

BUILDING FOR A PANDEMIC

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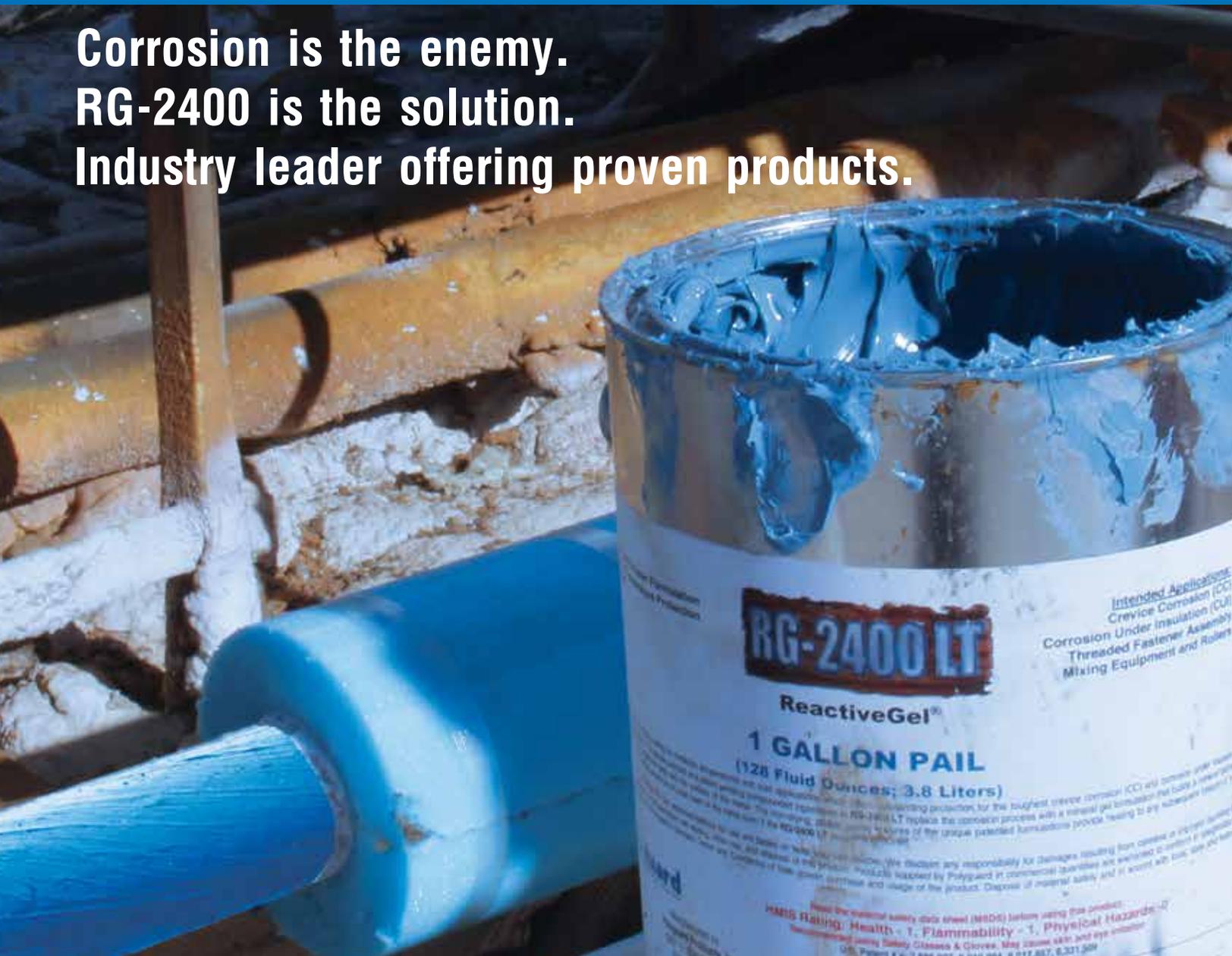
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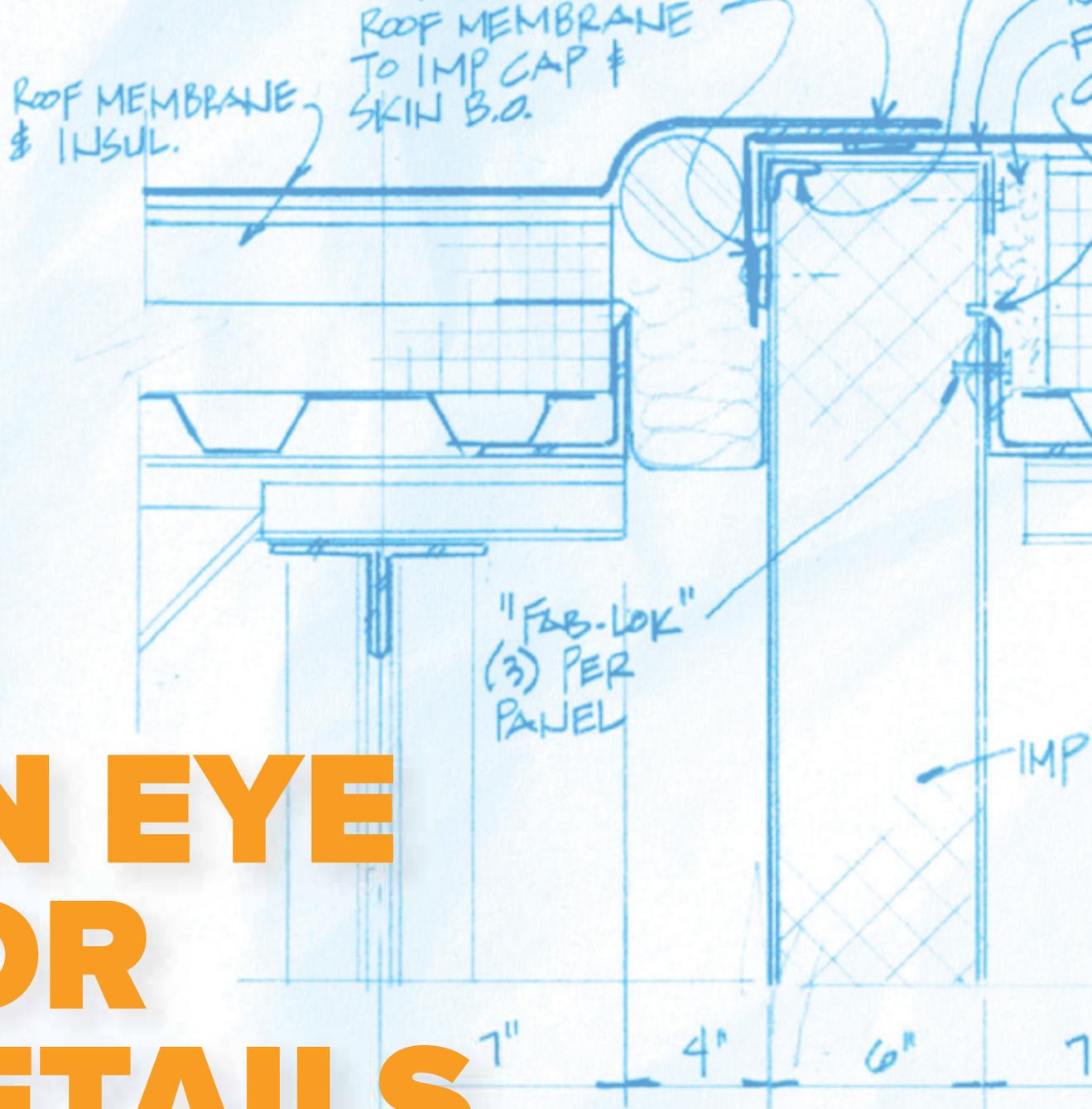
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About the Cover

Nor-Am Cold Storage in Dodge City, Kansas, United States, is a new 148,000-square-foot modernized cold storage warehouse. Designed and built by Tippmann Innovation, the facility includes freezing, storage, processing and features high-density racking, automated pallet shuttle technology and has been engineered for future expansion. (Photo courtesy of Tippmann Innovation.)

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CEBA: Pivoting to Plan for the Post-Covid Facility

TWO YEARS AGO IN THIS COLUMN, THE NEW NAME AND MISSION OF THE CONTROLLED ENVIRONMENT BUILDING ASSOCIATION (CEBA) WAS ANNOUNCED. WHILE SOME DAYS IT MIGHT SEEM A LOT HAS CHANGED SINCE THEN, CEBA'S GOALS TO ACHIEVE RECOGNITION, BUILD FUTURE TALENT, DEVELOP EXPERTISE AND PROMOTE VALUE ARE STILL EXTREMELY RELEVANT TO ADDRESS THE CHALLENGES WE CURRENTLY FACE.

In this annual design/build issue of COLD FACTS, those goals are well represented. The lead article, "Building for a Pandemic" on page 12, creates a dual-view snapshot, based on quantitative data and qualitative interviews, of today's design/build landscape.

GCCA fielded a survey in July, open to all CEBA members, to collect data on the influence of COVID-19 on current and future design and construction and the impact of those changes on our businesses. Survey data indicates one third of respondents have already modified facility plans to address COVID-related accommodations, such as for social distancing.

This market intelligence, important to decision making at both the strategic and operational levels, is amplified in the lead article by interviews with CEBA members who describe first hand, the modifications they are incorporating for processor and 3PL customers.

Supporting the Build Future Talent directive of the Strategic Plan, "The Challenge of Hiring Project Managers" article on page 18, gives a voice to CEBA members responsible for overseeing project managers as they explain the value of this crucial role on the design/build team. They also offer their best practices in recruiting, training and retaining these valuable team members.

And then we hear directly from the source. This issue's Cool Person, on page 46, is a project manager recruited into the industry from a college construction technology program.

As this issue of COLD FACTS was going to press, our leadership made the difficult decision to pivot the face-to-face CEBA Conference, and instead go virtual. I'm pleased that a CEBA construction track will be featured during GCCA's Virtual Innovation Program taking place virtually between October 14 and November 10. For more information, see page 26.

The 2020 CEBA Global Built by the Best Award continues to exemplify the CEBA brand as well as its mission to Achieve Recognition, Develop Expertise and Promote Value as it showcases innovative new builds, the teams behind them and the power of using experts in this niche area. Each of the 2020 submissions will be presented as part of the CEBA track in GCCA's Virtual Innovation Program.

To revisit the 2019 Built by the Best Award winners, see the articles in the CEBA Showcase, enclosed with this issue of COLD FACTS. The showcase also features a directory of all CEBA members.

The CEBA vision remains clear – to be the authoritative voice for expertise in the unique best practices of building and maintaining the thermal envelope in buildings of all types.

And despite the upheaval of the first half of 2020, CEBA members are overwhelmingly optimistic about the future of their business and the cold chain industry.

Nearly 90 percent of surveyed CEBA members indicate they believe their business will be even more successful in two years.

Why shouldn't we be optimistic? Who better than a CEBA member, with a level of expertise fine-tuned through decades of experience, to tackle any new facility build or retool? 🧠



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COLDFACTS

COLD FACTS magazine is published every other month by the **Global Cold Chain Alliance (GCCA)**, an organization that unites partners to be innovative leaders in the temperature-controlled products industry. The GCCA Core Partners are:

The **International Association of Refrigerated Warehouses (IARW)**, which promotes excellence in the global temperature-controlled warehouse and logistics industry.

The **World Food Logistics Organization (WFLO)**, which delivers education and research to the industry and empowers economic development by strengthening the global cold chain.

The **International Refrigerated Transportation Association (IRTA)**, which cultivates, fosters and develops commercial and trade relations between all those engaged in the transportation and logistics of temperature-controlled commodities.

The **Controlled Environment Building Association (CEBA)** represents the design and construction industry specializing in temperature-controlled facilities that prioritize product safety best practices. We are the source for best practices of building and maintaining the thermal envelope.

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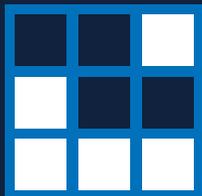
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NEW CHEMICAL INCIDENT RULE

GCCA communicates burden of the new reporting system to CSB.

By Lowell Randel

Global Cold Chain Alliance (GCCA) members in the United States are now subject to a new chemical incident reporting requirement administered by the Chemical Safety and Hazard Investigation Board (CSB). The new requirement was finalized in February, about the time when most facilities were turning their attention to COVID-19 and the potential impacts of the pandemic. While facilities have been understandably focused on pandemic response, it is important to understand the new CSB requirement and what is needed to stay in compliance.

The CSB rule creates a new reporting requirement for facilities that experience a chemical release. The enabling legislation that established the CSB included a requirement that the agency develop a reporting mechanism to help identify incidents that warrant CSB investigation. While the legislation was enacted in 1990, and the CSB began operating in 1998, the agency had never finalized the reporting requirement included in the authorizing legislation.

Because the CSB receives reports of chemical releases from multiple sources, including the National Response Center (NRC), finalizing the reporting rule was not previously determined to be a priority. However, a legal challenge was brought against the CSB to compel them to finalize a reporting rule and the U.S. District Court for the District of Columbia ordered the CSB to complete a rulemaking by February 2020.

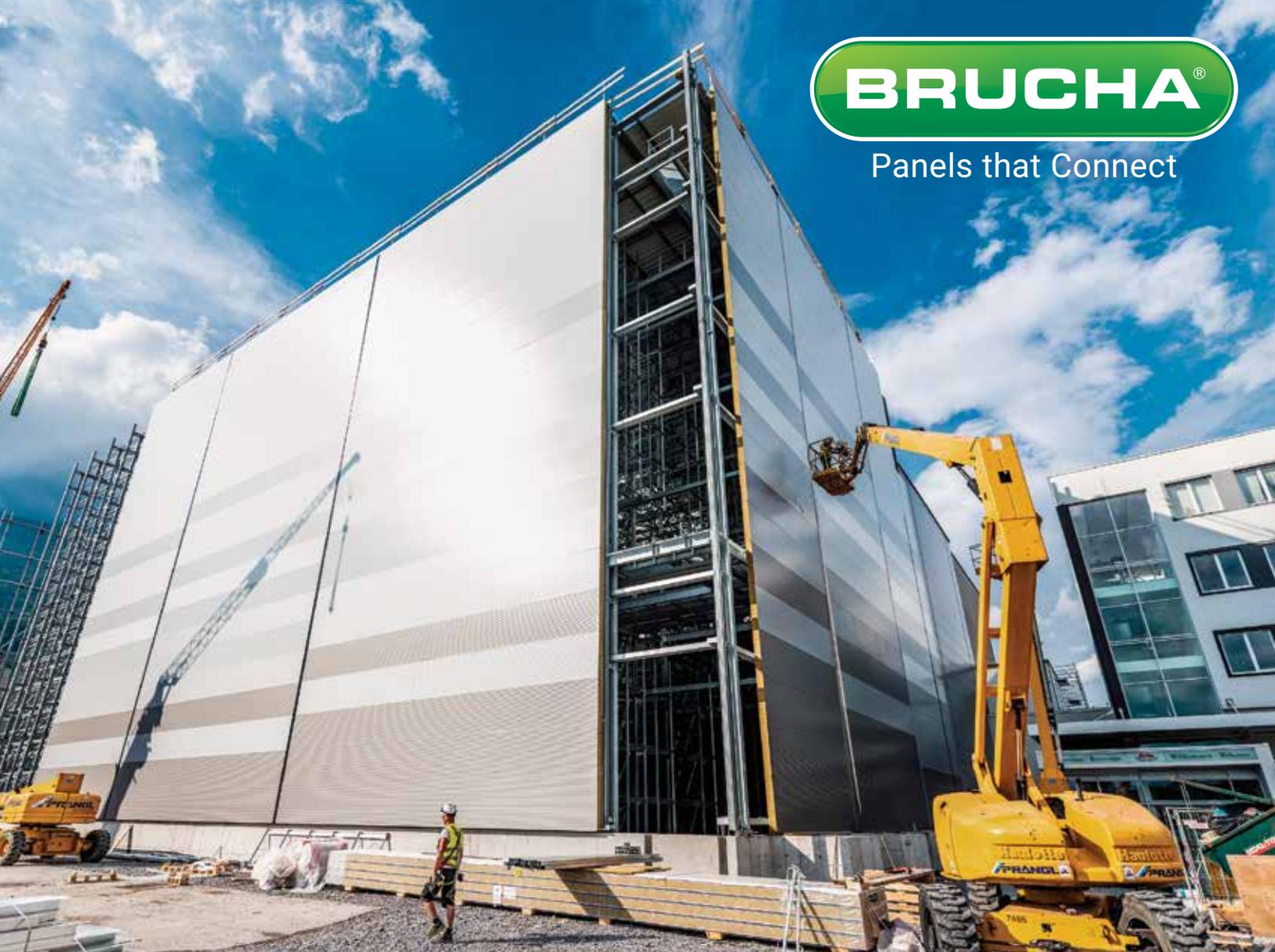
In December 2019, the CSB published a Proposed Rule that would comply with the court order and establish a new reporting requirement. The International Institute of Ammonia Refrigeration (IIAR), along with many others in the industry, responded to the Proposed Rule commenting on the proposed provisions in an effort to minimize duplication and reporting burden for regulated facilities. The Final Rule released in February 2020 incorporates some of the recommendations made by industry, but fundamentally moves forward with the creation of an additional reporting requirement that GCCA members must recognize.

Key Provisions of the Final Rule

The owner or operator of a facility must report any accidental chemical release resulting in a fatality, serious injury or substantial property damage. Serious injury is defined as any injury or illness that results in death or inpatient hospitalization. This definition was refined between the Proposed Rule and the Final Rule in response to comments made by industry and others that expressed concerns that the original definition was too broad and would capture minor incidents outside the interest of the

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CSB. Substantial property damage is defined as estimated property damage at or outside the stationary source equal to or greater than \$1,000,000.

Given the definitions of “serious injury” and “substantial property damage,” it is likely that many releases GCCA members must report to the NRC may not fall under the requirements for CSB reporting. The current reportable quantity threshold for NRC reporting is 100 pounds over a 24-hour period. Many accidental ammonia releases that are stopped small and well contained do not result in “serious injury” or “substantial property damage.” However, it is critical that GCCA members understand the new requirements and report to the CSB when applicable.

The Final Rule specifies that facilities will have eight hours to report a covered incident to the CSB. This is an improvement over the Proposed Rule, which suggested a deadline of only four hours to make the report. During the comment process, industry expressed concerns that four hours was insufficient, as facilities are focused on emergency response in the first hours of an incident. Thankfully, the CSB acknowledged the need for additional time for reporting and extended the timeframe to eight hours in the Final Rule.

Contents of the Report

The report required under the Final Rule must include the following information regarding an accidental release as applicable:

- a. The name of, and contact information for, the owner/operator
- b. The name of, and contact information for, the person making the report
- c. The location information and facility identifier
- d. The approximate time of the accidental release
- e. A brief description of the accidental release
- f. An indication whether one or more of the following has occurred:
 1. fire
 2. explosion
 3. death
 4. serious injury
 5. property damage
- g. The name of the material(s) involved in the accidental release, the Chemical Abstract Service (CAS) number(s), or other appropriate identifiers

- h. If known, the amount of the release
- i. If known, the number of fatalities
- j. If known, the number of serious injuries
- k. Estimated property damage at or outside the stationary source
- l. Whether the accidental release has resulted in an evacuation order impacting members of the general public and others, and, if known:
 1. the number of persons evacuated
 2. approximate radius of the evacuation zone
 3. the type of person subject to the evacuation order (i.e., employees, members of the general public, or both)

Reports may be made by email to: report@csb.gov or by telephone at 202-261-7600.

If You Already Reported

The Final Rule recognizes that in some cases a facility is already required to make a report to the NRC within a specified timeframe. In order to minimize duplication, the Final Rule states that if the owner or operator has submitted a report to the NRC, the CSB reporting requirement may be satisfied by submitting the NRC identification number to the CSB within 30 minutes of submitting a report to the NRC. This is the most likely scenario for GCCA members, as the refrigerated warehouses are already accustomed to making reports to the NRC “immediately” after knowledge of a reportable incident.

If the owner or operator has not submitted a report to the NRC and notified the CSB, the owner/operator must submit a report directly to the CSB within eight hours of the accidental release.

Enforcement

The Final Rule states that the focus of the CSB will be on education and compliance, not on “creating traps for the unwary.” However, the rule does make it unlawful for any person to fail to make reports required under the regulation. Suspected violations of the regulation will be forwarded to the EPA for possible enforcement action, which could include administrative penalties, civil actions, or criminal actions. To allow adequate time for compliance education, CSB will provide a one-year grace period. The CSB has indicated that it looks forward to working with owner/

operators and other stakeholders to help ensure compliance.

It is important for GCCA members to understand that they are now responsible for notifying the CSB of reportable incidents. In most cases, this will likely take the form of providing the CSB the NRC identification number within 30 minutes of contacting the NRC. However, there may be cases where facilities need to make a full report directly to the CSB.

GCCA is working with partners including the International Institute of Ammonia Refrigeration (IIAR) and the Ammonia Safety and Training Institute (ASTI) to communicate to the CSB the burdens of the new reporting system in hopes of further streamlining the process and reducing redundancy. In the meantime, members are encouraged to familiarize themselves with the regulation and be prepared to meet the new requirements. ☺

LOWELL RANDEL is Senior Vice President, Government and Legal Affairs at GCCA.

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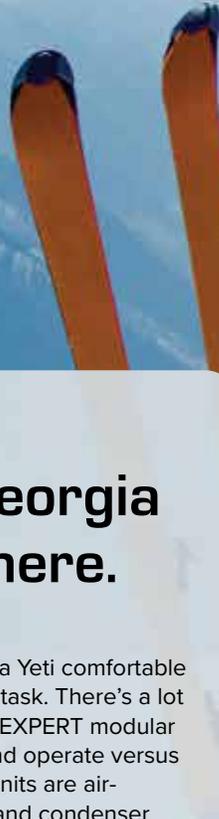
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BUILDING FOR A PANDEMIC

The design/build community pivots to plan for more space, more automation and more e-commerce.

Seven months after the first media reports of COVID-19, more than a third (36 percent) of surveyed members of the Controlled Environment Building Association (CEBA) have helped to modify an existing customer facility to accommodate a new reality – reconfiguring for operational modifications and social distancing because of a global pandemic. More than 50 percent of those surveyed anticipate helping customers reconfigure in the future.

This data is part of the market intelligence from the CEBA COVID-19 Business Impact Survey fielded in July and open to all CEBA members.

The survey results align closely with the experiences CEBA members share for this article about changes in design, build and process as a result of the pandemic.

Reconfiguring Distance

“The biggest problem in modifying existing facilities is the square footage required to facilitate the additional areas within a given facility and the burden that puts on other functional



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areas,” says Michael Jones, AIA, President, Primus Design Services.

Steven Hansen Jr., Project Manager, Hansen Cold Storage Construction, notes, “Construction modifications to existing facilities include adding additional doors throughout to expand the path of travel and minimize contact, installing plastic shields and barriers at all employee desks, installing window speak-throughs at existing doors and adding hand sanitizer stations everywhere.”

Change of Plans

According to the Business Impact Survey, more than one third (35 percent) of surveyed CEBA members have also adjusted plans for new builds to account for business changes stemming from COVID-19. Forty-seven percent anticipate doing so in the future.

Hansen notes the same pandemic modifications being made to existing facilities are also being added to designs for new builds. “All the new facility designs are taking human contact and social distancing into consideration, such as

by adding separate entrance and exit doors at the truckers/shipment office,” he says. “We’re also creating designated check-in stations for employees to perform temperature checks, mask checks and hand sanitization.”

“We are seeing clients, especially in the food processing space, ask us to include employee screening spaces as well as quarantine rooms for those individuals who may have abnormal medical symptoms. They won’t allow anyone with symptoms to enter the facility and put the balance of the workforce, and the products being manufactured, at risk of contamination,” explains Jones. “There is also a heightened awareness of the need to accommodate onsite medical support at some of the larger companies, given the sheer number of employees, and nursing stations are being incorporated into building plans.”

“In general, we see office configurations and collaborative areas in customer service getting larger,” notes Rob Adams, Partner, Tippmann Innovation. “Employee welfare and break areas along with locker rooms

will be designed differently to allow for more distancing.”

Hansen adds that amongst his customers, there is a strong focus on more automation. “We have already seen an increase in automation in the industry in racking and order pulling and now COVID-19 has accelerated the automation roll out.”

Jones agrees. “With the onset of the pandemic, the workforce was challenged to not interrupt industry service while maintaining the highest degree of safety, both in the workforce and the food chain. This may lead companies to consider automation as a way to distribute food products with the least amount of human interaction and to decrease dependency on larger teams to keep products moving through the supply chain.”

Food Service Hit Hard

Adams reports that the pandemic has impacted the food service industry, which has resulted in a slowdown of projects now and in the near future.



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"This part of the food industry has been the hardest hit, yet the resiliency I've seen has been amazing," Adams points out. "I've seen companies repurpose part of their business at a moment's notice by adapting a portion of their distribution network so that product originally destined for restaurants, is now being redirected to the public via e-commerce."

Jones' foodservice clients also feel the need to restructure business models to offset the decrease in restaurant capacity. "They are looking for ways to become a spoke in the wheel of some of the larger players, so the food they store does not go to waste."

Business Not Quite as Usual

Hansen believes the industry will need to adapt its sales techniques quite a bit in a post-COVID world.

"Sales techniques have changed drastically as a result of COVID and the days of just showing up at a facility are a thing of the past," admits Hansen. "One of my favorite aspects of my job is meeting with customers in person and creating a relationship that often leads to great friendships. Now my sales meetings are on Zoom and other virtual meeting platforms that limit human interaction and the ability to read body language."

Adams' company and its customers have recently made the decision to start traveling again, although not at the same frequency as in the past and also not in the same close or confined environments.

"This pandemic has changed things quite significantly, but fortunately we've been able to collaborate via Zoom and other meeting platforms," Adams says. "Additionally, it's afforded us the opportunity to bring some innovative ways or out-of-the box approaches to meeting our customers when on site."

In the United Kingdom, customers have been left with the responsibility of interpreting the government guidance on how to manage COVID on their site and assess their own individual risks, according to Peter Clift, Consultant and Former Owner, GPL Construction and a member of CEBA UK.

"There are widely differing approaches to working restrictions on sites making costing projects and management of resources difficult," Clift explains. "Clear communication of individual site requirements has proved to be essential to ensure compliance and to avoid complacency. In most cases we have found that site staff are keen to comply and that there is a clearer understanding of the implications associated with COVID out-

"We're seeing a new found interest in cold storage like never before – it's all very positive."

ROB ADAMS, Tippmann Innovation

breaks on sites with quarantines and for their individual safety."

The Cold Rush

Hansen says he named the cold storage popularity boom of the last couple of years, the Cold Rush.

"Landlords and dry box builders already knew the cold storage business was lucrative and a lot of money was invested in these facilities and they've been trying to get in long before COVID," Hansen points out. "But now that the world sees that food and grocery delivery services are the future, I anticipate another wave of companies, investors and developers with no experience trying to bust into the industry. It will bring new competitors but also new building opportunities."

"Seasoned owners/operators will be able to identify inexperienced contractors in the cold storage industry and it's unlikely they'd choose just anyone to build for them," Adams maintains. "They're looking for companies that specialize in this unique type of construction because problems could potentially be catastrophic if facilities are not properly designed and constructed. It behooves operators to align themselves with a company with a depth of understanding of the complexities of these facilities and what they are all about, including automation and processing needs."

Looking Ahead

CEBA members are very optimistic about future business conditions. Nearly 90 percent of surveyed members expect their business to be more successful in the next two years.

"We are seeing a lot more interest in projects, as if the pandemic reminded the nation that even in the most uncertain of times, people will always be food consumers," Jones notes. "People are going to feed their families – the demand is certainly there."

Adams believes the impact of e-commerce is changing distribution patterns and will continue to do so over the next five years and will result in an industry pivot to include more cold e-commerce.

"I believe the landscape is changing and facilities and distribution centers will be closer in proximity to densely populated areas to help facilitate just-in-time and e-commerce opportunities. Accommodating this industry pivot is likely to change and enhance the configuration of warehouse design," Adams suggests.

"We're seeing a new found interest in cold storage like never before – it's all very positive," Adams says.

Clift discloses that in the United Kingdom, at the onset of the pandemic, they were unsure of the effects it would have on the market and business in general. Some construction projects were put on hold, while most continued with site restrictions. "We had expected more contracts to be cancelled and a down turn in the level of inquiries, however, this does not appear to have occurred at present. How the market reacts to a prolonged down turn in trade remains to be seen. If economies don't bounce back quickly we fear a delayed down turn is likely."

"Regardless of a pandemic, our industry is full of strong and determined leaders, and we will pivot and adapt to the changes as we always have and continue to succeed and support the food supply chain," contends Hansen. "Despite the unknown, our industry has proven to be resilient through hard times and I believe there will be new opportunities ahead." 📞

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THE CHALLENGE OF HIRING PROJECT MANAGERS

A combination of technical and people skills is required for success.

By Sheryl S. Jackson

Project manager is one of the most critical and difficult positions to fill in a design/build firm. But Timothy Nguyen, Senior Vice President, ESI Group USA, believes there is a misconception that a project manager is focused only on tasks and technical activities needed to complete the project.

“When I interview applicants for project manager openings, they tell me how organized they are, how big the projects they previously managed were and how familiar they are with the technical aspects of the job,” Nguyen says. “Technical knowledge and experience are important, but I’m not just hiring a project manager, I am looking for a ‘people manager’

– someone who can communicate effectively with clients, subcontractors, vendors and other members of our team to keep the project on track.”

Project management is handled slightly differently from company to company, which makes it important to clearly outline the traits and experience applicants are

expected to have. As design/build has grown in popularity, the role of project manager has expanded well beyond that of construction manager – making it more difficult to find top-notch talent.

For example, at ESI Group, a program manager, which is a senior level position, oversees the initial assessment of the client’s needs, develops the scope of the project and prepares the proposal for the client. Once the client accepts the proposal, a design project manager has day-to-day oversight of the design process that includes architects, mechanical and structural engineers and other team members.

“An important part of the design project manager’s responsibility is to ensure that there is no ‘scope creep’ during the design process that will cause the costs to increase,” says



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Nguyen. If there are necessary design elements that were not anticipated in the proposal, the project manager communicates with the client to make sure there are no surprises.

Following the completion of the design, the construction project manager at ESI takes over to put out bids, hire subcontractors, schedule work and oversee the project budget. “While technical knowledge is important, project managers must be able to clearly communicate with all people involved in the construction and with the client,” says Nguyen.

At Coldbox Builders, the project manager is the “hub of the wheel,” says Paul D’Agostino, Director of Design Build for the company. “The role requires a high level of technical skill but the most important trait is the ability to understand the strengths of each team member to make sure the right responsibilities are assigned to the right person,” he says. “Everything for the project flows through the project manager who manages processes and actively communicates with clients and team members.”

Project managers at ARCO Design/Build begin working with the client on day one of the concept, says Jake Stefan, President of the firm. “They conduct the site assessment and create the conceptual design that includes everything from bay sizes and door layouts to electrical, HVAC and refrigeration systems to size of steel needed,” he says. “Our project managers also do all of their own estimating, which is helpful as the project progresses because they know exactly what was involved in the creation of the project budget.”

Because not everyone has the ability to work effectively as a design/build project manager, Coldbox Builders uses a behavioral and cognitive assessment tool to help identify the model candidate for the job. “This helps us identify candidates who are a natural fit for the role, which leads to successful hires,” D’Agostino says.

Attracting Talent

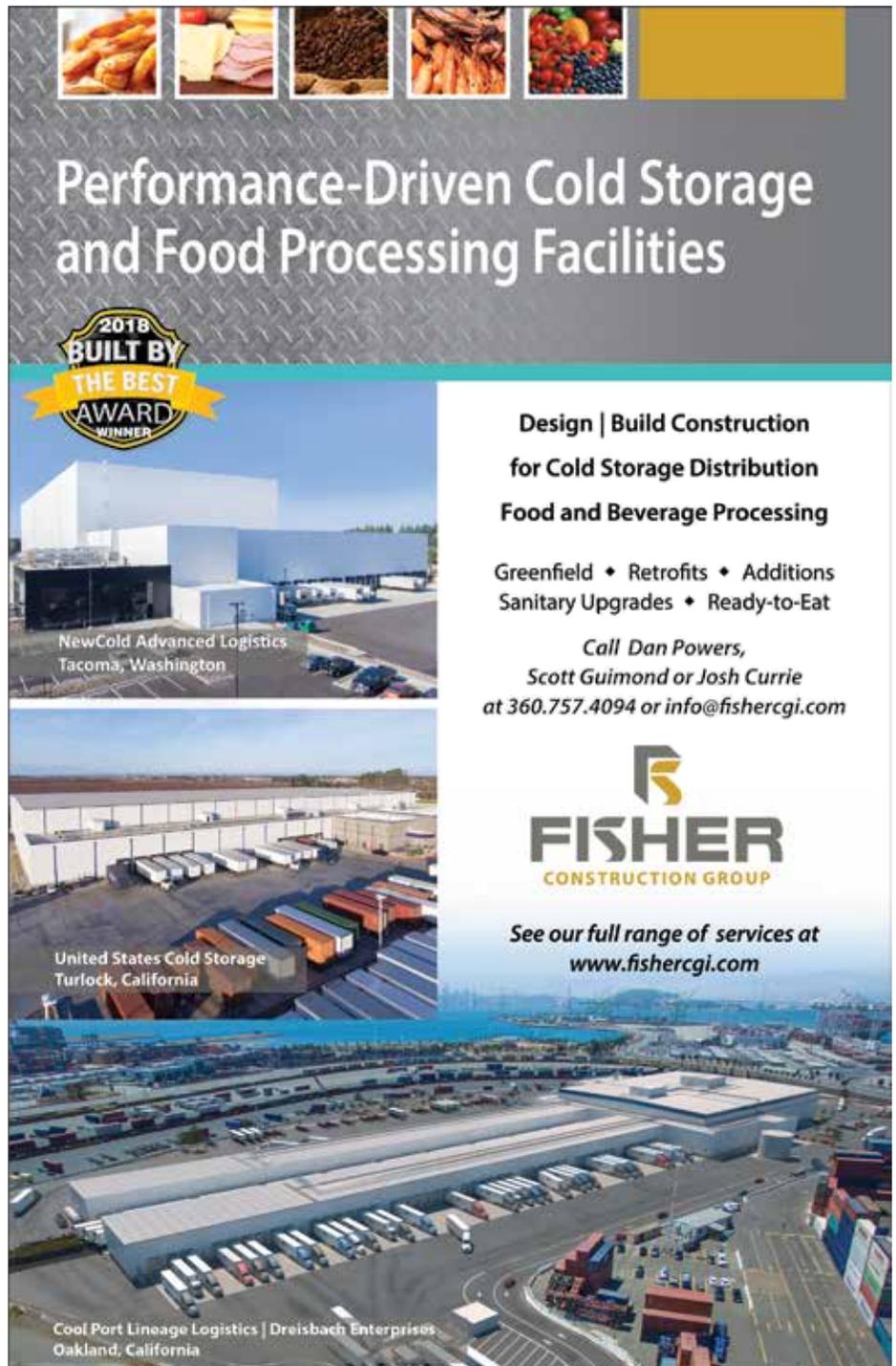
Developing project managers in-house is a long play for Coldbox Builders. There are project coordinators or junior project managers at the company who demonstrated early in their career that they possessed the right traits for the role. “Not everyone is cut out to be a project manager, but when we see

someone at our company with potential, we have a pathway to develop them for the role,” says D’Agostino.

A M King focuses on promoting from within and developing young talent into team leaders, says Dan Crist, Vice President of Operations. “We’ve found that growing our talent in-house produces better results than

hiring from outside the company,” he explains. “We focus on a strong internship program and the majority of those interns join A M King after graduation.”

An aggressive training and career path process for employees throughout the company, including project managers, is one way that A M King focuses on “training our



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replacements,” says Crist. “We encourage our managers to develop their subordinates and ensure they have the tools to become future leaders of our company.”

“Our company is not a title-driven organization so we don’t have many different levels such as project manager, project coordinator or assistant project manager,” Stefan notes. “Someone who has been a co-op student or intern with us can be hired as a project manager immediately after graduation, which is the same job title for someone we hire with five years of experience at another company.”

“When there is an immediate need due to rapid growth, we do hire from outside,” D’Agostino explains. Internal referrals from current employees, job boards and recruiters within their network are the most common sources of applicants, he adds.

Traits for Success

Because project managers at his company handle such a breadth of tasks and responsibilities, Stefan looks for, “very sharp people who can process lots of information.” A high level of motivation, sense of responsibility and results-oriented approach to work are also important, he says. “We want people who want the ball, have the drive and energy to complete the project and are willing to take the initiative to find solutions to problems.”

“Communication skills are paramount because the project manager must be able to effectively communicate with an owner of a multinational group as well as the foreman of a concrete crew because they both have very specific and different needs on a project,” says D’Agostino. Leadership and sound decision-making skills are critical because the project manager must keep a project moving forward even if there is missing information or an issue that causes one part of the project to slow, he adds.

“One of the most important traits is the ability to work with others because our company is very much a team environment,” Nguyen notes. This also means that project managers must be able to understand that they don’t have to be perfect and an expert in all areas, he says. “We don’t want people – even project managers with many years of experience – to think that they can’t ask for advice or input from other people on the team.”

Retaining Project Managers

Making sure the project managers are engaged and planning to stay at the company



is just as important as hiring a good project manager. Company culture plays an important part in retention and providing an environment that recognizes talent, offers growth opportunities and supports the project manager is important.

“A M King refrains from micromanaging our employees,” says Crist. “Our project managers are given the opportunity to forge their own paths, develop client relationships and build their own teams,” he says. Unlimited growth opportunities and a focus on work-life balance as part of the company culture also lead to retention, he adds.

“I’ve always been a self-learner – seeking out people in the field or at the drafting table to teach me something I didn’t know when I first started in this field,” Nguyen explains. “Today, younger employees want a more formal training program, so as the company grew, the senior level employees presented lunch and learn forums, and we are developing more training for younger employees.”

An informal mentorship program where supervisors mentor their team members to provide guidance or to recommend others in the company who can answer questions because they handled similar projects in the past is effective, points out Nguyen. “We encourage everyone, regardless of experience level, to ask questions and to share information.”

ARCO Design/Build has a two-year, formalized training program that includes everyone in the company – from estimators to technical experts to project managers. “ARCO University begins the first day of employment,” says Stefan.

The new employee is assigned an ARCO advisor who serves as a guide to company resources as well as the best contacts for specific questions or advice. A series of videos provide a quick – five to 10 minutes – discussion of a specific subject or demonstration of a specific activity. “We will also give newer project managers a chance to partner with senior project managers on a large project to get on-the-job training as they learn new skills,” he adds.

When asked for advice for design/build firms that are facing challenges when hiring project managers, Crist recommends, “patience.” He adds, “Building a group of strong, experienced project managers takes time. You must first focus on finding talented, hardworking employees that are willing to learn and understand your company’s culture and that foundation will lead to the development of top-notch project managers.”

SHERYL S. JACKSON is a freelance writer based in Alpharetta, Georgia, who specializes in industry issues and trends.

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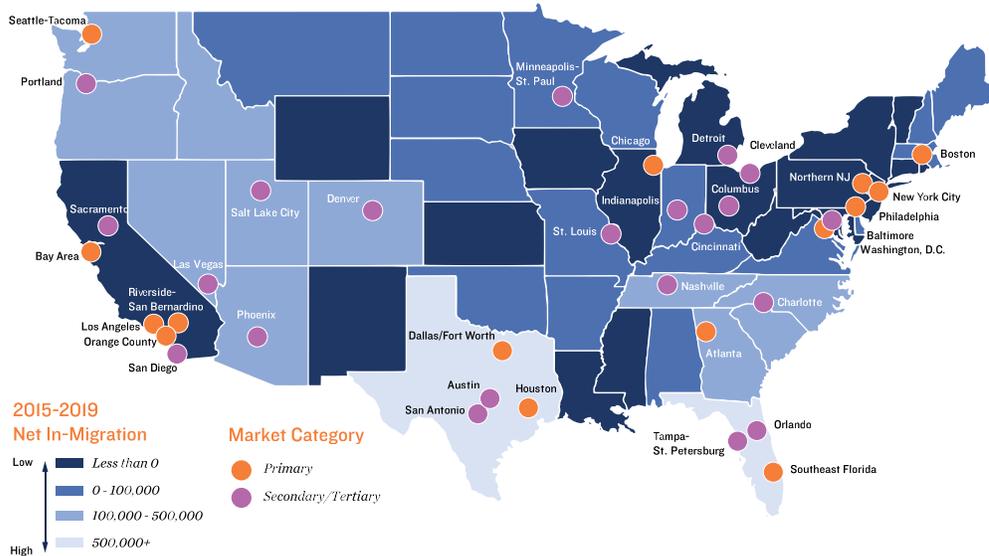
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CEBA GOES VIRTUAL

CEBA Conference & Expo education, business to business meetings and networking to be delivered via the Virtual Innovation Program.

As this issue of COLD FACTS was about to print, the CEBA leadership made the challenging decision to cancel the face to face CEBA Conference & Expo and include components of the CEBA educational program and expo in the newly launched Virtual Innovation Program taking place October 14 - November 10, 2020 via an online platform. The new virtual event will offer educational opportunities for CEBA members via the Cold Chain Essentials component of the new event. The Cold Chain Collaboration feature will allow CEBA members to connect with one another, warehouse/3PL partners and food companies, replicating all the powerful connections and interactions found at the conference.

Cold Chain Essentials – Education

A highlight of the Conference is the presentation of the 2020 Built by the Best Award entries as case studies. This year, they will be presented virtually. The award acknowledges industry-changing innovations and projects that exceed customers’ expectations, positively impact and grow the cold chain worldwide, and contribute to the larger society through food safety, trade development, and job creation. Teams from each finalist company will present their controlled environment project to participants of the Virtual Innovation Program, allowing attendees to walk away with practical ideas and inspiration.

In addition to the case studies, there will be presentations by industry thought-leaders, sharing results of a recent survey of CEBA members regarding the impact of COVID-19 on the design/construction of controlled environment facilities.

Industry Idea Exchange – Construction

Participants will discuss critical industry issues. The roundtable conversations provide participants a chance to share ideas, ask questions and solve problems in specific areas with their peers in a small group setting.

Past topics included workforce retention, food safety, sustainability, automation and technology, profitability, project management, workplace safety and differentiating your value and expertise as a controlled environment construction specialist.

Cold Chain Collaboration – B2B Meetings

The B2B Meetings Program is not a virtual tradeshow but instead enables strategic and pre-scheduled dialogue between CEBA members and key industry contacts.

To provide quality connectivity and business conversations that would have occurred at the CEBA Conference & Expo, CEBA is offering a virtual business meeting platform for members from across the world to engage in strategic dialogue to expand existing relationships and provide access to new business contacts.

Some of the most respected companies in the industry will virtually participate showcasing the latest technologies, solutions, products and services to attendees. Here is a sampling of the products and services that have been featured at past expos:

- Fire Detection Systems
- Flexible Walls
- Flooring
- Insulated Panels
- Insulation
- Lighting
- Materials Handling
- Racking
- Refrigeration Solutions
- Roofing

- Cold Storage Contractors
- Doors
- Energy Efficiency Solutions

Industry Connectivity

The Virtual Innovation Program will provide opportunities for knowledge sharing, learning, peer to peer information exchanges, business to business meeting and much more. It’s so important now for the industry to come together to share solutions, ideas and camaraderie.

This is the only event in the world dedicated to best practices in controlled environment facility construction, design and maintenance, and serves to further CEBA’s vision to be the association where anyone looking to build, renovate or modernize a first-rate, innovative facility comes to find the most experienced designers, contractors, manufactures and suppliers. To learn more, visit <https://www.gcca.org/ve>. 📞

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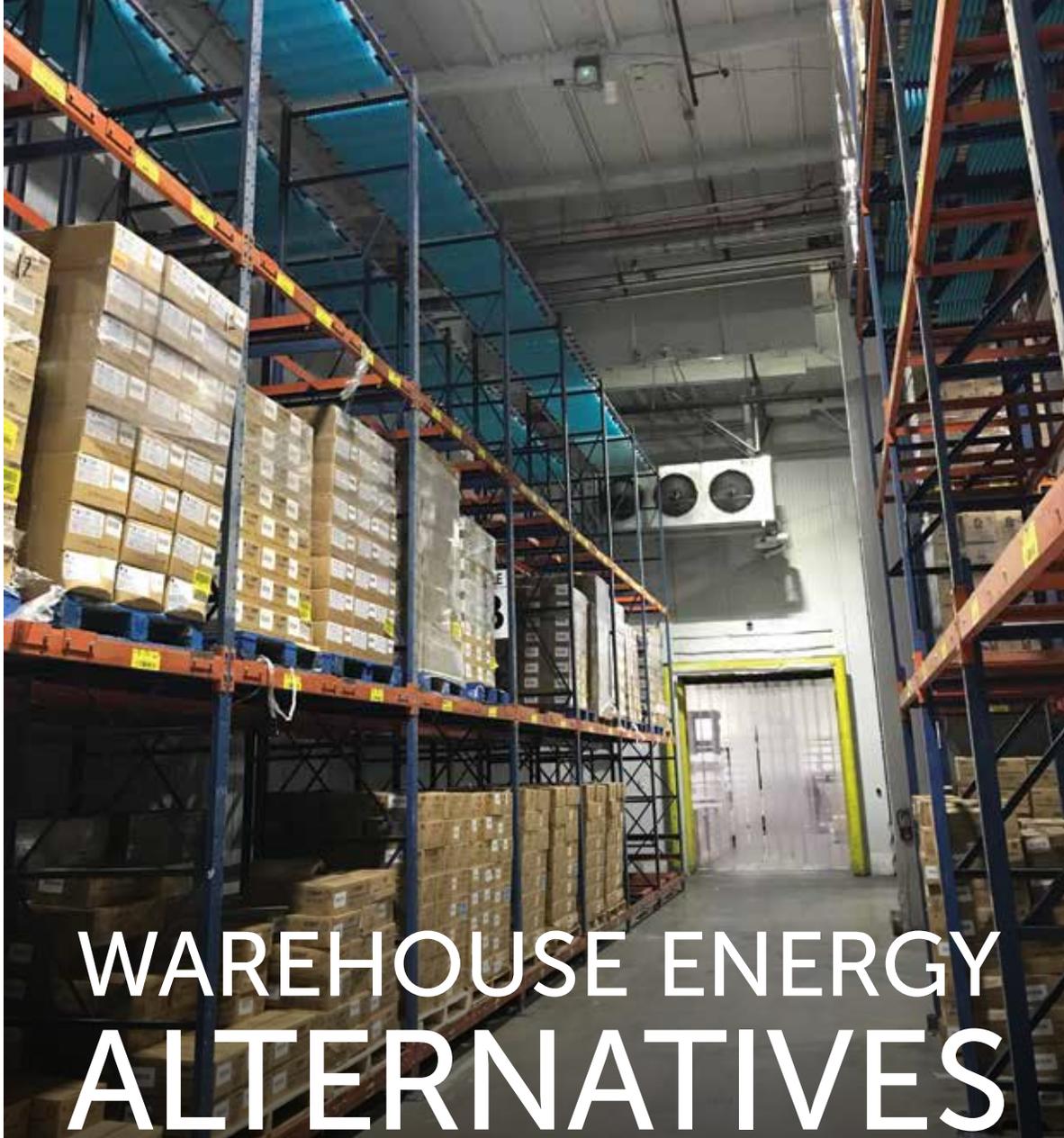


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WAREHOUSE ENERGY ALTERNATIVES

A look at cutting-edge warehouse energy solutions.

By Keith Loria

Connectivity and the Internet of Things are both creating a lot of buzz in refrigerated warehouse energy solutions, as companies look to find sustainable and cost-efficient answers to problems that have long been associated with the industry.

Savvy facilities are finding some alternative energy solutions to be perfect at meeting these goals and advancement in technology continues to grow each year.

Here is a look at some of the solutions used today in temperature-controlled facilities.

GridBeyond

British company GridBeyond recently installed an energy system on a refrigerated warehouse in the United Kingdom for a cold storage food logistics provider, with the goal of maximizing participation in energy services,

integrating inflexible assets into energy services and improving sustainability credentials.

By linking grid operators, operational load, distributed generation, storage, EV (electrical vehicle) charging and utilities to integrated energy services, the system can control temperatures across the entire site.

“Our panel fits into the refrigerated plant room,” says Wayne Muncaster, GridBeyond’s Vice President for North America. “We have a number of meters that will go on through CT clamps to the system itself, and we have a number of relays that can be integrated into the PLC or starter system and our software fits within the panel.”

The blue panels above the racking are part of Viking Cold Solutions' TES technology. (Photo courtesy of Viking Cold Solutions.)

Its CentrePoint cloud-based platform collates data from a number of sources, including site assets, and uses machine-learning algorithms to automatically place flexibility in the program likely to generate the best returns. Its ViewPoint acts as the window into all the energy activity happening at a site.

“Being able to monitor and assess the operational performance against what the compressors and condensers are doing helps ensure that every single product within the environment is kept within the right temperature bands,” Muncaster says. “That operational integrity is the most critical element of what we do.”

Lineage Logistics

Today's electrical grid is more strained than ever before. With the onset of renewables,

electrical power is no longer simply generated whenever people need it, but instead is created whenever the sun shines or the wind blows. This can lead to major problems when millions of people get off work and begin consuming power in the evenings right as the sun begins to set.

Alexander Woolf, Vice President Research & Development for Lineage Logistics, notes that to address this issue, society is turning to electrical batteries to shift electrical load more and more, but these solutions come at a high economic and ecological cost.

That's where the company's flywheeling technology come in. The solution utilizes one of the world's most vital assets – our food supply – as a thermal battery capable of shifting massive electrical loads and rebalancing power generation and consump-

tion, while ensuring the highest standard of food safety.

“Flywheeling can do this with no additional hardware upgrades and completely avoids the large capital expenses associated with traditional electrical batteries – you just need a little software to turn a freezer space into a thermal battery,” Woolf says.

For example, a Lineage Logistics facility in California, United States, is utilizing the equivalent to a 165MWh battery. In addition to helping stabilize the grid, this also provides a tremendous electricity savings.

“That amount of electrical storage would have cost around \$100 million in traditional batteries. In our last facility, we saved 37 percent, resulting in over \$1 million saved every year off that facility's utility bill,” Woolf says.

Another example is CrossnoKaye, which



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- Freezing Profiles - Store SKU specific freeze performance for extremely accurate dwell times
- Occupancy Sensing - QFM starts when pallet is placed in front of QFM and stopped when dwell time is reached
- IoT - Data Logging, Remote Control, WiFi, JSON Communication
- Remote Control - Change the cycle time remotely through API or web interface



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is incorporating real-time rate structures, weather and incoming product to automatically adjust refrigeration loads through its ATLAS system. Working with flywheeling technology, the system deploys energy scheduling and algorithms and delivers results through scalable cloud-based software.

“Flywheeling and the ATLAS platform turns our existing facilities into smart facilities,” Woolf says. “Through ATLAS we can not only optimize our energy spend but also our operational throughput and our facility maintenance all while maintaining the highest levels of food safety through advanced monitoring, analytics and automation.”

According to Woolf, the future of cold storage is smart algorithms controlling facilities to drive down costs, increase safety and improve throughput.

Logix

Logix offers customized industrial refrigeration controls that reduce operating and energy costs, improve plant productivity and help promote employee and product safety.

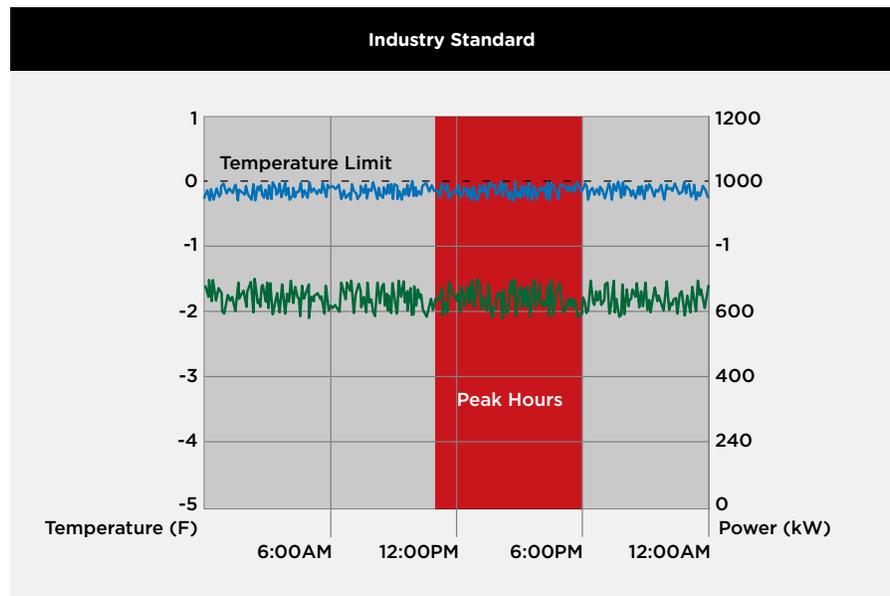
Its Logix Clarity management software communicates with distributed controllers, graphically displays and logs operating data, and provides for user viewing and alteration of control settings. Its Axiom Microprocessor Panels provide distributed control of compressors, evaporators, condensers and other mechanical equipment for maximum efficiency and safety.

Logix General Manager Mark Ghan notes the two combine to provide robust reliability, versatile networking and remote access and notification features for the wide-ranging needs of customers.

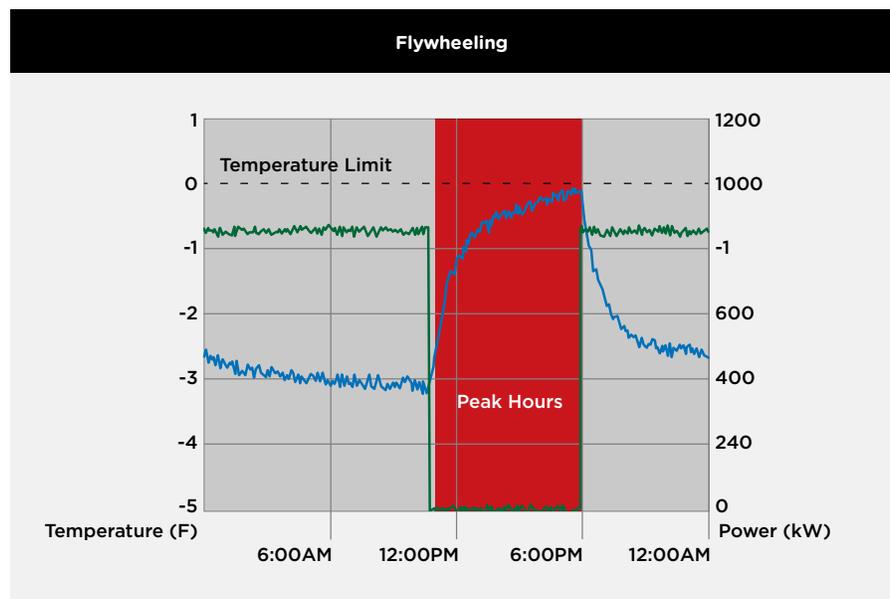
“In a connected world, you really want to be adept at being able to integrate the capabilities and solutions of other third-party vendors,” he says. “We can integrate with anyone else on a communication platform that allows us to deliver a result to meet a user’s objective.”

For example, looking at the smart grid concept where utilities are trying to optimize with cold storage warehousing, there are a lot of programs available with various incentives. Logix is able to find those sorts of solutions.

“As a controlled vendor, we are agnostic in our approach and not married to any particular vendor’s hardware or platform. That gives us complete freedom to most cost effectively meet any objective, despite the technology out



An example temperature and power trace for a refrigerated warehouse using conventional 24/7 cooling scheduling. (Image courtesy of Lineage Logistics.)



An example temperature and power trace for a refrigerated warehouse using the flywheeling control strategy. (Image courtesy of Lineage Logistics.)

there,” Ghan says. “It comes down to saying ‘yes,’ to enhance the ROI.”

Viking Cold Solutions

James Bell, President & CEO of Viking Cold Solutions, notes the company’s cloud-based intelligence platform uses real-time data to optimize temperatures and the operation

of refrigeration equipment inside cold storage facilities.

Its TES (thermal energy storage) technology, which Viking began installing nine years ago, allows operators to safely shift energy use to accommodate utility tariffs, employee comfort, or renewable energy sources, while the TES systems add tempera-

ture resiliency to facilities when there is a loss of power or refrigeration.

“TES is a unique long-duration energy storage technology with discharge times of up to 13 hours per day to maintain temperatures while minimizing refrigeration use,” Bell says. “Another unique attribute of the technology is its resiliency by preserving temperatures and food even when electricity or equipment fails.”

This technology allows operators to take advantage of utility programs, incentives and demand response economics.

“TES allows operators to safely manage heat infiltration which protects food quality and shelf life, unlike sub-cooling or flywheeling on their customers’ food,” Bell says. “TES is flexible enough to respond to any energy tariff, and TES allows facilities to participate in any revenue generating energy programs.”

Additionally, installations of TES take up no pallet or product space and can be conducted during normal facility operations. TES can be installed during design and construction or as retrofit to existing facilities.

The process determines system design and savings based on temperature requirements, refrigeration system components, facility size, racking, and utility tariffs.

“TES technology helps operators automate their refrigeration to optimize temperatures and energy consumption and can easily connect to other technologies like warehouse management systems, automation platforms, data analytics, and artificial intelligence – all of which are accelerating due to COVID-19,” Bell says. “Cold storage and electrical grid operators both are facing new energy challenges. As the world moves towards renewables and green sources of electricity, TES technology is a unique and powerful tool to help address these challenges.”

KEITH LORIA is an award-winning journalist who has been writing for major newspapers and magazines for close to 20 years, on topics as diverse as sports, business and technology.

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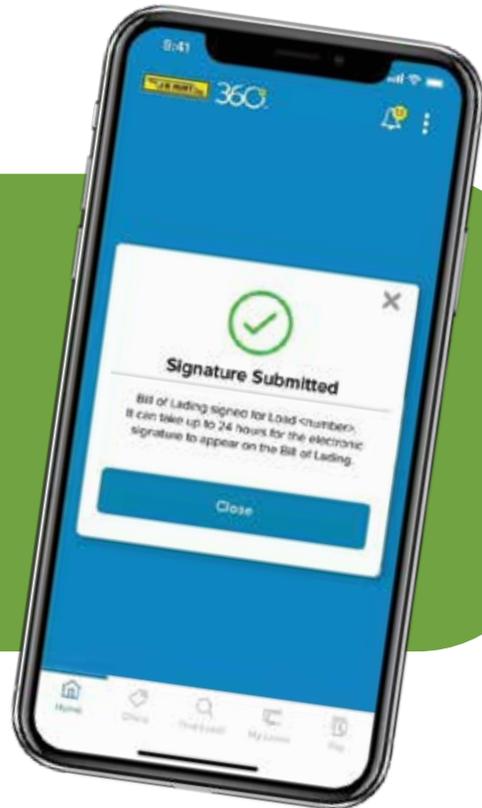
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TOUCHLESS TRUCKING



J.B. Hunt's electronic bill of lading reduces contact during the delivery process. (Photo courtesy of J.B. Hunt.)

Digital technology enables social distancing for COVID-19 and beyond.

By Karen E. Thuermer

With physical distancing an ongoing reality, automation and streamlining of traditional business methods have taken on a new urgency. Consequently, companies are reviewing every aspect of business that requires person-to-person interaction. That review includes applications software, or apps, that can make trucking operations more efficient and help workers stay safe by limiting in-person contact during COVID-19 and beyond.

Apps help companies minimize the time it takes to deliver goods. They can be used to integrate fleet management solutions, enable real-time tracking of goods, and streamline the entire logistics process. They are also being used to generate electronic bills of lading.

Todd Lanter, Director of Transportation for Lineage Logistics, points out that historically the documentation generation and exchange

process has been defined by the shipping facility. "Moving toward a paperless exchange will have to be acceptable to all parties associated with the transaction – shipper, carrier and receiver," he says.

In Lanter's opinion, an ideal technological solution would be apps that were platform independent for user flexibility and provide checks and balances that clearly establish the

transference of care and custody from one party to the next.

Some companies have either developed apps or are in the process of doing so.

Here's a look at what a few companies are doing.

Digital Platforms

In May 2020, J.B. Hunt launched a new electronic bill of lading (eBOL) feature that enables businesses and carriers to digitally sign BOLs, further reducing contact during the delivery process. The company introduced the eBOL feature largely because of COVID-19 and a need to protect its workers and all parties involved in the movement of goods.

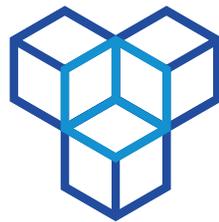
The paperless system saves drivers and customers from passing paper back and forth to each other. A driver can take a photo of paper documents with his or her phone and the BOL is then indexed with the load.

Shelley Simpson, Executive Vice President, Chief Commercial Officer, J.B. Hunt said,



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“The current environment is challenging every aspect of the supply chain, from securing capacity to completing deliveries. This new electronic bill of lading feature offers simplicity, efficiency, and most importantly, a safer option for drivers and front-line employees to sign load documents.”

Using Carrier 360 or the J.B. Hunt Drive app, drivers are able to securely send the eBOL to customers for electronic confirmation and signature. A signed proof of delivery is then emailed to the customer.

“Our goal is to create the most efficient transportation network in North America,” says Brian Webb, Senior Vice President of Business Development.

Touchless Contact Executions

PLM Trailer Leasing recently developed a new internal field app (Touchless Contact Executives) on the Microsoft Dynamics platform that allows for touchless contract execution for both rental and lease assets. By using the app, the customer can reserve a specific refrigerated trailer asset type by email or a call into one of the national field office locations.

“The PLM Operations Manager provides the customer asset unit number(s) to the customer, completes an electronic contract and a physical inspection of the trailer prior to driver’s arrival,” explains Don Durm, Vice President of Customer Solutions. “Once the driver arrives on property, the electronic contract is emailed to the driver and or dispatch for the inspection and acceptance of the refrigerated trailer and the contract can be executed through a digital signature. Then they simply hook up and drive out of the facility.”

The app was in queue for development prior to the pandemic and now the technology is available and utilized at PLM locations. “The pandemic accelerated this project line and was accomplished within two weeks of the pandemic,” Durm says. “The future for this technology would be to further develop the app-based program so it can be utilized as a management and invoice tool by PLM vendors that provide maintenance and repairs to our refrigerated assets.”

PLM’s Customer Web Portal offers remote access to customers business operations with PLM and gives customers access to dynamic reporting of PLM rental and lease activity, online invoicing and statements, web-based

support requests, and real-time preventative maintenance and repair reporting. This service provides customers 24/7 electronic access and support to their rental and leased fleet.

Additionally, the customer has access to PLM’s ColdLink telematic solution on the refrigerated trailers, which provides historical and real-time tracking, temperature monitoring, fuel level, and unit health for remote management of loads.

“An example may be a driver just delivered a frozen load at -10 degrees and the next pick up is fresh strawberries at 34 degrees,” Durm explains. “The unit was not reset from the previous load, so the unit is at -10 degrees. Dispatch could change the temperature remotely while the driver is in transport, with their permission to access the TRU, avoiding a major insurance claim.”

Mobile Device App

Conestoga Cold Storage Ltd. (CCS) recently developed an application to provide all customers and drivers with contactless interactions at all their warehousing facilities. Today, the added benefit of limiting in-person contact with CCS staff has made the choice to implement this type of technology more relevant. The app is supported by both the iOS and Android mobile device platforms.

“The mobile application is in early stages of implementation,” reports Gavin Sargeant, Vice President, Conestoga Cold Storage. “The application gives truck drivers the ability to enter information into our system prior to arriving at one of our facilities.”

The app uses the power of geofencing to monitor truck drivers as they approach a CCS facility. By using GPS or cellular data, the system can track a driver’s location to know when that truck is within range of the appropriate facility. Once within range of communication, the driver uses the mobile app to sign in and receive information from CCS. For example, the system can issue a door assignment to the driver directly to a mobile device, thereby eliminating the need for the driver to physically enter the building.

CCS is using this technology to manage the ebb and flow of trucks entering and exiting their facilities. “We are trying to limit the unnecessarily process of drivers waiting, walking or standing in a vestibule with other people, especially with COVID,” Sargeant

says. “We are trying to mimic the process that airline passengers experience when checking in online for a flight.”

The new software application will allow drivers to remain in their trucks and avoid face-to-face contact when arriving at a CCS facility.

“Our cold storage facilities provide a critical service to food manufacturers across the country,” Sargeant adds. “The current situation has highlighted the importance of keeping Canada’s food supply chain up and running so deliveries to distribution hubs and grocery stores can continue uninterrupted. If we can eliminate the need for truck drivers to park in our yards and enter our offices to do paperwork, we can reduce the risk to workers while continuing to increase the efficiency of our operations.”

Initially the application focused on drivers arriving at CCS facilities. The technology is now being used to automate more of the process, including driver checkout. “Now drivers receive check-out codes electronically on a mobile phone. The security code is then scanned at the exit gates.”

Sargeant notes the application was originally developed for security reasons and to reduce paperwork and driver congestion, but now it serves an even greater purpose by keeping workers and drivers safe. 📍

KAREN E. THUERMER is a freelance writer based in Alexandria, Virginia, who specializes in economic and logistics issues.

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COLD CHAIN DEVELOPMENT

NEWS ABOUT WFLO INTERNATIONAL PROJECTS

WFLO VOLUNTEER SPOTLIGHT

This column features news about key projects of the World Food Logistics Organization (WFLO), a GCCA Core Partner, and its work with members, aid organizations and international development partners to help emerging economies and lower-income countries meet the challenges that arise when growing a safe and efficient global cold chain.

The success of WFLO projects is dependent on a cadre of member volunteers who lend their warehouse operations expertise to improve the cold chain in other countries.

Manuel Cabrera is one of those volunteers. Over the years, he has taken time away from his family and professional responsibilities as the Director of Friopuerto to support WFLO/GCCA projects in Vietnam, Cambodia and Ethiopia among others. He also serves as a key resource to GCCA staff, who reach out to him often with general questions.

Cabrera's perishable foods lineage and global wandering appear to go back generations. He explains that in the 17th century, his family arrived in the Spanish Canary Islands, via Ireland, where they grow, by Cabrera's account, some of the world's best bananas and avocados. His family went on to build one of the first public cold storage facilities in Spain in 1967, at the Port of Barcelona. Cabrera joined the cold storage industry 20 years later and has been building and operating facilities in Europe, the Americas and Africa, ever since.

"When WFLO asked me to volunteer in South East Asia, it was easy to say yes," recalls Cabrera. "I wanted to learn more about our industry in other parts of the world and to try to promote GCCA efforts to help develop the cold chain internationally. It's also important to me to try to ease some of the pain and distress that results from food spoiling in parts of the world that can least afford food loss."



WFLO volunteer Manuel Cabrera, center, and other WFLO volunteers visit the newly constructed Ha Long Foods Import Export Company, while conducting a cold chain country assessment in Vietnam. From left to right, translator Tuan, the company Director and Owner Truong Dinh Tung, Cabrera, Kent Sisson of SIAM Professionals, LLC, and Wes Jayne of Halls Warehouse Corporation.

In Vietnam and Cambodia, Cabrera explains that he was part of a group of WFLO volunteers and GCCA staff that performed cold chain country assessments to study produce/farming conditions, cold chain requirements, cold storage, road and port infrastructure, facilities construction and food distribution under the auspices of WFLO and United States Department of Agriculture (USDA).

"Over the course of a couple of weeks, we meet with many stakeholders in the industry, as well as government agencies and authorities," says Cabrera. "Our objective, and the aim of the projects, is to promote trade relationships between these countries and the United States, prevent food losses from farm to fork, which runs as high as 40 percent, assist in developing local processing industries related to temperature-controlled perishables (mainly



Above: Cabrera in Vietnam, speaking with Tran Loi, the Director of My Hoa, about the butter and cheese he imports as the sole distributor for Lactalis, France.

Below: Cabrera and Jayne question Nguyen Van Tu, the Operations Manager at Thang Long Logistics Services Corporation in Vietnam, about operations at the 5000-square-meter chilled and frozen facility.

fruits and vegetables) and improve cold chain related operations through technical and educational support.”

Cabrera says other projects are longer. For example, WFLO, working with GCCA member LixCap, has been contracted by private entities to conduct comprehensive feasibility studies for countries in Africa and Southeast Asia. The scope will range from market research to final construction with options and plans to build one or more facilities with the goal of promoting and facilitating the domestic demand and export of temperature-controlled perishables.

Looking to the future, and the opening up of travel post-COVID, Cabrera hopes to get involved in new projects the WFLO is now proposing to the World Bank in Benin and Mexico, and in another project in the Philippines.

“If someone can spare a few days and is committed to developing the cold chain internationally with all that entails – farming conditions, new facility construction, transport and distribution issues, port infrastructure – there is always a need for support and expertise,” Cabrera points out.

“I would highly recommend becoming a WFLO volunteer. Your contribution to the global cold chain is always rewarding because of the difference you make, the unforgettable experiences you share, the cultures you learn about and the people you meet,” adds Cabrera. “We also should give back a little, as we are very fortunate for the way we live and we should commit ourselves to stopping food waste in our society while there is increasing starvation in poorer countries.”



ASSOCIATION NEWS

NEWS ABOUT GCCA CORE PARTNERS

In light of the evolving situation surrounding COVID-19, **GCCA** leadership has made the difficult decision to cancel the 2020 face-to-face **IARW-WFLO** Convention and the face-to-face 2020 **GCCA Cold Chain Conference & Expo**. The association has launched two new events. The Cold Chain Essentials Virtual Learning Series will launch October 14. It is a new, affordable, virtual learning series aimed at delivering essential content for individuals of all levels within all segments of the global **GCCA** membership. The new Cold Chain Collaboration - B2B Meetings will be a virtual business meeting platform to allow **GCCA** members from across the world to engage in pre-scheduled meetings with qualified participants. Learn more at www.gcca.org/ve.



The U.S. Department of Labor's Occupational Safety and Health Administration has recognized **GCCA** as an Alliance Program Ambassador in recognition of **GCCA's** long-standing work raising safety awareness in the cold chain.



GCCA's South Africa regional office has named five cold chain industry leaders to its Advisory Council: Christopher Nulliah, Logistics Director, Etlin International; Paul Gibbons, Customer Director, Vector Logistics; Colin Barker, Compliance Manager, Table Bay Cold Storage; Carlos De Mendonca, General Manager, Crossberth Cold Stores; and Jaco Ollewagen, Manager: Technical, CCS Logistics.



GCCA is pleased to announce three key staff changes: Brian P. Lynch joined **GCCA** as Senior Vice President of Business Development and Member Programs. Reporting directly to **GCCA's** President & CEO, Lynch will oversee the creation and enhancement of all non-dues revenue-producing pro-

grams and services that benefit **GCCA's** 1,300 member companies in 85 countries. In recognition of their commitment to excellence and outstanding leadership, Megan Costello and Lowell Randel have been promoted effective immediately. Megan Costello has been promoted from Chief Operating Officer to Executive Vice President & Chief of Staff. Lowell Randel has been promoted to Senior Vice President of Government & Legal Affairs.

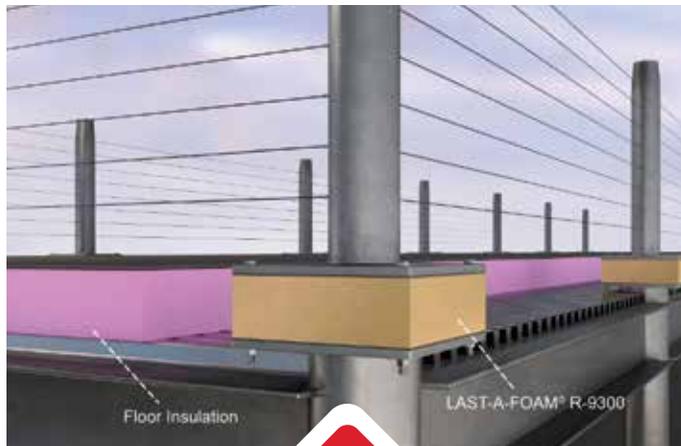


The **GCCA** Cold Chain Policy Forum, held virtually this year, has broken attendance records. Nearly 200 registrants – double the number of 2019 registrants – heard the latest developments on key regulatory programs from OSHA, EPA and FDA.

IARW has released the association's annual Global Top 25 List of its largest temperature-controlled warehousing and logistics members. The list can be found at gcca.org.



IRTA officers and board members were recently re-elected. The officers are Chairman Todd Lanter, Lineage Logistics; Vice Chairman Don Durm, PLM Trailer Leasing; and Treasurer Richard Patenaude, Congebec. Re-elected directors are Greg Bryan, Lineage; Chris Mnichowski, CTI Freight Systems; Keith Mowery, USCS; Eric Olafson, Port of Miami; Barbara Pratt, Maersk; Ned Runser, Hall's Warehouse; Brian Webb, J.B. Hunt; and Brandon Woods, Refrigerated Transport. 📧



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COLD CHAIN INNOVATIONS

REDUCE ENERGY COSTS AND ENSURE PERISHABLES ARE PROTECTED WHILE PROMOTING SUSTAINABILITY

In the fast-moving cold chain environment, a simple mistake like a temperature hotspot in a warehouse facility can cost tens of thousands of dollars in wasted product and lost revenue. Smart cold chain technology company Therma eliminates these costly problems with an IoT sensor-based smart refrigeration monitoring platform. Therma's 24/7 wireless sensors measure temperature and humidity to provide accurate, real-time data across warehouse facilities – reducing energy costs, preventing loss events and ensuring product quality.

Therma is deployed across major foodservice, hospitality and manufacturing brands including McDonalds, Starbucks, Dominos, NOW Health and Crider Foods providing warehouse facilities with accurate, real-time and actionable insights across the cold chain.

Market segments like cold storage and vaccine distribution present compelling opportunities to maintain and ensure the precise conditions products are stored in, down to the second. "As much as 35 percent of vaccines are lost due to improper temperature management in the supply chain. This represents a huge opportunity for improvement, especially at a time when mass distribution of a



COVID-19 vaccine is critical," says CEO and Founder Manik Suri.

Powered by machine learning, Therma's Data Insights recommends adjustments to settings that reduce energy costs, prevent "alert fatigue" and ensure cooling is based on data-driven management. 🌐

Cold Chain Innovations, a column brought to you by Tippmann Innovation, features the latest technologies, cutting-edge solutions, and innovative practices that the cold chain industry has to offer. Featured in each issue of COLD FACTS Magazine, the Cold Chain Innovations section gives readers thought-provoking ways to optimize their supply chain and improve operational efficiencies. The information presented in the Cold Chain Innovation section is sourced from GCCA members. To feature your news, press releases or submit your idea for a future Cold Innovation article, contact James Rogers at jrogers@gcca.org or call 703.373.4300.

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COOL SOLUTIONS

SCIENTIFIC ANSWERS TO COLD CHAIN CHALLENGES

This column highlights a cold chain question and answer submitted through the GCCA Inquiry Service to the team of experts on the WFLO Scientific Advisory Council (SAC).

To get instant advice from a private, online community of over 4,000 cold chain professionals, simply post your inquiry in the GCCA Online Community. All GCCA Members and their employees can access the GCCA Online Community at community.gcca.org/home. There are active forums for Construction & Engineering, Government Affairs, and Third Party Logistics.

If you are not a GCCA member, or are unsure how to post in the GCCA Online Community, contact the GCCA Inquiry Service at www.gcca.org/inquiry. GCCA Members can also browse the full archive of inquiries and responses in the GCCA Inquiry Service Archive. Access to previous inquiries is restricted to members of GCCA core partner organizations.

Q: Does a corrugated outer carton need US Food and Drug Administration (FDA) approval when used for packing seafood? The corrugated outer carton has an impervious lacquer on both sides. It will be used, in this case, to ship crayfish. The crayfish are packed directly into the carton, which is constructed to prevent any liquid leakage. Each carton carries 15kg of crayfish and they are exported frozen. The inside of the carton is completely lined with wool insulation and a polymer film, ensuring that the crayfish remain frozen during the journey.

A: Our initial assessment indicates that if the wool insulation is fully surrounded by polymer film and will not come in contact with the crayfish, this packaging should be acceptable. The FDA does not approve packaging materials, however, the FDA does regulate components of food contact materials, including packaging. Once known as indirect food additives, FDA now refers to these materials as food contact substances (FCS). Information regarding Packaging & Food Contact Substances (FCS) can be found on the FDA website at: <https://www.fda.gov/food/food-ingredients-packaging/packaging-food-contact-substances-fcs>. Information regarding Determining the Regulatory Status of Components of a Food Contact Material can also be found on the FDA website at: <https://www.fda.gov/food/packaging-food-contact-substances-fcs/determining-regulatory-status-components-food-contact-material>.

Answer provided by WFLO Scientific Advisory Council Chairman Dr. Mike Jahncke, Virginia Seafood Agricultural Research & Extension Center. @



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SAC MEMBER SPOTLIGHT



DR. PAUL L. DAWSON
Professor
Department of Food, Nutrition
and Packaging Sciences
Clemson University

Paul Dawson is a food scientist who studies ways to improve food safety and quality, specializing in food microbiology. His research has spanned food production through final packaging of many food products. He works directly with the industry through the Cooperative Extension Service and through funded research projects. Much of his work has focused on poultry products, as he worked in this industry prior to graduate school studies

Dawson obtained his MS degree in Poultry Science from the University of Florida and his PhD in Food Science from North Carolina State University (NCSU), and after a two-year post-doctorate at NCSU, he came to Clemson University in 1991.

He teaches undergraduate courses covering Food Chemistry as well as Food Resources and Society. He also teaches two graduate courses on Food Chemistry and Food Rheology while serving as Graduate Coordinator for two MS and one PhD program in the department.

Dawson has authored/co-authored 133 refereed scientific publications, 18 technical book chapters, 170 scientific abstracts and a recent book on food habits entitled, "Did You Just Eat That?" Paul has conducted more than 150 interviews for public media including appearances on National Public Radio, CNN, Headlines News, MSNBC, Canadian Broadcasting Company, Fox News Channel, CBS Radio News and an appearance on Michael Feldman's Whad'Ya Know? Radio Show. Paul joined the WFLO Scientific Advisory Council in 2002 as the Poultry Products Scientific Advisor. 📧

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IARW

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WFLO

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Tongwell, United Kingdom

KEITH Manufacturing Co.
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Punjab, India

MEMBER NEWS

NEWS FROM MEMBERS OF GCCA CORE PARTNERS

A M KING, an integrated design/build firm, had its status as an Accredited Quality Contractor renewed by Associated Builders and Contractors for another year. In other news, GroundBreak Carolinas has honored Brian King, President of A M King, by naming him a 2020 GroundBreaker. This award is given to four individuals who are shaping the architecture, engineering, and construction industry in a variety of ways.



A M KING began construction of a 262,000-square-foot ripening and cold storage distribution center for Mission Produce Inc., the world's largest grower, packer, and shipper of Hass avocados. The new mega-facility will be located in Laredo's the Pinnacle Industry Center in Laredo, Texas, United States, on 32.6 acres adjacent to the Rio Grande River and the Mexican Border.



BRIDGE DEVELOPMENT PARTNERS

and joint venture partner PGIM Real Estate acquired a 20.08 acre site for its future Bridge Point Cold Logistics Center in Hialeah, Florida, 312,103-square-foot speculative cold storage facility. This represents the first-ever cold storage project to be delivered in South Florida on a speculative basis.



BELLINGHAM COLD STORAGE in Stanwood, Washington, United States, has new processing space. The facility has 83,000 square feet of cold storage, dry storage and loading docks, with an additional 88,000 square feet of processing space and office space connected. The company has also signed an agreement to lease and manage the Twin City Foods (TCF) cold storage warehouse located in Stanwood, to accommodate millions of pounds of TCF frozen vegetables as well as adding critical capacity for customer growth.

A new 653 kWdc solar energy installation at **CENTRAL STORAGE & WAREHOUSE'S** location in Caledonia, Wisconsin, United States, now makes the refrigerated warehouse company the largest privately-owned host of commercial rooftop solar power generation in the state.



CEVA LOGISTICS received a majority stake in Dubai-based AMI Worldwide, uniting CEVA's almost 1,000 employees and over 1,000 AMI Worldwide employees in 12 countries expanding across East and Southern Africa. In addition, CMA CGM, the parent company of CEVA, will join its three service facilities that are in Mali, Burkina Faso, and Ivory Coast to the African network. They will offer freight and forwarding services.



GRAY is partnering with contract beverage manufacturer Prime Beverage Group on the company's first production facility in Kannapolis, North Carolina, United States. The 300,000-square-foot facility will include a warehouse and high-speed manufacturing lines to produce various products.



JOHNSON CONTROLS was ranked 18 among the 100 Best Corporate Citizens for 2020, for environmental, social and governance (ESG) transparency and performance.



KLOOSTERBOER began construction of Cool Port II, a new state-of-the-art, fully automated, multi-customer, high-rise cold storage facility with a capacity of 60,000 pallets at City Terminal Rotterdam in the Netherlands. The building is expected to be finished by January 2022.

LINEAGE LOGISTICS has pre-leased a 189,889-square-foot build-to-suit cold storage facility that will be operated by its subsidiary Preferred Freezer Services, in a planned 3.2-million-square-foot industrial park in Gloucester County, New Jersey, United States.



LINEAGE LOGISTICS' work on optimizing the design and process of blast freezing food products was recognized by the U.S. Department of Energy (DOE) with its 2020 Better Project Award.



LINEAGE LOGISTICS has signed a definitive agreement to acquire Ontario Refrigerated Services, Inc. (ORS), a leading family-operated cold storage company offering temperature-controlled space in the Greater Toronto, Canada, market, marking Lineage's entrance into the Canadian market.



METL-SPAN is offering a new online course through Hanley Wood University – Designing with Architectural Insulated Metal Wall Panels.



Olmo, founded in 2015 with a vision to consolidate the Mexican Cold Storage market via mergers and acquisitions, announces the launch of **QUALIANZ**, an operating company that integrates over 29 facilities across Mexico and more than 100,000 temperature-controlled pallet positions.



RLS LOGISTICS recently created a joint venture that will offer customers the ability to work with regional family-run cold storage providers on a national basis. The goal is to partner with existing best-in-class operators in 10 to 12 regions of the United States, as well as Eastern and Western Canada.

MEMBER NEWS

NEWS FROM MEMBERS OF GCCA CORE PARTNERS

RLS LOGISTICS received food safety certification through the British Retail Consortium Global Standard (BRCGS), garnering the highest AA rating at each of its five cold storage facilities and for its distribution network.



SCOPELITIS, GARVIN, LIGHT, HANSON & FEARY recently announced the addition of four new attorneys in its office in Milwaukee, Wisconsin, United States. The four bring extensive experience in transportation law – one in accident litigation, and the others in workers’ compensation defense – to the national transportation law firm.



THERMO KING and **BPW** announced a collaboration to develop a new economical and ecological refrigerated trailer solution. 🌐



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MARCO RIVERSO

PROJECT MANAGER
COLDBOX BUILDERS, INC.

CF: How did you transition from college to Coldbox Builders?

MR: During the summer of my first year in college, I was working with a friend who had an excavation company and saw that Coldbox was hiring for a summer position. I applied for the job and was called in for an interview. I started a few weeks later as a Junior Site Superintendent at a corn processing plant and worked for Coldbox on this project for the remainder of the summer, returning to school in September. Just a few months later, the operations manager contacted me about an opportunity to work in London, Ontario, Canada, over the three-week winter break. I was excited to be called back and accepted the opportunity knowing that Coldbox was a company I could see myself working for in the future. After graduating from the Construction Engineering Program at George Brown College, I accepted a full-time position as a Project Coordinator for Coldbox, where I have been for the last 6 years.



The ability to change on the fly and do it well helps me as a project manager to deliver a successful project.”

CF: What do you think is the best way to recruit and retain talent that can develop into Project Managers?

MR: Job fairs are a great way to meet future candidates, network and get your company name out there. Offering internships or co-ops for students provides an opportunity for mentorship and growth with the company. Talent retention is key to the success of a business. Offering professional development, industry-specific educational opportunities, creating pathways for advancement, providing competitive salaries and bonuses, and fostering a progressive and positive work environment are all important for retaining talent.

CF: What is the most important thing to know about the role of Project Managers in the design/build of refrigerated warehouses?

MR: Every client and project is different with their own specific needs and requirements based on their products, operations and their end users. Collaboration and communication in the early project stages are critical for a Project Manager to understand the client's needs in order to provide the best value solution. What is most important of all is the ability to be nimble and shift plans as the project unfolds in the build phase: opportunities can arise, needs change and challenges present themselves. The ability to change on the fly and do it well helps me as a project manager to deliver a successful project.

Helping a client separate “need to haves” and “like to haves” early on will streamline the process.

CF: What do you like most about your job?

MR: I enjoy that we are often faced with the challenge of adding onto an existing building that is operational. This adds a layer of complexity compared to a greenfield project. We often have to perform shut downs to occupied portions of the existing facility, which involves planning and communication with the client, their staff, our subcontracts, authorities having jurisdiction and the Coldbox team. Every day that I am challenged helps me to learn, grow and master my role.

CF: What do you think will be the next big thing in building temperature-controlled facilities?

MR: This niche market – environmentally controlled facilities – is driven by science and technology. With the continuous advancement of technology comes new and improved products that keep the industry exciting. We are seeing products that are more effective at managing temperature and humidity as well as the speed and ease of construction. These advancements help the design builder and the client to increase efficiencies and improve the process. In the near future, we will see more efficient refrigeration systems and building envelope solutions, which will help keep operating costs down for our clients. 🌀



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