision-making for event marketing and operations.

Hand-sanitizing stations with digital signage will be practical long after the pandemic is over; during flu season, for example, and as a general reminder of good hygiene. In schools, colleges and childcare facilities, ultraviolet C (UVC) sanitization can modernize and elevate cleanliness practices. These solutions support public health while communicating that an organization is doing all it can to protect its constituents' well-being — a powerful message at any time.

laser, is the highest-energy area of the UV spectrum. As a disinfection agent, UVC light kills viruses, bacteria and other microorganisms.

UVC sanitizing is available in three delivery modes:

- **Drones:** Indoor, industrial drones have small, powerful UVC lights to quickly disinfect large surface areas. (Because they are used inside, they do not require the FAA licensing that outdoor drones do.) These have wide applications in healthcare, retail, warehouses, transportation, common areas of schools and businesses, government facilities and athletic facilities.
- **Wands:** Handheld wands are designed for portability, with a rechargeable battery. They are well suited to classrooms, daycare facilities, small offices and shared tools such as keyboards and instrument panels.
- **Platforms and cart cabinets:** These disinfect multiple, high-touch devices at once.

Hand-sanitizing stations, which dispense gel or liquid sanitizer, are equally versatile, including wall-mounted, tabletop and freestanding models. Stations equipped with digital signage can serve a communication function as well, from sharing practical messages (such as handwashing reminders) to business information (brand messaging or sales promotion).



The percentage of organizations that plan to reduce the number of employees onsite at one time as a practice to limit contact during the COVID-19 pandemic<sup>1</sup>

Air purifiers remove air contaminants and increase air flow, which is recommended by the CDC for creating a healthier environment. In senior-care facilities, air purifiers can minimize risk for vulnerable populations, particularly given seniors' susceptibility to respiratory issues. Every facility manager, however, should be mindful that the majority of coronavirus transmission occurs indoors and, accordingly, air purifiers are integral to a robust ventilation strategy.

## Social Distance: Occupancy Tracking and Contact Tracing

Social distancing has two key

components: occupancy counting, to maintain a safe number of individuals indoors; and contact tracing, to track interactions so that, if needed, organizational leaders or public health officials can manage and mitigate the potential risk of contacts with an infected individual.

Some organizations take a manual approach to occupancy control, posting an employee at entry and exit points and tasking them with coordinating a full occupancy count. This strategy consumes personnel resources, can quickly overwhelm staff and is prone to error. Manual monitoring is also impractical in a large environment, where occupancy counting is most critical.

IP-enabled video surveillance cameras, supported by analytics software that detects and counts people as they enter and exit, automate this function and increase accuracy without additional labor costs.

The same cameras and video analytics tools that organizations already use to plan staffing, analyze movement patterns and manage security can be deployed to track occupancy. This makes it easy to layer in edge analytics and occupancy management software that integrates into an existing video management system, or to install new cameras to address coverage gaps. Organizations that lack a video management system may incorporate a cloud-based system for centralized management of multiple locations in a single dashboard.

Specialized occupancy counting software adds deeper functionality, correlating data from multiple sources and providing clear signals, such as red and green lights, to indicate when it is safe to enter. It can also improve the customer experience by giving visitors an accurate assessment of wait times.

From a management perspective, these solutions facilitate compliance with internal policies and external regulations by:

- Centralizing monitoring for multiple sites
- Monitoring multiple entry and exit points, and aggregating data
- Tracking occupancy by rooms, floors or departments
- Alerting staff when occupancy limits have been reached
- Using dashboards to present timely, actionable data



## Virtual Reality Solutions Bring People Together

When colleagues can't gather physically, virtual reality offers an expanding set of ways to connect in a digital space.

In education, growing libraries of VR content make it easier to add immersive experiences to remote learning. VR headsets preloaded with mobile device management software let instructors push content to students' headsets. Collaborative VR platforms let students gather in virtual classrooms, with the benefit of pedagogical supports such as quizzes and animations.

Coworkers can use these same tools to gather in virtual meeting rooms. When these solutions are part of cloud collaboration systems, employees have an immersive experience that also facilitates access to documents and materials.

VR also supports training and certification, which means companies can maintain momentum on new hires. Simulations mimic work environments and task trainees with complex duties that allow managers to evaluate skills just as they would during in-person assessments. This type of training is well underway in higher education, particularly in medical training.

For visitors, crowd interaction alerts also serve an important purpose. Signage and floor markers are helpful, but often overlooked. Automated alerts can be a better way to enforce social distancing; for instance, when two people come within six feet of each other or when a group of people gather.

If a virus transmission occurs or is suspected, organizations must be prepared to quickly contain the risks. For this purpose, contact tracing — facilitated by body-worn sensors, smartphones or other devices — helps identify people who may have come in contact with an infected individual. These tools have widespread application, but are especially valuable in hospitality, retail, healthcare, manufacturing, logistics, public safety and field service environments.

Contact tracing dashboards display proximity events and produce a variety of reports, including historical data that show



The average reduction in employment among small businesses as a result of the coronavirus pandemic<sup>2</sup>

who each person encountered and the length of each exposure. They can also identify hot zones, or areas where people tend to congregate. In schools, for example, administrators can identify areas where students gather, so they can respond appropriately.

Privacy concerns related to contact tracing may arise. However, many of these solutions rely on anonymization. For example, Bluetooth technology lets smartphones exchange randomly generated numbers that support cross-checking but do not require the exposure of individual identities. Efforts are underway by technology providers in the United States and other countries to build a larger arsenal of privacy-focused contact tracing solutions.

## Protective Shields

Protective shields allow face-to-face interaction while enforcing separation of personal space. Diverse options let organizations deploy the best solution for a specific purpose, including freestanding, counter top, adjustable, custom-sized, and window or nonwindow features.

In classrooms, shields prevent students from getting too close, while providing a degree of social interaction. In gyms, personal care businesses and professional services firms, shields make it possible to provide service to multiple customers at once. And in offices, particularly those that availed themselves of the open-office trend, desk partitions make it easier to bring teams back together.

## A Strategy for the New Normal

Ideally, organizations will return to work gradually, establishing phases to pilot, assess and adjust new procedures. In an office setting, a small group of employees might volunteer to initiate and evaluate back-to-work procedures. A retail establishment might start with a lower occupancy limit than allowed by local laws to test and troubleshoot new systems. Commonsense strategies also should prevail, such as closing off common areas and paying attention to vulnerable employees, who may need to continue social distancing at home.

Organizations should evaluate end-to-end operations from the perspective of every stakeholder. For example, how will employees travel to work, and will that raise any risks? Every organization is unique, so these strategies should be tailored to the needs of specific teams and locations.

Once leaders have identified their objectives, they can figure out the best way to achieve them. For example, to adopt thermal screening, organizations need to consider the potential volume of people who may require screening, determine the best location to perform checks and develop policies to guide employees. These factors may determine the best type of solution, as well as the optimal number and placement to prevent bottlenecks.

## Amid Fast-Changing Conditions, Focus on Agility

As business and education leaders know, guidance on public health, business and education has been a moving target since the coronavirus pandemic began. Several factors have contributed to this uncertainty, predominately the fact that the pandemic has been an unprecedented experience. Equally influential is the variable and unpredictable nature of human behavior in response to this event.

As a result, many leaders have been in the unenviable position of making far-reaching decisions with insufficient data, little or no prior experience, and large stakeholder groups subject to widely divergent interpretations of available information. To a great extent, these conditions have intensified a business reality that predates the pandemic and to which many organizations were already trying to respond: the need for agility across operations, supported by cultures, processes and technologies that are deeply flexible and dynamic.

As organizations develop back-to-work and back-to-school strategies, many have put flexibility at the center of their plans. Many have also leveraged technology as a powerful enabler of this flexibility; for instance, the cloud and collaboration solutions that made it possible to quickly move large groups of students to remote instruction.

Agility-minded leaders are preparing for multiple scenarios and building the capacity to pivot among them, as needed. It's an approach that will serve organizations well, both in coming months and in the future.

Organizations should support new technologies with appropriate communication strategies for internal and external audiences. Contact tracing, for instance, may raise objections from individuals worried about privacy. Leaders should be proactive in anticipating these concerns, determining how to address them and sharing this guidance with frontline employees.

It is important to remember that many of these solutions will be new to employees, including IT staff. Deploying and maintaining these solutions correctly can affect their efficacy, so learning about their implementation – or engaging an expert partner for guidance – can be valuable. Thermal cameras, for example, may need to

be calibrated daily or weekly, and their placement is important: The ideal location will be inside, away from doors, windows, and heating or air conditioning vents.

Third-party experts can also help organizations evaluate solutions and develop a holistic strategy to facilitate a successful return to operations. Consulting, implementation and sanitization services can help to fill knowledge gaps as organizations enter what, to many, will be unfamiliar territory. The right partner and the right solutions can make this journey faster, easier and safer for everyone.

**CDW: We Get the Future of Work**

In a short period of time, many new technologies and services have come onto the market to help organizations return to and manage in-person operations safely. CDW continues to analyze these offerings to provide knowledgeable, timely guidance and recommendations to our customers. We can take the guesswork out of the equation to help you choose and implement the best solutions for your organization.

With our strategic focus, key partnerships and deep experience in a variety of industries, CDW is positioned to assist organizations in taking proofs of concept to implementation. We have supported many of our customers as they navigate the IT challenges arising from the COVID-19 outbreak, and we want to share that expertise and knowledge with you.

We provide consulting services, managed services and implementation support. Most important, we offer valuable partnership to our customers as we help them assess and adapt to a landscape that is changing rapidly from health, technological and business perspectives.

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