BACK TO THE OFFICE:

KEY STEPS FOR SAFEGUARDING HEALTH, WELL-BEING, AND CONTINUITY IN THE WORKPLACE

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Prior to COVID-19, most businesses, large and small, hadn't experienced the need to establish specific measures that would have quickly minimized virus transmission in the office, thereby ensuring employee safety and business continuity.

While the pandemic's long-term effects on the workplace will take time to play out, it is clear the office environment has and will continue to undergo scrutiny and change. While each organization's situation is unique, every office should be prepared to ensure a safe environment for staff and visitors as more businesses reopen – and have measures in place should another infectious outbreak or pandemic occur in the future (which health experts say is a given).

In addition to dealing with the harsh realities of a pandemic, many businesses and organizations may also be contemplating added physical security in response to increases in active assailant events, environmental emergencies, and even civil demonstrations that turn violent and pose a risk to their facilities.

This executive guide introduces several actions that can be taken to start mitigating the risk such events pose to staff, visitors, and buildings. While the guide does not provide an all-inclusive list of available measures, it does offer a high-level look at key areas of design that can be part of the process, such as organizational policies and procedures, building security, health screening, and indoor environmental quality. By being aware of these measures and choosing which actions are applicable, feasible, and adaptable to their situation, each business owner can begin the process of preparing their facility for the future.

Vulnerability Assessments

No emergency is 100-percent avoidable but preventing most threatening events from happening – and mitigating the effects of such events – will substantially lessen the risks to organizations. We know now that we are vulnerable to pandemics, but what else might be a threat to your staff and business?

Finding out begins with a vulnerability/gap analysis, a component of organizational resilience planning that assesses an institution's physical, employee, and material security as well as risk, searching for deficiencies in physical security barriers, policies, and procedures. Such an analysis is essential for the safety of a business's people, brand, and functions.

Gap analysis can be performed at any time for an existing building, but owners who are building a new office should engage a security specialist early in the project. This can provide optimum building security from the start, along with cost savings and aesthetic integration with architectural elements.

Whether analyzing a planned or existing building, once gaps are found they can be closed by implementing new or updated policies, procedures, and security measures. After an initial assessment has been completed and deficiencies are addressed, a follow-up assessment should be completed within one year. If no major changes to the organization or its processes are needed, future assessments can be scheduled every two to three years.

Establish policies and procedures

Establishing, implementing, and communicating new or updated policies and procedures – whether the result of a gap analysis or not – is critical for office safety. The planning and execution of these procedures should revolve around three key areas of emergency preparedness: prevention, response, and post-event recovery.

Depending on the size of your office, number of employees, and the exposure it has to various threats, you might also consider conducting a tabletop exercise – an activity in which key personnel gather to discuss various emergency scenarios and participate in mock events to determine how they and the organization would react in real-time. Led by a security expert, a tabletop exercise can streamline the preparation process by identifying the critical needs, processes, roles, and responsibilities, and serve as the basis of a business continuity plan. You can then train your employees on the correct response to various situations.

Post-event recovery procedures also are crucial in the event an emergency does occur. The recovery process after an event can be arduous and emotionally difficult, and a company's employees must be the top priority. For an event that causes loss of life, bereavement and counseling opportunities should be in place to help staff members begin to process and heal.

Once you have successfully executed these crucial planning steps, any threat or emergency encountered can be better managed, and will hopefully be less traumatic for your staff, visitors, and operations.

Building security

Building security goes well beyond key locks, card readers, cameras, and other typical security system devices supported by security guards. For the most comprehensive and cost-efficient design, security should be considered from the moment a new building is conceived. Early integration allows owners to maximize design in respect to a safety program, site selection, building layout, permitting, life safety, lobbies, and other unique requirements.

Gaps in an existing building's security can be exposed in a vulnerability assessment, with corrective measures taken – though they may be more costly to implement and less aesthetically pleasing than if they had been planned pre-construction.

For new or existing office buildings, one of the most effective ways to increase physical security on the exterior without creating an overly institutionalized aesthetic is by utilizing Crime Prevention Through Environmental Design (CPTED), a group of strategies that leverage architectural elements to create secure environments. These include:

Restricting access points to the building.
Designated, specific entrances for public access allows for easier monitoring and secure visitor screening. Utilizing vegetation and various architectural elements can help drive people away from entrances they shouldn't use and toward the main entrance. With proper signage, alarms, camera monitoring, and even removing the entrance-side door hardware, you can better control which doors permit entry into your facility.

Separating visitor and employee parking lots. One of the biggest physical security concerns every owner should have is for their staff. To limit the potential for dangerous interactions, businesses with enough parking space can keep public access points separate from employee access points. By establishing a perimeter boundary for an employee parking lot, you can create a level of protection within the parking area so staff can move back and forth to their vehicles safely.

Utilizing effective parking lot lighting. Evenly lit parking lots are more important than brightly lit parking lots. When lighting is too bright in some areas, it can have the effect of making other areas seem darker. Instead of using big, bright lights, aim for smaller, more frequent lights that have a high level of distribution over parking lots. This can play a significant role in security by increasing visibility and improving camera coverage.

Creating vehicular boundaries. Since pedestrian traffic needs to be protected from vehicular traffic, creating a clear separation between the two can minimize incidents. For example, instead of just a crosswalk, consider using pavement changes, lighting changes, and rumble strips to draw attention to the separation. CPTED principles can also restrict vehicle access to buildings through bollards and curbing. Just ensure the restrictive elements have practical stopping power, rather than just aesthetic appeal.

Utilizing glass vestibules as boundaries for secure entry. The entrance to a facility should be warm and welcoming — but it also needs to be safe. Fortunately, you can increase security by creating a glass vestibule to act as an additional set of doors necessary to gain entry to your facility. Depending on the location of your facility and its risk for gun violence, consider making the entrance glass bullet resistant. At minimum, use laminated glass so it won't immediately shatter if hit.

The lobby

The traditional functions of the lobby are to convey a corporate image, welcome employees and guests, verify their identities, and screen them prior to entering the facility. All these traditional functions should continue while adapting to new security and health threats.

To protect employees working in these areas, lobbies should be easily escapable. Consider creating safe points and escapable options in case employees feel threatened in the event of an active aggressor. For instance, while a desk can act as an initial boundary, having an additional exit behind the desk through which the employee can slip out if threatened adds an extra layer of protection.

With increased health prescreening and screening for COVID-19 and future health threats, many organizations will also need to evaluate the adaptability of their current lobby space and layout to safely support these new policies and procedures. The evaluation should include:

• Anticipated traffic
• Screening staff positions and equipment
• Safely distanced queuing space
• Private area to communicate health concerns
• Area for isolated employees to work safely when necessary

Each of these considerations will vary based on specific policies that will be enforced by the lobby. Although more restrictive than a typical lobby, screening area layouts in airports are a commonly observed example of this adaptive screening process. Airport screening is not only adapted to the lobby layout but also adapted to anticipated traffic flow through the addition of screening lanes, queuing lines, and staffing.

If the screening policy includes additional screening prior to turning away staff and guests, designated areas will be necessary for the additional screening and to provide isolated areas where those to be screened can continue to work safely while waiting to be cleared to enter the facility. The areas could be designed to provide for rapid cleaning between use. Additional screening may also necessitate increased staff to accommodate the lobby layout and specific screening requirements.

Health screening process

Many organizations that have continued in-office operations during COVID-19 have screening procedures in place, while others currently preparing for a return of staff are considering their options. At a minimum, existing screening and lobby processing policies and procedures should be updated to address modifications necessary to ensure a safe operation – not only as the pandemic abates but also to be prepared for any future health threat. (For more information and resources, read the CDC's Guidance for Businesses and Employers.)

Because health-related policies and procedures can impact many people inside and outside the organization, their development should include key stakeholders, which may include executive leadership, risk management, legal counsel, human resources, IT, facilities, marketing, and physical security. Participants and specific roles and responsibilities will vary and should be established early in the development process. Scheduling will also be essential to the success of this often-complex process.

Key policy and procedure considerations should include:

- Prescreening for employees, guests, and contractors prior to visiting facilities
- Staggered shifts, arrival times, and similar strategies to reduce population, congestion, and potential exposure
- Protection and training for screening staff
- De-escalation training for staff to handle persons who need additional screening, are potentially ill/contagious, or who become agitated while being screened
- Action and notification process for potential exposures

It is important to note that personnel who may be responsible for the screening may not be healthcare professionals; staff will need detailed guidance and training to execute screening procedures in compliance with laws and regulations.

Once all policies have been adopted and documented, it is critical to establish a process to clearly communicate the security and safety policies and processes to staff and guests. This could include preparing literature to explain the screening process and its purpose, updating employee handbooks, conducting training and orientation, and preparing site visitor information and signage to direct staff and guests.

Health screening technology

Once the policies and procedures are developed and lobby conditions evaluated, consideration of necessary or optional screening technologies can begin. While technology can be an effective tool, it is seldom successful on its own and relies on many other factors to ensure success. When vetting health-screening-related technology, be sure to consider:

- Effectiveness and reliability of the technology
- Ease of integration with existing systems
- Lobby layout, size, and environmental conditions that could impact the technology
- Staff and guest reaction to the technology
- Training and maintenance needed for the technology
- Ability of technology to be repurposed beyond the health screening process

In addition to manufacturer information, research independent assessments regarding the technology to learn from the experience and research of others. Security industry magazines and consultants often review products and technologies, providing insight beyond manufacturer information. For example, you can reference **this IMEG guide** regarding the use of thermal imaging for fever detection.

Training your staff

Once you've made the effort to develop and evaluate policies, procedures, lobby layouts, and technology, it's crucial to train your staff to ensure success of the security and screening programs alike. Consider the following training elements to ensure a successful program:

- Consistent application of the policies and screening processes
- Frequent use of the technology so staff become familiar with it
- Demeanor and approach to staff and guests
- Communication privacy
- Passively identifying behavior and symptoms common to illness and potential health threats
- De-escalation and anger management strategies that reduce stress and anxiety caused by the screening process

Your staff also must understand the policies for and be prepared to respond to other emergencies, such as fires, natural disasters, and active assailant events. Drills and rehearsals should be conducted regularly to help condition them to respond appropriately when their minds and bodies are under stress – keeping in mind that different emergencies evoke different responses and therefore require different drills and training.

Repetition and rehearsal are key to preparedness in any situation, as they build muscle memory in your employees.

Indoor air quality

At the onset of the pandemic, many were concerned that virus particles could be transmitted through a building's HVAC system and infect people in other spaces. IMEG engineers have found no evidence to show this to be the case, and a February 2021 statement from ASHRAE concurs with this assessment.

"It is impossible to say for sure, but to date, we have found no evidence or study showing new cases being attributed to the air handling equipment, or evidence of long-range transmission through an AHU system," stated ASHRAE Epidemic Task Force Chairman William Bahnfleth. While there is sufficient evidence to believe that airborne transmission is possible in some circumstances – such as when there is low ventilation in a space – the Task Force adds there is a very low probability for the HVAC system being the route.

"For re-entrainment of the virus to be an issue, there must be someone present in the building shedding the virus, have it captured by the HVAC system, and re-introduced elsewhere," states the Task Force. Nevertheless, ASHRAE emphasizes that "it is not possible to reduce risk to zero indoors" and that building HVAC systems warrant being checked.

To provide guidance, the Task Force has issued and regularly updates its **Building Readiness Guide** to help owners prepare their buildings for reopening as cities and states emerge from COVID-19 shutdowns and restrictions.

The guide suggests owners assemble a team of building staff and design professionals to review the HVAC system. Specific items to address include:

- Building controls sensors. Ensure they are functioning properly and providing accurate readings.
- Ventilation air. A minimum of code-level outside air should be provided.
- Ventilation rates. Can they be increased without impact to major equipment?
- Flushing of spaces. If it's necessary to provide pre- or post-occupancy flushing of spaces with outside air, identify how long you need to flush the spaces before and after occupancy.
- Air filtration. Improved filtration may help, but it depends on the space capture velocity, filter location, and system design. Improved MERV ratings may or may not make a difference.
- Ultraviolet germicidal irradiation. UVGI (using ultraviolet C, or UV-C, light to kill or inactivate the virus) can help, but like filters, it depends on placement and intensity.
- Control sequences and setpoints. Determine if any changes should be made.

(Additional review and startup considerations are included in the **Building Readiness Guide**, with many actions depending on whether an owner was able to continue equipment and system maintenance programs during their shutdown. For example, if the plumbing system has not been operated for days or months, there most likely will be issues to resolve, including an elevated risk for the growth of Legionella bacteria, which cause Legionnaire's disease. Stagnate water at normal building temperatures can provide a prime breeding ground for the bacteria, so plumbing systems need to be flushed and cleaned prior to occupants being introduced into the space. **Learn more**.)

It is crucial for all adjustments to a building's infrastructure to be based on an understanding of the space, the system design, intent, and operation. Changing system settings and sequences of operation without a good understanding of the effects on overall building operations could result in unintended consequences. In addition, owners should be cautious about investing in filters or UV lights inside the AHU where lengthy duct runs limit their effectiveness. Instead, they should make sure their consultant understands their concerns and can guide them to real solutions.

With an experienced and knowledgeable team following ASHRAE's guidelines, owners should feel confident they are taking the right steps to help ensure occupant well-being and operational integrity as their building returns to occupancy.

(For more information, read the IMEG whitepaper **"HVAC strategies for mitigation of airborne transmission of COVID-19 and other viruses."**)

Getting started

This executive guide does not cover all potential security measures available for increasing office staff and visitor safety and health. Depending on the size, type of business, and other characteristics of your organization, additional security measures that may warrant consideration include:

- **Mass notification system.** Such a system helps improve the safety and security of an organization by providing alerts and real-time instruction during a crisis.
- **Video analytics.** Advancements in software development and processing power continue to make video surveillance an increasingly more powerful tool for organizations' security efforts.

- **IoT-driven intelligent building strategies.** In the case of security, the swipe of a card in a parking garage can result in safe passage for employees and control/activation of building systems that are specific to the holder/owner of the card, as well as a workspace that is secure.
- **Cyber security** to protect cyber infrastructure from malicious attacks. Such a breach can be devastating for an organization's reputation and ability to continue to function.

Whatever measures are appropriate for your organization, taking a holistic view of your building's physical security and environmental safety – and implementing the appropriate measures – is the best way to provide a safe and healthy workplace and provide confidence and comfort for employees and visitors now and in the future.

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