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CONNECTING A VITAL INDUSTRY SEPTEMBER–OCTOBER 2019

MORE BUILDING AROUND THE WORLD

COVER STORY 12

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COLDFACTS
CONNECTING A VITAL INDUSTRY

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About the Cover

This 180,000 square foot, state-of-the-art meat packing facility for Wolverine Packing Co. in Detroit, Michigan, just completed by Tippmann Innovation, includes all of the latest technologies in refrigeration and food processing, ensuring energy efficiency and cost savings. It is also serves as a case study for creating a positive environment for employees and community members. The facility includes a 3-acre park as part of the overall building project that features a walking path, basketball court, playground, baseball field and a soccer field for neighborhood families. (Photos courtesy of Michigan Video and Photography.)

FEATURES

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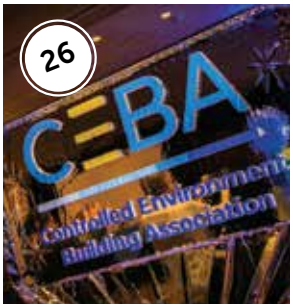

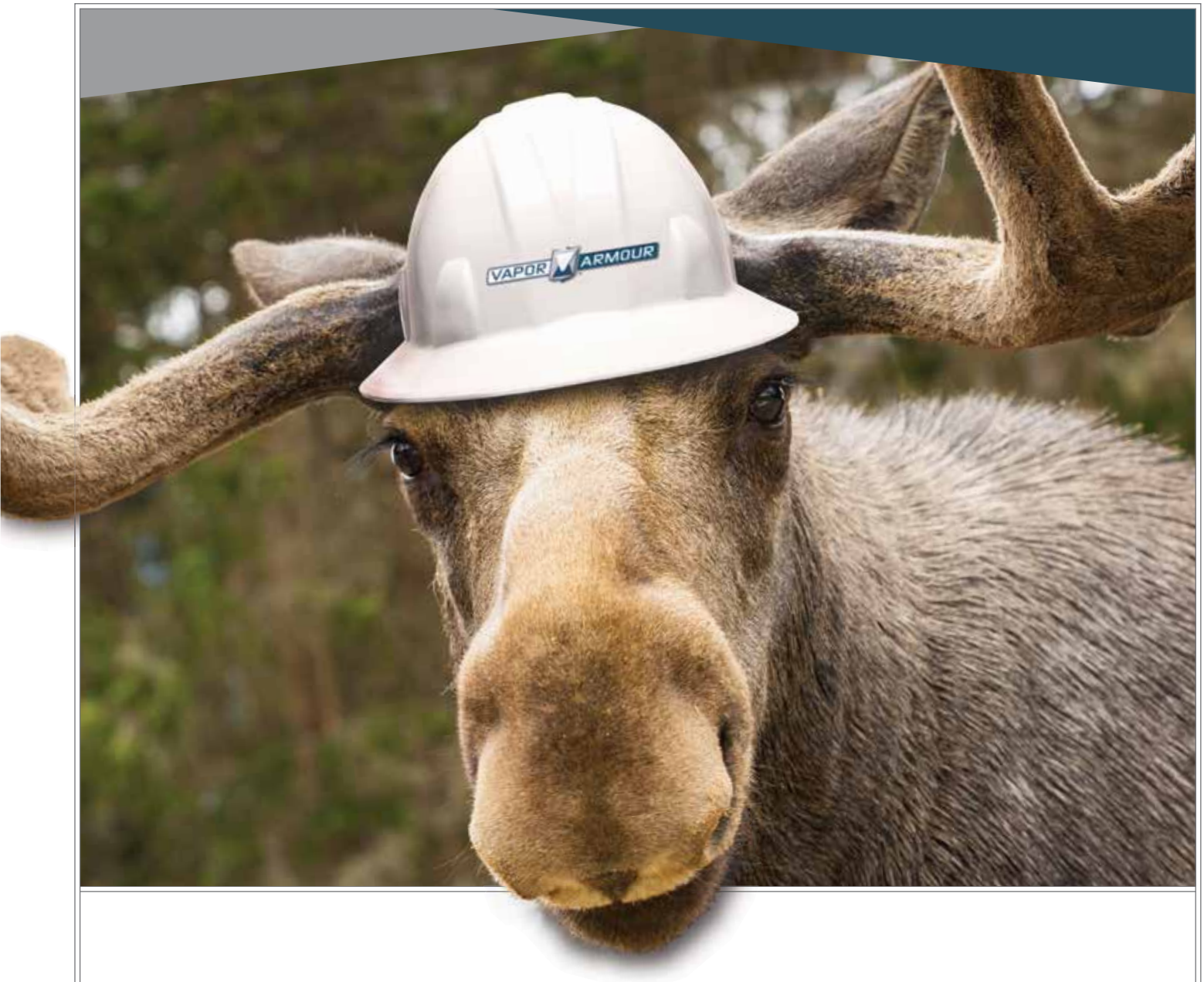

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Additionally, we are in discussions with numerous facilities in Quebec, Nova Scotia and British Columbia for future projects. We feel extremely fortunate to service projects in Canada and look forward to further establishing our presence there.

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CEBA: A Year of Success Under a New Brand

ONE YEAR AGO THE CONTROLLED ENVIRONMENT BUILDING ASSOCIATION (CEBA) ADOPTED ITS NEW NAME AND MISSION.

One of the most significant evolutions in our sector has been the diversification of the business. Many projects today extend beyond cold storage facilities, and CEBA members have the expertise to handle these types of projects.

Our new mission is to fully represent the expert builders who specialize in the design and construction of controlled environment buildings, including cold storage warehouses, food processing facilities, clean rooms, pharmaceutical facilities, and foodservice and retail distribution centers.

The CEBA vision is to provide a home for anyone looking to build, renovate, or modernize a first-rate, innovative facility using the most experienced designers, contractors, and manufacturers and suppliers.

Today I am pleased to report that CEBA membership has reached a record number of companies. We are providing services at a higher level than ever before to more companies than ever before.

The CEBA Built by the Best awards competition has achieved even higher prestige and recognition, and winners are featured extensively each year in COLD FACTS magazine and recognized at the annual CEBA Conference & Expo that will be held November 14, 2019 at the Loews Miami Beach Hotel. It's where an expected 300 building professionals, suppliers, and end-users will gather to learn and do business with each other in this robust marketplace of controlled environment buildings. We preview the CEBA Conference & Expo on page 26.

CEBA is also working to build future talent, offering recruitment and retention programs and exploring other opportunities for talent development; and to implement plans for developing expertise and increase engagement with MEPs, refrigeration engineers, and customers.

Enclosed with this issue of the magazine, you will find the CEBA Showcase, which lists all CEBA members.

The lead article, "More Building Around the World" on page 12, demonstrates the range and versatility of CEBA members as they design and build some of the best facilities across the globe.

I encourage all of you to read these excellent articles, and better yet, attend the conference in November and if you are not yet a member – join CEBA to participate in all we have to offer.

I know you will be richly rewarded.

TIMOTHY NGUYEN
CEBA CHAIRMAN

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.

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COMPLIANCE FOCUS
ON AMMONIA FACILITIES

EPA initiative establishes minimum key safety measures for inspection.

By Lowell Randel

Compliance and safety in ammonia facilities continues to be a high priority for the Environmental Protection Agency (EPA).

In 2016, EPA announced a series of National Enforcement Initiatives focused on improving safety in a variety of high hazard industries. Among these initiatives was an effort entitled, "Reducing Accidental Releases at Industrial and Chemical Facilities."

The EPA placed specific emphasis on ammonia facilities as a part of the initiative, which has subsequently been renamed a National Compliance Initiative (NCI). The initial NCI was scheduled to run through fiscal years 2017-2019. The EPA recently announced that the NCI on chemical facilities will continue for fiscal years 2020-2023.

The goal of the NCI is, "to reduce the risk to human health and the environment by decreasing the likelihood of chemical accidents. A successful initiative would reduce communities' risk by having regulated facilities and industry associations work to: improve safety; increase compliance with RMP and GDC requirements; and promote coordination and communication with state and local responders and communities."

The Global Cold Chain Alliance (GCCA) and the International Institute of Ammonia Refrigeration (IIAR) are actively engaged with EPA regarding the NCI, and it was the subject of a meeting between industry representatives and EPA as a part of the recent Cold Chain Policy Forum.

Minimum Key Safety Measures

One of the major components of the NCI was the establishment of a list of minimum key safety measures for inspection of ammonia refrigeration systems. These are measures that EPA has determined should be in place, regardless of an ammonia refrigeration system's age or size. This is not intended to be a complete list of important safety measures but rather a subset of easily verifiable items that could help facilities prevent ammonia releases and prepare for any releases that do occur.

It is important to note that the list does not replace the obligation to comply with EPA Risk Management Program.

Below is a summary of the key safety measures on which EPA inspectors will be focusing when inspecting ammonia facilities:

Identifying Hazards

- Hazard Addressed – Releases or safety deficiencies that stem from a failure to identify hazards in design/operation of system:
  - Facility has completed a process hazard analysis or review.

Operating Activities

- Hazard Addressed – High risk of release from operating or maintenance activity:
  - System has self-closing/quick closing valves on oil pots.
  - Facility has written procedures for maintenance and operation activities.
  - Only authorized persons have access to machinery room and the ability to alter safety settings on equipment.

Maintenance/Mechanical Integrity

- Hazard Addressed – Leaks/releases from maintenance neglect:
  - A preventative maintenance program is in place to, among other things, detect and control corrosion, deteriorated vapor barriers, ice buildup, and pipe hammering, and to inspect integrity of equipment/pipe supports.
  - All piping system openings except the relief header are plugged or capped, or valve is locked.
  - Equipment, piping, and emergency shutdown valves are labeled for easy identification, and pressure vessels have legible, accessible nameplates.
  - All atmospheric pressure relief valves have been replaced in the last five years with visible confirmation of accessible pressure relief valves [note – replacement every five years is the general rule but there are two other options in IIAR Bulletin 110, 6.6.3].

Machinery Room and System Design

- Hazard Addressed – Inability to isolate and properly vent releases:
  - The System(s) has/have emergency shut-off and ventilation switches outside each machinery room.
  - The machinery room(s) has/have functional, tested, ventilation. Air inlets are positioned to avoid recirculation of exhaust air and ensure sufficient inlet air to replace exhausted air.
  - Documentation exists to show that pressure relief valves that have a common discharge header have adequately sized piping to prevent excessive backpressure on relief valves, or if built prior to 2000, have adequate diameter based on the sum of the relief valve cross sectional areas.

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Emergency Actions

- Hazard Addressed – Inability to regain control and reduce release impact:
  - Critical shutoff valves are accessible, and a schematic is in place to show responders where to access them.
  - EPCRA Tier II reporting is up to date.

Additional Compliance Items

Identifying Hazards

- For systems that employ hot gas defrost, the process hazard analysis/review includes an analysis of, and identifies, the engineering and administrative controls for the hazards associated with the potential of vapor propelled liquid slugs and condensation-induced hydraulic shock events.

Operating Activities and Maintenance/ Mechanical Integrity

- Written procedures are in place for proper use and care of personal protective equipment.
- If respirators are used, facilities know the location of their respirators, and they are inspected and maintained per manufacturer or industry standards.
- All changes to automation systems (programmable logic controls and/or supervisory control and data acquisition systems) if present, are subject to management of change procedures.

Machinery Room and System Design

- The facility has engineering controls in place to protect equipment and piping against overpressure due to hydrostatic expansion of trapped liquid refrigerant. Administrative controls are acceptable where hydrostatic overpressure can occur only during maintenance operations.
- Eyewash station(s) and safety shower(s) is/are present and functional.

Emergency Actions

- Emergency response communication has occurred or has been attempted with the Local Emergency Planning Committee and local responders.
- The facility has an emergency action plan pursuant to 29 C.F.R. § 1910.38(a) or an emergency response plan pursuant to 29 C.F.R. § 1910.120(q) and 40 C.F.R. § 68.95.

Members with ammonia facilities, regardless of the size of the ammonia charge, should review their operations to ensure that they have addressed the above items appropriately at their facility.

General Duty Clause Pilot in New England

In addition to the national efforts to address compliance at ammonia facilities, EPA Region 1 in New England is implementing a pilot program focused on facilities with less than 10,000 pounds of ammonia that are subject to the General Duty Clause.

The primary focus of this initiative is facilities with more than 1,000 pounds of ammonia, but less than 10,000.

EPA is sending targeted Information Requests to selected facilities that it has reason to believe may be out of compliance. Facilities will be required to respond to EPA, answering four questions about their ammonia refrigeration systems, including whether a process hazard review has been performed.

If a facility has not performed the required hazard review, EPA will inform the facility that it has violated the first duty of the General Duty Clause. Unless a significant release has occurred at the facility, EPA will offer to resolve this violation for a discounted penalty, provided the company agrees to perform a hazard review of its system with the help of an expert. The company will also be required to meet with emergency responders and submit any missing Tier II forms.

EPA has indicated that it will inspect a small subset of facilities to determine if the Initiative has improved compliance with the General Duty Clause.

Members in New England are strongly encouraged to make sure they have conducted a hazard assessment related to accidental releases of ammonia and have plans in place to prevent releases and minimize the consequences of accidental releases that do occur.

As EPA continues its focus on ammonia facilities through the NCI and efforts like the pilot program in New England, GCCA will remain actively engaged with the agency and key partners, including IIAR, to ensure that industry has the information and tools it needs to promote compliance.

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

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By Alexandra Walsh

MORE BUILDING AROUND THE WORLD

More automation, more AI, more exports and more consumer preferences impacting global cold storage construction.

Here is the second annual snapshot of controlled environment facilities construction around the world. Designers and builders in Europe, South Africa, the Philippines, Brazil and Australia discuss global and local trends and challenges.

Europe

The maturation of Asian markets, and regions where populations are seeing improved living conditions and increased purchasing power, are feeding the demand for European produce exports.

Paralleling the ever-increasing demand for produce exports is the need for more storage capacity as producers expand production.

Julie Hanson, European Director for the Global Cold Chain Alliance (GCCA), reports that the glow is off the fresh food movement, and frozen is praised by consumers, bringing about general growth in the frozen food sector.

She also notes the expansion of fast-food chains creates opportunities for both fresh and frozen storage with European 3PLs.

Hanson says acquisitions of smaller companies by large private-equity-driven groups are intensifying in Europe, which generates the availability of capital to invest in new buildings.

"In the last couple of years, there has been a tremendous increase in the demand for warehousing, not only temperature controlled, but in general," says Martijn Baartmans,

Left: Temperture-controlled warehouse with frozen and chilled chambers for pharmaceutical storage in San Paulo, Brazil. (Photo courtesy of Civil-Frio.)

Right: An automated high-bay warehouse with 37,000 deep freeze pallet locations built by B-Built temp controlled warehouse, Kloosterboer. (Photo courtesy of B-Built.)

Director, B-Built BV, based in the Netherlands. "Looking at our prospects, we can only see this trend continuing. Whether it's market replacement, the need for automation or simply expansion, the signs are very positive."

Baartmans attributes much of the growth to exports. "As transportation continues to make the world smaller, our clients focus on interlinking their facilities on a global footprint and we see an increase in cross-border warehousing needs."

A continuous movement towards automation in the industry is driving technological advances Baartmans sees incorporated in Europe's temperature-controlled warehouse design/builds. "Whether it's ASRS (automatic storage and retrieval systems) equipped warehouses or mobile racking warehouses, both appear to be on a clear path towards full automation."

As a result, Baartmans says the warehouses his company builds today are up to 43 meters high (141 feet) compared to 10 years ago when they built to a height of 34 meters (105 feet).

Another trend Baartmans sees in the way controlled environment buildings are designed and built is the consideration of value-added services.

"The layout of the warehouses we build all take into account the need to layer pick or case pick or have an area for machines or robots capable of mixing products on a box level," he points out.

Baartmans reflects that the biggest change in the construction of temperature-controlled warehouses in the past 10 years has been local government initiatives that encourage and support warehouses to invest in environment-friendly buildings.

"For example, operators are supported in their efforts to build with increased insulation values, fast acting sliding doors, DOBO (dock on before opening) docking and solar panels."

Baartmans has a positive outlook on the industry's future.

"People will always eat and always store food and I have no doubt the construction of temperature-controlled buildings will continue to develop," Baartmans says. "The globalization of the logistics industry will only support this even more."

South Africa

The South African cold chain industry is almost 100 years old this year and has enjoyed steady growth. However, it has also seen huge growth in capacity over the past decade.

The mixed model of pure commercial, multi-user facilities, and producer/importer in-house facilities that enter the commercial market from time to time with excess capacity, and the third category of pure 3PL providers, is still prevalent. This last category has seen the most growth in recent years in South Africa.

The export of temperature-controlled perishables such as citrus, sub-tropical fruits, table grapes and deciduous fruits, is an important source of foreign revenue for the country and relies heavily on an efficient cold chain.

The new cold storage facilities for the export of fruit and the new distribution centers for all the supermarket groups, has brought growth in the cold chain sector that is far above the national economic growth of South Africa.

However, in South Africa, the business of designing and building warehouses has not been great, contends Martin Bailey, Chairman of Industrial Logistic Systems, Johannesburg, South Africa.

"The economy is not growing because we have an 'unfriendly to industry' government and a high tax rate that sends investors elsewhere."

Although it has now been eclipsed by Nigeria as the largest economy on the continent, South Africa still stands out as an economic leader and the primary entry point into Southern Africa. But, the country's economic growth is sluggish and has failed to expand by more than 2 percent a year since 2013, due in large part to the global economy as well as by constraints on the supply of electricity.

Energy costs of both electricity and fuel are a major challenge facing the South African cold chain, as are drought-induced water shortages.

A hot dog processing facility in the Philippines with 20,000 pallet positions. (Photo courtesy of Jojo Castro.)

All sectors of the cold chain are challenged to improve efficiency, reduce carbon emissions and find alternative sources of energy to that of the national grid.

Electricity tariffs generally increase on average 15 percent per year forcing warehouse operators to look to alternative sources such as solar systems. And because of load shedding and interrupted supply, many operators also invest heavily in diesel powered standby generators.

In addition, there is a lack of managerial expertise and skilled workers. Although wages continue to rise, unemployment is exceptionally high, reaching 27.5 percent in 2018.

South African cold storage facilities mainly use mobile racking for pallet storage. Refrigerated warehouses are still designed for bulk storage or for case picking and distribution, with most warehouses offering storage and some case picking and labeling can be done if required.

But that is changing.

"The need for improved energy management as well as labor inefficiencies mean that the warehouses we are building are getting bigger, more energy efficient and more automated," Bailey points out. "Our customers want their facilities to be as environmentally friendly as possible."

In addition, Bailey notes that what their customers generally want to get from their new or expanded facilities are deliveries that are faster, smaller, better at OTIF (on time in full) and at a lower cost.

Temperature-controlled warehouses in the Philippines, like this one for pharmaceuticals operated by Distriphil, are growing in double digits, and are bigger and more automated. (Photo courtesy of Jojo Castro.)

Other factors that Bailey notes as impacting the design and construction of temperature controlled facilities in South Africa includes consolidation in the industry, an increased number of SKUs, more consumer demand for fresh versus canned, the availability of cutting-edge IT software and hardware and the decreasing cost of automation.

Bailey says the main difference in the way they build temperature controlled warehouses today is that they really focus on process first and then wrap the building around that process.

Looking to the near future, Bailey contends that the biggest impact on the design and construction of temperature-controlled warehouses will be more automation as costs are reduced and more players enter the market, artificial intelligence that will bring better forecasting and inventory control and better systems to optimize warehouse operations.

Philippines

While the Philippines is a newly industrialized country that is transitioning from an agricultural economy to one based more on services and manufacturing, an adequate cold chain

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is critical to feed the country's population of 110 million and sustain its export/import potential.

Most food products in the Philippines do not pass through the cold chain, but travel to a traditional wet market. Compounding the problem is a market culture that, while slowly evolving, still prefers fresh over frozen.

"The Philippines is experiencing a remarkable growth rate compared to other ASEAN countries, and exports of bananas, mangoes, pineapples and now coconuts are booming," points out Jojo G. Castro, a local refrigeration consultant who has worked with the GCCA. "Naturally, temperature-controlled warehouses are riding on that growth but we really need to catch up with our neighbors Thailand and Vietnam, which have bigger installed capacities. "

Castro says temperature-controlled warehouses, with support from the government, are growing in double digits, and are bigger and more automated. "I surmise our total capacity is now at 350,000 metric tons."

"There is a cold storage facility under construction with automatic storage and retrieval system that uses ammonia as a refrigerant within Metro Manila," Castro notes. "As to automation, many warehouses are using basic automation software packages, and the facilities come in different shapes and sizes, mostly with two deep, and six to seven high, pallet arrangements, from 18 meters tall to 40 meters."

Castro says he is currently involved in the construction of a 7,000 pallet position facility, is bidding on another with a total of 16,000 capacity and in the works is a 12,000 pallet position, 2-deep, 9-high facility.

Other ways in which construction of temperature-controlled warehouses is changing is in insulation panels, which Castro says have come a long way in the past 10 years.

"Polyurethane is rapidly on the way out, replaced by Polyisocyanurate (PIR) panels, but that might also be replaced in a few years by another technology," explains Castro. "We are now specifying quadcore technology together with PIR for the panels."

Castro notes warehouses are now designed without any columns in the middle to accommodate more racking systems.

"Ammonia is the preferred refrigerant for big warehouses, but small ones (1,000 pallet positions and less) still use halocarbon refrigerants," Castro says. "But the refrigerant market is changing now and in fact we are helping a company that promotes the new generation of refrigerants establish its presence here."

Consumer preferences are beginning to shift from fresh to frozen, which also represents a sizable market volume that would require cold chain support.

Distriphil pharmaceutical warehouse in the Philippines with 6,388 pallet positions. (Photo courtesy of Jojo Castro.)

"In private subdivisions and villages, hypermarkets and grocery stores are sprouting all over Metro Manila and other major cities and logistics companies are coming up with various ways to entice these new clients, from delivery and pick up services to using lithium-ion batteries for their forklifts," Castro says.

Castro notes that he recently designed the ventilation system for a big facility that is launching a ready-to-eat meal package service for working millennials.

"Likewise, the online delivery system is also having a heyday here," Castro points out. "A few online delivery food companies have started delivering hot meals from consumers' favorite restaurants in major cities all over the archipelago. Replicate this all over Southeast Asia, and you have a booming food and beverage industry – cold storage will have to catch up by then."

Brazil

The Brazilian cold chain, primarily temperature-controlled warehouses, has been growing above the country's GDP for the last few years, despite a challenging economy.

Cold storage capacity is estimated close to 19 million cubic meters, divided nearly equally between private and public warehouses. There are approximately 180 to 200 cold storage warehouses owned by logistics operators in Brazil.

One of the main trends in the Brazilian cold chain is creating proficiency in product handling and distribution. Automation and artificial intelligence are expected to positively impact the Brazilian cold chain, with investment in improvements close to $100 million a year.

"Companies have come to consider supply chain management and storage efficiency as basic and strategic principles for competitiveness and growth, and a sound business model," says Anselmo dos Santos Pires Filho, Technical Director, Civil-Frio. "Increasingly, logistics is outsourced in Brazil, and that adds to the likelihood of logistics operators and real estate investors constructing temperature-controlled buildings."

Pires Filho notes the growth of the frozen foods market in recent years, especially the development of new products in line with current consumer trends of people living alone and with less time or inclination to cook with fresh items. As a result, he says frozen food companies in the segment are more demanding.

In designing and building temperature-controlled warehouses, Pires Filho says he sees this reflected in cost control, quality of infrastructure to comply with regulations and legislation, environmental certifications for building and management, applying investments in new spaces and retrofitting existing buildings.

Pires Filho notes that his company develops buildings from a group of parts with pre-defined structural sections, which fit into modulations capable of responding to the most varied spans and load requests.

"Standardization of parts and assemblies through the design of intelligent construction systems results in reduced schedule, material quality, competitive cost and lower future maintenance," Pires Filho explains. "This is due to the application of scheduled procedures, repetitive and constant production, high productivity and use of galvanized parts fire bolts connected by screws."

He says in temperature-controlled storage, they reduce the need for height work by mounting floor-level structures, raised by a crane set, and with coupled refrigeration brackets for insulation and cooling.

"We optimize the use of applied refrigeration supports, which are used to perform structural functions in the building, such as locking the roof or fixing side closures, as well as supporting insulation and cooling," Pires Filho says.

One very big change for Pires Filho's company over the past couple of decades is that they now design flexible warehouses.

He says his company originally began operations with prefabricated dry warehouses in the 1990s, and moved to temperature-controlled warehouses in 2005. But with flexible warehouses, it is possible, without a high initial cost, to create an adaptable and adjustable space for a very specific use for refrigerated loads.

Looking to the future, Pires Filho predicts more sophisticated order picking and storage systems. He also believes autonomous vehicles capable of higher load handling will increase efficiency and productivity.

"By maximizing operations, there is a continuous search for solutions with a smaller and more functional structure for greater capacity, efficiency and control, and to reduce costs."

A refrigerated warehouse for fish production and storage built by Civil-Frio in Rio De Janiro. (Photo courtesy of Civil-Frio.)

Australia

"In Australia, there has been minimal investment in the cold storage market for decades, and now the country is seeing consolidation in the industry, fueled by capital from large equity funds. All this has led to a decline in cold storage construction."

So says, Shannon Porter, CEO of Retracom. However, Porter is optimistic.

"The long-term outlook is positive. The need to build more energy efficient cold storage and the impact of changing sales points is going to drive the need for new and custom facilities," Porter says.

He also points out as land and labor prices escalate, a reduced footprint and reduced labor needs are becoming paramount to a successful business model.

For those reasons, Porter says, "The most prevalent trends are around high-rise (high-bay) construction with greater automation."

Although Porter says his company is predominantly responsible for the insulated panels on cold storage design/build projects in Australia, because of the move towards high-rise and automation, his company is more involved than ever before in the overall design.

He notes that the need for reduced energy consumption and greater quality control (more cold chain) are the driving factors in a new era in temperature-controlled storage design in Australia.

He points out the increasing speed of service requirements necessitate additional space on the loading dock.

"The retail market will drive the need for individual skew picking," Porter says. "Current cold storage facilities have an emphasis on pallet movements with the local retailers responsible for display and single skew presentation."

And, Porter says container volumes through distribution centers are increasing because of trends in import/export inventory transshipments.

"New facilities are designed to allow for fast throughput of inventory, racking and automation options to allow for flexibility with changing customer requirements, like skew picking and dispatch," Porter notes.

Thinking of other trends that might lie ahead, Porter believes insurance and compliance will impact the cold storage construction industry.

"Insurance requirements and fire compliance will have a growing influence on what type of cold storage is designed and built if premium increases become a major financial hurdle," Porter contends.

And, he adds, "As the 'Amazon' sales model takes hold the need for cold storage facilities to manage the retail single, skew pick and delivery will become increasingly prominent."

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

EMAIL: awalsh@associationvision.com

THE IMPORTANCE OF QUALITY ASSURANCE

The champions of food safety, SOPs and protecting the brands.

By Keith Loria

A vital person in a temperature-controlled warehouse is whoever is tasked with quality assurance (QA) or quality control, as it's their job to ensure that all in-house procedures are up-to-date, running smoothly and working the best way possible.

Billy H. Adams, Food Safety and Quality Director for Americold, says the role of the QA lead in any food-oriented organization is the champion of food safety to ensure customer and consumer confidence in the food supply. While there are many other roles within warehousing and food production, the food safety leader is truly the "voice of the customer" as it relates to food safety and food quality.

"They must be very knowledgeable of food science (including food microbiology), problem identification and prevention, food defense (prevention of intentional contamination), able to influence senior management regarding capital expenditures to ensure the safety of food and must have absolute integrity," he says.

Sripriya Agaram, Food Safety Manager for Henningsen Cold Storage Co., points out that in this day and age, where regulators have more data on every registered facility across the globe, along with their enforcement powers with the Food Safety Modernization Act (FSMA), no facility can afford to not emphasize customer requirement and consumer safety.

"Ignoring either of those will eventually impact the company's brand and the customer's brand," she says. "With advanced testing capabilities driving recalls and best practices in the food industry, GFSI (Global Food Safety Initiative) benchmarked audits being commonplace from farm to fork, expectations as well as the risks of not meeting those are getting higher day by day."

An SOP Plan

These important roles play an integral part in creating a company's Standard Operating Procedure (SOP) and protecting their company's brand as well as the customer's brand.

Frank Ahern, Corporate Director of Safety, Health and Environment for Burris Logistics, says the company's quality SOPs cover all aspects of the business, including strict inbound receiving, storage and shipping.

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"For example, if a meat product comes in and it's out of our range, we won't take ownership of it and won't allow the shipper to take it off the truck," he says. "We will do trailer inspections to make sure everything is in place – such as temperature and pest control. We will always protect our customers to ensure we are not passing along a product that shouldn't be passed along."

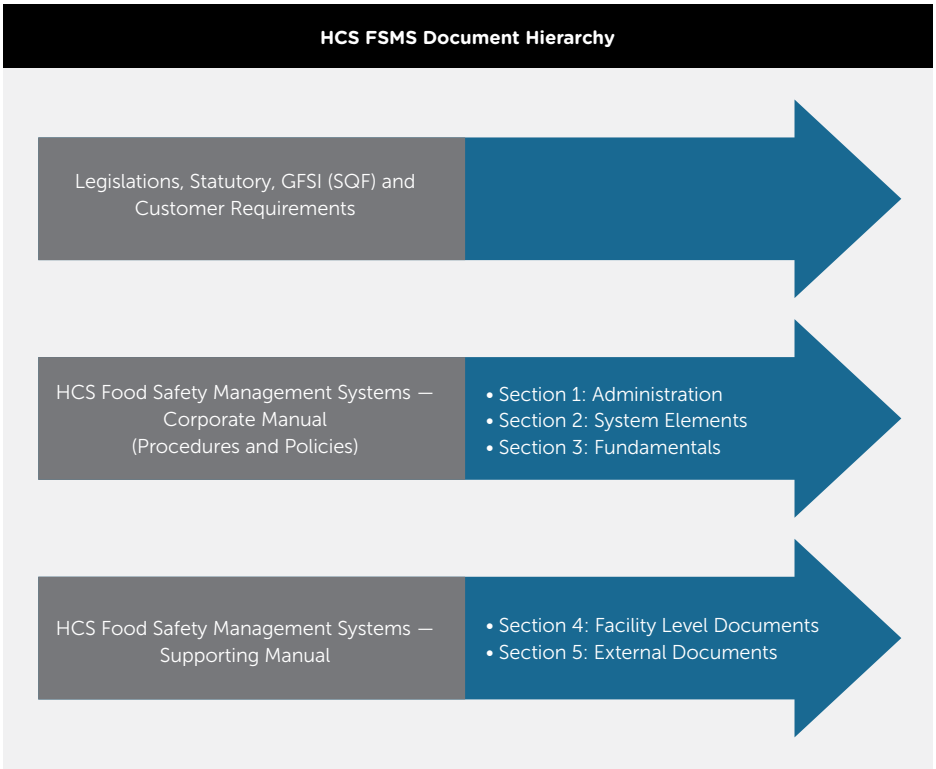
Adams says since the company has multiple customers with varying requirements (such as product owner, USDA, FDA, SQF), its SOPs must be comprehensive and generally approach the most stringent requirements from any of those customers.

Additionally, SOPs may vary slightly from warehouse to warehouse as they may store different commodities that likely have different food safety requirements.

"We utilize over-arching policies to ensure clear expectations regarding 'what' programs must be in place," Adams notes. "The SOP can be flexible at the site level to accommodate their specific nuances and still meet company policies. But at the end of the day, a laser focus on food safety is paramount to ensure we fulfill our responsibility in the cold chain supply process to ensure we protect the customers' brands and brand equity."

Agaram says Henningsen's quality and food safety procedures have a tiered approach. There are common expectations, core requirements along with indicators of effective implementation that apply to all facilities – conveyed via a corporate manual.

"Based on the facility, process, customers and the products handled, the procedures of compliance to customer requirements and regulatory requirements could vary at each facility," she says. "While the methodology of implementation could differ, the intent and results of implementation consistently aligned to meet customers' requirements. All programs are regularly reviewed, audited internally and externally, to drive continuous improvement on the current state."



Henningsen's quality and food safety procedures have a tiered approach and are conveyed via a corporate manual.

Best Practices

At Americold, there are a number of unique activities and practices it deploys for its customers. Examples include freezing and thawing meat portions using both air tempering and water tempering techniques.

"We are very involved in preparing shipments for our customers who export their products from the United States, based on U.S. regulations as well as those of country of import," Adams says. "In several of our warehouses, we maintain areas for inbound imported goods inspections by USDA or Customers and Border Protection."

In addition to these activities, Americold leverages one of the largest integrated North American distribution networks to reduce supply chain costs through its regional and national freight consolidation programs. By leveraging the network, it's able to reduce transportation costs as much as 10 percent off a customer's baseline.

Ahern says it's important to have a good checks and balances system in place for all processes.

"Each facility has a food safety manager and they are responsible for doing a monthly self-auditing with correct document access," he says. "I come around once every month to make sure that's going correctly and we also have a third-party auditing company that comes in and does the check and balances."

Learning from each other is one of the best practices of Henningsen teams.

"All the facilities share the highlights and details periodically as well as after each customer visit, inspection or audit," Agaram says. "This enables other sites with similar needs or interests to engage with one another and collectively and constantly raise the bar. In a similar way, all the facility documents and procedures are made accessible to all the facilities."

Agaram believes this approach enables better idea exchanges and easier implementation across the company when similar opportunities or challenges come along.

QA Trends

Adams notes in an advanced culture like the United States, tighter legislative expectations and customer expectations will continue. A perfect example of this is the recent FSMA, which touched practically all aspects of food production and the supply chain.

"The appropriate desire to minimize/eliminate product recalls and foodborne illness will continue to be the driving force behind more rigid food safety and quality compliance requirements," he says. "Additionally, as food delivery options continue to change (home delivery meal kits, Uber-Eats, Grubhub, maybe drones), refrigerated food storage and transportation may be slightly affected. But there will continue to be a need for bulk storage of frozen and refrigerated food items and therefore, a market for public refrigerated warehousing."

Agaram says GFSI Scheme implementation, such as SQF or BRC certification, is widely expected by today's customers and is growing tremendously every year.

"Unannounced GFSI benchmarked scheme audits every year is expected to be the norm quite soon," she says. "Another trend is customizable training and software as demand for this training is on the rise."

Continued on page 24.

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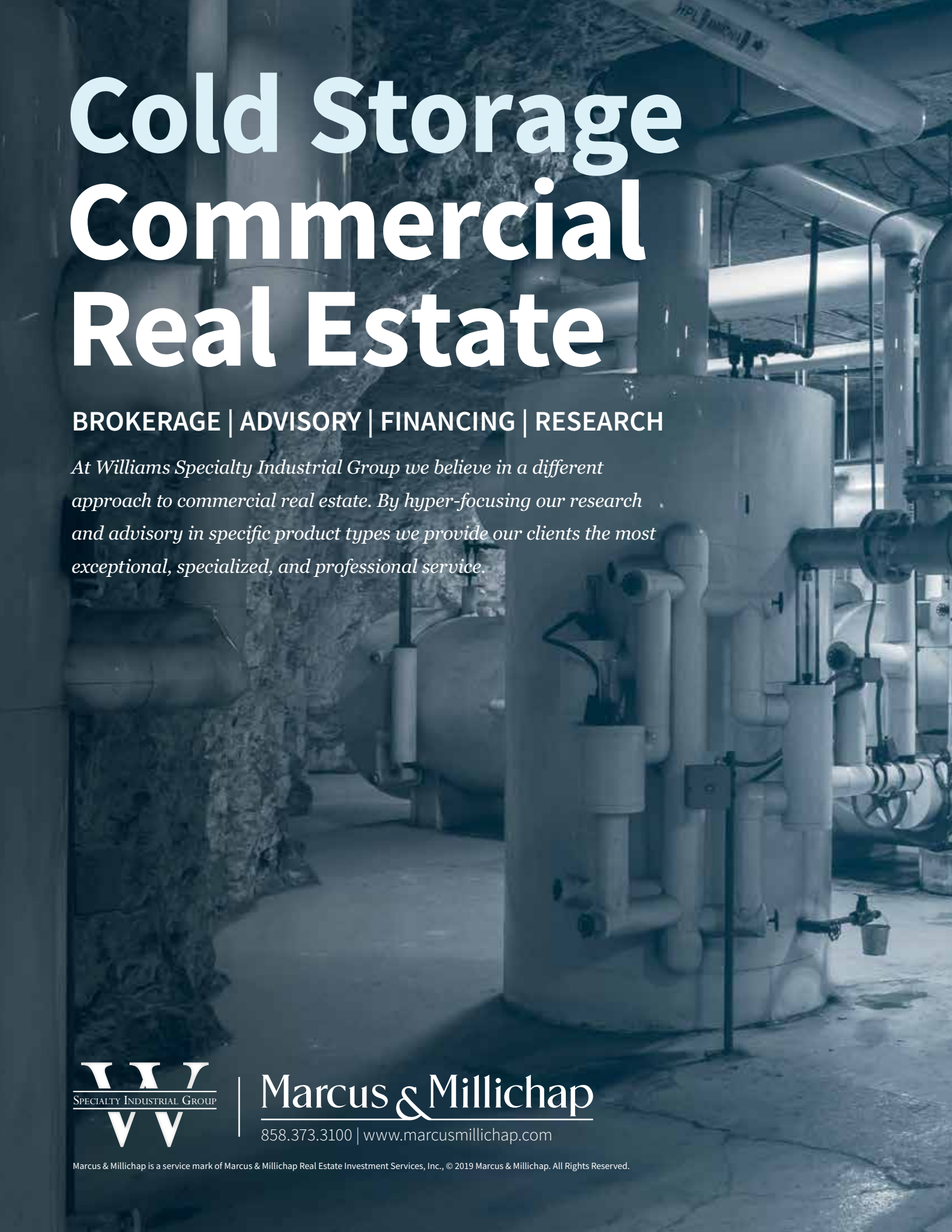

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Learning the Ropes

Those working in lead quality assurance positions in the cold storage industry normally have some sort of background with the role in a different industry, and things aren't always the same.

For instance, Adams' first position after college was as a QA supervisor in a pharmaceutical production facility and quickly learned that strict compliance to company expectations and regulatory requirements were the norm.

"Detailed company policies and SOPs were in place to ensure impeccable production records, high yielding batches and zero tolerance for off-specification drugs," he says. "After a few years, I moved in to food manufacturing where I learned those same expectations were in place but were, in many cases, a bit more vague. This can be explained again by the strict FDA approval and monitoring of a limited number of pharmaceutical products as compared to the vast array of food items produced in the United States."

Ahern had 20 years of experience in production, and learned quality control from the systems in place and has carried much of that over to the cold storage industry.

The quality assurance function has been at the core of every role Agaram has had in her career.

She started in the food and beverages industry in the QA department at a carbonated beverages manufacturing plant, eventually serving in a corporate QA role, managing multiple locations and teams across five countries. She has also worked in the pet care industry. In all of those roles, quality assurance has been at the core of what she performed – whether that was within research and development, technical services, systems implementation, internal audits, key accounts management or managing process improvement teams.

Agaram says the food manufacturing industry and cold storage industry, apart from being food related, share a lot of commonalities such as regulations, audit standards, procedures, processes and above all customers and consumers.

"The biggest difference I can see is that we get to store and handle our customers' products," Agaram contends. "That's why we rely on our customers to share their requirements clearly to meet their expectations. Another difference is we get to handle a wide variety of customers' products and commodities in the same facility so we need to be experts in managing such diversity effectively, and above all, safely."

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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The annual CEBA Conference & Expo, held November 14-16, 2019, at the Loews Miami Beach Hotel in Miami, Florida, United States, is the only event in the world dedicated to best practices in controlled environment facility construction, design and maintenance.

The event draws over 200 controlled environment facility construction, logistics, and supply chain operations professionals from around the world to gain valuable insight for improving their business.

This year, the conference is Building an Environment for Success with case studies, presentations by industry thought leaders, exceptional networking activities and an expo with cutting-edge products and technology.

Through robust programming focused on peer case studies, the conference delivers an education program intended to help solve the most significant cold chain business challenges.

General Sessions

General sessions at the CEBA Conference & Expo provide attendees a thorough look at the latest innovations in controlled environment design and building.

This year's conference will include presentations from the finalists of the CEBA Built by the Best Award as well as insights from industry experts.

The Built By the Best Award acknowledges industry-changing innovations and projects that exceed customers' expectations, positively impact and grow the cold chain worldwide, and contribute to the larger society through food safety, trade development, and job creation.

Construction Cafe

The goal of the CEBA Construction Café is to create an exchange of ideas and stimulate facilitated discussion on critical industry issues. Participants choose from 10 different topics, join the table at which the issue is being discussed, and spend 20 minutes sharing ideas. Participants then switch tables to discuss another topic.

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The roundtable conversations provide attendees a chance to share ideas, ask questions and solve problems with their peers in a small group setting. The moderator will guide the participants through questions they have submitted in advance, diving into the subjects that matter most to attendees.

The Expo

The expo features the latest technologies, solutions, products and services from some of the most respected names in the industry.

Here is a sampling of the products and services that will be featured at the expo:

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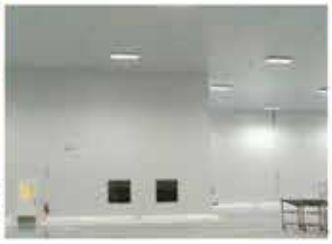


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- RHH Foam Systems Inc.
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- Vapor Armour

Networking Events

Prominent social activities, receptions, and the exhibit hall all give industry suppliers unparalleled access to build partnerships with construction/design-build, warehousing and food processor decision makers.

Other networking opportunities include a first timer and new member reception, an opening night reception, two afternoons set aside to catch up with peers and vendors for private business meetings, a golf tournament, and an after-hours party.

This is the only event in the world dedicated to best practices in controlled environment facility construction, design, and maintenance, and serves to further CEBA's vision to be the association where anyone looking to build, renovate or modernize a first-rate, innovative facility comes to find the most experienced designers, contractors, manufactures and suppliers.

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FLAWS WITHIN THE PHARMACEUTICAL SUPPLY CHAIN

Tips to address packaging, tracking and supply management.

By Keith Loria

As technology evolves, companies are seeking innovative ways to address the challenges they face, allowing them to provide clients with improved and more efficient service. Chief among those industries is the pharmaceutical sector, where imperfections in the areas of packaging, tracking, and supply management have long been issues.

Those flaws, and how to solve them, were the focus of an informative and insightful presentation at the 22nd GCCA European Cold Chain Conference in March 2019, in Brussels.

During the program, which was titled "Innovative Temperature Monitoring Solution," Christopher Fuss, Head of IoT Accelerator at DHL and Jeremy Laurens, Co-founder and CEO of Blulog, discussed how the two companies have collaborated on an innovative solution that addresses and simplifies flaws within the pharmaceutical supply chain.

"The idea of this presentation was to show the work we've been doing and some first results that were achieved for this project," Laurens says.

Seeking New Technology

The project came about as DHL was seeking a new solution to its SmartSensor program. The DHL SmartSensor division has been working on technologies pertaining to temperature management and tracking, mostly for temperature-sensitive products, including pharmaceutical.

Among the services this technology provides are near real-time visibility, full condition sensing, Geo positioning, proof of delivery, multiple models and a global web portal.

Laurens notes that through SmartSensor, DHL has offered clients two solutions, one based on RFID (radio-frequency identification) devices, which the company used for its Thermonet service, and another that uses some active devices.

"They replaced both solutions, the passive with our solution and the second, active was also lifted to a new generation, offered by another company," he says. "In late 2017, they responded to our RFP (request for proposal), which basically detailed what they were looking for in the new solution to replace the existing passive RFID solution. From the start, they were pretty convinced that NFC (near-field communication) as a technology was the right technology for them."

Laurens adds that because DHL already used passive devices, it was fairly easy to adapt the technology for the transport mode, in particular air transport.

"Most of the shipments they were monitoring with these solutions were air transport, air shipments," Laurens points out. "This is why NFC for them was a natural evolution of passive RFID as a technology itself. NFC is a derivative of passive RFID, but it's been much more standardized and adopted world-wide, because it might become also the standard for all forms of payments. This is why most smartphones can directly interact with NFC devices and this was, for DHL, one of the main reasons it wanted to switch."

> "It's extremely important to ensure the data integrity and that the processes are fast and reliant. For example, for product release or for customs, having this monitoring solution allows everybody who's part of the supply chain to see the status and the health of the shipment."
>
> –CHRISTOPHER FUSS, *Head of IoT Accelerator at DHL*

App Development

In January 2019, Laurens and the team at Blulog began work on a specific app that would directly fit DHL tracking platforms, and that would also allow data to be retrieved by loggers. Rollout of the app started in Spring 2019 for pharma shipments through air transport.

The presentation at the GCCA European Cold Chain Conference included two videos, one which demonstrated how much time could be saved using NFC. This was done via a side-by-side comparison between NFC and RFID for temperature monitoring. The other video showed how the NFC solution is deployed, providing an idea of its features, and its advantages.

Especially important is air freight, because the DHL Air Thermonet system has set a standard for temperature-controlled pharmaceutical air freight shipments and it has used a SmartSensor RFID device.

During the presentation, Fuss noted how RFID represented state-of-the-art technology at the time, and that since 2010, 130,000 devices have been deployed and 200 million temperature measurements taken.

Fuss notes that this system results in immediate payoffs for DHL, including saving time.

Advantages of NFC

The first payoff for the logistics company was the gain of time. According to the presentation, NFC allows for faster temperature-data scanning without the need for specific hardware. That resulted in a 40 percent reduction time for programming and data reading.

"Of course for them, time is one of the most important criteria for performance," Laurens points out. "Second was the cost of the solution, which was much more affordable than what they used to have. This was the second payoff in terms of the yearly purchase price comparing both solutions."

The presentation also explained the simplicity of NFC, and how anyone with a smartphone, downloaded with the proper app, can utilize it.

Another advantage is NFC does not require RFID readers; it can be used by simple smartphones and deployed in more areas because additional equipment is not needed.

A long-term advantage is that data can be read at delivery, which extends the tracking of temperature. NFC has allowed DHL to read data directly at the destination, which is where temperature monitoring can be a challenge.

Taking on Challenges

Laurens notes that NFC also faces obstacles, including that most companies still are not aware of it.

"This is the main obstacle, or topic, that we face when we present our customers with this solution," he says.

However, it is helpful that more and more people are using NFC on their smartphones to make payments.

"It will make people more used to NFC, and we see it," Laurens notes. "That's why we know it's more long-term and that's why we believe, in a couple of years, NFC will really become mainstream. And we believe the kind of solutions using USB, for instance, will on the contrary, become less used and less known."

More Options with NFC

Another key selling point is that because it is passive, NFC can be used in any transport mode.

"One of the great benefits of NFC is that it doesn't require a particular authorization, maybe some airlines always ask, but it's quite fast, which means it's easy to deploy as a worldwide solution without the need to get authorization by all the logistic partners or even final consumers," Laurens says.

"This is one big benefit of NFC and it can be read worldwide, it's one global standard. So whether it's read in Asia, the United States or Europe, it's the same standard and the same kind of phones."

Spreading the Word

Fuss says the presentation provided DHL with a forum to showcase its capabilities in regard to cold chain before an important audience.

"We presented how, as a big corporation and global player, we handle innovation and by dealing with start-ups that have some special knowledge, which we can leverage," Fuss recalls. "We can, in a short time, develop new technological solutions and bring a new generation of technological solutions to life, which we couldn't potentially have done if we had done it only in-house. I think that's the main message – our innovative approach, dealing with start-ups to get things done earlier and faster than doing it in house."

He adds that one of the biggest concerns in pharmaceuticals is logistics, and that for the supply chain to have product integrity, a temperature control during shipment is important.

This can become complicated because of various temperature ranges that items can be shipped at – ambient which is 15 to 25 degrees Celsius, chilled, and frozen. Another important fact is that the pharmaceutical industry uses various modes of transportation – roads, rail, ocean freight, and air freight.

"Within DHL, with the advanced technology solution, we specifically concentrated on covering the air freight part because this is where we face the highest requirements," Fuss says, adding that shipments are monitored in order to fulfill those regulations.

"For example, no active transmitting devices are allowed during a flight. If you're onboard a passenger craft, you have to shut

down your smartphone," he explains. "That also applies to cargo freighters. So, we needed to have a technological solution that fulfills not only the pharma industry standards but also the air freight industry standards."

That means tracking requires real-time information, and if real-time isn't possible, then at least near real-time information, which means receiving the information as fast as technology allows.

Other Challenges

The readout infrastructure, meaning gateways, is another obstacle.

"If a shipment passes that gateway, a scan will be conducted," Fuss says. "We wanted to overcome that by using ordinary technology that is out there in the field, more or less everywhere – smartphones."

The shift to NFC will allow anyone who has a smartphone and the respective app to handle readouts.

When it comes to temperature monitoring, Fuss recommends that each organization seek the best-fitting technology for them.

"There is no one-size-fits-all technology," he comments. "Anyone should really try to avoid manual steps and make it as automatic as possible, and as safe as possible. Meaning, you cannot rely completely on technology – it's also good to have at least one or two steps in the process that you still have under control."

He also pointed out other advantages of the new solution.

"It can be used on a large scale," Fuss notes. "It's completely compliant with the regulations of the pharma industry, as well as other cold chain industries, like perishables, foods, wine, or flowers, for example."

In short, it is a development expected to provide great things for the supply chain.

"It's extremely important to ensure the data integrity and that the processes are fast and reliant," Fuss says. "For example, for product release or for customs, having this monitoring solution allows everybody who's part of the supply chain to see the status and the health of the shipment."

And in the end, that also means security for those who receive the shipment, which is the last step of this success story.

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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AROUND THE WORLD IN 180 DAYS

By Ruth E. Thaler-Carter

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 Global Cold Chain Alliance (GCCA) continues to expand connections between industry members around the world and provide new insights into common challenges, approaches and successes.

In the first six months of 2019, GCCA staff, volunteer members and other cold chain experts crisscrossed the globe, providing education and research to the industry and empowering economic development by strengthening the global cold chain.

Here is a sampling of those trips.

South Africa

Richard Tracy, Vice President of International Programs at GCCA, visited Johannesburg and Cape Town to reconnect with the industry before a USDA-sponsored study tour for representatives from the Angolan cold chain industry.

He was also in the country to lay the groundwork for a new GCCA office to serve South Africa and neighboring African nations.

Many of the Angolan cold chain representatives expressed interest in additional training, especially in basic knowledge of refrigeration and operations.

"South Africa has reached the point where they can transition into a well-developed system, but it requires proper training and communication," according to Tracy. "GCCA will serve as an entity to facilitate relationships and provide training and resource materials."

Uzbekistan

Tracy traveled to Uzbekistan to examine the feasibility of establishing a fee-based, association-type organization.

He also joined 50 colleagues in Tashkent for the Uzbekistan Cold Chain Development Roundtable, sponsored by the USAID Agricultural Value Chains project; GCCA has been a partner in the project since 2015.

"The most-desired services include government affairs, market opportunities, and improving internal capacities to provide consistent and high-quality products to international buyers," Tracy notes. "GCCA will continue to work to grow the cold chain until 2020 and determine our longer-term strategy in the country and region."

Egypt

GCCA member DGrid Energy sent solar expert Sequoya Cross to Cairo and Luxor in January to deliver training on solar energy for cold storage along with James "Rusty" Eason, President of Chelsea International Cold Storage and Logistics, and Hesham Badawy, Engineer and General Manager of Cool Care Egypt.

Cross-focused on technical aspects and specifications, Eason discussed the business case and Badawy drew parallels to other locations and experiences in Egypt. The goal was to equip participants to make the right decisions when considering investments in solar energy.

Study tour in South Africa, February 2019. From left to right, front, Ivan Sutic and Richard Tracy. Back, Jakes Small and Francois Dowling.

Dr. Mohamed El-Mogy, a Postharvest Education Foundation graduate and professor at Cairo University, worked with Dr. Lisa Kitinoja, Senior Technical Advisor to the World Food Logistics Organization (WFLO), to train farmers in Luxor in postharvest handling of tomatoes.

GCCA is working on an additional project in Egypt and has supported development of the country's cold chain since 2015, through the USAID Feed the Future Egypt Food Security and Agribusiness Support (FAS) project.

"We have maintained flexibility to respond to needs that have arisen since the assessment of the country's cold chain that we conducted in 2016," says Amanda Brondy, Director of International Projects at GCCA. She explains that the assessment outlined several activities that GCCA has undertaken in Egypt.

COLD CHAIN DEVELOPMENT

NEWS ABOUT WFLO INTERNATIONAL PROJECTS

Dominican Republic

Marko Dzeletovich, President of ColdBox Builders, visited the Dominican Republic to provide design-build advice to cold chain businesses working with the USDA Exporting Quality and Safety (EQS) project.

He also presented a seminar about common challenges and solutions in building cold storage facilities, especially in a hot and humid climate, and joined GCCA Latin American Representative Debbie Corado at a meeting with the Cold Chain Working Group organized by EQS.

Dzeletovich and Corado also visited Haina Port, which is under construction. According to Corado, "The commercial manager was so impressed with his (Dzeletovich's) recommendations, he expects to make changes following Marko's advice."

Marko Dzeletovich of ColdBox Builders visited the Dominican Republic to provide design-build advice to cold chain businesses.

England

Brondy traveled to England to co-chair and speak at the World Bank's Cooler Cleaning Symposium, presented in collaboration with the University of Birmingham and the Department for Business, Energy and Industry Strategy (BEIS) of the British Foreign Common Office (FCO). The symposium's purpose is to examine ways to reduce greenhouse gases while increasing access to cooling services.

"GCCA's contribution was unique because many of the conference participants understood the refrigeration side of cooling, but had little knowledge of cold chain logistics," Brondy explains. "GCCA will remain engaged with the World Bank as their initiative moves forward."

The conference is the first step in sharing information and developing a workplan for a cohesive and collaborative approach to cooling.

Alice McKinnon, Director of Membership and International Programs at GCCA, sees these trips as invaluable resources for all involved.

"Often, the purpose of our international travel is to build relationships with industry players or associations and to perform market research on the cold chain in various countries and regions," McKinnon observes. "I have been able to see so many different refrigerated and frozen warehouses and cold storage operations around the world, and have learned so much about the industry as a result."

Tracy Richard and Mumin Isamiddinov, GCCA's technical expert in Uzbekistan, listening to the country's cold chain leaders.

RUTH E. THALER-CARTER is an award-winning freelance writer-editor.

EMAIL: Ruth@writerruth.com.

COOL SOLUTIONS

SCIENTIFIC ANSWERS TO COLD CHAIN CHALLENGES

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

Q. A GCCA member recently completed an initial GFSI SQF Facility Audit but had a documented non-conformance for not properly addressing food fraud as it relates to packaged frozen foods. The warehouse does not open any cases of product at any point while product is in their possession and they do not have processing operations on site. The warehouse Food Fraud Plan identifies product substitution and mislabeling as potential risk factors and mitigates those risks by comparing physical product labeling to products listed on the BOL/Packing List or Shipment Order.

This plan was insufficient in the eyes of the SQF auditor, so GCCA involved Dr. Michael Jahncke, Chair of the Scientific Advisory Council, for additional guidance for the member.

A: In principle, the warehouse's statement on food fraud is accurate, although they should consider adding language related to product tampering or adulteration by checking for open cases. It appears that the non-conformance is related to a lack of records verifying visual checks and comparisons of labels to shipping manifests/BOLs. A quarterly or monthly comparison (of BOL to actual box label) and visual check (for open or tampered cases), supported by a recorded signature on a form, satisfy the requirement. The warehouse should also verify that their food defense plan is in place and addresses food fraud.

Answer provided by the Scientific Advisory Council's Chairman and WFLO Scientific Advisor Dr. Michael Jahncke, Virginia Seafood Agricultural Research & Extension Center.

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Chairman and WFLO Scientific Advisor
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2019-2021 CALENDAR

SEPTEMBER 19-20, 2019
GCCA European Warehouse Council Meeting
London, England

OCTOBER 10, 2019
GCCA Brazil/ABIAF Symposium
Sao Paulo, Brazil

OCTOBER 21-23, 2019
WFLO Institute Australia
Melbourne, Australia

NOVEMBER 3-5, 2019
GCCA Latin America Cold Chain Conference
Mexico City, Mexico

NOVEMBER 14-16, 2019
39th CEBA Conference & Expo
Miami, Florida, United States

JANUARY 12-15, 2020
56th WFLO Institute West
Tempe, Arizona, United States

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

SEPTEMBER 28-30, 2020
Global Cold Chain Expo
Dallas, Texas, United States

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

JANUARY 10-13, 2021
57th WFLO Institute West
Tempe, Arizona, United States

JANUARY 31-FEBRUARY 3, 2021
57th WFLO Institute East
Atlanta, Georgia, United States

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

ASSOCIATION NEWS

NEWS ABOUT GCCA CORE PARTNERS

During the Cold Chain Policy Forum in Washington, D.C. on July 31, 2019, the OSHA/GCCA Alliance was re-signed by **GCCA** President and CEO Corey Rosenbusch and Loren Sweatt, Deputy Assistant Secretary of Labor for Occupational Safety and Health.

Since its inception in 2010, the OSHA/GCCA Alliance has been very productive in developing and disseminating resources to support safety in the cold chain. With a focus on ammonia safety, the alliance began by developing posters that are still used today in facilities across the country and around the world.

The alliance also emphasized the importance of education and training for both industry and agency personnel. The alliance has worked closely with the OSHA Training Institute to provide web-based training to over 150 OSHA inspectors over the last few years, with 40 federal and state COSHOs (Compliance Safety and Health Officer) completing training this month.

In addition, the alliance supported training for agency personnel in connection with the WFLO Institute, hosting in-person education programs in Atlanta and Arizona. These trainings and education sessions help inspectors better understand the unique aspects of industrial refrigeration facilities and the IIAR (International Institute of Ammonia Refrigeration) standards specifically developed to support them.

The **IARW** European Warehouse Council Meeting is taking place in London from September 19-20, 2019, and is being held in conjunction with the IARW-**WFLO** Board Meeting.

The Warehouse Council members will join the IARW-WFLO board members as well as board members from the Cold Chain Federation of the UK for an interactive cold chain trends discussion as well as a networking reception and dinner. European Warehouse Council members will also participate in educational sessions and a facility visit.

Members of the **CEBA** Education Committee are in the process of building the educational content for the 39th CEBA Conference & Expo, November 14-16, 2019, in Miami, Florida.

This conference is for experts in the designing and/or building of controlled environment facilities. Over 200 professionals will participate in educational programming focused on Built By the Best Award case studies, keynote presentations by industry thought leaders, exceptional networking activities, and exhibitors showcasing valuable products and services for the design, maintenance and modernization of cold storage warehouses, food processing facilities, clean rooms, pharmaceutical facilities and foodservice and retail distribution centers. See the article on page 26. Registration is now open on the GCCA website.

IRTA names new officers and board members. Todd Lanter, Henningsen Transportation, Kansas City, Missouri, was confirmed as the 2018-2020 Chairman. Don Durm, PLM Trailer Leasing, Daytona Beach, Florida, was named Vice Chairman and Richard Patenaude, Congebec, Mississauga, Ontario, Canada was elected Treasurer.

Board members re-elected to three-year terms through 2022 include Craig Bennett, Utility Trailer, City of Industry, California and Matt Luckas, Hanson Logistics, St. Joseph, Michigan. Newly elected board members, who will also serve through 2022, include Amber Edmondson, Trailiner Corp, Springfield, Missouri; Herman Haksteen, Cryo Tranz, Reisterstown, Maryland; and Mike Murdock, Carrier Transicold, Athens, Georgia.

NEW MEMBERS

NEW MEMBER COMPANIES OF GCCA CORE PARTNERS

IARW WAREHOUSE MEMBERS

Hoosier Logistics, Inc.
Indianapolis, Indiana, United States

Holt Logistics Corp.
Gloucester City, New Jersey, United States

Las Vegas Cold Storage
Las Vegas, Nevada, United States

Mokbel International Trading
Sector da Talatona, Angola

Polar Box
Leon, Mexico

IARW ASSOCIATE MEMBERS

3Gtms, Inc.
Shelton, Connecticut, United States

BRCGS
Milton, Ontario, Canada

CoolSys
Jacksonville, Florida, United States

ISR Corporation
Baltimore, Maryland, United States

CEBA MEMBER

Excel Engineering, Inc.
Fond du Lac, Wisconsin, United States

WFLO MEMBERS

Fred Nolte Consulting
Vancouver, British Columbia, Canada

Lion
Melbourne, Victoria, Australia

IRTA MEMBERS

Berner Air Curtains
New Castle, Pennsylvania, United States

Calpine Energy Solutions
Houston, Texas, United States

Cryo-Trans, LLC
Reisterstown, Maryland, United States

Great Plains Transport Inc.
Mapleton, North Dakota, United States

Holt Logistics Corp.
Gloucester City, New Jersey, United States

Mokbel International Trading
Sector da Talatona, Angola

NFI Industries
Camden, New Jersey, United States

Polar Box
Leon, Mexico

Trailiner Corp.
Springfield, Missouri, United States

MEMBER NEWS

NEWS FROM MEMBERS OF GCCA CORE PARTNERS

EMERGENT COLD invested in a new facility in Piura, Perú, which marks Emergent's initial investment in Latin America and lays the foundation to build out a broader network in Perú and across the region. The facility will provide import/export services as it's strategically located near Paita Port, Peru's largest refrigerated container port. The Piura facility also has modern storage and logistics capabilities to enhance its customers' distribution in Northern Perú.

• • •

TIPPMANN INNOVATION released QFM™, the next evolution of QuickFreeze™. The design of QFM improves the performance of QuickFreeze, while adding flexibility, remote control, and new ways to manage blast freeze and tempering demand. The flexibility of QFM's modular design allows operators to install and remove units from their facility in as little as 10 minutes per pallet position.

• • •

WCS LOGISTICS, formerly Winchester Cold Storage, hosted a ribbon-cutting for a new, 63,000-square-foot facility in Frederick County, Maryland, more than 100 years after the company's founding. The new building is the company's seventh facility and quadruples WCS Logistics' freezer storage capacity. The company now has a greater capacity to store products in temperatures as cold as 20 degrees below zero. The building's energy savings technology is reflected in the ammonia refrigeration system, sensor-controlled LED lighting and air-tight insulation, which meet high-efficiency standards.

• • •

NEWCOLD opened a $90 million, 180,000-square-foot facility in Burley, Idaho. The facility, which took 25,000 tons of steel to construct, is using advanced conveyance and stacking technology to load and store frozen food pallets. It stands at over 14 stories tall with a cubic, vertical layout optimal for pallet storage. Its design cuts down energy consumption by up to half the rate of traditional warehouses. The facility's high bay – not accessible by facility workers – is kept dark, slashing electricity usage. The warehouse stores foods at -5°F, with oxygen levels lowered to 16.5 percent for fire prevention. The facility is located near a short-line rail facility, which will be used to ship approximately 15 percent of NewCold's stored foods. The remaining loads will be trucked to foodservice clients or other warehouses.

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