Door Security+Safety

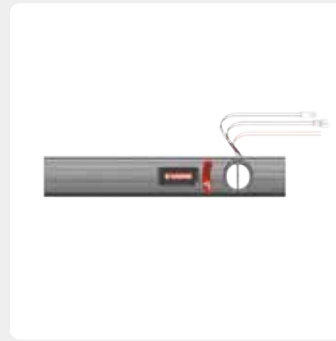**OCTOBER 2023**

Advancements in Access Control

INSIDE:

- ACCESS CONTROL TECHNOLOGY CONTINUES TO EVOLVE
- THE BENEFITS OF INTEROPERABILITY
- RETROFITTING DOORS FOR ELECTRONIC ACCESS CONTROL
- SMART SOLUTIONS FOR SLIDING DOOR LOCKS

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THE SEASON FOR EDUCATION AND NETWORKING

CORTNEY ANDERSON WASCHER is President of Anderson Lock Company and the 2023-2024 DHI President.

IN AUGUST, ANDERSON LOCK HOSTED ITS THIRD ANNUAL TEAM GENE AMYOTROPHIC LATERAL SCLEROSIS (ALS) WALK. NEARLY 200 EMPLOYEES, FAMILIES, FRIENDS AND DHI PROFESSIONALS GATHERED IN OUR COMPANY PARKING LOT AND PARADED THROUGH THE NEIGHBORHOOD. WE RAISED MORE THAN $45,000 TO HELP FIND A CURE FOR THE NEUROLOGICAL DISEASE THAT TOOK MY FATHER'S LIFE IN MAY.

A manufacturer representative who attended expressed her gratitude for the industry networking the event provided, explaining that it felt like a DHI chapter meeting. I couldn't agree more—these opportunities are what makes DHI a valuable community. Making business connections that develop into long-lasting personal relationships strengthens our industry by gaining different perspectives and fresh ideas.

Since becoming DHI President in July, I've enjoyed and benefitted from networking at the Management Summit in Colorado Springs and the Buckeye Chapter Golf Outing in Ohio. My conversations with industry leaders emphasized the importance of DHI meetings at national and chapter levels. Sharing ideas—and concerns—guides the elected DHI Board of Governors when we meet to plan programs, budgets, goals and visions.

This includes plans for education, a cornerstone of DHI. We're evolving what we offer to incorporate the latest technology and meet today's demands. James Gammon, DHI's new Director of Technical Activities, will assess our existing education program and expand it with new offerings, such as NTT201: Applications of BlueBeam Revu Fundamentals. This course launched in September at our Fall Classroom series, in-person in North Carolina. Like many distributors, our project managers and estimators use BlueBeam software with basic purpose. However, this class tailors the program's functionality to be more in line with industry workflows, making everyday job processes faster and more efficient.

I'm also pleased to announce that COR123: Using Door, Frame and Hardware Standards, is now available in a self-paced format online to educate DHI newcomers on how industry standards affect door openings. Knowledge of the many door, frame and hardware standards is essential to correctly specify, detail, furnish and install these products. COR118: Understanding Specialty Doors, will also relaunch as an online, self-paced course this year.

We're also hard at work raising the bar for credentials and industry safety. DHI credentials such as Architectural Hardware Consultant (AHC) and the Certified Fire + Egress Door Assembly Inspector (CFDAI) are recognized by architects, code officials and facility managers nationwide. These officials rely on DHI professionals for solutions that create code-compliant, safe, secure openings that incorporate cutting-edge technology. To further advance the vital role of our certified professionals, DHI and the Door Security & Safety Foundation (DSSF) are collaborating on guidelines that identify different levels of security for doors that will hopefully become an American National Standards Institute (ANSI) standard in the future.

The "CONTINUING THE (R)EVOLUTION" conNextions conference will be held in Boston, October 25-26. There will be more than 20 all-new CEP-certified education sessions across multiple topic tracks such as electronic access control, codes, trends and technologies, and safe schools. More than 20 DHI-approved continuing education points will be available. You'll find free exhibitor-led presentations on the latest technology and trends in the Exhibit Hall Innovation Theater. And of course, be sure to make the most of the many networking opportunities this event provides. See you in Boston! ✛

MARK GULLETT, CFDAI

OWNER, CALVERT INDEPENDENT HARDWARE SPECIFICATIONS
DHI MEMBER SINCE 2006

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!

WHAT WERE YOUR CHILDHOOD AMBITIONS?

I wanted to be a farmer. I grew up on a farm and was very active in Future Farmers of America in school.

WHAT WAS YOUR FIRST JOB?

My first job was a carpenter's helper doing labor work during the summer when I was 16. I've been in the construction industry ever since.

WHAT LED YOU TO OUR INDUSTRY?

I followed in my father's footsteps. He taught me the installation of doors and hardware. Later I became a certified locksmith and obtained my master electrician license. Then I worked for a door hardware supplier, which broadened my knowledge of Division 8, 10 and 28. Now I am involved in specification writing and producing riser diagrams of electronic openings for architects and engineers.

WHAT'S YOUR PROUDEST PROFESSIONAL MOMENT?

Besides getting my credentials from DHI, owning my own business.

WHAT'S BEEN YOUR BIGGEST CHALLENGE?

Learning the specification writing side of the door and hardware industry.

WHAT'S YOUR GUILTY PLEASURE?

Eating late night snacks and staying up watching TV.

WHAT'S YOUR FAVORITE BOOK/ MOVIE?

All of the "Star Wars" series.

WHO DO YOU CONSIDER A MENTOR OR HERO?

My father, Ronnie Gullett. He got me started in the door and hardware industry. He was a master carpenter and knew all about installing commercial doors and hardware.

WHAT'S THE BEST ADVICE YOU EVER RECEIVED?

Strive toward quality, not quantity. Take your time and don't rush through your work. Never stop learning.

WHAT'S THE BEST ADVICE YOU NEVER RECEIVED?

Just because it worked for me doesn't mean it will work for you.

HOW HAS YOUR INVOLVEMENT WITH DHI SUPPORTED YOUR CAREER?

DHI has been great. It has helped me continue my education in the door and hardware industry as I set my path toward being an Architectural Hardware Consultant.

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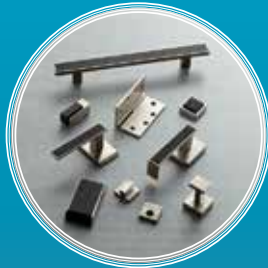
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ACCESS CONTROL TECHNOLOGY EVOLVES
AS DEMAND GROWS

Access control solutions are more secure, flexible and efficient to manage a wider range of openings.

BY TOM SEIDEL

The accelerated evolution of access control solutions has expanded their use in more markets, ranging from office spaces, classrooms, health care facilities and campus housing, to delivery lockers, server cabinets and many other applications.

From the ubiquitous brass keys of yesteryear to today's intelligent, interconnected physical and mobile credentials, the shift from mechanical to electromechanical and networked electronic locks has played a significant role in this change.

Biometrics, like facial recognition, are also showing greater potential as a non-contact door solution in North America, especially since concerns about privacy and how algorithms discern facial features and other characteristics are being addressed.

The Layers of Access Control

The term access control extends beyond locks and traditional doors. Consider perimeter fences, turnstiles, designated entry points, vestibules for screening, video surveillance and artificial intelligence (AI) for identifying weapons, license plates and restricted visitors.

All provide effective ways to control the flow of traffic, whether it's vehicular or on foot, as well as authorized entry. Combined with electronic access control (EAC) technology and

Left: The broad range of electronic access control solutions available today makes it easier and more affordable to extend access control deeper into a facility and to more applications.

today's better mechanical locks, these solutions bolster curb-to-core security.

Taking a closer look at electronic access control devices, it's interesting to note how they have evolved from strictly hardwired installations to power over ethernet (PoE), wireless and Wi-Fi options. This range of solutions makes it easier and more affordable to extend access control deeper into a facility and to more applications.

The ability to immediately issue, modify and revoke credentials translates into a richer, more convenient and seamless user experience. The technology also generates important audit trail and activity data for reliable accountability, greater control and other valuable uses.

Wireless EAC Adoption

At the end of 2022, we saw how significantly wireless solutions had dominated the prior year's major projects involving digital access solutions. This trend continues to grow as we round out 2023. The primary drivers revolve around the affordability, faster and easier installation, greater scalability, labor efficiency and compatibility with wired solutions offered by wireless EAC.

With its higher degree of flexibility and cost effectiveness, wireless EAC now allows facilities to secure the many doors that used to be impractical to address with access control, which in turn is helping businesses and institutions be more resilient, responsive and safer in today's fast-changing world.

It's not unusual to see a mix of traditional wall readers, integrated wired locks and PoE wired access control, especially on perimeter/exterior openings, and then lower cost Wi-Fi locks on the many interior doors of buildings. For example, this has become a more frequent combination in recent retrofits for college campus residence halls.

Wired systems are relatively simple to deploy during new construction when walls and ceilings are still open and before the sheetrock goes up. But even in new construction, organizations can stretch their budgets by incorporating a mix of wireless solutions and traditional wired options.

In addition, wireless access control can be readily installed on remote entry gates and parking facility openings within signal range. The technology also creates opportunities to extend

security to nontraditional doors on cabinets, equipment closets, lockers, drawers and server racks, as well as glass, stone and other architecturally significant materials.

Whether for traditional or nontraditional openings, all these wireless EAC applications can be integrated into existing electronic access control infrastructure and managed as one hybrid system.

Another benefit of wireless access control is extended resiliency. With access granted/denied decisions taking place within the lock, there is no need to connect these openings to building-wide uninterruptable power supplies that are limited to days, not years. Audit trails are maintained, and once the system is back online, the locks will reconnect to accept changes in access rights and upload transaction logs.

Another way to build an access control infrastructure with resiliency and extended future life is by planning ahead to accommodate credential technology that is continuously evolving to ensure the highest level of security.

Planning should include a migration path that allows for a seamless

Above: As credential technology continues to evolve, it's essential to plan a migration path to higher security and mobile credentials.

Right: Wireless technology makes it easier than ever to add access control to all-glass openings.

Intelligent Wi-Fi locks offer increased resilience with the ability to operate even during a prolonged power outage.

These integrated wired locks utilize OSDP communications and support PIV credentials.

This OSDP server cabinet lock and others like it extend real-time access control protection to government servers and other data center assets.

transition from legacy credentials to higher security card formats, mobile credentials and other emerging technologies.

Fortunately, today's wireless locking solutions support the latest credential technologies, such as mobile.

Lower electrical consumption is yet another positive. Wi-Fi locks, for example, are powered by off-the-shelf, low cost batteries that last for years since they only operate when a credential is presented or when an automatic update is pushed. That means they consume a fraction of the electricity used by wired locks that are always on. Even though they draw minimal power when locked and idle, wireless locks wake up immediately once a credential is presented.

Despite the advantages of wireless EAC, there are environments, such as government and military facilities, where wired EAC is a strict requirement.

Open Supervised Device Protocol (OSDP) Wired Solutions

New security procedures prompted by 9/11 understandably had a huge impact on the access control industry. That

indelible event resulted in the issuance of Homeland Security Presidential Directive (HSPD) 12. HSPD-12 mandated the standardization of higher security credentials for federally issued government personnel and their contractors for physical and logical access across all federal agencies.

Soon after, the National Institute of Standards and Technology (NIST) issued Federal Information Processing Standards (FIPS) 201 regulations (now FIPS 201-3) that codified the mandate for the type of card, readers and authentication methods integrated into access control hardware and software.

Today, we're seeing an enhanced focus on cybersecurity mandates such as FIPS 140-3 and programs such as FedRAMP, which supports a risk-based approach of modern cloud-based solutions for the federal government.

While essential, deeper regulation of security components over the last 15-plus years has created some significant hurdles for manufacturers, especially integrated intelligent lock producers.

But that hasn't stopped companies from forging ahead with innovative FIPS 201-3 compliant access control

solutions to help overcome those barriers. Today, there are integrated locks on the General Services Administration (GSA) FIPS Approved Product List (APL) that can reduce the cost of a hardwired opening by half for the government.

The value of OSDP is that it allows secure channel, serial communication between credential readers and the Physical Access Control System (PACS). This provides continuous monitoring of end-to-end wiring that conducts the strong authentication signal required for government environments and applications. OSDP also protects against tampering and man-in-the-middle attacks.

Biometrics and Contactless Access Control

Biometrics have been in use at high security locations for several years, including data centers, financial institutions and government facilities

where dual-factor authentication is required.

Improving and scaling the technology to implement it across a wider range of markets is underway and has become desirable for those positioned to invest in it for their facilities. For example, industries with large workforces are very motivated to deploy high speed facial recognition at optical turnstiles to better facilitate shift changes in high throughput openings.

Because interest in biometric credentials is growing, we're witnessing a refresh of the technology. Earlier generation fingerprint and iris scan devices are being upgraded to technologies like four-finger wave and appliance or server-based advanced facial recognition. These and other detection technologies like gait recognition (GRT) continue to evolve and emerge at a rapid pace.

The prospects are intriguing for the eventual expanded implementation of biometric devices at the door, especially as they improve their ability to authenticate people equitably and responsibly, accurately determine intent/direction of approach and become cost effective. There's little doubt, though, that biometrics will ultimately greatly impact the advancement of contactless access control systems and the touchless technology connected to them.

Access Control Data and the Smart Workplace

Badging in at an electronic reader with card credentials has become commonplace when entering perimeter doors, interior spaces and taking elevators to authorized floors, especially in the workplace. The broader implementation of mobile credentials in offices and factories is gaining traction, just as it has on college campuses.

The hybrid practice of mixing time at the office with working from home has also become more entrenched and is changing how access control credentials and data are being

integrated with building management systems and more.

Insights captured from connected doors can detect when employees are coming in and how they're using the building. This information can be invaluable for redesigns and making wiser decisions about spaces. It can also make a positive impact on energy efficiency and sustainability efforts. Plugging access and occupancy data into system applications that control HVAC and lighting can go a long way toward creating a smarter building environment. It's also useful for room, desk and locker scheduling software.

Along with the more visible electronic locks and card readers that most people interact with daily, access control devices also include automatic door operators and closers that make sure openings are tightly closed or can alert someone if they're not working properly. Not only does this functionality promote energy savings, but so do the devices themselves. Low power automatic doors with touchless wave-to-open sensors also help prevent the spread of germs, making the workplace healthier and more eco-friendly.

Interoperability

As technology advances, the industry will continue to make further progress toward seamless integration and greater interoperability, which will become even more critical for ensuring access control devices interact flawlessly with video management, intrusion detection, mass notification and other developing security solutions. This is essential for creating a holistic approach to more effective physical and cybersecurity, as well as better user experiences. ✛

TOM SEIDEL is Manager, Training and Education at ASSA ABLOY Door Security Solutions. Email: *tom.seidel@assaabloy.com.*

Don't Get Locked In:

The Benefits of
Interoper

ability

Open solutions can enable long-term system flexibility and success.

BY ANN GEISSLER TIMME

As providers of access control solutions, being locked into proprietary technologies can be an impediment for you and your clients. Interoperable or open solutions are alternatives that are becoming the standard, as they enable long-term system flexibility and success.

Defining Interoperability

Let's start by defining interoperability. It means different things depending on the application, but at its core, interoperability is when different systems, devices or products connect and communicate in a coordinated way.

In an access control solution, interoperability means that credentials, readers, or electronic locks and software are able to work with each other. This is true regardless of brand or manufacturer being used.

Proprietary solutions are usually manufactured by one company. Because they're typically supported by a limited number of partner systems, the entire system's flexibility and capabilities may be reduced. This will continue to hold true as technology and needs evolve in the future.

What Interoperability Looks Like

When thinking about an access control system, credentials and the devices they interact with are some of the most important scenarios to explore.

Interoperability means a credential from one manufacturer can be fully supported by another manufacturer's access control device, which can

then be managed by another company's software. This allows customers to leverage existing investments they've made, while still being able to expand access control to more openings in their buildings, using the technology that best fits their needs or budget.

Another example focuses directly on credential interoperability—specifically, extending credential utility to other hardware manufacturers or application providers through the use of a custom encryption key. This solution creates a unique encryption key owned and controlled by the customer—not the manufacturer. It provides the customer a greater level of control, security and flexibility over what solutions they can use, as well as goals they can accomplish using their credential of choice. This includes where to purchase their credentials and which access control products to use when building their ideal system.

Benefits of Interoperability

The value of interoperability is vast, and how it is measured differs by customer. Interoperability opens new levels of options, control and confidence. It unlocks possibilities.

FREEDOM

Interoperable solutions put the end user at the center of the decision-making process. They provide freedom to choose best-in-class solutions that meet the unique needs of different markets and applications, no matter the brand. Interoperability means greater choices of technology, hardware and manufacturers. It means a more convenient path to adopting new technology as it becomes available.

FINANCIAL CONFIDENCE

Control over long-term financial costs is crucial. Choosing interoperability is a strategy that can enable that control.

A successful solution will generally rely on a range of products, many of which will require integrations to other systems. With proprietary technology limiting choices to only a select few vendors controlled by that manufacturer, costs are potentially higher. An interoperable standard allows for a wider selection of products. It means customers can shop around to find the best solutions for their needs at the best cost and won't be locked in down the road.

SECURITY

It is a misconception that open or interoperable systems mean the technology is unsecure or less secure than a closed solution. Using interoperability, the storage and communication of data and secure information remain protected using similar robust encryption methods as a closed solution. When credentials and hardware use custom encryption keys, the levels of security go up even further.

USER EXPERIENCE

For some markets, the use of an interoperable credential built on open protocols is extra valuable. Think of all the student touch points that are accessible with a campus identification card or mobile credential. Beyond access control, it includes public transit access, meal plans, the library, fitness center access, event tickets and other types of financial transactions.

Hospital staff may want to use the same credential for parking, cafeteria, vending or other financial transactions. The credential could also allow individualized access to pharmacy carts and other security sensitive areas.

Interoperability enables use of a single credential for all these applications through simpler integrations. The less users need to worry about which credential to use, the smoother their day runs and the more satisfied they are with their experiences. The possibilities are greater when they are built on interoperable, open technology.

PRODUCT AVAILABILITY

The supply chain issues of the last few years have affected most of us in one way or another. Availability and lead times for access control products have been anything but the norm.

But interoperable solutions may have reduced the impact for customers. Using products that work with multiple manufacturers' credentials or hardware in the same system provide flexibility that leads to increased protection of the overall system.

The Power of Interoperability

Interoperability empowers customers with the freedom of choice when it comes to credential and hardware brands and technologies. It makes adding new openings to the access control enterprise seamless and protects the existing investments as needs change in the future. ✚

ANN GEISSLER TIMME is Brand and Solutions Marketing Manager at Allegion. Email: *ann.timme@allegion.com.*

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Retrofitting Doors **for Electronic Access Control**

When it comes to implementing electronic access control, security, life safety and accessibility are paramount. Consider these insights to follow these imperatives, while maximizing profit and minimizing liability.

BY KERBY LECKA

FIGURE 1: EAC PROFIT, LIABILITY & APPLICATION CONSIDERATIONS

Product Availability Budget Requirements
- Timing/Delivery affects profit
- Good, Better, Best Solutions to match project budget

Retrofit Project
- Single or multi-door
- Standalone or integrates into EAC system/network

Life Safety Codes
- City
- State
- National
- Local Jurisdiction

Type of Door & Frame
- Aluminum
- Off-set
- Center Hung
- Slide or Swing

Level of Security
- High Security - Failsecure
- Low Security - Failsafe
- Monitoring Features

Aesthetics
- Concealed
- Surface Mount
- Architectural Housing
- Available Finishes

As a door professional, chances are it isn't your first rodeo when converting a door from mechanical to electronic access control (EAC). This article is intended as a reference primer, regardless of expertise level, certification or experience.

What's the Objective?

First, you'll need to understand what the access control objective is for the door. It usually falls into three main categories with corresponding considerations or requirements:

- **Security:** Includes risk and asset management, personal protection and crime prevention
- **Life safety:** Includes fire, crisis management, crowd control, senior and infant protection, and hazardous material/contamination/disease control
- **Accessibility:** Includes compliance to the Americans with Disabilities Act (ADA), human and vehicle traffic control, and the actual building function

Consider the Profit Potential

Will your solution need to integrate with other technologies to maximize the benefit? Is there an opportunity for customer revenue, beyond this door, from options and upselling? Is this project right for you? With an understanding of EAC objectives, you can determine the full profit potential for the EAC retrofit project.

Determining the best suited EAC hardware is central to your profit potential and requires a review of many factors. Figure 1 offers some of the most important considerations.

Consider Liability Issues

Make sure you've identified the code compliance requirements specific to the EAC hardware and supply them to your customer. This information may be a deterrent to having an inspector reject the installation, which could occur today or at a later date when code changes take effect.

Code compliance includes any performance certifications (ANSI/BHMA), lab listings (UL) and product or service warranties. Noncompliant components could lead to potential liability, should a fire or life safety emergency occur where you installed them. Know and understand the products you're installing.

Before You Continue

With the proliferation of EAC hardware, products and systems in the market, understanding their proper use and purpose can be confusing. As a manufacturer, we've encountered many instances of misapplication in the field. This can range from a deviation from the intended use or under/over utilizing the security, life safety and accessibility features designed into these EAC solutions.

Make sure you understand how the EAC solution matches the service the door opening provides. For example, the door opening might accommodate:

- Public or private access
- Single or unidirectional traffic control
- Restricted access or egress
- Frequent use
- Designated egress or fire exit
- ADA accessibility
- Traffic types dictating special consideration

Door Checklist

A great way to understand the right questions to ask is through continuing education courses offered by EAC manufacturers and industry associations. DHI's "COR101: Fundamentals of Architectural Doors and Hardware" and "COR102: Introduction to Building Codes" are two online courses that can help inform your EAC considerations.

Assess the Door Opening

If you don't already, use some sort of door assessment checklist. It helps capture the necessary details for recommending an appropriate upgrade to the door.

SDC developed a comprehensive door checklist in interactive and downloadable versions (*https://sdcsecurity.com/Door-Checklist.htm* and *https://sdcsecurity.com/docs/door-checklist.pdf*). Your trade association or EAC manufacturer may also have an alternate resource.

The checklist will help capture key door details that will figure into proper application and installation of an EAC component upgrade. Door handling, type of door and size, as well as type of door header and frame, are important to confirm. Also record existing lock, hinge, door closer (if any), ceiling type and height, distance from power supply and more.

Comprehend the Opening

It's important to note the condition of the door on your checklist. Does it close properly without binding or rubbing? Does it positively center? What are the current environment and conditions the door is operating in? If there are issues, they'll need to be resolved before installing the EAC upgrade.

Identify the Function

Identifying the function of a door helps determine appropriate retrofitting. Ask these questions to determine how the EAC will be used.

- What is the current door hardware function for the opening (i.e., a storeroom, classroom, entry or passage)?

- Can existing hardware (such as a mechanical exit device) be modified for electric operation?

- Will existing hardware need to be replaced to operate in an EAC system?

- Is a field electrification kit available?

- If adding an auxiliary electrified lock, will it integrate with existing hardware like an electric strike or electromagnetic lock?

- Is a factory installed modification required to maintain a UL listing?

Fire-Rated Openings

Fire-rated openings are common in stairwell and elevator lobby door situations. They will need to comply with the Authority Having Jurisdiction (AHJ) that enforces the codes. Here, we recommend you are familiar with the NFPA 101: Life Safety Code, among others. Some key requirements are:

- Code requires self-closing and latching

- Free egress is critical for life safety

- Fail-safe electrified hardware is mandated

- Modifications to install hardware might require recertification of door or frame

- Electrified hardware is typically tied into the fire system to release in the event of fire, power failure or other emergency

Identify the EAC Solution

HOW WILL I GET IN?

In the old mechanical days, staff employees were given a key to a door or facility. Doors were manually unlocked during business hours.

Today, an easy way to provide EAC is by installing a keypad and/or reader at the door to control who can gain access. This can require a pin code, swiping or placing a credential near the reader, or using a smartphone. Keypads and readers come in standalone models or with outputs to connect them to an access control system. They usually release some type of electric door lock to gain entry.

There are also battery-powered standalone electric locksets combined with keypads and readers that don't require hardwiring to an access control system. They are available in cylindrical, mortise or rim exit device configurations. Also included are Bluetooth and Wi-Fi enabled models.

Wall-mounted key switches may be used for some applications. These include roll-up door or automatic gate

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Electromagnetic Locks

operation to control access versus keypads and readers.

IS IT ADA COMPLIANT?

People who are physically handicapped or disabled are guaranteed equality under the Americans with Disabilities Act (ADA), a civil rights law. Title III of the law covers public accommodations and is a directive to ensure accessibility within public buildings. Retail storefronts, office buildings, campuses and health care facilities typically need to meet ADA compliance at points of access and egress as well.

Public door accessibility for ADA applications can be met through the use of low-energy automatic door operators. ADA compliant actuators— like wireless and hardwired push plate switches to activate the door opener— can be used for handicap access and request-to-exit applications.

Some ADA compliant actuators are wall mounted, while others are placed within bollard posts at the entry or exit to the door. The use of touchless exit switches to control automatic doors for a hands-free experience has increased dramatically. This correlates with demands to increase public health and safety during the COVID pandemic.

Identify the Locking Solution

WHAT WILL THE LOCK SECURE?

Electric locking devices come in a variety of application configurations to meet local, regional and national fire

Electrified Cylindrical Lockset

and life safety code requirements. From electromagnetic locks to electric strikes, electrified locksets and electric bolt locks, there's an EAC solution to meet just about any need to secure a door.

If you have participated in online continuing education through DHI, the following courses on hardware and electrified hardware applications can be of help:

1. "COR117: Door, Frame and Architectural Hardware Applications"

2. "COR133: Electrified Architectural Hardware"

Electromagnetic locks are appropriate for interior doors, perimeter exit doors and entrances that require fail-safe emergency release capability. Depending on the level of security required, they usually come in several levels of holding force.

Electromagnetic shear locks are available in concealed, semi-concealed and surface-mount models. They provide high security with a fail-safe locking mechanism for openings that

Electric Bolt Lock

require an architecturally superior appearance.

Electric strikes enable the electrical release of a locked mechanical latch or bolt and are well matched for new and retrofit construction. Electric strikes are available in a variety of configurations. They can accommodate several types of mechanical locksets and door and frame styles. They also permit fail-safe and fail-secure applications.

Electrified cylindrical or mortise locksets are used to meet building and fire life safety code compliance. They are for fire-rated office doors,

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SDI CERTIFIED   NAAMM National Association of Architectural Metal Manufacturers MEMBER   HMMA HOLLOW METAL MANUFACTURERS ASSOCIATION   DHI Door Security + Safety Professionals   UL   Warnock Hersey   NAMI

corridor doors, lobby doors, exit doors and stairwell doors. Whether fail-safe or fail-secure, controlled access and remote control capability is provided while the door stays latched even when unlocked. This maintains fire door integrity.

Unlike electric strikes, electric bolt locks need no other mechanical lock device to provide security. Electromechanical bolt locks are available in fail-safe and fail-secure modes. Applications include high security interior doors and cabinets where electromagnetic locks are not required.

Identify the Power and Door Control Solution

HOW WILL THE DOOR BE CONTROLLED?

Hardware control and door control modules are offered by many manufacturers to control separate electrified locking devices, multiple doors, relay operating and system modes. They provide system logic for lock control, monitoring, and communicating door status. They are normally installed in the power supply cabinet and provide a centralized wiring location, simplify installation and provide easy troubleshooting.

Power transfer devices are required to power EAC components and include power transfer loops, concealed power transfer hinges and devices.

Don't forget to consider the power supply itself. Door hardware and locksmith professionals should know that power requirements for EAC hardware are different from other systems such as CCTV. Access control systems require steady low-voltage DC current. They generally draw higher current during access control-related events, such as when an electric strike is released.

Before selecting a power supply, plan ahead. Evaluate your project carefully to avoid common installation and operating problems. Consider the following questions:

- What power is required and what power is available (if retrofitting)?

- If retrofitting, what modifications have been made over the years to affect the capacity of the power supply?

- How old is the power supply? If it's more than 10 years old, replace it.

- Do all products really work together?

- What regional and national codes might be applicable?

- Does your AHJ require the installation to be compliant with UL 294, an access control standard? Get the AHJ involved in your system design.

- How long must the system function after a power loss?

- Is a low-voltage license required in your jurisdiction?

WHAT ABOUT POWER OVER ETHERNET SOLUTIONS?

We've focused on retrofitting or upgrading a door opening for EAC without regard to whether it must integrate with a PC-operated access control system or network. Some of you may be adept at integrating a door opening with a larger enterprise AC network, either through experience, training and/or familiarity with reselling or installing access control systems available on the market today.

You're the door expert, not the IT and software expert. Perhaps you have the opportunity to provide retrofits for access control, but are uncomfortable when it comes to hooking up to the network. You may be reticent to take on jobs that can potentially open a whole new bag of snakes. They could include callbacks for software and hardware conflicts, incorrect settings or even general liability for IT issues that may not be the result of your installation.

You have options. At the risk of sounding redundant, consider online

> ## Don't forget to consider the power supply itself. Access control systems require steady low-voltage DC current. They generally draw higher current during access control-related events, such as when an electric strike is released.

Power Supply

training courses. They will help you become more proficient in the best practices for integrating door openings into an access control network. Check out the Electronic Security Association at *esaweb. org*, *SecurityCEU.com* or the online modules offered by many industry manufacturers.

You will learn and become familiar with networks and access control—and you still have choices for integrating your door opening into an EAC system without being an enterprise IT expert. Leading among these alternatives are power over ethernet (PoE) hardware and components that connect to an IP-enabled controller using the ethernet cable that already exists in the facility. This way, heavy cost commitments associated with complex, oversized, enterprise-wide systems can be avoided.

PoE solutions like these can be simple, tapping into the nearest ethernet connection to power and control door access and low-voltage access and egress devices via web browser. If you become comfortable at recommending and installing PoE solutions, you can carve out a niche. You can serve the smaller company or single facility that doesn't require a full-blown, complex and expensive enterprise-wide system. The same smaller company that also wants the convenience and 24/7 access of a PC-based access control system.

Most of the industry's manufacturers offer low-voltage, PoE hardware and components for access control. The list includes magnetic locks, key and exit switches, electrified exit devices, electrified locksets, electric bolt locks and automatic door operators. There are even cabinet locks to attach to a network system via ethernet cable.

There are also several manufacturers that offer IP-based door access controllers that are powered by ethernet cables. They connect to the existing network structure and are browser-based. They require no software to install. Simply plug

FIGURE 2: SINGLE DOOR PoE SOLUTION EXAMPLE USING AN IP-BASED DOOR CONTROLLER
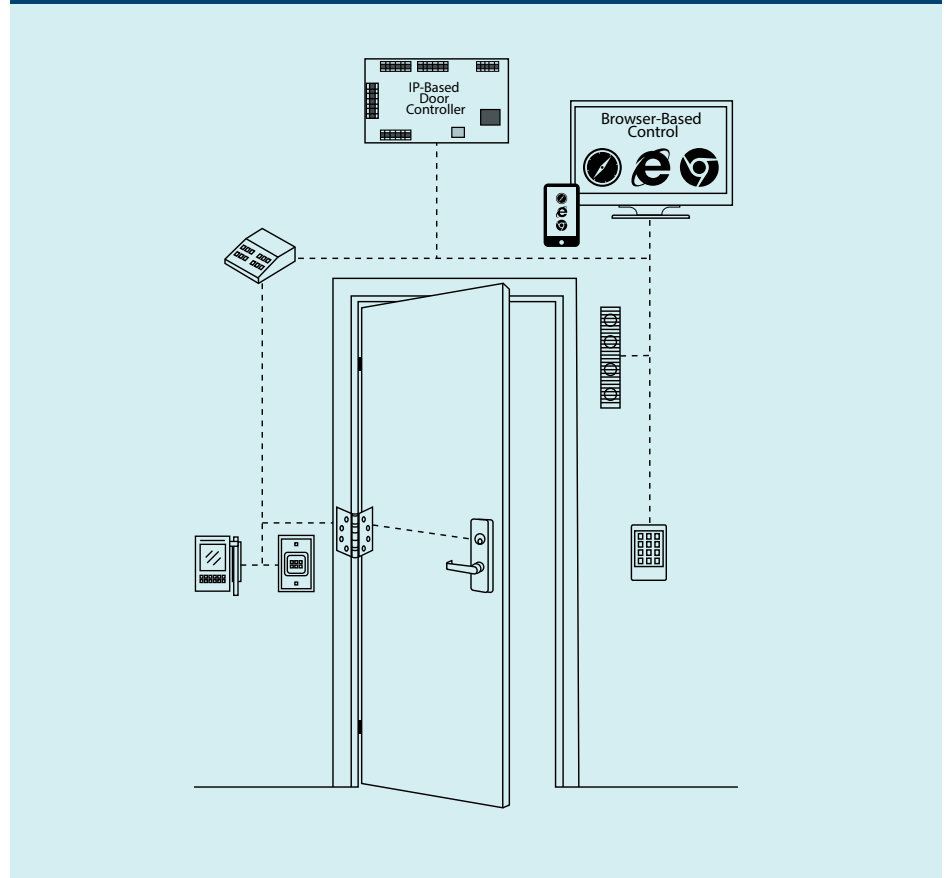
the controller into a wired LAN connection, then use the web browser on a computer or smartphone to set up and manage the system.

These PoE/IP-based controller solutions allow you to get in and out of a job quickly. Otherwise, it can be very time consuming to consult with the IT manager and find a suitable computer at a customer site.

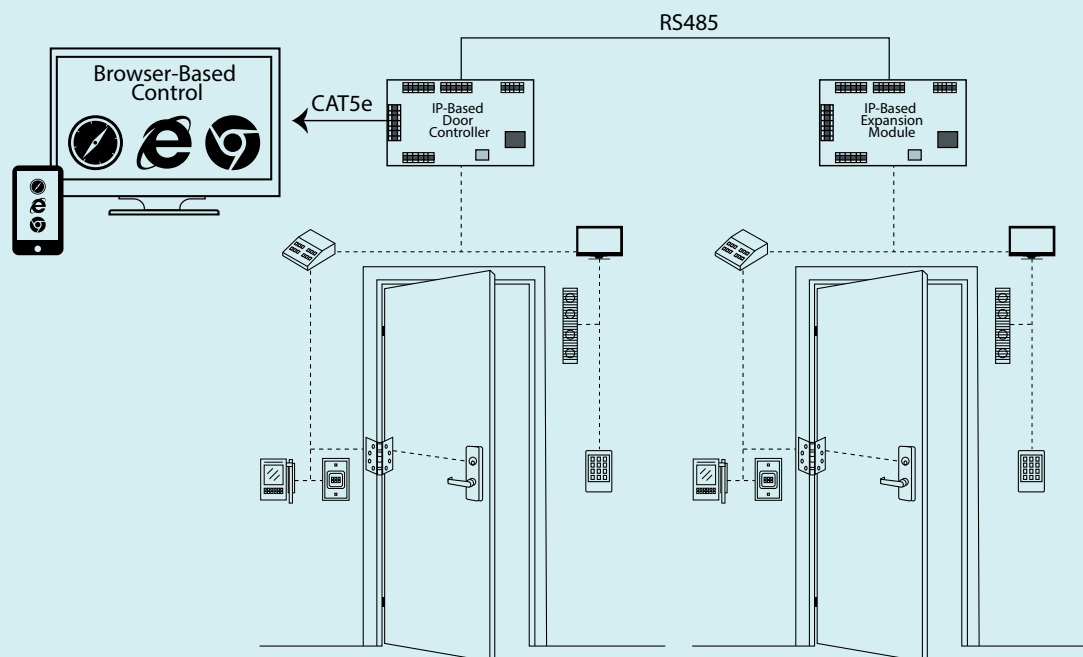Figure 2 displays a typical PoE door control solution using an IP-based door control.

Physical electronic access control solutions utilizing low-voltage PoE hardware, components and IP-based door controllers are particularly suited to tenant improvement and retrofit projects. They provide the ability to purchase and install just what's needed without having to

invest in a more costly enterprise system designed for larger facilities. The beauty of this approach is they are usually easy to expand as needs grow without the front-end commitment to an oversized solution.

Multi-door applications are also supported by several manufacturers. Some simply offer IP-based door controllers in 2, 4, 6, 8 door configurations that support brand-specific access and egress control hardware. Others provide the door controller and optional expansion boards for additional door openings that are non-brand specific to the access or egress control hardware.

Most offer free, pre-installed software. That provides the functionality of a full PC-based access control system managed via web browser from a desktop, tablet or smartphone.

You will need to survey where the ethernet cable is and/or where electricity is available to power the system. This will depend on the type of installation and whether it's a single door or multiple doors. If using the existing ethernet cable, you may need to install a PoE splitter to provide power to your components. If additional power is required from a power supply, you may need to install a PoE injector to provide the additional power to the system.

As with any tenant improvement or low-voltage implementation via ethernet cable, we recommend that installers are comfortable with ethernet network best practices (see our training recommendations from above). We also recommend testing any installation using an inexpensive ethernet cable tester before startup.

Also, by following industry standards— ANSI/TIA-1005-M.I.C.E and ANSI/TSI-569C.0 (cable lengths)—many issues can be eliminated that may be residuals of previous installations.

A word of warning: Do not forget that any PoE access and egress solution using IP-based door control still needs to meet all existing fire and life safety code compliance. This includes using UL 294 approved hardware where required.

Using existing legacy ethernet cable with PoE hardware and an IP-based controller will save time, money and manpower. And you're not required to be an enterprise network expert.

You may be able to bring safe, secure, easy to implement door access control to the network's edge without the headaches of costlier, more complicated enterprise solutions. You can also usually expand from a single door up to 100 or more doors in the future, depending on the manufacturer's solution you choose.

This is a great way to upgrade the door without being an IT expert. You can use PoE-capable locking hardware and IP-based door controllers to bridge

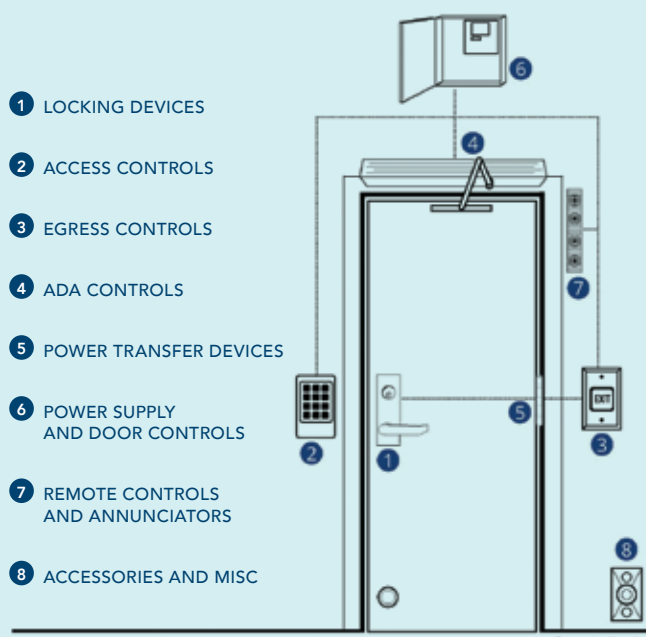the gap between traditional locking hardware and IT networks.

Identify the Egress Control Solution

HOW WILL I GET OUT?

Key switch assemblies provide an economical method of providing authorized control for a variety of applications and new or retrofit construction. Most use U.S. standard, 1-inch and 1 3/8-inch mortise key cylinders, and interchangeable core cylinders to maintain compatibility with a new or existing facility mechanical key system.

Many manufacturers also provide a variety of exit button and push button styles and contact configurations to fit several request-to-exit application needs. Additionally, wave-to-open switches and motion sensors provide hands-free compliance and convenience for touchless applications using proven infrared detection technology.

FIGURE 4: BASIC COMPONENT CONSIDERATIONS FOR CONTROLLED DOOR SYSTEMS

1. LOCKING DEVICES
2. ACCESS CONTROLS
3. EGRESS CONTROLS
4. ADA CONTROLS
5. POWER TRANSFER DEVICES
6. POWER SUPPLY AND DOOR CONTROLS
7. REMOTE CONTROLS AND ANNUNCIATORS
8. ACCESSORIES AND MISC

Components not to scale

Egress devices are designed for the release of magnetic locks and the activation of delayed egress locks installed on non-latching doors. Request-to-exit (REX) push bars provide uninhibited egress through access-controlled openings equipped with magnetic locks. At the same time, they eliminate the need for prior knowledge of egress operation and enable egress with a single natural motion. The use of REX push bars eliminates the need for wall-mounted exit switches that require prior knowledge. Also eliminated is a manual secondary action to unlock the door.

Exit devices are essential hardware components for safety and security and are found in almost every building. Electrified exit devices allow for greater control of the opening. They can also interface with other electronic equipment. Electrified exit devices either control the latch bolt of a device or control the locking of the operating trim.

There are two ways to control the electric locking and unlocking of the exit device. First, a solenoid or motor retracts the latch (electric latch retraction–ELR). It is held retracted or in the "dogged" position until power is interrupted. The door operates in a push-pull manner.

The second method controls the operating trim, allowing the exit device to remain latched. The exterior level, knob or thumbpiece is electrically locked or unlocked for entry control in either fail-safe or fail-secure modes.

Electrified exit device manufacturers offer a variety of available trim options. Selections can also be made about rim mount, surface vertical rod and concealed vertical rod device types. As a result, panic and fire exit device solutions are available for virtually any door opening application.

There are also cost-saving ELR field modification kits available. These can be used to convert existing mechanical exit devices to electronic. Electric access control, simultaneous latch retraction and dogging operation are all enabled.

Features and Functions

WHAT ELSE DO I NEED?

There are remote controls and annunciators designed to meet the demands of different control and monitoring applications without PC-based access control capability.

They provide methods for central monitoring and control of openings in a facility. They also enable audible and/or visual status supervision and notification. They can include desktop modules with switches to release a single opening.

LED displays indicate door position or lock status. LED displays can also be placed at the door opening to provide visual status of the door.

Door prop alarms with timed delay, LED status display and buzzer alarm are available to prevent piggybacking of unauthorized students or employees through a controlled door opening.

Plus, there are a variety of electrified accessories and specialty items to enhance any EAC conversion solution, depending on the application. For reference, Figure 4 is a visual summary of the categories of product recommendations to consider when upgrading any door from mechanical to electronic.

Hopefully this article has given you practical insights for consideration when retrofitting a door for EAC, ultimately helping to minimize liability and maximize the profit potential for the installation.

As always, consult your local AHJ for compliance requirements before starting any door installation project. +

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

… AND NOW!

Five keys to dealing with the biggest challenges facing the door, frame and hardware industry.

BY IAN OXMAN

Many business leaders today report difficulties finding qualified candidates willing to fill the shoes of the retiring generation. This article explores the root cause of the staffing problem. It also provides strategies for solutions by examining millennial workers.

Software for Hardware believes new hiring practices, attitudes and technologies that address modern concerns and preferences must be adopted. It's how we can attract and retain the next generation of hardworking employees who will drive success in the commercial construction industry.

Current Situation

Unless you've gone off the grid for the last several years, you know that the U.S. economy currently suffers a severe labor shortage. For the wholesale and distribution industry, the data paints an even more challenging picture of available labor.

The Bureau of Labor Statistics reports a 2.9% unemployment rate in wholesale trades. As unemployment falls and open job postings rise, average hourly wages also rise. The reported average hourly wage for wholesale nonsupervisory employees rose to an all-time high of $36.16 an hour.

Door, frame and hardware distributors report overwhelming customer demand coupled with simultaneous low product availability and a crushing labor shortage. As a result, many distributors report being forced to stop bidding new jobs and pass on additional work.

"You might think it's a nice problem to have, that it's more business than we can serve, but it's not a nice problem," Linda Williams, General Manager at

PMP, says. "We strive to deliver high customer satisfaction to all our clients and saying 'no' is just not ideal."

Mitch Lazar, CEO of Rapid Door, echoes the same situation: terrific demand but a shortage of qualified labor. "We as industry leaders need to step up and figure out a program to recruit more young people into the industry," he says. "In our case, we're taking new hires with no industry experience knowing we'll be investing a year or two getting them fully trained."

What Caused the Labor Shortage?

Two broad trends merged into a perfect storm to create the current labor shortage.

First is the long-running aging of the U.S. population. Every year since 1998, the labor participation rate has declined as more workers retire than enter the labor market.

COVID-19 combined with government assistance programs also dramatically accelerated the retirement of older workers. New workers entering employment were minimized. Research from Moody's estimates that 70% of the workforce decline is due to retirement.

Moreover, a 1-to-1 replacement of a retired worker with a new person entering the workforce does not provide employers equal productivity. A new worker often falls far short in productivity compared to the experienced retired worker because of the learning curve; they require specialized training and knowledge, which takes time and energy to teach.

The second trend driving the labor shortage is quitting. According to a 2022 FlexJobs survey of 2,202 individuals, 62% cited quitting their jobs because of toxic company culture.

The pandemic brought this issue into sharp focus. Many workers had to deal with fear and tragedy from COVID-19 amidst their already tiring work routines and family responsibilities. They decided enough was enough. People wanted better management, better pay, more

flexibility and a healthier work-life balance.

A Rising Generation

How can door, frame and hardware distributors attract workers when so many people are retiring and quitting in the aftershocks of the pandemic?

We must shift our focus to a rising generation of workers: millennials. Generally ages 25-40, they are currently the largest single segment of the workforce and comprise nearly 50% of all U.S. employment.

Millennials are ready to fill positions in the door, frame and hardware workforce, with many already in some form of leadership role. It is vital that we maintain a connection with this large group of people. They adopted new technologies like smartphones and social media in their formative years and are accustomed to improvements in IT. They are expecting to see the digital world embraced within their workplace.

Millennials and younger generations have also grown up seeing diversity become an increasingly visible topic. Many younger people thus want to see acceptance of minorities reflected in the workplace. They hope that workplaces will value the same ideas they do.

5 Keys to Hiring Success

1. REACH OUTSIDE

Having grown up with the internet, millennials comfortably search for jobs in the digital world. Job searching websites like Indeed are common, as they allow individuals to apply filters such as "remote work" and "level of experience" or specify a preferred salary amount. Detailed filters help weed out options and connect individuals straight to jobs that meet their qualifications. These popular sites offer great visibility for job openings.

Social media continues to serve as a hub for the newer generations. That makes it another great avenue to use. Increasing a company's presence on

social media can reach more people, especially a younger audience.

Since LinkedIn is a social media platform tailored specifically for business and employment, it's a great recruitment platform. Along with job posting, setting up your company's profile to include a description and link to its current staff will promote your company's professional image.

As for other avenues of outreach, Twitter, Instagram and Facebook rank among the most popular social media sites today. There, you can repost job openings, or even write up posts that share positive experiences from current employees. That could convince candidates to give that job post a second look.

On your own website, keeping your careers section updated and easy to locate also attracts attention from potential hires browsing the site.

Consider reaching out to colleges for internship opportunities as well. Creating relationships with colleges for apprenticeship programs can spread the word and educate young people about the industry. After all, some young people don't even know that the door, frame and hardware industry is an option for them. These programs can serve as their first point of contact.

Whichever avenues you pursue online, make sure you dedicate time to pursuing them even after you've filled the position. Maintaining a consistent online presence is key in continuing to attract today's workforce and can build an audience of candidates ready to apply in the future.

2. INVEST INSIDE
Investing in clear, professional branding for your company proves highly valuable when recruiting a new generation of workers.

Branding is identity. What identity does your company project to people?

Unprofessional, unclear branding is a bad first impression. Millennials especially will respect branding that feels current and cognizant of trends.

It shows that your company is open minded and embracing the change they want to see.

Millennials will also appreciate investments in their livelihoods. Offering a sign-on bonus is a good incentive to a prospective candidate, as it shows your commitment. Continuing to offer bonuses for employees that do good work also shows your acknowledgement and appreciation of helping your company grow.

A benefits program that includes ample vacation time, health insurance and retirement savings plans is also important to candidates, especially since the pandemic. If you show willingness to invest in a candidate, the right candidate will invest in you.

Another untapped avenue for finding applicants is offering a sizable employee referral bonus. Your current employees may have large social networks and connections in the industry. Show your employees that you're serious about leveraging their network by offering a $2,500 to $5,000 bonus. In the long run, this saves money you could otherwise spend on an expensive recruiter.

3. STREAMLINE THE PROCESS
You've gained the attention of potential hires. Now you need to retain and grow their interest through a streamlined modern hiring process.

Avoid making the application a lengthy process. When applicants browse around job sites, they often apply for many different jobs at once. They will grow impatient with an application that requires manually filling in their entire resume. They simply want to upload it.

You may want to include a few short questions to form an initial idea of the applicant, but make them concise. If you're also requesting a cover letter, remember applicants don't want to spend time writing an essay. And you likely don't want to spend time reading 100 essays. The interview is the prime opportunity for longer discussion.

Make sure to not wait too long before scheduling an interview. Once again, candidates are busy. If you don't show interest in them after they submit their application, they likely won't show further interest in you. They'll invest their time in companies that have responded. They might even land a new job before you can offer the first interview.

Obviously you don't want to rush through the interview process and mistakenly end up with an unqualified hire. Keeping a tight schedule of the number and kinds of interviews to conduct can keep the process quick and efficient.

Allow the candidate to speak to members of the company they'll work with most directly. It serves as a good test in seeing if they will work well together. It also allows your employees to talk about their experiences working for the company, which can further educate and convince the candidate.

4. OFFER MORE THAN MONEY
When it comes to compensation, money is not everything. Millennials care about company culture and many want to share the same values as their employers. Communicating accurately in the interview about your company and what you value will ensure the candidate feels at home and represented. For example, the horizontal model, a management organization where a workplace has many employees and little management, has risen in popularity for the autonomy and collaboration it grants employees. This can create a comfortable, flexible workspace for employees.

Communication is also essential for a sustainable work environment. Younger employees want to know if they perform well, and they want to know what they can improve on. Be upfront and fair about both their strengths and areas of improvement. You will foster an environment of honesty and let them know that they and their work are valued. Transparency will create trust.

KEYS TO RECRUITING SUCCESS
Follow these tips to improve recruiting:

- Turn your attention to millennials who constitute a majority of the workforce and keep a keen eye on Gen Z behind them.

- Recruiting millennials and younger generations means understanding their common skills and concerns.

- Millennials typically embrace technology and desire more flexible working conditions that match their values.

- Employers will find great success reaching out through the internet where many millennials have gathered to job search.

- Investing in creating a strong brand image and employee benefits will grab candidates' attention.

- Designing an accelerated, streamlined hiring process will help you decide quickly whether candidates fit your company.

- Offering workplace accommodations outside of money will keep employees working long term.

Additionally, COVID-19 marked the era of remote work. Since then, many companies still offer this option. Some employees prefer the flexibility of working at home with no commute times. If possible, offering a remote or hybrid schedule can attract the next generation of candidates.

5. EMBRACE TECHNOLOGY

Because many millennials learned how to use smartphones, laptops and more from an early age, they pick up on new technology fast. They understand that technology holds the power to make work processes much more efficient and convenient. Millennials expect employers to provide appropriate technology for their role.

Technology can streamline your workflow, and attract an eager, tech-savvy new generation of workers. Company growth follows naturally.

Joe Broders, Sales Manager at the door, frame and hardware supplier Steve Broders Co., saw this demand firsthand when trying to attract top talent to join his company, which did not use project management software. They used hand drawings and Excel spreadsheets at the time.

"We were told straight out that they would not join our company without the tools to help them be productive and successful. That was a wake-up call for us," Broders says.

Additional technologies, such as human resources software, brings efficiency to HR functions. By using software that automates processes like payroll and talent acquisition and management, you devote less time and money to managing your employees. As Peoplegoal says, you can streamline onboarding, see real-time data and

reduce the number of filing cabinets full of paper. Younger generations will appreciate companies embracing helpful technology like this.

Looking Ahead

As generations of workers retire and quit, turn your attention to the millennials that constitute a majority of the workforce. Those who understand this generation and tailor their hiring practices accordingly will find greater success in recruiting competent, satisfied, long-term staff. +

IAN OXMAN is Co-Owner of Software for Hardware, LLC. Email: *ian@softwareforhardware.com.*

Salt Lake City's Net-Zero Energy Fire Station

Thermal curtain wall helps Station No. 14 earn LEED Gold certification.

BY BRIAN TOBIAS, LEED AP

Salt Lake City's Fire Station No. 14 earned LEED Gold certification in April 2020. It was certified through the U.S. Green Building Council for its energy-efficient, environmentally responsible design and construction.

When it opened in 2018, it was one of the first net-zero energy (NZE) fire stations in the country. This means it generates more energy than it consumes.

Tubelite's triple-glazed thermal curtainwall, multi-pane storefront and interior framing systems, installed by Mollerup Glass Co., helped achieve the building's performance goals.

BUILT FOR COLD

Nestled between the Wasatch and Oquirrh Mountains, Salt Lake City's valley winter temperature inversions can act as a lid trapping cold air and pollution for several days or weeks. The State of Utah and Salt Lake City have invested in strategies and resources to improve the air quality and reduce potential health risks.

Above: The entrance, curtainwall, storefront and window systems contribute to the building's energy-efficient thermal performance and condensation resistance, indoor air quality and natural ventilation, daylight and views. These attributes support LEED certification criteria and the physical and mental health of the firefighters living and working in the building.

PHOTOS © CACHE VALLEY PHOTOGRAPHERS, COURTESY TUBELITE

Salt Lake City Fire Station No. 14's LEED Gold-certified building is one of the first net-zero-energy fire stations in the country. It features a solar panel roof array, geothermal heating and cooling, and a high-performance building envelope.

Fire Station No. 14 features a solar panel roof array, geothermal heating and cooling, and a high-performance building envelope. Creating the station's high-performance façade, Tubelite provided its triple-glazed 400TU Series Therml=Block® curtainwall. It also supplied its T1400 I/O Series multipane storefront, operable windows, side entrance doors and INT45 interior framing systems.

"Our Therml=Block curtainwall offers a fully, thermally broken system engineered to meet or exceed today's stringent energy codes and NZE designs," Mary Avery, Vice President of Marketing at Tubelite, says. "Even in extreme cold climates, Therml=Block products provide superior energy and condensation resistance performance using multiple thermal barriers, while providing structural integrity and aesthetic flexibility."

Energy-efficient thermal performance and condensation resistance, indoor air quality and natural ventilation, daylight and views all support projects seeking LEED certification. These attributes also contribute to the physical and mental health and readiness of the firefighters who live and work in the building. Further contributing to the community's environmental and economic goals, the building was designed for a lifespan of at least 50 years.

Blalock & Partners Architectural Design Studio worked with fire station specialist TCA Architecture + Planning to meet all of the project's objectives. Zwick Construction led the project's nearly two-year construction, staying on schedule for the May 2018 opening. The two-story, 17,100-square-foot building includes a four-bay garage and dormitory rooms for 12 firefighters. It also features a multipurpose room, a dayroom, an exercise room, a commercial kitchen and a second-floor deck.

WARM AND DRY

Enclosing the two-story Fire Station No. 14, Tubelite's triple-glazed 400TU Series incorporates dual thermal polyamide insulating strut between the interior and exterior aluminum framing members. This achieves industry-leading U-Factors

SALT LAKE CITY FIRE STATION NO. 14

- Lead architect: Blalock & Partners Architectural Design Studio; Salt Lake City; *http:// blalockandpartners.com*

- Architectural consultant: TCA Architecture + Planning; Seattle; *https://www.tca-inc.com*

- General contractor: Zwick Construction Company, Inc.; Salt Lake City; *https://www. zwickconstruction.com*

- Curtainwall, storefront and interior framing systems glazing contractor: Mollerup Glass Co.; North Salt Lake, Utah; *https:// mollerupglass.com*

- Curtainwall, storefront and interior framing systems glass: Northwest Industries, Inc.; Seattle; *http://www.nwiglass.com*

- Curtainwall, storefront, window, entrance and interior framing systems manufacturer: Tubelite Inc.; Walker, Michigan; *https:// www.tubeliteusa.com*

- Curtainwall, storefront, window, entrance and interior framing systems – finishing: Linetec; Wausau, Wisconsin; https:// linetec.com

The aluminum-framed side entrance doors feature durable tie-rod corner construction, which allows for field modification and adjustment and provides strength and flexibility.

of 0.21 for thermal transmittance and a frame condensation resistance factor (CRF) of 84. The curtainwall's enhanced thermal break is located in the tongue area of the back member.

The triple-glazed insulated glass is positioned to the system's exterior for enhanced resistance to rainwater. The glass units were also specified with a low-e coating and custom ceramic frit to manage solar heat gain. Reducing unwanted solar heat and condensation improves comfort, sanitation and air quality inside the station.

Minimizing both interior and exterior maintenance, all of Tubelite's aluminum framing was finished by Linetec in a durable, Class I clear anodize. Linetec's no-VOC, eco-friendly anodize produces a frosty, matte finish that helps hide small imperfections sometimes seen in recycled aluminum.

With its suite of sustainable, renewable and energy-efficient features, Fire Station No. 14 contributes to a carbon emission reduction of approximately 902,000 pounds of carbon per year. The project has been honored with numerous awards, including:

- 2019 Merit Award from the American Institute of Architects (AIA) Western Mountain Region and 2018 Merit Award from AIA Utah

- Green Building Award from the Associated General Contractors of Utah
- *Firehouse Station* magazine's Most Outstanding Green/Sustainable Project from Utah Construction and Design (Gold)
- Government/Public Building Design Award (National, Best of the Best) from *Engineering News Record*

"We are honored to receive this national recognition," Fire Chief Karl Lieb says. "Salt Lake City's Fire Department takes our responsibility to protect the community seriously. This is what we do every day in responding to incidents and emergencies, and it's what we're doing at a system level in how we construct and manage buildings, source renewable energy and support cleaner-fueled vehicles." ✛

BRIAN TOBIAS, LEED AP, is Senior Manager of Product Strategy at Tubelite and its aluminum-framed storefront, curtainwall, entrances and daylight control systems. Email: *dependable@tubeliteusa.com*

The Eco Transformation of a Mid-Century Marvel

Hotel Marcel is an architectural landmark reimagined for the future.

BY BILL SHAUGHNESSY

As a company committed to mitigating climate change, ASSA ABLOY is proud to have played a role in the redevelopment of an extraordinary landmark—the stunning Hotel Marcel.

The 1950s mid-century building was originally designed by modernist architect Marcel Breuer to be the New Haven, Connecticut, headquarters of the Armstrong Rubber Company. Now the impressive structure has undergone an ecological transformation. It has been masterfully reimagined, rejuvenated and repurposed into an incredible 165-room boutique hotel.
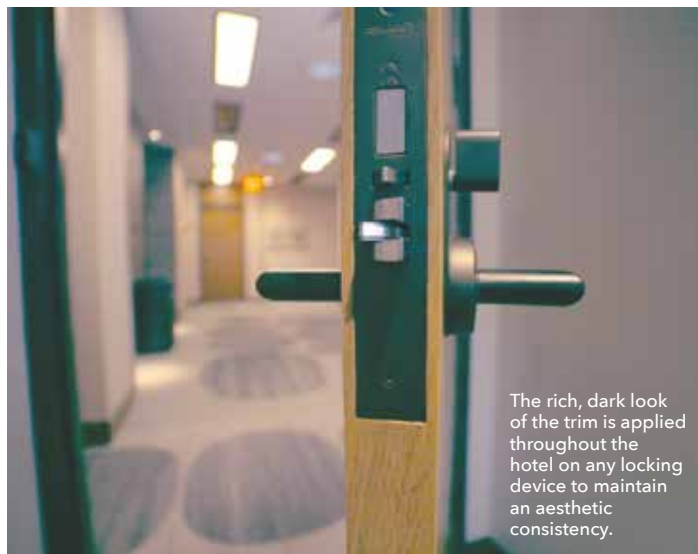
The Hotel Marcel is designed to the LEED Platinum Standard and to be a Passive House Certified Building.
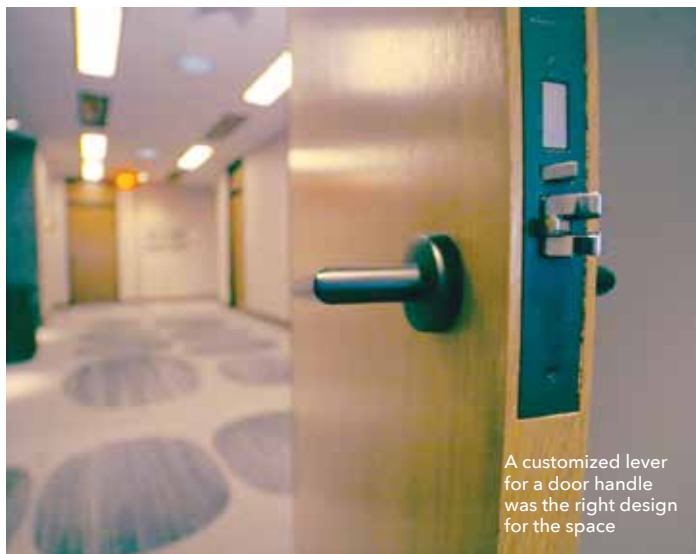
A customized lever for a door handle was the right design for the space

The rich, dark look of the trim is applied throughout the hotel on any locking device to maintain an aesthetic consistency.

HOSPITALITY FOR THE PLANET

"Hotel Marcel is such a cool building architecturally," Bruce Becker, Developer, Planner and Architect at Becker & Becker Architects, says. His team redesigned the hotel and he notes that the building's focus on sustainability makes it even cooler.

"It's slated to be the first net-zero hotel in the United States," Becker says. "We don't use fossil fuels; it's designed to the LEED Platinum Standard and to be a Passive House Certified Building."

Becker notes, "Sustainability is not just a matter of checking a few boxes. It requires a holistic approach to design and construction where every element is examined to evaluate its environmental impact. We look for partners and suppliers that share our commitment to sustainability. The fact that ASSA ABLOY takes sustainability so seriously was really important to us."

"The relationship with Becker & Becker was a very collaborative experience," says Erin Spadavecchia, Architectural Consultant and Program Manager for Sustainability at ASSA ABLOY. "We were able to provide product information, specification services and coordination via our Openings Studio platform. That really helps with visualization and selection to support the holistic approach."

Spadavecchia added the sustainability team also coordinated with ASSA ABLOY Global Solutions to provide an even more extensive package of solutions, products and services that fit the project's sustainability objectives.

THE IMPORTANCE OF TRANSPARENCY

As part of our global sustainability commitment, ASSA ABLOY continually sets ambitious goals that architects, interior designers and building owners like Becker & Becker and

Hotel Marcel align with. This includes methodologies to make products more efficient and responsible.

Product and process documentation also matter to the design community. With Hotel Marcel, documentation, such as Environmental Product Declarations, was an imperative contribution to product vetting and selection. It was also fundamental to the project's LEED points.

THE RIGHT DESIGN FIT

Becker acknowledges it was great to work with ASSA ABLOY. He says it was particularly helpful for Becker and his team that they could get technical support and be introduced to the products best suited for the project.

"Bruce and his design team paid a visit to our ASSA ABLOY Innovation Showroom to talk about the breadth of solutions we have to offer," says Sandy Matheny, Director of Decorative Openings at ASSA ABLOY Opening Solutions.

"We started out just looking at door handles," Becker adds. "ASSA ABLOY was the only company that had such a great selection and could even customize a door handle. The right design is a high priority for us."

Matheny says that ultimately Becker's team settled on a lever that is perfect for the space. "The finish has a beautiful, rich, dark look," she says. "We can take that same trim and apply it throughout the hotel to maintain an aesthetic consistency, whether it's the guest room entry lock or any other locking device."

SECURITY REMAINS PRIORITY ONE

"A building can look great and be super functional, but security is just as important," Emilio Mejias, Assistant General

Manager at Hotel Marcel, explains. "Whether it's a maid's closet or guest room door, it must have the appropriate level of security. With the credentialing system that we have in place, we have that flexibility. For guests, we're able to use a digital check-in, where they don't even have to stop by the front desk."

"There's a virtual key that's sent to the guest's mobile phone, so the phone becomes a credential," Sue Greco, Regional Sales Manager of Hospitality North America for ASSA ABLOY Global Solutions, adds. "The mobile check-in that's used just matches the cutting-edge vibe of the hotel."

"It's really a seamless process for the guest and also a very easy thing to manage for the hotel staff," Becker adds.

AN INSPIRING EXPERIENCE

"Whether the customer needs a solution that involves aesthetics, sustainability, high security or nimble operation, we can actually incorporate all of these elements into the same product without affecting its integrity and proudly stand behind it," Amy Musanti, Director of Sustainability at ASSA ABLOY, says. "That inspires trust. More than anything, it's validation for us on the sustainability side of things to have our efforts match the needs of a very progressive industry."

"This trailblazing effort to create a sustainable hotel really is what the future should be for the hospitality industry," Mejias says.

"It really was a solution waiting to happen, because this building was abandoned for 20 years, and now it's been turned into a symbol of the future," Becker explains. "It would not have been possible to be successful without such strong partners, including ASSA ABLOY." ✚

BILL SHAUGHNESSY is Marketing Communications Manager, Solutions at ASSA ABLOY Door Security Solutions.
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Website: *www.assaabloydss.com*.

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Retrofitting With Wireless After 160 Years

Earning trust and reducing anxiety at La Salle University.

BY BILL SHAUGHNESSY

La Salle University in Philadelphia was founded as a private Catholic university 160 years ago. Since then, it has been an important academic and public service force in the community.

When it came to choosing the right door security solutions to update and expand La Salle's access control technology, the school found that many recommended products were quite similar. The same was true of pricing.

KEEPING THE CAMPUS SAFE

Though LaSalle University is in an older and well-established neighborhood, most university students in major metropolitan areas are concerned about urban crime. It is key to create a school and work atmosphere that reduces that anxiety, making door access control a security priority for the university.

Strengthening security measures like access control goes a long way in alleviating fears. Limiting the assignment of credentials to authorized students and personnel helps create an increased comfort level on campus. This is a keystone in how La Salle builds living and learning environments that are as safe as possible without making students and staff feel like they're being locked down.

TEAM ASSESSMENT

La Salle had a few disparate access control systems that had been in place for several years. Some newer construction had been outfitted with all the camera and access control bells and whistles. However, older systems were on software that could no longer be updated and there was hardware they could no longer get parts for.

Meanwhile, there were many places around campus that still only had mechanical locks and brass keys.

The university decided to do a full assessment to determine what they had, where the gaps were and what the next steps should be. Three different campus entities were involved in the assessment—facilities, IT and public safety. They knew it was essential to have all the players at the table to identify needs, system functionality and end goals properly.

They concluded they wanted a single platform that would allow them to manage access, credentials and lockdowns from a centralized point.

There was a newer access control system in one of the university's new buildings. But there wasn't a plan for

> *With the new system in place, La Salle University is well positioned to transition to mobile access control credentials when the time is right.*

how to apply that technology across the campus and optimize it.

Looking for a more holistic approach, the team knew they needed a solution that was updateable, played well with a mix of technologies and would be around five years down the road and longer. As a result, they selected an open architecture solution from ASSA ABLOY that offers the flexibility to connect to a greater variety of compatible options.

RETROFITTING WITH WIRELESS

Phase one of the projects involved retrofitting more than 275 openings with ASSA ABLOY wireless locks. ASSA ABLOY went the extra mile and sent a team out to La Salle to conduct a complimentary class on troubleshooting, maintenance and part replacement for the locks. The ASSA ABLOY team also left a demo unit with the university.

The demo unit is used frequently by the university and has been very informative. It travels between facilities, IT and public safety, depending on who wants to analyze it. Their mechanics wanted to learn how to take it apart, put it back together and understand how it works.

College and university students are accustomed to using apps on their devices to make purchases, access lockers and so many other everyday things. With the new system in place, La Salle University is well positioned to transition to mobile access control credentials when the time is right.

"The team at La Salle has been working toward implementing mobile credentials," Dave Priest, Integrated Solutions Specialist at ASSA ABLOY Door Security Solutions, says. "We worked closely with them to ensure

ASSA ABLOY wireless locks were installed on 275 openings at La Salle University.

they had all the correct credential parameters and the right complement of compatible locks to make that happen in the near future. It is important technology that's going to last and be adaptable for years to come, and we'll be there to support the university as they make this transition." ✦

BILL SHAUGHNESSY is Marketing Communications Manager, Solutions, ASSA ABLOY Opening Solutions. Email: *bill.shaughnessy@assaabloy.com*. Website: *www.assaabloydss.com*.

Smart Solutions For Sliding Door Locks

Franchise retailers gain leasable space, enhanced security and access management.

BY QIANYAN CHENG

INOX smart locks can be controlled remotely to keep the door unlocked or to block credentials for a certain amount of time.

Salons by JC is an inventive franchise beauty salon operating across 120 locations, offering beauty professionals private, well-equipped workspaces for their independent businesses.

According to Mark Dancer, a business innovation researcher and writer, companies should "lean in to help skilled workers thrive." [1]

Salons by JC is this type of forward-thinking company, offering extended business services for beauty stylists like marketing, professional growth opportunities, and networking support to empower these entrepreneurs.

The blueprints for Salons by JC facilities currently in construction across the United States include sliding doors for the salon entry openings. This allows more individual salons to be designed within a facility. In turn, the franchisee is able to attract more beauty stylists or therapists as tenants.

THE CHALLENGE

The efficient use of space in commercial projects is critical for enhancing aesthetics, functionality, productivity and, notably, cost-effectiveness. Retail spaces in particular require efficient space utilization to maximize return on investment.

An emerging trend in retail environments is the adoption of sliding doors. They have a modern aesthetic and are accessible for those with disabilities. However, one of the main reasons for their popularity is they allow designers to maximize usable space by reclaiming the clearance required by swing doors.

With many independent businesses operating inside the larger Salons by JC facility, access control with sliding doors becomes an interesting challenge. Franchise owners, beauty stylists, customers, maintenance workers, cleaning crews and many others require access to different parts of the facility at different times.

Salons by JC needed a solution that would provide modern, efficient access control for sliding doors. It would require creating a hierarchy of users and permission levels with remote operating and scheduling capabilities.

THE SMART LOCK

For their sliding doors, Salons by JC in Houston and Denver chose the INOX ISM-PD9500 smart lock. It is the only brand offering a wireless Bluetooth/Wi-Fi/RFID battery-powered sliding door mortise lock. Together with the ISM-MC7000 smart mortise lock for swing doors and the ISK-B300 narrow stile smart reader-controller, the new facilities are now designed for robust remote security management.

Both the sliding door and swing door mortise locks provide commercial Grade 1 construction with a motor-driven deadbolt. The ISM-PD9500 outside trim includes a round sectional RFID reader, Bluetooth connectivity to a smart app and a touch-to-lock feature. A separate cylinder is provided for a mechanical key override. This lock runs on four AA batteries eliminating the expense and challenge of hardwiring the lock to a power supply.

"We were eager to integrate sliding door designs, but were uncertain about available electronic hardware," John Burgtorf, Franchisor of two Salons by JC locations in Austin, Texas, says. "The

Sliding doors create efficiencies of space and design, which can be very beneficial in snug retail spaces.

INOX smart lock solutions provided the answer for sliding doors, swing doors and the access control for the storefront as a one-stop smart solution. Our tenants and their clients can use one app and one fob to access both the common area and their own units. It is an ideal solution for enhanced security and privacy."

SIMPLE CONTROL

In addition to the hardware considerations, the access control system had to be simple and intuitive at the user level. Salon owners want to spend a minimum amount of time away from client service.

"The true advantage lies in the app," Eric Martin, Senior Project Manager at Cook and Boardman, says. "Scheduling access to the building entry and their individual salons is effortless. Salon managers can grant one-time access or quickly activate a repeat customer's credentials. Access can also be scheduled to expire, which saves time and enhances security."

INOX smart locks support passage mode to keep the door unlocked. They can also be switched to privacy mode to block credentials for a certain amount of time. Authorized users can control the locks remotely from anywhere since the locks are all connected to the cloud through a Wi-Fi gateway.

By incorporating sliding doors into their floorplans, Salons by JC has created efficiencies of space and design. The selection of the INOX smart locks and access control system has enhanced those efficiencies while elevating the aesthetics and simplifying access control. ✛

ENDNOTE

1. Mark Dancer, 'Leading the Way,' *Facing the Forces of Change*, 12th Edition, *https://markdancer.substack.com/p/leading-the-way*

QIANYAN CHENG is Co-Founder and Vice President of Product Development at INOX® hardware.
Email: *qcheng@unisonhardware.com.*

★ EVENT SCHEDULE

TUESDAY, OCTOBER 24

8:00 AM - 5:00 PM
Registration Open

12:00 PM - 3:30 PM
Pre-Conference Workshop

WEDNESDAY, OCTOBER 25

7:00 AM - 4:30 PM
Registration Open

8:00 AM - 12:00 PM
Conference Sessions

12:00 PM - 4:30 PM
Exhibit Hall Open

1:00 PM - 3:20 PM
Innovation Theater in Exhibit Hall

3:30 PM - 4:30 PM
Happy Hour Networking Reception in Exhibit Hall

6:00 PM - 8:00 PM
Influencer Party
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THURSDAY, OCTOBER 26

7:00 AM - 4:30 PM
Registration Open

8:00 AM - 12:00 AM
Conference Sessions

11:00 AM - 12:00 PM
DHI President's Remarks & Panel Presentation

12:00 PM - 4:30 PM
Exhibit Hall Open

12:30 PM - 3:20 PM
Innovation Theater in Exhibit Hall

6:00 PM - 9:00 PM
DHI conNextions After Party
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Note: Hours and schedule subject to change, please refer to www.dhiconnextions.com for up-to-date schedule.

DHI conNextions

TUESDAY, OCTOBER 24

11:00 AM-12:00PM | PANEL PRESENTATION

DOOR SECURITY & SAFETY FOUNDATION: CREATING STANDARDS TO PROPEL OUR INDUSTRY FORWARD

Join leaders from the Door Security and Safety Foundation for a glimpse into the recent work of the Door Security Working Group. The leaders will detail the purpose and process of the recent standards development project, including discussing desired outcomes and who all has a seat at the table for this project. They will discuss all the work that has been done to date and will seek feedback from the audience on the standards as the program is finalized.

★ REGISTRATION RATES

ALL-ACCESS PASS	Early Bird (Through 9/23)	Standard (9/24-10/24)	On-Site (10/25-10/26)
DHI Members	$225	$275	$325
Non-Members	$325	$375	$425
Non-exhibiting Manufacturer/Supplier	$425	$475	$525
EXHIBIT HALL ONLY			
DHI Members	$25	$30	$40
Non-Members	$35	$40	$50
Non-exhibiting Manufacturer/Supplier	$135	$140	$150
PRE-CONFERENCE WORKSHOP			
Harnessing AI: A Beginner's Guide to ChatGPT, Revolutionary Artificial Intelligence (AI)	$199	$229	$229

DHI conNextions

After Party

DATE: Thursday, October 26
TIME: 6:00 p.m. - 9:00 p.m.
VENUE: Lucky Strike
ADDRESS: 145 Ipswich Street

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IMPORTANT HOUSING NOTICE

Housing agencies may contact you presenting themselves as hotel booking agencies for DHI conNextions. There is no official housing company that is authorized to place hotel reservations on behalf of DHI conNextions. Reservations made through one of these agencies cannot be guaranteed and may result in additional charges, incorrect hotel placement, or inflated room rates for other conference participants. Please book direct using the provided links above to avoid any confusion or additional charges.

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INFLUENCER PARTY

DATE: Wednesday, October 25 | **TIME:** 6:00 PM-8:00 PM

VENUE: Cheeky Monkey Brewing Co. | **ADDRESS:** 3 Lansdowne Street

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SPECIAL LOCKING ARRANGEMENTS

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.*

A LOT OF CONFUSION SURROUNDS THE CODE REQUIREMENTS THAT APPLY TO ELECTRIFIED HARDWARE, BUT UNDERSTANDING ONE CONCEPT WOULD HELP TO CLEAR UP MANY OF THE MISINTERPRETATIONS.

QUESTION: IS EVERY OPENING WITH ELECTRIFIED HARDWARE CONSIDERED A SPECIAL LOCKING ARRANGEMENT, SUBJECT TO THE CODE REQUIREMENTS ADDRESSING THESE SYSTEMS?

The short answer is no—not all doors with electrified hardware are considered special locking arrangements. But what's the difference between electrified hardware that's a special locking arrangement and electrified hardware that isn't?

SPECIAL LOCKING ARRANGEMENTS

When a door is equipped with electrified hardware that may delay or prevent egress, it is typically considered a special locking arrangement. The model codes include sections specific to each of these systems to help ensure that the life safety requirements are met. Because the egress methods for these systems differ from typical hardware (i.e., panic hardware or locksets), there are prescriptive

ASK YOUR MOST PRESSING QUESTIONS!

Decoded now features a new question-and-answer format. We are selecting some of the most pressing questions that readers have about codes and answering them here. Submit your questions at *idighardware. com/decoded-qa* and we'll answer as many as we can in future Decoded columns.

A delayed egress lock is considered a special locking arrangement, as egress is impacted by the electrified hardware under normal operation.

mandates in the codes stating how this special hardware must function.

The sections in the 2021 model codes addressing special locking arrangements are as follows. The references below are from the International Building Code (IBC), International Fire Code (IFC) and NFPA 101: Life Safety Code.

- Stairwell reentry applies to the hardware on the stair side of interior stairwell doors, which unlocks during a fire to allow building occupants to leave the stairwell and wait for assistance or find another exit. 2021 I-Codes - 1010.2.7, 2021 NFPA 101 - 7.2.1.5.7

- Door hardware release applies to electrified locks (typically electromagnetic locks) that are released for egress via a switch in the door-mounted hardware, such as panic hardware, a lever handle, or a sensor bar with a request-to-exit (RX) switch. 2021 I-Codes - 1010.2.11, 2021 NFPA 101 - 7.2.1.6.3

- Sensor release addresses electrified locks (typically electromagnetic locks) that are released for egress when a presence sensor detects a building occupant approaching the door. 2021 I-Codes - 1010.2.12, 2021 NFPA 101 - 7.2.1.6.2

- Delayed egress locks prevent a building occupant from exiting for 15 seconds under normal operation or 30 seconds where approved by the Authority Having Jurisdiction (AHJ). 2021 I-Codes - 1010.2.13, 2021 NFPA 101 - 7.2.1.6.1

- Controlled egress locks in health care facilities are allowed to prevent egress until emergency evacuation is needed, but clinical staff must be able to release the locks at any time.

Electrified hardware that controls access but does not affect egress is not considered a special locking arrangement.

2021 I-Codes - 1010.2.14, 2021 NFPA 101 - 18.2.2.2.5/19.2.2.2.5

- Elevator lobby doors may be electrically locked to prevent unauthorized access to a tenant space, depending on the adopted code. The I-Codes do not currently address the special locking arrangements for these doors, but a new section will be added in the 2024 editions. 2021 NFPA 101 - 7.2.1.6.4

The types of systems listed above are considered special locking arrangements, and the detailed requirements can be found in the adopted codes. Life safety mandates may include additional means of releasing the locks for egress, for example, auxiliary push button release, remote release, or immediate egress upon fire alarm / sprinkler system actuation or power failure. Additional requirements such as signage, emergency lighting, and UL listings may also apply.

Previous Decoded columns explain each type of system and what is required by code in order to balance life safety and security.

ACCESS CONTROL / FREE EGRESS

Unlike the special locking arrangements, the most common application for electrified hardware controls access but does not affect egress in any way. For these openings, the door hardware allows immediate egress regardless of the status of the access control system. These systems have been unofficially called normal locking arrangements because for egress purposes they function like normal doors.

To date, the model codes have not included a specific code section for the type of electrified hardware that controls access but allows free egress. This hardware must comply with the same code requirements that apply to mechanical hardware:

- The door must unlatch with one releasing motion for egress (with some exceptions).

- Egress must require no key, tool, special knowledge or effort.

- Operation of the door hardware must require no tight grasping, pinching or twisting of the wrist.

- Operable force for the hardware must be within the limits of the applicable code or standard.

- Releasing hardware must be mounted between 34 to 48 inches above the floor (with some exceptions).

The lack of a model code section specific to this type of electrified hardware has caused confusion regarding which requirements to apply to these normal locking arrangements. However, a change has been approved for the 2024 edition of the I-Codes that will help clarify the intent of the codes (Annex A of NFPA 101-2024 has also been modified).

The I-Codes currently include a section addressing doors with electrified hardware that monitors or records when the door is used for egress. Beginning with the 2024 editions of the IBC and IFC, this section will also apply to doors with monitored or recorded egress and access control systems. Where electrical systems that monitor or record egress activity are incorporated, or where the door has an access control system, the locking system on the egress side of the door shall comply with Section 1010.2.11, 1010.2.12, 1010.2.13, 1010.2.14 or 1010.2.15, or shall be readily openable from the egress side without the use of a key or special knowledge or effort.

This section states that when a door is equipped with one of these types of systems, the electrified hardware can either comply with one of the sections addressing special locking arrangements or the door must be readily openable from the egress side without the use of a key or special knowledge or effort. There will now be a section addressing doors with electrified hardware that controls access but does not affect egress. This section makes it clear that when a system allows free egress, it is not considered a special locking arrangement. ✚

8 STEPS TO PROPERLY UNDERCUT A WOOD DOOR

SCOTT "BIG DOOR" FOLEY is Sales Manager at P&M Doors and Hardware. He got his "Big Door" nickname in the 1980s while working on a big project that required moving lots of doors. At one point, Foley was carrying a heavy 42- by 96-inch door on his back when his co-workers spotted him struggling under the weight of it. His good friend Gerry Wylie looked up and in his Irish Brogue blurted out, "Big Door Foley!" They all had a good laugh and the nickname stuck. Foley is proud of the nickname. Years later when he and his wife, Joy, founded a door installation company they named it Big Door Inc., which enjoyed 10 years of success. Email: *scott@pandmdoors.com*.

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*.

OVER THE YEARS, I'VE LEARNED MANY TIPS FROM SOME OF THE VERY BEST DOOR MECHANICS, GOING BACK TO WHEN I WAS AN APPRENTICE.

One of the skills I learned was how to undercut a wood door in the field. When doing this, it's important to set up outside or in a location where dust isn't going to be a problem.

If you're lucky enough to do this in a shop, be sure to use an air filtration system or at least have a large industrial fan behind you blowing the dust out an open door. Here are eight steps that will help:

1. Place the door on the sawhorses with the critical side facing down (if there is one side that is seen more than the other). You should do this because the way the circular saw turns, the downside will cut more cleanly every time.

2. Prepare the top side of the door before cutting, or your door will end up with torn, shredded and chipped veneer. The saw blade pushes up from the bottom and any veneer you don't want cut will tear off. Mark the door with a pencil clearly for the amount you plan on cutting. The better you see the line, the better your pass of the blade will be. Make sure to wear safety glasses. If you're doing a stack of doors, you'll need a dust mask as well.

3. Make another mark approximately 1/16 inch above the pencil mark, then, with your utility knife, score the second line all the way across the door and make sure to cut through the veneer clean. Use a straightedge.

4. Apply painters tape along the edge of the scored veneer cut. This will keep chips to a minimum; anything being pushed up from the blade that's not cutting clean will break off at the scored veneer line you just made.

5. Set up a straightedge and clamp it to the door at the proper location. This way, all your doors will have a factory look.

6. Use cardboard to protect both veneer faces of the door where the circular saw will contact the door. Over time, if your saw is like mine, it gets dinged up and may scar the face of your door if it's not protected. The same rule applies for the underneath side. The sawhorses can also scar the door, so make sure to protect that side with cardboard as well.

Richie Pohl, President of P&M Doors and Hardware (wearing the blue shirt), showing Wood Shop General Manager Danny Blersch how to properly cut a wood door.

7. Cut the door and sand the edge slightly with light grit to break the edge. Clean up any chips with filler.

8. The last step is the most important step—clean up! A good job is not a good job until you've cleaned up the work site well. If you skip this step, it doesn't matter that you just cut the door perfectly—you won't have a happy customer! +

"

A good job is not a good job until you've cleaned up the work site well. If you skip this step, it doesn't matter that you just cut the door perfectly—you won't have a happy customer!

DHI BUCKEYE CHAPTER HOSTS ANNUAL GOLF OUTING

DHI President Cortney Anderson Wascher was one of many door and hardware professionals and industry suppliers to participate in the annual DHI Buckeye Chapter annual golf outing in August 2023 at Deer Ridge Golf Course in the rolling hills of north-central Ohio.

Wascher spoke about the importance of DHI chapters and pledged to work on getting all of them more involved in the coming year.

"Cortney was hugely motivational for all of us and helped make our outing an especially fun occasion," said DHI Buckeye Chapter President Gary Link.

The event set an attendance record and drew approximately 75 participants, continuing a long tradition of consistent DHI Buckeye Chapter events to keep members connected throughout the years.

Erich Schroeder of J&B Acoustical served as Golf Chairman for the second year in a row. Fifteen companies stepped up to sponsor the event, and all proceeds will be used to fund DHI Buckeye Chapter education programs.

The winning foursome was from Architectural Door Systems and included three people from the company: President Richard Beckman, Ralph Vosseberg and Todd Miller, along with Brian Schmiesing, Founder of Select Approach Design.

For more information or to get involved in the DHI Buckeye Chapter, contact President Gary Link at *link.gary@yahoo.com.* +

Calling All DHI Chapters: We Want to Hear From You!

Have you recently completed an event or educational session with your DHI chapter? *Door Security + Safety* Magazine wants to spotlight your work! Send your submissions to Editor-in-Chief Al Rickard at *arickard@dhi.org.*

The winning foursome included (left to right) Ralph Vosseberg, Todd Miller, Brian Schmiesing and Richard Beckman.

A. DHI President Cortney Anderson Wascher speaking to the DHI Buckeye Chapter at the start of the annual golf outing.

B. Erich Schroeder of J&B Acoustical (left) receiving an award from DHI Buckeye Chapter President Gary Link for serving as Golf Chairman.

C. Libby Krupinski of Allegion gave away a Lowes gift card to a lucky golfer.

D. The Thursday evening networking reception was an opportunity for chapter members to meet and talk with DHI President Cortney Anderson Wascher and her husband Devin.

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CONGRATULATIONS!

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

(List current as of September 1, 2023)

DHC
Door + Hardware
Consultant

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.

Alexander Boren, DHC, DHT
Arconic Kawneer Inc.

Andrew Timothy Christian, DHC, DHT
Manganaro - Southeast

Jeff Franey, DHC, DHT
Negwer Door Systems

DHT
Door + Hardware
Technician

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.

Andrew Timothy Christian, DHC, DHT
Manganaro - Southeast

Jeff Franey, DHC, DHT
Negwer Door Systems

Kevin McIntyre, DHT
Allegion

Brett Troyer, DHT
Walsh Door & Security

Derrick Weller, DHT
Precision Doors & Hardware Division of Cook & Boardman Group

Frank Carl Weylock, DHT
Oshkosh Door Company

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.

Amir Asghari
AccessSMT Holdings Ltd.

Krystal Bacon

Hunter L. Baker
ASSA ABLOY Americas

Michele Blum

Evan Braun
Academy Locksmith Inc.

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STAY SAFE ONLINE: TIPS TO AVOID GETTING HACKED

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RECENTLY, MY LINKEDIN ACCOUNT WAS HACKED. I RECEIVED AN EMAIL FROM LINKEDIN STATING THAT AN ADDITIONAL EMAIL ADDRESS HAD BEEN ADDED TO MY ACCOUNT. THEN I RECEIVED A SECOND EMAIL THAT THERE HAD BEEN SOME SUSPICIOUS ACTIVITY AND ASKED IF I MADE THOSE CHANGES. BY THE TIME I READ THESE EMAILS AND ATTEMPTED TO LOG IN, SOME BAD ACTOR HAD CHANGED THE PRIMARY EMAIL TO THEIR OWN, WIPED OUT MY LOGIN CREDENTIALS AND ESSENTIALLY TOOK OVER MY ACCOUNT.

I experienced the entire range of emotions: fear, anger, self-pity and finally acceptance. LinkedIn is one of my primary marketing vehicles for podcasts and other services. The thought of rebuilding my 3,000-plus connections and profile was not something I was looking forward to.

Fortunately, after 10 very frustrating days, I was able to find a contact in the LinkedIn security department who helped me restore control of my account. Not only was this a tremendous relief, but it has sent me on a quest to plug the leaks in my online boat.

Nothing like a swift kick to the teeth to shift one from reactive to proactive mode. Since this incident, I have researched how to mitigate this type of invasion in the future. Here are some of the challenges and solutions that made the most sense to me.

PASSWORD NEGLIGENCE

I am truly guilty of this. I have used the same passwords for many of my online accounts without regard for the sensitivity of the product. My financial services, travel and my shopping accounts used the same passwords. My social media accounts often had the same passwords as well. In hindsight, this was simply foolish. It was like having the same key to my home, vehicles, office and safe deposit box.

As an alternative, my research suggested the use of password management software that will randomly generate a very strong set of arbitrary characters whenever you open a new account somewhere. The program then stores this information and uses auto-fill technology to log you into the account. This is one of the areas where autofill is positive. I will talk about the negative aspects later.

As an additional measure, I would encourage you to turn on something called Multi-Factor Authentication (MFA) whenever possible. This is becoming more prevalent in the online world. Essentially, when the service doesn't recognize where you are entering from (either browser or IP address), a verification code is sent to your phone or email. This is the second layer of protection even if your login and password information has fallen into the wrong hands.

NETWORK SECURITY

Like many of you, I travel extensively and often find myself taking advantage of free Wi-Fi opportunities in hotels, airports and coffee shops. While these opportunities are certainly welcome where mobile service is limited, they do come with potential risks.

When we jump on an unsecured network, even if there is an access

password, there is a chance that someone is "listening in" to our digital stream. They could be gathering information on sites that we visit and ultimately capture our credentials. Conversely, there have been incidents where malicious software has been delivered to unsuspecting users who tap into the unsecured Wi-Fi stream.

Using your own mobile hotspot to provide a connection for your other devices is one way to get a tighter handle on your digital connections. Most smartphones have this feature, including generous data usage limits.

Another security solution is to use virtual private network (VPN) software to secure your online connection. These services create an encrypted connection so that eavesdroppers can't follow you around looking for site credentials or secure information. These services are inexpensive and should be part of any traveler's arsenal.

AUTOFILL CONVENIENCE

If you are anything like me, online shopping has become a way of life. If I haven't visited the UPS store to pick up packages in a couple of days, they call my cell to check if I'm okay.

As one who believes in working smarter, not harder, I tend to take advantage of shortcuts in all aspects of my life. Shopping is no exception.

Over the years, I have allowed Google to store and fill in my address information to facilitate a quicker shopping experience. Furthermore, I also store credit card information on Google to speed up the process. Google Pay and Apple Pay may feel like a wonderful convenience; but these services, as secure as they may seem to be, leave us a bit vulnerable.

Just be careful that you are limiting the autofill usage to reputable sites.

Also use other security measures, such as fingerprint or facial recognition, to authenticate the process.

SOCIAL MEDIA SHARING

For me, this is where this whole mess started. I post information on LinkedIn. I use it to share my podcast episodes, comment on others' postings and generally let my thoughts be known in a limited way. I try to avoid too much personal sharing as I believe that this is a business platform.

On the other hand, lately I have been dragged into the more personal side of social media using platforms like Meta and Instagram. I am certainly not a super user of these mediums. But who doesn't like a scrolling dopamine hit every once in a while? There are certainly many cases of personal attacks and manipulations though these platforms, but I wanted to key in on one that has always made me a little more cautious.

Travel-related posting can be fun in a "my life is better than yours" kind of way. Unfortunately, there are dangers in sharing when you are away from your home. In a 2011 study, researchers at the University of Florida found that approximately 78% of ex-convicts surveyed admitted that social media played a role in their selection of homes to target for burglary and other property crimes. These participants

noted that vacation-related posts were key factors in their process.

Furthermore, social media profiles and posts can give important information to con-artists and online scammers. Clever criminals can dupe friends and relatives into giving up sensitive information by posing as close friends. They know details about your life, such as your place of work, restaurants you frequent, your travel plans and even your personal relationships.

My intent is not to scare anyone here. I am simply sharing what happened to me and how it has helped change my thinking around the subject of cybersecurity.

I am by no means an expert. If you want a greater understanding of how your personal and business assets can be compromised, I encourage you to seek out a professional on the subject. I interviewed an expert a few years ago on my podcast and I would be happy to pass along his information.

Before I wrap up, I would be remiss if I didn't urge you to back up your data. As I was reeling with the thought of having to rebuild my LinkedIn network, I was cursing myself for not backing up my connections. When was the last time you backed up your critical contacts, emails and work documents?

Be smart and be safe. +

HEADSCRATCHERS

BY MARK J. BERGER, FDHI

After writing more than 130 of these columns and running who knows how many pictures, you'd think nothing would surprise me. But you'd be wrong.

A   SPELLING ERROR

In addition to pointing out all the issues with doors and life safety, I'm also a stickler for spelling, and errors catch my eye very quickly. Perhaps the sign should have read "TOO MANY LOCKS ON THIS EXIT DOOR."

B   IGNORE THE PANIC DEVICE
Those of us in the openings industry know that exit devices are probably the most expensive pieces of door locking hardware. Why would you pay for exit devices and then place signs above them saying these aren't exits? And then only add a hasp and padlock to one of the doors?

C   WHICH SET WOULD YOU USE?
At the same facility as the not-to-be-used panic devices, there is a real exit on the adjacent wall. Note the following:

1. Look at the covered junction boxes above the set of doors to the right. Looks like there should have been three doors in that set, not two.

2. The "Not An Exit" doors do not have padlocks.

3. The functioning exit doors have signs stating they are under surveillance and alarmed.

4. The "Not An Exit" doors are not surveilled, alarmed or blocked.

MARK J. BERGER, FDHI, is the President and Chief Product Officer of Securitech Group, and a Past President of DHI and Chair of the Builders Hardware Manufacturers Association Codes & Government Affairs Committee. All "Real Openings" photos were taken in public spaces with the goal of highlighting the prevalence of code violations and the need for vigilance to save lives. **If you see something, say something.** To submit a photo for this column, email *real.openings.dhi@gmail.com.*

The images shown here are not intended to reflect upon any specific manufacturer or products but are intended to help build awareness around the everyday code violations that occur in buildings over time, despite our members' best efforts to provide solutions to secure the life safety and security of the building occupants.

D SAFELY SEALED

Dave Klein sent me this photo from a jewelry store. Evidently, he had pointed out all the issues to them during a warm month. Why? Because they taped his business card next to one of the bolts before they Saran Wrapped the door to keep out the cold.

E WHICH SIGN TO BELIEVE?

I greatly enjoy museums. I'd have enjoyed this one more if the exit weren't blocked … by a sign telling you to use a different exit! Oh, and there's the matter of the slide bolt on the door, too.

OPENING THE DOOR TO SCHOOL SAFETY

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.

LOCK! DON'T BLOCK

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GREATER AUTOMATION IMPROVES GENERAL CONTRACTORS' PROJECTS AND BOTTOM LINES

A NEW REPORT FROM DODGE CONSTRUCTION NET-WORK IN PARTNERSHIP WITH SMARTAPP.COM™ FOUND THAT 53% OF GENERAL CONTRACTORS DO NOT UTILIZE A TECHNOLOGY SOLUTION FOR THE MAJORITY OF THEIR PROCESSES. THE REPORT, "OPTIMIZING DIGITAL PROJECT MANAGEMENT SMARTMARKET BRIEF," REVEALS THAT THE DIGITAL MATURITY OF GENERAL CONTRACTORS VARIES WIDELY ACROSS THEIR CORE PROJECT MANAGE-MENT PROCESSES.

The study compares the performance of two sets of general contractors: those who have automated most of their processes, and those with less automation. It contrasts the contractors that rely on a mix of specific software solutions for every process to those that utilize a platform integrating these core processes together. Together the findings expose a trend toward digital transformation and platform use emerging in construction will help general contractors improve their projects and their businesses.

The study shows the top five benefits reported by those using a technology solution for their project management processes are improved schedule and cost performance, better overall data collection from the jobsite, increased profitability and labor productivity.

The study also demonstrates the challenges caused by the current lack of integration: 76% report experiencing data integration challenges, with many reporting both construction process and project outcome impacts. This can include, but is not limited to, accurate analytics, good budget control and cost predictability during construction, profitability for the general contractor, and slippage of the final delivery date on their projects.

TYPES OF TECHNOLOGY SOLUTIONS USED BY GENERAL CONTRACTORS
Average Among the Companies That Report Using Technology

Commercial Solutions (73%) | Other Solution Types (27%)

| 39% | 34% | 21% | 6% |

■ **Commercial Platform**
Provides multiple pre-integrated functions and an API for external integrations

■ **Commercial Point Solution**
Purpose-built for a single function

■ **Generic Software**
(e.g., Excel) Customized to support construction processes

■ **Internally Developed**
Provides a single function
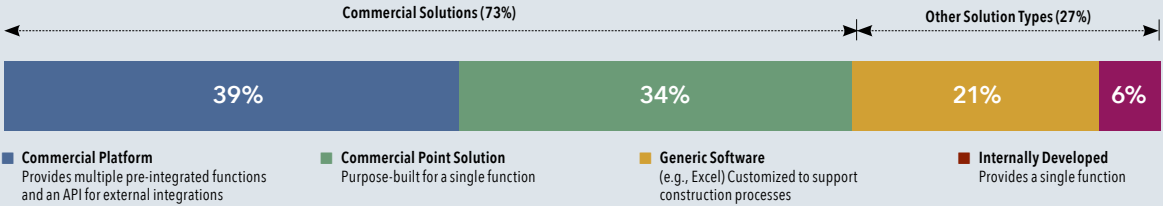
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