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NEW SURVEY REVEALS OPPORTUNITIES AND CHALLENGES

Industry professionals see possibilities in automation due to continued workforce shortages.

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LEADOFF

MESSAGES FROM GCCA LEADERS

Farewell GCCA

ear GCCA Friends, I announced back in December that I accepted an offer to be the next President and CEO of The Fertilizer Institute (TFI) starting in early February 2020.

While I had no intentions of ever leaving GCCA, I understood a day would come that an opportunity too good to pass up would be presented. TFI is that opportunity. It is a \$12 million revenue association, about twice the size of GCCA, and includes a Political Action Committee that raises about \$180,000 per election cycle to influence policy makers on Capitol Hill. The opportunity to lead a larger, advocacy-focused organization with a formidable presence with Congress allows me the opportunity to expand my horizons.

I am also excited to return to my agriculture roots. The son of an agricultural science teacher, I studied agriculture in college and served as President of the National Future Farmers of America after high school. Fertilizer accounts for more than 50 percent of global food production, so I will remain committed to telling the story of "feeding the world."

Making the decision to leave GCCA has been one of the hardest decisions I have ever made because of you. As an industry, we are lucky to have some of the best people and I will always cherish the relationships that have been so impactful on me and my family. I am struck with emotion when I consider I will not get to spend time at events with so many of you who have become dear friends.

I am very proud of all the work we have accomplished in my 14 years with GCCA. I am especially thankful for the amazing team I have worked with over the years. We were able to create a strategic plan that has been impactful on so many levels. GCCA is lucky to have the most talented staff in the association community.

The demands and pressure on the future of GCCA are significant, and I sincerely believe it is also a great time for the association to

have new leadership. At this very unique time in the industry's history, I am confident that the association will benefit from new ideas. As Marshall Goldsmith titled his book, "what got you here won't get you there."

At the end of the day, I may be moving on from GCCA, but we will always have our relationships and shared memories. But most importantly, you have always been incredibly supportive of our vision for the future of the association. We proposed many changes, ideas and new strategic directions. I have never worked with a group of leaders that were so receptive of those new directions. Thank you for your confidence in our staff, board and leadership.

On behalf of my family, Katie, Hannah, Ava and Elle, thank you for your friendship and amazing memories.

Sincerely, Corey Rosenbusch **@**



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.

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REGULATORY REFORM IN THE AMERICAS

GCCA advances agenda in Canada and Brazil.

By Lowell Randel and Isabela Perazza

egulations are a major consideration for the cold chain not only in the United States, but in many countries around the world. With this in mind, the Global Cold Chain Alliance (GCCA) has been working to expand its influence to improve the regulatory climate outside of the United States. In recent months, significant progress has been made in Canada and Brazil.

TSSA Implementing Regulatory Reforms in Ontario

Over the last few years, GCCA has led efforts to reform an outdated regulation impacting facilities in Ontario, Canada.

In 2015, GCCA staff and Canadian members, led by former IARW Chairman Eben James of Trenton Cold Storage, initiated meetings with the Technical Standards and Safety Authority (TSSA) to discuss Ontario regulations related to attendance requirements for operating engineers.

Under long-standing Ontario policy, facilities have been required to provide operating engineers on a continuous (24/7) basis based solely on the horsepower present at the facility. GCCA explained to TSSA that the prescriptive nature of this policy has not kept up with advancements in technology and increasingly safer systems and procedures. TSSA acknowledged that the policy was very prescriptive and that a review of the regulation was warranted.

As a result of GCCA bringing these issues forward, TSSA commissioned a study to examine the Ontario policy, along with the approaches from other jurisdictions in Canada and North America. At the completion of the study, it was determined further action should be taken.

A task force was formed with representatives from the various industries and sectors impacted

by the policy, including two members from GCCA, James and Joe Sammon of Versacold. This group met on numerous occasions and ultimately arrived at a consensus that an alternative approach was needed for the operating engineers regulation. The task force named this alternative Path 2, which would provide a framework with which facilities could develop their own performance-based risk and safety management plans based on the specific needs of their individual facilities.

A technical committee was then formed to take a deeper look at how a Path 2 process could work. At the end of the process, the TSSA and the Ontario Ministry of Government and Consumer Services concurred that the old operating engineers policy was too prescriptive, not risk-based and exacerbates the shortage of qualified operating engineers.

These concepts were then taken up by the Ontario Parliament through Bill 66, Restoring Ontario's Competitiveness Act, 2019. This legislation is broader than just the operating engineers policy and was designed to improve the climate for businesses in the province.

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"As a result of GCCA bringing these issues forward, TSSA commissioned a study to examine the Ontario policy, along with the approaches from other jurisdictions in Canada and North America. At the completion of the study, it was determined further action should be taken."

Bill 66 was approved by the Ontario Parliament and received Royal Assent during the summer of 2019.

TSSA is now in the process of implementing the operating engineers components of the legislation. Since passage, GCCA has held multiple meetings with TSSA to discuss implementation. TSSA has stated that the goals of the new regulation are to:

- · Enhance safety
- Reduce regulatory burden
- Drive innovation
- Improve compliance
- Address labor shortage

The new policy is broken into two paths. Path 1 is a modified version of the current policy that prescribes attendance requirements based on horsepower and some additional factors. Facilities will receive a score that determines what class of facility they will be assigned and the corresponding attendance requirement.

Path 2 provides a more flexible approach based on site-specific risks and how a facility plans to mitigate such risks through the development of a Risk and Safety Management Plan. Plans would be developed by facilities and submitted to TSSA for approval. If the plan is approved, the facility will be registered and receive periodic audits to ensure the facility is following the plan that was submitted.

TSSA intends to base the Risk and Safety Management Plans on the Chemical Industry Association of Canada's Process Safety Management Standard (CSA Z767-17). This approach is similar to Process Safety Management in the United States. Companies with facilities in Ontario considering the Path 2 approach are encouraged to review CSA Z767-17. TSSA indicates it will be developing guidelines to assist facilities in their evaluation of the Path 2 approach.

TSSA also indicates it intends to have draft guidelines for Path 2 completed by the end of 2019 and offer a consultation period for industry in early 2020. The feedback received from stakeholder consultation will be incorporated into the draft guidelines and a final draft is expected by Spring 2020.

GCCA will continue to actively engage with TSSA as the implementation process moves forward.

Advocating for Fair Standards in Brazil

In February 2018, GCCA Brazil and Associação Brasileira de Armazenagem Frigorificada (ABIAF) created a Food Safety and Regulations Committee to address the primary regulatory concern for the cold chain industry in Brazil.

The current regulations that Brazilian third party logistics providers (3PLs) comply with are the same as for the food processing industry and slaughterhouses that handle food directly. The requirements are not aligned with actual 3PL processes and procedures and have a big impact on operation costs and administrative responsibilities sanctions. The rigor imposed by auditors is much higher than for other countries, where the cold chain is better developed. The industry-related Technical Standards were created in 1952, and are outdated.

The Food Safety and Regulations Committee is comprised of veterinarians and quality control inspectors from member companies. In 2018 and 2019, monthly meetings were held to discuss the issues and examine Brazilian policies. After analysis of the industry's issues and regulations, it was determined developing a relationship with the government, specifically the Ministry of Agriculture, was necessary.

Led by Committee Chairwoman Vivianne Moreira Leite, the committee members created a technical document of best practices for the handling and storage of temperature-controlled products. The document was finalized in March 2019, and was based on internationally recognized standards and codes of practice relating to food safety. In May 2019, representatives from GCCA Brazil and ABIAF met with members of the Ministry of Agriculture, Livestock and Supply (MAPA) and expressed that current regulations are burdensome and do not align with industry best practices globally. The technical document was presented with all the information necessary to align regulations with best practices related to food safety in order to meet the requirements of the Brazilian and international markets. A second meeting with a member from the agency was held in September.

The process is now under review at the Ministry of Agriculture.

Currently, the association is also part of the MAPA Clients Committee, made up of associations with similar regulatory concerns.

In November 2019, MAPA hosted an event for the first time for members from the associations and the industries they represent to come together to define priorities for a two-year regulatory agenda.

Representatives from GCCA and member company, Martini Meat, were there to represent the cold chain industry's interests and establish positive relations with the MAPA.

These efforts represent a good start in elevating the cold chain with policy makers in Brazil.

GCCA Brazil and ABIAF will continue to seek alternatives to strengthen the relationship with the MAPA in order to understand how best to advocate on behalf of its members.

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COVER STORY



NEW SURVEY REVEALS OPPORTUNITIES AND CHALLENGES

Industry professionals see possibilities in automation due to continued face workforce shortages.

n the new research the Global Cold Chain Alliance (GCCA) conducted on trends impacting the cold chain industry and its stakeholders, the association finds industry stakeholders are extremely optimistic about the future of the cold chain.

Best Opportunities for the Cold Chain Industry



Overall, refrigerated warehouse professionals consider market conditions for the cold chain industry better now than five years ago and are extremely optimistic.

However, industry professionals also indicate they believe they can have an even greater impact by communicating the importance and value of cold chain.

"The survey results showed us the passion professionals bring to the cold chain and also the potential we all have to further the industry," says GCCA President and CEO Corey Rosenbusch, CAE, IOM.

While market conditions for the cold chain industry are better than five years ago, there is opportunity to advance the industry by more acutely aligning all cold chain stakeholders, including third-party logistics providers (3PLs), food companies, retailers, suppliers and transportation companies. See "Market Conditions" graph.

While half of the refrigerated warehouse professionals responding gave the industry high marks, a quarter believe cold chain players are not sufficiently aligned to address challenges and develop market demand.

The research indicates that improving alignment is an ongoing mandate. An overwhelming majority of respondents perceive GCCA to be aligned not only with the business challenges and growth opportunities of the overall cold chain industry, but also with the interests of their companies. Still, significant opportunities exist for GCCA to drive value and sustainable growth on behalf of the member companies.

Drivers and Barriers to Growth

Respondents are very positive about the future of the cold chain industry and even more so about the ongoing success of their own companies. See "Best Opportunities for the Cold Chain Industry" graph.

The top cold chain opportunity is the use of automation and robotics, which 43 percent of survey respondents noted. The next three opportunities are as follows:

- Increased demand for food, as the global population grows (37 percent)
- Growth of e-commerce (34 percent)
- Increased outsourcing by customers (32 percent)

To a lesser yet still significant extent, respondents see opportunity for growth leveraging the following:

- Diversification of temperature-controlled products in the food industry
- Replacement of old assets with new, modern warehouses
- · Demand for data and predictive analytics
- Global trade expansion
- Changing consumer food preferences

Respondents are, however, less optimistic that favorable changes in the regulatory environment will drive growth. Not surprisingly, most respondents (51 percent) noted driver



Greatest Challenges for the Cold Chain Industry



and workforce shortages as the greatest challenge to the cold chain industry. See graph "Greatest Challenges for the Cold Chain Industry."

- Also included in the top list of challenges: • Inability to balance demand and capacity
- (37 percent)
- Customer building their own facilities, insourcing (35 percent)

"We know that talent and labor is on everyone's mind, and the survey results show that significance both in the opportunity of automation and robotics and on the challenges side," Rosenbusch says.

The survey indicates that talent and labor issues are felt more acutely by larger companies located in the United States than smaller companies and those located elsewhere. However, workforce development has the potential to advance all cold chain stakeholder companies, including refrigerated warehouses, and is therefore a top-tier priority for the industry.

Notably, insourcing and insufficient local capacity are among the most cited reasons why companies lose business aside from price. The percentage of respondents indicating that price is one of the top three reasons they lose business dropped significantly from a 2014 survey, while the number of respondents citing insourcing and capacity issues increased. Customer demands for more complex services without higher prices also is a significant burden on respondent companies.

Improving Alignment

Members give GCCA high marks on the leadership the association provides in overcoming barriers and maximizing opportunities to sustain growth in the cold chain industry.

"We know that talent and labor is on everyone's mind, and the survey results show that significance both in the opportunity of automation and robotics and on the challenges side."

-COREY ROSENBUSCH, GCCA President and CEO

Strategic Planning Task Force Members

The following GCCA member company representatives are part of a task force that will help guide the association as it determines next steps based on the outcomes of the Cold Chain Industry Trends Survey.

- Brian Beazer, GM & CEO, WCS Logistics/Winchester Cold Storage
- Ron Buford, President & CEO, Premier Refrigerated Warehouse
- **Don Dick**, *Partner*, Dick Cold Storage
- Mickey Hoffmann, Vice President, United Cold Storage
- Andrew Janson, President, MTC Logistics
- Manuel Kabana, Director, Friopuerto Investment, SLU
- Daniel Kaplan
- Tony Leo, President & CEO, RLS Logistics
- David Stuver, Executive Vice President of Business Development & Supply Chain Solutions, Americold Logistics LLC
- Steve Tippmann, Executive Vice President, Interstate Warehousing

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

Tippmann Innovation Awarded Built By The Best Award from CEBA

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Top Areas GCCA Should Prioritize



Quantitative and qualitative survey results indicate GCCA can support even greater alignment in four important areas:

- · Workforce development
- Market intelligence
- Industry promotion
- Policy advocacy

Applying the Results

"At GCCA, we take these results and apply them directly to our strategic planning, working to better serve our members and the cold chain industry as a whole," notes Rosenbusch. See "Top Areas GCCA Should Prioritize" graph.

Workforce Development

Workforce development is a source of concern for all supply chain industries. Traditional means of attracting individuals to careers in the cold chain, and then retaining those workers, are not getting the results the industry needs to meet demand.

In the digital age, cold chain stakeholders look to GCCA to raise awareness of careers in the cold chain, and to support recruitment by delivering training and career benefits designed to improve performance and retention.

Market Intelligence

To be successful in a fast-paced environment, cold chain stakeholders need a constant flow of information gathered and analyzed to support decision making at both the strategic and operational levels. GCCA serves as an important conduit of market intelligence by performing research and sharing results based on key segments of the industry including location, product types, and company size.

This research must increasingly focus on how advanced technologies and data can be utilized to improve operations, increase capacity, and help mitigate labor supply issues.

Food safety remains a major issue for food companies and their suppliers. GCCA must continue serving as a reliable source of scientific research related to improving food safety.

Industry Promotion

The public is increasingly aware of the important role the cold chain plays in ensuring food and drug safety. The opportunity exists for the GCCA to coordinate the effort to increase public awareness of the cold chain to support workforce development as well as consumer engagement. Collaborating with cold chain leaders and companies, the GCCA can advance the industry at large through joint research and development initiatives and public relations campaigns.

Advocacy

Survey respondents are not optimistic that a favorable regulatory environment will emerge soon. GCCA public affairs and advocacy leadership is necessary to ensure that the cold chain and its stakeholders are well-represented to government agencies and policymakers with regards to such issues as food safety,

worker safety, energy and the environment. A cold chain industry advocacy platform can align stakeholders around a common message.

Next Steps

Results of the Global Cold Chain Industry Impact research paint the picture of a dynamic and thriving industry. Stakeholders are optimistic about the future, but also recognize that more needs to be done to ensure sustainable growth. Industry alignment is key to realizing that goal.

The GCCA will continue to play a pivotal role in improving alignment to optimize opportunity and remove barriers to growth and drive value across the cold chain industry. To facilitate that role, the GCCA will revise the association's strategic plan, informed by the findings of this latest research, and present the revised plan to members at the 129th IARW-WFLO Convention in May 2020.

The Cold Chain Industry Trends Survey is based on research GCCA conducted in 2019 with Potomac Core Association Consulting, which surveyed members, former members, and prospects of the International Association of Refrigerated Warehouses. @

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TIPPMANN INNOVATION HONORED WITH CEBA BUILT BY THE BEST AWARD

Meat processing and distribution facility built for wow-factor and innovation but with green space and community in mind.

By Keith Loria

ith 82 years of experience behind it, Wolverine Packing Co., based in Detroit, Michigan, is one of the nation's leading producers of meat, processing more than 8 million burgers a week.

Rob Adams, a partner with Fort Wayne, Indiana-based Tippmann Innovation, remembers the initial meeting he had with leadership at Wolverine. They had come together to discuss Wolverine's desire for a new meat processing and distribution facility to be located in Detroit, where the company already operated four other processing plants. "We worked with Jay and Jim Bonahoom of Wolverine for several years about where they wanted to build this project and we laid out multiple buildings on different sites before we landed on where we did," Adams says. "It was a long process of finding the right location and coming up with something that would fit all their needs." The result of the 180,000-square-foot project, which was completed in February 2019, is a state-of-the-art cold storage warehouse that not only allows Wolverine to expand its operation, but provides a variety of benefits to the surrounding community as well.

The facility is home to approximately 20,000 pallet positions of storage space, a 50,000-square-foot processing area and the QuickFreeze In-Rack Freezing System (QF+), considered the most innovative and energy efficient racking system on the market.

The outstanding work earned Tippmann Innovation the CEBA Built by the Best Award for 2019. The award was presented on



Tippmann Innovation was named the winner of the 2019 CEBA Built by the Best Award competition. The award was given at the 39th CEBA Conference & Expo. L to R: CEBA Chairman Vince Free with Tippmann Innovation's Sam Tippmann, Rob Adams and Josh Koester. (Photo courtesy of Tippmann Innovation.)



Trailer dock doors allow trucks to pull directly into the freezer keeping cool air in and warm air out. (Photo courtesy of Tippmann Innovation.)

November 15, 2019, during a general session at the 39th CEBA Conference & Expo.

"We are a national contractor that specializes in the construction of cold storage facilities, and what was nice about this award is that it was given to us by peers in the industry; people who are industry specialists and recognize us as a company that can execute the quality and standards needed in a modern cold storage warehouse," Adams says. "It was really gratifying."

Innovation Abounds

It was important to all involved to build a facility with a wow-factor, something that would be technically superior and pave the way for the future.

"A lot of innovative equipment was used in the development of the processing facility," Adams says.

For instance, the warehouse boasts a conveyor system that easily transfers meat from the 50,000-square-foot food processing room to the adjacent 125,000-square-foot freezer.

Then there's the QF+, which Adams notes is nothing like traditional blast freezers as the system pulls warm air away from the middle of the pallets instead of blasting cold air at them. This provides a rapid, even freeze of products while at the same time producing



(L to R) The new Wolverine Packing Company processing and distribution center has 20,000 pallet positions of storage space. (Photo courtesy of Tippmann Innovation.) The QF+ blast freezer provides a rapid, even freeze of products while producing less waste and requiring less energy. (Photo courtesy of Tippmann Innovation.)

less waste and requiring less energy.

Additionally, the mezzanine above holds air compressors and other equipment that allow for maximum storage and processing space, while stainless steel slope and slot floor drains cover the processing room floor, eliminating an additional step in the cleanup process.

Although combining processing, freezing and distribution efforts under one roof created some hurdles, Tippmann Innovation worked with a number of reliable local companies to help install industry-leading systems to create a warehouse that could produce, pack, freeze, store and ship, all within the same facility.

Investing in the Community

Wolverine wanted to continue its relationship with the Detroit community and opted to build the site in Detroit's Eastern Market. The company acquired Forest Park, a cityowned park that had seen better days, but was directly adjacent to the market.

"There was never a question that it would be built in Detroit, because that's where the existing facilities were located and it made sense to be there," Adams says.

With its long history in cold storage construction, Tippmann Innovation had experience dealing with brownfield sites before. So building a site on what was once 60 parcels that covered 32 homes (the basements still remained underneath) posed little challenge to the company, other than dealing with complex permit processes and administrative challenges.

"Because the site had those 32 houses and all kinds of stuff you would not want to see underground, we had to dispose of it in the correct way environmentally," Adams says. "We had great local contribution from contractors and a great team overall."

Tippmann Innovation was also able to help Wolverine secure a fire variance for the new facility, saving the company millions of dollars in the process.

But it wasn't just about building a new facility. Wolverine also used the space to

"It was important to all involved to build a facility with a wow-factor, something that would be technically superior and pave the way for the future." create a new, modern three-acre park complete with a walking path, basketball court, baseball field, playground and workout area that the company gifted back to the city.

This investment, in conjunction with the new freezer warehouse, provided jobs for the community and brought attention to the new plant.

Sustainability Considerations

Another project component of chief importance to Wolverine was developing a building that worked sustainably. Tippmann Innovation is well versed on designing energy-efficient warehouses, and was able to deliver on the entire project with sustainability in mind.

Adams cites the high-quality refrigeration room, QF+, the installation of energy saving lighting systems, tankless water heaters to provide instant and efficient hot water, and the various other efforts around the property.

He explains the state-of-the-art refrigeration room is fully equipped with Frick Refrigeration's highest quality equipment, which utilizes a BFD compressor on the primary load in the engine room that helps better trim the loads in comparison to traditional compressors. It also utilizes a microprocessor that has a specialized combination for energy management load shedding. "The engineers designed a specialized piping system that allows the QF+ room to run on shared capacity from the main freezer when the building is running at a lower capacity," Adams says. "The dedicated low load temperature system is only used when the building is running at a high capacity, giving Wolverine the option to run the QF+ freezer on the same system as the rest of the facility during slower times."

Therefore, Frick's system helps Wolverine save a significant amount of energy and money.

Other energy and cost saving elements in the freezer and processing center include energy efficient touchless fixtures, motion sensor lighting, and a clean-up mode that uses less water than traditional wash down systems.

Additionally, trailer dock doors are "drive in" style, allowing trucks to pull directly into the freezer, keeping cool air in and warm air out. The doors from the dock to the freezer also reduce energy waste thanks to a bi-parting design that keeps cold air in the freezer better than traditional door designs.

"Not only were the refrigeration room and freezing and processing equipment built for energy efficiency and cost savings, but other design details inside and outside of the facility were crafted to ensure economic, environmental and social sustainability," Adams says. For example, a ductless mini-split system was installed adjacent to the freezer in areas far from major air conditioning units, allowing those areas to stay cool while in use, but not use energy from the rooftop systems when not in use.

A Job Well Done

Of course, a project of this magnitude isn't executed without some challenges, and a tight schedule for completion was one. But despite some site-related issues with removing soil and satisfying safety requirements, and obstacles related to working in an existing neighborhood, which meant not much staging could be done on-site, Adams notes it was a relatively stress-free project.

"Along with the local companies, we had a really great contribution from national contractors who are specialists in cold storage to help us build this, and the entire team did an outstanding job," Adams says. @

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

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SUCCESSFUL SAFETY CULTURE BUILT ON RELATIONSHIPS

Everyone buys in to goal of protecting each other vs. meeting regulatory requirement.

By Sheryl S. Jackson

he dictionary definition of culture is a set of shared attitudes, values, goals and practices that characterizes an institution or organization. When a company builds a "safety culture," the same definition applies, except the main focus is the safety of all employees and customers.

Complying with U.S. Occupational Safety and Health Administration (OSHA) regulations and risk management recommendations from the legal and insurance sectors, implementing safety-related signage and creating safety committees are all important steps – but even these measures alone do not create a safety culture. Missing from that list is the essential ingredient to creating a safety culture, a commitment from the executive level as well as engagement at the associate level. For that reason, it is imperative to demonstrate the company's focus on safety – and demonstrate it consistently.

Although each company's culture is different, successful strategies employed by two Global Cold Chain Alliance member companies show how a safety culture can be cultivated and sustained.

"A culture of safety is based on actions, not verbiage alone," says Rick Stevens, Senior Director of Risk Management and Risk



"Missing from that list is the essential ingredient to creating a safety culture, a commitment from the executive level as well as engagement at the associate level. For that reason, it is imperative to demonstrate the company's focus on safety – and demonstrate it consistently."

Looking Beyond Incident Reports to Build Safety Culture

"Metrics are a critical component of any safety program, but just looking at the incidents is not enough," says Rick Stevens, Senior Director of Risk Management and Risk Control at Americold Logistics. All incidents should have a root-cause analysis performed to identify how the incidents could have been prevented, he suggests. "It is also important to focus on leading indicators in your safety program versus lagging indicators."

Lagging indicators are typically "output" oriented and measure actual results, such as number of forklift accidents or back injuries. While easy to measure, they are hard to improve or influence without addressing the causes of these results.

Leading indicators are "input" oriented and measure activities required to meet an overall goal. To address forklift accidents or back injuries, the activities might include ensuring proper forklift operation training or providing proper lifting technique demonstrations. These indicators are easy to influence with safety classes, training sessions and ongoing monitoring and reinforcement of proper, safe behaviors.

Stevens adds, "Focusing on leading indicators to improve results enables companies to raise the bar for their safety programs."

Control at Americold Logistics. "Talking about safety only takes a company so far in its pursuit of creating a culture of safety," he says. "You need to provide actual proof to all of your associates that you are serious about this commitment – you need to walk the talk."

Providing the right protective equipment, installing signage to be sure employees are aware of hazards, offering comprehensive training and asking for front-line associates' input are a few of the actions that demonstrate a company's responsibility to safety, Stevens adds.

Americold's Behavioral Based Safety (BBS) program focuses on reinforcing positive

behaviors and taking a constructive approach in "coaching up" associates who are not demonstrating these types of behaviors rather than taking a punitive approach. The program elements include:

- Identify no more than three behaviors through the review of loss run reports and incident investigations
- A baseline process so improvement can be measured
- Supervisors and managers conducting 10 daily observations and closing the distance – personal, one-on-one interaction – between the observer and the associate being observed

On introduction of the program at Americold, observations were made but conversations did not always take place. "The closing the distance rate has increased from between 17 and 23 percent at the beginning to between 84 and 87 percent today," says Stevens. However, the appropriate disciplinary action is taken in situations where associates are observed in repeated unsafe behaviors. "A successful behavioral-based safety program focuses on identifying the correct behaviors driving poor performance and the personal, interactive process between the observer and the associate."

Although this initiative is a "safety program," operations must claim ownership, which further increases the likelihood of sustainable success, says Stevens. "We've also kept recordkeeping simple and user-friendly by allowing supervisors and managers to use iPads or our BBS booklets to document observations and enter data into the Behavioral Based Share-Point site," he says. Weekly Behavioral Based Reports are generated to enable each location to track their progress, he adds.

Relationships Key to Building Culture

At Henningsen, managers and supervisors are also walking around to praise associates for safe behaviors and to coach associates if behaviors don't meet company expectations.

These safe work observations and conversations, however, are building important relationships between management and frontline associates, says Bo Hurley, Safety Manager for Henningsen. When an unsafe behavior is observed, the conversation is positive with the observer explaining what is unsafe about the associate's behavior.

"We want all of our associates to go home safely each day and emphasize that goal in our conversations," explains Hurley. "We have also observed associates coaching other associates when unsafe behavior is observed, which is a good indication that our culture is safety-focused."

Although personal, face-to-face recognition of safe behaviors is positive, Henningsen's safety program takes recognition a step further.

GCCA Workplace Safety Survey

In an effort to understand the current safety culture in the industry and how GCCA may be able to help provide support and resources on safety, the association is conducting a workplace safety survey of warehouse employees throughout the industry.

All industry leaders are asked to encourage warehouse associates to take the survey to ensure that the most accurate picture of the safety culture in the industry is provided. The short – less than five minutes – online survey is live in January and February 2020 and can be accessed at https://www.gcca.org/ safetysurvey.

Results of the survey will be used to quantify the current state of the temperature-controlled warehouse industry with regard to safety culture, awareness of available safety resources, ongoing safety training, and resulting impact of safety activities and programs. An added benefit for high participation at a facility is a site-specific report that can be provided for the facility.

For more information contact, Jason Troendle at jtroendle@gcca. org or call 703-373-4300. "Managers have always had \$25 gift cards to present to associates with consistent safe behavior, but we've just rolled out a new program that gives managers a chance to hand out a tangible reward more frequently," says Hurley.

"Scratch off" reward cards, similar to instant reward lottery cards, that give associates a chance to win a prize such as a gift card, coffee mug, apparel or other item, are presented when safe behavior is observed. "Associates who do not have an instant winning card are put in a lottery for a grand prize drawing," Hurley explains. If an associate who is an instant winner wants to go into the lottery for the larger prize, he or she can forego the gift to enter the lottery.

While the recognition of safe behavior can be fun, Hurley points out that everyone understands that safety is not a game. "We make it easy for associates to receive the safety training they need, and we have several ways that associates can speak up about their own ideas to improve safety," he says.

In addition to active safety committees that include representatives from all shifts and all departments, associates can contact Hurley directly with anonymous or signed notes with suggestions or in person via phone or while he's visiting a site.

"Our culture promotes safety and associates feel comfortable speaking up," says Hurley. "In one instance, an engineer who had been hired a couple of years earlier told me he had concerns about egress during rooftop evacuation at his facility." After further evaluation, Hurley agreed that changes were needed and was able to work with the regional engineer to move the project up the priority list.

This is only one example of the safety culture at Henningsen, says Hurley. "We have provided the training, ways to reinforce knowledge and rewards for safe behavior, but the most important part of our program is giving all associates a voice," he says. "Everyone sees their facility through a different lens, so when associates, managers and the safety manager are all working together to identify and address safety, we not only have buy-in throughout the company, but we can make sure everyone goes home at the end of their shift." @

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

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PORTS POISED FOR GROWTH

Cold chain stakeholders address seaport capacity issues.

By Karen E. Thuermer

ith the advent of more than 15,000 TEU (20-foot equivalent unit) container vessels and more shipping lines carrying refrigerated cargo, fewer seaports are in the position to accommodate them.

To capture the lucrative and competitive business, some seaports in the United States are making huge investments in infrastructure and improving on- and offdock turn times. Consumer appetite for fresh fruits and vegetables has grown exponentially given developments in reefer technology that make it possible to transport perishables longer distances by sea. Seaports in the southeastern United States, in particular, have been working with the U.S. Department of Agriculture (USDA) to gain approval to handle imported frozen and refrigerated product.

The USDA Southeast In-transit Cold Treatment Pilot program enables a limited amount of containerized cargo to enter the port directly after completing a two-week cold treatment process. This is a safeguard against fruit flies and other pests, as well as an opportunity to acquire all the necessary unloading clearances prior to the shipment's arrival in port. Among those that have successfully completed the pilot program are the Port of Savannah in Savannah, Georgia and the Port of Virginia in Norfolk, Virginia.

The Georgia Ports Authority (GPA) has been investing in Savannah's cargohandling capability and rail links. Savannah can handle 3,341 refrigerated containers simultaneously and offers 485 plug-ins for chilled containers on chassis. Its Garden City Terminal features the nation's most extensive on-terminal infrastructure for refrigerated cargo, with 119 electric-powered refrigerated container racks.

"Georgia already has a strong, established outbound refrigerated market," says Edward Fulford, GPA Spokesman. "Handling 40 percent of all frozen poultry exported out of the United States, Garden City Terminal is the nation's busiest export terminal for frozen poultry."

Dovetailing with this business is new steamship service to Europe and Asia.

"Previously, Savannah was approved to receive cold-treated produce from Chile, Peru, Uruguay and Argentina," Fulford notes. "In addition to now serving all of South America, GPA has added countries of origin such as Spain, Morocco and Italy."

Consequently, Americold, which acquired PortFresh Holdings in Savannah, is building a 15 million-square-foot cold storage facility



The Port of Savannah's Garden City Terminal features 119 electric-powered refrigerated container racks. (Photo courtesy of GPA.)

Steamship Lines Invest to Expand Capacity

Surging demand for fresh fruits and vegetables, combined with improvements in cold-chain technology, are making it possible for consumers to acquire perishables year-round.

"More products are shifting to reefers due to the new refrigeration technology," comments Manuel Cabrera, Director of Friopuerto Investments.

Seeing profits, steamship lines such as Maersk, MSC, and CMA-CGM are increasingly handling refrigerated products. "Either directly or through associates, they are building cold storage capacity to support their reefer and new cold chain operations," Cabrera says.

In June 2019, Maersk began construction on a 255,105-square-foot, three chamber cold store facility in St. Petersburg, Russia, for imported perishables. With 35 docks, the warehouse will be able to serve up to 200 trucks daily.

Maximum storage capacity will be over 50,000 tons.

In October 2019, CMA CGM and CEVA Logistics opened a 107,155-square-foot climate-controlled warehouse – dubbed the Chill Hub – adjacent to London Gateway, the United Kingdom's number one reefer hub.

"MSC also announced [activities] at the Port of Valencia (VLC Port) in Spain," adds Cabrera.

In September, MSC revealed plans to launch a dedicated rail service for reefer cargoes between Zaragoza and Valencia and possible investment in new cold storage in the logistics zone at VLC Port as part of its expansion in Spain.

Morocco is seeing port expansions that include added capacity for cold storage at its Ports of Nador, Dkhla and Agadir.



The Port of Savannah has the capacity to handle 3,341 refrigerated containers at a time. (Photo courtesy of GPA.)

Rotterdam Food Hub

The Port of Rotterdam in the Netherlands is expanding its position as Western Europe's biggest transit port for agricultural, horticultural and fishery products. The strategy includes the establishment of the Rotterdam Food Hub at the 148-acre Calandkanaal at the entrance to the port's Maasvlakte, a massive man-made extension on reclaimed land of the industrial facility within the port of Rotterdam and home to the largest container terminal in Europe.

Berths for inland vessels will be available and warehouses will be located immediately adjacent to the quays to enable storage, processing or quick transport of refrigerated and frozen cargo. An advantage of the Rotterdam Food Hub is that various shared facilities can be used on site.

After the United States, the Netherlands is the world's largest agriculture exporter.

The Netherlands is seeing an explosion of requests from cold chain companies looking to set up distribution centers. Cuno Vat, CEO at NeeleVat Logistics, reveals that requests have increased 500 percent and attributes it to Brexit.

"North American and Asian companies that would normally set up in the United Kingdom are now looking at the Netherlands," he says. "Many are looking for locations capable of handling three months of extra stock of temperature sensitive goods." to increase its share of food imports and exports. The new warehouse, set to open in mid-2020, will add 37,000 pallet positions, advanced blast freezing capabilities, and space and infrastructure to support the refrigeratedcontainerized trade.

Reefer capacity at the Port of Virginia is increasing by 66 percent through a \$700 million investment at its Virginia International Gateway (VIG) and Norfolk International Terminals (NIT).

"We're expanding the stack-yard at VIG and reconfiguring the yard at NIT," explains John F. Reinhart, CEO and Executive Director of the Virginia Port Authority. "Both of these projects include new reefer racks for each stack."

When completed, there will be nearly 900 reefer spaces at each terminal. This will benefit perishables from South America such as blueberries, citrus and grapes from Peru; blueberries and grapes from Uruguay; and apples, blueberries and pears from Argentina. Preferred Freezer Services is investing \$60 million in a 200,000-square-foot cold storage warehouse in Portsmouth, Virginia. Cloverleaf Cold Storage, a recent Americold acquisition, is also investing \$21 million to add over 100,000 square feet to its facility in the City of Chesapeake. The expansion will allow Cloverleaf Cold Storage to increase its current service volume of blast freezing, exporting and importing, as well as accommodate additional refrigerated products for its current and new customers in the mid-Atlantic region.

Powerhouses in the Northeast

For now, however, more than 90 percent of imported fruits and vegetables still arrive through the Northeast ports of the United States and are trucked to markets in the Southeast.

To maintain their advantage, traditional powerhouses for perishables, such as the Port of Philadelphia (Pennsylvania) and the Port of Wilmington (Delaware), are stepping up their game.

The Port of Philadelphia, which handles more than \$5 billion in food and \$3 billion in fruit each year, is spending nearly \$1 billion in infrastructure improvements that include five super post-Panamax cranes at its Packer Avenue Marine Terminal.

"We are planning and building with cargo velocity in mind," says Sean Mahoney, Philadelphia Port Spokesman.

The Port of Wilmington, where imported perishables represent nearly half of its total tonnage, is spending \$500 million on a new refrigerated-centric container terminal as well as a refrigerated warehouse with rapid cooling capacity. By reconfiguring its container yard, officials expect refrigerated container throughput to double.

Big in the West

Ports of the U.S. West Coast have been reconfiguring their terminals to better accommodate today's huge container vessels and the mega ships soon to follow.

California's Port of Oakland has added night gates, appointment systems, reduced truck turn times, and a rail line that became key to Lineage Cool Port Oakland, which opened in November 2018.

Cool Port Oakland is an advanced storage and transportation hub designed as an international gateway for temperature-controlled cargo. The 280,000-square-foot facility has 90 truck dock doors that can send up to 1 million tons of perishable product through the port. The distribution center offers 20,000 pallet positions, three blast cells and includes a 100,000-square-foot, high-cube, multi-temperature storage environment. Most significant, Cool Port also reduces truck usage since up to 36 railcars per day go straight to shipping containers to be loaded on ships.

"It was designed to limit truck trips,"

BUILT B

NewCold Advance Lo Facoma, Washington

d States Cold Storag

ock. California

reports Frank Zampo, Port of Oakland Spokesman. **②**

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GCCA TO HOST 23RD EUROPEAN COLD CHAIN CONFERENCE

More than 120 industry decision makers will convene to learn, network and view supplier exhibits.

By Julie Hanson

he Global Cold Chain Alliance (GCCA) will hold the 23rd European Cold Chain Conference March 18-20, 2020 in Rotterdam, The Netherlands.

The European Cold Chain Conference is a forum where cold chain professionals can meet industry peers, learn about the latest industry and technology trends and share and promote best practices.

Approximately 120 decision makers from

all segments of the temperature-controlled third-party logistics industry – warehousing, transportation, construction, equipment, technology and service – will gather in Rotterdam to participate in this event.

Attendees will have ample opportuni-

ties to network, connect or re-connect, and exchange their views with professionals from throughout Europe and around the world. In 2018, attendees represented 19 countries.

Plenary Sessions

The keynote speakers are leaders in their industries – whether that is logistics, automation, economics or talent management. Their stories will inspire you to think outside the box and widen your perspectives. With the support of the European Advisory Committee,

Pre-conference Automation Tour

Automation is of increasing interest in temperature-controlled logistics and Europe is a leader in this area. GCCA will facilitate visits to industrial sites using various types of automation – automated guide vehicles, automated high-bay, automated picking, pallet shuttles and more.

The visits will take place prior to the conference, March 17-18. Attendees interested in this program can sign up for a complete conference package including access to the conference and ancillary functions.

Four visits will be included in the tour – two on March 17 and two on March 18.

More details are available on the conference website at www.gcca.org/ europeancoldchainconference.

GCCA is building a program that aims to be transformative, innovative and practical.

Learning Opportunities

The conference education program will offer sessions highlighting industry innovations or technological development in human capital development, automation, operational excellence, building performance, information technology and data, crisis management and more. The session formats will provide attendees a chance to share ideas, ask questions and solve problems with their peers.

Cold Chain Café

Rated as one of the most popular features of the educational program, the Cold Chain Café will be an integral part of the 2020 conference. The Café is a forum where attendees can partake in roundtable discussions with their peers on specific topics. It is a unique way of sharing views and can trigger new ideas. By the end of the session, groups will share the outcome of their table conversation.

Topics may include:

- Food Safety Regulations and Compliance
- Automation
- Talent Management
- Energy Performance & Energy Saving
- Risk Assessment/Insurance

Cold Chain Exhibits

Partnering and working with leading companies in the cold chain industry is essential in providing a complete range of solutions and services to customers. The conference expo will feature the latest technologies, solutions, products and services from some of the most respected companies in the cold chain industry.

The following product categories and services may be showcased in the Expo:

- Automation
- · Battery and Power Systems
- Clothing
- Construction
- Doors
- · Energy Efficiency Solutions
- Fire Prevention
- Flooring
- Insulated Panels





- Lighting
- · Material Handling
- Racking/Materials Handling
- Refrigeration Equipment
- Roofing
- WMS/TMS solutions

Recognizing NextGen Leaders

GCCA has a longstanding commitment to developing talent in the cold chain industry, which needs a constant influx of young people who represent the next generation of cold chain leaders.

To promote talent development, GCCA launched its Global NextGen Future Leader Competition to recognize top candidates from several areas of the world. Candidates from cold chain logistics companies in Europe will compete at the GCCA European Cold Chain Conference through interviews with a panel of judges and deliver presentations during a plenary session.





European Warehouse Council Meeting

The GCCA European Warehouse Council meeting is an exclusive opportunity for cold chain operator members to learn about the latest country-specific market developments across Europe – and beyond.

Participants will gain unique insights from industry peers and can exchange views on current challenges and the future of the sector. This function is organized before the opening of the conference on the afternoon of Wednesday, March 18.

The European Warehouse Council meeting is open to all GCCA operator members, regardless of their participation in the conference.



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At the end of the conference, the judges will recognize one future leader to represent Europe in the global competition taking place at the GCCA Cold Chain Conference & Expo, September 28-30, 2020, in Dallas, Texas, United States. There, the European Future Leader Award Recipient will compete with their counterparts from Latin America, Australia, South Africa and the United States for the title of GCCA's 2020 Global NextGen Future Leader.

The recipient of the 2019 GCCA European Cold Chain Future Leader Award was Ben Price, Commercial Manager, Grocontinental, an AGRO Merchants Group company.

Facility Tour

Immediately following the formal educational program on Friday, March 20, interested delegates can visit an industrial facility showcasing innovation in operations, high automation or other specifics of interest to attendees.

Networking and More

GCCA is offering numerous networking opportunities for attendees to make new connections and strengthen existing relationships at the conference. Networking programs include a group activity on Wednesday, March 18 and an Early Arriver's Dinner that evening.

A Welcome Reception and Dinner is planned for Thursday evening, March 19. Throughout the event, attendees will have numerous occasions to connect again with peers during coffee breaks, expo time and a happy hour.

Sponsoring & Exhibiting

The European Cold Chain Conference is a supplier's best venue for reaching temperature-controlled warehousing and logistics executives throughout Europe and beyond.

Vendors can strengthen their brand and increase visibility throughout the event and exclusively at specific events, by being a Conference sponsor.

Exhibiting at the event is a great add-on to showcase the power and benefits of your products, technology or services.

The Conference will be held at the Hilton Rotterdam. For more information visit www.gcca.org/europeancoldchainconference.

For general, sponsorship or exhibiting inquiries, please contact Julie Hanson. **@**

JULIE HANSON is European Director at GCCA.

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COLD CHAIN DEVELOPMENT NEWS ABOUT WFLO INTERNATIONAL PROJECTS

EMERGING VS. MATURE ECONOMIES: WFLO STUDIES DIFFERENT NEEDS OF EACH

By Sheryl S. Jackson

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.

Creating an education and training program that prepares cold chain professionals to better manage the operational and safety aspect of cold storage facilities is a demanding task. But, ensuring the program reflects the varying needs of both mature and emerging markets presents a different level of challenge.

The World Food Logistics Organization (WFLO) is meeting that challenge by going directly to the sources and talking with cold chain representatives to better identify their needs and discuss how the WFLO resources can help them.

Alice McKinnon, Director of Membership and International Programs for GCCA, recently returned from Indonesia, where she participated in one of several roundtable discussions sponsored by WFLO in different countries. Participants included executives from cold storage companies, refrigerated transport firms and food retail and processing businesses.

"Unlike mature economies such as the United States or Australia, the cold chain is more vertically integrated in emerging economies, so it is important to obtain input from all parties," says McKinnon. To give participants a frame of reference for the type of education the WFLO can provide, educational sessions similar to the U.S. WFLO Institute program were presented in the morning. "In the afternoon, we asked them to give us feedback on the morning session and talk about how it might translate to Indonesia," she explains.

A major difference in Indonesia is the popularity of the wet market – which sells beef or other meats, vegetables and fruit in an open-air environment – versus a retail store that controls the temperature of the food. "In this culture, the perception is that if food is cold, it is not



Attendees from Indonesia and the Philippines ask questions during a presentation on refrigerated transportation.



Delegates included executives from food retail, cold storage, food manufacturing, freight forwarders, and local associations.

fresh," says McKinnon. "This helps us understand the importance of teaching the workforce basic food safety and the need for temperature maintenance to begin the process of educating others in the community."

Attendees at WFLO programs in emerging economies are also likely to differ from more mature economies. While the preponderance of people attending WFLO Institutes in the United States and Australia are managers and supervisors, in Indonesia, India or Kazakhstan, the participants are more likely to be the owners or executives of the company, says McKinnon.

At a 2018 fact-finding meeting in India, GCCA representatives learned that companies were not willing to pay for training that the government provided for free, however, there was more interest in an Institute-type program when attendees learned that a certificate of completion is issued at the end.

Many indicated that they would pay for a certificate program, which is perceived as more valuable.

Cold storage operators in emerging markets face a number of challenges to participation in the global cold chain due to inconsistent standards and inability to meet U.S. or similar regulatory requirements.

"We do see a wider range of knowledge and sophistication in emerging markets versus more mature markets, with some companies who do business with larger markets operating at a high level of quality, safety and consistency and others who don't meet the standards only operating domestically," says McKinnon. "Although there are no required international standards for the cold chain, we see WFLO educational programs as a good way to bring best practices to emerging economies to enable them to expand their businesses."

In addition to supporting cold storage companies' ability to compete in a global cold chain, robust educational programs also help develop talent to benefit the industry, says Donald Dick, Partner, Dick Cold Storage and Chairman of the Executive Committee of the WFLO.

"I attended the inaugural WFLO Institute in Australia and was surprised to see the level of technology in cold storage facilities," he says. But, even with their tradition of innovation and technology, which Dick says is on par with the United States, there has been no formal program that cold storage companies could send up-and-coming employees to, to prepare them to be the industry leaders of the future." "Cold storage operators in emerging markets face a number of challenges to participation in the global cold chain due to inconsistent standards and inability to meet U.S. or similar regulatory requirements."

"Australia and more mature economies have the regulations and processes – such as safety protocols for forklift drivers – and are looking for educational programs that provide a well-rounded understanding of all aspects of the industry," says Dick. Part of the value of the Australian session was the variety of people from different companies, he says. "It was a very sophisticated audience comprised of people from all areas of the business – operations, purchasing, safety – which led to some interesting and challenging questions from different perspectives."

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

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COOL SOLUTIONS SCIENTIFIC ANSWERS TO COLD CHAIN CHALLENGES

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

To get instant advice from a private, online community of over 4,000 cold chain professionals, simply post your inquiry in the GCCA Online Community. All GCCA Members and their employees can access the GCCA Online Community at community. gcca.org/home. There are active forums for Construction & Engineering, Government Affairs, and Third Party Logistics. If you are not a GCCA member, or are unsure how to post in the GCCA Online Community, contact the GCCA Inquiry Service at www.gcca.org/inquiry. GCCA Members can also browse the full archive of inquiries and responses in the GCCA Inquiry Service Archive. Access to previous inquiries is restricted to members of GCCA core partner organizations.

We have a customer who wants to freeze flavor powders to extend their shelf life. They are concerned humidity may ruin their product, especially when it is brought back to non-frozen temperatures. What is the best way to handle the product?

A You need to address both the conditions inside the package as well

as barrier materials. First, vacuum packaging is well-established in food packaging and there are both very established processing equipment and materials.

Barrier materials vary based on moisture and oxygen transfer rates. Laminated foil, while being the best, is also very expensive, so metallized films are very good economical alternatives. If the packaging is secure, there is nothing about the cooling and warming that should impact the product's moisture content. It is unlikely there is a phase change of water in the product at a low moisture content.

Answer provided by two WFLO Scientific Advisory Council members – Dr. S. Paul Singh, Rutgers, and Dr. Denny Heldman, Ohio State University. &



SAC MEMBER SPOTLIGHT



DR. KEES JAN ROODBERGEN, Professor, University of Groningen

Kees Jan Roodbergen is a Professor of Quantitative Logistics and Director of the Center for Operational Excellence at the University of Groningen in the Netherlands. He obtained his PhD at Erasmus University Rotterdam, the Netherlands. He has been a visiting researcher at Georgia Tech and Virginia Tech in the United States and Université Laval in Canada, among others.

His expertise is e-commerce logistics, warehouse optimization, vehicle routing and inventory management. He has applied various techniques from operations research in practical studies and his methods developed for warehouse control have been implemented in several Warehouse Management Systems.

Roodbergen is a member of the Scientific Advisory Council of the World Food Logistics Organization. Until 2013, he served as a member for international affairs on the College-Industry Council on Material Handling Education (USA). This council is affiliated with the Material Handling Industry of America and facilitates the exchange of knowledge between industry and universities.

He served as a jury member for several practice awards in e-commerce. His work has been published in various academic journals such as Operations Research, IIE Transactions and Interfaces.

As applicant and researcher, he was involved in various public-private partnership projects, mostly geared towards e-commerce logistics, including transportation and warehousing, planning and design.



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Joseph Slavin Jos. Slavin & Associates, Expertise: Fish Products

Dr. W. F. (Will) Stoecker University of Illinois, Expertise: Refrigeration Engineering

2020 CALENDAR

FEBRUARY 9-12, 2020

56th WFLO Institute East Atlanta, Georgia, United States

MARCH 18-20, 2020

23rd GCCA European Cold Chain Conference Rotterdam, Netherlands

MAY 5-8, 2020 129th IARW-WFLO Convention Bonita Springs, Florida, United States

JUNE 2020

GCCA Brazil/ABIAF Cold Chain Symposium Sao Paulo, Brazil

JULY 13-15, 2020 WFLO Latin America Institute Mexico City, Mexico

JULY 27-29, 2020 GCCA Cold Chain Policy Forum Washington, DC United States

SEPTEMBER 28-30, 2020

Cold Chain Conference & Expo Dallas, Texas, United States

OCTOBER 2020 WFLO Institute Australia Melbourne, Australia

NOVEMBER 10-12, 2020 40th CEBA Conference & Expo Rancho Mirage, California, United States

*For more details go to www.gcca.org/events

COLD CHAIN INNOVATIONS

DIGITIZE YOUR NEXT CONSTRUCTION PROJECT

Communication between all parties during a project is essential to its success. Bosz Arch, Inc., an architectural firm located in Irvine, California, utilizes Matterport Pro 2 3D camera and processing services to provide end-users and construction partners with 3D virtual tours of commercial and industrial properties. Virtual tours allow a user to capture, document and provide an interactive 3D virtual walkthrough of a facility's interior or exterior, pre-, during, or post-construction.

"3D virtual tours provide us and all parties involved with a tool to view and document existing conditions of a facility without visiting the location," said Cory Bosz, President of Bosz Arch, Inc. "The physical information provided helps protect everyone involved."

Utilizing the Matterport platform helps minimize field changes, jobsite visits and rework costs. It promotes better coordination, increases productivity and profitability and allows measurement and distribution of data. Matterport provides several different views, including a dollhouse view that creates a 3D digital twin of a property. A user can go for a walk-through of the space as if they were physically moving



A dollhouse view of the recent CEBA Conference & Expo, mapped by Bosz Arch.

room-to-room. Floorplan views provide a bird's eye perspective, so a user can easily understand the layout of the property.

Special Mattertags annotate features of the space with notes, videos, and photos. A built-in measurement tool allows users to measure any wall, door, etc. within the space and see how equipment will fit in the facility. When a project is completed, Matterport provides as-built views of a building. Facility owners also have the added benefit of using the virtual tour for marketing or training purposes.

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

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ASSOCIATION NEWS NEWS ABOUT GCCA CORE PARTNERS

A new white paper is now available to **GCCA** members who want to learn more about carbon dioxide refrigeration systems. In "Cold Storage Transcritical CO_2 Refrigeration Systems," learn how CO_2 refrigeration systems are increasingly providing refrigerated warehouse owners with a viable alternative to ammonia (NH₃) refrigerant, which faces increasing government regulation. Download the white paper from gcca.org.

The **IARW** Cold Chain Index, a template that warehouse operators can use to strategically discuss rates with customers, has been updated. The index tracks the growth rates of costs using economic data along with actual expense classes from the IARW Productivity and Benchmarking tool. The Cold Chain Index can be customized to the region and state where a warehouse facility operates and includes five classes of expenses: labor, electric power, supplies, repairs and rent. Visit gcca.org/ resources/cci to learn more.

New board members for **CEBA** were announced during the closing session of the 39th Annual CEBA Conference and Expo, which took place in November 2019. Vince Free, FREEZ Construction, transitioned into the Chairman role; Marko Dzeletovich, Coldbox Builders, moved into the Vice Chairman position; Sam Tippmann, Tippmann Innovation was named Treasurer and Tim Nguyen of ESI Group, is now Immediate Past Chairman. Board members re-elected to three-year terms include Peter Bartell from RHH Foam Systems Inc.; Brian King, A M King; Jay Smith with Metl-Span LLC; and Chuck Zimmermann with Entrematic. Nick Dakouras, Delta T Construction Company and Vince Humphreys, Ahern Fire Protection were elected as new board members. For a full list of CEBA Board Members, visit the GCCA website. The 40th CEBA Conference & Expo will be held November 10-12, 2020 in Rancho Mirage, California.

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Charger Logistics joins nine other companies enrolled in the **IRTA** Cold Carrier Certification program. The certified companies have all made a commitment to follow IRTA's Best Practices Guide for the sanitary and safe transportation of perishable products. No matter where you are on the globe, this GCCA program is designed to recognize carrier organizations for their commitment to the sanitary and safe transportation of perishable products. Visit gcca.org/certifiedcoldcarrier to learn more. **@**



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129th IARW-WFLO Convention May 5 – 8, 2020 Bonita Springs, Florida

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Learn more or register at www.gcca.org/convention

MEMBER NEWS NEWS FROM MEMBERS OF GCCA CORE PARTNERS

NEWCOLD and **B-BUILT** have broken ground for building NewCold's Automated Coldstore, located in Montauban-de-Bretagne, near Rennes, France.

The cold storage facility will use state of the art technology including automated storage and retrieval systems (ASRS) to move and store products in the fully automated high-bay warehouse.

FRIALSA PERU opened a storage and distribution center for refrigerated and frozen products. The new logistics center has the capacity to store more than 10 thousand metric tons of goods at temperatures as low as -29 degrees Celsius (-22 degrees Fahrenheit). Located in the district of Lurín, Peru, the new 20,000-square-meter logistics center contains 10,000 square meters of space for refrigerated storage. It also has a parking lot and a 10,000-square-meter-yard for trucks and refrigerated trailers.

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STOW GROUP merged all its activities under the sole brand "Stow." Previously the group operated through several companies, each carrying their own brand name such as Feralco, Duwic, Storax, and Stow.

$\bullet \bullet \bullet$

COMMERCIAL WAREHOUSING, INC.

rebranded as CWI Logistics. The new name better describes the company's expanded service offerings into contract warehouse operations, transportation, and packaging.



RLS LOGISTICS increased its direct-toconsumer (D2C) fulfillment capabilities. The company will renovate two current facilities and is contemplating acquiring a new location in the Midwest United States. **@**



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CEVA Logistics Marseille, France

Green Isle Refrigerated Warehouse, LLC Winthrop, Minnesota, United States

Summit Cold Storage, Inc. Summit, Illinois, United States



IARW ASSOCIATE MEMBERS

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After



