

COLDFACTS

CONNECTING A VITAL INDUSTRY NOVEMBER-DECEMBER 2020



Corrosion is the enemy. RG-2400 is the solution. Industry leader offering proven products.

Polyguard RG-2400 Corrosion Control Gel responds with elements of new and existing steel pipe to form an ultra-thin glasslike protective surface. This layer of protection will fight off everything nature throws at it.

ReactiveGel

1 GALLON PAIL

128 Fluid Donces; 3.8 Liters)

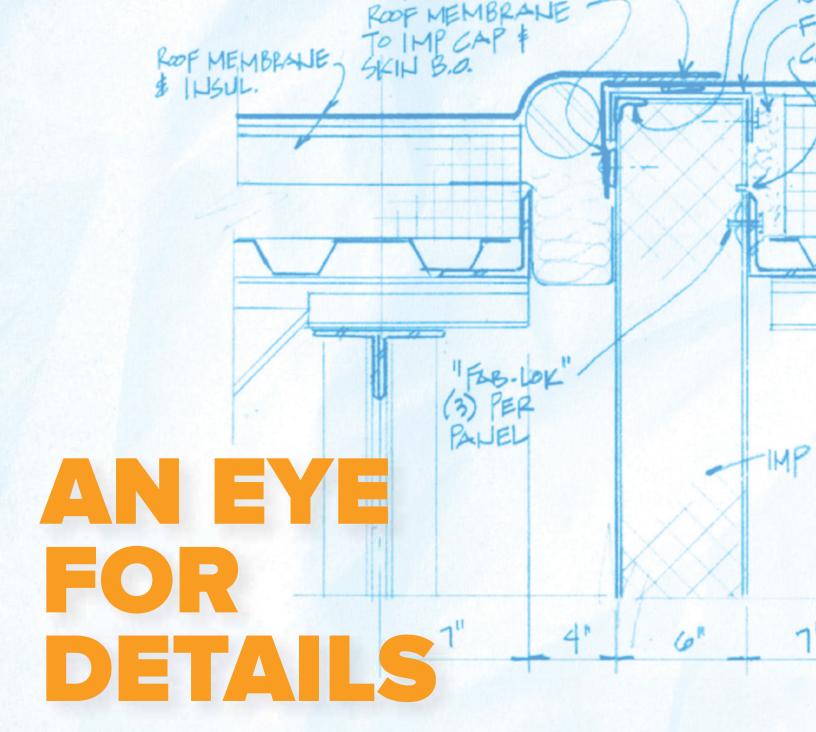
Threaded Fastener A Mixing Equipment and

His Railing: Health 1, Flammsbilly -1, Physical Hazze

OSHA Hazard Warning(s): May Cause Skin, Eye, & Respiratory Irritation

Innovation based. Employee owned. Expect

www.Polyguard.com 214-515-5000



Every aspect of our state-of-the-art facility and continuous line has been purpose-built to produce exceptional panels.

From our large-span column spacing which allows us to manufacture and maneuver panels over 70' long, to our double-belt designed to produce panels up to 8" thick, and our temperature-controlled finished goods storage where panels cure indoors before being staged outside for quick, efficient loading, we're using our expertise of the cold storage and industrial construction markets to deliver on the details that mean the most to you.

Discover a better way at truecorepanels.com





CONTENTS

NOVEMBER-DECEMBER 2020

DEPARTMENTS

- 32 Cold Chain Development
- **34** Cool Solutions
- **36** Member News
- **37** Cold Chain Innovations
- **38** New Members
- **41** Association News

COLUMNS

- **06** Leadoff
- 42 Cool Person



About the Cover

Food industry executives discuss how key customer segments have fared in 2020. See the article on page 12.

FEATURES

New Food Traceability Regulation Proposed
Would be the first major regulation under FSMA in years.

By Lowell Randel

The View from Retail
How key customer segments are weathering a pandemic and a few other disruptions.

By Alexandra Walsh



- A Pool of Management Talent
 Leadership development programs can be tailored to fit company needs and culture.

 By Sheryl S. Jackson
- 24 Improving Driver and Warehouse Relations
 Understanding and a clear path of communication are key.

 By Karen E. Thuermer
- Contending to Be the Best
 A look at three projects worthy of award-winning recognition.

 By Keith Loria







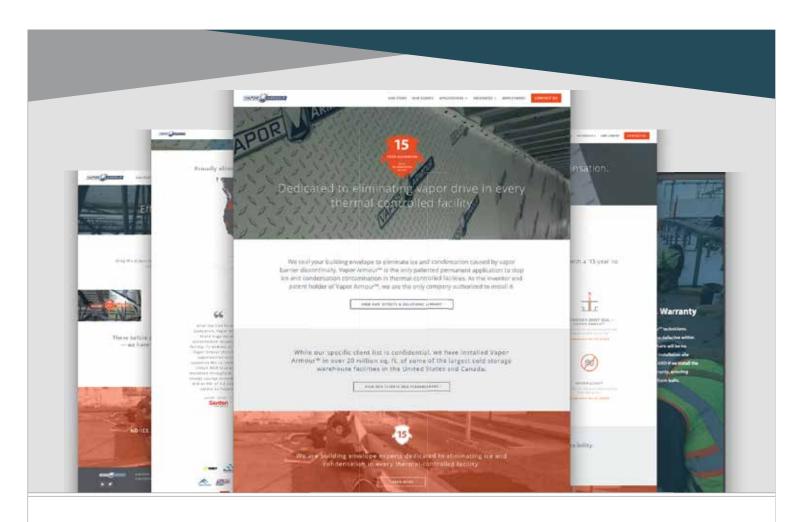














WE ARE PLEASED TO ANNOUNCE OUR

VAPORARMOUR.COM UPGRADE

FEATURES INCLUDE:

Vapor Armour GCCA involvement • Stakeholders, clients and customer showcase • 'Effects & Solutions' photo gallery Industry-leading 15- and 20-year warranty detail • FSMA regulations • Downloadable installation Cut Sheets Safety protocols and training regimens • Updated contact page featuring reps throughout the U.S.

Current job listings • Virtual Forensic and On-site Forensic Evaluations detail

NEW WHITE PAPERS & CASE STUDIES:

White Paper: FSMA Compliance and Energy Savings with An Effective Building Envelope Case Study: Beware of What You Cannot See Case Study: The Energy Thief

VAPOR ARMOUR, INC. // 855.437.0446 // CONTACT@VAPORARMOUR.COM // VAPORARMOUR.COM

LEADOFF

MESSAGES FROM GCCA LEADERS

WFLO Resources and Education Continue Virtually

DO NOT THINK IT IS POSSIBLE TO OVERSTATE WHAT A CHALLENGING, BUT INSPIRING, YEAR THIS HAS BEEN!

In the face of COVID-19, food logistics has been tested like never before. Our industry rose to the challenge and our companies' frontline teams – part of the world's essential workforce – are to be commended. While their contributions have been recorded in COLD FACTS over the last few months, we cannot convey enough our gratitude for their brave and hard work.

GCCA/WFLO also rose to the challenge. When I last addressed you in this column in the March/April 2020 issue, our big news was the launch of the IARW-WFLO Strategic Plan and its four priorities: workforce innovation, market intelligence, industry promotion and global advocacy. At the time, we had no idea how fast and how deep GCCA/WFLO would have to dive into the four priorities to provide the support member companies needed to understand and overcome the challenges of the global pandemic.

What has not wavered throughout these past months is the education, training and preparedness IARW-WFLO provides to meet the needs of member companies at every level – from warehouse teams to C-Suite teams.

Around the world, the WFLO continued to offer valuable resources and education virtually. When a WFLO training session I was to lead in Central Asia was cancelled due to the pandemic, a series of free webinars was quickly organized to help stakeholders manage any disruptions in the food supply chain. Free webinars were posted on GCCA's YouTube channel offering advice and best practices from industry experts based on experiences of GCCA members already hard hit by the pandemic. In August, several WFLO instructors and I taught a Virtual Cold Store Operations Short Course to 36 students from five African Countries and the United Kingdom. See page 32.

When IARW and CEBA made the difficult decision to pivot face-to-face conferences to virtual, GCCA provided members opportunities to learn and connect via the GCCA Virtual Innovation Program. The Cold Chain Essentials educational component ran for five weeks beginning in mid-October and offered a 6-track virtual learning series aimed at delivering relevant and timely content for individuals of all levels within all segments of the global cold chain.

As the 2020 CEBA Conference and the 2020 Latin American Cold Chain Congress were held in conjunction with the Virtual Innovation Program, education from these conferences was hosted in a new CEBA Controlled Environment Building Track, as well as a new Latin American Congress Track (conducted in Spanish). The WFLO Institute Latin American postponed Year 1 and 2 until July of 2021, however Year 3 students were able to complete their final year virtually and even enjoyed a virtual graduation.

The 2nd WFLO Institute Australia was postponed until October 2021, and the WFLO Institutes East and West, originally scheduled for January 2021, will move to May 2021 in the hope that the delay will allow the Institutes to be held in person.

The talent and expertise of our people is our greatest return on investment. And as this year has made more evident than ever, our teams are the most important component of being strong partners to our customers.

As we look to next year, clearly we will still see the impacts of COVID-19 but also, I believe, continued growth and opportunities. I want to convey what an honor it is to be serving as WFLO Chairman, even in these unprecedented and interesting times. ②



BRIAN BEAZER WFLO CHAIR

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.

CONTACT US:

COLD FACTS Magazine Global Cold Chain Alliance Attn: Megan Costello 241 18th Street South Suite 620 Arlington, Virginia 22202 United States

tel +1 703 373 4300 fax +1 703 373 4301 mcostello@gcca.org | www.gcca.org

COLD FACTS welcomes editorial ideas; contact Editor-In-Chief Alexandra Walsh at +1 301 523 3318 or awalsh@associationvision.com. Contact Jeff Rhodes at +1 410 584 1994 or jeff.rhodes@mci-group.com for advertising opportunities in GCCA publications.

Design by SWALLIS Design, San Francisco, California, USA.

While the material in this publication has been compiled with care, the Global Cold Chain Alliance (GCCA) has not validated all of the information contained herein and does not assume any responsibility for its use, accuracy, or applicability. As used above, GCCA shall mean the organization, GCCA Core Partners, and each organization's directors, officers, employees, volunteers, members, and agents.











PLANNING | ENGINEERING | CONSTRUCTION



BUILDING OUR PARTNERS' VISIONS



148' ASRS Freezer Americold Atlanta, GA



210,000 SF Foodservice Expansion SGC Foodservice Springfield, MO



86,000 SF Freezer Americold Atlanta, GA



LET'S CONNECT

griffcodesignbuild.com | 770.422.5420 1701 Barrett Lakes Boulevard, Suite 285 Kennesaw, GA 30144



NEW FOOD TRACEABILITY REGULATION PROPOSED

Would be the first major regulation under FSMA in years.

By Lowell Randel

proposal to create a new regulation related to food traceability was released by the U.S. Food and Drug Administration (FDA) on September 21, 2020. The rule would be a part of the food safety framework established through the Food Safety Modernization Act (FSMA) and is authorized by Section 204(d) of the legislation. The effort represents the first new major regulation under FSMA in several years.

The regulation also furthers the agency's effort to advance the FDA's New Era of Smarter Food Safety Blueprint. According to the FDA, the regulation would help the agency rapidly and effectively identify recipients of higher risk foods to prevent or mitigate foodborne illness outbreaks and address credible threats of serious adverse health consequences or death.

At the core of the proposal is a requirement for those who manufacture, process, pack or hold foods on the Food Traceability List (FTL) to establish and maintain records containing Key Data Elements (KDEs) associated with different Critical Tracking Events (CTEs). While the proposed requirements would only apply to those foods on the FTL, they are designed to be suitable for all FDA-regulated food products and FDA encourages voluntary adoption of these practices industry-wide.

The proposed regulation would add new traceability recordkeeping requirements (beyond what is already required in existing regulations) for persons who manufacture, process, pack, or hold foods that have been identified on a newly proposed FTL. The FTL was developed through a risk-ranking model that considered the following criteria:

- Frequency of outbreaks and occurrences of illnesses
- · Severity of illnesses
- · Likelihood of contamination
- The potential for pathogen growth, with consideration of shelf life
- Manufacturing process contamination probability and industry-wide intervention
- Consumption rate and amount consumed
- · Cost of illness

Many of the foods included on the FTL are perishable commodities that require temperature control to preserve food safety or quality. As a result, GCCA members will need to be aware of the products on the list and whether they handle these foods in their facilities. It is important to note that the requirements apply not only to foods specifically listed on the FTL, but also to products that contain foods on the list as ingredients.

Some of the foods on the list likely to be handled by GCCA members include:

- Cheese
- Eggs
- · Fruits
- Vegetables
- · Seafood

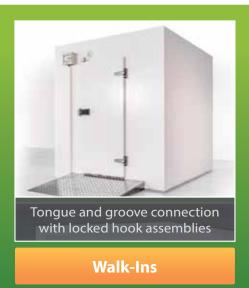
The FDA also identified a list of Critical Tracking Events (CTEs) for facilities handling foods subject to the regulation. CTEs include growing, receiving, transforming, creating, and shipping. Below are FDA's descriptions of CTEs:

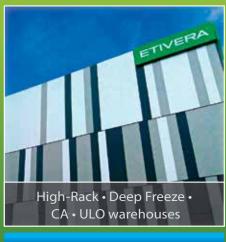
Growing

For products such as fruits and vegetables, growing is generally the first step in the supply chain. In addition to the general KDEs for growing, sprout growers would be required to establish and maintain additional growing KDEs that are specific to sprouts.



3rd Generation Family Owned Business Shaping the Industry for 70 Years









Hinged & Sliding Doors









Receiving

Receiving is an event in a food's supply chain in which a food is received by a customer (other than a consumer) at a defined location after being transported (e.g., by truck or ship) from another defined location. In addition to the general KDEs for receiving, "first receivers" would need to establish and maintain additional KDEs.

Creating

Creating is the making or producing of a food on the Food Traceability List (e.g., through manufacturing or processing) using only ingredient(s) that are not on the Food Traceability List. Creating does not include originating or transforming a food.

Transformation

Transformation is an event in a food's supply chain that involves changing a food on the Food Traceability List, its package and/or its label (regarding the traceability lot code or traceability product identifier), such as by combining ingredients or processing a food (e.g., by cutting, cooking, commingling, repacking or repackaging). Transformation does not include the initial packing of a single-ingredient food or creating a food.

Shipping is an event in a food's supply chain in which a food is arranged for transport (e.g., by truck or ship) from a defined location to another defined location at a different farm, a first receiver or a subsequent receiver.

GCCA members are likely to be involved in multiple CTEs for various regulated products. When a facility conducts a CTE, it must document Key Data Elements (KDEs) related to the product and the facility's activities. The KDEs required would vary depending on the CTE that is being performed. The records required at each CTE would need to contain and link the traceability lot code of the food to the relevant KDEs.

Below are examples of KDEs for Receiving and Shipping, two of the most common CTEs performed by GCCA members.

Receiving KDEs

- · Location identifier and location description for the immediate previous source (other than a transporter) of the food
- Entry number assigned to the food (if imported)

"At the core of the proposal is a requirement for those who manufacture, process, pack or hold foods on the Food Traceability List to establish and maintain records containing Key Data Elements associated with different Critical Tracking Events."

- Location identifier and location description of where the food was received, and the date and time the food was received
- The quantity and unit of measure of the food (e.g., six cases, 25 returnable plastic containers, 100 tanks, 200 pounds)
- Traceability product identifier and traceability product description for the food
- Location identifier, location description, and point of contact for the traceability lot code generator
- Reference record type(s) and reference record number(s) (e.g., "Invoice 750A," "BOL 042520 XYX") for the records relating to receipt of the food
- The name of the transporter who transported the food to the receiver

Shipping KDEs

- Entry number(s) assigned to the food (if imported)
- The quantity and unit of measure of the food
- · Traceability product identifier and traceability product description for the food
- Location identifier, location description and point of contact for the traceability lot code generator
- Location identifier and description of the immediate subsequent recipient of the food (other than a transporter)
- · Location identifier and location description for the location from which the food was shipped, and the date and time the food was shipped
- Reference record type(s) and reference record number(s) for documents relating to shipment
- Transporter's name who transported the food from the shipper

In addition to requiring records of KDEs, the proposed rule would require facilities that manufacture, process, pack or hold foods on the FTL to establish and maintain traceability program records. These records are intended

to help FDA understand a facility's traceability program, and include:

- A description of relevant reference records
- · A list of foods on the FTL that are shipped
- · A description of how traceability lot codes are assigned
- · Other information needed to understand data provided within the required records

Records can be maintained as either original paper records, electronic records or true copies and they all must be legible and stored to prevent deterioration or loss. When requested by FDA, traceability records must be provided no later than 24 hours after a request is made. And, during an outbreak or recall, an electronic sortable spreadsheet containing relevant traceability information must be provided to FDA within 24 hours, when requested.

The proposed rule includes a list of exemptions and partial exemptions for certain types of entities that would not be covered under the regulation. While most of the exemptions will not apply to GCCA members, there is an exemption for transporters. The proposed rule would exempt transporters of food on the FTL.

This is an initial step in the rulemaking process, and the FDA is accepting public comments on the proposed rule for a period of 120 days. The compliance date is proposed to be two years after the effective date of the finalized regulation to allow time for companies to prepare for compliance with the new requirements.

GCCA will continue to work with the FDA and food industry partners throughout the rulemaking process. @

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

EMAIL: lrandel@gcca.org





Vince Free, CEBA Board Member, Sam Tippmann, Tl Partner, Rob Adams, Tl Partner, Josh Koester, Tl Partner

Tippmann Innovation Awarded Built By The Best Award from CEBA

Tippmann Innovation was awarded the Controlled Environment Building Association's 2019 Built By the Best Award, honoring the contractor who constructed the year's most innovative and complex temperature controlled facility.

Cold storage is in our blood.

After over five decades in the industry, we understand the importance of guick and convenient temperature management. Our expertise does not stop with cold storage and construction. Our team understands the complex nature of supply chain operations and the master planning needed to thrive in this highly competitive industry.

We want every client to know that **Ti** is at the forefront of innovative technologies, expert design and customer service. Visit **TiCold.com** for more information.

We guarantee you'll see something cool.



Site Selection » Planning » Consulting » Engineering » Financing » Design-Build » Box-in-a-Box



THE VIEW FROM RETAIL

How key customer segments are weathering a pandemic and a few other disruptions.

OLD FACTS interviews the executives of two food industry trade associations to find out how key customer segments are managing the complexities and opportunities of channel shifts, changes in consumer behavior and other disruptions. And that's before the COVID-19 questions ...



JEFF RUMACHIK

Executive Vice President and Chief Operating Officer of the National Frozen Food Association (NFRA)

Jeff Rumachik is the Executive Vice President and Chief Operating Officer of the National Frozen Food Association (NFRA), which represents the interests of the frozen and refrigerated foods industry, including retailers/wholesalers, manufacturers and suppliers. Leslie G. Sarasin is President and CEO of FMI – The Food Industry Association, which brings together a wide range of members from retailers to food producers.

COLD FACTS: As historic 2020 draws to a close, what is the state of your industry?

RUMACHIK: Frozen food was making a comeback before the pandemic, with the frozen food department seeing back-to-back growth the last three years.

According to Nielsen, for the 52 weeks ending in June 2019, dollar sales were \$54.6 billion increasing 1.7% over the same period last year and unit sales were 15.2 billion increasing 0.6%.

Retail sales surged early in the pandemic due to panic buying, while foodservice sales ground to a halt. Foodservice is making a very slow comeback, but retail sales continue to see growth due to stock-up shopping trends.



LESLIE G. SARASIN

President and CEO of FMI - The Food Industry Association

The frozen department is up 19% and the dairy aisle is up 13% in dollar sales. Together the two departments account for 15% of total store sales and 23% of total store growth.

We expect these strong retail numbers to continue into 2021. If a second wave of the pandemic hits as predicted, consumers can feel confident we have a strong and safe food supply.

SARASIN: Overall, the food industry has proven our resiliency, fortitude and nimbleness in 2020.

The groundwork laid in 2019 allowed the food retail industry to be nimble this year when grocery stores faced unprecedented demand and the supply chain was dramatically disrupted.

In 2019, the food retail industry saw same store sales rise to 3.3% and food retailers experimented with new technologies, online sales and health and well-being initiatives. It turns out, these investments helped pave the way for 2020, so that food retailers were better prepared for challenges the COVID-19 pandemic presented.

Not all the industry trends in 2019 were positive. More than half of retailers surveyed said international trade and tariffs had negative impacts on their business. Credit/debit card interchange fees and health care costs continued to cut into profits, as did higher wages and employee benefits costs. As a result, net income averaged only 1% of sales, down slightly from 1.2% in 2018 and at its lowest point since 2010.

CF: How has your industry remained resilient during COVID-19?

RUMACHIK: The food industry has a lot of experience dealing with crisis, albeit on a smaller scale.

Checks and balances were already built into the system to ensure food safety. Food manufacturers and retailers will continue to require much agility to adapt to changing conditions.

SARASIN: I think dissertations will be written in the future on what COVID-19 taught us about supply chain operations. We have learned the food supply chain can make necessary adjustments to accommodate a sudden shift in demand, but it also taught us we need to become nimbler to do so.

FMI has been saying for years that there is need for better communication up and down the supply chain. We've been busy creating opportunities for that increased conversation and collaboration between and among trading partners. COVID-19 clearly reinforced the need for those improved exchanges between suppliers and retailers.

Overall, we adjusted to the emergency relatively well, but it took us a while to get the pacing practices in place – both at the supplier and the retail levels – that enabled us to better manage the panic buying that was taking place. Also, when restaurants and foodservice were restricted, it took time to figure out how to divert the supply stream to the retail outlets where it was needed to address the unprecedented demand. We eventually got there, with some bumps and bruises along the way.

At the same time, our members were rapidly adjusting to the needs of their shoppers and their communities. From new pandemic-related signage, enhanced in-store sanitation, worker benefits, food donations and community support programs, I've been astounded by the innovation and ingenuity of our industry.

The food industry has certainly proven we have a can-do attitude and we're willing to adjust, invent and take on any challenge that comes our way. It's been amazing to witness and makes me proud of all the men and women who make up our industry.

CF: What are the top up-at-night issues for your members?

RUMACHIK: One of the top concerns for retailers is the safety of customers and employees. The costs of implementing safety protocols are an ongoing matter.

A second top concern is maintaining product supply. Establishing the right mix of products and brands to ensure on-shelf availability is critical.

Food manufacturers are also challenged to predict product demand at retail and the pace of recovery at foodservice.

SARASIN: When asked about the factors that negatively and positively impacted their sales and profits in the early months of 2020 and the ongoing COVID-19 pandemic, food retailers offered that they are most concerned about investments in employees and customer safety; wages (including minimum wage and bonuses); competition from online retailers selling food; credit and debit card interchange fees; and trucking/transportation capacity.

Beyond the impact to food retailer's sales and profits, companies share anecdotally that their top of mind issues include product availability, talent retention and staying ahead of the consumer demands for frictionless experiences that are sure to shape future industry operations.

CF: What are the mission critical goals for your organization?

RUMACHIK: NFRA's mission to promote the sales and consumption of frozen and refrigerated foods is executed every day as we speak directly to consumers on our Easy Home Meals digital and social platforms. Our year-round public relations campaigns, Real Food. Frozen and Dairy... and Beyond, continue to promote

"Click and collect is bridging the gap between in-store and online. Prior to the pandemic, overall click-and-collect sales in all categories accounted for 11% of all CPG e-commerce compared to 4% just two years ago. That model has since boomed." JEFF RUMACHIK, NFRA

the benefits of the categories to consumers. Our annual promotions for March Frozen Food Month, June Dairy Month and Summer Favorites Ice Cream & Novelties unite the industry to promote the categories under a common theme. Now more than ever it's important to provide consumers with meal solutions they can easily make during their extended time at home.

We continue to be part of the larger conversations around food waste and food safety. We share food safety tips on our website and blog.

NFRA meetings continue to be a platform for industry executives to discover new products, connect with business partners and grow their business. The current environment forced us to modify our delivery of the NFRA Convention, but we continued to provide an experience that met the needs of the industry. While we hope to return to in-person meetings in the new year, we'll continue to explore virtual formats that maximize participation while providing the same excellence in programming.

SARASIN: In early 2020, we repositioned FMI to embrace a broader food marketplace, supported by our tagline – The Food Industry Association. FMI supports every link in the supply chain from the grower, the manufacturer, the supplier, the retailer to the consumer – which are all undergoing significant changes. We will continue to propel the retail food industry forward by advocating for, and supporting, a safer, healthier and more efficient consumer food supply.

In the early days of the COVID-19 pandemic, we began regular tracking surveys to get a handle on shoppers' rapidly changing needs and wants. FMI will continue to emphasize our research to inform our members and their business plans.

To support our member's strategic planning needs, we've revamped our events and spaced them every six months to facilitate more regular business planning across the supply chain. FMI will also continue to introduce new technologies and business operations tools to our members, especially with regard to online.

CF: What does the future look like today for both the physical and digital shelf? Are you seeing newly emerging distribution channels?

RUMACHIK: As a result of the pandemic, adoption of e-commerce accelerated by three to five years. However, the vast majority of frozen and refrigerated sales are still occurring in stores as the industry tries to figure out the last mile.

Click and collect is bridging the gap between in-store and online. Prior to the pandemic, overall click-and-collect sales in all categories accounted for 11% of all CPG e-commerce compared to 4% just two years ago. That model has since boomed. While the current level might not be sustained, we expect e-commerce food sales to remain elevated.

SARASIN: While the long-term implications of the pandemic remain unclear, in the short term the industry is preparing for a return to fewer household trips, a more narrowed store selection and a resurgence of the stock-up approach to household grocery buying.

Prior to COVID-19, online sales had been slowly, but steadily, rising. In the first few months of the pandemic, online sales increases by food retailers exceeded an average of 300%. In response, the vast majority of food retailers (83%) added more staff to

IS YOUR FACILITY A GOLD-STAR ENERGY LEADER?



The GCCA Energy Excellence Recognition Program was designed to help your warehouse facility:

- **✓** GET AN ACCURATE PICTURE OF YOUR ENERGY CONSUMPTION
- **✓ EVALUATE YOUR COMPANY'S ENERGY CULTURE**
- **✓ IMPROVE ENERGY EFFICIENCY**
- **✓ GAIN RECOGNITION FOR IMPROVED ENERGY USAGE**
- **✓ EXPLORE RESOURCES TO IMPROVE FOR THE FUTURE**

160 FACILITIES have already made a commitment to improving the cold chain

Sign up and learn more at www.gcca.org/energyexcellence

"We have learned the food supply chain can make necessary adjustments to accommodate a sudden shift in demand, but it also taught us we need to become nimbler and quicker on our feet to do so."

LESLIE SARASIN, FMI

handle online fulfillment, while some (37%) allocated more staff for delivery of online orders. FMI responded to the need for hiring staff with an online portal that allows companies to identify furloughed talent and connect them to companies that are hiring.

Indications are not everyone will continue ordering online at the rate they were during the beginning of the pandemic. However, most consumers now have online in their shopping repertoire and are continuing to use it more than they did pre-coronavirus. Our industry is responding with additional online staff and some stores are piloting pick-up only store formats.

This is a new reality for the food industry and we're having to rewrite the online playbook in real time.

CF: Where are the opportunities for your member companies to grow now and in a post-COVID marketplace?

RUMACHIK: Frozen foods have a household penetration of 99% and refrigerated dairy is over 90%. U.S. household have an average buying frequency of 70 trips per year. That means shoppers are making a purchase from the frozen and dairy aisles more than once a week, making these departments important to total store profitability.

Focusing on health, wellness and self-care are more important than ever. It's a trend that is delivering exceptional growth today and will continue to in the future. Whether it is less carbs, plant-based proteins, gluten-free, vegan or other dietary and lifestyle demands, food manufacturers should be innovating to satisfy those consumer demands.

The largest sales gains seem to be around innovation with the popular plant-based foods and worldly flavors. With an expanding consumer palate and desire for ethnic exploration, there are more exotic and on-trend flavors and unique

ingredients in the frozen and refrigerated food

With consumers still limiting dining out experiences, the foods they are craving are those they can't easily replicate at home like seafood and ethnically-driven dishes. This could create an opportunity for retail to fill this hole and create a safe space for experimentation. Frozen foods in particular can satisfy shoppers' taste for adventurous flavors without the hassle and special ingredients needed to make ethnic dishes from scratch.

SARASIN: FMI has been helping to prepare and prioritize our members for when a COVID-19 vaccine is eventually developed. FMI filed comments with health officials to develop a framework to help policymakers and health authorities plan for the allocation and distribution of a COVID-19 vaccine. These comments advocated for our industry's essential workers to be prioritized for early COVID-19 vaccination to ensure the continued functioning of the food supply chain while also raising other key points for their consideration. These include the importance of including pharmacists and pharmacy technicians as part of the essential health care prioritized team as well as authorizing pharmacists nationwide to provide COVID-19 vaccinations to people of all ages, both on and off premises; anticipating equipment needs and supply sources – from needles, syringes, disinfecting wipes and glass vials, to freezers for vaccine storage; and the need for clearer guidance from federal agencies to ensure that all partners can effectively plan for mass vaccination.

As more consumers look to stay healthy and well, retailers have become a destination for food, health, hygiene and overall well-being in the communities they serve. The investments

food retailers have made in health and wellbeing outreach and programs have positioned the industry as a trusted resource to help consumers meet their personal health goals. In fact, our research finds 51% of shoppers say their grocery store is working to help them stay healthy.

CF: We are an interconnected supply chain - FMI and NFRA members are key customer segments for GCCA member companies. How do you see collaborative relationships evolving through the pandemic and post-pandemic?

RUMACHIK: Sharing of information to adapt to an uncertain future and understanding consumers' recessionary behavior is critical.

We see opportunities for collaboration where there is overlap in messaging like food waste and food safety.

SARASIN: We understand that fluid and nimble trading partner collaboration and planning are critical to managing the next pandemic and the uncertainty we continue

Our industry is strong at forecasting, but we never had to consider more than 90 days outside of inventory projections. We have had to learn to think differently about how we navigate the supply chain and create more opportunities to plan for crises. We must look further down the highway than we ever have before and simultaneously check our dashboard more carefully to ensure our machine is functioning in a way that will deliver us where the road is taking us and beyond.

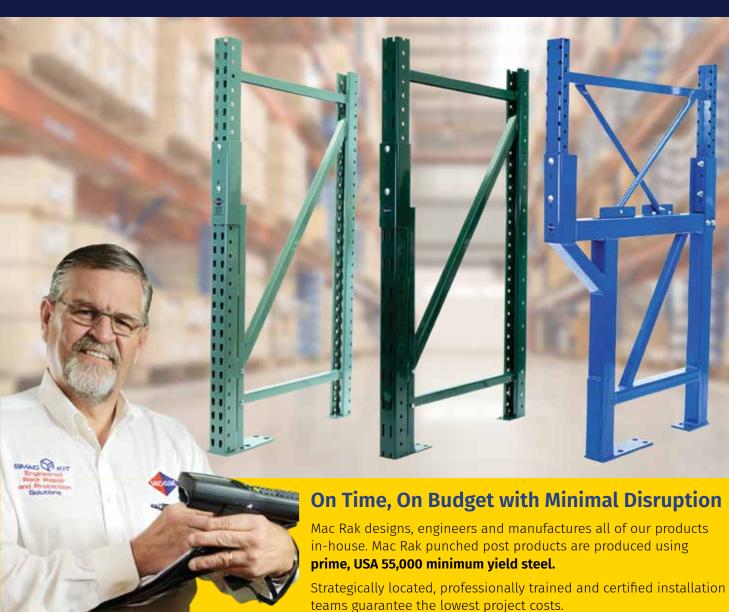
ALEXANDRA WALSH is a Senior Publishing Consultant with Association Vision and Editor-In-Chief of COLD FACTS.

EMAIL: awalsh@associationvision.com



MAC*RAK STRONG

Integrated Rack Repair and Protection



"I stand by everything we build" Shawn MacDonald, Owner of Mac Rak Inc.



For pallet rack repair assessments and a full line of engineered pallet rack repair and protection products

815-723-7400 or visit MacRak.com







We produce over 30 column designs which allows Mac Rak to offer

repairs for all types of racks on all types of rack systems.







A POOL OF MANAGEMENT TALENT

Leadership development programs can be tailored to fit company needs and culture.

By Sheryl S. Jackson

Iffective training and development programs are essential to ensure that employees can perform their roles safely, effectively and efficiently. A number of companies also focus on leadership development programs as one way to create a strong pipeline for mid-level and senior leaders in the years to come.

ID Future Leaders

The Lineage Management Program (LMP) is designed to identify and develop future leaders, says Sean Vanderelzen, Chief Human Resources Officer for Lineage Logistics. "The LMP is one element of our total picture of talent management and is designed as an entry-level development program," he explains. While the company had training

programs in place for mid- and senior-level leaders, there was a need for an entry-level development program for high-potential hourly employees who may or may not have a college degree, recent college graduates and military hires.

"We average about 20 individuals in each LMP cohort, all of whom undergo a rigorous interview process, and provide them with

development opportunities to grow into supervisor roles," says Vanderelzen. During the 20-week program, participants rotate through a variety of departments and gain experience in activities like participating in a safety inspection audit, case picking with a forklift, working in the front office and shadowing one week with the inventory control manager. "At facilities with specialized operations such as co-packing or re-packing functions, the participant works in those areas as well," he says.

To ensure that all LMP participants get the same level of training, a comprehensive playbook that describes specific activities or experiences that must be completed in the first 30 days and in the first 60 days is given to management staff involved in the program. Participants also have a syllabus that outlines



THERMAL PROTECTION

FOR EVEN THE MOST FRIGID OF COLD STORAGE NEEDS



Brazil 2020 HR Survey

GCCA Brazil and its partner Associação Brasileira da Indústria de Armazenagem (ABIAF), the national cold storage association of Brazil, released a Brazil 2020 Human Resources Survey.

- The average turnover rate in Brazil is 9.5%, but differs greatly by region.
- 100% of facilities are paying for employee transportation, bus/metro train fares, to and from work.
- Less than 5% of the labor force is temporary.

To learn more, contact tnascimento@gcca.org.

what they will learn and what experiences they will have so everyone can stay on track.

"The purpose of the program is to give participants the foundational experience they need to become a supervisor," points out Vanderelzen. The application process includes a review of competencies and skills as well as behaviors that indicate an inherent ability to lead, says Vanderelzen. "We are looking for people who can develop others, drive results and manage and measure work," he says. These qualities are discovered through questions related to the applicants' experience working on group projects in school, taking the lead for projects or activities at work or highlighting previous work or military positions, he says.

One change in the program has been the addition of mentors from the previous LMP cohort. "Our third cohort is underway, so members of the second cohort are serving as mentors to answer questions and provide guidance," says Vanderelzen. Another change from the first cohort is expansion of the timeframe - from 15 to 20 weeks - based on participant feedback, he adds.

Mentor From Within

Mentorship is the focus of a program Burris Logistics designed to support the development of employees to ensure a strong pipeline of future managers and company leaders.

"We were facing the prospect of always going outside our company to find senior level leadership such as general managers and regional vice presidents," says Laura McCann, Director of Talent Management. "We started the program in 2019 as a pilot in one division and expanded it companywide in 2020."

Although employees continue handling their primary jobs on a day-to-day basis, the program pairs the participant with a senior leader. Employees meet once every two weeks with their senior leader mentor to review goals and discuss courses and experiences that will help further develop leadership and management skills as well as a better understanding of the entire company.

For example, in the pilot program, an employee in purchasing wanted to learn more about the role of sales in the company and was sent to a sales conference, explains McCann. "Another purchasing employee asked for time to work alongside warehouse staff to learn more about that department," she notes. "We want people to experience the company outside the silo they work in to get a holistic view of how each function supports and is impacted by the other."

There were 32 applicants to the program when it was opened to the entire company, but some applicants were not quite ready for leadership and management development, explains McCann. "If they had between one and nine months with the company, we worked with them to create an individual development plan that will get them ready for a leadership program," she says. "We don't want to deny training and development opportunities to anyone, but we are looking for people who are ready to position themselves for senior leadership positions with our mentoring program."

Pipeline of Talent

Americold takes a blended approach to leadership development with a combination of Americold University – a library of online courses open to associates, the Americold Leadership Conference for between 300 and 400 management associates each year, and

a one-week leadership program that runs throughout the year.

"Potential leaders are identified through our performance management process which has managers talking with each associate about goals and opportunities to close the gaps in experience and knowledge with online courses or other training," says Treva Presley, Senior Director of Talent Management for Americold. "We have also begun to address mid-level management positions in our annual talent review and succession planning," she says. "The talent review process takes a look at company-projected leadership needs in terms of skills, experience and operational areas, to ensure we are developing a pipeline of talent for the future."

Back to School

The RLS Logistics leadership and development program is named the L.E.O. Academy (Learning, Education, Opportunities). In place for a number of years, the program offered access to, and tuition for, a variety of industry, vocational-technical or local college courses that helped employees enhance their skills and knowledge.

"A revamped, more structured program launched in the Fall 2019 session and we have conducted two sessions per year - fall and spring," says Lori Cogit, Vice President of Human Resources for the company. "It is a combination of in-person, virtual and online training that utilizes outside training resources such as Alchemy - our Learning Management System, our LinkedIn Learning memberships, RLS executive-led training courses, external resources such as the GCCA's Online Learning or Virtual Innovations Program and RLS manager-led courses," she says. "We use this program to build bench strength and increase retention."

There are multiple tracks in the Academy because not everyone wants to become a manager or senior leader, says Cogit. Although two of the tracks are management development with one that prepares a manager to move to senior leadership and another that prepares a supervisor to move to a manager position, the third track is focused on more job-specific skills, she says. "This flexibility allows us to tailor courses to the individual's needs," she says.

Twenty-six people participated in the fall 2019 cohort for the three-month program, but the cohort size for the fall 2020 program was limited to 15 people to make it easier to manage, says Cogit. "We also have a voluntary mentorship program that allows participants to mentor with a senior leader in a different department as a way to enhance their education," she says. Even without choosing a mentor, the involvement of senior leader and management staff as course instructors and speakers creates an opportunity for participants to interact with key leaders, she says.

Although it has been a relatively short time since the L.E.O. Academy's new launch, Cogit says that the company has seen a decline in supervisor and customer service staff turnover. "Comments from participants indicate they understand how their role impacts the overall company and they know that managers and vice presidents appreciate what they do," she says.

The decline in turnover is a byproduct of the organic, natural change that happens when people who work in different departments and at different levels have an opportunity to interact, says Cogit. "One of the warehouse supervisors that went through the Academy told me that she now understands how leadership works," she says. "When she's heard members of her team complain that management doesn't understand what they do, she's able to tell them about her conversations with managers and explain that they do know what she and her team does."

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

EMAIL: sheryljackson@bellsouth.net



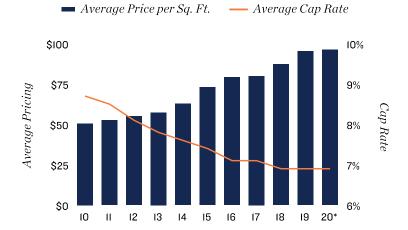
Cold Storage Commercial Real Estate

BROKERAGE | ADVISORY | FINANCING | RESEARCH

Williams Industrial Group believes in a better approach to commercial real estate. Through hyper-focused research and advisory in specific product types we provide our clients the most exceptional, specialized, and professional service.

Investors view industrial as a safer option. Bullish on the stability already demonstrated by the sector, investors with a focus on minimizing their risk exposure pursued industrial assets over other property types during the second quarter. Private buyers remained comparatively active across the nation, as most sales fell in the \$1 million to \$10 million price tranche, netting a mid-7 percent average cap rate.

Pricing Rises, Cap Rates Adjust Nominally in Q2



Contact luis.ortega@marcusmillichap.com for full details. Latest research briefs and special reports available at marcusmillichap.com/research

Marcus & Millichap
WILLIAMS INDUSTRIAL GROUP

858.373.3100 | www.marcusmillichap.com | NYSE: MMI

Marcus & Millichap is a service mark of Marcus & Millichap Real Estate Investment Services, Inc., © 2019 Marcus & Millichap. All Rights Reserved

WILLIAMS INDUSTRIAL GROUP



Kent R. Williams, SIOR Senior Managing Director Investments

Direct: 858.373.3193 kent.williams@marcusmillichap.com License: CA 00823860



Luis Ortega

Cold Storage Specialist

Direct: 858.373.3214 luis.ortega@marcusmillichap.com License: CA 02071282



Vince Krantz

Airport-Served Specialist

Direct: 858.373.3180 vincent.krantz@marcusmillichap.com License: CA 01976199



Pablo Ortega

Rail-Served Specialist

Direct: 858.373.3168
pablo.ortega@marcusmillichap.com
License: CA 02100280



Shawn Arnett

Fiber Lit Specialist

Direct: 858.373.3207 shawn.arnett@marcusmillichap.com License: CA 02080620



Matt Taylor

Crane-Served Specialist

Direct: 858.373.3179 matt.taylor@marcusmillichap.com License: CA 02105908



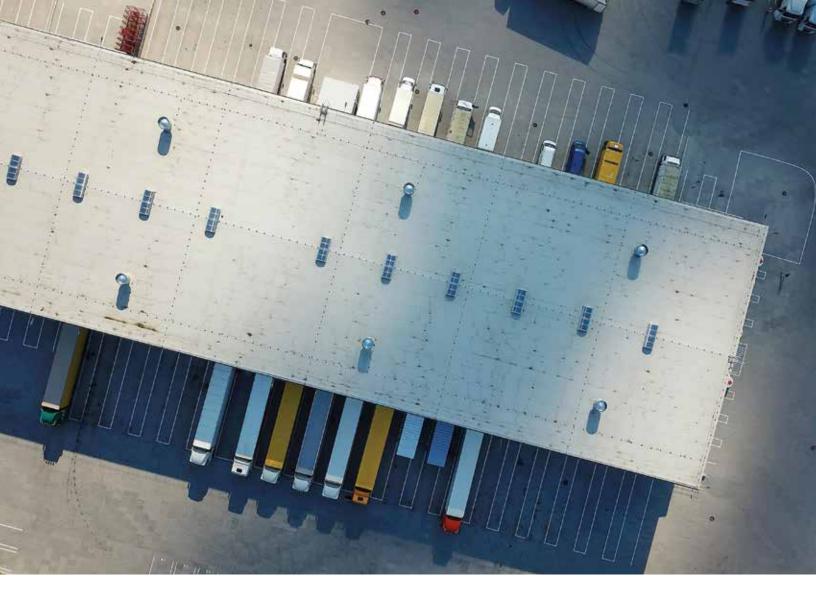
FEATURED EXCLUSIVE LISTING

Multi-Tenant Industrial Park in Northeast

- · Covid Resistant
- Rare Opportunity
- Northeastern Corridor

Contact Us For More Information

Property information available upon execution of NDA luis.ortega@marcusmillichap.com | direct: 858.373.3214



IMPROVING DRIVER AND WAREHOUSE RELATIONS

Understanding and a clear path of communication are key.

By Karen E. Thuermer

arehouses and trucks are critical links for all cold chain operations. Warehouses could not exist without trucks; truck drivers would not exist if there were no warehouses from which to pick up and make deliveries.

For cold chain operations, product integrity and temperature monitoring throughout the entire supply chain is crucial. "Warehouses and transportation providers must have effective lines of communication open to coordinate flawless execution," remarks Jeff Jackson, Senior Vice President of Operations at Penske Logistics.



GREEN SPAN PROFILES

MANUFACTURING SPECIFICALLY FOR THE LOW TEMP/COLD STORAGE INDUSTRY





- Unsurpassed Product Quality
- •Ultra-Competitive Pricing
- On-time Deliveries
- Superior Thermal Performance
- Outstanding Structural Performance
- •Available in USDA Painted, Plastisol and Stainless Steel



"Built to perform. Built to last. Built right."















Priorities for temperature-controlled warehouse workers and truck drivers, however, are not always aligned. Historically, there has been conflict between drivers and warehouse workers.

"At the end of the day, neither can survive without the other," says Keith Mowery, Senior Vice President, Logistics, United States Cold Storage (USCS). "Both rely on each other."

But how truckers and warehouse workers interact, impacts each other. The relationship has not always been smooth. Compounding matters are many factors drivers face while on the road – bad traffic, bad drivers, road construction and issues at the warehouse that cause driver delays. Sometimes, just being isolated for hours in a truck may be enough for a driver to arrive at the warehouse with a bad attitude.

"How welcoming a warehouse is when a driver first arrives is critical to how the relationship goes from that point," says Brent Higgins, President of Brent Higgins Trucking. "Their willingness to work with drivers, whether they are late or not, is fundamental. But if a driver is treated negatively, the relationship goes off the rails. Kindness goes a long way."

It's Complicated

Complicating factors place best case scenarios for drivers and temperature-controlled facilities at opposite ends of the spectrum.

"Often drivers cannot understand why the other entity cannot operate in a way that helps them," Mowery remarks. "And warehouse operators cannot understand why truck drivers cannot show up at their appointment time."

Ideally, warehouse operators would like an evenly spaced number of trucks to arrive throughout the day. "This way, warehouse operations can run with a consistent level of work," Mowery says. "Operators would be more able to plan for labor needs and operate efficiently at the lowest costs."

Meanwhile, drivers want flexibility since they face multiple factors not in their control, such as those mentioned above. Drivers want to get loaded and away from the dock as quickly as possible so they can move on.

Drivers also need more flexible appointment times since loading/unloading may not match up with the time slot they are given. "Or the driver takes a later appointment and ends up waiting at the warehouse for several hours," Mowery says. "For some reason, the

"First and foremost, the two parties need to work as a team to accomplish the shipper's on-time in-full delivery and food quality goals. Leverage available technology and data to provide visibility, optimize and create realistic goals for both the warehouse and carrier. Key Performance Indicators (KPIs) that span both warehouse and transportation help drive accountability and performance."

JEFF JACKSON, Penske Logistics

warehouse cannot get the truck loaded or unloaded."

Jackson concurs that product not being ready at the scheduled pick up/dispatch time is a key challenge for the carrier.

"This has the potential to negatively impact driver hours of service," Jackson adds. "Pick patterns and the loading of product may also not be completed in a manner that is best for the driver when unloading. Key challenges for the warehouse include staffing and training, especially in today's environment. There's also adherence to scheduled appointment times."

Added Impact

COVID-19 has not helped. It exacerbated these issues, particularly stay-at-home orders that caused consumers to rush to stores to stock up.

"Consequently, retailers and manufacturers saw high levels of reordering," Mowery says. "This resulted in bottlenecks at distribution centers. There simply was too much volume for them to handle. We had trucks showing up at retail DCs only to be turned away because there was no way for them to unload. Or truckers sat for hours waiting to be unloaded."

Many of these issues have since been resolved. But other issues that escalated during COVID-19 still impact the driver-warehouse relationship.

"Many facilities didn't want drivers in shipping areas and on docks because they did not know where the drivers had been and who they had been around," Mowery points out. "And they faced enough concerns for their own employees."

As a result, COVID-19 safety protocols reduced driver access to facilities and amenities. "Shippers have also experienced disruptions with their product replenishment, causing shortages," adds Jackson.

Truckers faced further frustration. "There was no place for them to eat and rest stops were closed. Many were met with new procedures they were not aware of," Mowery adds. "This added a level of distrust. Meanwhile, no one was sure how easily the virus was transmitted."

"Drivers still needed access to bathrooms - a place to wash their hands," adds Higgins, emphasizing that an outdoor portable toilet was no solution. "Drivers are not used to port-a-johnnie's, plus they have no ventilation, no social distancing and no monitoring or regular cleaning."

Solutions

Situations can be improved to make both parties happier and get the job done efficiently.

One idea is to offer drivers break rooms with comfortable seating and access to water. "The area could include a vending machine," says Higgins. "It doesn't have to be anything fancy. Just somewhere where drivers are not in the truck."

Mowery suggests that warehouses look more closely at staff scheduling based on carrier needs. "If you staff everyone from 6 a.m. to 2 p.m., but most trucks are showing up at 1 p.m. then staying later, maybe staff should start earlier or stay later," he says.

He also suggests accommodating more drop trailers to allow warehouses to load trailers

when they are scheduled – even if the driver comes two hours later to pick up the trailer.

"It's also critical to have a clear path of communication both ways," Mowery adds. "If drivers are delayed at a prior stop, they should call the warehouse and let them know what is going on and that they will be late. The same with warehouses. If a warehouse is running behind, be honest. It's all about perspective – rarely are the problems intentional or an act of defiance."

In short, drivers may not know how they impact warehouse operations and vice versa.

"First and foremost," says Jackson, "the two parties need to work as a team to accomplish the shipper's on-time in-full delivery and food quality goals. Leverage available technology and data to provide visibility, optimize and create realistic goals for both the warehouse and carrier. Key Performance Indicators (KPIs) that span both warehouse and transportation help drive accountability and performance."

Some companies, such as Penske and its Clearchain technology suite, are making such an effort. According to Jackson, the technology provides a platform for the visibility and accountability necessary to drive execution.

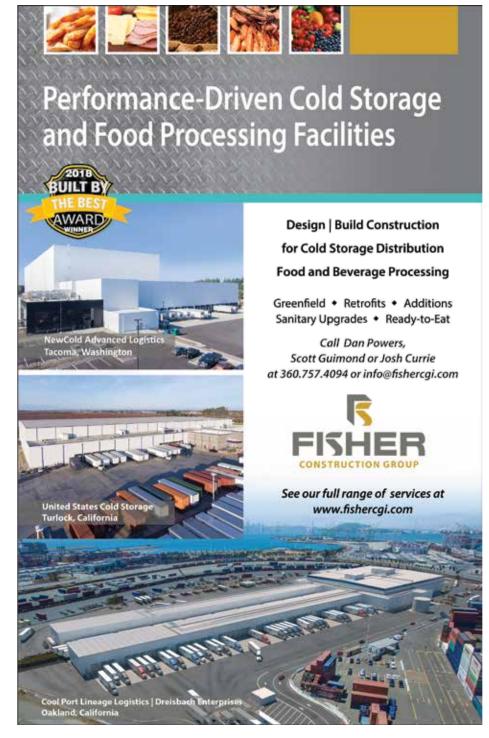
United States Cold Storage has the ability to get driver feedback in real time.

Ultimately, however, Higgins sees the only way for truckers and warehouse workers to improve relations is for more communication.

In the meantime, Higgins believes that changes to truck driver hours of service rules that came into effect this fall and are designed to offer drivers more flexibility, will help. He contends that by extending truck driver hours, fewer trucks will be on the road during adverse conditions and drivers will feel less fatigue. @

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

EMAIL: kthuermer@aol.com





CONTENDING TO BE THE BEST

A look at three projects worthy of award-winning recognition.

By Keith Loria

s a way to acknowledge the hard work and savvy innovation in constructing, renovating and/or modernizing controlled environment buildings across the globe, the Controlled Environment Building Association (CEBA), a core partner of the Global Cold Chain Alliance (GCCA), created the Built by the Best award in 2016.

In 2020, from among the dynamic entries submitted by CEBA members, three were selected as final candidates for this year's award.

Here is a look at the trio of projects that are competing for the 2020 Built by the Best award, with the winner to be announced later this year.

Americold near Savannah Port Primus Builders

Americold Logistics chose Primus Builders to construct a new poultry import/export facility near the Port of Savannah in Savannah, Georgia, United States.

At 51-feet, the 312,000-square-foot building is designed to offer maximum flexibility in its cold storage options, which include a -20° QFR quick-freeze system that freezes product faster and more efficiently.

The finished project also includes a twostory office, a USDA (United States Department of Agriculture) inspection lab that allows inspectors to test the product for spoilage, employee welfare areas, a Quell fire protection system to ensure maximum coverage for the building height, ALTA Expert refrigeration units and automated conveyors, wrapping and labeling stations.

But getting the facility up and running wasn't easy.

First, the land Primus was building on had very high ground water, meaning the construction team would hit water just a few feet down, and the water had nowhere else to go. Primus was able to solve this problem by laying gravel transported from elsewhere in the state and continuously pumping water offsite.

Then, there were delays caused by Hurricane Dorian, as things were forced to close down.

And finally, COVID-19 happened. A plan was developed to continue construction while keeping everyone safe during essential construction activities.

The fact that Americold had an urgent need for the facility to be fully operational quickly only added to the challenges.

Americold challenged Primus to make the building more efficient. The company's in-house automation design team determined the way to create the most value for their client was the blast freezer. The team also made the route to and from the blast freezer more efficient.

The Primus design reduces man hours and cost while improving quality, safety, energy savings and overall building efficiency. For example, water savings were achieved by using ALTA Expert units and the company was able to reduce the building's water consumption by 45%.

Energy efficiency was aided by the systems selected and the construction of the envelope — the insulation values of walls and roof.

The finished facility is Americold's first LEED-certified building and the overall projected energy savings for Americold Savannah is expected to be between 26% and 29%.

Lineage Logistics Cool Port Oakland Fisher Construction Group

Cool Port is a 276,000-square-foot facility set on 25 acres at the Port of Oakland, California, United States, and is a public/private partnership, owned by Lineage Logistics and operated by Dreisbach Enterprises. Fisher Construction Group, working with ATI Architects, managed the design/build process for the facility, incorporating the wants and needs of the partnership, while ensuring the facility met the targeted ROI.

The project was designed to bridge the gap between rail and ship and offer a muchneeded cold storage and transfer hub for importing and exporting protein products between the United States and Pacific Rim nations and transitioning temperature-controlled cargo through Northern California.

With an 80,000-square-foot freezer and two 10,000-square-foot storage rooms that convert between frozen and chilled, Cool Port is more than a conventional transload facility. It features 90 truck docks and 18 rail docks and rail cars can be staged four abreast between the refrigerated wings of the building and unloaded in bulk. By designing a continuous cold chain intermodal transport facility, it reduces the facility's limitations, thus increasing its functionality in an evolving market.

The project sits on the former WWII-era Oakland Army Base, which offered its share of complexities in permitting and preparing the site for construction.

The success of Lineage Logistics' Cool Port project required significant innovation long before the first excavator arrived onsite and throughout the project's entire design-build process. A soggy site with pockets of methane and prone to seismic activity had to be transformed into a suitable building foundation. And the glycol heating lines also had to be protected in the event of seismic activity or muddy land settling. To mitigate risk, freezer and interchangeable storage areas rest upon specially designed suspended 16-inch structural slabs.



LEADERS IN COLD STORAGE CONSTRUCTION



TEMPLE, PA | 610-816-6995 | KAISERMARTINGROUP.COM

Built by the Best 2020

To learn more about these three exciting projects, stay tuned to future issues of COLD FACTS in 2021, for complete case studies, supplier lists and comments and reflections from the project managers.

Fisher's design, construction and operations met the 2010 California Green Building Standards Code. This is a result of 100% electric cargo-handling equipment, grading and paving to prevent surface water runoff into buildings and designing Cool Port's roof to accommodate roof-mounted solar panels. These will feed into the Port's power plant once it is ready to accept additional energy into its grid.

Southern Foods Processing Facility A M King

For this challenging job, design-build firm A M King was charged with converting an 88,000-square-foot spec shell warehouse into a one-of-a-kind, innovative, modern USDAgrade meat, seafood and cheese processing facility for Southern Foods, with multiple temperature zones ranging from -20 degrees to 45 degrees.

The facility in Greensboro, North Carolina, United States, includes a 13,500-squarefoot food processing area with a distinctive 34-degree, 4,200-square-foot dry beef aging room fitted with high-tech temperature and humidity controls and large viewing windows. It also is home to 11,585 square feet of freezers; 11,429 square feet for 32-degree coolers and loading docks; a refrigerated cheese processing area; a 14,250-square-foot space for dry storage; and a 12,660-squarefoot office mezzanine.

The company implemented numerous sustainability and energy efficiency elements to decrease Southern Foods' carbon footprint and overall energy costs of the facility.

For instance, HVAC systems were selected to balance energy efficiency and economic viability. On the facility's first-floor, nonproduction spaces and the second-floor office spaces were each configured as a variable air volume (VAV) system with a packaged rooftop air conditioner with modulating natural gas heating and a variable speed supply fan for each floor.

Additionally, each rooftop unit had two compressors for staging capability and to reduce energy consumption at lower loads.

The completed project combined USDAgrade processing and freezer storage with a high-finish test kitchen and customer viewing rooms.

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.

EMAIL: freelancekeith@gmail.com



Winchester Cold Storage, Winchester, Virginia

NEED MORE ROOM?

Let BONAR help you with your plant expansion or new facility. We are currently building energy-efficient minimum charge ammonia/CO2 cascade refrigeration systems. **Call Hank Bonar today!**

904-631-8966 hank@bonarengineering.com

Bonar Engineering, Inc. PO Box 60009, Jacksonville, FL 32236



The ultra-reliable, low-charge solution.

With Evapcold low charge ammonia systems, you can drastically reduce your ammonia charge while also increasing your system reliability. Evapcold Packaged Refrigeration Systems have been thoroughly tested in EVAPCO's industry-leading R&D and run-testing facilities and are also very successfully operating in the field. Guaranteed system performance and reliability is a key advantage with Evapcold. Its industrial design and components, product features, and low ammonia charge make it the best choice to eliminate the business disruptions from less reliable alternatives.

This includes:

- IIAR-2 and ARM-LC compliance
- Fully-rated equipment
- Robust factory testing
- Hot gas defrost
- · Pumped liquid recirculation design
- Component redundancy options

And that's only the beginning. Talk to your local EVAPCO representative or visit **evapco.com** to discover all the ground-breaking benefits of Evapcold Packaged Refrigeration Systems and new chiller packages. We are EVAPCO—the team you can count on for life.









COLD CHAIN DEVELOPMENT

NEWS ABOUT WFLO INTERNATIONAL PROJECTS

GCCA SOUTH AFRICA HOSTS VIRTUAL SHORT COURSE

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 GCCA's South Africa regional office hosted a Virtual Cold Store Operations Short Course in August 2020, with 36 students participating from South Africa, Ghana, Namibia, Kenya, Nigeria and the United Kingdom.

"The short course definitely will add value to any company sending their employees to attend," says Jaco Ollewagen, Technical Manager, CCS Logistics. "I thoroughly enjoyed the interaction and group discussions. It was a well-organized, well-presented training program covering a wide variety of key industry topics and offering practical strategies to help save money and improve operations."

Christopher Nulliah, Logistics Director, Etlin International, received positive feedback from his team members that attended the course. "They said the course was very engaging and it felt alive and not boring. They were really captivated with the content and interaction. We will definitely try to include more of our staff next time around."

Lizelle van der Berg, Director of Global Cold Chain Alliance, South Africa, says the short course was a great success and provided information for both professional and personal development. "The interaction and participation showed that students are eager to learn more on the specific topic of cold storage," notes van der Berg. "This is my passion, to help grow and strengthen the cold chain by providing training that strengthens and improves operations of our members."









Short Course Instructors and Topics

- Brian Beazer, CEO, WCS **Logistics and WFLO** Chairman, United States -Introduction to Cold Store Operations
- Verona Ramsook, Group Food Safety Manager, Etlin International, South Africa Food Safety/HACCP
- Professor Michael Jahncke, Chairman of the GCCA Scientific Advisory Council, United States – Food Handling and Temperature Management
- Colin Barker, Compliance Manager, Table Bay Cold Storage, South Africa -**Regulatory Procedures**
- Mesuli Mdluli, Maintenance Manager, CCS Logistics, South Africa – Energy Management
- Don Schoenl, President, Agile Cold Storage, United States – Innovations and **Best Practices in Cold** Storage Technology
- James Eason, GCCA Cold Chain Technical Advisor, Kenya – Promoting a **Culture of Safety**
- Paul Gibbons, Customer Director of Vector Logistics, South Africa - Customer Service

Graduates of the Virtual Cold Store Operations Short Course holding their certificates.

COOL SOLUTIONS

SCIENTIFIC ANSWERS TO COLD CHAIN CHALLENGES

To get instant advice from a private, online community of over 4,000 cold chain professionals, simply post your inquiry community.gcca.org/home. There are active forums for Construction & Engineering, Government Affairs, and Third Party Logistics. 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.

We are currently assessing all of the physical security at our facilities. Can GCCA provide us with some guidance on best practices for building security?

There are some pretty good government resources available related to physical security. The Department of Homeland Security (DHS), which administers the Chemical Facility Antiterrorism Standards Program (CFATS), has a variety of resources on its website. Facilities with over 10,000 pounds of ammonia would have filed a Top Screen under this program. Cold Storage facilities most likely were not placed into a "high risk tier," which would have dictated that they develop a site security plan (SSP) to comply with the program. Even though it is not likely a regulatory requirement for most cold storage facilities, you may benefit from looking at the risk-based standards and SSP guidance. These guidelines can help identify issues for consideration related to physical security. DHS is working to develop a consultation program to assist non-tiered facilities in developing site security on a voluntary basis.

The Food and Drug Administration has some potentially useful resources, as well, related to food defense.

Resources

Resources from the Department of Homeland Security:

- DHS Risk Based Performance Standards www.cisa.gov/sites/default/files/publications/cfats-rbps-guidance_508.pdf
- Security Vulnerability Assessment/Site Security Plan Instructions www.cisa.gov/sites/default/files/publications/csat-sva-ssp-instructions-508-3.pdf

· Other CFATS resources www.cisa.gov/cfats-resources Resources from the Food and Drug Administration:

- Food Defense Plan Builder www.fda.gov/food/food-defense-toolseducational-materials/food-defenseplan-builder
- Draft Guidance for Industry: Mitigation Strategies to Protect Food Against Intentional Adulteration

www.fda.gov/regulatory-information/ search-fda-guidance-documents/ draft-guidance-industry-mitigationstrategies-protect-food-against-intentional-adulteration

Answer provided by Lowell Randel, Senior Vice President, Government and Legal Affairs, GCCA. @



WFLO SCIENTIFIC ADVISORY COUNCIL

Chairman and WFLO Scientific Advisor

Dr. Michael Jahncke, Virginia Seafood Agricultural Research & Extension Center, Expertise: Fish Products

WFLO SCIENTIFIC ADVISORY COUNCIL

Dr. Jeffrey Brecht

University of Florida, Expertise: Cool-Climate Fruit & Produce

Dr. Patrick Brecht

PEB Commodities, Expertise: Refrigerated Transportation

Dr. Paul Dawson

Clemson University, Expertise: Poultry Products

Dr. Donald Fenton

Kansas State University, Expertise: Refrigeration Engineering

Dr. Brian Fugate

University of Arkansas, Expertise: Supply Chain

Dr. Cody Gifford

University of Wyoming, Expertise: Meat Products

Dr. Dennis Heldman

Ohio State University, Expertise: Food Process Engineering

Dr. Faris Karim

Kansas State University, Expertise: Ammonia Contamination and Food Toxicology

Dr. Barbara Rasco

Phd JD, University of Wyoming, Expertise:

SAC EMERITUS

Dr. R. L. (Bob) Henrickson

Oklahoma State University, Expertise: Meat Products

Dr. Daryl B. Lund

University of Wisconsin, Expertise: Food Science

Dr. Joseph Sebranek

Iowa State University, Expertise: Meat Products Food Safety, Food Safety Regulations

Dr. Kees Jan Roodbergen

University of Groningen, Expertise: Logistics and Operations Management

Dr. Vicky Salin

Texas A&M University, Expertise: Agriculture Economics

Dr. Subramaniam Sathivel

Louisiana State University, Expertise: Frozen Food Quality

Dr. S. Paul Singh

Michigan State University, Expertise: Packaging & Labeling

Dr. Donald Schaffner

Rutgers, The State University of New Jersey, Expertise: Microbiology

Brian Strouts

AIB International, Expertise: Bakery Products

Dr. Charles White

Mississippi State University, Expertise: Dairy Products

Dr. Elhadi Yahia

Universidad Autónoma de Querétaro, México, Expertise: Tropical-Climate Fruit & Produce

Joseph Slavin

Jos. Slavin & Associates, Expertise: Fish Products

Dr. W. F. (Will) Stoecker

University of Illinois, Expertise: Refrigeration Engineering



MEMBER NEWS

NEWS FROM MEMBERS OF GCCA CORE PARTNERS

AGILE COLD STORAGE announces the start of construction on its first cold storage warehouse in Georgia, United States. The 150,000-square-foot facility will open Summer of 2021. Agile's experienced team is led by Don Schoenl, the former President of Nordic Cold Storage and Chairman of the World Food Logistics Organization.

AMERICOLD will acquire AGRO MER-CHANTS GROUP. Agro is the fourth largest temperature-controlled warehouse company globally, the third largest in Europe, and the fourth largest in the United States. It's portfolio consists of 46 facilities, totaling 236 million refrigerated cubic feet, located in 10 countries.

CONHEXA, the first logistics operator in the port of Dunkirk, France, is proud to announce an expansion of the storage capacity of its Duncold division by 5,000 square meters, enabling additional storage and cross-dock operations for multi-temperature products.

GRIDBEYOND has released the Energy Opportunity Calculator, a free tool to calculate the value of energy flexibility. It is designed to enable industrial and commercial businesses to learn how much money they could earn and save through demand response and energy optimization services.

J.B. HUNT reports third quarter intermodal results were worse than anticipated. This is the result of major network congestion in rail terminals and shippers sitting on containers, which may not ease until 2021.

LINEAGE LOGISTICS announced the completion of 10 acquisitions in the United States to build on its facility network. Over the past 18 months, Lineage acquired 24 locations across core population and food production markets.

NEWCOLD will see construction begin late this year on a second deep freeze storage facility in the United Kingdom. The facility, set to go live in late 2021, will sit on a 23-acre plot in Corby, Northamptonshire.

PENSKE LOGISTICS has earned the Cold Carrier Certification, the first certification of its kind focused on excellence in refrigerated transportation. The Cold Carrier Certification recognizes cold trucking carrier companies that comply with the GCCA's Refrigerated Transportation Best Practices Guide.

RLS LOGISTICS announced new hires and promotions supporting its national expansion plans. The moves include onboarding Tom Casey, Chief Investment Officer, RLS Partners, promoting Ken Johnson to Chief Operating Officer, RLS Warehousing Group and Ron Pack to Vice President, Technology.

TITAN COLD STORAGE announced a new strategic partnership with Port Logistics Refrigerated Service (PLRS), a cold storage and port terminal operations facility, located on Hooker's Point at the Port Tampa Bay, Florida, United States. The PLRS 135,000-square-foot facility is designed for handling large volumes of imported and exported cargo.



CHILLFAST High performance, high speed, impactable freezer door system

- High speed operation reduces cooling costs
- Controls frost with heated guides/bottom edge and optional air system
- Insulated curtain is durable and has a 2-year warranty



Contact us today: (800) 365-3667 www.chillfast.com • www.hormann.us in @ F **High Performance Doors**

COLD CHAIN INNOVATIONS

SEAMLESSLY CONNECTING PRODUCTION AND DISTRIBUTION

Swisslog helped United States Cold Storage address, implement, and engineer an innovative, automation solution that seamlessly connects an ice cream production facility with distribution while maximizing efficiency of operation at their facility in Covington, Tennessee, United States.

Swisslog's solution begins at production facility output. Pallets of ice cream are picked up by one of two Automated Guided Vehicles (AGVs) using an on-board conveyor. The AGVs move along a defined route from the palletizing to the in-feed section, where they unload the pallets and the product is scanned and ready to move to storage and/or distribution. AGVs provide a smart alternative to manual transport, offering reliable, on-time delivery with each AGV programmed using an optimal transport strategy.

A 350-foot-long elevated corridor connects the production facility with the USCS distribution center. The corridor keeps the pallets temperature-controlled during their journey from production. And by moving pallets above ground, they avoid blocking traffic below,

keeping both trucks and products safe. Swisslog engineered a vertical lift to raise pallets up from the AGVs to the corridor. Within the corridor, pallets are moved using a ProMove chain conveyor.

The Automatic Storage and Retrieval System (ASRS) features two Swisslog Vectura cranes specially designed for the USCS distribution center. The cranes pick up pallets from the elevated corridor and automatically store them in an aisle of temporary holding racks using a single deep fork unit. After holding for 24 hours, the same cranes retrieve the pallets and deliver them to the opposite side of the aisle for dispensing. The cranes use specially designed on-board conveyors that lift and tilt the pallets onto rack gravity flow lanes for pick up by manually operated fork trucks for storage or shipping.

The solutions at USCS are good examples of how to incorporate automation. Smart design and intelligent management systems minimize the amount of distance travelled by manual fork truck operators, helping reduce the number of manual operators needed, while still meeting the USCS target throughput of 85 pallets per hour. @

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.









Tippmann Construction

- Design/build construction of multi-temperature warehouse and production facilities
- New builds, expansions and renovations
- More efficient blast freezing with QFR Zone® technology
- Master site planning
- Members of U.S. Green Building Council
- Owner/operator experience & knowledge

Interstate Warehousing

- 5th largest PRW in U.S.A.
- 115,000,000 cubic feet of cold storage space
- SOF certified facilities
- Customized distribution solutions
- Retail and Foodservice consolidation programs
- Comprehensive management development & training program





9009 Coldwater Road • Fort Wayne, IN 46825 • (260) 490-3000 • www.tippmanngroup.com

NEW MEMBERS

NEW MEMBER COMPANIES OF GCCA CORE PARTNERS



CEBA MEMBERS

Allied Insulated Panels

Fort Lauderdale, Florida, United States

DAN-doors A/S

Skanderborg, Denmark

JG Petrucci Company

Asbury, New Jersey, United States



IARW-WFLO WAREHOUSE MEMBERS

Complete Cold Logistics, LLC

Westfield, Massachusetts, United States

Frozen Logistics, LLC

Taylor, Texas, United States



IRTA MEMBERS

Brent Higgins Trucking

Mulberry, Arkansas, United States

Complete Cold Logistics, LLC

Westfield, Massachusetts, United States

Frozen Logistics, LLC

Taylor, Texas, United States

Prime Inc

Springfield, Missouri, United States

Transportation Concepts, Inc

Phoenix, Arizona, United States @



IARW ASSOCIATE MEMBERS

Below 0, LLC

Burr Ridge, Illinois, United States

The Brevoort Co.

Brooklyn, New York, United States

CrossnoKaye

Santa Barbara, California, United States

JG Petrucci Company

Asbury, New Jersey, United States

Platform Ventures

Fairway, Kansas, United States

Rebound Technologies Inc.

Commerce City, Colorado, United States

Therma

San Francisco, California, United States



Employers:

- Post jobs quickly and easily
- · Limit applicants to only qualified professionals
- Search resumes
- · Manage jobs and application activity

Job Seekers:

- · Search and apply to hundreds of current jobs on the spot
- Post multiple resumes and cover letters
- Personalize job alerts
- · Get expert advice

jobs.reta.com





ASSOCIATION NEWS

NEWS ABOUT GCCA CORE PARTNERS

GCCA provided cold chain professionals virtual opportunities to learn and connect via the GCCA Virtual Innovation Program, which ran from October 14 - November 10, 2020. This new online program attracted over 650 participants from more than 20 countries who were able to select from more than 40 education sessions. In addition, 40 plus companies took part in B to B meeting suites, conducting hundreds of virtual meetings with attendees over the course of the event.

The Virtual Innovation Program replaced several face-to-face meetings including the IARW-WFLO Convention, GCCA Cold Chain Conference & Expo as well as the 2020 CEBA Conference and the 2020 Latin American Cold Chain Congress.

GCCA European Cold Chain e-Conference will also be conducted virtually, November 16 – 25, 2020, with more than 100 cold chain professionals participating. Delegates represent cold store operators, refrigerated transporters, controlled-environment builders, equipment suppliers and service providers and will be able to discuss challenges, opportunities and innovations happening in the temperature-controlled supply chain. Education sessions focus on consumer trends, cold chain supply chain, sustainability, economy, transportation, talent management and more. Presentations can be found on the GCCA website.

GCCA Brasil releases its local Productivity and Benchmarking Report for the second year. (See the sidebar on page 20.) The information collected covers the operational and financial activities of the third-party cold storage and logistics industry. Respondents to the current survey included a broad range of establishments, in terms of the size of warehouses, geographic location and the diverse types of services provided by each facility. Only participating companies receive a free copy of the report. For companies that have not joined the survey, the amount of BRL 500.00 will be charged. Contact Isabela Perazza, GCCA's Director of Brazil at iperazza@gcca.org if you are interested in purchasing the report.

WFLO Institute Latin America graduated 13 students in October 2020. The Year 3 students included: Alnardo Andrés Diaz Rosendo from Equiport, Cornelio; González De Los Santos from Grupo Frío Integral; Eddy Santiago García Rodríguez from Camin Cargo Control, SRL; Jhonatan Eduardo Báez Cuas from Tropical Shipping; Jorge Augusto Miranda Cubilete from Intec; José Enrique Burdie Jiménez from UPS, José Gregorio Minaya Espinal from Aerodom: AILA; María De Lourdes Núñez Cuervo from CNC; Martín Linares from Linca Refrigeración; Merlin Roberts from Delta Cargo; Modesto Rosado Duran (Consultor); Nilsy Mirlene Delgado Antuna from Nestle Dominicana; Rafael Alberto Smith Ortega from the Punta Cana Airport. Congratulations to the 2020 Graduates.



CEBA members are true experts in building the cold chain. To recognize their tremendous expertise, the CEBA Built by the Best Award was launched in 2016. The award acknowledges project teams moving the industry forward in the design and construction of temperature-controlled facilities. The recipient of the 2020 CEBA Built by the Best Award is Primus Builders for their Americold Logistics facility near the port of Savannah, Georgia, United States.

Americold Logistics chose Primus Builders to construct a new poultry import/export facility near the Port of Savannah in Gainesville, Georgia, United States. At 51-feet, the 312,000-square-foot building is designed to offer maximum flexibility in its cold storage options, which include a -20° QFR quickfreeze system that freezes product faster and more efficiently. The finished project also includes a two story office, a USDA (United States Department of Agriculture) inspection lab that allows inspectors to test the product for spoilage, employee welfare areas, a Quell

fire protection system to ensure maximum coverage for the building height, ALTA Expert refrigeration units and automated conveyors, wrapping and labeling stations.

A case study on this project will be featured in the next addition of COLD FACTS.

. . .

WFLO is proud to announce the recipient of the 2020 Don Schlimme Future Leader Award - Zeshan Hassan, Continuous Improvement Manager with Congebec Logistics. The award was presented by Brian Beazer, WFLO Chairman and General Manager & CEO, WCS Logistics during the GCCA Virtual Innovation Program. Established in 2015 by WFLO, the Don Schlimme Future Leader Award recognizes talented young professionals in North America, who have the potential to become future leaders and make a positive contribution to the development of the temperature-controlled warehousing and logistics industry. Nominees must demonstrate excellence in their work, the potential to excel further in the many facets within the industry and possess insight into their organization's strategic values and direction, policies and ways of working.

The award is named in honor of Donald V. Schlimme, Ph.D, who passed away in 2012, and was a longtime member of the WFLO Scientific Advisory Committee (1983-2012) and a WFLO Staff Advisor for many of those years. He was an expert in food science and cold storage and was committed to sharing his extensive knowledge.

Hassan competed for the award with the following finalists: Alex Woolf, Vice President of Research and Development, Lineage Logistics; John Long, Senior Engineering Program Manager, Americold Logistics; and Ray Rodriguez, Senior Manager, Business Development, United States Cold Storage. As part of the selection process, each finalist was interviewed by a panel of judges made up of industry leaders. Each of candidate also delivered a short presentation to the panel of judges and the attendees of the GCCA Virtual Innovation Program. A final award recipient was selected as a result of this selection process.





THE M STANDS FOR MAXIMUM AIRFLOW, MODULAR, MOBILE... OR JUST PLAIN MAGIC.

Now you can get the same revolutionary freezing power of the Tippmann QuickFreeze In-Rack Freezing System in a modular, mobile unit. QFM is designed to work with your existing racking and allows you to increase capacity—**FAST.**

MODULAR

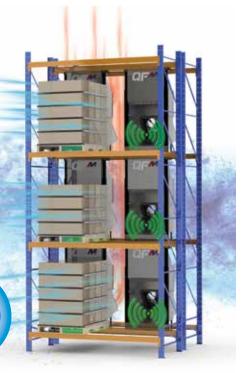
 Users can install & remove QFM themselves. This allows equipment to be moved to other locations or stored off season.

FASTER

• Faster than conventional blast and up to 40% faster than QF+

SMARTER

- 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



THE **FASTEST** WAY TO **FREEZE** A **PALLET**



COOL PERSON

PROFILING INFLUENTIAL PEOPLE CONNECTED TO THE COLD CHAIN INDUSTRY



My lab ramped up to do experiments, this fall and beyond, where we will use a non-pathogenic virus that infects bacteria as a surrogate for understanding the potential for SARS-CoV-2 to persist and transfer. This research will be useful to

DR. DONALD W. SCHAFFNER Extension Specialist in Food Science, Distinguished Professor **Rutgers University**

Dr. Schaffner is Extension Specialist in Food Science and Distinguished Professor at Rutgers, the State University of New Jersey, United States. He is also a member of the GCCA/ WFLO Scientific Advisory Council (SAC) and his expertise is microbiology

When, and how, did you know you wanted to devote your professional life to food safety?

DS: I decided to major in food science as a high school senior because I was interested in the biological sciences, but I also knew that the job market for biologists was not that great at the time. After talking to a family friend, who was also a food science professor, I decided to choose food science because I wanted to have a job after graduation. I didn't really like food science at first, although I really did enjoy all my basic science classes. It wasn't until I discovered food microbiology that it really clicked. I still wasn't ready to look for a job, so graduate school was the next logical choice, where I learned more about food microbiology, focusing on food fermentation for my MS degree. My PhD degree looked at fermentation and mathematical modeling. Once I came to Rutgers, I pivoted again to food safety and mathematical modeling because it was clear to me that this new research area was the future.

What has it been like to serve on the WFLO Scientific **Advisory Council?**

the food industry."

DS: I first learned about the organization from former SAC Chairman Daryl Lund, who was also my department chair when I first came to Rutgers University. When the opportunity came to join the SAC at Daryl's request, it was a no-brainer to say yes. I've really enjoyed all the people I've met from the industry over the years, and I'm happy to be a resource for the organization.

Over the course of your career, what has been the most significant change in how food is kept safe?

DS: Although I knew early on that modeling and risk assessment had the potential to help manage food safety, some of my academic colleagues were more skeptical. It's been very gratifying to see (slowly... over my 30-year career) a greater appreciation for the use of math and statistics to manage food safety.

You co-host podcasts on food safety and risk. What is this experience like?

DS: It has been an absolute joy to co-host one, and now two, podcasts. As a podcast listener myself, I know the intimate feeling of listening to strangers (who eventually feel like old friends) on a regular basis. It's been great to create that level of connection to the listeners of our podcasts. I am very proud of the fact that our listeners range from just "normal people" with no connection to the food industry who find our topics interesting, to academic, government and industry colleagues who join us for fun, and hopefully informative, discussions.

Issues involving handwashing and cross-contamination are part of your research interests in quantitative microbial risk assessment and predictive food microbiology. As an expert, how have you been impacted by the COVID-19 pandemic?

DS: Because of my background in these topics, it has given me an entry point into the rapidly expanding scientific literature around the virus and the disease. It has been great to be part of the discussion, through traditional and social media, helping people understand and manage risk. I recently worked with some French colleagues to publish a mathematical model describing the effective temperature on coronavirus survival. I'm part of FoodCov.net, a group that was funded by the U.S. Department of Agriculture to develop a collaborative approach to managing SARS-CoV-2 within the food industry. My lab ramped up to do experiments, this fall and beyond, where we will use a non-pathogenic virus that infects bacteria as a surrogate for understanding the potential for SARS-CoV-2 to persist and transfer. This research will be useful to the food industry.



FLOOR FACTS

FOR OPERATIONS

Easy cleaning, light reflecting, reduced axle and transmission repairs, better pick rates, and faster driving

FOR HUMAN RESOURCES

Lowered operator fatigue, increased morale, safer driving and higher retention rate

FOR THE BOARD OF DIRECTORS

Longer lasting, lowered equipment cost, higher throughput, lowest total cost of ownership

Reduce unnecessary distractions, increase profits, and strengthen your reputation as a world-class distributor.





INDUSTRIAL FLOOR CONTRACTOR

FLOOR COMPANY, INC.

Building Value For You WORLDWIDE SERVICE

HOME OFFICE

1680 E. 69TH AVENUE DENVER, COLORADO 80229

(303) 674-2290 KalmanFloor.com

info@kalmanfloor.com

BEST INVESTMENT

- Easy-to-clean Self-polishing Abrasion-resistant
- Non-dusting
- Longest warranty in the industry

KALMAN FLOORS HAVE UP TO 90% FEWER JOINTS



