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The Value of Professional Networking

By Jerry Heppes Sr., CAE

One lesson I was taught by an early mentor was the value of developing and nurturing a strong professional network. I believe it is one of the most critical components of a successful career. Advancement opportunities, valuable information from experienced peers for making decisions, input on identifying good partners for your company, and how to approach a challenge are just a few of the benefits of cultivating a strong network.

I would go as far to say that my networks in our industry, in the trade association industry, and in the hospitality industry are certainly responsible for 40 percent of the development of my career, but they have also added to my personal life and quality of life. Suffice to say, I have a lot of great friends that I have developed through my network, and I enjoy them a great deal.

When I have conversations with many industry folks, they always tell me wonderful stories of experiences during their career, and they always involve their network colleagues! I think the baby boomer generation has done an excellent job of developing great networks and rely on them a great deal.

Often, who you associate with defines you. And, for a person who has spent a lifetime working for a trade association (29 years in June); I have seen numerous examples of network development through DHI. Schools, chapters, conventions, regional meetings, and volunteer leadership at multiple levels all contribute to network building. However, what about the next generations—have they built their networks yet?

In May, conNextions 2016 will bring together a large number of industry folks who will be renewing and expanding their network. What is the value of attending? The opportunity to build your professional and personal network holds great value.

New this year in Orlando, on Friday, May 6, we have an event called the DHI LEAD Academy. LEAD Academy not only provides some great leadership and management education but is also DHI's effort to build a community (code word for networks of today) of people early in their careers in leadership and management.

We intend to target those who are new to their management roles, or have been in their management role for five years or less, and those looking to move up into management. Developed by IRI Consulting using hands-on activities resulting in highly extensive and in-depth training, LEAD Academy delivers the fundamentals to improve upon managers' *Leadership, Engagement, Accountability, and Development*.

LEAD Academy is comprised of 10 modules. The first two foundation sections—*From Peer, to Manager, to Leader and Leading People Differently*—will be presented on May 6. To make the training impactful and meaningful, sessions are limited to just 30 students and include simulations, role plays and activities using the participants' real-life experiences.

LEAD Academy is built on the underlying principle that effective leadership requires productive relationships to maximize organizational effectiveness, and to achieve excellence and long-term business results. That sounds very much like the definition of networking!

I hope you'll go to the conNextions website at www.dhiconnections.org to learn more about this exciting new educational opportunity and get more details on everything happening in Orlando. And to my network—hope to see you in Orlando to renew friendships and to learn how life is treating you! ■

JERRY HEPPEs SR., CAE, is the CEO of DHI. If you'd like to comment on this article or any others within the April issue, email dgable@dhi.org.

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OCCUPATION: Director of Residential Sales and Marketing

CHILDHOOD AMBITION: Be a professional golfer ... schleppin' hardware on the side

FIRST JOB: Working as a merchandiser for an Anheuser Busch distributor. In other words, stocking the beer shelves in multiple grocery stores every day.

WHAT LED YOU TO OUR INDUSTRY: The five generations of Hagers before me!

PROUDEST PROFESSIONAL MOMENT: For a family member to work at Hager Companies, we have a policy that you must work outside of the business for a minimum of three years. I hated this rule at the time, but I know it helped shape who I am today and am very grateful for the policy.

BIGGEST CHALLENGE: Being a sixth generation family member in the business, you feel quite a bit of pressure. Thankfully I have two of my first cousins—Josh Hager and August Hager—here every day and we make a great team. Communication is the key. We are all so busy but at least three times a week the family has lunch together and we're always discussing how we can grow the business.

GUILTY PLEASURE: Golf and fly fishing

MENTOR/HERO: Other than my mom, Carol, my dad, Ralph, and my wife, Amanda, I would have to say that the late Eric Klein was a key mentor when I began my career at Hager. I miss him every day.



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HOW HAS YOUR INVOLVEMENT WITH DHI SUPPORTED YOUR CAREER? DHI is a great resource for education and professional networking. The annual conNextions show also provides an opportunity for me to meet and speak with our customers one on one, which is important to understand how we best can serve them.

Do you know a DHI member you would like to nominate to be spotlighted in Faces?

Submit your nominations to Paige Horton at phorton@dhi.org, and we'll take care of the rest!





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Cybersecurity also includes protecting data rooms with code compliant physical electronic access control, often the weakest link in IT security.

FROM NETWORK'S EDGE TO SECURITY EDGE DEVICES:

Code Compliant Physical Electronic Security for Non-Enterprise Applications

By Kerby Lecka

From network's edge to security edge

devices, there are a variety of cost-effective, low-power solutions to meet code compliance for electronic access control of door openings in smaller companies and single facilities. Physical electronic security begins with the protection of people by providing fire and life safety, preventing unauthorized access, and monitoring of activities and behavior of people more prone to unauthorized access. Then, physical electronic security is about the protection of assets—products, intellectual property, processes, equipment, facilities and data—including financial, personnel, customer, and even health records.

Physical electronic security is now as simple as tapping into the nearest Ethernet connection to power and control door access via Web browser and low-voltage access and egress devices. The following IP Security and PoE hardware applications are just a few of many possibilities:

Data Room/Private Cloud Computing Facility Security

No longer the exclusive domain of complex, enterprise-wide security systems, sophisticated and cost-effective electronic access control is now available for smaller companies and single facilities with the same need for protection as larger organizations. Data rooms are no exception.

Beginning at the outer door, to the inner door separating visitors from employees, to even the entrance to the “data” part of the center, low-voltage access control devices (PoE hardware) can be controlled via an IP controller connected to the PC network and accessed by web browser 24/7. This includes creating “mantraps,” allowing only one door to open at a time and requiring authentication for booth doors. This can also include access control at the door to an individual computer processing room (data room) where the actual server, mainframe or other critical IT equipment is located. Even individual computer cabinets can be secured and connected to the

network via low-power electronic cabinet locks.

Applicable, low-voltage PoE hardware solutions for access control include magnetic locks, key and exit switches, electrified exit devices, electric strikes, electrified locksets, electric bolt locks and cabinet locks—all connected by Ethernet cable to an IP-based access control.

Real-time monitoring, detecting unauthorized access or attempts, and keeping track of people—especially with a building evacuation in an emergency—are critical. Low-voltage keypads, card readers and proximity readers are popular key technologies for door access control, all tied to an IP-based controller that provides audit trails and user management to define who has access. These are also suitable for entrances like loading docks and other exterior facility doors.

Should the smaller company or single facility need to enlarge, these PoE hardware solutions and IP-based access controllers and software serve as a foundation for unlimited, cost-effective expansion. Instead of paying upfront for a large and expensive access control system, users can add security and protection incrementally as budgets and needs increase.

Generally, applying the principle of least privileges is appropriate. Physical security is the key to all other IT security measures. Unauthorized physical access to server and equipment is the weakest link in IT security and can have profound consequences.

Clean Rooms, Hospitals, Pharma Facilities

Clean rooms require rigorous controls placed on reducing environmental pollutants to pre-determined levels for the protection of products and processes from contamination by chemical vapors, aerosol particles, dust and airborne microbes. Prevalent in pharmaceutical, biotechnology, and high technology industries, clean rooms provide protection from contamination by equipment and staff, primarily

by limiting physical access and logging all access and egress activity.

As with data rooms, most physical electronic access control systems have been designed at the enterprise level for large facilities and organizations. Yet, the clean rooms in smaller or single facilities must also prevent contamination using solutions within their budgets. Enter low-power PoE hardware devices and IP-based access control connected and powered with existing Ethernet connections.

Clean rooms typically use airlocks for entry and exit; a combination of mantrap with two doors interlocked to prevent simultaneous opening, and special timing functions to avoid unwanted passages between areas to maintain sterile and safe conditions. These procedures also maintain constant temperature, humidity and air pressure in the clean room. Access to these secure areas can be limited to authorized personnel through the use of low-voltage keypads, key switches and card readers. Of particular benefit is the use of proximity readers to provide touch-free high security and contamination avoidance.

As with data rooms, all access and egress activities can be controlled with low-voltage PoE hardware connected to and monitored in real time with an IP-based controller, and stored for future audit trails. While the protection of people for fire and life safety is foremost, physical electronic security of clean rooms can also ensure compliance with organizational policies and regulatory compliance with GMP and FDA 21 CFR Part 11.

With low-voltage, cost-effective physical electronic clean room security, consistent product quality can be ensured to prevent costly recalls and regulatory actions that may affect reputation and impact the bottom line.

The healthcare industry has seen a disturbing trend towards visitor impatience, patients in behavioral health facilities being more easily upset, and staff unprepared to respond appropriately to bad behavior. This includes

Although it is generally not an accepted practice to lock entry and exit doors to everyone who enters a hospital, clinic or healthcare facility, it is acceptable to control access into specific areas. Physical electronic security applied to funneling patients and visitors into areas can provide them with a positive, safe and secure clinical experience.

access and egress of unauthorized people into higher-risk areas potentially leading to violent incidents. The trend can be particularly acute for small, single facility entities like urgent care centers, outpatient surgery centers, and rural medical clinics not requiring enterprise-wide security systems but still needing viable solutions.

Again, low-power PoE hardware devices and IP-based access control connected and powered with existing Ethernet cable offer a practical alternative. Although it is generally not an accepted practice to lock entry and exit doors to everyone who enters a hospital, clinic or healthcare facility, it is acceptable to control access into specific areas. Physical electronic security applied to funneling patients and visitors into areas can provide them with a positive, safe and secure clinical experience. Restricting access into high-risk areas is also part of a well-designed program. High-risk areas may include:

- Emergency Room
- In-house Pharmacy
- Maternity
- Pediatrics
- Geriatrics
- Behavioral Health

Using low-voltage, PoE Hardware and IP-based access control for physical electronic security in healthcare is one of the easiest and most cost-effective means for preventing healthcare crime and violence.

Pharmaceutical facilities have come under increased inquiry and examination by the FDA and DEA, and increased pressure to comply with good manufacturing practices (GMP), good distribution practices (GDP), good storage practices (GSP) and international World Health Organization (WHO) standards. Additionally, physical security and access control regulations from the Department of Homeland Security (DHS) and the DHS Chemical Facility Anti-Terrorism Standards (CFATS) must be adhered to in an effort to minimize access to dangerous chemicals by terrorists.

The small pharmaceutical manufacturer, wholesaler or logistics provider has few alternatives for lower-cost physical electronic security than the large, enterprise systems currently offered them. Yet they must also meet the many guidelines of FDA Title 21, Subchapter C, dealing with the security of facilities which “must be secure from unauthorized entry” and whose “access from outside the premises shall be kept to a minimum and be well controlled.”

As you may surmise, low-power PoE hardware devices and IP-based access control connected and powered with existing Ethernet cable is a viable alternative for the needs of the small pharmaceutical facility. Physical electronic security can restrict access to sensitive areas in a cost-effective manner while still providing the fire and life safety to meet local and national code requirements. Real-time monitoring and audit trails via an IP-based access controller can provide 24/7 protection of vulnerable areas inside manufacturing and distribution facilities. These areas include warehouse, vault and temperature rooms, packaging and chemical rooms.

Data rooms and clean rooms are commonly found in pharmaceutical facilities and physical electronic security solutions as previously described are equally as efficacious here. Also, the protection of people—researchers, corporate executives, managers—is foremost, followed by the facility’s critical assets including the processes, research/intellectual property, and raw materials used to develop and manufacture the final products. As with other facilities, all perimeter exit doors, and loading entrances can be included in a physical electronic security solution via PoE hardware and IP-based access control.

Tenant Improvement

The world is wired. Ethernet cable is everywhere. Buildings are smart. Imagine the savings in cost and installation time by not having long cable runs and power supplies for every door by simply tapping into the nearest Ethernet connection. Low-power PoE-capable locking hardware connected to IP-based access control does just that by allowing easy integration and connection to a physical electronic access control system.

Physical electronic access control solutions are particularly suited to tenant improvement and retrofit projects, providing 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 the PoE hardware and IP-based access control approach is that it is easily expandable as needs grow without the front-end commitment to an over-sized solution.

As with any tenant improvement or low-voltage implementation via Ethernet cable, we recommend that installers are comfortable with Ethernet network best practices, and test any installation using an Ethernet cable tester before start-up. Also, by following industry standards—ANSI/TIA-1005 – M.I.C.E and ANSI/TIA-569C.0 (cable lengths)—many issues can be eliminated that may be residuals of previous installations.

Without a doubt, using viable, legacy Ethernet cable with PoE hardware and an IP-based controller will save cost, time and manpower when retrofitting for physical electronic security. Plus, the building or facility can remain operational without the need to remove, install and recycle cable.

Security Regulations Compliance

Physical electronic security via PoE hardware and IP-based access control can also meet the compliance requirements of many regulations not typically associated with access control. Again, there are many smaller organizations seeking compliance, but they haven't had access to simple, cost-effective physical security

Low-power physical electronic perimeter and gate security for energy and chemical facilities can ensure plant entrances are safe and secure as well as meeting many homeland security and anti-terrorism standards.





Renovation and retrofit of buildings using existing ethernet cabling to connect low-power physical electronic security solutions is a cost-effective way to ensure compliance with building codes.

solutions until now. All listed below also require Physical Security as part of meeting compliance:

- **HIPPA + HTECH** – Health Insurance Portability and Accessibility Act + Health Information Technology for Economic and Clinical Health: hospitals and health care facilities must comply with these two acts for the protection of personal health information and electronic health records, including *limiting physical access* to information systems, equipment and IT operating environments to authorized individuals.
- **Sarbanes-Oxley** – abbreviated as SOX, requires all organizations to store specific financial information in an auditable trail, have *physical security*, and a system for monitoring and reviewing access on a periodic basis.
- **PCI-DSS** – Payment Card Industry Data Security Standard covers all businesses that accept credit card payments: Requirement 9 states that any *physical access* to data or systems should be appropriately restricted, and entry controls used to limit and monitor physical access to systems that store, process or transmit cardholder data.
- **SSAE 16** – is an auditing standard issued by the American Institute of Certified Public Accountants that restricts physical access to data centers through a combination of *physical security systems* and biometric identification.

The smaller organization or facility can now meet many of the particular physical electronic security requirements of their industry with lower cost, low-voltage, easy to install and operate PoE hardware and IP-based access control solutions, using existing Ethernet cable and avoiding heavy cost commitments in complex, oversized, enterprise-wide systems. ■



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Restricting Access while **IMPROVING ACCESSIBILITY**

By Melany Whalin

Access control systems have become commonplace in every type of commercial facility, from healthcare to health spas. They are renowned for being convenient, easy to maintain, increasingly affordable and highly effective at restricting unauthorized access. However, it's important to be aware of some of the ways in which these systems can also impair the authorized access of the elderly and people with disabilities.

Working with hardware and security experts can help mitigate many of these issues, but some are not currently addressed by the codes. By being aware of these particular challenges and including appropriate access control solutions as part of the design process, architects can play a vital role in creating a space that balances the safety, security and convenience of *all* occupants.

Where to Begin

Although access control systems are typically standard on new construction, they are still frequently overlooked during the design process, as are the openings on which they will be installed. The later in the process issues like access control and accessibility are addressed, the more likely they are to create problems for the architect as they both directly impact door specifications, which ultimately determine how an opening must be constructed to comply with the relevant fire and life safety codes.

Access control should be planned for after the initial architectural plans and building layout is complete. "Ideally, access control planning should occur in conjunction with the hardware design," says Derek Ommert, PSP, Safety and Security Consultant at Allegion.

However, it's crucial to include the relevant experts in the planning process. Typically, this involves the hardware consultant, the security consultant, the integrator and possibly an electrical engineer.

"By relying on industry subject matter experts early in the process, architects are better able to consider

the reliability of access control as well as the environment for which it's planned," says Ommert. As an example, he points to a hospital setting where access control considerations must accommodate the quiet, patient environment in addition to the facility's unique life safety and security needs. Consulting with experts in these issues will go a long way towards ensuring a satisfactory outcome.

Ensuring Accessibility

Once your team is assembled, be sure to emphasize the importance of ensuring accessibility as a guiding principle for the planning process. Below are some common issues to be aware of as plans are being made:

- Operable hardware that is "easy to grasp with one hand and does not require tight grasping, pinching, or twisting of the wrist to operate," must be mounted within the allowable range—either less than 48 inches above the floor, or between 34 inches and 48 inches above the floor, depending on which standard is used. California requires operable hardware to be mounted between 34 and 44 inches above the floor.
- The 2010 ADA operable force requirements state that door and gate hardware must operate with five pounds of force, maximum. This currently conflicts with International Building Code requirements of 15 pounds of force, but compliance with the more stringent requirement will prevent costly ADA violations and improve accessibility for all occupants.
- Standby Power for Automatic Operators is required for automatic doors if the proper maneuvering clearance isn't provided. However, automatic operators on fire-rated doors are required to be deactivated upon fire alarm. Therefore, an automatic operator with standby power should not be used on a fire-rated door to overcome maneuvering clearance problems because

Access control should be planned for after the initial architectural plans and building layout is complete. It's crucial to include the relevant experts in the planning process. Typically, this involves the hardware consultant, the security consultant, the integrator and possibly an electrical engineer.

Another benefit of bringing together stakeholders early is that it gives architects the opportunity to avoid many of the unpleasant surprises that are common during the building process and typically lead to delays and dissatisfaction.

it will not be functional when the fire alarm is sounding.

- The 2002 edition of ANSI/BHMA A156.19 introduced a requirement for power-assist and low-energy-power-operated doors to be activated by a 'knowing act,' such as a push-plate actuator or an access control device like a card reader, keypad or keyswitch.
- Stepping into the field of a motion sensor is not considered a knowing act. If automatic operation via a motion sensor is desired, automatic doors must comply with the standard for full power operators—ANSI/BHMA A156.10, instead of A156.19. This means that even though the door may have a low-energy operator, it has to meet the same requirements as a full-power operator, including the safety sensors or control mats and guide rails.
- Maneuvering Clearance for Recessed Doors must be provided when there is an obstruction within 18 inches of the latch side of a door that projects more than eight inches beyond the face of the door. Without this clearance, a person using a wheelchair may not be able to open a door that is recessed in an alcove. A frame with a large jamb depth (approximately 10 inches or more) can create the same situation.

Although access control products must comply with the same code requirements as mechanical hardware, architects and security consultants should also take into account some of the accessibility concerns that may not be addressed by codes. For instance, there are several types of readers and credentials that are difficult, if not impossible, for people with certain disabilities to operate. A keypad that requires a high degree of manual dexterity to enter a code will prove far more challenging than a proximity (prox.) reader. Be sure to consider whether the use of potential products will be appropriate for occupants of ages and abilities before making any decisions.

An Ounce of Prevention...

Another benefit of bringing together stakeholders early is that it gives architects the opportunity to avoid many of the unpleasant surprises that are common during the building process and typically lead to delays and dissatisfaction.

"One of the biggest surprises is the length of time it takes to incorporate access control into design," says Ommert. "That surprise usually comes when access control is treated as an afterthought—an add-on, after the design has been finalized."

When access control is added later in the construction process, it often results in additional circuits, extra raceways, and power and conduit layout changes. "This often leads to change orders—and more time and money," he says.

Planning for access control early on also ensures the access control system will not only be appropriate for the current needs of that facility, but flexible enough to adapt to future changes. Because today's systems frequently extend access control into parking garages, warehouses, storage units and other areas, plans must also take into account the potential needs of the system outside the main building. Failure to incorporate access control into the design phase can result in situations such as an owner wanting access control on a walkway that connects a building and a parking garage, but the design of the walkway limits what's possible from an access control standpoint because of egress requirements dictated by building codes.

Taking the time to consult with all the relevant stakeholders and properly incorporate access control into the design process will help architects avoid many of the costly mistakes and frustrations that occur when it is overlooked. ■

MELANY WHALIN, CSI, is a marketing manager at Allegion, working to educate the architectural community on security, door hardware and access control. Learn more at allegion.com or check out iDigHardware.com for information and updates on door hardware codes by Lori Greene, AHC/CDC, CCPR, FDAI, FDHI.

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EAC Opportunities for the Door and Hardware Distributor

By Dave Sylvester

This month's edition of *Doors + Hardware* focuses on one of my favorite topics in the physical security industry—growth and development of Electronic Access Control (EAC), and specifically, EAC and the door and hardware distributor.

For the last 10 years, changes in EAC have been concentrated in product technologies. Changes in the next ten will be most dramatic in the delivery channel. The manufacturers have reported 20 to 30 percent growth in their electronic security products for the past several years. As a door and hardware distributor, if your sales of EAC products have been up 20 percent for the past two years, you can skip the rest of this article, and keep doing what you are doing. If not, then maybe this article can generate a couple of ideas.

In previous articles, I have talked about the growth of EAC and the challenge from integrators taking more share of the opening. This article offers some potential reasons why door and hardware distributors struggle to build EAC as a significant portion of their businesses and offer some ideas on how to overcome those obstacles.

Here are my predictions for 2016 and the next few years:

- ▶ Concern for our personal security will continue to increase.
- ▶ National and international terrorism risks are not going away in our lifetimes.
- ▶ Personal security concerns will lead to more control over access to facilities, not less.
- ▶ Government regulations will drive more demand for electronic security.
- ▶ Technology developments will continue to be key drivers of change. Technology will:
 - › Change what security products are sold
 - › Change the way security products are sold and serviced
 - › Drive creation of new business models

- ▶ A large number of the owners of door and hardware distributors and security integrators will retire and transition their businesses structures in one way or another.

EAC Growth Is a Bit Like Global Warming—Undeniable

According to the Freedonia Group's report, Electronic Security products - SIA Edition, October 2015, U.S. demand for electronic security products is forecasted to grow 7 percent per year through 2019 to \$16.2 billion. Video surveillance, access control and alarms will be the fastest growth products.

In December, the research firm IHS, Inc. reported that electronic locks were a \$325 million business in North America and more than \$1 billion worldwide. IHS believes the category is entering a five-year period of growth, averaging between 10 to 12 percent, and is on pace to become the leading technology in electronic door access control by 2019, surpassing readers and panels

In Allegion's fourth quarter 2015 financial presentation, they used the chart on the following page to illustrate their focus on electro-mechanical convergence. They do not say they are following the market, but that they are focused on leading the convergence.

In ASSA ABLOY's 4th quarter earnings release, Johan Molin, CEO, said, "Strong demand for electromechanical products continued....as customers are converting from mechanical locks to an ever increasing extent. It is clear that AA has established leadership for both residential and commercial applications."

The leading security hardware manufacturers who traditionally depend on door and hardware distributors to deliver the majority of their products to market are clearly driving this technology movement. And to achieve their sales growth objectives, the product manufacturers are making significant investments in their selling organizations to reach the software OEMs and the security system integrators, and now consider these relatively new routes to market as keys to future business development.

Leading Electro-Mechanical Convergence

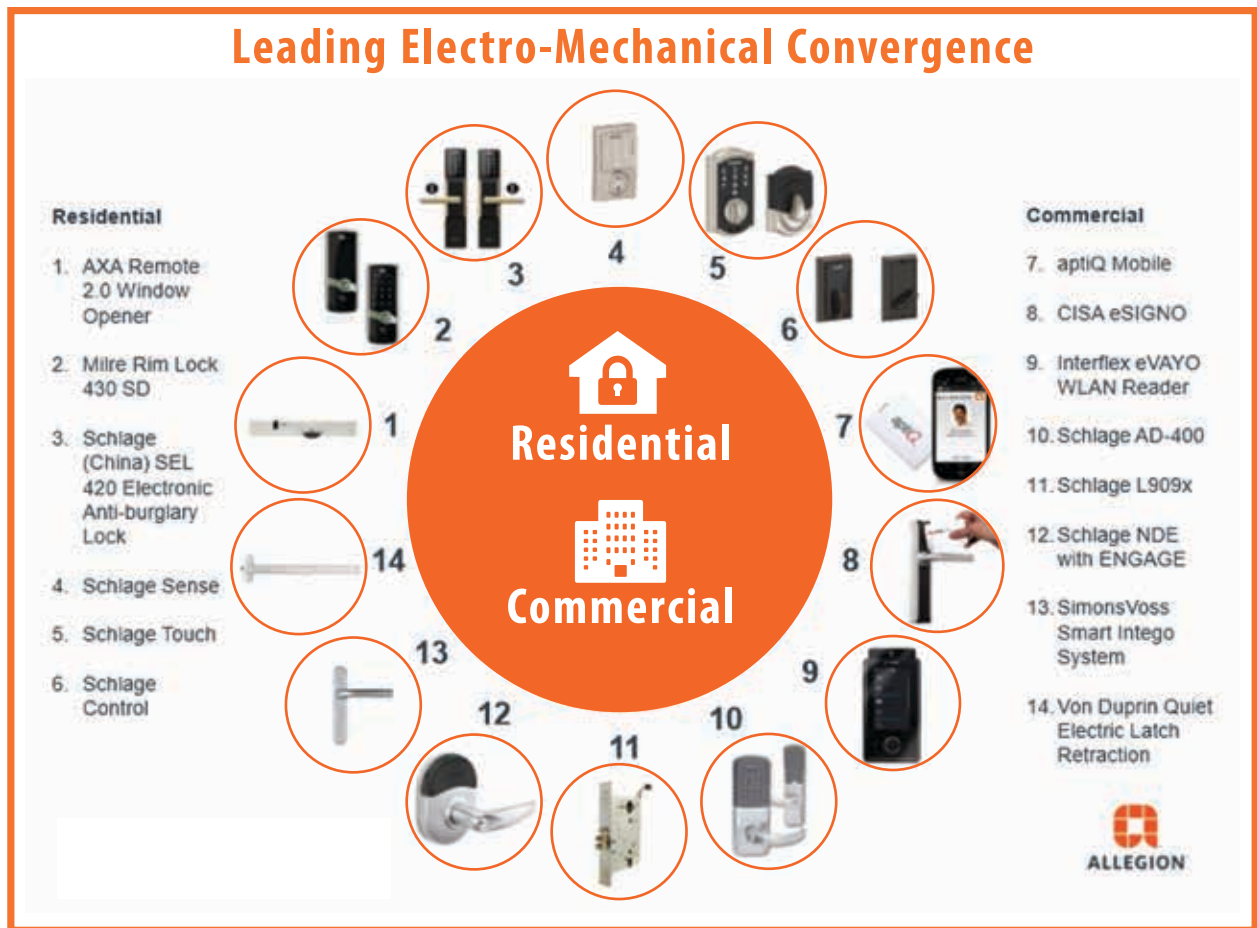


Illustration courtesy of Allegion

The Security Integrator's World is Changing Too

Mergers and acquisitions among integrators continued at a fevered pace in 2015, and are off to a fast start in 2016. So far this year, Convergent announced the acquisition of Dakota Security, and Apollo Global Management (PE) rocketed into the security world, buying ASG Security and Protection 1 for a combined \$2 billion in 2015, and recently announced a \$7 billion offer for ADT (\$13 billion including ADT's debt).

Financial performance expectations from investors in Integration businesses are high. Yet many of the integrators talk about the challenge of maintaining profit margins, largely driven by the commoditization of video security products and systems.

Where does the integrator go for profits? Consolidation? Big data? Operational efficiencies from EAC information? The cloud? Monitoring services? Alternatively, maybe doors and hardware? I think doors and hardware are starting to look pretty good.

The Door and Hardware Distributor World is Evolving

Looking around the North American market, I see the development of several types of door and hardware distributor business models in various stages of evolution:

1. New construction bid machines
2. Traditional door and hardware new construction bidding with some aftermarket sales (aftermarket defined as repair and replacement, counter traffic and small TI and retrofit.)
3. New construction, aftermarket greater than 30 percent of revenue from aftermarket, some pre-installed hardware, and installation services (either managed or self-performed), capable of all levels of electronic hardware and smaller EAC systems
4. Hybrid distributors performing new construction projects, greater than 40 percent aftermarket revenue, pre-installed hardware, increasingly managing or performing installation, EAC system sales, installation and are able to provide services to build relationships with end user customers.

The majority of the door and hardware distributors are operating in Level I or II and are working on developing characteristics of Level III. There is small but growing number of distributors who have created very successful hybrid distributors businesses. The hybrids made the decision and commitment to this business model years ago and have stuck with it.

So Why Have Door and Hardware Distributors Not Developed More EAC Competencies?

Could it be that the Division 08 CSI structure sets up doors and hardware as a supply only function? I spoke with Scott Tobias, Associate Principal, Door + Hardware Consultants, Inc. and Mark Williams, Allegion's Vice President of Architectural Construction & Services, regarding this dilemma. Both felt that while Division 08 structure does not prohibit door and hardware distributors from providing installation and services, the specification does not mandate nor necessarily encourage services.

In contrast, Division 28 includes supply, installation and commissioning of the products and systems. This certainly explains the historical separation of hardware and EAC.

Interestingly, most of the hybrid distributors still write specifications, and use their EAC competencies and installation/service capabilities to win business. Certainly, the manufacturers would like write specifications that include installation and commissioning to reduce problems on site.

John Hunepohl, PSP, CSPM, Director of Special Projects for ASSA ABLOY, had one of the most articulate explanations, which is simply that, "the door and hardware distributor and the security integrator are fundamentally different business models. There has been no natural evolution to develop the integrator model; it has only happened with deliberate management commitment."

How Do Door and Hardware Distributors Capitalize on EAC Opportunities?

- ▶ **Grow your own capabilities.** Write a business plan to create a separate division or company, and recruit key

TRADITIONAL DOOR AND HARDWARE DISTRIBUTOR

- > New construction focus
- > Bid package driven
- > Supply to GC model
- > On job early
- > Off job early

SECURITY INTEGRATOR

- > Engaged later in the project
- > Installation and commissioning expected
- > 24-hour service model
- > Never off the job – end user/operator relationships

talent including a GM, sales and service technician to get started. Then leverage the relationships with your best customers to get going. It is going to take an investment; but you have just had a great year, so pump some money back into your future. The door and hardware distributor already has the most difficult aspect of developing the business in place—a relationship with your customers.

- ▶ **Buy an integrator or be bought by an integrator.** Several of the hybrid businesses have bought integrators over the years to make the jump. Those acquisitions always have some pluses and minuses. The plus is that you are up and running and have a book of business day one. The minuses: it takes a lot of work to find them, complete a successful transaction, and assimilate different cultures. An integrator buying a door and hardware business is still a concept. So far I am not aware of an integrator buying a door and hardware distributor, but it is going to happen.
- ▶ **Buy or merge with the leading locksmith in your market.** Many of the locksmiths have developed significant EAC and integration capabilities, and have built their businesses from a 24/7 service mentality. They have a book of business, strong end user customer relationships and are experts in door and hardware application.
- ▶ **Buy a franchise.** Security 101 is a security integration franchise business. The leadership team—Steve Crespo and Jim Pasquarello—built and later sold a successful integration business based in Ft Lauderdale, Fla. They launched Security 101 10 years ago and have more than 35 operational franchisees. They still have many markets open and this is a reasonable option.

Advantages include instant access to a total business operating software platform, which includes quoting, purchasing, project management, engineering, and financial modules. Security 101 also provides technical training and support, talent recruitment and assessment, access to all the major suppliers, and national account business opportunities. It is a franchise—you have to buy the franchise and pay a fee to be part of the family. This direction requires confidence that the benefits far outweigh the costs of the franchise.

There are many ways to build EAC competencies. It starts with a commitment to service and a commitment to participate in the future of the physical security industry. Don't be shy about leveraging the product manufacturers' training materials, support teams and field sales/service teams. Do not get left behind!



DAVE SYLVESTER is the President of 3SE LLC and works with business owners considering an ownership transition, including planning and executing the sale of their business, and with private equity and public companies targeting acquisitions in the physical security industry. He can be reached at dsylvester@3secorp.com.

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The Role of Door Locks and Hardware in School Lockdowns

By Ron Baer

While lockdown procedures and drills have been an integral part of K-12 school safety plans in the past decade, they are continually being re-evaluated due to the many variables that can impact their effectiveness.

From school layout to staffing to training capabilities, every school has unique characteristics that must be factored into their lockdown protocol. The protocol must then be tested through lockdown drills to identify gaps and ensure faculty, staff and students know exactly what to do in an emergency situation.

The safety strategy promoted by most security consultants and first responders is to evacuate whenever possible, suggesting that the further away from the event, the higher chances are for survival. This strategy could be best understood by comparing the evacuations for a fire and hurricane. In a fire, the top priority is to evacuate and get far away from the danger, while in a hurricane, the goal is to take shelter and remain in place until the threat passes.

Like hurricanes, there are many scenarios where it is safer for students and staff to be locked inside rather than outside, such as nearby police activity, a hostage situation, riots or an active shooter elsewhere on campus.

How Lockdown Decisions are Made and Applied

In every scenario, there should be a protocol that is followed that incorporates a specific method of lockdown based on how decisions are made and applied. Traditionally, there are two types of lockdown: Centralized Decision with Universal Application and Decentralized Decision with Local Application.

Centralized Decision with Universal Application occurs when a decision is being made from a single location to lock all doors campus-wide instantly with the push of a single button. This

approach lacks situational awareness in each classroom and corridor. Thus, security and law enforcement professionals are now consistently advising that this approach can escalate risks through unintended consequences.

Decentralized Decision with Local Application allows each teacher to decide whether to evacuate or lock their door, based on their situational awareness and options. There are pros and cons to this type of lockdown as well. The main benefit is that it allows teachers to make an intelligent decision based on their direct surroundings and situation.

Security professionals will most often suggest an application-appropriate solution or hybrid of these two lockdown options, which many law enforcement and first responders also advise. Many times, this includes a Centralized Decision with Universal Application along the perimeter of a building and property, combined with a Decentralized Decision with Local Application for interior doors that allows teachers and faculty to respond to events.

It Takes a Village

Many people are involved in planning school lockdown procedures: teachers, administration, students, parents, the school board, architects, designers and consultants all have roles to play. Administrators must involve everyone to make the best decisions and have the greatest chance for successful execution of their lockdown policies and procedures.

Possibly the most important component in executing an effective school lockdown is having an administration committed to ensuring faculty and staff have the training they need to know how to respond in an emergency situation. A well-planned response needs to be communicated and practiced through routine drills, just like fire drills, to ensure there is less panic and confusion in the event of a real lockdown.



A stand-alone lock with radio frequency fob provides the capability to lock a door anywhere in a classroom.

If protocol calls for a teacher or staff member to make a local decision, they must also be empowered to use their judgment to make a decision that best protects their students, without the fear of any disciplinary action after the fact. At public schools, some teachers and teachers' associations are reluctant to take on additional responsibility during a lockdown, due to potential liabilities.

When developing a lockdown plan teachers and staff input is essential because they have unique insight into the logistics of their classrooms. For example, many educators secure their personal items in a cabinet or drawer and may not have immediate access to keys or access control credentials. To implement a proper lockdown procedure, this policy would be changed, so teachers keep their credentials or keys on them at all times.

Selecting the Best Lockdown Solution

Deploying the appropriate technology for lockdowns is imperative, and a solution must be selected carefully. All of the previously discussed factors must be considered, in addition to budget and structural limitations.

Once faculty and staff are informed of a lockdown, the first step is usually to lock all doors and windows immediately. How they go about doing so depends entirely on the door hardware and lockdown technology implemented at their school. The following options exist for securing school doors and entryways:

Mechanical Locks

Functionally, a mechanical system is well-proven technology that's stood the test of time. The major drawback in school lockdowns is that teachers must quickly locate their keys, get to the door and be able to quickly operate the hardware, while under enormous pressure.

Standalone Locks with RF Fob

A fob communicates through radio frequency to lock the door from anywhere in the classroom and eliminates the need to walk to the door to lock it. If a teacher receives a text alert or an audible lockdown alert, the teacher can turn and lock the door from where they are. Since fobs communicate on a radio frequency, the system must be tested and maintained to avoid interference issues that could arise in a lockdown.



Since Wi-Fi Locks are normally in locked mode, they do not need to be locked down.

control panel. This appeals to many schools because it offers the flexibility and convenience of wireless with the real-time communication of online access control. With the newest technology, Centralized Decision lockdown can be accomplished in less than 10 seconds.

Hardwired

Doors can be hardwired allowing for an instantaneous Centralized Decision lockdown and a plethora of door hardware options. Backup power supplies and supplemental locking options may be incorporated to mitigate a power and/or communication outage. Many times, hardwiring doors is initially the first choice for schools, but it frequently exceeds school budgets once construction begins since it involves wiring, power infrastructure, and panels installed in a closet.

Late-stage value engineering often results in the elimination of all or most of a traditional hardwired access control system. Power over Ethernet (PoE) lock options give the same functionality as traditional hardwired locks, but offer significant infrastructure cost savings in new construction. Incorporating lower cost wireless and stand-alone options can help prevent security compromises, due to budget constraints.

Prepared for Any Situation

New security innovations help accommodate lockdowns and keep students safe inside the classroom. Technology and automation have greatly improved lockdown capabilities and opened up new, more flexible lockdown options that allow school administrators to adjust their response based on individual scenarios.

The right lockdown solution combined with a well-thought-out plan and training through routine drills can make all the difference in a crisis. In an emergency, people often panic and fail to perform simple tasks, making drills imperative to ensuring teachers and staff feel confident implementing a lockdown.

Teachers and staff should be given ample practice at physically locking doors before a crisis, and any issues should be addressed through further training. Proper planning and correctly deployed technology can mean the difference in averting the kind of crisis and tragedies that have become far too common in schools today. ■

RON BAER is Director of Business Development - K-12 for ASSA ABLOY.

Wi-Fi Locks

To prevent intruder access to Wi-Fi locks, teachers can walk to the door and push a button to turn the reader off, or set them to block lower-level credential carriers. Since Wi-Fi locks are normally in locked mode, they do not need to be locked down. However, they are capable of maintaining an extended unlocked/passage mode, in which case there would be a delay in executing a Centralized Decision lockdown scenario.

To shorten the delay time, the Wi-Fi lock can be hard powered, which increases the frequency in which it communicates. The Wi-Fi lock maintains its local functionality in the event of a power or network outage, and numerous integrations allow the lock to function with many software platforms, linking multiple security functions.

Smart Technology

A new technology eliminates the greatest cost and complexity of traditional access control—the wiring around the door—by using wireless communication between the wireless device and a hub that is connected to an access

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OPPORTUNITIES IN ACCESS CONTROL

By Isac Tabib

Oxford dictionary defines the word opportunity as “a set of circumstances that makes it possible to do something...” successfully. I added the word “successfully.” In our business, we look for opportunities that help company growth, increase our customer base, improve the bottom line and build a company that makes us proud.

This combination will allow, at some point, retirement, with the knowledge that what we have invested our lives in—the long hours, time away from our kids, the financial risks—was for the good of our family, employees and customers. Easier said than done, for sure. It seems a lot needs to come together for opportunities to be realized and translated into success.

Security systems comprised of burglar alarms, closed circuit TV (CCTV), access control and others are all around us. There is hardly a nearby structure that does not have, or need, some type of security system, each of which provide us an opportunity to be involved.

In last month's *Doors + Hardware*, I wrote an article entitled *The Case for Access Control*, where I mentioned that I have been in the electronics security industry for many years. We grew our company to a multi-million dollar highly successful organization. Among the many projects we installed were thousands of access control doors. Each one of those doors needed an electrified locking mechanism. All of these were installed by qualified locksmiths, who for the most part acted as subcontractors. Each played a small part—installation of the electrified door lock—while simultaneously, losing the opportunity to play a much bigger role in further involvement from installation/service (think RMR) of the total security system being installed.

So, why are most locksmiths ‘willingly’ giving up the bigger opportunity, and instead playing a secondary role? The answer includes numerous variables. In this article, we will address two variables necessary for achieving a larger role in these opportunities and their success:

- 1) technical skills
- 2) solid product offerings

Technical Skills

You wouldn't take apart your automobile engine without the skills and knowledge of how it works so that you can successfully reassemble it in good running order. Possessing that knowledge and required technical skill sets makes you powerful. The quotation we've all heard—“knowledge is power”—is often attributed to Francis Bacon, in his *Meditationes Sacrae* (1597).

The concept of the quote is simple: the more you know, the more powerful you become. Hence, the more you know about access control, the more powerful and successful you can become in this lucrative business. Obviously, there is a lot to know, so we will handle one topic at a time while sharing my experiences. I hope that over time these articles will convey best practices to consider and follow and help you to become more knowledgeable and successful on your own.

The Access Control Door: The 4 Key Elements

Some of you may have a good understanding of access control, from the door hardware to the functionality of each of four key door elements:

- 1) Card Reader (CR)
- 2) Door Status Monitor (DSM)
- 3) Request to Exit (RTE/REX)
- 4) A proper Electrified Lock (EL)

Some of you may have working knowledge and might be a little fuzzy on answers to “how to” and “why,” while for others, this may be the first time you’re thinking about expanding your opportunity circle. Let’s do a quick recap of a typical access control door and what I call the four key elements involved:

1) Card Reader

You are likely familiar with the ubiquitous proximity reader. Most look the same but, don’t necessarily function in the same manner. Some are ‘read only,’ while others are ‘read/write’—meaning additional data is stored and can then be ‘written’ onto the PVC cards presented.

Consider that the PVC proximity card you hold in front of the reader has a tiny ID microchip but does not have a built-in battery. Where is the power for the chip coming from? In a very simplistic way, the wall mounted card reader has a built-in coil that plays dual roles. Half the time the coil in the reader is powered and thus generating a magnetic field, while the other half of the time, the coil is behaving as a large antenna receiving the faint “bits” transmitted by the PVC card.

In addition to the microchip, the PVC card has a built-in coil and a capacitor. When presented within the magnetic field of the reader, the coil within the card generates a minute amount of electricity that is stored on the capacitor and powers up the chip. The chip then ‘wakes up,’ transmits its ID to the reader, and so on. This process takes place thousands of times per second.

The most common reader is a ‘read

only.’ It is simple to install, very flexible, and requires 12VDC power (red/black wires, typical) to operate. It has a tri-color (red/green/yellow) LED, (brown/orange wires, typical). LED color patterns depend on the controller’s type and wiring. The LED indicates certain door/read statuses such as door secured, door in alarm, door held open, access granted, access denied; and more.

A yellow ‘beeper’ wire (yellow color, typical) provides additional audible clues to supplement the various LED indications. The most common communication protocol between the reader and the controller is Wiegand. The Wiegand communication format requires just two conductors known as “Data 0” (green lead) and “Data 1” (white lead). Wiegand is a very reliable communication form with suggested no more than 500 feet maximum distance from the controller panel.

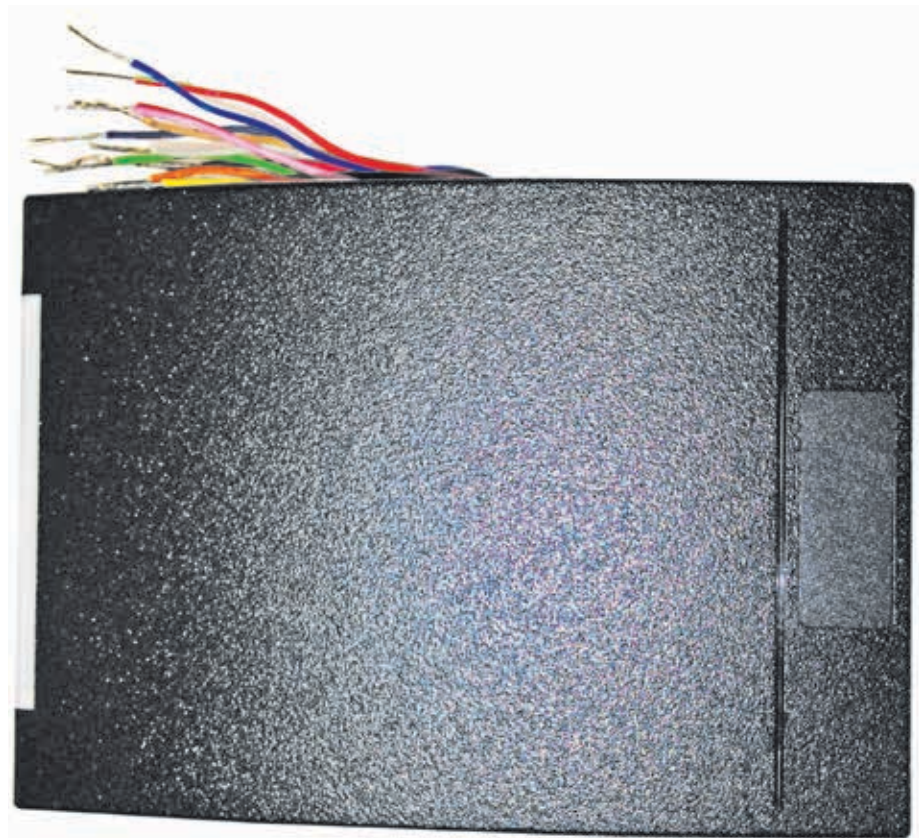
As mentioned, the faint card Binary signal (0/1) ID code is captured by the wall mounted proximity reader, the serial Binary stream is then transmitted via the DATA0/DATA1 leads to the controller. The controller then parses the data, matches it to a specific user,

and validates the user against some 20 or so parameters such as who are you, what door you’re at, time, date, is the card flagged as lost/stolen, any special instructions when this card shows up, and so much more. We will cover the controller’s functionality in future articles.

It should also be noted that the Wiegand format is easily compromised, posing a greater system vulnerability. To overcome these shortcomings, newer generation of RS-485 serial readers, adhering to a universal (OSDP) protocol, are becoming more acceptable.

2) Door Status Monitor (DSM)

This is a simple magnetic reed switch installed on the door frame with a mating magnet mounted on the swinging/active door. The DSM is then wired, either in a supervised or non-supervised mode, to the controller. Since the use of the DSM is not mandatory, the card reader and electrified locks will function without it. For this reason, I find that many installers, both security integrators and locksmiths, choose not to install it. As mentioned, the card reader door





will function without the DSM. The questions then becomes, why use it at all?

As you might imagine, there are some really good reasons to use the DSM rather than leave it off. Let's look at a few examples:

Relock

When the controller grants access to a valid card holder, it will do so for a preprogrammed amount of time. Most manufacturers default the 'unlock time' for eight seconds. This is apparently enough time for an average person to, after presenting a card, pick up a box or similar (if needed), pull or turn the door handle open and go through the door. Doors that accommodate disabled persons typically require much more time—approximately 30 seconds—to complete the same transactions and move through the door.

In either case, during that time, the door is unlocked. Both eight seconds and 30 seconds are considered to be enough time for a "trailing person" to follow the valid card holder and enter the premise without authorization; again, the door is unlocked.

While testing these kinds of scenarios, I have gained entry to many doors and sites by simply trailing an authorized card holder. When a DSM is in use, following a valid card presentation, the door controller 'knows' or recognizes

that the access door was opened and subsequently closed. After the door closes, the DSM signals the controller that the door is now closed, and the controller then 'rellocks' and secures the door thus preventing a trailing person from entering the premise freely.

Door Held Open

As you might imagine, for various reasons following a valid transaction, Users don't verify that the door has locked behind them, that the door was inadvertently or perhaps deliberately, left open thus compromising security. During a recent site inspection, I was able to gain access to an important building via a door that was held open by an 8" rock someone deliberately left at the door. When using a DSM, the security system is notified of "door held open" violations, so that they can be addressed.

Door Forced Open

Similar to the door held open condition, we can also get an alarm signal if the door has been forced open from the unsecured side. Interesting to know, when using a card reader to enable entry from the unsecured side, after presenting the card to open the door, while pulling the door open, the DSM is triggered, which can cause an alarm condition. There is no reason to worry. The door controller automatically silences the "door forced open" alarm upon a valid entry.

Please note that the above features and notifications can only take place if a DSM is used. For this reason, plan on doing so as a best practice.

When describing the DSM, I mentioned the term "supervised." We will cover that feature in the future. Keep in mind that a good access control system would also like to know if someone has cut or shorted (compromised) the wire leading to the DSM. This is easily achieved via the installation of one, or two, End of Line (EOL) (inexpensive) resistors.

3) Request to Exit (REX/RTE)

From the above, we know that it is highly beneficial to use a DSM on every access control door. When in use, during exit and while pushing the door to open, a "door forced open" alarm is generated. This is an undesirable byproduct of the use of the DSM.

This issue is remedied through the use of an REX/RTE device. These devices come in a variety of shapes and configurations, however, they all achieve the same purpose—to signal the door controller before the door is opened from the secured side, that the next transaction (door open) is legitimate and that the door forced open alarm is suppressed.

Some RTE/REX devices are Passive Infra-Red (PIR/heat) motion sensors; others use ultrasonic detection method, while other REX switches are



simply built into the locking hardware. When ordering electrified locking hardware, as locksmiths, you are all familiar with the “REX Option.”

In most cases, the REX has only one purpose: to suppress the door forced open alarm when exiting the secured space. When using a magnetic lock, as the electrified locking device, the REX is also used to unlock the door. Finer details regarding the use of “maglocks” will be discussed in a subsequent article. For now, think of maglocks for use only in the situation where there are glass doors.

4) Electrified Locks (EL)

These are available in what seem to be countless forms. You are most qualified to select the proper EL for the job. Do consider door/frame types, use, and required life safety codes, etc.

The Products: Adding Value for our Customers...

As mentioned, there are many pieces to the “success” puzzle. In the first paragraph, I mentioned the need for technical skills and having a solid product offering. In speaking with several locksmiths, I asked why they are not taking advantage of the opportunities to provide the entire access control system. I got almost the same answer from everyone I spoke with: it is complicated to install. I understand that. It is not that easy to become both a security expert and an IT person overnight.

“I’ve tried to install access control, but find it very difficult to achieve

successfully,” says Micha Snider of J&J Security in Long Island NY. “I know the basics [i.e. the four key door elements] but, the installation process of the software is complex, especially when it gets to the IP configuration and connecting the computer,” he adds, “We even experimented with installing wireless locks but, found them to be even more difficult to install and complex to configure, as they need to connect to an access control system headend software which we do not manage.”

As a security integrator for many years, we realized early on that we had to build an IT department to enable us the capacity to handle the technical issues described by Micha Snider and others. Most locksmith organizations do not have such network-centric resources available to them, forcing them to shop for easy to install systems they purchase through their lock hardware distributors.

“We get calls from various locksmiths, many of whom are pretty smart, asking if we have something ‘simple and easy’ to sell,” says Eric Hagee of Accredited Lock in Secaucus NJ. “To be honest, we carry little variety in this regard, since we pride ourselves in providing support for what we sell.”

“Tech support is very time consuming as well,” adds Hagee. “Many manufacturers call asking us to sell their wares, however, we find that they don’t offer anything different or new, that may be easier to install or, will minimize the number of support calls

we receive. So, we stay with the lines we already sell. Having products that are simpler and easier to install will give us and the industry a much-needed boost. Today, everything is about price. To grow, we need to add value to our customers and their customers.”

We understand this very well, as selling locks at reasonable and needed profit margins is becoming more difficult. There is a need to “de-commoditize” our industry. Adding value is the solution. You cannot go to Amazon and buy “value.”

In spending time discussing current access control products offerings available to the locksmith industry today, I agree that they leave much to be desired. The opportunity to grow is knocking on our door. Acquiring the necessary skills and knowledge is a matter of commitment and investment. It seems this will only take place after there are good products available that are also easy to install and simple to program. In this regard, stay tuned as I am aware of a couple of companies that are trying to develop hardware controllers that are based on the “plug and play” concept.



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A resort in Reno, Nevada, installed exit devices for easy access from an outside pool area to inside changing rooms, with the addition of vertical rods to lock the doors securely after hours.

Providing Security and Peace of Mind with the Right Door Hardware

By Gary Phillips Security stands as one of the biggest challenges in hardware specification. With safety and security a constant concern of people who live, work, and visit facilities, our industry has a greater calling than ever before to do our part in giving them peace of mind. Choosing door hardware carefully can help you fulfill that responsibility.

Three main categories of door hardware are involved in securing commercial and public buildings. Used together to fit the specific needs of applications faced in the variety of vertical markets, they ensure greater safety to occupants and visitors:

Locks

Mechanical locks are still widely used on most openings, with Electronic Access Control (EAC) products used to secure perimeter and high security doors. When selecting locks, you'll typically want to consider function first, and, depending on the application, aesthetics, as well.

Review the features and benefits of various types of locks available (such as dead bolts, tubular locks, cylindrical locks, and mortise locks) that will meet the specifications for the project before making a decision on which will be the best fit.

Several considerations to keep in mind when selecting a lock include:

- **Does the application call for a specific ANSI grade?**

The durability of commercial locks varies. ANSI Grade 1 locks are the most durable and used in applications as public buildings, schools, hospitals, and manufacturing facilities. For medium-duty applications such as hospitality, apartment buildings, retail stores, etc., Grade 2 commercial locks will often be selected.

- **How heavy duty does the lock need to be?**

The majority of commercial locks consist of either heavy-duty cylindrical chassis or heavy-duty mortise locks. Mechanical cylinders with

patented keyways provide added security, and you can get them from virtually every premium door hardware manufacturer. Light-duty locks with a standard cylindrical or tubular chassis, however, may be a good choice in certain situations.

• **Is “curb appeal” important?**

Most commercial/industrial applications use 626 or 630 finish, while high-end apartments or hotels may select a more decorative finish like 625, 619, or 613.

Panic Hardware and Exit Devices

In certain applications, you may need exit devices that reliably secure egress doors while complying with specific fire, life safety, and occupancy code requirements. Panic devices are used most often on doors that are on a fire exit or that are part of an emergency exit plan. They generally consist of a T-shaped bar that lays across a commercial door at mid-arm height, with

a “touch” bar that releases the locking mechanism and allows occupants to exit. To fulfill aesthetic needs as well as safety purposes, panic devices with the bolt-action mechanism hidden inside the door handle interior are available for glass doors.

Exit devices come in rim, mortise, and surface or concealed rod configurations to fit the needs of varied applications. You’ll also want to consider whether you’ll need a narrow or wide stile device. Wide stile exit devices have become most popular because they stand up to wear, tear, and abuse more effectively—particularly important in school buildings and other applications where there’s high traffic and the potential for misuse.

For added security, we’re seeing panic and exit devices often paired with electronic access control. That’s becoming increasingly common in the hospitality industry. Noise abatement is a high priority for health care facilities. To satisfy the need for less

noise, devices with motorized latch retraction (which unlatches far more quietly than devices with solenoid latch release) have become a favored choice.

Electronic Access Control

Openings that provide electronic access control offer not only safety and security; they also provide added convenience to users. Low energy operators, automatic doors, revolving doors; you have a lot of options to consider. With a wide range of electronic access control solutions available, it pays to know as much as possible about the requirements of the project so you can select which will best serve the application.

EAC offers the ability to lock down all doors at one time for life safety purposes. Hospitals have been ahead of the curve with this technology—and now an increasing number of schools and offices are transitioning to EAC for their perimeter doors.



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At a fire station in California, a push-button lock allows quick access to fire fighters who know the PIN, but guards the entrance when the station is unmanned.

EAC provides an unprecedented level of control and audit capabilities, as it offers a way to limit and monitor access remotely. The progression toward EAC is evident in:

1. A transition from the installation of traditional mechanical locks and separate components to installing a single device with everything embedded (lock, card reader, door position sensor, etc.) at an access point.
2. Development of new RFID (Radio Frequency Identification) solutions—including proximity, smart card and long-range solutions.
3. Progression from wired type systems to wireless.
4. New credential types including NFC (Near Field Communication), Bluetooth® and wearables.
5. Cloud-based access and security systems, the Internet of Things (IoT), and SaaS (Software as a Service).

According to Scott Lindley, President, Farpointe Data and an expert in RFID and EAC product development, “Certainly, mechanical locks will continue to be part of security solutions. However, we are seeing more customers who appreciate the benefits of electronic access control.”

Among the needs that EAC helps satisfy include:

- Protecting sensitive HIPPA information at physicians’ offices.

- Keeping valuable inventory safe in a factory’s warehouse.
- Providing peace of mind to tenants of an inner city apartment building.

“Basically EAC provides a more precise method of allowing only authorized people to enter a building,” explained Lindley. “For example, numerical codes (PINS – personal ID numbers) that work with electronic keypad locks can easily be added and removed from EAC-enabled locks. A clear benefit is the cost savings a building owner or property manager realizes by avoiding the expensive re-keying of a mechanical lock.”

Lindley also shared that wireless access control solutions are gaining popularity. They require less manual labor (no holes to drill, trenches to dig, wire to pull, etc.) and therefore create less of a disturbance at the customer site during installation. This is key with historical structures, such as those found on the National Register of Historic Places.

Another plus about wireless EAC is it allows you to provide protection to openings beyond doors alone. They are capable of also extending access control to non-traditional exit devices, such as gates and elevators, making them ideal for use with long range RFID solutions.

Final Thoughts

Security is, without a doubt, one of the biggest challenges in hardware specification. For now and in the future, commercial and public buildings in all

industries will require sophisticated and responsive systems for controlling access. In the hospitality industry, operators must have simple and effective means of credentialing their guests and distinguishing them from other users. Health care has many unique challenges, centering on the need to provide varying yet foolproof access for visitors, staff, patients, vendors and others who enter a building.

Regardless of the type of building or industry, the uniform need exists to provide access according to time of day and specific entry points. Hierarchies of access based on specified secure areas, individual security clearances, and safety/security plans are increasingly important for installations wherever access must be carefully managed.

Considering the demands and complexity that confront security managers now and in the future, the evolution of technology will without a doubt shape the development of door hardware. I believe we can expect a lot more sophistication and integration on the horizon. Despite all the advances, however, one thing will remain consistent: You must always carefully consider the unique requirements of each application to ensure the door hardware you choose will deliver the optimal level of security for the situation.

GARY PHILLIPS is Director of Sales East for DORMA. He can be reached at gary.phillips@dorma.com.



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PROTECTING CONTACTLESS CARD-BASED ACCESS CONTROL SYSTEMS FROM HACKING

By Scott Lindley

SKIMMING, EAVESDROPPING AND RELAY ATTACKS CAN BE PROBLEMS. BOTH THE READER AND THE WIEGAND PROTOCOL ARE VULNERABLE. HERE'S HOW TO DEFEND THEM.

Radio Frequency Identification devices are typically used as proximity or smart card identification in tracking and access control systems. These systems operate on the assumption that the token is in close proximity to the reader because of the physical limitations of the communication channel.

However, current RFID devices are not suitable for secure identification. They can be subject to skimming, eavesdropping and relay attacks. An attacker can fool the system by simply relaying the communication between the legitimate reader and token over a greater distance than intended. As these facts become better known, there has been a drive by security directors to overcome such shortcomings.

Wiegand is the industry standard protocol commonly used to communicate credential data from a card reader to an electronic access controller. Gone are the days when Wiegand was considered inherently secure due to its obscure and non-standard nature. No one would accept usernames and passwords being sent in the clear nor should they accept vulnerable credential data. ID harvesting has become one of the most lucrative hacking activities. In these attacks, a credential's identifier is cloned, or captured, and is then retransmitted via a small electronic device to grant unauthorized access to an office or another facility.

Let's Review the Threats

First of all, when considering any security application, it is critical that you have your end user realistically assess the threat of a hack to their facilities. For example, if access control is being used merely as a convenience to the alternative of using physical keys, chances are the end user has a reduced risk of being hacked. However, if the end user is using their access system as an element of their overall security system because of a perceived or imminent threat due to the nature of what they do, produce or house at their facility, they may indeed be at higher risk and they should consider methods to mitigate the risk of a hack. Here are a few steps that may be considered in reducing that danger.

Just as we've become aware of criminal skimmers causing mischief with the ATM infrastructure, card holders should avoid presenting access control credentials to any access readers that appear to have been tampered with. Secondly these same card holders should be encouraged to quickly report to the facility's security and management teams any suspicions or access control system tampering, including instances involving either the access control readers or access credentials.

Skimming occurs when the attacker uses his reader to access information on the victim's RFID token without consent. The attacker has the ability to read stored information or to modify information by writing to the token, so he can control when and where the attack is performed. In practice the attacker's main challenge is to increase the operational range by powering and communicating with the token over a greater distance, as the owner might become suspicious of somebody in his personal space.

An eavesdropping attack occurs when an attacker can recover the data sent during a transaction between a legitimate reader and a token, which requires the attack to be set up in the vicinity of a likely target. The attacker needs to capture the transmitted signals using suitable RF equipment before recovering and storing the data of interest. The degree of success that the attacker will achieve depends on the resources available to him. An attacker with expensive, specialized RF measurement equipment will be able to eavesdrop from further away than an attacker with a cheap, home-made system. The attack is still a viable threat either way.

RFID systems are also potentially vulnerable to an attack where the attacker relays communication between the reader and a token. A successful relay attack lets an attacker temporarily possess a 'clone' of a token, thereby allowing him to gain the associated benefits. It is irrelevant whether the reader authenticates the token cryptographically, or encrypts the data, since the relay attack cannot be prevented by application layer security.

Smart card readers have several options that increase card security.

A combination keypad/card reader provides two-factor validation—something the person knows plus something the person has.

What's scary about all this is that the equipment needed to perpetrate the above attacks can be quite inexpensive and is widely available.

Boosting the Integrity of the Card-Based Access Control System

Because of such threats, single factor verification no longer provides the access security that many campus access control systems now require. Today, they want to have multi-factor verification with what they have, a card, plus what they know, a PIN. With a combination reader/keypad, access control manufacturers and their integrators can provide them with a simple, reliable solution for shoring up their system, the combination card reader/keypad.

To enter, the individual presents her proximity or smart card, gets a flash and beep, and then enters her PIN on the keypad. The electronic access control system then prompts a second beep on the reader and the individual is authorized to enter.

Another novel way of protecting card based systems is to provide a high-security handshake, or code, between the card, tag and reader to help prevent credential duplication to ensure that readers will only collect data from these specially coded credentials. In a sense, it's the electronic security equivalent of a mechanical key management system, in which this single campus is the only one that has the key they use. Such keys are only available through the integrator chosen for the job. Your integrator never provides another organization with the same key. No other organization will have the reader/card combination. Only their readers will be able to read their cards or tags and their readers will read no other cards or tags.

Smart Cards

Smart credentials go far beyond traditional identification cards. In addition to individual profile information, they can provide users with secure access to everything from their offices, parking lots and computer networks to safe methods of payment in the company cafeteria and checking out machine tools.

Let's summarize and list the various applications that the shrewd security administrator can consider for smart credential implementation:

- Physical credential administration
- Visitor management administration
- Provisioning or access privileges assigned
- De-provisioning or access privileges revoked
- Segregation of duties
- Parking permit administration

- Property pass administration
- Compliance/governance reporting and auditing
- System troubleshooting and maintenance
- Alarm correlation and response
- Emergency communication and notification
- Video analytics applications (people counting, behavior tracking, etc.)
- Identification
- Time and attendance
- Logical access
- Supplies check-out verification
- Charge privileges at various locations, including the cafeteria
- Document printing
- Biometric template storage

Let's also not forget the building management system. If the access control systems notes that someone is in a specific part of the building, the air conditioning and lighting can be activated. Once that person leaves, either the access control or video system could automatically tell the building management to turn those systems off.



If applications require multiple forms of verification, the smart card securely stores other credential types such as biometric templates, PIN codes and photos right on the card, using the enhanced storage and encryption of smart technology.

This can save money and resources, a potential green solution that would be helpful in meeting smart building requirements.

In addition to the functionality for multiple applications, smart credentials also increase the security of information kept on the card and stored in the facility. Valid ID is a new anti-tamper feature available with contactless smartcard readers, cards and tags. At manufacture, readers, cards and tags are programmed with the Valid ID algorithm, cryptographically ensuring the integrity of the sensitive access control data stored on the card or tag.

With Valid ID, readers scan through the credential's access control data searching for data discrepancies, which may occur during the counterfeiting, tampering or hacking of a contactless smartcard. Valid ID is an additional layer of protection to what is already available in smart card authentication, operating independently, in addition to, and above this standard level of security. In use, Valid ID allows a smartcard reader to effectively verify that the sensitive access control data programmed to a card or tag is not counterfeit.

If applications require multiple forms of verification, the smart card securely stores other credential types such as biometric templates, PIN codes and photos right on the smart card, using the enhanced storage and encryption of smart technology. Smart cards also provide an extra level of security at the access point, protecting the information behind closed doors or on the secure network.

Equally important, smart credentials afford security administrators more avenues to ensure safe and secure

environments. The cards work in concert with access control systems, video surveillance and mass notification capabilities. With today's convergence of technologies, organizations can integrate existing systems with advanced credential reader technologies to enhance the security of their environments.

How to Help Customers Reduce Hacking Attacks

The door and window provider can be the frontline defense for protecting a security system. Understand what the customer's needs are, what the customer can do, what the customer

has to work with, what hackers can do, where the hacker is most likely attack and what can be done to thwart the hacker. In other words, you need to figure out how apply the cliché "a good offense is the best defense." There are many things that can be done to reduce hacking of a card-based access control using the Wiegand system.

- Install only readers that are fully potted and that do not allow access to the reader's internal electronics from the unsecured side of the building. An immediate upgrading is recommended for readers that fail to meet this standard.

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Make available credentials with an anti-playback routine, such as transmitters, instead of cards. This can be done by implementing long-range receivers installed in the locked security closet, with the electronic access control panels out of harm's way.

- Make certain the reader's mounting screws are always hidden from normal view and make use of security screws whenever possible.
- Embed contactless readers inside the wall, not simply on the outside, effectively hiding them from view. Or, if that is not possible and physical tampering remains an issue, consider upgrading the site to readers that provide both ballistic and vandal resistance.
- Make use of reader cable with a continuous overall foil shield tied to a solid earth ground in a single location. This helps block signals from being induced in the individual conductors making up the cable as well as those signals that may be gained from the reader cable.
- Deploy readers with a pigtail, not a connector. Use extended length pigtails to assure that connections are not made immediately behind the reader.
- Run reader cabling through a conduit, securing it from the outside world.
- Add a tamper feature, commonly available on many of today's access control readers.
- Use the "card present" line commonly available on many of today's access control readers. This signal line lets the access control panel know when the reader is transmitting data.
- Use access control readers with an output alternative to the industry-standard Wiegand output, provided they are supported by the electronic access control system. Alternatives can include ABA Track II, OSDP, RS485 and TCP/IP.
- Offer the customer cards that can be printed and used as photo badges, which are much less likely to be shared.
- Promote a technology to limit the credentials a reader can read to a very specific population. As earlier mentioned, consider implementing a high-security handshake, or code, between the card or tag and reader to help prevent credential duplication and ensure that the customers' readers will only collect data from these specially coded credentials.
- Offer a smart card solution that employs sophisticated cryptographic security techniques. An example is MIFARE® DESFire™ EV1 cards making use of AES 128-bit encryption.
- Make available credentials with an anti-playback routine, such as transmitters, instead of cards. This can be done by implementing long range receivers installed in the locked security closet, with the electronic access control panels out of harm's way. With the receiver in the security closet, there would be no access readers installed at the door. Thus, no Wiegand data lines are ever exposed to the outside of the building. To enter the facility, the system user presses the appropriate button on the log range transmitter to gain access to any exterior entrance at a distance set by the user. The receiver, which is safely installed in the closet, will accept the signal and forward it to the access panel installed in the same closet, which will unlock the door. Meanwhile, traditional RFID access control readers could be used inside the facility.
- Offer a highly proprietary contactless smartcard technology such as Legic®.
- Provide two-factor readers, including contactless and PIN technologies. Alternatively, also offer a third factor, normally a biometric technology.

We must always stay one step in front of the bad guys. With the proper tools, any of these assaults can be defended.

Look for These Product Options

Here are some items that you should consider to help end-users protect their access control systems:

- Offer a custom format with controls in-place to govern duplication.
- Avoid multi-technology readers as credential duplication risks increase.



SCOTT LINDLEY is a 25-year veteran of the contactless card access control provider industry. Since 2003, he has been president of Farpointe Data, a DORMA Group company. Prior, he was director of RFID products at Keri Systems and sales manager, North America, for Motorola Indala.



QUIET, RELIABLE, AND SECURE

DORMA 9000 Series with Motorized Latch Retraction



The Dali Museum, St. Petersburg, FL
Photo courtesy Mons Moreno/HOK
9000 Exit Device shown above

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THE PROFIT REPORT:

Expanding an Invaluable Service

By Dr. Albert D. Bates

The PROFIT Report is continually ranked as one of the most valuable services that DHI provides. At the same time, a number of DHI members do not take advantage of this important (and free) service. Part of the problem appears to be a difficulty in making use of the information provided.

Starting in 2016, two important additional outputs will be provided as part of the PROFIT Report service. The additional outputs are designed to indicate what each member must do to improve profitability. The enhancements, collectively, are what the Profit Planning Group, the firm that prepares the PROFIT Report, calls *Prescriptive Benchmarking*.

Prescriptive benchmarking represents the ultimate level of data presentation. It not only provides comparisons, it structures information in a way that allows management to know what should be done and by how much. It combines the “how are we doing” component of traditional benchmarking with a “what if” component and then adds a dose of consultative support.

The two enhancements contained in prescriptive benchmarking are a three-way performance analysis chart (yes, that is a mouthful of words) and a dynamic performance dashboard. The first enhancement provides a precise indication of what the firm needs

to do. The second provides a basis to use the PROFIT Report results in planning.

The three-way performance chart, as the name implies, brings three important measures of performance together. It does so for the five key Critical Profit Variables (CPVs)—sales growth, gross margin percentage, operating expense percentage, inventory turnover and the DSO (days sales outstanding). A sample chart is shown in **Exhibit 1**.

On the horizontal axis, the exhibit presents the individual firm’s percentile ranking on each factor. This can rank from one to 100 percent. That is, the firm can outperform somewhere

EXHIBIT 1: A THREE-WAY PROFIT INTERACTION CHART

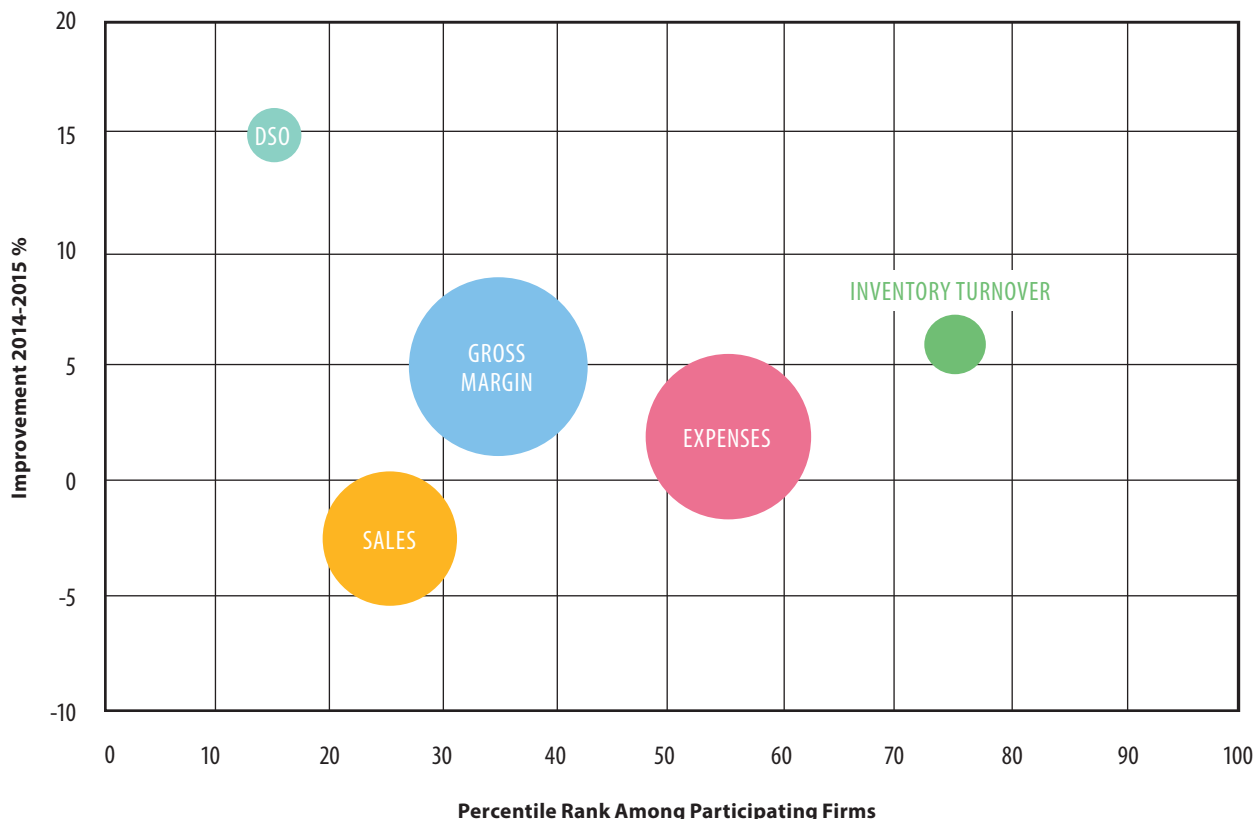


EXHIBIT 2: A SAMPLE DYNAMIC PERFORMANCE DASHBOARD

	Goal Performance Rank			Goal Value	Service	
Return on Assets	59			10.9	Check	
Profit Margin	68			4.2	Check	
Gross Margin	46			21.2	Check	
Operating Expense %	68			16.8	Check	
Asset Turnover	34			2.6	Check	
Sales Change %	51			7.6	Check	
Use Throttle & Control set goals which improve performance ranks. Use Check buttons to investigate contributing factors.						
Throttle & Control	Current	Change By	Change %	Goal	Current Rank	Goal Rank
Total Annual Invoice Lines	40,000	2,400	6.0	42,400		
Avg. Selling Price Per Invoice Line	250.00	3.75	1.5	253.75		
Avg. Purchase Price Per Invoice Line	200.00	0.00	0.0	200.00		
Payroll & Fringe Benefits	1,250,000	37,500	3.0	1,287,500	56	64
All Other Operating Expenses	500,000	25,000	5.0	525,000	71	73
Other Income/Expenses (non-operating)	0.0	0.0		0		
Warehouse Sales (% of sales)	72.0	0.0	0.0	72.0		
Inventory Turnover (turns)	3.5	0.0	0.0	3.5	27	27
Credit Sales (% of sales)	94.0	0.0	0.0	94.0		
DSO (days)	48.5	0.0	0.0	48.5	78	78
Fixed & Noncurrent Assets	1,000,000	0.0	0.0	1,000,000		
Income Tax Rate (%)	30.0	0.0	0.0	30.0		
Interest Rate (%)	7.0	0.0	0.0	7.0		
Cash Change Used to Reduce Debt (%)	0.0	0.0	0.0	0.0		

between one and 100 percent of its peers within DHI. For example, the sample firm in Exhibit 1 (every firm has a different chart) outperforms about 75 percent of its peers on inventory turnover.

The firm's percentage improvement on each of the CPVs is shown on the vertical axis. Since the change can be negative, this factor must be scaled to reflect the actual change, either positive or negative. For DSO, the firm improved by about 15 percent during the course of the last year.

These two axes position each variable in terms of importance and improvement. The final factor in the exhibit is that the size of the circles reflects the relative impact that each of the critical profit variables has on profitability. In this particular instance, the gross margin circle is the largest and the DSO (days' sales outstanding) is the smallest. Again, all of this information is company specific.

The exhibit provides an instantaneous feedback mechanism for management.

It indicates how well the firm is doing compared to its peers, how performance is changing and how important each factor is. It is a roadmap for improving results.

The dynamic performance dashboard shown in **Exhibit 2** provides a mechanism to help participants move from understanding financial issues to taking action on those issues. It converts the static historical dashboards into a planning dashboard.

The top of **Exhibit 2** provides information on the six most important metrics in distribution. Three are overall performance measures—return on assets, profit margin and asset turnover. The other three are the three most important of the CPVs—gross margin percentage, operating expense percentage and sales growth.

What makes the dashboard unique is that each participant has the potential to make changes in fourteen different areas, each of which is identified in yellow at the bottom. The cumulative changes have resulted in shifts in the

performance metrics at the top. For example, the top factor (Return on Assets) has risen to 10.9 percent from what it was previously.

With an interactive dashboard, the association is now providing a package that moves benchmarking from a method of presenting historical data to one of helping firms improve performance. It makes benchmarking dramatically more important to the membership.

The enhancements are provided at the same price the PROFIT Report has always had—it is free. It is a great way for firms to really get serious about improving their performance.

DR. ALBERT D. BATES is founder and president of Profit Planning Group. His recent book, *Breaking Down the Profit Barriers in Distribution*, is the basis for this report. The book is available in trade-paper format from Amazon and Barnes & Noble.

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REDUCING the Risk of FORCED ENTRY

By Jeff Wherry

Photos courtesy of the Steel Door Institute



Although each facility's security needs are unique, virtually every type of building requires protection against forced entry. The challenge lies in determining the degree of protection that is appropriate and therefore which products are most suitable. New standards designed to evaluate product performance include ratings that indicate the door's ability to resist as many as six attackers for up to an hour. However, architects and specifiers must resist the urge to specify more than is reasonably warranted to ensure occupants' life safety and security.

A door assembly is often a building's first line of defense and can dramatically reduce the risk of harm to people or property. This article will cover the security options that are available and where they make the most sense.

Defining Security Requirements

The first step is to determine what level of protection is appropriate for the building's use and location. Government and high-end buildings tend to be more at risk for physical attacks. Retail and commercial tenants are usually more concerned with theft. The security needs of schools vary widely and are often a hybrid of burglary prevention and safety.

Travis Hoover, Program Manager of Intertek-ATI, is tasked with testing security openings to ensure they perform as advertised. "It's important to distinguish between the types



Exterior doors are a building's first line of defense.

of threats because they are addressed quite differently. Physical attacks tend to be more planned and sophisticated. For those, we test a lot of bullet resistant doors with laminated glass that won't shatter. Those doors usually have steel stiffeners and higher gauge steel."

"For burglary prevention, the openings we test often have seamless welds, reinforced hardware, and steel stiffeners," added Hoover.

Finding the "Just Right" Amount of Security

In the aftermath of any violent tragedy such as a terrorist attack or school shooting, people are left feeling vulnerable, having been robbed of their sense of security. As a result, it is not uncommon for there to be a reflexive push to implement the maximum degree of security on openings and facilities, well beyond what is necessary to protect the building's occupants. Overspecification means unnecessary costs.

Ironically, deciding what degree of security is appropriate can become more difficult with lower levels of risk. Specifying a steel door rated with the highest levels of blast, ballistics, and forced entry resistance would be considered absolutely appropriate for high risk government facilities and potential terrorist targets such as dams or

nuclear power plants. But what is appropriate for corporate offices or retail locations whose owners are generally more concerned with theft? How do the security needs of a warehouse differ from those of a jewelry store?

Design professionals should consider:

- budget
- risk of physical attack, burglary, or both
- severity of the risk
- if bullet resistant doors would make sense
- (for existing buildings) if retrofitting the windows and steel doors would be sufficient.

Addressing the items above should never come at the expense of life safety. Barricades and security gadgets often do not meet the most essential life safety concepts such as the ability to egress in one operation without any special knowledge or effort. Stick to tested and approved products that won't have the local Fire Marshal steaming.

Specifying Forced Entry Resistance

Rather than get bogged down with components or door construction, the standards below can be specified to ensure the desired level of safety.



Door assemblies with additional security features usually look just like standard doors and frames.

Until the technology for force fields moves beyond the realm of science fiction and it becomes possible to repel bullets, no door is “bulletproof,” only bullet-resistant.

- **US Department of State SD-STD-01.01 Forced Entry and Ballistic Resistance of Structural Systems**

This test is similar to ASTM F3038 but is specific to government facilities.

Perhaps ASTM F1233 Class II should be specified for a high-end retailer to withstand 20 whacks of a hammer? Specifying 30 minutes of protection in accordance to ASTM F3038 for a water treatment plant could thwart a potential terrorist. Door assemblies that can withstand 60 minutes of SD-STD-01.01 and are bullet- and blast-resistant could make all the difference in the world to a distant U.S. embassy under attack.

These are just examples. Consider working with a security consultant for guidance on a specific project.

“Bulletproof” Doors

Ballistics go hand-in-hand with forced entry. While the most common standard for evaluating the efficacy of a bullet-resistant core, UL 752 *Standard for Bullet-Resisting Equipment*, has numerous levels of resistance, none are considered “bulletproof.” That phrase gets thrown around a lot, but until the technology for force fields moves beyond the realm of science fiction and it becomes possible to repel bullets, no door is “bulletproof,” only bullet-resistant.

Bullet-resistant doors are frequently specified in government buildings, cashier stands, high crime areas and any structure where increased safety is desired. They are typically constructed using formed, heavy gauge steel face sheets around a custom engineered

steel rib core. They are manufactured at eight different levels, which indicate the number of shots from a particular caliber of bullet that a door can resist. For example, a level 1 door can stop three shots from a 9 mm; a level 8 can withstand five shots from a .308 caliber rifle.

Although end users could easily be convinced that “more is better,” a level 2 or 3 door offers plenty of protection for most applications. A level 8 door will cost substantially more than a level 1 bullet-resistant steel door, so be sure to specify the appropriate level of resistance.

Hey Good Lookin’

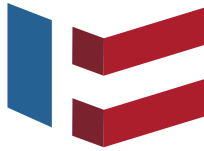
After making hundreds of thousands of secure door assemblies, Steel Door Institute (SDI) member manufacturers often hear, “But this looks just like a regular door!” It’s as if they were expecting imposing steel bars and bulky hardware.

Architects and specifiers should let their customers know beforehand that security doors look just like the rest. That way when they see the door they’ll know it’s the performance that counts.



JEFF WHERRY has been Managing Director of the Steel Door Institute (SDI) for more than two decades. The SDI develops steel door and frames standards that are used for millions of buildings in the United

States. SDI members are the only manufacturers that have been certified to ensure their products and processes meet SDI standards. Jeff can be reached at jw@wherryassoc.com.



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2016 DHI SECURITY SURVEY

RESULTS REFLECT GROWTH IN WORLDWIDE DEMAND

By Denise Gable

DHI recently conducted its annual survey of distributors, independent consultants and sales agents to determine to what degree electrified hardware is a core part of their business.

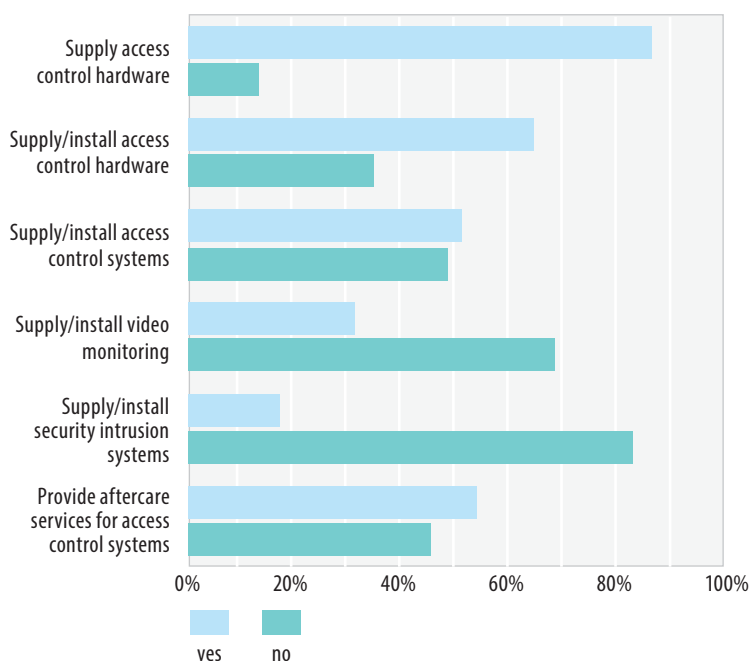
The anticipated strong growth in security products and systems is reflected in the results of the survey and a 17 percent increase in the number of respondents to the survey, with 73 percent of respondents being distributors. Sixteen percent of respondents are sales agents and 11 percent are independent consultants.

The number of respondents involved with electrified hardware/access control as an important and/or growing part of their business remained strong at 91 percent. Here's a breakdown of their offerings:

- 87% supply access control hardware
- 65% supply and install access control hardware
- 54% provide aftercare services for access control systems
- 51% supply and install access control systems
- 31% supply and install video monitoring
- 17% supply and install security intrusion systems

Fifty-nine percent of companies responding install small access control systems (1-10 doors); 54 percent identified as installing large systems (over 25 doors) and 38 percent install medium systems (11-25 doors).

In which of the following is your company involved?



Increased Sales Expected

When asked the reasons why respondents expected to increase sales in 2016, 69 percent cited growing market demand. Twenty-four percent of respondents said that they had made a strategic decision to increase their involvement in these products. One half has service staff to support this growing business.

When asked to estimate how much increase is expected, answers ranged from 2 percent to 40 percent, with most falling in the 10 – 20 percent category.

Core Businesses

57 percent of respondents have at least one-quarter (25 percent) of business in access control hardware and systems.

63 percent of respondents have at least 25% of their business in electrified hardware/access control new construction and aftermarket.

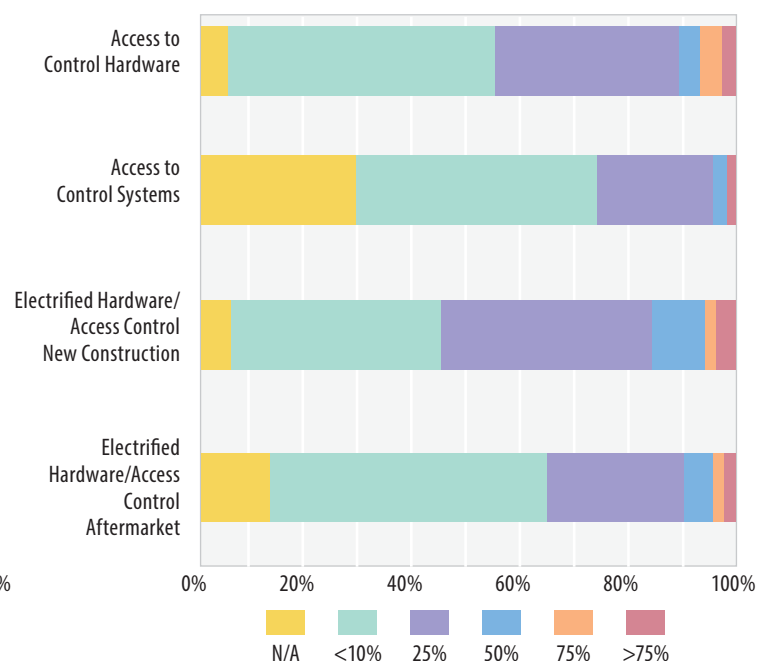
Staffing

68% have an AHC on their permanent staff

36% have EHC or equivalent on their permanent staff

The consistency of DHI's survey responses, along with the continued increase in the number of respondents to the survey, shows that DHI members are continuing to incorporate these products into their lines and to add credentialed personnel to their staffs, and they should be well-prepared for the predicted growth in demand.

Approximately what percentage of your business are the following?



U.S. Demand for Electronic Security Products to Grow 7% Annually Through 2019

Demand for electronic security products in the U.S. is projected to rise 7.0 percent annually through 2019 to \$16.2 billion, according to an October 2015 report by the Freedonia Group, an international business research company.

Strengthening new construction expenditures following the recession-impacted 2009-2014 period will drive gains, as electronic security products are often installed during initial construction. A heightened perceived risk of crime due to widespread media coverage of high profile crimes and tragedies will also support gains, even as the number of crimes has declined in recent years.

Technology gains to drive sales in all segments

Technological advances will promote sales gains in all segments, both by providing a boost to value demand via the incorporation of value-added features and by increasing market penetration. Rising interest in networked, IP-connected systems that provide interoperability between various electronic security systems and building automation systems will continue to promote growth of higher value devices.

For instance, there is an ongoing shift from legacy analog video surveillance systems to digital, IP capable ones. In addition to interoperability, digital video components benefit from the incorporation of video analytics software at the original equipment manufacturers' level, as well as the ability to use mobile and other offsite monitoring and Cloud-based storage.

As a result of this transition to IP systems, the video surveillance product segment is projected to experience the fastest gains through 2019. Concerns regarding the potential for criminals hacking into these interconnected electronic security devices will drive demand for higher value versions that incorporate cyber hardened capabilities such as encryption and authentication.

These smart products are controlled and accessed via mobile devices, aiding security equipment sales as interest in smart home automation systems also rises. The alarm segment will further benefit from innovations in personal emergency response service (PERS) alarms, particularly for types that integrate mobile technology. Access control systems will see strong gains as smart card-based systems gain traction over less secure technologies such as proximity and magnetic stripe cards.

U.S. Demand for Security Equipment to Rise 5.4% Annually through 2020

Sales of mechanical security products are expected to rise 5.4% percent annually through 2020 to \$6.1 billion, according to a new report by the Freedonia Group, an international business research company.

Growth will be stimulated by the large lock segment, which will benefit largely from continued gains in building construction spending, the Group says. Advances in value terms will be aided by the ongoing shift to higher value electrified products, particularly door locks and door security hardware that are used with electronic access control systems. The need for electrified versions of mechanical security products will continue to rise as access control and other such systems are installed at more entry points.

Locks and door security hardware to see above average gains

Locks accounted for more than 70 percent of mechanical security product sales in 2015. Sales of door locks dominate this segment and alone accounted for 60 percent of total mechanical security demand in 2015. Door locks are also expected to see the fastest growth of any mechanical security product, driven by rising demand for doors both in new construction and repair and renovations.

In value terms, sales of door locks are also aided by the rising need for more sophisticated electromagnetic locks in light of the increasing prevalence of electronic access control systems in nonresidential buildings. The relatively mature padlocks segment will register slower growth.

Sales of door security hardware, including panic hardware and exit devices, represented 10 percent of mechanical security sales in 2015 and will also generate above average sales gains. Much like door locks, sales of these products will benefit from the strong demand for doors and the increasing use of access control systems and related, more expensive electrified hardware.

Government, Commercial Markets to Grow the Fastest

The consumer market accounted for one quarter—the largest share—of mechanical security product demand in 2015 because mechanical locks are generally considered sufficient as the primary security measure.

However, the next two largest markets—government and institutional, and office and lodging—are expected to see more rapid gains, aided by the increasing installation and upgrade of access control systems, which require more expensive electromechanical door locks and security hardware.

For more information on either study, go to www.freedoniagroup.com.

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May 4–6, 2016
Orlando, Florida

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Schedule At-A-Glance

Sunday, May 1–Monday, May 2

7:30–8:00 am	Technical Education Registration
8:00 am–5:30 pm	Technical Education – DAI 600

Tuesday, May 3

8:00 am–5:30 pm	Technical Education – DAI 600
12:00–5:00 pm	Convention Registration

Wednesday, May 4

8:00 am–5:30 pm	Technical Education – DAI 600
8:00 am–5:00 pm	ChannelExChange in Exhibitor Suites
12:00–8:00 pm	Convention Registration
2:00–4:30 pm	Education Sessions (2:00–2:45 pm, 2:55–3:40 pm and 3:50–4:35 pm)
5:00–8:00 pm	Exclusive Exhibit Hours with Opening Reception
5:00–8:00 pm	ChannelExChange on the Tradeshow Floor

Thursday, May 5

7:30 am–6:30 pm	Convention Registration
8:00 am–12:00 pm	ChannelExChange in Exhibitor Suites
8:00–8:30 am	Celebrating Our People – New Opportunities!
8:30–9:30 am	Celebrating Our Industry – Dedicated to You!
9:45 am–12:20 pm	Education Sessions (9:45–10:30 am, 10:40–11:25 am and 11:35 am–12:20 pm)
12:30–6:30 pm	Exclusive Exhibit Hours
12:30–6:30 pm	ChannelExChange on the Tradeshow Floor
1:00–5:00 pm	SolutionSessions on the Tradeshow Floor

Friday, May 6

8:00 am–6:30 pm	DHI LEAD Academy
9:00–11:35 am	Innovation Sessions (9:00–9:45 am, 9:55–10:40 am, 10:50–11:35 am)
11:45 am–1:30 pm	Foundation Keynote Lunch

Schedule subject to change.

Convention Highlights

Tradeshow

Open Wednesday and Thursday, the DHI tradeshow floor is your best chance this year to experience the latest products and technologies and interact directly with the entire channel; all in one location. Network with old friends and new at the Opening Reception; stop by the Showcase of New Products to see the latest trends in the industry; or listen in on a SolutionSession.

SolutionSessions

Designed in response to requests for more educational opportunities and to maximize the time spent by attendees on the tradeshow floor, exhibitors will conduct 10 of these 15-minute sessions on Thursday afternoon. Attendees have the option to see first-hand available solutions to application issues they face with new products, technologies or potential new suppliers in a fast and efficient presentations.

Celebrating Our Industry – Dedicated to You!

You are the most important part of this industry, *you* are the reason we gather at conNextions and *you* are the reason for exciting changes at DHI. Be part of the industry celebration Thursday morning, beginning with Celebrating Our People – New Opportunities, to engage with one another before the main event: Celebrating Our Industry – Dedicated to You! Here, you will learn just what all the fuss is about: the Education Evolution, Certification Transformation, Advocacy Advancement, Membership Matters and new Member Experience. Everyone is invited and encouraged to attend this eye-opening experience!

Foundation Keynote Lunch

Participate in Friday's Foundation Keynote Lunch and experience Jeff Haven's humorous *Us vs. Them* presentation, during which he will share a better way to look at the generational picture. Get ready to laugh more and learn more than you ever thought possible, because improving your generational issues doesn't have to be boring!

Education and Innovation Sessions

Covering a wide range of topics, sessions are designed to help you both grow your business and learn the finer details of technical issues affecting the industry. The sessions on Wednesday and Thursday are rich in information and detailed takeaways. On the technical side, expert presenters will guide you through topics ranging from new green requirements to the increasing use of BIM in the industry. On the managerial side, learn the finer points of surety bonds and improving cash flow, as well as negotiating pay-if-paid clauses and trends in workforce management. Don't miss the Friday manufacturer-led Innovation Sessions. Get valuable training information, and learn the latest and greatest, directly from the manufacturers themselves.

ChannelExChange

Created to give structure to the informal meetings which have always taken place at the show, ChannelExChange is a program of pre-scheduled appointments between exhibitors and attendees and is facilitated through the conNextions app and Convention Attendee website, www.dhiconnections.zerista.com. ChannelExChange appointments are designed to be held in exhibitor suites before and after the exhibition hours and in exhibitor booths and networking areas during the tradeshow.

conNextions App

The whole show in the palm of your hand! Truly user-friendly, this powerful app will connect you with fellow attendees and exhibitors by way of ChannelExChange appointments and social engagement, as well as allow session note taking. NEW for this year is gamification! Playing is simple and rewarding. Visit the networking page of the conNextions website for more information.

Celebrating Our People – New Opportunities!

Thursday, May 5 | 8:00–8:30 am

Crystal Ballroom

Before the main event Thursday, join a coffee-fueled meet and greet event to interact with fellow door security and safety professionals along with access to DHI leadership. Re-connect and renew; be seen and be heard. We're celebrating the new dawn of your industry association, and you're the guest of honor! Enjoy light morning snacks and plenty of coffee to lead you into a productive show day.



Celebrating Our Industry – Dedicated to You!

Thursday, May 5 | 8:30–9:30 am

Crystal Ballroom

The best way to prove we are no longer your dad's DHI is to deliver a completely new and completely unexpected DHI main event!

Powerful, promising, reinvented and reimagined, this is your chance to hear first-hand how your industry association is evolving to better meet your needs. This presentation is about you—door security and safety professionals—celebrating the important role you play in the construction process and how DHI is focused on supporting you with the tools you've told us you need.

Our leadership and staff will provide a truly engaging presentation that highlights all of our new initiatives. These programs are based on your feedback, and target such important topics as the way we deliver education, the launching of new credentials/certifications, a strengthened membership structure and experience, and the advancement of our advocacy efforts—all created to drive your career as a door security and safety professional, and your company, forward.

*Celebrating Our Industry –
Dedicated to You! sponsored by*

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Foundation Keynote Lunch

Friday, May 6 | 11:45 am–1:30 pm

Crystal Ballroom

Us vs. Them

Jeff Havens

By now you probably know that there are four distinct generations operating side-by-side in today's working world. You've also probably been told that (although probably not in these exact words) that you need to just deal with all these different people, because they're not going away and they're not going to change how they operate. If that advice suits you, fantastic.

However, if you've ever been frustrated by how impossible it seems to employ four different strategies to manage four distinct generations, and if you've ever felt like you're the only one who's being asked to make any changes, then *Us vs. Them* is exactly what you need. Because, as it turns out, there really aren't four generations.

In this fun presentation, you'll learn a simpler way of looking at your own generational picture, and you'll also learn how to understand, recognize, and resolve every generational issue facing today's workforce. That's no exaggeration—by the end of *Us vs. Them*, you will walk away with all of the knowledge you'll need to address 100 percent of the generational issues you'll face for the rest of your career.

Other generational presentations focus on what people want, but *Us vs. Them* will tell you why everyone wants the different things they do. It's an important distinction, and it will make implementing new solutions easier than you ever thought possible.

Takeaways:

- Learn to replace the complicated four-generation model with a workable dichotomy between older, more experienced workers and their younger, less-experienced counterparts.
- Understand the key cultural, technological and social changes that have conspired to create a disconnect between team members from these two generations.
- Walk away with several immediately applicable strategies to address and eliminate problems caused by the disconnect mentioned above.
- Inspire a healthier, more robust work ethic in your younger employees (and your older ones, too).
- Inspire a healthier, more robust attitude toward change in your older employees (and your younger ones, too).



Foundation Keynote Lunch
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Education Sessions

Wednesday, May 4 | 2:00–2:45 pm, 2:55–3:40 pm & 3:50–4:35 pm

Thursday, May 5 | 9:45–10:30 am, 10:40–11:25 am & 11:35 am–12:20 pm

BIM for Construction & Facilities: Show Me the Information!

Andrew Sova, CM-BIM, LEED Green Associate, CSI, Director of BIM Technologies for ASSA ABLOY Openings Studio

What do your customers, the General Contractor and Facility Managers, really want out of BIM? You've heard all about lower construction costs, reduced jobsite waste, improved scheduling and flow of information, but how are these benefits actually being realized in the marketplace? Learn how the "I" in BIM—Information—has become the true force driving an increased demand for BIM content in contract documents. Eligible for 3 CEP points, 16-0203

Code Jeopardy – Basic and Advanced Sessions

Lori Greene, AHC/CDC, FDAI, FDHI, CCPR, Manager of Codes and Resources, Allegion

TJ Gottwalt, AHC/CDC, FDAI, CCPR, CM-BIM, Strategic Architectural Account Manager, Allegion

Tim Weller, AHC/CDC, FDAI, Manager of Codes, Standards and Sustainability, Allegion

Let's play Code Jeopardy! This is your opportunity to get a refresher on the code requirements for door openings and find out what's new in a fun and engaging format. Teams will compete to see who is most familiar with the requirements of the International Building Code, NFPA 80 - Standard for Fire Doors and Other Opening Protectives, NFPA 101- Life Safety Code, and the accessibility standards. Two different sessions will be offered: one covering the basic requirements, and one with more advanced questions. Eligible for 3 CEP points, 16-0201

Facilitating Project Success with ConsensusDocs

Carrie L. Ciliberto, Esq., AGC Senior Director and Counsel, Contracts and Construction Law, ConsensusDocs Deputy Executive Director and Counsel

Contracts can make or break a project. One study estimates that contract prices go up 20 percent on projects that have five risk-shifting clauses. This session will explore how and why contracts impact efficiency in the A/E/C industry and will provide you with drafting strategies and delve into potential alternative approaches to what you are used to traditionally seeing. Also, get a sneak peek at what is coming in 2016 from ConsensusDocs. Eligible for 1 CEP point, 16-0204

The Green Horizon – What's Next in Sustainability

Stephen Farley, Vice President of Commercial Sales, TruStile Doors, LLC

Tim Petersen, LEED AP, Vice President, Sales, AWD Division, VT Industries, Inc.

The next version of LEED is looming and with it comes a whole new set of environmental requirements. These requirements will demand more in-depth environmental information about the products you sell. Language is already changing in project specifications, demanding documentation to standards that have yet to be completed. The environmental movement is driving the market, moving faster than industry and standard organizations can keep up. Covering LEED and other green building programs, this long-term DHI program series updates you on the latest green requirements. Eligible for 3 CEP points, 16-0202

Eliminating Unnecessary Retainage

E. Colette Nelson, Chief Advocacy Officer, American Subcontractors Association, Inc. (ASA)

Retainage has been a problem for subcontractors for years, but you can see improvements in your contracts and payment after attending this workshop, which will cover:

- Ensure fair contract language by eliminating or limiting retainage through new contract language.
- Understand industry standards on retainage that range from industry leading groups to the federal government's positions on retainage.
- Increase your negotiating skills by clarifying your customer's and your own perspectives.

Eligible for 1 CEP point, 16-0207

Getting More "Pay" and Less "If" from Pay-if-Paid Clauses

E. Colette Nelson, Chief Advocacy Officer, American Subcontractors Association, Inc. (ASA)

Learn the difference between "pay-if-paid" and "pay-when-paid" clauses, how to modify them to reduce your risk of nonpayment, and negotiating tips to help you win that modification. Eligible for 1 CEP point, 16-0205

Improving Cash Flow

E. Colette Nelson, Chief Advocacy Officer, American Subcontractors Association, Inc. (ASA)

During this program, you'll learn how to establish a good foundation for your cash management program, heed the lessons of your customer's track record, use your time and employees to your advantage, and use the leverage you have to get paid.

Eligible for 1 CEP point, 16-0206

How to Increase Revenues through Excellent Customer Service

Johnny Walker, MA, CPC, Executive Coach and Facilitator

In this breakout session, you will learn about the Service Profit Chain, a simple problem-solving formula your team can use, and the importance of process over personality. Johnny Walker will facilitate table group discussions and share ideas on how your customers can receive customer service excellence every time they connect with your people. Join us for this breakout session if you want to learn how to increase your revenues through excellent customer service. Eligible for 1 CEP point, 16-0210

Increasing Sales without Pushing Products

Johnny Walker, MA, CPC, Executive Coach and Facilitator

In this session, Johnny Walker will share some ideas on what typical sales often look like, why most training doesn't work, effective interviewing and The GAP Model. There will be group discussions, ideas to implement when you get back to your office, and even opportunities to take it to the next level. Eligible for 1 CEP point, 16-0208

The Players Can't Play If the Coaches Can't Coach

Johnny Walker, MA, CPC, Executive Coach and Facilitator

Johnny Walker will facilitate table group discussion and share ideas on how your managers can learn to coach their people toward excellence. You will learn the difference between managing and coaching, the important part managers play in the Service Profit Chain, and what part listening plays in the process. Eligible for 1 CEP point, 16-0209

Opening the Door to Surety Credit: Understanding Bond Types and Surety Relationships

Paul J. Ciambriello, Vice President, Guignard Company

Nate Omodt, CPCU, AFSB, Managing Director, Bond & Specialty Insurance, Construction Services, Travelers

An accomplished surety bond producer and a senior corporate surety underwriter will guide you in a fast-paced journey through the world of surety bonding, explaining what surety bonds are

and what they are not; how they differ from traditional insurance products; their importance in ensuring the integrity of commercial transactions and the protection of contracting parties; the common types of bonds used by the door and hardware industry, the pathway for a firm to achieve surety credit; and the process for making claims against payment bonds. Eligible for 1 CEP Point, 16-0211

Impact of NFPA 80, Standard for Fire Doors and Other Opening Protectives, on the Healthcare Market with 2016 Update

Paul G. Baillargeon, AHC, FDAI, Vice President, Technical Consulting, Door Security & Safety Foundation

Kristin Bigda, P.E., Principal Fire Protection Engineer, NFPA

NFPA 80, Standard for Fire Doors and Other Opening Protectives, requires the annual inspection of fire doors as well as documentation of inspection, testing and maintenance procedures. Upon adoption of the newer model codes and the NFPA 80 standard, healthcare and other types of facility maintenance personnel will require the awareness and expertise to support their inspection, remediation, and ongoing maintenance needs to ensure their facility's compliance with NFPA 80. Learn more about the inspection, testing, and maintenance provisions of NFPA 80 and how your facility will be impacted by these new provisions.

Eligible for 3 CEP Points, 16-0311

Getting Things Done

Michael E. Brunner, President, Brunner & Associates, Inc.

Getting Things Done is a seminar based on David Allen's best-selling book, *Getting Things Done*. It describes a proven approach to being effective with all that is on one's plate. With a complete and current inventory of all your commitments, organized and reviewed in a systematic way, you can focus clearly and make wise choices about what to do (and not do) at any moment. Brunner shows you actual examples of how this would work and how it leads to one being better organized, less stressed, more productive and happier. Eligible for 1 CEP point, 16-0212

Planning and Goal Setting for Success

Michael E. Brunner, President, Brunner & Associates, Inc.

This seminar presents a simple and practical approach to clarifying roles and expectations by developing clear, measurable goals and objectives. If an organization ensured that every employee had a set of annual objectives—agreed to by the employee and the supervisor—and aligned with the organization's mission and vision, the increase in overall productivity would be huge. If you believe your unit, department or organization could be producing more with less time and effort, come join us and find out how. Eligible for 1 CEP point, 16-0213

Innovation Sessions

Manufacturer-led sessions with in-depth solutions to today's application issues.

Friday, May 6 | 9:00–9:45 am, 9:55–10:40 am & 10:50–11:35 am

Convergence: How do we best choose electro-mechanical solutions vs. traditional mechanical ones in a way that better satisfies the customer and grows our relationship with the end-user?

Presented by Allegion

Electro-mechanical versus traditional mechanical solutions—how do you choose in a way that enhances your value and relationship with the end user? Allegion's Futurist and Director of Connectivity Platforms, Rob Martens, hosts an interactive session on how to leverage convergence to your advantage in a dynamic and changing marketplace. Martens will explore the current thoughts, concerns and needs of facility managers, IT staff and CIOs regarding technology in the physical access control marketplace. Martens will share suggestions on important criteria when considering electro-mechanical security advancements and solutions that may help guide decision makers to avoid the most dangerous state of all—inaction.

Uncovering New Opportunities in Multi-Family Housing and Small Business

Presented by ASSA ABLOY Americas

The multi-family housing and small business markets have been largely underserved in terms of security and present a tremendous opportunity for the growth of your business. Traditional enterprise-level solutions can be cost-prohibitive and far too complex for the needs of multi-family housing properties and small businesses. On the other end of the spectrum, mechanical solutions don't provide the right level of security, convenience or accountability. Gain an understanding of the specific challenges and requirements that these customers face, and learn how you can address those challenges with flexible, scalable solutions tailored specifically to the needs of these two growing market segments.

Sensor and Security Solutions for Commercial Door & Building Applications

Presented by BEA, Inc.

BEA, Inc. is a global leader in sensing technology for automatic doors, as well as low energy, access control and industrial applications. Our National Sales Manager for BEA Security will present examples of our innovation and dedication toward providing safer, smarter solutions for the automatic door industry. We will discuss ANSI standards over the last 15 years as they relate to automatic swing doors and detail BEA's answer to changing industry standards for safety within that market, including involvement in key codes and standards groups, innovative product development and using new technologies in the automatic door industry and beyond.

Self-Service Business Intelligence Using Excel PowerPivot and the Comsense Enterprise Data Warehouse

Presented by Comsense, Inc.

Learn how to use Microsoft Excel PowerPivot to glean valuable information from the data already present in your Comsense Enterprise system. Starting with a sample business question, we will walk through the steps required to get that question answered. We will start at the very beginning and connect Excel to the database, review the available data in the Comsense Data Warehouse, organize the required data in the PowerPivot data model, and finally, create a pivot table and pivot chart to deliver the answer to our question.



NFPA 80: Field Labeling Service: Scope, Procedures & New Requirements

Presented by Guardian Fire Testing Laboratories, Inc.

Discussion will center around the Scope and Procedures of Guardian's Field Labeling program. The ramifications of the new NFPA glazing labeling requirement and its effects on wire glass manufacturers and distributors will be analyzed. Wire glass still is used in many areas across the U.S. The new requirement also will affect fire door assemblies already installed in public buildings such as healthcare facilities, hotels, motels, apartment and office buildings. Ways in which the new requirement can be met by all concerned will be presented.

BEST SHELTER: Introducing Responsive Lockdown

Presented by Stanley Security Solutions, Inc.

Schools, businesses and public places require a new kind of response to security. In a live shooter or violent incident, it's critical to be able to quickly create safe spaces within the interior of a building: classrooms, offices, assembly areas, multi-purpose rooms, corridors, etc.; a solution that allows administration to respond rapidly to safeguard students, employees, customers and visitors. BEST SHELTER—a unique combination of code-compliant mechanical hardware and proven technologies—is a responsive lockdown solution specifically designed for education and business environments. This session will provide attendees with a simple, affordable solution that ensures appropriate lockdown—and protection of lives—so schools and businesses can focus on what they do best

What's New in School Locking

Presented by Securitech Group, Inc.

As an industry, we provided a pretty traditional body of products to schools. All that has changed over the last 10 years, as the concept of an open campus for schools has all but disappeared. The last few years has seen the trend of creating "Safe Havens" in classrooms, mostly as a response to the Sandy Hook shooting and incidents which have followed. We'll not only talk about product solutions, but also discuss the proper language to use when discussing this sensitive topic.

What's New in Windstorm Solutions

Presented by Securitech Group, Inc.

"Toto, we're not in Kansas anymore." The same could be said of windstorms. The change in our environment has increased the areas in the U.S. where tornados have touched down. Hurricanes have grown ever more intensive. This seminar will discuss advances in products to meet the growing need and different requirements to satisfy users. Shelters of all types will be discussed, as well as a comprehensive guide to door manufacturers and their tested solutions.

How to Solve the Most Difficult Locking Scenarios

Presented by Securitech Group, Inc.

Architects dream it, security consultants add to it, users demand it, hardware suppliers wonder how. In a nutshell, that's what today's special locking world is all about. Whether it is providing safety and security, locking an unusually tall door, meeting Bluetooth unlocking requests or providing the highest level of forced entry, there are solutions for almost every single locking need. How do you find these? It starts with being able to gather the correct information and then sourcing the product. We'll discuss the process and show examples of existing products and how they can be modified to meet special needs, as well as entirely new products created to solve difficult locking scenarios.

Importance of Acoustics in Healthcare the Vertical Segment

Presented by Masonite Architectural

A session focused on acoustics and its importance of the healthcare vertical segment.

Interpreting Division 8 Specifications

Presented by Masonite Architectural

Educational session on writing and interpreting Division 8 specifications. This will include eliminating contradictions and interpreting if a project is a LEED project.

SolutionSessions

New Solutions. New Products. New Technologies.

Thursday, May 5 | 1:00–5:00 pm

Get more education and more from your time at the exposition by combining the two. DHI exhibitors will present quick 15-minute SolutionSessions on the tradeshow floor during Expo hours. By participating in these sessions, you will learn the available solutions to application issues you face with new products, technologies or potential new suppliers.

Be sure to add these sessions to your DHI conNextions schedule so you don't miss them!

PDQ Manufacturing

Classroom Security Solutions

Thursday 1:00–1:15 pm

Presentation of PDQ's exclusive line-up of solutions designed to increase classroom security.

National Guard Products, Inc.

Understanding Fire-Rated Glass

Thursday 1:50–2:05 pm

Review of most recent IBC glass codes relative to areas classified as hazardous locations.

ASSA ABLOY Americas

Uncovering New Opportunities in Multi-Family Housing and Small Business

Thursday 1:25–1:40 pm

The multi-family housing and small business markets have been largely underserved in terms of security and present a tremendous opportunity for the growth of your business. Gain an understanding of the specific challenges and requirements that these customers face, and learn how you can address those challenges with flexible, scalable solutions tailored specifically to the needs of these two growing market segments.

Allegion

Innovative Cost-Effective Access Control Hardware Solutions from Schlage

Thursday 2:15–2:30 pm

Security and access control technologies continue to evolve. In this session, you'll learn about the latest from Schlage in innovative cost-effective access control hardware solutions designed to extend access control deeper into interior spaces to deliver enhanced security, convenience and efficiency throughout nearly any building.



AMBICO Limited

Specialized Doors and Frames for Health Care Environments

Thursday 2:40–2:55 pm

AMBICO has developed a large range of products to fulfill the many demands of the built, healthcare environment. Among our many products, we offer stainless steel assemblies in areas demanding a high level of cleanliness; protection against radiation or containment of radiation within treatment areas with lead-lined assemblies; and radio frequency (RF) and electromagnetic interference (EMI) shielded assemblies to eliminate cell phone or other types of interference in and around rooms and equipment requiring proper shielding.

Eggers Industries

Vinyl-Clad Flush Doors – The High Impact Solution

Thursday 3:05–3:40 pm

Impact-resistant flush doors offer an attractive solution for high-traffic facilities such as health care. Find out why this product has become the answer to a long-standing problem and how the face and edge-design positions it perfectly to handle the stress of these applications. You'll learn about construction, capabilities, and face options, along with a quick discussion on how this product compares to other options on the market.

Stanley Security Solutions, Inc.

BEST SHELTER: Introducing Responsive Lockdown

Thursday 3:30–3:45 pm

Schools, businesses and public places require a new kind of response to security. In a live shooter or violent incident, it's critical to be able to quickly create safe spaces within the interior of a building: classrooms, offices, assembly areas, multi-purpose rooms, corridors, etc.; a solution that allows administration to respond rapidly to safeguard students, employees, customers and visitors. BEST SHELTER—a unique combination of code-compliant mechanical hardware and proven technologies—is a responsive lockdown solution specifically designed for education and business environments. This session will provide attendees with a simple, affordable solution that ensures appropriate lockdown—and protection of lives—so schools and businesses can focus on what they do best.

Detex Corporation

DETEX CORP EASYKIT

Thursday 3:55–4:10 pm

Description of how Detex can provide the total answer to your door system challenges.

ABH Manufacturing, Inc.

The Quiet Hospital

Thursday 4:20–4:35 pm

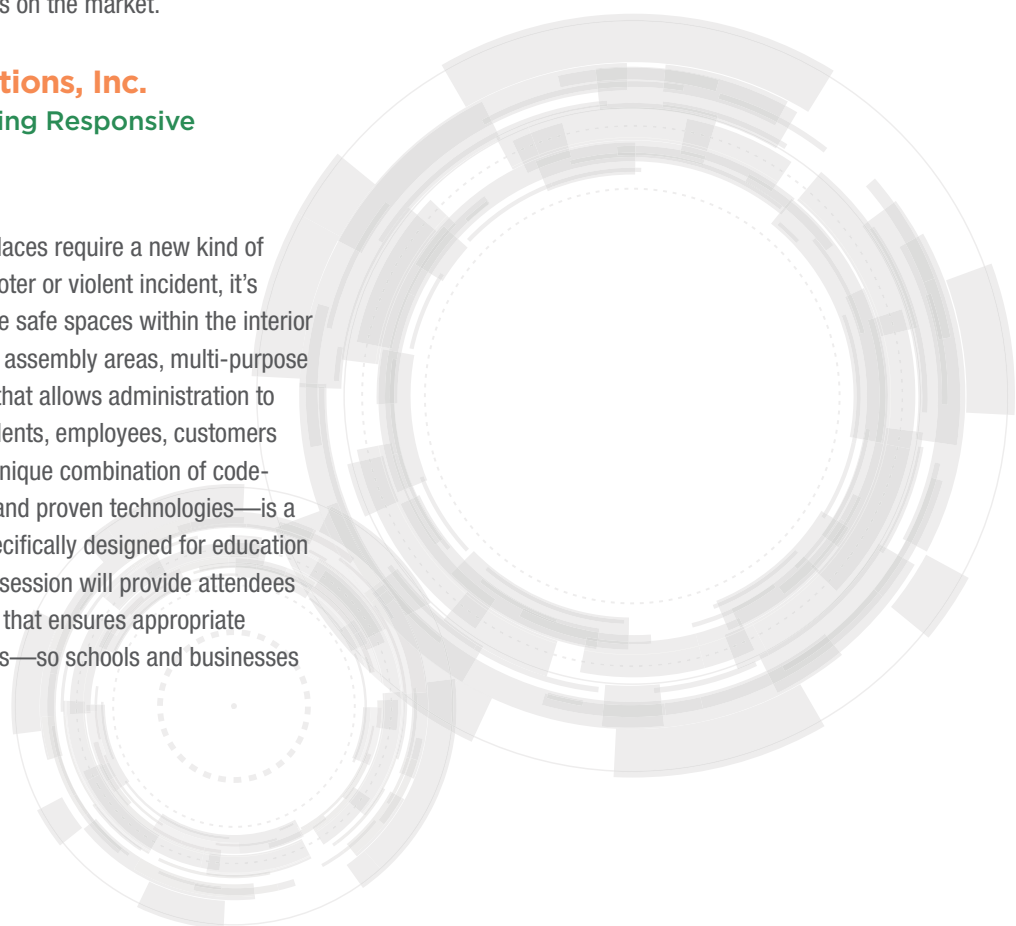
The Quiet Hospital Movement is a hot topic in the health care industry. Learn how it relates to patient care as well as how it increases the government funding they receive.

Beyerle US, LLC

Base Bottom Roller Systems

Thursday 4:45–5:00 pm

Beyerle US has a unique style of sliding door hardware that is installed on the base of the door rather than the top of the door. We will be discussing the different styles, models and benefits of this type of hardware.



Exhibitor Recognition

DHI is proud to recognize and thank many of our 2016 conNextions exhibitors for their longstanding commitment to this event and our industry. Through their continued participation, they display their products, services and solutions to our industry's openings issues; demonstrate the latest developments and technologies available to attendees; and confirm the importance of this annual gathering of the industry's influential players. They highly value the opportunity for face-to-face business meetings, whether demonstrating products or discussing mutually beneficial strategies with their channel partners.

Please thank our exhibitors for their significant investment in our industry, and their participation and support in our annual convention.

Since 1976, DHI has held a convention for the door and hardware industry, and a special few exhibitors have participated in every one of them. The following exhibitors deserve special recognition for exhibiting at all 40 conventions:

Allegion

ASSA ABLOY Americas

Detex Corporation

National Guard Products, Inc.

Republic Doors and Frames



Following are this year's exhibiting companies with five or more total years' participation.
Those company names in **GREEN** indicate consecutive years exhibiting.

Companies exhibiting 35+ total years:

Accurate Lock and Hardware Co., LLC	39
Masonite Architectural	39
Security Door Controls	39
Stanley Security Solutions, Inc.	39
Hager Companies	38
AMPCO by AJW	37
Anemostat Door Products	37
Bommer Industries, Inc.	37
Door Controls International	37
Reese Enterprises, Inc.	37
TRIMCO	37
Woodfold Mfg., Inc.	37
Mesker Openings Group	36

Companies exhibiting 30–35 total years:

Activar Construction Products Group	35
Eggers Industries	35
Alarm Lock Systems, Inc.	34
MARKS USA	33
Intertek	32
L. E. Johnson Products, Inc.	32
PDQ Manufacturing	32
Timely Industries, Inc.	32
Securitech Group, Inc.	31
Architectural Control Systems, Inc.	30
HMF Express	30
VT Industries, Inc.	30

Companies exhibiting 25–29 total years:

Cal-Royal Products, Inc.	27
National Custom Hollow Metal	27
Dayton Industries, Inc.	26

Companies exhibiting 20–24 total years:

ABH Manufacturing, Inc.	24
UL, Inc.	24
A&L Shielding, Inc.	23
Daybar Commercial Steel Doors & Frames	23
Comsense, Inc.	21
CORRIM Company	21
Gensteel Doors	21

Companies exhibiting 15–19 total years:

AMBICO Limited	19
Overly Door Company	19
contractERP	18
Doormerica	18
Karona, Inc.	17
C. R. Laurence Company, Inc.	16
Krieger Specialty Products Company	16
Lorient North America	16
NGFL Incorporated	16
Burns Manufacturing, Inc.	15
KVAL, Inc.	15
Stier Steel Corp.	15

Companies exhibiting 10–14 total years:

Dictator US, Inc.	14
Concept Frames, Inc.	13
Premier Products, Inc.	13
Midwest Wholesale Hardware	12
Top Notch Distributors, Inc.	12
Townsteel, Inc.	12
FMS, Inc., Frame Material Supply, Inc.	10
Guardian Fire Testing Technologies, Inc.	10
Special-Lite, Inc.	10

Companies exhibiting 5–9 total years:

AVAware Technologies	9
BEA, Inc.	9
Construction Specialties, Inc.	9
Custom Metal Products	9
emullion Corporation	9
Five Lakes Manufacturing, Inc.	8
ODICE, LLC	8
Sugatsune America, Inc.	8
TOAD, LLC	8
Unison Hardware, Inc.	8
Philadelphia Hardware Group, Inc.	7
Software for Hardware	7
MultiAx America, Inc.	6
Door and Hardware Systems, Inc. (DHSI)	5
Full House Machinery	5

A special welcome to our first-time exhibiting companies:

Jako Hardware Aventura, Inc.
Segos America
Washington Hardwoods and Architectural Products, Inc.
Zhongshan Keyman Locks Products



May 4–6, 2016 Orlando, Florida

DHIconNextions.org

This is your **ONLY** opportunity this year

to meet face to face with the largest number of industry-leading manufacturers and suppliers in one location.

More than 100 companies will be exhibiting the latest technologies, products and services that offer solutions and opportunities for your business. Learn about new developments that directly impact the openings industry, your company and your career.

Exhibition Schedule:

Wednesday, May 4

5:00–8:00 pm Exclusive Exhibit Hours with Opening Reception on the Tradeshow Floor

Thursday, May 5

12:30–6:30 pm Exclusive Exhibit Hours
1:00–5:00 pm SolutionSessions on the Tradeshow Floor

For an up-to-date list of participating exhibitors, visit www.dhiconNextions.org.

2016 EXHIBITOR LIST

A&L Shielding, Inc.
ABH Manufacturing, Inc.
Accurate Lock and Hardware Co., LLC
Activar Construction Products Group
Alarm Lock Systems, Inc.
Allegion
AMBICO Limited
AMPCO By AJW
Anemostat Door Products
Architectural Control Systems, Inc.
ASIS International
ASSA ABLOY Americas
AVAware Technologies
BEA, Inc.
Beyerle US, LLC
Bommer Industries, Inc.
Borg Locks (HK), Ltd.
Builders Hardware Manufacturers Association (BHMA)
Bulldog Fasteners, LLC
Burns Manufacturing, Inc.
C. R. Laurence Company, Inc.
Cal-Royal Products, Inc.
Commercial Door Systems / Tiger Door
Comsense, Inc.
Concept Frames, Inc.
Construction Specialties, Inc.
Contact Industries

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Dayton Industries, Inc.
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Multiax America, Inc.
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Stier Steel Corp.
Sugatsune America, Inc.
Surelock McGill, LLC
The Association of Locksmiths of America, Inc.
Timely Industries, Inc.
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Top Notch Distributors, Inc.
Townsteel, Inc.
TP Doors
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Unified Purchasing Group
Unison Hardware, Inc.
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Window and Door Manufacturers Association
Woodfold Mfg., Inc.
Zhongshan Keyman Locks Products

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Pocket Guide

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Booth #335

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sales@alshielding.com
www.alshielding.com

A&L Shielding supplies lead lined wood and hollow metal door assemblies, lead lined hollow metal frames, bullet resistant openings and other custom shielded openings.

ABH Manufacturing, Inc.

Booth #429

1222 Ardmore Avenue
Itasca, IL 60143
(630) 875 9900; Fax: (800) 932 9224
abhinfo@abhmfg.com
www.abhmfg.com

Family owned and operated, ABH Manufacturing continues to expand with new and innovative products. ABH's sister company, Omega Door Frames, manufactures interior aluminum door frames.

Accurate Lock and Hardware Co., LLC

Booth #525

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Stamford, CT 06902
(203) 348 8865; Fax: (203) 348 5234
sales@accuratelockandhardware.com
www.accuratelockandhardware.com

U.S. manufacturer of locks and custom architectural hardware including pocket/sliding door locksets and a line of ligature-resistant locks and hardware. Specialists in restoration projects.

Activar Construction Products Group

Booth #523

4450 W 78th Street Circle
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(952) 835 6850; (800) 554 6077
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Sales@activarcpg.com
w2www.activarcpg.com

The Activar Construction Products Group includes Air Louvers, Hiawatha and JL Industries. From door components such

as vision lites, louvers and architectural hardware, to fire protection, roof hatches and access doors, we stock 10 U.S. locations with our most popular items for 1 3 day shipment. With Minnesota and California manufacturing, we have the ability to meet both standard and specialty needs with quick delivery and the quality you have come to expect.

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Booth #505

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(800) 626 7590
sales@adamsrite.com
www.adamsrite.com

Adams Rite is a 100 year old manufacturer of exit devices, electric strikes, narrow stile locks and latches, access control hardware and the Rite Door Integrated Fire Door.

Alarm Lock Systems, Inc.

Booth #430

345 Bayview Avenue
Amityville, NY 11701 4871
(800) 252 5625; (800) 252-5625
Fax: (631) 789 3383
www.alarmlock.com

Alarm Lock Systems, Inc. has a strong reputation as a respected leader in door technologies. Our electronic access locks provide keyless access dependability, time automated security and a wealth of management information.

Allegion

Booth #405

11819 North Pennsylvania Street
Carmel, IN 46032
(877) 671 7011; Fax: (800) 288 4242
www.allegion.com

Allegion (NYSE: ALLE) is a global pioneer in safety and security, with leading brands like CISA®, Interflex®, LCN®, Schlage® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion produces a range of solutions for homes, businesses, schools and other institutions. Allegion is a \$2 billion company, with products sold in almost 130 countries. For more, visit www.allegion.com.

The Associated Locksmiths of America, Inc.

Booth 338

3500 Easy Street
Dallas, TX 75247-6416
(214) 819-9733; Fax: (214) 819-9736
bob@alao.org
www.alao.org

AMBICO Limited

See our ad on page 109.

Booth #921

See our ad on page XX.
1120 Cummings Avenue
Ottawa, ON K1J 7R8, Canada
(888) 423 2224; Fax: (800) 465 8561
specialized@ambico.com
www.ambico.com

AMBICO Limited manufactures leading edge, laboratory tested, specialized doors, frames and windows. We boast an extensive line of decorative and engineered products. Our network of independent reps and distributors enhances our ability to provide dedicated client service throughout the world.

AMPCO By AJW

Booth #818

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info@ampco.com
www.ampco.com

Ampco by AJW, Focused on Service, is a commercial building products manufacturer with multiple locations across the United States. Our specialty is bundling solutions that can include washroom partitions, commercial doors, washroom accessories, visual display products, and storage solutions.

Anemostat Door Products

Booth #424

See our ad on page 67.

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door@anemostat.com
www.anemostat.com

Anemostat manufactures the most complete line of fire-rated vision frames,

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www.allegion.com

aptiQ Smart Technology enhances the intelligence of products through a secure, open architecture design in readers, credentials, and smart phone applications. aptiQ seamlessly interfaces and communicates with a variety of products, and provides a platform that easily adapts as new innovations enter the marketplace. The aptiQ portfolio includes readers designed to be ultra easy, complete and versatile, accommodating most manufacturers' magnetic stripe cards, proximity cards, aptiQ smart cards, and the latest in mobile technology (NFC). aptiQ contactless smart credentials offer a variety of data storage options and impressive data transfer rates in an open architecture design.

Architectural Control Systems, Inc. **Booth #503**

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(314) 652 5588; (800) 753 5558
Fax: (314) 652 2090
eklein@acsi-inc.com
www.acsi-inc.com

We design and manufacture a complete line of quality electrified hardware products which meet the diverse needs of the architectural and security hardware industry.

ASIS International **Booth #233**

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ASSA ABLOY Americas **Booth #505**

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110 Sargent Drive
New Haven, CT 06511
(800) 377 3948; Fax: (203) 777 9042
info@assaabloydss.com
www.assaabloydss.com

ASSA ABLOY is the global leader in door opening solutions, dedicated to satisfying end user demands for security, safety and convenience. Among our product innovations are a full spectrum of security technologies ranging from advanced electronic access control to traditional mechanical locks and hardware. We offer a wide selection of decorative doors and hardware, sustainable openings that address green building challenges and architectural specification support, including BIM software tools.

AVAware Technologies **Booth #535**

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info@AVAware.com
www.AVAware.com

Developing industry software solutions for nearly 20 years. AVAproject is a comprehensive project management system encompassing all aspects of the bidding, detailing and submission cycle, with the most complete door and frame drawing tool available AVAcad. AVAproject Fusion completes the solution with the most advanced business intelligence, reporting and ERP integration software in the industry. AVAware's flexible product suite can be integrated with virtually any existing accounting system.

Baron Steel Doors & Frames, An ASSA ABLOY Group Brand **Booth #505**

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sales@baronmetal.com
www.baronmetal.com

Baron manufactures high quality steel doors and frames. We are Canada's

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BEA, Inc. **Booth #436**

See our ad on page 69.

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security@beainc.com
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BEA's Security Segment offers a complete line of products designed to maximize a building's safety, security and efficiency. The Security segment's main product lines include Maglocks, Request to Exit Sensors, Activation Plates, Touchless Activation, Wireless Transmitters and Receivers, Electric Strikes and other items that secure a building and safeguard the people inside it. From employee safety to building security, BEA covers your door security needs.

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www.beyerle-us.com

Door hardware manufacturer distributed out of Atlanta, Ga. Products are ready to ship across North America. Architectural designer's appeal, European high quality stainless steel decorative hardware, sliding door hardware, locking pulls, handles, flush pulls and sliding shower door hardware. MADE IN GERMANY, stainless steel products offered in different finishes, including oil rubbed bronze. We have a wide range of styles that are appearing across North America.

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Booth #717

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140-year-old family-owned manufacturer of Quality Builders Hardware, Contract Hinges, Spring Hinges, Specialty Pivots and Postal Specialty products proudly MADE in the USA.

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Booth #217

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552 9021 3485
sales@borglocks.us

From 20 years of manufacturing experience, Borg has developed a unique range of pushbutton mechanical access control locks designed to suit all applications, both internal and external, and from light to heavy duty.

Builders Hardware Manufacturers Association (BHMA)

Booth #239

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www.buildershardware.com

As the industry leader in building safety and security, BHMA is the only organization accredited by ANSI to develop performance standards for builders hardware. BHMA also maintains third party certification.

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Booth #312

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Booth #843

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www.burnsmfg.com

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Booth #330

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crl@crlaurence.com

www.crlaurence.com

C.R. Laurence offers a full range of Jackson, Blumcraft and CRL brand door hardware including surface, overhead and floor mounted closers, pivots, access control handles, locks and cylinders, electronic locks, door pulls, panic exit devices, commercial hinges, entry locks, and door thresholds and weatherization hardware.

Cal-Royal Products, Inc.

Booth #605

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(323) 888 6601; (800) 876 9258
Fax: (323) 888 6699
sales@calroyal.com

www.calroyal.com

Manufacturer of a complete line of builders hardware, including exit devices, commercial/residential locksets, hinges (decorative and commercial), and door closers.

Ceco Door, An ASSA ABLOY Group Brand

Booth #505

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(731) 686 8345; (888) 232 6366
Fax: (731) 686 4211

www.cecodoor.com

Ceco Door is the world's leading manufacturer of steel and hollow metal doors and frames. We supply a full line of quality custom and standard hollow metal doors and frames for new and retrofit construction projects in the commercial, educational and healthcare markets.

Commercial Door Systems

Booth #923

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(269) 327 7003; (800) 828 3655
Fax: (800) 828 3577
doors@eliasoncorp.com

www.eliasoncorp.com

Commercial Door Systems is your ultimate provider of durable, attractive Fiberglass doors and frames. CDS has continued to provide opening systems for educational, commercial and institutional applications for over 28 years, fulfilling the need for the toughest door and frame product. CDS continues to be the solution for door and frame applications requiring an attractive, durable, low maintenance product that will last! We are committed to providing an opening system that will provide value to you and your customer for years.

Comsense, Inc.

Booth #223

See our ad on page 33.

202 7145 West Credit Avenue, Building 2
Mississauga, ON L5N 67, Canada
(905) 542 9300; Fax: (905) 542 1465
sales@comsenseinc.com

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Comsense is a leading provider of computer software solutions for the Architectural Openings industry. Our systems facilitate all facets of distribution from spec writing through to financial reporting.

Remember the Alamo!



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Booth #201

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concept@conceptframes.com
www.conceptframes.com

Concept Frames, Inc. manufactures custom hollow metal frames and doors, including stainless steel and lead lined, for commercial and industrial use. Quick shipments and custom designs are our specialty.

Construction Specialties, Inc.™

Booth #621

See our ad on page 17.

3 Werner Way
Lebanon, NJ 08833
(908) 236 0800; (800) 972 7214
Fax: (908) 849 4285
acrovyn@acrovyn.com
www.csgroup.com/acrovyn doors

Cradle to Cradle Certified Acrovyn® Doors feature impact resistant PVC Free Acrovyn material that stands up against damage from heavy traffic, without cracking or chipping. For added impact resistance, Acrovyn Doors also feature rounded edges that are field replaceable if ever damaged. For more peace of mind, introducing the New Acrovyn Frame System. This system features a steel frame clad with durable Acrovyn material, which is also field replaceable if ever damaged.

Contact Industries

Booth #235

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(503) 228 7361; Fax: (503) 221 1340
droth@contactind.com
www.contactind.com

Contact Industries, an ISO 9001 and FSC-Certified veneered wood components manufacturer, has the skill to set and ability to economically manufacture products efficiently and aesthetically pleasing, to meet your unique design needs in fire-rated, primed and hardwood frames.

contractERP

Booth #915

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contractERP is a business management and accounting platform tailored specifically for the architectural openings industry. contractERP ties every facet of the job back to the contract that governs it, allowing you to manage everything from sales and special inventory tracking, to production scheduling and shop floor management, to installation scheduling and service calls—all while keeping a sharp eye on job profitability and costs. Already running Protech, e/PWS, Software for Hardware, or Avaware? Great! contractERP can import your project submittal details, eliminating costly rekeying and data errors.

CORBIN RUSSWIN, An ASSA ABLOY Group Brand

Booth #505

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DCI is a U.S. manufacturer of life safety and security products for the commercial door hardware industry, specializing in high security rim exit devices, power supplies, door coordinators, flush bolts, and miscellaneous door hardware.

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Booth #524

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Booth #732

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National Custom Hollow Metal Booth #626

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Little Rock, AR 72206
(501) 372 3441; (800) 334 3070
Fax: (501) 375 3070
Shea@nchmetal.com
www.nationalcustomhollowmetal.com

National Custom Hollow Metal quick ships hollow metal in 5 to 10 working days. Other specialties are DEFENDDOOR Stainless steel doors/frames, TRUSTSHIELD lead lined doors/frames, Hurricane Doors. Doors and frames up to 10'X 12'pairs, 12 18 Gauge fire doors/frames labeled by UL and WHI.

National Fire Protection Association Booth #334

1 Batterymarch Park
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Quincy, MA 02169 7471
(617) 770 3000; (800) 344 3555
Fax: (617) 770 0700
www.nfpa.org

NFPA is an information and knowledge organization devoted to eliminating death, injury, property and economic loss. Along with supporting the development of our 300 codes and standards NFPA also offers a range of training options where and when you need it—classroom, online, and onsite. The NFPA Xchange™ is an online community that lets you connect with professionals worldwide, explore content, share ideas and ask questions.

National Guard Products, Inc. Booth #727

See our ad on the back cover.

4985 E Raines Road
PO Box 753430
Memphis, TN 38175 3430
(800) 647 7874; (800) 647 7874
Fax: (800) 255 7874
dan@ngpinc.com
www.ngp.com

Thank you for your valued Threshold, Gasketing, Lite Kit, Glass and Louver business. At NGP, customers come first.

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NGFL is the only official licensed distributor in the NAFTA region for Palusol/Palusol SW cores as manufactured by BASF SE, as well as for Interdens and Exterdens manufactured by Dr. Wolman GmbH. Expertise in all facets of intumescent technology.

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www.nortondoorcontrols.com

Norton Door Controls offers a comprehensive line of door controls designed and manufactured to ensure superior performance, reliability and application breadth. Norton offers traditional surface, industrial economy, overhead concealed, commercial and architectural grade closers. To complement the closers, Norton also offers a unique range of arms to help provide maximum door and frame protection.

ODICE LLC - Passive Fire Protection Booth #215

1997 Newborn Rd. Rutledge GA 30663
(706) 557-7772; Fax: (706) 557-9334
info@odice.com
www.odice.com

ODICE offers a full range of fire-resistant products. We supply intumescent seals, incombustible boards, and insulation materials - all the necessary materials for the manufacturers of fire-rated doors, partition walls, shutters, safes and other fire-rated construction. We have our own laboratory with two fire-resistance test furnaces for preliminary fire tests of our customers and partners.

OMNIA Industries, Inc. Booth #836

5 Cliffside Drive, PO Box 330
Cedar Grove, NJ 07009-1234
(973) 239-7272; (800) 310-7960
Fax: (800) 542-7611
info@omniaindustries.com
www.omniaindustries.com

OMNIA, a leading manufacturer for over 50 years, crafts solid brass and stainless steel latchsets, mortise entry locksets, deadbolt locksets, narrow backset mortise locks and multipoint trim in more than 90 knob and lever designs. OMNIA also offers a wide range of decorative cabinet hardware, solid brass hinges and architectural hardware, available through authorized showrooms throughout North America.

Overly Door Company Booth #701

See our ad on page 89.

574 W Otterman Street
Greensburg, PA 15601 0070
(724) 834 7300; (800) 979 7300
Fax: (724) 830 2871
overly@overly.com
www.overly.com

Overly Door Company is a custom manufacturer of sound retardant, blast and pressure resistant, bullet resistant and security doors and windows, for industrial, commercial and governmental applications.

PDQ Manufacturing Booth #607

2754 Creek Hill Road
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(717) 656 4281; (800) 441 9692
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656	657
	
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702	707

Philadelphia Hardware Group, Inc. Booth #103

6590 Top Gun Street
San Diego, CA 92121
(800) 545 2309; Fax: (800) 828 0988
kenny@philhardware.com
www.philhardware.com

Philadelphia Hardware Group is a manufacturer and distributor of door and bath hardware. We provide a wide variety of door hardware ranging from Advantage Commercial Locks to Advantage Door Closers and Exit Devices. We also carry a full line of Advantage Hinges, Advantage Trim Hardware, CitiLoc Residential Locks, EZ SET Residential Locks along with Bath Accessories as well.

Premier Products, Inc. Booth #813

2840 Sterlington Road, PO Box 7269
Monroe, LA 71203
(318) 361 0796; (800) 962 6517
Fax: (318) 323 5068
sales@trustpremier.com
www.trustpremier.com

Premier manufacturers a complete line of hollow metal doors and frames, including fire-rated and windstorm assemblies. Distribution centers are located in Monroe (LA), Atlanta and Houston.

QAI Laboratories Booth #337

16 211 Schoolhouse Street
Coquitlam, BC V3K 4X9, Canada
(604) 527 8378; Fax: (604) 527 8368
qhuckell@qai.org
www.qai.org

QAI specializes in testing and certification of building products. We offer comprehensive testing services for a vast array of building products in the broad areas of construction materials, roofing products, doors, fire doors and windows.

Reese Enterprises, Inc. Booth #816

16350 Asher Avenue
PO Box 459
Rosemount, MN 55068
(651) 423 1126; (800) 328 0953
Fax: (800) 334 8823

info@reeseusa.com
www.reeseusa.com

Reese provides a full selection of premium quality products to the commercial construction industry. Products offered include thresholds, weatherstrips and intumescent seals; aluminum floor mats and grates.

Republic Doors and Frames Booth #715

155 Republic Drive
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(731) 352 3383; (800) 733 3667
Fax: (731) 352 2556
www.republicdoor.com

Republic is an American manufacturer of standard and custom steel doors and frames. Products include bullet-resistant, STC, lead lined and FEMA units. Republic has a network of service centers offering set up and weld and modified products.

RIXSON, An ASSA ABLOY Group Brand Booth #505

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RIXSON Specialty Door Controls offers customized solutions for challenging design requirements. We are the leading North American provider of concealed closers, pivots and mechanical/electromechanical door holders.

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info@rockwoodmfg.com
www.rockwoodmfg.com

Rockwood's product line includes both institutional and decorative door pulls, made to order protection kick plates, push and pull plates, door stops, flush bolts and auxiliary hardware. Rockwood decorative door pulls are designed to suite with hardware from other ASSA ABLOY Group

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webmaster@sargentlock.com
www.sargentlock.com

SARGENT® is a market leader in locksets, cylinders, door closers, exit devices, electromechanical products and access control systems for new construction, renovation and replacement applications.

Schlage, An Allegion Brand Booth #405

Administrative Office
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schlageinfo@irco.com
www.schlage.com

For more than 90 years, Schlage has been creating the strongest and most technologically advanced security products for homes, multi family, commercial and institutional buildings. From durable mechanical locks to comprehensive electronic access control solutions and biometrics, Schlage provides protection at critical moments when property and personal security are at stake. In homes, public buildings and in the workplace at the end of the day Schlage stands for one thing: strong.

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www.securitron.com

SECURITRON Magnalock Corporation produces electronic locking products and systems including electromagnetic locks, electromechanical locks, gate locks, power supplies, entry and exit devices, power transfer devices, timers, switches and lock control panels.

Security Door Controls
Booth #719

See our ad on page 81.

801 Avenida Acaso
PO Box 3670
Camarillo, CA 93012
(805) 494 0622; (800) 413 8783
service@sdsecurity.com
www.sdsecurity.com

SDC is a Quality Management Certified manufacturer of premium grade access control hardware specified by security consultants for prominent facilities worldwide. SDC has been providing intelligent solutions for security, safety and accessibility for over 40 years. SDC bridges the gap between traditional locking hardware and IT networks with low power PoE Capable Locking Hardware and IP ProTM IP based Single Door Access Control. Finally, IP security has reached the door.

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(312) 767 2125

SCHOTT North America, Inc.
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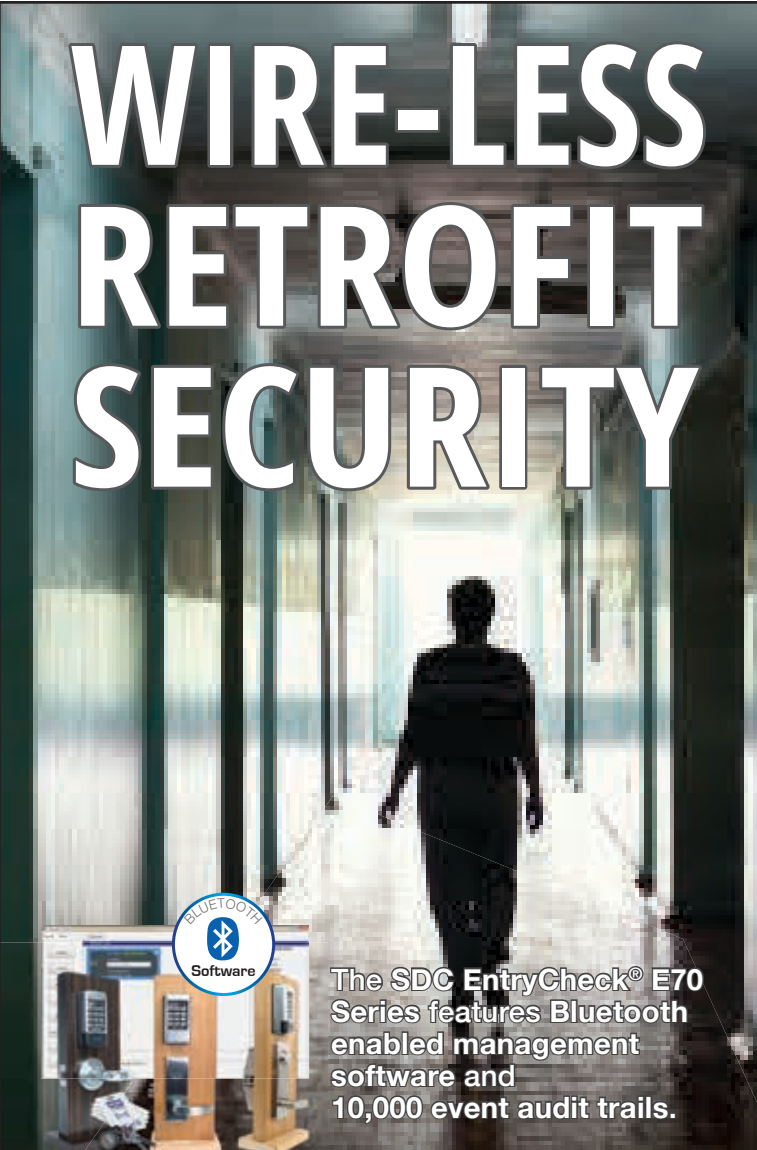
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DOORS + HARDWARE APRIL 2016 81

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151 Price Hills Trail
Sugar Hill, GA 30518
(770) 945 2463; Fax: (770) 945 2463
john@softwareforhardware.net
www.softwareforhardware.net

Software for Hardware is a complete software program designed for the door and hardware distributor to quote, detail, draw door/frame elevations, produce submittals, order and ship material for contract jobs and sales orders. We support over 75 hardware price catalogs and seven Division 10 catalogs with cutsheets and eight hollow metal catalogs. Inventory control comes built in and direct interfaces to Peachtree, QuickBooks and Contract ERP are supported.

Special-Lite, Inc Booth #734

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(800) 821-6531; Fax: (800) 423-7610
www.special-lite.com

Special-Lite is renowned for made-to-order aluminum entrance systems engineered for high traffic and abusive locations since our 1971 inception. Pioneer of the FRP/Aluminum Hybrid Flush Door in 1981 to address special needs of Education market. New products, manufactured with our acquired expertise: All Fiberglass Doors and Frames, FRP Restroom Partitions, and Interior Architectural Products: Omega Aluminum Interior Framing and LiteSpace Interior Glass Demountable Walls.

Stanley Security Solutions, Inc. Booth #417

6161 E 75th Street
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(317) 849 2250; Fax: (317) 806 3276
StanleyMechanicalSecurity@sbdinc.com
www.stanleysecuritysolutions.com

A provider of security solutions for institutional, commercial and industrial businesses. Emphasizing service, Stanley delivers a comprehensive suite of security products, software and integrated systems.

Steelcraft, An Allegion Brand Booth #405

Administrative Office
11819 North Pennsylvania Street
Carmel, IN 46032
(877) 671 7011; Fax: (800) 356 7178
steelcraftinfo@irco.com
www.steelcraft.com

Designed for institutional, commercial and industrial application. Steelcraft provides an impressive selection of hollow metal doors and frames for virtually any wall condition or entryway requirement. Steelcraft's offering includes flush, stile and rail, severe weather, acoustical, stainless steel and blast resistant doors as well as the Grain Tech Series of stainable steel doors that provide the beauty of wood with the benefits and features of steel. Steelcraft has set the standard for performance, reliability and style.

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14279 Highway 16 E
Spring Valley, MN 55975
(507) 346 2545; Fax: (507) 346 2544
sales@stiersteel.com
www.stiersteel.com

Stier Steel manufactures components for the hollow metal door and frame industry. We supply glazing bead, spreader bars, hat channel, closer reinforcements, EMW anchors, Z Clips, Tube Anchors, chairs, mullion clips and more.

Sugatsune America, Inc. Booth #231

18101 Savarona Way
Carson, CA 90746
(310) 329 6373; (800) 562 5267
Fax: (310) 329 0819
obi@sugatsune.com
www.sugatsune.com

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nasales@surelockmcgill.com
www.surelockmcgill.com

For the past 40 years, Surelock McGill has been renowned throughout the world as the leader in high performance door hardware. We design locking solutions to meet a variety of security and safety needs to protect against vandalism, fire, burglary, and terrorist attack. Our ongoing program of research, development, design and testing enables us to meet the changing needs and the latest levels of certification of our global customer base.

Tiger Door Booth #923

1181 Garden St.
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888 891 4416
info@tigerdoor.com
www.tigerdoor.com

Tiger Door manufactures custom-molded fiberglass doors for your most corrosive applications. These doors continue to be used in educational buildings, pool areas, recreational facilities, parks, zoos, WWTPs and many other applications requiring door systems that are tough, durable and can withstand moisture exposure. These doors require little to no maintenance. Tiger Door is your solution for the toughest chemical and wet environments!

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www.timelyframes.com

Timely's superior performance, design flexibility and lower cost has made this the product of choice. For over 40 years we have continued to innovate and adapt, resulting in reduced costs for end users and profitable results for our dealers.

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www.toadllc.com

TOAD, LLC is a premier provider of digital content to the door and hardware industry. We produce and manage the most robust product configurators available. Our "plug in" software components, CRT and DoorDesigner, act as add ons to any Windows program.

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Honesdale, PA 18431 0189
(570) 253 5625; (800) 233 4210
Fax: (800) 854 4146
sales@topnotchinc.com

www.topnotchinc.com

Top Notch strives to be the foremost distributor in the architectural door hardware industry by exceeding our customers' expectations with integrity, knowledge and the drive to provide the best service. We carry a wide selection of residential, commercial and electronic access control products, parts and accessories in stock and available for same day shipping from four warehouses. With over 100,000 products from 60-plus manufacturers, we have the products you need.

Townsteel, Inc. Booth #300

See our ad on page 71.

17901 Railroad St.
City of Industry, CA 91748 1113
(626) 965 8917; (877) 858 0888
Fax: (626) 965 8919
sales@townsteel.com

www.townsteel.com

TownSteel is a BHMA manufacturer of commercial grade builders door hardware with over 25 years of experience. We offer a full line of Ligature-Resistant Locks, Electrified Locks, as well as Digital and RFID Mortise and Cylindrical Locks. TownSteel is

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ckim@tamlyn.com

www.tamlynpadilladoors.com

TP Doors specializes in the manufacture of fire and safety doors. The success of this young and dynamic company is due to a firm commitment to specialization efficiency in a very competitive sector, and providing the very best solutions for their customers; the results of which has led them to become one of the best and most qualified companies in the production of fire doors and safety doors.

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www.trimcohardware.com

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(847) 272 8800; (877) 854 3577
Fax: (847) 272 8129
Kathy.P.Fakas@ul.com

www.ulenvironment.com

UL safety experts evaluate a wide range of products for fire resistance and performance including doors, glazing

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Unified Purchasing Group Booth #314

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901 W Baxter Drive
South Jordan, UT 84095
(801) 784 8744
micquelle@upg.org

www.upg.org

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Fax: (916) 388 8322
sales@unisonhardware.com

www.unisonhardware.com

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Administrative Offices
11819 North Pennsylvania Street
Carmel, IN 46032
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vonduprininfo@irco.com

www.vonduprin.com

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VT Industries, Inc.

Booth #809

See our ad on page 13.

1000 Industrial Park, PO Box 490
Holstein, IA 51025 0490
(800) 827 1615; Fax: (712) 368 2923
door_info@vtindustries.com

www.vtindustries.com

VT Industries is the industry leading manufacturer of architectural wood doors. Producing a wide range of high quality door products ranging from high pressure decorative laminate to high end custom sketch face and interior and exterior stile and rail door products, VT Industries offers a complete line of doors that set the bar for quality, design and sustainability.

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Booth #716

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Seattle, WA 98109
(206) 283 7574; (800) 882 4552
Fax: (206) 283 0970

sales@washingtonhardwoods.com

www.washingtonhardwoods.com

Waterson Corp.

Booth #318

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info@waterson.com

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Booth #237

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Booth #501

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Booth #505

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Berlin, CT 06037 1524
(800) 438 1951; Fax: (800) 338 0965

www.yalecommercial.com

Yale Locks & Hardware provides a comprehensive line of door hardware, including an extensive range of mechanical and electromechanical mortise and cylindrical locks, exit devices, door closers and cylinders.

Zhongshan Keyman Locks Products

Booth #331

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Contributors Listing as of March 2, 2016

Safe Dispersal Area within a Fence or Enclosed Court

By Lori Greene, AHC/CDC, CCPR, FDAI, FDHI

A few years ago, I worked as the hardware consultant on a data center project with extremely high security. On the interior door openings, there were many challenges and conflicts between the code requirements which mandated free egress and the need for security methods that included interlocks, delayed egress, and several levels of access control.

A security fence surrounded the building, with access control readers at the vehicular and pedestrian entrances to the site. To maintain this secure perimeter, the security consultant did not want to allow free egress through the gates which led to the public way. Because the paths from the building's exterior doors to the public way are part of the means of egress (this portion is called the exit discharge), any gates encountered before reaching the public way would typically be required to comply with the egress code requirements. These include the mandates for one operation to release the latch(es), no special knowledge or effort, no tight grasping/pinching/twisting, and operable hardware mounted between 34 and 48 inches above the floor or ground.

Exterior gates are notoriously difficult to secure while providing free egress when required by the model codes. Locking/latching hardware may be defeated from the secure side of the gate, and many gate designs cannot easily accommodate the door closers needed to keep the gates

closed and latched. Electrified hardware used on exterior gates can create additional challenges, due to exposure to the weather as well as unauthorized access to the release devices (like actuating the motion-sensor release for an electromagnetic lock from the secure side of the gate).

With today's focus on security for schools, office buildings, and other types of facilities, it will likely become more common to see a building completely surrounded by a fence. Each opening in the fence that is equipped with hardware allowing free egress becomes a potential access point for authorized or unauthorized individuals. While I am not recommending that we surround every building with a fence, or that there should be no gates to provide egress from the contained area, the *International Building Code* (IBC) does address this situation.

In the 2015 edition of the IBC, this is covered in section 1028.5 – *Access to a Public Way*, which requires the exit discharge to provide direct and unobstructed access to a public way; typically the public way is a street or alley. The exception to this section states that when access to a public way can't be provided, a safe dispersal area is required, where building occupants can wait for fire department assistance. This safe dispersal area—a location within the fenced area or enclosed court—must meet the following requirements:



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care units and other mental health facilities, where a secured yard is often provided for the use of care recipients. In an emergency, this enclosure can provide a safe alternative to allowing care recipients to freely evacuate to a public way.

NFPA 101 – *The Life Safety Code*, includes some language similar to the IBC, but only in relation to Detention and Correctional occupancies. In these facilities, sections 22.2.7 (new) and 23.2.7 (existing) allow exits to discharge into an enclosed court. Not more than two walls of the courtyard may be walls of the building, and the enclosed court must be large enough to provide a net area of 15 square feet per person at least 50 feet from the building.

The local codes and the Authority Having Jurisdiction (AHJ) should be consulted to verify the requirements of a specific jurisdiction. For sites where the requirements for a safe dispersal area cannot be met, gates which are properly sized, remotely located, and equipped with hardware that meets the egress requirements will likely be needed. ■

- The safe dispersal area must be large enough to provide at least five square feet of space for each building occupant (see below for variations on this requirement for stadiums and I-2 occupancies).
- The area must be on the same lot and at least 50 feet away from the building, accessed by a safe and unobstructed path.
- The area must be permanently maintained and identified as a safe dispersal area, and cannot be used for another purpose such as parking, storage, or temporary structures.

If these criteria are met, the fence surrounding the building would not be required to have gates that allow free egress, as the building occupants can gather safely in the enclosed area and wait for emergency responders to arrive.

For stadiums, IBC-2015 section 1010.2.1 describes a safe dispersal area that provides at least three square feet per occupant, located a minimum of 50 feet from the enclosed area of the stadium. If this safe dispersal area is provided, and if the stadium gates are under constant supervision when the stadium is occupied by the public, then panic hardware is not required to be installed on the stadium gates.

Section 407.9 of the 2015 IBC addresses Group I-2 occupancies (hospitals, nursing homes, psychiatric hospitals, detox facilities, and foster care facilities). This section requires the safe dispersal area for I-2 occupancies to provide at least 30 net square feet for each bed and stretcher care recipient and 6 net square feet for ambulatory care recipients and other building occupants; as with other occupancy types, the safe dispersal area must be at least 50 feet away from the building.

The use of a fenced area that is sufficiently sized for use as a safe dispersal area can be especially helpful for memory



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APRIL 10-17, 2016

National Conference Center | Landsdowne, VA

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COR113 Architectural Hdw & Applications			COR120 Door & Frame Applns		COR125 Take-Off & Estimating		COR103 Understanding & Using Constr Doc
COR133 Elect Arch Hdw					EHC400 Electrified Hardware Applications & Documentation		
	AHC205 Detailing Hardware			COR147 Introduction to Specification Writing			
	AHC200 Masterkeying	COR160 Mat Purch Concepts	COR153 Installation Coord & Proj Mgmt		COR140 Using Codes & Standards		
CDC300 Using Dr & Fr Stds	CDC305 Detailing Doors & Frames		CDC310 Writing Door & Frame Specifications			CDC315 CDC Exam Prep	
EHC405 Access Control & Electrified Hdw Systems			EHC410 EAC & EH Installation & Troubleshooting				
AHC220 AHC Exam Prep							
					AHC207 Advanced Detailing Hdw <i>(begins face-to-face followed by 4 online sessions)</i>		

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- **NEW!** CE1501: 2015 IBC Code Update for Swinging Door Openings

For more details, email education@dhi.org.

Sign Me Out

By Mark J. Berger

I enjoy creativity. Ask me a simple question and my mind searches for a reply I've never given before. It's an exercise to keep my mind sharp. Many will argue the exercise has not been a success.

We know exit doors must have the four letter word above them—simple enough. Sometimes we want to warn people the door should only be used in emergencies, so the “Emergency Exit” or “Emergency Exit Only” verbiage is added—perfectly fine. To further restrict door usage, we add alarms, and for an alarm to be successful we must provide notification of the alarm presence and consequence, so “Alarm will sound” is added to the door—makes sense.

So what's behind all the extra wording on these doors?

▼ ALARM SIGN AND DEADBOLT

It is nice to be informed that the alarm will sound, but can you really exit through this door if the deadbolt is engaged? Even worse, it is a double cylinder deadbolt, so you'd never be able to unlock the door unless you had the key.



► MULTI-USE DOOR

Sometimes signs are too brief. This was a catering hall where the emergency exit path was right through the kitchen (how safe is that?). It is true that you'd only want your wait staff and kitchen team traveling in and out of those doors during normal operation, but the signage should be clearer. And the slide bolt makes absolutely no sense.





◀ SAY IT LOUD

I have been admonished for texting in caps or not noticing all the capital letters in an email. Here's a facility that wants to make sure occupants know the type of exit this is. Bravo.

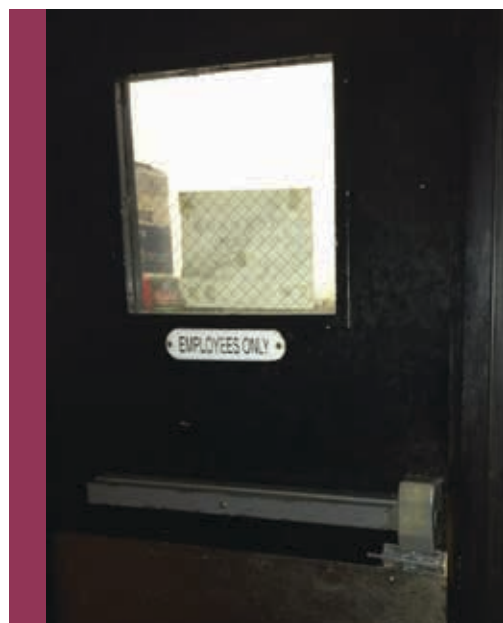
▼ LOCKS AND SIGNS

Let me say right off that this was not an exit door. So the three locks on the door are perfectly acceptable, provided someone inside the Limited Access area could freely exit. But then why the handwritten "Do Not Lock" signs? I guess the printed "Do Not Enter" sign was powerful and effective.



▲ CURIOSITY KILLER

By now readers of the column know a trip to a restroom in a restaurant usually results in a photograph for this column (Did that sound right?). Here's a restaurant that was emphatic about restricting access to the area outside the exit door. They went about the "Do not use" admonition we frequently plastered on exit doors. Thanks for answering the unasked question.



POLITE SIGN

Signs can be homemade and tell a story. This exit device has large lettering, and there's nothing on the door restricting it. If only the employees heeded the nicely written sign. Unfortunately, thanking them in advance was in error.

Real Openings



◀ POWER OF LOVE

Way before emoticons took over text communications, the simple heart was the most frequently used simple. Here it is used to indicate appreciation in advance for heeding the sign's request. But a better expression of love of your fellow occupant would have been leaving off the slide bolt on this exit door.

▶ INTERESTING SIGN SIZE

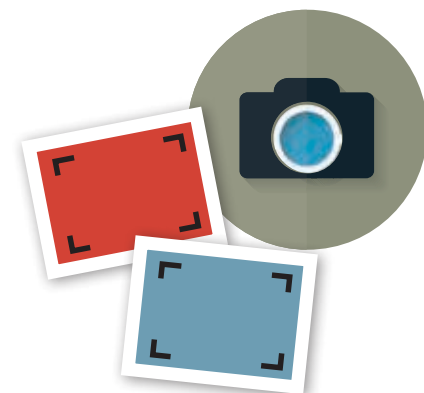
When I saw this from a distance, I wondered at the message: "THIS IS A FIRE EXIT DO NOT." Was Yoda the sign maker? Only after approaching it did I realize that "DO NOT" was part of a larger statement. Not the most logical sign, but an effective one. It states what it is and it instructs personnel to do the right thing, and by the looks of things, they do. There is a breakaway security tag on the door (designed not to impede exiting) and there is nothing blocking the door. That's a function of more than the sign; that's good management.



◀ STAFF ONLY

It appears conflicting signs on exit doors is a global phenomenon. Let's hope this exit door is unlocked. The amount of English speaking tourists has resulted in the addition of

"Staff only" to the sign. I guess the French, Italian, Spanish and other tourists instinctively know when not to use an exit.



MARK BERGER is the President and Chief Product Officer of Securitech Group, as well as the chair of the Builders Hardware Manufacturers Association Codes & Government Affairs Committee. All "Real Openings" photos have been 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.



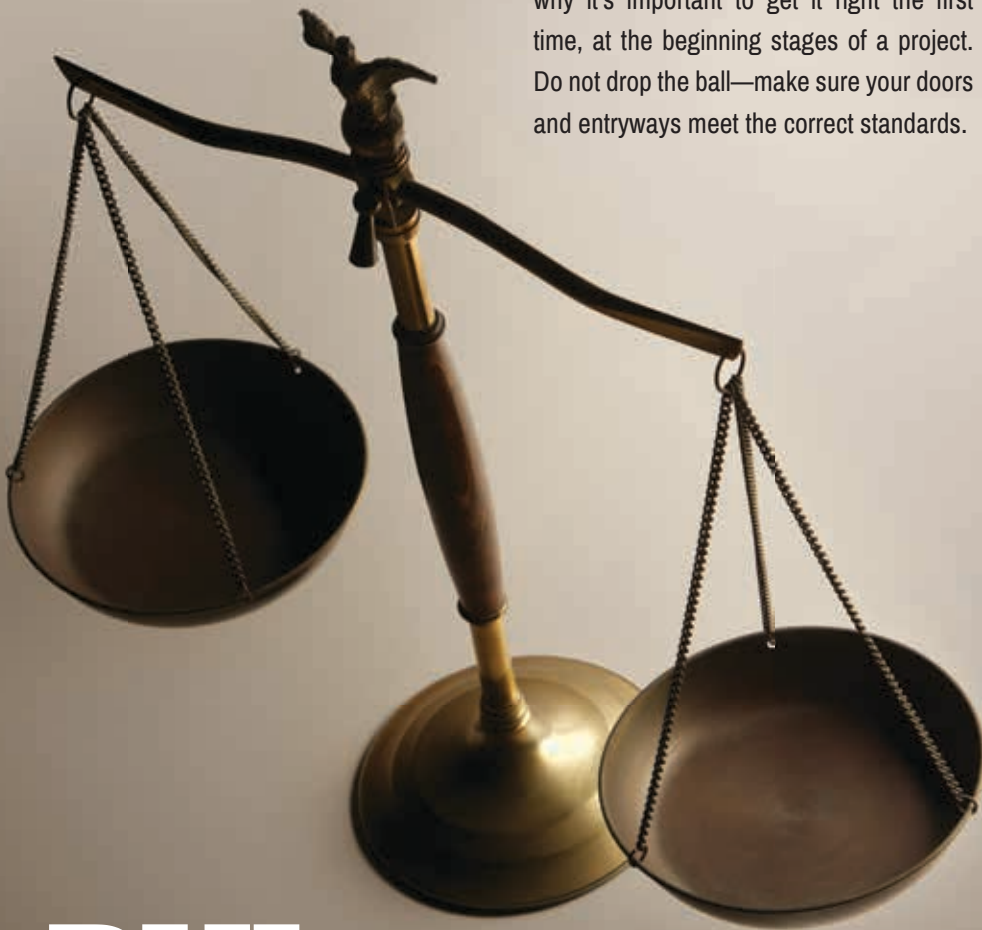
The images shown here are not intended to reflect upon any specific manufacturer or products but are intended to help build awareness around the everyday code violations that occur in buildings over time, despite our members' best efforts to provide solutions to secure the life safety and security of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

Managing the Balance of Life Safety and Security

DHI members are the only certified, credentialed professionals with the experience to find the right balance between life safety and security in the non-residential architectural openings industry.

When it comes to public buildings, it's easy to take the doors and entryways for granted. A major challenge is that often door security measures can undermine human safety. **It is critical that door assemblies provide the correct balance of life safety and security while meeting building and fire codes.**

Building codes and product standards are complicated. And there are thousands of combinations of doors and hardware. In fact, while **doors and openings represent only 2% of a new facility's average construction costs, they constitute more than 30% of punch-list issues.** That is why it's important to get it right the first time, at the beginning stages of a project. Do not drop the ball—make sure your doors and entryways meet the correct standards.



Where do I find the industry experts to strike the right balance of life safety and security?

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Architectural Hardware Consultant (AHC), Certified Door Consultant (CDC), Electrified Hardware Consultant (EHC) and Architectural Openings Consultant (AOC) are the certification designations recognized as marks of excellence throughout the industry. These professional certifications attest to the extensive knowledge of the individual and that he or she is a professional prepared to provide sound architectural door and hardware specification advice to architects, contractors and building owners.



To find a DHI-Certified Consultant near you, visit www.dhi.org/FindAProfessional or call 703/222-2010.

NINE CRITICAL ATTITUDES for SALES GROWTH

By Alex Goldfayn

So much of sales has to do with attitude and mindset. Want to grow?

What do you believe about your products and services? How do you perceive your work? Are you selling products or improving lives and companies? Are you offering great value to your customers when you call, or do you fear bothering them?

When it's time to follow up on a quote or proposal, what are you thinking? Are you expressing interest or taking more of their valuable time?

When you need to inform your customer that there's a lot more you can sell them and help them with, where's your head? Are you proud to help, or worried about overstepping?

Through my work with clients—who are almost always heads of manufacturers and distributors between \$50 million and \$500 million in revenue—I've identified the nine key attitudes that impact revenue growth. These are ways of thinking and behaving, and as such, they can be learned. I can teach this, and you can adopt it into your daily process.

The following list represents my most recent work, and to date, I've only shared it with clients in workshops. It's not in my latest book, although it might become my next book! You are the first to be reading about this. Here are the nine critical attitudes for growing sales:

1. Focus on Your Value

When you talk about your products and services, don't talk about your products and services. Emphasize how your customers are improved. You save them time. You're dependable, which allows them to sleep at night. You grow their business. You help them look good to their customers, which leads to retention and referrals for them. You do this. Talk about it. It's far more interesting than your product specs.

2. Confidence

You are not lucky to have your customers' business. They are lucky to have you. If you asked them, they'd tell you this. You are not lucky they picked up the phone; they are lucky you decided to call them over 100 others you could be talking to. Be confident in your great





value. The opposite of this is uncertainty, doubt and fear—which is the default position for many salespeople. It's why salespeople quickly agree to lowering prices at the customer's first request. They fear losing the business. Teach them to think confidently, and this stops. It's a part of nearly every project that I do.

3. Boldness

Confidence informs our thinking, and boldness dictates our behavior. If we think confidently, we behave boldly. Boldness—the opposite of meekness—leads us to think less and take action more. When we are bold, we don't hesitate to pick up the phone, or schedule the meeting, or pivot to the sale, or ask if our customer would like to buy other products that we offer. Bold salespeople don't procrastinate. Bold salespeople ask for the business. Bold salespeople sell more. This can be taught and learned. I teach this.

4. Optimism

There are countless studies that find that optimistic people are more successful than pessimistic ones. It makes sense, right? If you believe you will get the business before you pick up the phone (confidence), you will behave accordingly (boldly) and chances are you're right. If, conversely, you believe you won't get the business (pessimism), chances are you won't. Henry Ford said, "whether you think you can, or you think you can't, you're right." Might as well be optimistic and think you can!

5. Gratitude

Too many people—starting with our politicians and the media that covers them—believe that the country is broken. The country isn't broken. America is the greatest country in the world, and as such, the best country on the planet in which to be in business. Your company is not broken, it has been around so long—often for generations!—for a reason: Because you provide massive value to your customers. Be grateful for where we get to live, and where we get to work, and the customers we get to sell to. The opposite of gratitude is cynicism, which is far more common to find in business. Be grateful and you'll behave accordingly. You'll sell more.

6. Perseverance

As I've written previously in this space, we only need one yes. A single yes obliterates 100 no's that came before it. A no never means no forever. It merely means not now. So give people another opportunity to say yes. In fact, a terrific revenue growth technique which I have my clients implement is to go back to everyone who said no in the last year, and ask if you can help now that some time has passed.

7. Uncommoditization

Focus on your relationship, and you'll be singular. Nobody else has the relationship with their customers that you have. The friendship, the extra effort you put in, the trust, the reliability—that's yours alone. Focus on it, rather than your products and pricing.

8. Proactive Efforts

Strategic growth demands proactivity. Get out of the problem solving circle: customer calls with a problem; you work to resolve it; then another problem comes in; you solve that one; and this repeats until it's 4 p.m. and time to go home. Block out 15 minutes of proactive communication time daily, and call customers and prospects.

9. Action

Do stuff. Communicate. Don't put it off. Don't procrastinate, which is the core competency of the unsuccessful. Make your core competency action. Your communication doesn't have to be perfect, and it doesn't have to be 100 percent ready before you send it out. It only needs to be helpful. So take action!

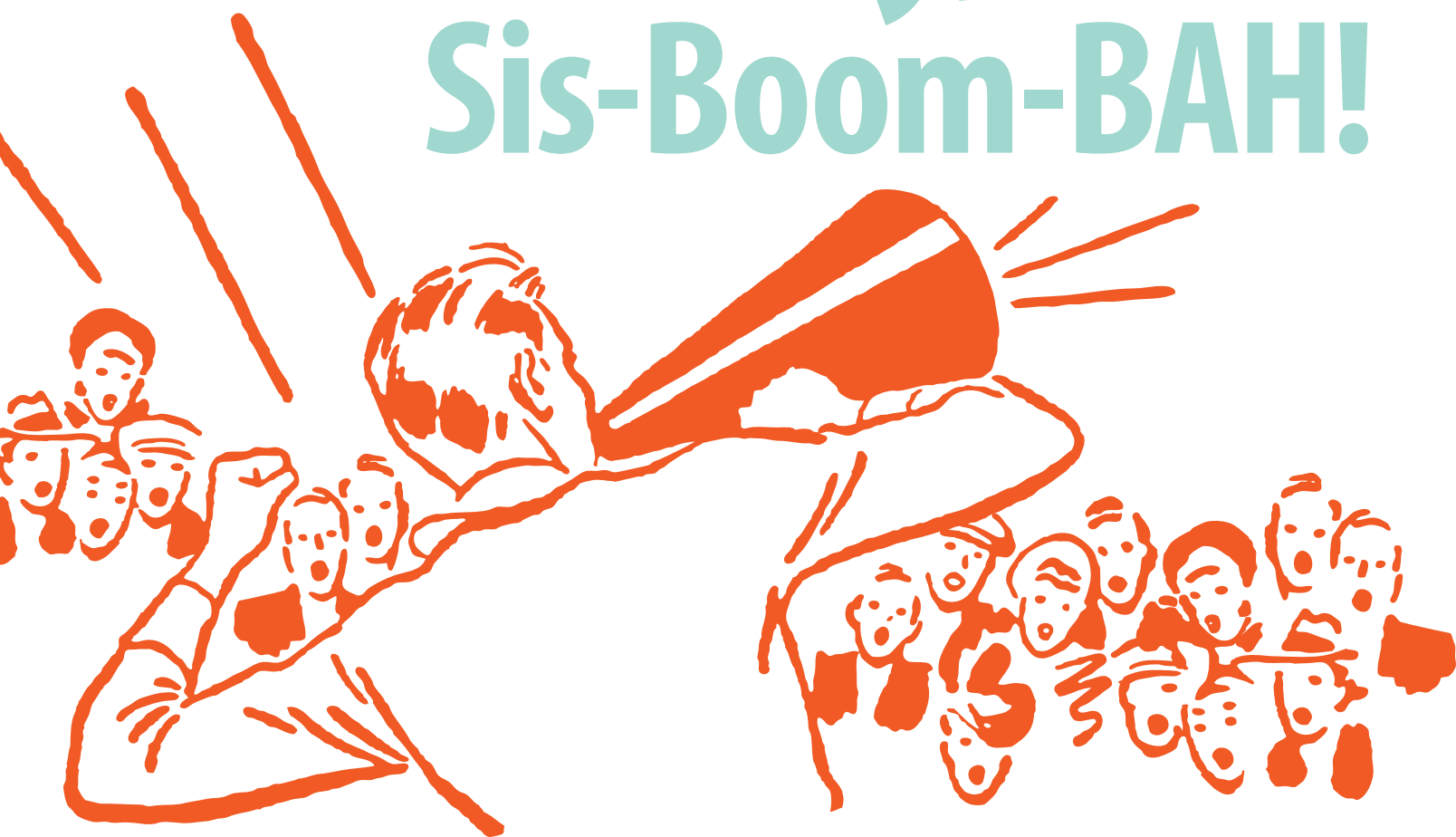
I repeat: these nine critical growth attitudes can be taught, and they can be learned. If you want to grow your sales, turn these attitudes into culture inside your business.



ALEX GOLDFAYN is the CEO of the revenue growth consulting firm The Evangelist Marketing Institute. These approaches are described in-depth in his new book, *The Revenue Growth Habit: The Simple Art of Growing Your Business by 15% in 15 Minutes a Day*. To learn more, go to www.evangelistmktg.com.

Shelf Life

Inventory, Inventory, Sis-Boom-BAH!



By Danah Head If you have read any of my articles or been to any of my Distribution Simulation “games,” then you know that I am seriously crazy about inventory. Part of the reason I have this amazing job is because I am the biggest inventory cheerleader, ever!

I started out humbly enough dragging my poor boss through the ins and outs of inventory as a supply chain coordinator. The man must have sighed out loud when I put in my notice. I felt/feel like everyone should be as passionate about it as I was (am). I would tell you his name, but I think he is in an inventory cheerleader witness

protection program these days. Just kidding; I stop in from time to time to trouble him and my remaining ex-coworkers.

As I said, I started out not knowing much of anything about inventory. The very first time I cycle-counted, I realized this was really where my heart is. I was so proud of myself. I had gone to school later in life to do this—to be in purchasing, to protect inventory, and to love every inch of the supply chain. However, as you may know, learning can also equal scraped knees and egos.

I learned a lot in those days. However, inventory was always and still is something about which I am incredibly passionate. I want to help every company figure out what program works for them. I could sit here and write articles until my fingers fall off and still not have found the right combination for your company's inventory woes.

As one of my favorite coworkers used to say, "I'm just gonna tell you for free," cookie cutter ideas will probably not work. One-size-fits-all inventory idealism will only really get you started in the right direction. The reason I am writing this today is to inspire you to think outside the warehouse. I want to challenge you to question people you don't even know. Unless, of course, your company doesn't have inventory control issues. If so, you can stop reading; if you do, stick with me a little while longer.

Start by identifying one issue—one single, solitary inventory issue. Make it one you feel is easy. Do not spend a lot of time thrashing around at night awake over it; just decide on one and let's start there. The issue itself is of no consequence; how you solve the issue is. One you have identified your challenge, go after it. This will take a minute...

You are now an inventory investigator. For fun, make yourself a name tag that says, "Hello, I'm Mr./Ms. Inventory Investigator." Grab a pen and a steno pad (like a real prime time detective might do), get up, leave your office, act like you're a superhero dashing past the president's office with invisibility powers, and slip out into the orange and green jungle of shelving, a.k.a. the warehouse. As you enter, try not to let the sweet siren call of the forklift backing up distract you from your cause.

Next you will need to find out who is who. If you know, great; if you don't, ask the manager; he or she will give you the crucial info. Make a list of their names and ranks and set out to find them each. Ask one question, "What do you think about the _____ problem we are having with inventory?" This should yield you some strange looks and maybe some illusive answers at first. However, you are just starting this relationship and you need to work on your coaxing skills, and most importantly, build trust.

As you are interviewing, there are some things that might get you information you didn't think about yet. Ask each person in the warehouse not only what he or she thinks about the issue, but what do they think you are doing about it, and what they think *should* be done. As you go, you might hear all kinds of things, from personnel issues, to how so and so's dog died last week, and how crummy the back end of the warehouse smells after it rains.

What you will also find are some amazingly creative ways to fix your inventory problem. This could also lead to more problems, but try to stay on track and deal with the one you are trying to tackle first.

As you grow in your investigation skills, you will find a few amazing by-products of your new inventory expeditions. You will know the names of who is protecting your company's largest cash asset. You will hear new and exciting ways to stop loss. You will find out who is promotable and who needs more work. You will find allies in your quest, and people will come to you and let you know when something is off kilter. You will gain the respect of the people that are your ground floor crew in inventory protection. The best part is, you may find yourself rewarding the warehouse team for their dedication to inventory greatness.

What I most hope you will take away from this, except the idea to patent an invisibility cloak for the office, is that we will never get better if we don't share our knowledge. If you come up with any cool tips or tricks, let me know so I can share them with other readers and simulation participants. As always, I am excited to help and look forward to any opportunities to collaborate on inventory challenges that you face. ■



DANAH HEAD is an Executive Advisor for The Distribution Team. She holds an MBA in Technology Management for Supply Chain and a master's degree in Adult Education and Corporate Training. While pursuing her education she worked in different purchasing and supply chain roles within the manufacturing industry. She can be reached at danah@distributionteam.com or visit The Distribution Team at www.thedistributionteam.com.

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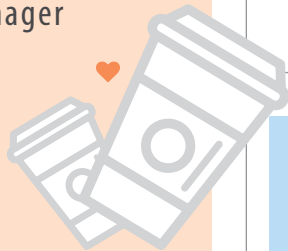
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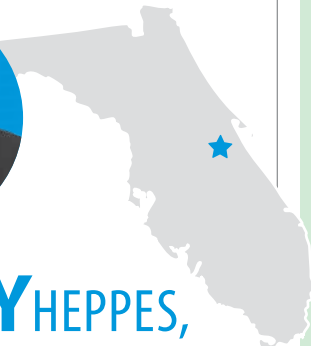
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No Matter Your Role in Our Industry, You'll Gain at DHI conNextions

By Bill Ritchie, AHC/CDC/EHC

DHI conNextions 2016 is just around the

corner, and if you haven't registered yet, I would like to share a few thoughts on the value of attending. I have been attending the DHI show in its various configurations for more than 20 years. During that period, I have at times been employed as a distributor, sales agent, and with a manufacturer. In every role, the same primary value has been realized—that of networking and building business relationships.

As a distributor, I have had the opportunity to meet other distributors from across the country with whom I would not have had an easy opportunity to interact. We have compared market strategies, learned about regional differences in customer expectations, discussed interaction with our suppliers and shared experiences with new products and technology. I have found that suppliers who exhibit at conNextions are a good source of introductions to other distributors they know who are typically trendsetting, and willing to share good ideas with those who are regionally separated from themselves.

As a sales agent, the DHI show has always been of excellent value in making deeper connections with the manufacturers you represent. I cannot overstate the value of meeting the behind the scenes staff—customer service reps, technical reps, operations managers, and others who provide the support you and your customers rely on to get the job done. Meeting these people face to face, shaking their hand and giving them a sincere thank you for their contribution to your success is priceless.

The manufacturers appreciate the same relationship strengthening in reverse and will make sure that key office staff are in attendance at their booths. Of course, considering new lines is always on the mind of a sales agent, and the DHI show is where you have an opportunity to make connections with new product and representation possibilities.

As a manufacturer, conNextions is where you can connect with the maximum number at one time of both your sales agents and your direct customer, the distributor. Of course, you want your sales managers in attendance to interact with your customers and agents, but you want your in-house people there who would not otherwise have the opportunity to make personal connections to the people they support.

ConNextions is the perfect place to launch new products and technology; you can have sales meetings and distributor appreciation events, and make your booth a place for old friends to connect and strengthen relationships. Equally important, you have the chance to make new relationships and develop new long-term value with agents and customers.

For all attendees, the direct education provided puts the value proposition over the top. You can experience new products, and work with physical samples in hand from your existing suppliers and potential new ones. You also have valuable professional development educational offerings; I still use information gained over the years on inventory control, credit and collections, acquiring and retaining quality people, and succession planning, to name just a few topics.

In conclusion, I can best reinforce the old wisdom—you get out of life what you put into it in equal measure. With respect to my career in the door hardware industry, I have found this to be true: by investing as much time and energy into opportunities to gain knowledge and build relationships as I can manage, I have been blessed with many friendships in the industry and business success has come from the shared wisdom of those I have met along the way. I look forward to sharing with you at the show!



BILL RITCHIE, AHC/CDC/EHC, is a member of DHI's Certification Council; a member of the Board of Directors of DHI Canada; and a member of the Canadian Prairie Chapter of DHI Canada.

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