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#### **JULIE WALTER**

Former DHI Director of Events Julie Walter, who worked at DHI for 16 years, passed away on February 15, 2023, following a four-year battle with cancer. DHI President David Beckham, AHC, FDAI, says, "Julie Walter was an amazing human being who was always positive and thoughtful. She cared deeply for our organization and will be missed by all those she touched at DHI." Former DHI CEO Jerry Heppes Sr., CAE, remembers Walter as "one of the hardest working and consistent performers I ever worked with. I always looked forward to saying hello to her in the morning because of her bright and cheery smile." DHI offers its deepest condolences. Visit www. moneyandking.com/obituaries/ Julie-G-Walter?obId=27395882 or scan the QR code to see the obituary for Julie.





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## DHI EDUCATION – REFRESHING A CLASSIC



**CEDRIC CALHOUN, FASAE, CAE,** is Chief Executive Officer of DHI. Email: ccalhoun@dhi.org.

#### DHI RECENTLY SET A PATH TO MAKE SOME SUBSTANTIAL IMPROVEMENTS TO ITS EDUCATION PROGRAM.

We started at the beginning with COR101: Fundamentals of Architectural Doors and Hardware and COR102: Introduction to Building Codes. We embarked on a journey with our Education Council to review each lesson within the two courses and our education partner, AC Business Media, to make the course cleaner and easier for students to navigate.

The original version had its limitations and frankly, a change was due. As you may already be aware, DHI relaunched the refreshed COR101/102 bundle in early March and we are very pleased with the early results.

What this refresh does for DHI and the industry is to put foundational content in a more updated platform, with more visuals and narration to guide students more effectively through the lessons. This platform also allows us to make updates and changes on the fly, based on student feedback and suggestions. The design and layout will appeal to early-career door, frame and hardware professionals, as well as professionals from other affiliated industries.

For example, COR101 and COR102 have been accepted for recertification points by the Construction Management Certification Institute (CMCI). In the very near future, we plan to apply for more of our coursework to be accepted by CMCI and other certification organizations as well. This will meet our goal of exposing other industries to our knowledge base and the expertise we hold, with the ultimate goal of increasing the number of certified professionals globally.

Along these same lines, this refreshed course will appeal to the next generation of life safety and security professionals as they consider a career in doors, frames and hardware. DHI will start connecting with workforce development offices, vocational schools and two-year colleges across the country to promote integrating it into their course curriculums.

We will also consult with local member companies to understand the entry-level job openings they have so we can make introductions and matches once an individual becomes a Door and Hardware Industry Associate. We've heard that while employers are open to hiring someone with no experience and training them, they would also prefer to hire people who have some baseline knowledge.

Another key component of success will be the engagement of our local chapters in the areas where we have the most traction. While this will be a national initiative, I am aware that most of the action will take place at the local level.

Refreshing COR101/102 has many far-reaching implications and sets up DHI, our members and the industry for growth if we embrace the possibilities and opportunities. I encourage you to register your new hires in these courses and engage with DHI on our talent pipeline initiatives. Our industry needs new professionals to take it far into the future. It starts with us. +

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#### BE A FACE OF DHI WE'D LIKE TO GET TO KNOW YOU!

Volunteering to be a "Face" of DHI is a great way to expand your professional network. It allows Door Security + Safety readers to get to know you better and also gives you a chance to share your accomplishments and career highlights in our industry. Not ready to be a "Face" but know someone who is? Email Alexandra Walsh at awalsh@dhi.org with your nominee. We'll take care of the rest!

#### JAN HOFFE, DHT, CFDAI, CAPM

**SECURITY CONSULTANT, RHEA INC.** *DHI MEMBER SINCE 2020* 

#### WHAT WERE YOUR CHILDHOOD AMBITIONS?

I was interested in heavy equipment, like many kids, and I even followed through with an education in civil construction.

#### WHAT WAS YOUR FIRST JOB?

I worked at Canadian Tire in high school. I started out at the customer service desk, then moved to seasonal once I'd had enough of people yelling at us for not being able to return their used junk.

#### WHAT LED YOU TO OUR INDUSTRY?

My first job after college was in project management on a huge government accommodations project. I was tasked with managing the doors, frames and hardware design packages for the fit-up, and I've been involved in the industry ever since.

#### WHAT'S YOUR PROUDEST PROFESSIONAL MOMENT?

Being on the project management/ design side of things, it's nice to see the tangible result of your work. Seeing any completed project in person is it for me.

#### WHAT HAS BEEN YOUR BIGGEST CHALLENGE?

COVID-19. Finding the motivation to do extra professional development/ learning at home, after also working a full day at home, is difficult.

#### WHAT'S YOUR GUILTY PLEASURE?

Spending way too much money on car parts, computer components and golf clubs.

#### WHAT'S YOUR FAVORITE BOOK/ MOVIE?

"Dodgeball: A True Underdog Story," with honorable mention to "Happy Gilmore."

#### WHOM DO YOU CONSIDER A MENTOR OR HERO?

I want to give a shout out to Daniel Abrams, who brought me into the industry and taught me many technical and management skills. I got pretty lucky finding that job, and I wonder how my career would have shaped up had our paths not crossed.

#### WHAT'S THE BEST ADVICE YOU EVER RECEIVED?

A time management principle called the 80-20 rule. It means that 20% of your activities will account for 80% of your results. In practice, you identify the activities that bring you the most success, and focus on them.

#### WHAT'S THE BEST ADVICE YOU NEVER RECEIVED?

Earth will continue to spin if you don't answer that email right away.

### HOW HAS YOUR INVOLVEMENT WITH DHI SUPPORTED YOUR CAREER?

Being the door guy in the office means that people come to you with unique problems. It's very satisfying when I can apply what I've learned at DHI to those problems and help solve them.



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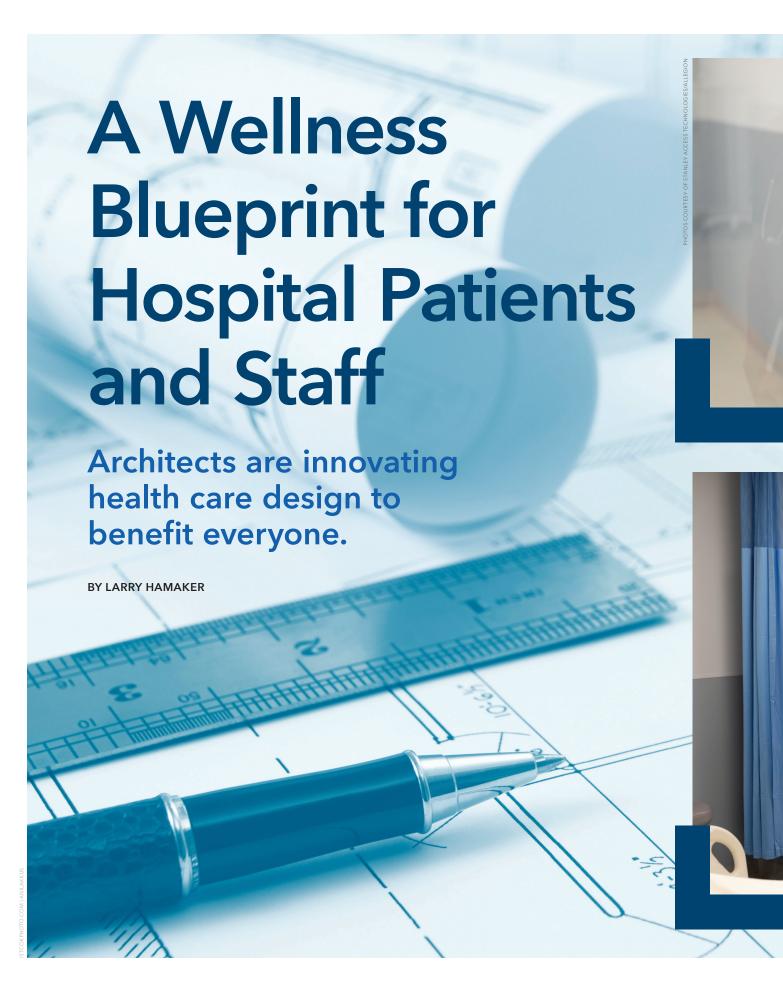
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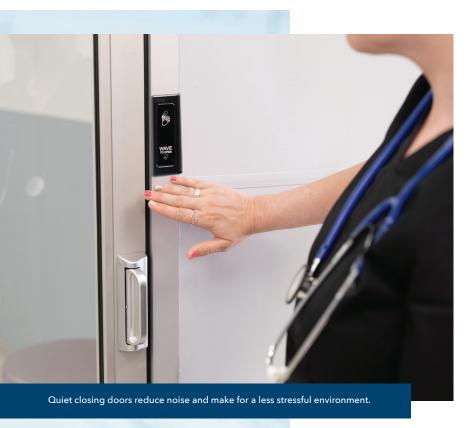
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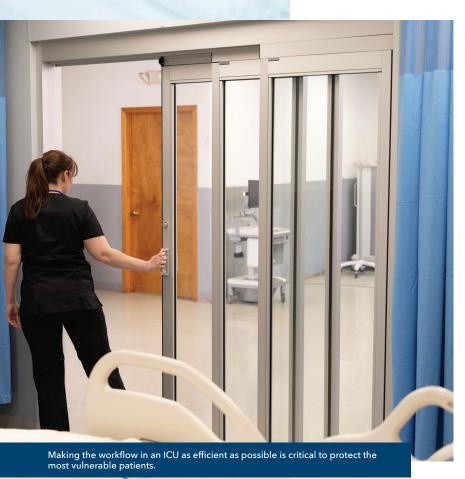




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Architects are implementing new and effective design strategies to improve both employee wellness and patient care in health care settings, particularly in intensive care units (ICUs). These hospital interior designs address patient and staff needs throughout every aspect of health care.

The pandemic helped shine a light on the importance of the well-being of both patients and hospital staff. The physical and emotional demands of patient care put doctors and nurses at a higher risk for physical and mental health issues.

A new study from the Mayo Clinic revealed 63% of physicians reported at least one symptom of burnout, up 46% from 2011. Even before the pandemic, 35% to 54% of physicians and nurses reported symptoms of burnout, according to the U.S. Department of Health and Human Services (HHS).

Physician and nurse shortages in many parts of the country are also setting off alarm bells. Physician demand is expected to continue to outpace supply, particularly in primary care and rural communities. HHS predicts a shortage of between 54,100 to 139,000 physicians by 2033. The aging baby boomer generation is helping fuel the nursing shortage as the demand for registered nurses continues to grow.

As the nation transitions to pandemic recovery and adjusts to a new normal, hospital interior design professionals are implementing design elements that can ease the burden on health care workers. By improving workflow, increasing exposure to sunlight and creating space for patient families, health care architects are doing their part to limit burnout. They're also making it easier to provide patient care, particularly in the intensive care unit (ICU).

"We're moving from patient-centric design to balancing the needs of both the patients and the caregivers. Focusing on caregiver satisfaction is an important piece of ICU design in the future," Julie Mullen, AIA, ACHA, LEED AP, says. Mullen is the Senior Operation Leader at Gresham Smith's health care design studio in Charlotte, North Carolina.



#### **Maximize Workflow**

Whether it's adding digital check-in stations, decentralizing medication, widening doorways and entrances to make it easier to move patients and equipment, or creating separate entries for contagious patients, improving workflow is an invaluable tool to help overtaxed physicians and nurses.

"We look to improve the flows of patients, staff, equipment, care, medications and whatever other critical flows the hospital department identifies," Neil Sutton, an architect with CMBA Architects in Sioux City, Iowa, says.

Architects are implementing cluster designs and decentralizing medication to improve patient visibility and monitoring. For example, during the vertical expansion of WakeMed Cary Hospital in North Carolina, the team at BSA LifeStructures, a national integrated design firm, added six nursing neighborhoods throughout the hospital. The goal is to help reduce the number of steps hospital staff members must take and help maximize patient care.

The workflow of ICUs requires careful planning and deliberation. It's no small undertaking to maintain the quality of care while improving the experience for health care providers, as well as family members, other visitors and support staff.

The focus of an ICU is to provide intensive specialized medical and nursing care, and to monitor critically ill

patients. This focus presents its own set of challenges when it comes to interior design that are not present when designing traditional hospital rooms.

Gresham Smith's architects are doing their part to help prevent health care burnout and improve workflow by getting feedback from physicians and nurses during the ICU design process. The team also creates mock-up ICU rooms to ensure the design enables hospital staff to provide patient care in ways that are easier and more comfortable for health care providers.

#### **Keep Everyone Safe**

One look at the headlines on any given day is enough to remind us all that security is a concern for every public space.

Even hospitals must reexamine their practices and systems to protect everyone, but good design can provide a head start. Designers looking for doors and monitors that can fully integrate with fire and security systems are finding a range of products. This includes products that communicate with each other to those that can be monitored from one or more central locations if a lockdown is needed.

#### **Let the Light Shine In**

Incorporating natural elements into hospital interior design promotes healing and provides a calming atmosphere. HDR Architects, for example, plans to add extensive landscaping



and outdoor space at a new hospital opening in San Francisco. The design includes a publicly accessible outdoor terrace and will take advantage of the hospital's unique proximity to a nearby nature preserve.

The pandemic encouraged architects to take it a step further by creating flexible outdoor spaces to accommodate programs and amenities. HDR Architects recommends designing outdoor spaces to give staff access to fresh air and gardens to decompress.

Designers are also making it a priority to incorporate natural light into every aspect of hospital design. Studies suggest exposure to daylight increases efficiency and reduces burnout of hospital staff. Sunlight aids patient recovery and helps reduce hospital stays, according to Environmental Health Insights.

#### **Turn Down the Volume**

Hospitals are high-stress environments and rarely offer peace and quiet for patients or staff. Lowering the volume helps decrease stress and improve patient healing. With that in mind, designers are eliminating overhead pagers. They are also building corridors to separate staff and the public, as well as adding quiet-closing doors to minimize disruptions. Designers are placing special emphasis on adding easily accessible break rooms and respite areas to help staff recharge.

#### **Focus on Family**

Family will continue to be a priority for health care architects. Keeping families close provides reassurance to patients, and they may spot an issue that needs to be addressed. As a result, designers are prioritizing private rooms with comfortable chairs and space to accommodate family members. Emory University Hospital's Neuroscience ICU features a small respite room for families, attached directly to the patient room.

#### Flexible Real Estate

To help health care workers provide optimal support to patients, architects are creating flexible spaces to accommodate an influx of patients. Having the right equipment during high-stress medical situations provides health care workers with peace of mind.

Gresham Smith recently built a medical surge unit that can be converted into an ICU to treat overflow patients. The project required medical surge rooms to have extra clearance at the head of the bed. It also added the ability to install a boom or articulating arm for medical equipment commonly used in ICU rooms, among other accommodations.

#### **Technology-Driven Perks**

Designers are taking advantage of technological advances to improve patient care and employee morale.

Doors, for example, are being designed to break out at the touch of a button. This allows the entire doorway space to be utilized when moving patients, equipment and staff in and out of hospital rooms. Similarly, some door handles are now designed to prevent snagging on medical tubes, while electronic privacy glass and integral blinds add privacy.

#### **Looking to the Future**

Healthcare architects are on the frontlines improving patient care and employee well-being. By listening to the professionals who work in these facilities as well as the patients and family members who visit them, smarter designs, innovative products, and real-world solutions will help shape the future of healthcare. That is a future that looks very bright indeed. +

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## DOOR SECURITY TRENDS IN

## Health Care

#### Trends include more safety and access innovations in a healing setting.

BY TOM MORGAN

Wave-to-open sensors offer hygienic solutions for hands-free access and egress.

Even with the prospect of fewer respiratory infections as spring arrives, the health care system continues to face major challenges on several fronts.

Doctors, nurses and support staff are still stretched thin by labor shortages and extra workloads. High inflation and other economic worries weigh on the minds of patients and administrators. All this comes on top of endemic COVID-19, seasonal influenza and the recent spike in the respiratory syncytial virus (RSV).

Further straining the system are cybersecurity concerns and a side effect of the health care workplace—threats from upset or agitated patients, family members and others.

It's more important than ever to take progressive steps to create and maintain a healthy, secure and safe working environment. It allows health care workers to focus on giving patients the best care possible. Safer working environments can also translate into higher success rates for retaining trusted professionals and recruiting qualified talent.

#### An Increase in Construction

Adding to the demands on the system is the increase in hospital and clinic construction. Notably, behavioral health and psychiatric facilities continue to make up the highest percentage of expansions currently underway or planned for the next few years. These include dedicated treatment centers within hospitals, as well as behavioral health emergency intake/triage areas separate from main emergency departments.

Whether it's a new behavioral health department or an additional wing for a hospital, the security of door openings

provides the primary line of defense for health care workers, patients and visitors alike. Secured openings also extend to medication storage, patient files and servers. The good news is that the industry has more effective functional, privacy and aesthetic options when it comes to door security solutions today.

#### Advances in Behavioral Health Doors and Hardware

Securing safe behavioral health settings requires that architectural door hardware is ligature resistant and free from sharp edges and catch points. Fortunately, the trend has moved toward levers, latches and other security hardware solutions, offering a soothing, decorative look versus something that appears dreary and oppressive.

Patient rooms can also be equipped with specialty access doors or hardware. For example, double swing hinges can be released by staff in the event a patient has barricaded the door or otherwise prevented the door from opening into the room.

#### Less Door Contact, More Secure Access

Several touchless (no-touch) and low-touch access technologies were developed as convenient opening solutions well before the pandemic. Ever since the outbreak, demand for devices that help prevent the spread of microbes and viruses has understandably accelerated and continues. These devices facilitate smoother movement through openings, provide greater accessibility and promote inclusivity.

Solutions now range from low-touch mechanical hardware like push paddletype trim and door arm and foot pulls, to touchless wave-to-open sensors and electronic access control (EAC) systems that trigger automatic door operators and hold open hardware. EAC credentials have also continued to evolve from keypads to fobs to the more hygienic contactless cards and mobile devices.

An advantage of migrating from card to mobile credentials is that smart devices are far less likely to be lost, stolen or left at home. Smartphones also offer an extra layer of credentialing by requiring facial recognition, a fingerprint or numeric input to authenticate the user. Dedicated biometric access control sensors at the door that use facial recognition are also on the horizon.

Many facilities are also updating door security by rekeying openings with intelligent key systems and using key control platforms.

#### **EAC for Medications and More**

The call for cabinet access control has also increased. Access control is especially relevant for health care facility pharmacies where accountability, safety and security are critical. In addition, EAC for server cabinets, patient file storage and personnel lockers has gained more attention.

This layered approach to security facilitates controlled access to key areas of the facility. It can also help ensure compliance with federal and local regulations, boost patient satisfaction, improve efficiency, and reduce the costs of administration, operation, compliance and loss of diverted equipment and supplies.

#### **Specialty Doors**

There is a bigger push in health care for sliding and pocket doors. They are typically easier to open and save space by eliminating the radius required for a swinging door. Today's sliding and pocket doors feature newer insulating materials that make them more



Wireless locks expand access control to drawers, cabinets and lockers.



Behavioral health access doors give caretakers or authorized personnel quick access to a patient's room in case of an emergency.



Ligature resistant door hardware features rounded surfaces that are free from sharp edges or potential catch points.

energy efficient and keep rooms quieter, more private and more comfortable. Plus, they have a greater aesthetic quality to them with wood and other decorative finishes that are available.

#### **Delayed and Controlled**

Depending on the area within a hospital, assisted living facility or nursing home, there could be a blend of egress solutions. They might be controlled, delayed and free, based on what an Authority Having Jurisdiction (AHJ) allows. That's why there's an even greater impetus for health care facility administrators to know and stay current on codes.

Delayed egress doors in health care settings help prevent an unauthorized person from entering a secured area of a hospital or exiting through a monitored or restricted door. Typically, passage is allowed only after a specified period, usually 15 or 30 seconds. A loud, audible alarm sounds in the vicinity of the door to discourage someone from trying to sneak through with something valuable, for example.

Controlled egress is common in behavioral health environments where the clinical needs of patients require staff to look after them and their safety, and to ensure they remain within the unit. The same concern for patient safety applies to those who might try to wander out of a dementia unit or memory care facility. For infant patient care wings, the objective is to protect the child and carefully monitor and manage their release.

While some mechanical controlled egress door locks may still exist in these environments, EAC and maglocks have become the norm as more facilities add advanced solutions.

#### **LifeSafety Power®**

Integrated power and access control panels have also become must-haves in health care. Separate boxes and enclosures, from wall mount to rack mount, are brought into one system for intelligent monitoring. Using Netlink communication, LifeSafety Power provides a holistic view of a facility's networked solutions. This includes connected wired and wireless systems, as well as a variety of temperature, humidity, airflow and other sensors. Managers have peace of mind that vital systems are up and running and the integration helps provide greater comfort control throughout the facility.

#### Cybersecurity

Threats are not limited to the physical security of health care facilities and the patients and healers inside. They also extend to cyberattacks, which have increased significantly worldwide since COVID. Hospital and clinic IT departments were already taxed with keeping systems online to handle massive caseloads. It was challenging to balance those demands with maintaining countermeasures to defend against health care data breaches.

Fortunately, many facilities have since developed risk management programs. They have either bolstered internal capabilities or enlisted the help of managed cybersecurity providers.



Aesthetic sliding doors provide easy, quiet operation and eliminate the radius required for swinging doors.



Durable push/pull paddle trim provides easy-to-use access for health care environments.

Originally, cybersecurity was about safeguarding computers and servers. Today, the focus is on the cybersecurity of networks and the growing number of interconnected Internet of Things (IoT) devices, including digital access solutions for door openings in health care facilities.

Security integrators and their customers are asking manufacturers lots of cybersecurity questions these days. This means they're taking the subject very seriously. They want to hear directly from manufacturers what is being done to protect the devices they're about to procure and/or install. This is why it's important to work with companies that are as transparent as possible about their cybersecurity posture.

It's also critical to become more educated about the cybersecurity of the products and solutions being considered, and about cybersecurity in general. Security awareness organizations like SANS (sans.org) can help take participants from a relatively low level of cybersecurity understanding to a much more advanced level. The Cybersecurity and Infrastructure Security Agency (CISA; cisa.gov) and the Department of Homeland Security also have training for critical infrastructure customers and support organizations.

#### **Security Consultants and Product Standardization**

Time is always precious in the health care industry for physicians, department managers, administrators and other decision makers. Finding the bandwidth to address security planning for these expansions while simultaneously dealing with immediate safety concerns can be overwhelming. In addition, some health care facilities are hampered by a shortage of skilled labor to manage door openings and all the integral technology and assets for safeguarding these environments.

Inevitably, it's essential to commit the necessary time and crossfunctional teams to diagnose the issues, identify the needs and prescribe the best solutions. That's why the trend continues toward tapping into experienced consultants and partners. They can provide insight and education on security innovations and alternatives that lead to better informed decisions.

Fortunately, companies specializing in door security solutions have health care specialists across the United States who are ready to help. They also have solutions that help with everything from design, site surveys and specifications, to punch lists, smart tagging of door assets and inspections.

Another trend is standardizing on a product line that covers the extensive security solutions required by the health care industry. Narrowing choice to the most trusted manufacturer and a singular resource can mean significant economies of scale. Better pricing, more consistent quality, easier integration and a more responsive level of support can be achieved. +

**TOM MORGAN** is Director of Business Development-Health Care at ASSA ABLOY Opening Solutions. Email: thomas.morgan@assaabloy.com.



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## MORE THAN CODES:

How Door Specification Shapes Health Care Experience

Sliding doors offer design solutions for a range of health care facilities.

BY TYSEN GANNON





While planning the efficient use of space is important for every project, it receives added emphasis in health care settings. A well-executed floorplan can improve a patient's access to services by increasing the number of exam rooms incorporated within the built environment. It can also help medical staff provide better care by utilizing elements of lean design.

However, it's important that the larger considerations for the use of space (i.e. the distance between exam rooms or staff and patient areas) neither impede accessibility to these spaces nor limit their ability to support patient-focused medical care.

Rooms within health care facilities should be able to accommodate the storage of supplies and equipment necessary for a variety of routine services. Further, access to these materials should not be difficult for any occupant. Though these considerations seem straightforward enough, planning for both can sometimes feel like a zero-sum game, in which achieving some of one goal comes at a cost to the other.

But it doesn't have to be that way. Because they are repeated throughout the built environment, commercial sliding doors can support largescale efficiencies within medical centers without compromising access within individual rooms. Knowing the codes that govern door specification, as well as how door type can benefit an entire facility, can help building professionals choose the right product for their needs.

#### **Codes to Know**

Door specification can be one of the more difficult aspects of health care facility design. In addition to recommended best practices, there are several codes that govern not only door hardware and opening width, but also what types of doors can be installed in specific areas of the building.

While this article provides an overview of codes relevant to door specification, facility managers and designers are encouraged to familiarize themselves fully with the specific details of each requirement.

The Americans with Disability Act (ADA) ensures accessible design by outlining parameters for all doors. The ADA requires doors have a maximum opening force of five pounds, a set closing speed



Sliding doors facilitate on-stage/off-stage design at University of Iowa's Heart and Vascular Center.

for self-closing doors and minimum width of 32 inches. Door hardware must be no-twist, allow for one-hand operation and be located a maximum of 48 inches above the floor. All doors must meet these criteria to be useable in health care settings.

In terms of code requirements for fire and life safety, the National Fire Protection Association (NFPA) has specific standards (NFPA 80 and NFPA 101) that govern door specifications. The International Building Code (IBC) has similar standards. Both codes outline minimum fire, smoke and heat containment capabilities for doors in areas of egress, as well as key life safety considerations throughout a building.

It's important to note that these documents represent model code requirements and specific locations may deviate from them, so designers are encouraged to contact the local Authority Having Jurisdiction (AHJ) to ensure proper code compliance.

For rooms that are attached to corridors and accessed by patients,

the IBC requires breakout doors. When these doors swing, they should do so into rooms from circulation areas (with some exceptions) and should fall well within ADA guidelines.

While sliding doors can meet and exceed most of these codes, there are instances where their use can be difficult or unfeasible. In these cases, door specifiers do not need to take an either/or approach. They can use the door type most appropriate for each opening.

However, doing so may complicate construction timelines, design aesthetics and long-term maintenance, so it's recommended that professionals seek manufacturers that offer a range of door types to meet the various needs of a project, without compromising how a space looks and how staff can keep doors in operable conditions.

#### **Patient and Exam Rooms**

When it comes to patient and exam rooms, space-saving design is of the utmost importance—especially in

renovation projects where a building's dimensions have little to no leeway. For these rooms, designers consider both the total number of rooms and the usable space within them.

Sliding doors solve for both considerations. Because they do not have swing arc trajectories, these doors help architects ensure a health care facility has the maximum number of rooms without having to shrink the size of spaces, which helps accommodate the necessary amount of medical equipment within them.

This was a key point in a recently completed renovation of Providence Health's Gately-Ryan Building in Renton, Washington. The architects and standards director understood that sliding doors save 10 square feet per door, allowing them to add an extra exam room for every 11 planned. This satisfied the project owners and ensured a facility that supported the medical center's patient-focused philosophy.

In addition to the space savings, these doors also reduce access barriers.
Because they do not have approach

To allow providers and administrative staff do their work efficiently, many health care facilities utilize the on-stage/off-stage model.

clearances and can be specified with no twist hardware, commercial sliding doors are more easily operated by those with disabilities.

However, as noted above, there are some instances when sliding doors cannot be used for patient rooms. In these situations, architects can turn to flexible opening swing doors. For example, doors with two unequal leaves can be used to minimize swing arc trajectories for daily use. When staff needs to move equipment into a room or move a patient bed out, the secondary leaf can be engaged for a large ad-hoc opening.

#### X-ray Labs and Specialty Doors

In addition to common spaces, there are rooms throughout health care facilities that may need special requirements, including X-ray rooms and patient toilet rooms. For X-ray rooms, building codes require lead shielding across the walls and doors. Sliding doors can be lead-lined to provide requisite protection and efficient use of space.

Much like in patient and exam rooms, by sidelining swing-arc trajectories, these doors can help alleviate spatial constraints. This allows more freedom of movement within these labs, which often need to have large openings to accommodate equipment or patients needing assistance.

Patient toilet rooms can also pose design challenges. Swinging doors can be blocked unwittingly, trapping patients within the room—a danger that is lessened by specifying a sliding door. However, patients with mobility challenges may require bed lifts, which may initially seem to disbar the use of sliding door



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## By muffling 39 decibels of sound, sliding doors help reduce crossover noise from adjacent rooms.

systems. In these instances, sliding doors can be specially adapted with a split top rail to allow bed lifts to transport patients through a sliding door opening.

#### **Isolation Rooms**

As the past few years have shown, isolation rooms are incredibly important to patient care. These rooms not only need specific air change rates, but also need to be sealed to reduce airborne infection risks. Likewise, when medical personnel need to access an isolation room, it's important that door operation not cause enough air turbulence to disturb the sterile field. As such, the openings to these rooms play a key role in maintaining conditions to support patient recovery and infection containment.

According to peer-reviewed research, it appears that sliding doors significantly reduce the risks of containment failures in hospital isolation rooms. Swing doors create large eddies of air turbulence, which can disperse airborne pathogens into or out of an isolation room and temporarily disrupt a sterile field. Sliding doors mitigate these risks.

Using water tank models and computational fluid dynamic modeling, research indicates that proper opening and closing cycle practices with sliding doors significantly lower the risk of containment failure. Therefore, the International Health Facility Guidelines recommend the use of sliding doors "for airborne infection isolation rooms (negative pressure), protective environment rooms and any other spaces that have been identified as an infection control risk."

In addition to their operation, commercial sliding doors can be specified with perimeter and dropdown seals that are rated to UL 1784 standards. This rating is primarily used to indicate that a door will block the passage of smoke, but it is also applicable to the requirements of pressurized environments. These features make sliding doors well-fitted for isolation and clean rooms.

#### **Administrative Areas**

Health care environments are more than places where nurses and doctors see patients. There are myriad tasks that occur in the background to help these facilities run smoothly. To allow providers and administrative staff do their work efficiently, many health care facilities utilize the on-stage/off-stage model.

This type of design separates patient and treatment areas from other aspects of the medical profession. In on-stage areas, staff can see patients and provide care. But in off-stage areas, staff chart patient records, take breaks, collaborate on steps in patient care and more. Sliding doors support these functions by contributing to efficient space use and by providing premium acoustic isolation.

The perimeter and drop-down seals available on select sliding door assemblies allow these doors to achieve Noise Isolation Class (NIC) ratings of up to 39. By muffling 39 decibels of sound, sliding doors help reduce crossover noise from adjacent rooms. In on-stage areas, this helps protect patient confidentiality. In offstage areas, this contributes to more concentrated and uninterrupted work areas, as well as rest spaces that are more peaceful. Both benefits support staff wellness and their ability to provide the best care they can.



Barrier-free designs support patient room accessibility by allowing the use of bed lifts.

#### **Designing for End Users**

Health care settings can present several challenges to door specification and interior planning. Knowing the code requirements creates a baseline understanding of how to design these spaces. It is also important that building professionals know how different door options can support the various functions of health care settings, including patient accessibility and the medical staff's ability to provide care.

Because commercial sliding doors can save up to 30 square feet per door and can meet or exceed most code and accessibility requirements, they can help architect and facility managers solve challenges in health care design. This helps the built environment more readily contribute to positive patient and staff experiences. +

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#### BY WADE ARNOLD

Security windows and doors in health care settings are an important part of providing a safe environment for staff, patients and visitors. They promote patient safety, protect patients and staff, and deter theft or vandalism. They control the safe and secure exchange of people or items throughout the facility.

To ensure that security windows and doors are manufactured and installed properly, it is a best practice to meet with stakeholders, including the installer, general contractor and architect, early in the process to review key shop drawings, budgets, timelines and scope of work.

#### **Patient Safety**

Anti-ligature windows and doors are designed to reduce the risk of individuals harming themselves or others. These types of systems are common in mental health, detention and other institutional settings. They offer several important benefits that significantly enhance safety and security for both patients and staff.

One of the key advantages of anti-ligature windows is their tamper-resistant design.



They have been tested to prevent objects from being lodged between the window frame and glass, reducing the risk of ligature points. The materials used in these types of windows also make them more difficult to break compared to standard glass.

In addition to their tamper-resistance, antiligature security windows also offer enhanced visibility for staff monitoring patient activity. This is especially beneficial in a hospital's behavior health facility, as it allows staff to keep an eye on high-risk patients without entering their rooms. In a center's high-risk areas, human-impact rated windows and doors offer superior protection against breakage, making them an ideal choice for health care. The proprietary, reinforced frames of these windows

and doors are made from heavy-duty aluminum which can withstand repeat impacts from objects or people.

#### **Protecting Patients and Staff**

Secure locking mechanisms, access control and security glazing are among the top considerations for hospitals. They help ensure that the patients and faculty remain safe and provide controlled access to the facility.

An enhanced security storefront system can act as a deterrent against vandalism, theft and active shooter threats. For hospitals in high crime areas, it is not uncommon to consider a more robust storefront system with ballistic protection for entry points around the building. Think about areas prone to security risks.

This transaction window is part of a secure transaction system.



Security glazing on doors and windows provides visual interest and a durable barrier while still preserving the healing environment of a health care space.

Typically these are ambulatory areas where violence is often initiated by gang activity or pharmacies dispensing medical products.

#### **Secure Transaction Systems**

Transaction windows, drawers and package receivers are essential distribution channels for medical centers. These transaction systems are commonly found in reception areas providing safe and secure exchange of goods with patients. They can also securely control the access of people or items into the hospital.

In pharmacies, transaction systems provide secure storage for medications and other products, while still allowing access to authorized users. Pharmaceutical transaction systems are tailored to the specific needs of each pharmacy. The drawers are designed to be durable and secure to withstand the daily rigors of busy pharmacy environments.

Health care settings frequently require a secure means to transfer people and items. From passthru equipment for sterile environments to the secure storage and distribution of prescription medicine, to the safe exchange of syringes, there are a series of access control devices that securely control flow.

#### **The Right Solution**

Security glazing provides visual interest and a durable barrier, while still preserving the healing environment of a health care space. The clear laminated safety glass used in security doors and windows for health care settings is easy to clean and scratch-resistant. It also helps provide natural light with access to outdoor views, making the environment more pleasant and calming for patients.

As a building material, glass also helps reduce the time needed to properly disinfect surfaces while providing security. It is a long-lasting product that will stand up against regular cleaning processes.

Laminated glass is manufactured using a combination of heat, adhesive and pressure. The outcome is a strong and durable material that keeps unauthorized people out and high-risk behavior patients in. These types of impactresistant glass also provide excellent levels of insulation and soundproofing, allowing occupants to stay comfortable.

When selecting security windows and doors for a health care setting, it is important to consult early with stakeholders and consider factors such as size, strength and materials used. Features include anti-ligature, bullet or impact resistance, fire safety ratings and noise reduction capabilities.

#### **Protective Properties With Healing** Solutions

Health care designers and architects today have access to windows, doors and glazing solutions that balance practical safety with ample access to natural daylight and outdoor views that create a positive and nurturing environment for the patients of these facilities. Studies have shown that exposure to natural light results in improved sleep schedules for hospitalized individuals, better pain management outcomes, increased mood states, enhanced concentration levels and an overall improvement in cognitive functioning.







# Top Physical Security Trends Emerging in 2023

BY KYLE HURT

## Unifying security solutions, modernizing access control and analyzing physical security data are just some of the priorities for security professionals this year.

In 2022, we predicted that organizations would adapt to meet the challenges posed by the pandemic. This included shifting to hybrid work, restructuring their supply chains and overcoming human resource issues.

As businesses begin to emerge from the initial response phase of the pandemic, we believe that they are focused on recovery and growth.

More than 3,700 physical security professionals answered our annual survey to provide insights on current challenges, what their budgets will look like this year, the top 10 technologies they plan to invest in and more.

The findings are presented in the Genetec "State of the Physical Security 2022" report released in December 2022. The top seven key trends we discovered include:

### 1. Labor shortages will drive greater demand for unified security solutions.

Labor shortages across industries have been garnering attention for months. The physical security industry isn't immune to this struggle. In the survey, 50% of respondents said their physical security team experienced human resource challenges last year. Leaders were facing staff shortages, hiring difficulties and employee morale problems.

Ensuring adequate physical security with fewer staff is a recipe for burnout, which only compounds the problem. Team leaders are re-evaluating their technology stack. They want solutions that help them streamline tasks, automate processes and enhance the efficiency of their teams.

As leaders seek ways to maximize resources, the demand for unified physical security solutions will keep growing. Unifying video surveillance, access control, automatic license plate recognition, communication technology and other valuable functions can make an operator's job easier. It also reduces costs and training. Security teams can further streamline operations with built-in analytics or decision support features.

Investing in modern physical security technologies also positions the department culture as leading edge. This can entice younger, more techsavvy physical security recruits in a competitive job market.

#### 2. Modernizing access control will take precedence.

In the IFSEC Global 2022 State of Physical Access Control Report, only 41% of respondents believed their current access control system either met or exceeded their requirements. While 40% said their top challenge was protecting against cybersecurity threats, another 43% want to make access control administration easier.

This year, we'll see more organizations upgrading their access control systems. Our survey showed that 67% of organizations are planning to invest in access control modernization, putting it at the top of the technology investment list.

Modern access control solutions deliver a host of built-in cyber defenses and health monitoring tools. They also offer higher levels of automation to streamline access control tasks. Upgrading will allow organizations to eliminate weak points of legacy systems and better defend against cybersecurity threats. They can also maximize their investment to deliver value beyond the doors.

For example, operators can begin centrally managing the access rights of employees, visitors and contractors while automating access requests per company policies. This alleviates choke points in manual processes and improves efficiency and company-wide compliance.

Choosing an open access control solution further expands opportunities. From mobile credentials and biometrics to cloudconnected controllers and services, organizations can implement the latest technologies to keep modernizing their deployments over time.

#### 3. Hybrid-cloud deployments will grow alongside demand for cloud-connected appliances.

Hybrid-cloud deployments are gaining traction across the physical security industry. Our survey shows that 66% of organizations will move to managing or storing more physical security in the cloud over the next two years.

The reality is that full cloud deployments aren't a good fit for every installation. Some might want to conserve security devices and infrastructure investments that are not cloud-ready. Others may have bandwidth limitations or need to keep some data processing and storage on site.

As businesses rationalize their costs, concerns and approach to migrating to the cloud, we can expect an increase in demand for ready-to-deploy hybridcloud appliances. This infrastructure will support edge-computing workloads and make existing devices cloud-compatible. They'll also help centralize access to systems and data across many sites.

These cloud-connected devices will not only provide more flexibility to meet site-specific requirements, they'll streamline access to the latest innovations.

#### 4. Implementing better cyber measures and defenses will be a priority.

With rising concerns about cybercrime, organizations are looking for new ways to implement and maintain robust cybersecurity strategies. Our survey shows that 36% of information technology (IT) and security professionals want to invest in cybersecurity-related tools in 2023, with 40% of their efforts focusing on access control alone.

However, buying new tools doesn't mean organizations will have a comprehensive strategy to face new threats. Implementing better security measures and automated cyber defenses will be the priority. So will proactive security architecture planning and procurement. This will include:

- Replacing legacy equipment before succumbing to end-point failures to better mitigate risks
- Using intelligent maintenance tracking tools and metrics to improve procurement forecasting

- Relying on external help to adapt security architecture planning and offset supply chain delays
- Standardizing on cybersecurityminded vendors to enhance resilience across the partner ecosystem

This take-charge cybersecurity mindset will not only help organizations better defend against cyberattacks, it will also become an essential factor in preserving business resilience and continuity.

#### 5. Extracting physical security data will push digital transformation forward.

The COVID-19 pandemic accelerated digital transformation (DX) on a global scale. In the PwC Pulse Survey: Executive Views on Business in 2022. 60% of executives said DX is their most critical growth driver. As these initiatives expand, success relies on aggregating data from various sources and quickly making sense of data to make informed decisions.

In 2023, extracting intelligence from physical security systems will become central to roadmap discussions. According to the Microsoft-Accenture Future of Physical Security report, 75% of respondents believed DX of physical security will generate a meaningful return on investment (ROI). Also, 80% of respondents agreed that DX delivers non-financial benefits that are worthwhile to the organization, regardless of ROI.

Many organizations already understand that video surveillance, access control and other physical security systems contain a lot of information. However, bringing data sets from disparate systems together makes it possible to discover relationships and make real changes to business operations.

For example, most organizations have installed a video surveillance system, but few use this data to its full potential. By analyzing their data, organizations can create new outputs and/or additional value, which can change business processes.

As digital transformation continues to be a top priority for organizations, we are seeing increased collaboration between the IT and physical security

#### **Find the Research**

The Genetec State of Physical Security 2022 report is available at www.genetec. com/a/physical-security-report or by scanning the QR code.



The IFSEC Global 2022 State of Physical Access Control Report is available at www.hidglobal.com/doclib/files/ resource\_files/hid-and-ifsec-physicalaccess-control-trend-report-2022.pdf or by scanning the QR code.



The PwC Pulse Survey: Executive views on business in 2022 report is available at www.pwc.com/us/en/library/pulse-survey/ executive-views-2022.html or by scanning the QR code.



The Microsoft-Accenture Future of Physical Security report is available at www.accenture.com/\_acnmedia/pdf-100/ accenture-future-of-physical-securitywhitepaper.pdf or by scanning the QR



departments. They're sharing more information and working together to use data to serve broader organizational objectives. Find out why in the next trend.

#### 6. Blended IT and physical security teams will be seen as essential.

IT teams help manage network security solutions; however, bridging the divide between physical and IT security is a work in progress.

As the internet of things (IoT) expands and demand for mobility rises, vulnerabilities will increase.

Having siloed risk management strategies no longer makes sense. Many organizations understand that threats can come from anywhere. And communication gaps between physical security and IT teams expand opportunities for attackers.

This year, more organizations will seek solutions that provide a consolidated view of physical security and cybersecurity. We'll see more collaboration and even fully blended IT and physical security teams. Working together will heighten situational awareness and risk mitigation across the organization.

Increased IT and security collaboration will lead to better ways to secure data, assets and people. It'll also enhance efficiency, streamline global security operations, and improve business processes.

#### 7. Organizations will continue to embrace remote work and space utilization data.

In the wake of the pandemic, there's been a slow uptake in back-to-office work. To remain competitive, many organizations are embracing a hybrid work environment. With that, the office footprint is changing in significant ways.

Today, many are either downsizing or looking for ways to repurpose unused spaces. They also want to support new office demands such as more

hotdesking, team collaboration, and wellness amenities.

In 2023, we expect to see more organizations using existing video surveillance and access control to gain better insight into their office space utilization.

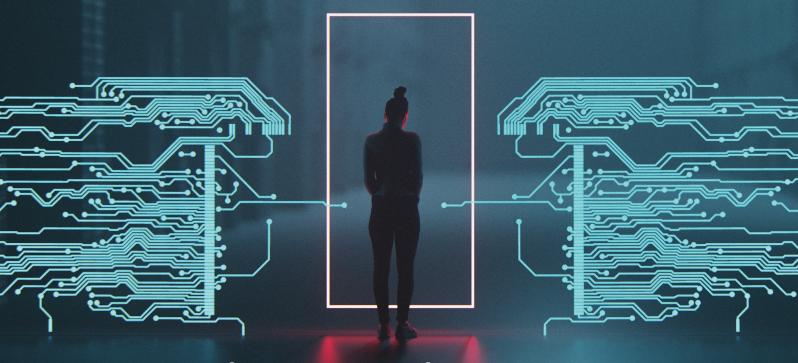
From people counting trends to live occupancy reports, managers can use metrics to make better decisions. They can track office attendance, manage desks and meeting rooms, and determine how to best optimize office space. This data can inform future lease renewals, occupancy policies and cost savings across real estate assets.

#### **Conclusion**

In the midst of these trends and changing priorities, manufacturers and integrators are working together to meet their customers' needs and goals. A unified, open architecture system is key. It allows customers to effectively take advantage of new technologies as they emerge and keep up-to-date with the latest cybersecurity measures. A unifed system also unlocks business intelligence by enabling the flow of data across security activities and other business operations. By focusing on unification, organizations can not only better protect their facilities but also improve their operations. +

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## CYBER-READY Today and Tomorrow



Implementing cybersecurity best practices is a priority.

BY MARK PRIBISH

Just as DHI members focus on the security and safety needs of their customers, they must also focus on information security and governance best practices for their employees and customers.

The Internet of Things (IoT) has been measured in billions of dollars and devices, representing a broad shift for a wide range of technology, media and telecommunications. This includes both commercial and industrial markets, such as smart buildings, smart doors, smart keypad readers, smart keycards, smart video surveillance, smart alarms and device security.



The shift to the IoT and wireless networking has brought many new, innovative and smart benefits to DHI manufacturers and distributors, along with their commercial and industrial customers. However, it has also brought new cyber threats and risks.

Today's DHI member should be cyber-ready for today and tomorrow by having an annually updated information security and governance plan, with a focus on response and recovery.

#### **Preparedness Is Key**

As we enter the second quarter of the year, I encourage every business-especially small to medium-sized—to take stock of its cybersecurity best practices. It is imperative to commit to new and improved information security and governance practices.

Your goal—or more importantly, the promise from your business to your employees and customersis to focus on cybersecurity, cybersecurity risk assessments, pre-breach planning and postbreach response.

Employers should create a culture of cybersecurity by educating employees and customers on the common threats and easy points of exposure. They should also provide educational resources for employees and customers to stay safe.

Whether your business experiences a cyberintrusion, malicious attack, or an accidental release of customer or employee information, lack of cyber preparedness can be a much greater threat than the data breach itself.

As you create or update your information security and governance strategy, here are some questions you may want to ask:

- What type of clients do you work with and what industries do they serve (education, health care, commercial office buildings, retail, law enforcement, etc.)?
- What is the type and volume of data that your company collects, uses, stores and transfers?
- Are your technology, information security and governance best practices up to date?
- Are mobile devices an integral part of your business?
- What are the total number of vendors and third-party contractors with access to your company's sensitive data?

#### **Top 10 Cybersecurity Goals** to Complete This Year

- 1. Create or update your information security and governance policy and put it in writing.
- 2. Your written information security and governance plan should be reviewed and signed on an annual basis by every company employee, regardless of the size of the organization.
- 3. Update and test your plan annually. Include penetration testing, along with a simulated databreach event.
- 4. Annual employee education should be the number one priority. Individuals, not hackers, are the cause of most data breaches.
- **5.** Define the proprietary information for your business, confirm which employees need access to it and train those employees to safeguard it.
- **6.** Use at least 21-character passwords, including lower and uppercase letters, numbers and signs. Change your passwords every 90 days. A great password tip is to write an easy-to-remember "pass-phrase."
- 7. Complete regular software updates and patches. Most hacking events leverage old flaws that have already been addressed but proper patches have not been applied.
- **8.** Emphasize the importance of protecting employees and customers when connecting to the internet. Do not use public Wi-Fi except with encryption or over a virtual private network (VPN).
- 9. Consider background screening for every employee. Effective pre-employment screening can identify those who intentionally misrepresent their identities.
- 10. Learn the state and federal breach notification laws where your organization conducts business, with a focus on response and recovery.

#### **Response and Recovery Plan**

CEOs and senior executives don't get fired when their companies get hacked or experience a data breach incident. They get fired for failing to implement and regularly test a clearly defined, strategic management response to their data breach incident. (Think of real world examples such as Target and Equifax.)

No company can ever prevent itself from experiencing a data breach incident, and no single resource has all of the answers. In fact, your company's response and recovery strategy may be as important (or more important) than your current cybersecurity technology initiatives.

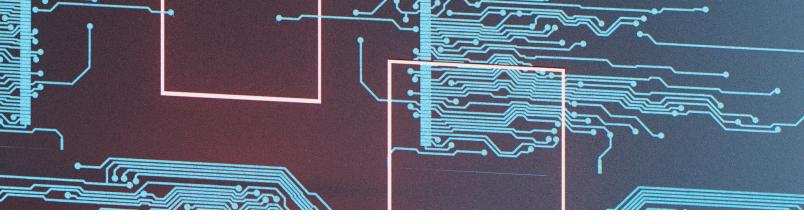
Why? An August 2020 CPO Magazine article titled "We're Spending Billions Each Year on Cybersecurity. So Why Aren't Data Breaches Going Away?" reported that "companies must build and sustain a strong security culture to remain continuously attuned to a constantly changing threat landscape and to minimize risks."

Three takeaway points from this article include:

- According to the FBI 2021 Internet Crime Report, there were 847,376 cybersecurity complaints that year, representing almost \$7 billion in business losses.
- Security awareness needs to be a companywide endeavor, not the sole responsibility of the IT department.
- Cybercriminals only need to be successful once to achieve their goals, but companies need to be successful 100% of the time to avoid being compromised.

Data breaches are not going away. Businesses need to be constantly aware of the current and evolving threat landscape to mitigate their legal and financial liability for data breach incidents.

While cybersecurity and prevention of data breaches are among the most difficult challenges in today's workplace environment, the technology aspect is falling short and has failed to live up to expectations.



High-profile hacking and data breach events affect every business sector, including the top five banks, top five insurance companies, top five social media companies and the three major credit bureaus. These organizations all have more financial and information technology resources than any other industry group—so what's the answer?

The answer is an information security and governance plan with an emphasis on response and recovery.

That does not mean ignoring technology, such as security or penetration testing, managed services, or information technology outsourcing and access management. These are all critical resources in protecting your business and mitigating the risks of a cyberattack and data breach incident.

When an incident does occur, follow these four basic response steps.

- 1. Make an initial assessment during a data breach incident. During a data breach incident, your business should immediately assess the nature and scope of the event. The type of incident will determine the type of assistance you'll need to respond and the type of damage and remedial efforts that may be required.
- 2. Implement measures to minimize continuing damage. After your business knows whether the incident is an intentional cyber intrusion, an accidental release or insider threat, determine next steps to stop ongoing damage and take steps to prevent it from happening again.
- 3. Record and collect Information. Your business should immediately make a forensic image and/or forensic record. It should include detailed notes of the affected computers and/ or a record of the stolen data for later analysis, and potentially for use as evidence at trial.
- 4. Notify. Contact employees within the organization, affected individuals outside the organization and law enforcement if criminal

activity is suspected. Also, know that 50 states, the District of Columbia, Guam, Puerto Rico and the Virgin Islands have security breach notification laws in place to notify any individual whose personally identifiable information has been breached. (See National Conference of Legislatures' "Security Breach Notification Laws" on ncsl.org for more information.)

#### **Stronger Cybersecurity Commitment**

Every DHI member needs to make a commitment to do more to safeguard personal and business information.

To help with your cybersecurity commitment, Consumer Affairs (consumeraffairs.com) has an identity theft glossary that serves as a great reminder of the current threat environment, including terms such as:

- **Keylogger:** A computer program that records a person's keystrokes to obtain confidential data.
- **Phishing:** A popular scam in which fraudsters send emails claiming to be from a reputable company, to trick individuals into revealing personal information.
- Smishing: Similar to phishing, smishing (or SMS phishing) is when someone attempts to mine sensitive information under a fake identity through text messages.
- Vishing: Like phishing or smishing, vishing is when an identity thief attempts to gain sensitive information over the phone.

Use these tips to help you make a stronger cybersecurity commitment and reduce your risks. +

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## **CASE STUDIES**

36 **SLIDING TO THE RIGHT LOCK** 

39 **REDUCING THE SPREAD** 



# Sliding to the Right Lock

Making the case for closed and sealed at Evangelical Community Hospital.

BY QIANYAN CHENG

The use of sliding doors in the health care industry is increasing at an exponential rate. Medical facilities embrace the ability to reclaim previously unused space, create wider paths of travel, and offer a more inviting and biophilic environment for patients. However, finding the right locking solution for sliding doors can be challenging. This is especially the case in health care facilities where privacy, security, acoustic performance and sustainability are critical factors.

Evangelical Community Hospital originally opened in Lewisburg, Pennsylvania, in 1953 with 79 beds. When the hospital designed its facility expansion in 2020, it chose sliding door systems for many of the medical exam rooms and offices.

Sliding doors allow medical facilities to reclaim unused space and create wider paths of travel.





Inset: This winged deadbolt engages with the latch to keep the door properly sealed.

Below: A sliding door lock can provide self-latching and selflocking operations.

Finding the right sliding door lock can present a unique challenge to designers and specifiers.

#### **LOCKING CHALLENGE**

Finding the right sliding door lock can present a unique challenge to designers and specifiers. There are several factors needed to be included in the considerations.

The beveled latch bolt in a swing door enables self-latching. This allows a closed door to remain closed, whether the deadbolt is thrown or not. A sliding door lock does not have beveled latch bolts, so it is not self-latching in the conventional sense. However, properly closed and sealed openings are very important in a health care environment. They prevent draft and smoke, reduce noise, and provide security and safe egress. See more in the sidebar on page 38.

#### **MEETING EVERY NEED**

The hospital needed a solution to meet all the requirements outlined in the sidebar of this article, "Closed and Sealed." This included self-latching or self-locking doors and to utilize the benefits of a sliding door for security and safety. The hospital's architectural hardware consultant selected the INOX PD96 sliding door mortise locks to meet the hospital's unique requirements for sliding doors in a health care setting.

The PD96 was designed as an ANSI/BHMA commercial Grade 1 lock with the healthcare environment in mind. It has a unique and patented anti-gravity deadbolt design to minimize binding issues caused by misalignments between doors and frames, which often happens on sliding door system.

PD96 not only has the essential functions for commercial openings such as keyed entry, passage and privacy, it also offers storeroom and classroom functions that do not exist with any other sliding door locking solution.





When the door is closed, the release button is activated, which triggers the deadbolt into the strike.

Overall, the INOX PD96 sliding door mortise locks have proven to be an excellent solution for Evangelical Community Hospital's needs. Enhanced security, privacy and sustainability for its medical exam rooms and offices have all been delivered.

By choosing the right sliding door-locking solution, the hospital has been able to create a more efficient, aesthetically pleasing and inviting environment for its patients, while maintaining the highest standards of safety and security. +

QIANYAN CHENG is Co-founder and Vice President of INOX. Email: qcheng@unisonhardware.com.

#### **CLOSED AND SEALED**

Properly closed and sealed openings in health care facilities are crucial to:

- Contain draft and smoke: Keeping the access point completely enclosed to prevent draft and smoke from coming through the opening is critical. These draft and smoke control door assemblies must comply with UL 1784, the Standard for Safety of Air Leakage Tests of Door Assemblies. A self-latching sliding door lock is essential to meet this standard.
- Reduce sound and noise: Sliding door assemblies are often required to be compliant with the STC35 acoustic rating. A self-latching deadbolt will ensure the door is properly engaged with the frame, which is also an important factor to maintain the privacy of the patient when consultation is in progress.
- Provide security: Security is equally important for the health care environment when many of the spaces contain drugs, alcohol and controlled substances. A standard deadbolt cannot hold a sliding door closed, because it cannot engage properly with the door frame. A sliding door deadbolt requires winged bolts or hooks that engage with the frame and hold the door in the secured position. These protrusions must be able to withstand a 500-pound pulling force without the door separating from the frame. In addition, some openings require self-locking mechanisms. The opening is secured when the door is closed without relying on an end user needing a physical key from the outside or using the thumbturn from the inside.
- **Promote compatibility:** Sliding door locks must integrate with interchangeable core cylinders to work seamlessly with existing master keying systems.
- **Ensure egress:** In any commercial space, egress from the interior side is required by universal building codes on all commercial locks. Sliding door locks are no exception. A single motion of retracting the deadbolt and opening the door should be in place in case of an emergency.
- Enhance sustainability: The use of sustainable materials such as stainless steel, which is 98% recyclable, in the construction of the locks aligns with the hospital's commitment to sustainability and environmental responsibility.

# Reducing the Spread of Germs

Door automation helps reduce touch points for medical research facility.

#### BY KRISTA RIVERS

A facility in Research Triangle Park, North Carolina, recently expanded its research and development portfolio to include vaccination research.

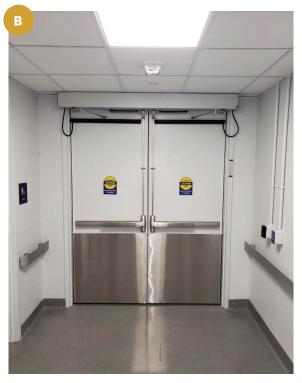
To do this, an existing facility was leased to provide the additional space needed.

With all the points of entry and exit, the facility manager recognized the important need to retrofit the existing manual doors with automation. "Since 2021, Advanced Door Automation in North Carolina has installed 13 Horton Automatics 4000 Operators, BEA Touchless Switches, BEA Bodyguard and Superscans throughout the building," Matt Stuka, General Manager for Advanced Door Automation at Door Services Corporation, says.

"Horton's operators give manual doors the expediency and efficiency of an automatic door, while providing the security and protection needed for lab technicians and other staff."

The BEA Bodyguard-T is an overhead sensor designed for pedestrian automatic doors. It provides threshold protection when the door is open. It also prevents a closed door from opening and an open door from closing when a person is in the detection zone.





(A) The BEA Bodyguard-T installation is designed for automatic doors to prevent a closed door from opening and an open door from closing when a person is in the detection zone.

(B) Once activated, the Horton HD-Swing™ 4000 Series Operator and BEA Touchless Sensor slowly opens the door and holds it open for a present time. This creates a barrier-free doorway and gives staff time to pass through the door before it closes.

The BEA Superscan-T is a door-mounted, active infrared safety sensor designed for use on automatic swinging, revolving, folding and low energy doors. The technology uses triangulation to detect the presence of a pedestrian while the door is opening and closing.

## TOUCHLESS DOOR SOLUTIONS ARE CRITICAL

"The need for touchless technology in a research facility such as this is of paramount importance," Stuka says. "The research and development labs must be equipped with infection control to limit any pathogens going in and out of the labs. With nearly 80% of illness caused by germs spread by human hands, one of the ways to mitigate this is to make sure labs have touchless entryways."

Touchless activation sensors not only help reduce the spread of bacteria but also improve accessibility through the labs.

"Imagine having to push a cart or carry trays through a manual entryway to a lab," Stuka says. "This can result in very costly accidents by dropping medicines or very expensive scientific equipment."

Applications for touchless activation include more than just laboratories and cleanrooms. They can also include any of the following applications and more:

- Common areas and corridors
- Public restrooms
- Health care facilities
- Commercial properties
- Food processing plants
- Retail facilities

Just a decade ago, automating entryways was looked at as a luxury by many. Today, with the prevalence of ongoing pandemics and the need for reducing the spread of germs, especially in medical facility environments, it has become a necessity. +

**KRISTA RIVERS** is Marketing Specialist at Door Services Corporation. Email: krista\_rivers@overheaddoor.com





Become a DSSF Ambassador for your community.

www.lockdontblock.org

## **HELP US TELL SCHOOLS & PARENTS!**

Several temporary door locking devices, or barricade devices, have been made available with the intention of providing protection for students while in the classroom.

Unfortunately, these products fall short of the code requirements and often lead to unintended consequences. There are already solutions in place in most schools and experts, like you, can help us inform schools and parents of the facts during these emotionally charged times. Become a DSSF Ambassador today!

Contact info@doorsecuritysafety.org to learn more about the DSSF Ambassador Program. It takes all of us to make a difference.



Door Security&Safety Foundation

# USING SENSORS FOR AUTOMATIC **OPERATORS**



LORI GREENE, DAHC/CDC, FDAI, FDHI, CCPR, is Manager of Codes and Resources at Allegion. She can be reached at lori.greene@allegion.com or idighardware.com.

#### **ASK YOUR MOST PRESSING** QUESTIONS!

This Decoded column is the first in a new question-and-answer format. During the past 13 years, I've covered just about every code-related topic, so it's time for a new approach. The new format gives you the opportunity to send me your most pressing questions about codes. Submit your questions at https://idighardware.com/ decoded-ga/ and we'll answer as many as we can in future Decoded columns.

#### **QUESTION:**

When swinging doors are equipped with automatic operators, are safety sensors required in order to prevent the door from hitting a building occupant in its path?

#### **ANSWER:**

Based on the model codes and referenced standards, the answer to this question depends on two variables:

- 1. The type of automatic operator installed
- 2. How the automatic operator is actuated

There are three general categories of automatic operators for swinging doors, and three ways the doors may be opened:

- Power assist operators: These operators reduce the opening force required to operate the door manually, but they do not automatically open the door. The standard that addresses this type of operator is ANSI/BHMA A156.19-Power Assist and Low Energy Power Operated Doors. The standard does not require doors with power assist operators to be equipped with safety sensors because the doors are opened manually, not automatically. This limits the risk of accidental contact with a building occupant.
- Low energy operators: Most doors with low energy operators may be operated manually or automatically. For automatic operation, a "knowing act" is typically used. It might be an actuator mounted on the wall, an access control device, a wireless transmitter, or the act of pushing or pulling the door to begin the automatic cycle. Once actuated by a knowing act, the door will open

automatically. This is unlike a power assist operator that only reduces the opening force for manual operation. Low energy operators that are initiated by a knowing act must comply with the ANSI/BHMA A156.19 standard, which does not require safety sensors.

Power operated pedestrian **doors:** These doors are often found on entrances to large retail stores and in other locations where the doors are almost always operated automatically. The automatic operators are typically actuated by sensors rather than by a knowing act. In comparison with low energy operators, power operated pedestrian doors normally open more rapidly and with more force; they must comply with a different ANSI/BHMA standard, A156.10-Power Operated Pedestrian Doors. This standard also addresses doors with low energy operators that are not actuated by a knowing act. An example is low energy power operated doors that are initiated by a sensor detecting a building occupant. Automatic doors required to comply with A156.10 do require safety sensors (or safety control mats-see below).

Safety sensors are required for automatic doors that must comply with the A156.10 standard. This includes power operated pedestrian doors, and low energy power operated doors that are not initiated by a knowing act.

There are a few additional considerations regarding safety sensors. Although overhead or door-mounted presence sensors are commonly used to monitor the safety zone in the vicinity of an automatic door, control mats are an alternative that is allowed by ANSI/BHMA A156.10. Safety control mats prevent an automatic door



from opening or hold the door open to avoid contact with a building occupant during the door's swing.

Beginning with the 2017 edition of the A156.10 standard, safety sensors and safety control mats must be monitored. Door systems complying with the standard must include a means to verify that the safety devices are functional, and that there is communication between the automatic door control system and each sensor or control mat. If a fault is detected, the automatic operator cannot function until the fault is corrected.

Monitoring the safety sensors must occur at least once before each closing cycle. However, some systems also

monitor the sensors before each opening cycle. The intent of the requirement for monitoring the sensors is to decrease the possibility of injury or entrapment caused by automatic doors with missing, disabled, disconnected, or defective safety sensors and safety control mats.

Most doors that are required by the A156.10 standard to have safety sensors are also required to have guide rails. These rails help control the flow of traffic through the automatic doors to minimize the chance of injury. Walls or other means of separation may be used in place of the guide rails, if they meet the requirements for the rails listed in A156.10.

One exception to the need for guide rails is when automatic swinging doors are installed in a hallway. If the distance between the wall and the door in the 90-degree open position does not exceed 10 inches, guide rails are not required. This requirement does not apply to doors addressed by ANSI/ BHMA A156.19.

For more information on this topic, refer to the ANSI/BHMA standards and the adopted codes. State and local codes may include additional requirements that could affect these openings. The Authority Having Jurisdiction (AHJ) is responsible for making determinations related to code compliance. +

## PAY ATTENTION TO LADDER SAFETY



**SUSAN ORENGA** is Executive Director of the American Ladder Institute. For more information, visit www.americanladderinstitute.org.

Tech Tips highlights useful technology tips for door installation and service. If you have an idea for a Tech Tips article you want to submit, contact *Door Security + Safety Editor Al Rickard, CAE, at arickard@dhi.org.* 

MARCH WAS LADDER SAFETY MONTH, SPONSORED BY THE AMERICAN LADDER INSTITUTE (ALI)-BUT LADDER SAFETY CONTINUES ALL YEAR LONG, EVERY YEAR.

Ladders are tools, and many of the basic safety rules that apply to most tools also apply to the safe use of a ladder:

- If you feel tired or dizzy, or are prone to losing your balance, stay off the ladder.
- Do not use ladders in high winds or storms.
- Wear clean, slip-resistant shoes.
   Shoes with leather soles are not appropriate for ladder use since they are not considered sufficiently slip resistant.
- Before using a ladder, inspect it to confirm if it's in good working condition. Ladders with loose or missing parts must be rejected. Rickety ladders that sway or lean to the side must be rejected.
- The ladder you select must be the right size for the job. The Duty Rating of the ladder must be greater than the total weight of the climber, tools, supplies and other objects placed upon the ladder. The length of the ladder must be sufficient so that the climber does not have to stand on the top rung or step.
- When the ladder is set up for use, it must be placed on firm, level ground without any type of slippery condition present at either the base or top support points.
- Only one person at a time is permitted on a ladder unless the ladder is specifically designed for more than one climber, such as a trestle ladder.

- Ladders must not be placed in front of closed doors that can open toward the ladder. The door must be blocked open, locked or guarded.
- Read the safety information labels on the ladder. The on-product safety information is specific to the particular type of ladder on which it appears. The climber is not considered qualified or adequately trained to use the ladder until familiar with this information.

Factors contributing to falls from ladders include haste, sudden movement, lack of attention, the condition of the ladder (worn or damaged), the user's age and/ or physical condition, and the user's footwear.

Although the user's weight or size typically does not increase the likelihood of a fall, improper climbing posture creates user clumsiness and may cause falls. Reduce your chances of falling during the climb by doing the following:

- Wear slip-resistant shoes with heavy soles to prevent foot fatigue.
- Clean the soles of your shoes to maximize traction.
- Use towlines, a tool belt or an assistant to convey materials so the climber's hands are free when climbing.
- Climb slowly and deliberately while avoiding sudden movements.
- Never attempt to move a ladder while standing on it.



Safe use of a stepladder.

- Keep the center of your belt buckle (stomach) between the ladder side rails while climbing and working.
- Do not overreach or lean while working, to avoid falling off the ladder sideways or pulling the ladder over sideways while standing on it.

When climbing a ladder, it's safest to utilize three points of contact, because it minimizes the chances of slipping and falling from the ladder. At all times during ascent, descent and working, the climber must face the ladder and have two hands and one foot, or two feet and one hand in contact with the ladder steps, rungs and/or side rails.

By following these rules, the climber is more likely to remain stable if one limb slips during the climb. The climber must not carry objects in either hand that can interfere with a firm grip on the ladder. Otherwise, three points of contact with the ladder cannot be adequately maintained and the chance of falling increases in the event a hand or foot slip occurs.

The U.S. Occupational Health and Safety Administration provides a fact sheet, "Reducing Falls in Construction: Safe Use of Stepladders," at www.osha. gov/sites/default/files/publications/ OSHA3662.pdf. +

# RECALLING INNOVATIONS IN ELECTRONIC LOCKS



**KERBY LECKA** is Marketing Director at Security Door Controls. Email: *kerby@sdcsecurity.com*.

The rich history of the door and hardware industry is highlighted by people and companies that drove innovation for decades. Their critical contributions moved us forward into what is now called the door security and safety industry, encompassing hardware and technology in all its forms to ensure life safety for everyone.

In this issue, we introduce a new column, "Unlocking History," which will commemorate many notable achievements.

If you have a notable historical story to share, please contact *Door Security* + *Safety* Editor-in-Chief Al Rickard, CAE, at *arickard@dhi.org* or 703-402-9713.

## THE WIDESPREAD USE OF ELECTRONIC LOCKS WE SEE TODAY WAS DECADES IN THE MAKING.

Arthur V. Geringer, the founder of Security Door Controls (SDC), was a forerunner in this area. His innovations in electronic locking systems and technology enabled the widespread adoption of electrified hardware by the door hardware and security markets.

Born in 1923, Geringer grew up in his father's architectural hardware business in Chicago. When he was just four years old, his parents got him started in the industry by letting him stack hinges.

After serving in the U.S. Army during World War II, he worked at a contract hardware firm before moving to an automatic door firm. While employed there, Geringer earned his certification as an Architectural Hardware Consultant in 1952, allowing him to combine his industry experience with his energy and passion for innovation.

In 1971, he was asked by the California State Fire Marshal to create a failsafe bolt lock for perimeter doors that would unlock automatically when the power was removed. His first solution was rejected because it relied upon springs to unlock–deemed unacceptable by the fire marshal.

Undaunted, Geringer remembered seeing small magnetized toy dogs that would repel each other when one dog smelled the other dog's tail. He realized a solution was there. He invented the FS23 series electric bolt lock, which utilized two repelling magnets to repel the bolt from the strike even if the spring should fail. The fire marshal immediately approved it.

In 1972, Geringer patented the lock and approached his employer

to manufacture it. However, his employer didn't share his intensity and enthusiasm for developing electric locking capabilities.

Geringer decided to form a company with his wife, Mae. Together, they founded SDC in Tarzana, California, and began manufacturing the FS23 Series Electric Bolt Lock. This past year, in 2022, SDC celebrated its 50th anniversary.

A miniature train with a battery powered sound chip used to make the engine noise and train whistle also stimulated Geringer's imagination. This became the catalyst for the invention



Art Geringer got an early start in the industry, stacking hinges at age 4.



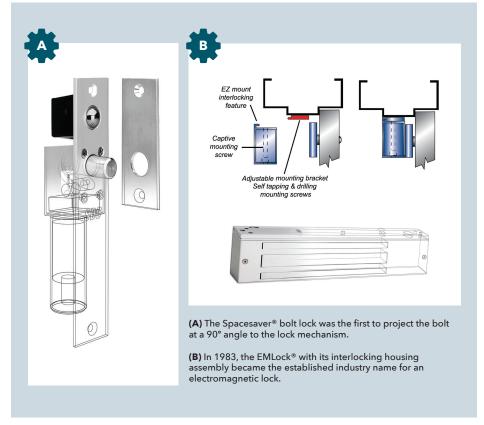
Art and Mae Geringer founded Security Door Controls in 1972.

of the first delayed egress lock with a human voice stored on a chip in the lock. The design evolved into today's fully integrated electromagnetic delayed egress lock-the SDC ExitCheck® 1511S-with a visual countdown and verbal audible alerts.

Geringer created many other patented inventions and innovations. For example, in 1975 he invented and filed the patent for the Spacesaver® bolt lock designthe first bolt lock to project the bolt at a 90° angle to the lock mechanism. Spacesaver® is a fundamental innovation in electronic access control, now commonly used everywhere.

During the 1970s, Geringer's was one of only two locks in the country approved for locking commercial stairwell and perimeter doors. As the inventor of numerous electronic lock designs, he is credited with ushering in the modern era of access control hardware.

In 1983, SDC launched its first electromagnetic lock, known as EMLock®. Later, after multiple improvements and patents, EMLock® became the established industry name for an electromagnetic lock and is still synonymous for electromagnetic locks today.



SDC also patented an interlocking housing assembly for magnetic locks with captive mounting screws, and incorporated it into EMLocks®, making it the first product to utilize an interlocking quick-mount assembly for ease of installation. The interlocking mounting plate enables positive attachment of the lock to the mounting plate prior to fastening, and provides increased mounting integrity by distributing stress evenly, alleviating pressure to the mounting screws.

In 1996, SDC released the UR Series Universal Microprocessor Door Control Module, the industry's first

field-programmable, multi-station access hardware controller with six application modes to allow control of multi-door interlocks, mantraps and communicating bathrooms applications via onboard logic. This product earned the Security Industry Finest Award from the Security Industry Association.

Geringer received the DHI Founder's Award in 1991, which is the association's most prestigious award. It recognizes significant and outstanding service to DHI and the door security and safety industry over an extended period of time. +

## **CONGRATULATIONS!**

The following door security + safety professionals recently received DHI credentials, certifications and certificates.

(List current as of March 1, 2023)



#### DOOR + HARDWARE CONSULTANT (DHC)

This certified consultant has advanced product and code application knowledge and expertise, and skills proficient to detail, estimate and project manage large and complex projects and existing facility renovations. They are qualified to provide technical consultation to architects, contractors and building owners on the most complex building projects, but do not provide specification writing services.

Jared D. Amato, DHC, DHT, CFDAI Oregon Door Consultants Jim Coughlin, DHC, DHT, CFDAI Dugmore & Duncan

Carolyn Hunt, DHC, DHT, CFDAI Hager Companies Jesse Mercer, DHC, DHT, CFDAI Warren Doors & Access Control



#### **DOOR + HARDWARE TECHNICIAN (DHT)**

This credential is earned by demonstrating the competence to provide product and code application, detailing, estimating, and project management skills on projects with an intermediate level of complexity of occupancy type. This is the first level of technical credential earned for technical competence to assist contractors and building owners with basic construction project issues.

Jared D. Amato, DHC, DHT, CFDAI Oregon Door Consultants Steven S. Crafton, DHT Rayhaven Group

Joseph Derro, DHT, CFDAI J & L Metal Doors, Inc.

Jack Thomas Sell, Jr., DHT Building Material Specialties, Inc.

Jeffery S. Smith, DHT House of Antique Hardwear

Jeffrey Earl Woodring, DHT DH Pace University



For more information on DHI education, certifications, credentials and certificates, contact education@dhi.org.



#### DOOR + HARDWARE INDUSTRY ASSOCIATE (DHIA)

The DHIA certificate recognizes individuals who have achieved a basic technical understanding of product and code applications. Recipients have completed two online, self-paced classes and passed the exams.

#### **Edward Akinbode**

CP Distributors, Ltd.

#### **Orin Alford**

Pacific Integrated Access LLC

#### John Aune

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PC Hardware, LLC

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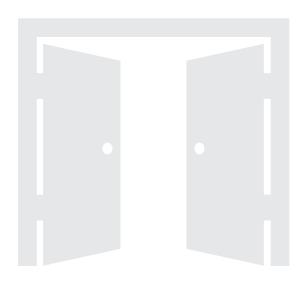
#### **Wendy Wendelsdorf**

VT Industries, Inc.

#### Jeffrey Earl Woodring, DHT

DH Pace University

Xiao Zhao



# **COVERING ALL THE BASES**



JASON BADER is Principal of The Distribution Team. He is a holistic distribution adviser who is passionate about helping business owners solve challenges, generate wealth and achieve personal goals. His podcast, "Distribution Talk," can be found at www.distributiontalk.com and through most podcast applications. Phone: 503-282-2333.

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A COUPLE MONTHS AGO. I WAS WORKING WITH A CLIENT WHO FELT HE HAD NEGLECTED CERTAIN ASPECTS OF HIS COMPANY. HE HAD BEEN SPENDING THE PAST YEAR HEAVILY FOCUSED ON SALES AND MARKETING, PARTICULARLY DRIVING AN ECOMMERCE PLATFORM. PREVIOUSLY, THE COMPANY ONLY OFFERED WEB SERVICES TO EXISTING CUSTOMERS, AND THIS WAS A WHOLE NEW CONCEPT.

#### AT WHAT COST?

The focus paid off. The company grew its online sales to previously unregistered customers from zero to \$250,000 in monthly revenue. It was an impressive achievement, and the growth shows no signs of slowing. This business development has been impressive, to say the least, but at what cost?

The foray into the digital commerce world has been a joint effort between the chief financial officer, who doubles as an operational officer, and the president of the company. Their combined skill sets have developed a very respectable line of business.

Unfortunately, other areas of the company began to backslide. Inventory management was not as sharp as it once had been. Vendor relationships had not been attended to. Operating expenses were not kept in check. I think you get the drift.

For months, my client and I had discussed the dangers of putting so much time and effort into one aspect of the business. It was bad enough that it had consumed the president. Now this initiative had also consumed another key executive in the organization. Executives had become addicted to the feeling of power when they were able to lure one more fish up to the boat. Something had to change.

The nagging feeling had caught up with him. Things weren't going right with the rest of his responsibilities and he needed to reengage with other aspects of the organization. This wasn't easy.

#### **EAT YOUR VEGGIES**

The digital marketing discovery was fun. It was intellectually stimulating. The technology sparked both curiosity and creativity. How do you put down that magic wand and reengage with the operational side of the business? Like a kid who hates to eat his vegetables, this was going to be tough to swallow.

Knowing that he had to reengage with other elements of the company, we needed to make a plan that ensured enough attention but did not smother. That is a fine line. We decided to create a weekly plan to cover the bases. The first assignment was to determine all the areas that the president would need to touch.

At first, we just brainstormed. The list was a bit long:

- 1. Inventory management
- 2. Purchasing
- 3. Vendor relations
- 4. Selling skills
- 5. Technology
- 6. Recruiting and talent acquisition
- 7. Freight and fulfillment
- 8. Financial management
- 9. Personal wealth

As you might notice, we did not cover marketing, because that was the drug we were trying to ween the executive off of.

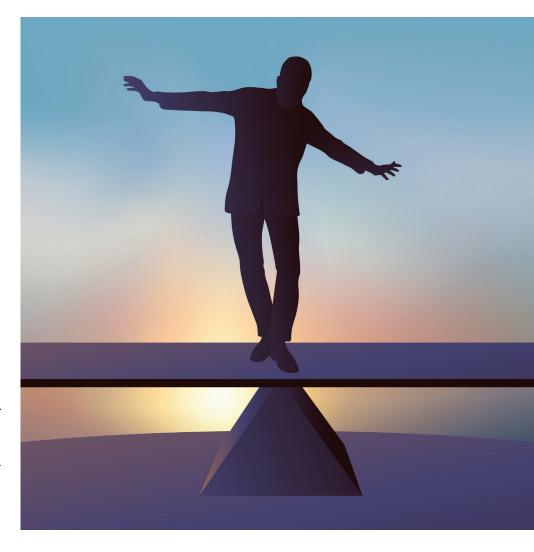
#### **TIME MANAGEMENT**

The initial goal was to work on two of these areas each day. That seemed logical and very methodical. The goal was to meet with a department leader during their designated time slot and devote time for personal research and thought. Using this simple method, each team leader would get face time with the president and benefit from his energy and ideas. This schedule lasted about a month.

One of the greatest benefits of the plan was the departmental interaction with the boss. My client is a charismatic leader. He likes to coach and is one of those bosses you want supporting you. This is something that leaders need to take note of. If you're a supportive leader, your people want to feel your presence. They like face time.

As leaders, we're taught to empower our management team, and to let them feel autonomous. While I agree with the principal, I have seen it lead to neglect with too many leaders. Just because a team leader is running their department well, it doesn't give us the right to leave them out on an island.

Years ago, I had a client that would take 12 weeks away from the office during the summer. He didn't neglect the company. He was always checking his email and would return phone calls promptly. I recall one of his key managers talking about his absence. She said that the company could function well enough, but it was always better when you knew he was in the office. Even if he wasn't meddling, his presence was noted and needed.



Although the plan with my client brought new attention to the neglected aspects of the business, he started to feel the strain of the structure. He was a creative creature and this box was a bit too confining. It did not give him the flexibility he needed. It did not allow him to get out of the office for the personal time he needed to remain healthy. He missed the excitement of the digital world. Ultimately, it was too rigid.

#### **WORK/LIFE BALANCE**

The solution was modified to focus one hour a day on an aspect of the company outside of sales and marketing. In practice, the executive spends the first hour or so totally focused on the department or initiative he has chosen. He still meets with team members but releases himself from the task after a short duration. Some days he spends more time on a task, but he's careful not to allow the activity to be too restrictive.

By scheduling his days, the executive has been able to touch more pieces of the business and doesn't feel like he's neglecting his responsibilities. So far, he's found balance. +

## **DSSF CONTRIBUTORS**



# THANK YOU TO OUR PREMIER **CONTRIBUTORS!**

The following contributors are committed to making a difference. (List current as of March 1, 2023.)

DIAMOND LEVEL

**MANUFACTURER** (\$35,000+)











**DISTRIBUTOR** (\$10,000+)





















#### For more information on becoming a contributor, visit www.doorsecuritysafety.org

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(UP TO \$2,000)

**AC Business Media Inc.** 

**DHI lowa Chapter** 

# **ACTION PLANS THAT EMPOWER EMPLOYEES**



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#### IN THE PAST THREE ISSUES OF DOOR SECURITY + SAFETY. WE SHARED SEVEN GUIDELINES FOR ESTABLISHING EMPLOYEE ACTION PLANS. HERE WE PRESENT THE NEXT THREE GUIDELINES.

Management and staff empowerment must be accompanied by accountability. Let's continue to explore how this happens at the best performing companies in your industry based on our MbA (Management by Accountability) System.

#### **ACTION PLAN GUIDELINE NO. 8: PUT THE ACTION PLAN IN** WRITING.

A fully effective management system should include specific, measurable and time-bound employee action plans. These plans should support the top priorities of the company as well as enhance accountability and results throughout the organization.

Put the action plan in writing, and make sure that both the employee and the manager have a copy. The plan should be utilized in several ways:

- Employee accountability for achieving action plans
- Annual performance appraisals
- Salary administration
- Incentive compensation

#### **ACTION PLAN GUIDELINE NO. 9: ESTABLISH ACTION PLANS THAT** ARE ATTAINABLE.

Make sure everyone establishes action plans that are attainable. Asking for the impossible is demotivating and sets everyone up for failure.

In establishing action plans, you and your employees also need to consider factors outside of the employee's control that could impact completion. For example, the company might close on a very large contract that will require certain employees to reassess their

priorities in order to stay on schedule and within budget.

In that regard, remember to always focus on meeting the wants and needs of the customers. Happy customers mean repeat business, and that is the least costly marketing initiative your company can undertake.

#### **ACTION PLAN GUIDELINE NO. 10: REVIEW ACTION PLANS** PERIODICALLY.

Action plans are what employees do in support of the company's top priorities and they make employees accountable for achieving success.

Action plans indicate how the company's top priorities will be accomplished by the employees. A common mistake is setting reviews of these plans aside until the end of the year. By then, it's too late to do anything.

Review your action plans periodically following this advice:

- Once a year is not enough.
- Quarterly is not too often.
- Set pre-scheduled review dates.
- Conduct personal, face-to-face review meetings.

Consider establishing quarterly action plan review meetings as a normal course of the company's activities for the year. Schedule the dates at the beginning of each year.

We can share your industry's best practices with your company at your request. Just contact us, and we'll send you an e-mail so you can compare your company to the best distributors and subcontractors. +

# TOTAL CONSTRUCTION MOVES HIGHER IN FEBRUARY

TOTAL CONSTRUCTION STARTS ROSE 6% IN FEBRUARY TO A SEASONALLY ADJUSTED ANNUAL RATE OF \$912.8 BILLION, ACCORDING TO DODGE CONSTRUCTION NETWORK. DURING THE MONTH, RESIDENTIAL AND NONRESIDENTIAL BUILDING STARTS ROSE 11% AND 9% RESPECTIVELY, AND NONBUILDING STARTS DECLINED BY 5%.

For the first two months of 2023, total construction starts were 17% below that of 2022. On a year-over-year basis, residential starts were down 31%, nonresidential starts were off 14%, while nonbuilding starts gained 6%. For the 12 months ending February 2023, total construction starts were 9% higher than the 12 months ending February 2022. Nonresidential and nonbuilding starts were 27% and 19% higher respectively, while residential starts lost 9%.

"February construction starts were a mixed bag that led to marginal growth," said Richard Branch, Chief Economist for Dodge Construction Network. "Manufacturing starts continued to be very robust, showing signs of promise early into 2023. However, the downturn in commercial and institutional building starts could very well be the beginning of an anticipated slowdown as the construction sector pulls back in the face of higher interest rates and lagging economic growth. While this ebbing should be comparatively mild, some construction verticals could face extreme stress as the year progresses."

Nonresidential building starts gained 9% in February to a seasonally adjusted annual rate of \$368 billion. Driving the gain was a 218% gain in manufacturing starts due to the start of a large electric vehicle battery plant in Ohio. Commercial starts decreased 2% in February as office and parking structure starts fell, offsetting increases in retail, hotels and warehouse activity. Institutional starts also fell during the month, following a decline in education and healthcare projects.

For the 12 months ending February 2023, total nonresidential building starts were 27% higher than the 12 months ending February 2022. Manufacturing starts were 91% higher, and both institutional and commercial starts gained 18% on a 12-month rolling sum basis.



Manufacturing starts continued to be very robust, showing signs of promise early into 2023.

Richard Branch, Chief Economist
 Dodge Construction Network

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# TRENDS IN HIGH-RISK PATIENT **ROOM ENTRANCES**



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PROJECT MANAGERS AT COMDOR LLC ARE NOTICING A DEVELOPING TREND IN THE HARDWARE USED FOR PATIENT ROOM ENTRANCES AT BEHAVIORAL HEALTH AND SURGICAL FACILITIES.

There is a noticeable shift away from the use of pivots and rescue hardware, and toward the inclusion of double-swing continuous hinges and emergency release stops. This change speaks to a focus on maintaining patient safety while improving patient privacy.

In past behavioral health and surgical facility projects, we saw more centerhung, double-acting pivots and rescue hardware consisting of a strike and emergency release at patient room entrances.

The function of this hardware met the safety needs of the patients as they could be quickly accessed by medical professionals in the event of an emergency via the rescue hardware. The rescue hardware allows for bidirectional door swing; in an emergency situation, a patient can be accessed even if the door is blocked on one side.

The pivots and rescue hardware necessitate the use of a cased opening frame, leaving something to be desired in the way of patient privacy. The lack of stop on the cased opening frame leaves a one-eighth-inch gap around the perimeter of the door, increasing visibility into the patient room.

To combat this lack of privacy, some facilities were including mortised brush-type gasketing and sweeps to conceal the gap around the door. This inclusion increases the complexity of the hardware set and installation on site.

The shift toward a double-swing continuous hinge and emergencyrelease stop allows for bi-directional door swing in the event of an emergency. The stop is released to swing away from the frame and the double swing continuous hinge allows for clear passage in both directions.

While this hardware is also used with a cased opening frame, the continuous hinge and emergency-release stop conceal the visible gap that was present with the use of pivots and rescue hardware. This negates the need for additional hardware items, such as gasketing and sweeps, and simplifies the installation.

Concealing this perimeter gap with the emergency-release stop also provides more privacy to the patients, doctors and visitors, while maintaining ease of access to patients in the event of an emergency. +



This door with double swing continuous hinges and emergency release stops eliminates the gap adjacent to the hinge, protecting patient privacy.

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- Ron Martinez, DHT, CDT, CCPR

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