



YOUR CUSTOMERS' NEEDS AND EXPECTATIONS

Study gains deeper understanding of members' customers.

06

Refrigerated
Transportation Best
Practices Guide

16

Best Way to Fight
Fire? Stop It Before
It Starts.

20

The Outlook on
Port Congestion

24

GCCA Celebrates
15 Years of
International Projects





RG-2400[®]

THE POWER TO STOP A KILLER

ELIMINATE YOUR CORROSION CRIME SCENE

Finally a surface treatment that will end your corrosion under insulation problems for good. A non-skinning, surface conversion gel protects the metal surface from electrolytes that cause corrosion. RG-2400[®] not only prevents Corrosion Under Insulation (CUI) on new systems, but stops existing corrosion in its tracks. RG-2400[®] will even stop stainless steel or copper stress crack corrosion. With minimal surface preparation required for corrosion remediation and with its ease of application, RG-2400[®] is the perfect answer for your corrosion problems. Mineralization technology coupled with buffering capacity in a mobile form means that RG-2400[®] is working under the insulation to protect your system until it is physically damaged or removed.

Consider your options: system replacement, or expensive blasting and painting requiring long plant shutdowns during remediation; or simply glove on RG-2400[®] surface conversion gel and re-insulate. Polyguard[®] has made it easy to fix your corrosion problem; we even manufacture self-healing vapor barriers to seal the system. Find out why 75% of the top 20 Food and Beverage producers in North America have used RG-2400[®] in their new and existing facilities.

For more information, scan the QR code with your smart device.

or visit our website: www.Polyguard.com/mechanical

Request a desktop corrosion test kit, by calling us: **214-515-5000**



RG-2400[®] ELIMINATES CORROSION FOR GOOD

214.515.5000

www.Polyguard.com

FOLLOW US ON OUR SOCIAL NETWORK



Polyguard[®]

Innovation based. Employee owned. Expect more.

DEPARTMENTS

- 27 Member News
- 28 Association News
- 28 SAC Solutions
- 29 New Members
- 29 Calendar

COLUMNS

- 04 Leadoff
- 30 Cool People



About the Cover

Focus groups conducted with food manufacturers and producers provide qualitative research on customer needs. See the article on page 10.



FEATURES

6

Refrigerated Transportation Best Practices Guide

GCCA provides STF compliance requirements and guidance for shippers, loaders, carriers and receivers.

By Lowell Randel

10

Your Customers' Needs and Expectations

Study gains deeper understanding of members' customers.

By Alexandra Walsh



16

Best Way to Fight Fire? Stop It Before It Starts.

Despite regulatory challenges, low-oxygen systems are garnering interest.

By Sheryl S. Jackson

20

The Outlook on Port Congestion

Fasten your seat belt, it's going to be a bumpy ride.

By Karen E. Thuermer

24

GCCA Celebrates 15 Years of International Projects

Member expertise on the preservation of food is more in demand than ever.

By Amanda Brondy and Meghana Venkatesh



The Global Reach of GCCA

WHEN THE WORLD NEEDS HELP in developing food handling, transportation, and storage systems, the Global Cold Chain Alliance (GCCA) is there to provide it.

For the past 15 years, GCCA – through its Core Partner the World Food Logistics Organization (WFLO) – has worked on 91 projects in 60 countries, significantly adding to the cold chain capacity and expertise in these nations.

We are extremely proud of these projects and the difference they have made in so many places. I encourage you to read the article, “GCCA Celebrates 15 Years of International Projects” on page 24 of this issue of COLD FACTS to learn more.

The work includes projects such as cold chain association development in the Philippines, using a grant from the Bill and Melinda Gates Foundation to study post-harvest losses in Africa, and a cold chain infrastructure and investment project in Morocco.

We also need your help to identify new opportunities. What specific areas around the world need help? If you know of some, please let us know. Whether it's a nationwide need or just a city or village, we want to find out.

We also want your expertise. (We know you have some!) There are opportunities for you to participate in WFLO projects, including traveling to project sites to help conduct the research, analysis, and work needed to improve the cold chain. If you are interested, please contact GCCA Director of International Projects Amanda Brondy at abrondy@gcca.org.

In addition to conducting valuable projects, GCCA is continually building its international capacity and infrastructure. To serve our global membership, GCCA has regional offices and Affiliate Partners in Australia, Brazil, China, Europe, India, Latin America, Nigeria, the Netherlands, and the United Kingdom.

These international offices are developing and delivering programs such as the GCCA Latin American Cold Chain Congress (coming up November 10-11, 2016 in Santiago, Chile) and the Indian Cold Chain Expo (coming up December 16-17, 2016 in Indore, Madhya, Pradesh, India).

The popular WFLO Institute, which trains cold chain professionals in all aspects of warehouse operations and management, has also grown internationally. The Institute launched in Latin America a few years ago and this year five people graduated from the three-year curriculum.

Within the United States, this program has also expanded to the West Coast where the 53rd WFLO Institute – West will be held March 18-22, 2017 at UCLA in Los Angeles, California. The 53rd WFLO Institute East will be held February 18-22, 2017 at Georgia Tech in Atlanta, Georgia, where it has been located for many years.

As we look to the future, I see great opportunity to grow GCCA globally. Today, about 70 percent of GCCA member cold chain capacity is in North America. Many non-member cold chain companies around the world can benefit from our knowledge and resources if we can just show them the benefits of joining GCCA.

So as you travel the world and talk to leaders of these companies, please tell them about GCCA and what we have to offer. The more connected we all become, the more success we will all have. ☺



FABIO FONSECA
Chair, WFLO

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 **International Association for Cold Storage Construction (IACSC)**, which provides a forum for innovative ideas, promotes standards of practice, and sponsors professional education programs for the cold storage construction industry.

CONTACT US:

COLD FACTS Magazine
Global Cold Chain Alliance

Attn: Megan Costello
1500 King Street, Suite 201
Alexandria, Virginia 22314-2730 USA

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

COLD FACTS welcomes editorial ideas; contact Editor-In-Chief Al Rickard at +1 703 402 9713 or arickard@assocvision.com. Contact Mike Derda at +1 415 883 7555 or mderda@associationvision.com for advertising opportunities in GCCA publications.

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

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





GREEN SPAN PROFILES®

INSULATED PANEL TECHNOLOGIES

MANUFACTURING INSULATED METAL PANELS SPECIFICALLY FOR THE COLD STORAGE INDUSTRY



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



"We are proud to be your domestically owned and privately operated insulated metal panel provider." – Kelly Ginn, President

GreenSpanProfiles.com • 844-807-7400



REFRIGERATED TRANSPORTATION BEST PRACTICES GUIDE

GCCA provides STF compliance requirements and guidance for shippers, loaders, carriers and receivers.

By Lowell Randel

The U.S. Food and Drug Administration (FDA) published its final rule for the Sanitary Transportation of Human and Animal Food (STF) in April 2016.

In response to the new regulations, the International Refrigerated Transportation Association (IRTA), a Core Partner of the Global Cold Chain Alliance (GCCA), developed a best practices guide, user guide/summary, and a compliance matrix. The guide and related resources were released in August 2016, and are designed to help shippers, loaders, carriers (with a focus on trucks) identify and adopt best practices and assist with compliance. While the STF rule was the catalyst for the development of the resources, the best practices included in the guide can be utilized by GCCA members outside the United States to improve sanitary transportation as well.

About the STF Final Rule

According to the FDA, the goal of the STF Final Rule is to prevent practices during transportation that create food safety risks, such as failure to properly refrigerate food, inadequate cleaning of vehicles between loads, and failure

to properly protect food. The rule, which became effective on June 6, 2016, establishes requirements for shippers, loaders, carriers by motor or rail vehicle, and receivers involved in transporting human and animal food to use sanitary practices to ensure the safety of that food. The focus of the rule is on food safety and not food quality.

The Final Rule establishes the following key requirements for maintaining food safety across the supply chain:

- **Vehicles and transportation equipment:** The design and maintenance of vehicles and transportation equipment to ensure that they do not cause the food that they transport to become unsafe. For example, they must be suitable and adequately cleanable for their intended use and capable of maintaining temperatures necessary for the safe transport of food.
- **Transportation operations:** The measures taken during transportation

to ensure food safety, such as adequate temperature controls, preventing contamination of ready to eat food from touching raw food, protection of food from contamination by non-food items in the same load or previous load, and protection of food from cross-contact, i.e., the unintentional incorporation of a food allergen.

- **Training:** Training of carrier personnel in sanitary transportation practices and documentation of the training. This training is required when the carrier and shipper agree that the carrier is responsible for sanitary conditions during transport.
- **Records:** Maintenance of records of written procedures, agreements, and training (required of carriers). The required retention time for these records depends upon the type of record and when the covered activity occurred, but does not exceed 12 months.

The final rule applies to shippers, receivers, loaders, and carriers who transport food in the United States by motor or rail vehicle. Many GCCA members will fit multiple categories under the rule.

- **Shipper** is defined as a person, for example the manufacturer or a freight broker, who arranges for the transportation of food in the United States by a carrier or multiple carriers sequentially. The Final Rule makes it very clear that brokers and other third-party providers can (and will) be considered shippers under the rule. In many cases, third-party warehouses will be deemed to be the shipper when they arrange for the transportation of food on behalf of their customers.
- **Loader** is defined in the Final Rule as a person that loads food onto a motor or rail vehicle during transportation operations. Warehouses and carriers are both likely to be loaders at times for the purposes of the Final Rule.
- **Carrier** is defined as a person who physically moves food by rail or motor vehicle in commerce within the United States. A carrier's responsibility will depend in large part on its agreements with the shipper.
- **Receiver** is defined as any person who receives food at a point in the United

States after transportation, whether or not that person represents the final point of receipt for the food. A core responsibility for warehouses will be that of receiver.

The Final Rule became effective on June 6, 2016. Large businesses must come into compliance with the Final Rule by April 6, 2017. Small businesses have until April 6, 2018 to comply.

The Final Rule specifically mentions the importance of industry best practices as tools to maintain sanitary transportation and promote food safety. The following resources developed by the IRTA Task Force can help members adopt industry best practices and assist with compliance.

Refrigerated Transportation Best Practices Guide

The Refrigerated Transportation Best Practices Guide helps shippers with understanding and preparing qualified – and attainable – food safety plans and transportation requirements, and offers carriers, loaders and receivers a clearer understanding of expected practices so that they can be prepared to deliver. The guide

is broken into 12 major sections and includes an appendix with additional checklists that members can use to improve their operations.

Below is a breakdown of the sections covered in the guide:

- **Section 1 – STF Overview and Key Requirements:** Provides an overview of the regulation and the key requirements of shippers, loaders, carriers, and receivers.
- **Section 2 – Training and Education:** Covers driver training, written procedures, and the need for competent supervisory personnel.
- **Section 3 – Pre-Requisite Programs and Defined Food Safety Procedures:** Covers equipment design and maintenance, vehicle and equipment storage, food safety procedures, time/temperature requirements, segregation of foods, and treatment of bulk foods.
- **Section 4 – Refrigerated Trailer Sanitary and Condition Inspection:** Addresses cleaning and sanitation of trailers, sanitation standards, and trailer inspection requirements.



UNITED INSULATED STRUCTURES CORP
PLANNING + ARCHITECTURE + CONSTRUCTION

LARRY LANTERO, JR
 PRESIDENT
 LARRYJR@UNITEDINSULATED.COM

RICH MALECZKA
 SENIOR VICE PRESIDENT
 RICHM@UNITEDINSULATED.COM

708.544.8200



WWW.UNITEDINSULATED.COM

- **Section 5 – Refrigeration Unit Operating Procedures:** Discusses pre-loading, identifying and setting refrigeration program units, modes of operation and issues related to multi-temperature trailers.
- **Section 6 – Pre-Cooling Trailers:** Covers trailer settings and pre-cooling settings and notifications.
- **Section 7 – Loading Procedures:** Addresses trailer inspections, refrigerator

unit pre- and post-loading operations, product packaging and staging, loading procedures, and post-load inspection and verification.

- **Section 8 – Staging Loaded Trailer Back On to the Yard:** Covers monitoring of staged trailers.
- **Section 9 – Departure and Arrival Process for Loaded Trailers:** Discusses check-in procedures, arrivals and departures, and post-trip inspections.

- **Section 10 – En-Route Compliance Requirements:** Addresses compliance requirements, data collection, and reporting.
- **Section 11 – Load Acceptance Procedures:** Covers criteria and procedures for load acceptance.
- **Section 12 – Records Retention:** Discusses records retention requirements included in the regulation.

User Guide and Summary

The Refrigerated Transportation User Guide and Summary provides a summary of the STF rule and how the broader best practices guide can be used to assist with compliance.

Compliance Matrix

The Sanitary Transportation of Food Compliance Matrix helps readers to identify specific compliance requirements included in the STF rule, the respective roles of shippers, loaders, carriers and receivers, and the section of the Best Practices Guide that includes guidance on how to comply.

Convening Leaders

GCCA has reached out to numerous partner associations in the food and transportation industries to share these resources and engage in a dialogue about preparing for STF rule compliance. An industry roundtable was held in conjunction with the GCCA Assembly of Committees to facilitate a discussion with key partners across the food supply chain. In addition, GCCA has given presentations at other industry association meetings to increase awareness of the STF rule and the best practices guide.

The best practices guide and related resources are available free of charge to GCCA members and non-members. They can be downloaded from the GCCA website at the following address: <http://www.gcca.org/resources/sanitary-transportation-food-compliance-resources/>.

GCCA members are encouraged to share these resources with their partners across the food supply chain and to engage in proactive communications prior to the compliance dates. Good communication between shippers, loaders, carriers, and receivers will be critical to establish policies and procedures and ensure consistent expectations between parties related to compliance with the STF rule. ☎

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

EMAIL: lrandel@gcca.org

TIPPMANN GROUP



KEEPING IT COOL SINCE 1968



Interstate Warehousing

- 5th largest PRW in United States
- 100,000,000 cubic feet of cold storage space
- SQF Level 2 certified facilities
- Customized distribution solutions
- Retail and Foodservice consolidation programs
- Comprehensive management development & training program

Tippmann Construction

- Design/build construction of multi-temperature warehouse and production facilities
- New builds, expansions and renovations
- Master site planning
- Members of U.S. Green Building Council
- Owner/operator experience & knowledge

(260) 490-3000



@TippmannGroup

9009 Coldwater Road • Fort Wayne, Indiana 46825 • www.tippmanngroup.com

Tired of getting hit with business disruptions? It's time to Destroy them.



With Evapcold low charge ammonia systems, you can eliminate the business disruptions that drag refrigerated facilities down.

- Reduce your regulatory burden
- Lower your compliance costs
- Provide a safer workplace
- Improve your system reliability
- Consume less energy & water
- Lower your operating costs
- Increase your usable cold storage space
- Move into your facility faster

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



Since 1976 | An Employee-Owned Company
Commercial HVAC | Process Cooling | Industrial Refrigeration | Power



YOUR CUSTOMERS' NEEDS AND EXPECTATIONS

Study gains deeper understanding of members' customers.

The inaugural Global Cold Chain Expo (GCCE) held this past summer in Chicago attracted thousands of key decision-makers from companies throughout the fresh and frozen food supply chain who buy or lease cold chain services. And, it presented the perfect opportunity to recruit some of those food producers and manufacturers to share their perceptions, observations, beliefs and attitudes surrounding their experiences with, and expectations of, 3PLs.

To accomplish this, GCCA commissioned a study designed to gain a deeper understanding of the expectations and needs of its members' customers, and to identify opportunities to better serve these end-user customers by improving and expanding services provided by GCCA member companies.

The information collected through this study, designed by the company EurekaFacts, will assist GCCA in cultivating better relationships with its members, understanding their needs and their customers' needs, fostering industry growth, and providing GCCA with insights to inform the association's strategic direction.

Methodology and Recruitment

Focus group discussion was the selected methodology for the study, as this type of qualitative research focuses on the development of insight and direction and will play an important role in identifying the expectations and needs of member company customers.

GCCA conducted the participant recruitment by enlisting five of its members who were involved in the development of the Global Cold Chain Expo. These members provided GCCA a list of seven customers and after GCCA's review, the members invited these customers to participate. GCCA then followed up with a formal focus group invitation and a total of 15 customers accepted and participated in two focus groups.

What follows is a sampling of the questions posed to the focus groups, detailed findings based on the participants' responses and some examples of verbatim responses – direct quotes – from participants that are included to underscore and illustrate key points made by the participants.

Current State of 3PL Partnerships

Q. What are the attributes that your company values most when it comes to existing partnerships with 3PLs?

Overall, customers spoke favorably of their relationships with their 3PL providers in the face of the industry challenges that impact their supply chain operations.

The common theme echoed among the customers is that they are looking for a 3PL to be a collaborative partner that has a perspective that includes the entire cold chain and recognizes that their actions impact the safe delivery of their customers' products and, ultimately, their brand.

"For me, the most valuable partners have a strategic end and perspective, as opposed to just being transactional: 'Yeah, we can ship your stuff, and you move them through the box'..."

Q. When thinking about 3PL services, what are the selection criteria that your firm uses?

Cost Structure

Reasonable costs were mentioned as one of the primary factors to consider when choosing a 3PL provider. Open book pricing and fee transparency were of particular importance to participants.

"We expect a working partnership as opposed to just, 'We'll send you a bill next year that's three or five percent higher because our labor went up.' Well, what can we do together to offset that — cost, safety, quality, speed metrics?"

Predictive analyses and modeling tools that go beyond optimization studies were highly coveted by participants, as these were thought to have the potential to reduce costs.

These tools have the added benefit of allowing the 3PL to work more closely with the customer by adapting their cost structure to fit the company's individual needs, rather than the other way around.

"One of the things we're looking at and probably bringing on board is... a modeling tool. It's more than just network optimization. It's really about

understanding the impact to shelf life and inventory optimization regionally. You can do it internally, but if 3PLs could provide that service, that's really a value add."

Customer Service

Good customer service was also a top deciding factor in selecting a 3PL, especially due to the unpredictable nature of an industry where last minute changes and unforeseen events are expected to be handled and resolved quickly and effectively by all parties involved.

Traceability and responsiveness were considered defining characteristics of good customer service.

"It is important that we can see what our inventory is and where it is. A lot of it is customer service because we're not handling that inventory on its way out the door, personally, so we are expecting our third-party distribution centers to really take care of us on the inventory side."

By providing good customer service, a 3PL can cultivate a dynamic and mutually beneficial relationship with its customers. Relationships are a timeless mainstay, particularly in regards to the contracting process, as they play a big role in the way contracts are granted, especially between smaller companies and larger 3PLs.

Most participants agreed that longer-term contracts with 3PLs are more desirable as they create the opportunity to develop solid, stable relationships.

"If it's easy to do business with you and you already have a track record for success, why wouldn't I want to continue doing business with you? When it comes down to tiebreakers, you'll win every time because you have that."

Participants agreed that a reliable, strategic-thinking general manager with strong leadership skills has the potential to ease customers' concerns about their shipments, instill trust among customers and, as a result, is a highly valued asset.



"Some of our best facilities are just that because they have a great GM. It's not necessarily because of the company but rather their ability to get the right leadership in some of those roles as well."

Technology and Innovation

Customers are looking for 3PL providers as partners that can generate "outside the box" solutions to existing ways of doing business and handle unexpected challenges.

They want a 3PL partner that is going to look at the big picture/whole supply chain and think about their role, as well as the role of their customer, and make recommendations based on how they can be more efficient and effective. This makes the customers' jobs easier and reduces stress.

"The ones that differentiate themselves are the ones that really have the will and the talent to step up and go, 'Let's look at this supply chain, and how can we engineer it for our mutual benefit?'"

Participants stated that special consideration is given to the technology employed by a 3PL, but only when this technology is compatible with the technology being employed by the company itself, when it fits the business needs of the company, and if is part of a larger cost-reduction strategy.



It was also pointed out that often warehouses set their own internal metrics. However, these do not provide downstream or upstream supply chain insights to the customers.

“I think we measure internally a lot more than we measure externally. For instance, how many pallets are you pushing through in a month, versus how many hours we pay out to our employees? I don’t really care what my 3PL’s pallet-per-man-hours are. I just care that it gets out the door.”

Lack of pre-established industry-wide metrics or existing ones that are internal to the 3PL are perceived as weaknesses. Customers want a 3PL partner, regardless of size, type of partnership, or length of contract, to have a set of basic standardized metrics that will help the customer with an analysis of 3PLs and the customer’s operations and performance.

“For transportation, it’s on-time delivery. That’s the most critical one. And then, for warehousing, we have a lot of great metrics to measure 3PLs. The rate of damage I think is one that we keep tabs on. Inventory discrepancies is another ... obviously, we keep tabs on cost.”

Size Matters

Q: What are the pros of working with a small company?

The size of small 3PLs affords some advantages. For instance, these firms can bend more quickly to respond and innovate solutions.

“Small players may not have the resources... but with the smaller ones, sometimes you’re just talking to the owner, so you’ve got the ears of the right person.”

Q. What are the pluses of working with large 3PLs?

It was agreed that larger 3PLs have the traceability that companies demand. Furthermore, the larger 3PLs tend to have a greater repertoire of experiences and more resources so they can respond more easily to innovation requests.

“The larger players are going to have the [web] portals. Then you can just pull up your inventory, which everybody says is important to them.”

“I think one of the things with a larger company... they have the ability to put the resources on the ground to improve the probability of having a successful start-up. So, that’s helpful. They’ll utilize their SWOT (strengths, weaknesses, opportunities, and threats) teams and get you over the hump if you’re going with a new program.”

Role of Metrics

Q. Generally speaking, how do you measure the success of the 3PLs you work with?

The metrics that customers want from 3PLs measure cost, safety, delivery time, inventory accuracy and quality (measured by over, short, or damaged claims).

Q. Do you require your 3PL partners to use Key Performance Indicators (KPIs) with you, and do you develop them or request that your 3PL partners develop them?

Participants agreed that although they require their 3PLs to utilize KPIs, they often have to develop them for the 3PLs, depending on what is important for them to measure as a company.

Current Trends

Q: What are the major trends in food processing that are impacting the distribution/supply industry?

The increasing demand for locally sourced food that is organic and free from preservatives and that results in a shorter shelf life is impacting the industry hard and fast.

The processors all agreed that their products are trending towards shorter shelf life that will impact the supply chain. Another trend is the increasing consumer expectation of near to immediate delivery.

“From our point of view, some of the trends that we are experiencing involve the removal of partially-hydrogenated oils from products, and clean labels, which are having a dramatic decrease in shelf life of a lot of products...”

Because of these trends, participants reiterated an urgent need for traceability of deliveries, which would help in streamlining

the delivery process, especially when the shelf life of organic products can be significantly shortened due to the lack of preservatives.

Along with the changing needs of the marketplace, increasing federal and state level regulations, and the Food Safety Modernization Act (FSMA) in particular, magnifies the burden and stress on a responsive cold chain.

“One of the things that’s getting us a little bit nervous is the whole cold chain and control of temperatures, and then the liability when we fail there, when somebody fails – either a third-party carrier, a warehouse – and then assigning, processing the claim.”

The need to protect the brand was singled out as the largest driving factor behind the anxiety that participants experienced once their product leaves their hands. Anything that goes awry with the 3PL’s process may legally impact the customer and severely damage the brand.

“It’s a shared journey, absolutely. I think it has to be, because the 3PLs are effectively stewards of our quality program and our brand.”

Another main concern for participants is keeping a skilled workforce motivated and satisfied in order to lower the turnover rate. According to them, staff is overloaded with work and responsibility. Because they have limited staff resources, they rely heavily on the expertise and human capital of their outsourced partners to solve many of their challenges.

Q. What is the biggest change that you see affecting the future of refrigerated and frozen food industry?

Participants recognized that the future of the industry is headed towards an increased preference for locally sourced food and cleaner labels or preservative-free food.

“One of the big initiatives in our world is to go to preservative-free fruit in yogurt and ice cream – the shelf life of the fruit itself, the ingredient, goes from six or seven months to now 45 days. So getting the demand signal correct, forecasting as accurately as possible, allows you to order the right amount of fruit, and then allows you to make the right amount of yogurt.”

THE PARTICIPANTS

GCCA thanks executives from the following companies who participated in focus group discussions for this research:



The idea of sharing space with their 3PL's other customers also came up as a solution to reducing waste and unused space that in turn can reduce costs.

"I'd like to see some intelligence within the 3PL arena where they can start to deliver pooled distribution information with replenishment for us... predictive analytics."

The potential advantages of sharing information and services were highlighted by participants in both groups.

"You know what you're getting on the front end, which will allow shared buildings and shared services from a master 3PL. That's going to happen in the future."

The development of mobile applications to increase space-sharing and lower costs was of interest. It is believed that the future of logistics is to adopt these technologies to provide faster, less expensive, more reliable and sustainable delivery.

Another concept that participants debated was whether future trends would force larger companies to decentralize and become more regional. Participants recognized another opportunity for 3PLs to share logistical resources while simultaneously decentralizing in order to establish operations that are more regional in nature.

"If I ensure shelf life on natural, organic goods, I don't want to be trucking something from Los Angeles to the East Coast and then back to the service again. So, do I need to start looking at more of a regional footprint close to my manufacturing sites, whether I'm internally manufacturing or contract manufacturing, so that my total supply chain time to get to customers goes down. I very much expect that we're going to be looking more at smaller rather than larger."



Summary of Customers' Concerns

Many customers are concerned with anything along the cold chain that impacts the brand – from food safety to on-time delivery. These customers need 3PLs they can trust to protect the brand once the 3PLs receive the shipment.

The trend for shorter product shelf life and shorter delivery times based on changing consumer behavior and demands that can increase costs, are also major pressure points.

Top management's pressure to reduce costs is another concern that drives many of the customers' decisions and operations. With decreasing margins, the challenge is increasingly greater.

The consolidation of the industry creates uncertainty about the future availability of cold chain resources.

Some of the key takeaways from the study represent the attributes of an ideal 3PL partner and the importance they play in fostering a customer-oriented relationship.

This ideal 3PL partner is strategic-thinking, offers good pricing, is responsive and innovative, customer service oriented, understands and operates with the entire cold chain in mind, has a mind set about "protecting the brand," and uses KPIs to help provide analytical insights on their performance to customers.

Providing traceability, food safety, on-time delivery and a strong general manager are also very important to your customers. 📧

ALEXANDRA WALSH is Vice President of Association Vision and Managing Editor of COLD FACTS.

EMAIL: awalsh@associationvision.com



Keep Your Assets Frozen

Cold storage fire protection at the highest level

Don't let an accidental sprinkler discharge melt away your profits. FM-Approved Quell™ methodology from Tyco Fire Protection Products can future-proof your facility to code standards up to an unprecedented 50-foot storage height—without the need for antifreeze or costly, obtrusive in-rack sprinklers.

Backed by an industry-leading 10-year warranty and a reputation you can count on.†

**Find out why Quell™ stands above the rest.
Visit tyco-fire.com/storage**

† For the applicable terms and conditions of sale for this and other Tyco Fire Protection Products, please visit www.tycosfbp.com/TFPPTerms of Sale.

BEST WAY TO FIGHT FIRE? STOP IT BEFORE IT STARTS.

*Despite regulatory challenges,
low-oxygen systems are garnering interest.*

By Sheryl S. Jackson

No warehouse owner wants to receive a fire alarm at the facility, but the unique nature of cold storage facilities exacerbates the likelihood of damage to buildings and product. For example, firefighters responding to a fire at a Columbus, Ohio, cold storage company in 2016, had to back away from their efforts to contain the blaze when they learned that the cooling system relied on anhydrous ammonia, which places firefighters using water at risk.

Luckily, no employees, emergency responders or neighbors were injured during the fire. But, the warehouse collapsed creating an economic hardship for the cold storage company as well as its customers.

One way to minimize the risk of fire damage is to prevent the fire in the first place, which is the goal of low-oxygen fire prevention systems.

Used throughout Europe, low-oxygen systems are the fire protection strategy of choice for automated cold storage facilities with racks

over 75 feet high, points out Frank Siedler, President of Wagner Fire Safety. Systems, such as OxyReduct®, which is offered by Wagner, reduce an environment's oxygen level below the point needed to ignite a fire.

With 1,000 installations in 20 countries, these systems are proven safe and effective, points out Siedler. "The greatest challenge in North America is the regulatory environment," he says.

In the United States, the Occupational Safety and Health Administration (OSHA)

requires a minimum level of 19.5 percent oxygen volume in occupied spaces. Fire prevention systems that reduce the volume of oxygen change the ratio of oxygen to nitrogen by adding nitrogen to maintain an oxygen level of between 14 and 17 percent – depending on the material contained in the protected area – to prevent fires from starting or spreading. According to OSHA regulations, employees entering spaces with oxygen levels lower than 19.5 percent must wear a self-contained breathing apparatus (SCBA), and warnings must be placed at the entrance to all oxygen deficient areas.

"Europeans have used this system since 1998, with no employee incidents or injuries related to low oxygen levels," points out Siedler.

According to German safety standards that form the basis for a standard developed for other European countries, safety training and occupational health examinations for employees who work in environments with between 13 and 17 percent oxygen levels, along with required breaks from the environment every two or four hours – depending on the level of oxygen – ensure the safety of workers.

Though there have been conversations with OSHA to determine the basis of the 19.5 percent threshold, Siedler points out that U.S. cold storage facilities can and have installed oxygen-reducing fire prevention systems. “Preferred Freezer Services in Richland, Washington, installed an OxyReduct system to protect their fully-automatic, deep-freeze warehouse,” he says. The facility’s three areas with 98.4-foot high shelving systems containing 117,000 pallet storage spaces are protected with oxygen levels of 16 percent.

Not only is it difficult to extinguish fires in a facility of this dimension with water, but sprinkler systems require space, which reduces usable space for storage, says Siedler. “We also know that water from fire suppression and from unexpected sprinkler pipe breaks damage inventory on shelves and create frozen floors – a safety concern for employees.”

Owners who understand the benefits of fire prevention with reduced oxygen environments and assume the responsibility for complying with OSHA standards, which include safety signage and SCBAs, can benefit from the system, says Siedler.

Reduced oxygen fire protection system benefits include:

- A fire is unlikely to start but if an electrical wire short or other event sparks a flame, the fire is unable to spread.
- The protection of entire area, including racks at or over 75 feet in height with densely packed inventory.
- A cost-effective solution for cold storage warehouses – especially for large areas.



Preferred Freezer’s Richland, Washington facility’s 116-foot-tall building with over 117,000 total pallet storage positions is the largest public refrigerated warehouse in North America.

Determining the best approach to fire prevention or suppression is difficult, admits Siedler. “An owner should consult with their architects, engineers, insurance company, and suppliers to compare all types of fire protection systems,” he recommends. “We have found that owners of large spaces – 10 million cubic feet – experience the greatest cost savings with a low-oxygen system.”

Cold storage owners also need to consider which areas of the warehouse are “mission critical,” suggests Siedler. “If a warehouse must operate 24/7 and the potential for loss of inventory is high, preventing a fire from starting versus extinguishing after it has spread is a good reason to consider a low-oxygen fire system.”

Another consideration is the ability to seal the area to prevent leaks of the nitrogen-enriched atmosphere to ensure the proper mix of oxygen and nitrogen is maintained. “It is obviously easier to install the system in a new warehouse as it is built, but the retrofit option is a possibility for some existing freezer warehouse spaces,” says Siedler.

The owner’s general contractor will assess changes such as painting walls, replacing seals on doors or walls, and adding air lock systems, but the nature of cold storage facilities that are designed to maintain controlled temperatures lends itself to installation of a low-oxygen fire system, Siedler adds. Conducting a room-integrity test to determine how much air leaks helps determine costs involved to prepare the space for low-oxygen fire prevention, which leads to a better understanding of the return on investment.



The decision to install a low-oxygen fire protection system for Preferred Freezer’s automated freezer facility in Richland, Washington was based on cost-effectiveness and need to ensure the facility remained operational 24/7.

HOW DO LOW-OXYGEN FIRE SUPPRESSION SYSTEMS WORK?

According to European standards, fire prevention concepts based on oxygen reduction principle should always be a combination of a low-oxygen fire system and a highly sensitive smoke detection system.

A low-oxygen fire system includes six components:

1. Nitrogen production module
2. Control panel
3. Nitrogen distribution pipe
4. Oxygen sensors
5. Display
6. Alarm & indicating devices

The oxygen reduction system generates nitrogen and continuously feeds it into the protected area in order to minimize the risk of fire. The nitrogen is introduced in a controlled manner in order to keep the oxygen level below the ignition threshold at all times.

In the OxyReduct® system, nitrogen is generated from the ambient air onsite, versus storing the gas in large tanks. This approach reduces space needed for the system and provides flexibility to move the system if space is reconfigured or used for a different purpose.

When evaluating a low-oxygen fire system, be sure to work with local agencies to ensure building codes and local safety requirements are met, and don't forget to communicate with the insurance carrier. National building codes require buildings of a certain size and hazard classification to be equipped with fire sprinkler systems designed and installed in accordance to the National Fire Protection Association Standards.

As Don Wiginton, Chairman and Chief Executive Officer of Wiginton Fire Systems and lead author of an IACSC-IARW Construction/Codes Committee white paper on hypoxic air fire protection systems said in a 2013 *Cold Facts* article, "Even if the standards allow new technology, an owner needs to check with the insurance company." This step ensures that the carrier is provided with up-to-date information on the system and that the owner complies with requirements to maintain coverage.

The Proven Leader in Cold Storage Construction



Integrity is our Foundation.



Martin Construction is a full-service Design/Build General Contractor ready to help you with new construction, addition and renovation projects throughout the East Coast.



- Planning
- Sealed Design
- Pre-Engineered
- Structural Steel
- Refrigeration
- Mechanicals
- Racking
- Sprinkler
- Lighting



Temple, PA (717) 336-2965 martinconstruction.net



Savannah Cold Storage, Effingham County, Georgia

NEED MORE ROOM?

Let BONAR help you with your plant expansion or new facility.

We are currently building energy-efficient minimum charge ammonia/CO₂ cascade refrigeration systems.

Call Hank Bonar today!

904-631-8966

hank@bonarengineering.com

Bonar Engineering & Construction Co.
PO Box 60009, Jacksonville, FL 32236

Even with the current challenges to easy adoption of a low-oxygen fire prevention system, Siedler foresees increasing interest. “This technology requires a shift in thinking,” he explains. “We can better protect assets and employees by being proactive. There is no need to wait for a fire to break out and then suppress it. We can stop it from starting, however, if enough energy exists for ignition, we can at least stop it from spreading.”

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

EMAIL: sherylsjackson@bellsouth.net



Left: By generating nitrogen from the ambient air onsite, the OxyReduce® system minimizes space needed for low-oxygen fire prevention and makes it possible to relocate the system if space is used for a different purpose. Right: Low-oxygen fire protection is ideal for storage racks at or over 75 feet – a height that is difficult to protect with traditional systems.

DEGREES BEYOND...

szero.com

M&M/Mars
Victorville, CA

A large-scale construction project is shown. Several workers in safety gear are on a flat roof, working to install a massive, white industrial refrigeration unit. The unit is being lowered into place by a crane, with cables and pulleys visible. In the background, a large white building and a clear blue sky are visible. The text 'DEGREES BEYOND...' and 'szero.com' is overlaid on the top left. At the bottom left, the project name 'M&M/Mars' and location 'Victorville, CA' are listed.

Industrial Refrigeration and Thermal Construction





THE OUTLOOK ON PORT CONGESTION

Fasten your seat belt, it's going to be a bumpy ride.

By Karen E. Thuermer

Port congestion strikes at the heart of the cold chain. It's not easy to forget the contract impasse that affected U.S. West Coast port productivity in 2014 and 2015. Ports face congestion-related challenges caused by the ever-increasing number of super-sized ships. Large vessels discharging greater cargo volume put a premium on marine terminal efficiency. Cargo must be moved in and out quickly to prevent logjams.

Mike Zampa, Port of Oakland spokesman, states that Oakland port officials have spent all of 2016 improving performance to ensure that cargo gets to its final destination quickly. "Management and labor have both demonstrated willingness to work toward improving performance in Oakland," Zampa says.

This year cargo volumes at Oakland have increased 5.1 percent over 2015. "That indicates that the port has more than recovered volume that temporarily migrated to other U.S. gateways," he adds. "Oakland vessel operations are now the most productive on the U.S. West Coast."

A good measure of terminal efficiency is truck turn times getting in and out of a seaport. "At Oakland, the average transaction time for drivers at our largest marine terminal in June was two hours or more," Zampa says. "That includes time spent in line outside the gate and inside conducting transactions. The average transaction time at Oakland's largest terminal in late August was between 60 and 70 minutes."

Other positive changes made at Oakland this year include:

- Monday-through-Thursday night gates at the port's largest marine terminal, Oakland International Container Terminal – a rarity since very few U.S. ports open gates to truckers on a regular basis at night.
- An appointment system for truck drivers to pick up loaded import containers.

APM Terminals at the Port of Callao has invested more than \$460 million to expand and modernize the multipurpose terminal. (Photo courtesy of APM Terminals Callao.)

- A yard designated exclusively for rapid pick-up or delivery of empty containers.
- An off-dock yard where loaded import containers on chassis are available 24/7 for immediate pick-up by cargo owners.
- An inland depot in California’s agricultural Central Valley for easy container exchange without driving to the port two hours away.
- Additional labor and new equipment to process increasing cargo volume.
- Mobile phone apps that measure truck transaction times and report them continually to aid driver/dispatcher planning.
- A mobile phone app that helps truck drivers with street-turns, that is, empty container exchange without the need to enter the Port of Oakland.

“These changes have been road-tested with the Port’s Efficiency Task Force, a group that includes shippers, shipping lines, trucking companies, railroads, labor, customs and port representatives,” Zampa says. “The group has tackled issues that include performance metrics, chassis availability, extended gate hours, terminal turn times, and the recently implemented SOLAS requirement for Verified Gross Mass. All parts of the supply chain are represented. That means solutions are developed with a broad view of their benefit, instead of addressing the needs of isolated groups.”

Big Changes on East Coast

U.S. East Coast seaports are not immune to problems, especially with the rerouting of services due to the deployment of neo-Panamax vessels. Even more significant, says Sam Ruda, Assistant Director of Port Department, Port Authority of New York/New Jersey (PANYNJ), is the shifting of alliances as lines consolidate and executives change affiliations.

This trend is especially expected to play out in Spring 2017, when vessels will shift in and out of certain strings and steamship lines realign due to capacity issues and the deployment of larger vessels. “When you think about the enormity of changes that will occur, fasten your seatbelts,” Ruda says. “There will be interesting dynamics.”

Some dynamics have already surfaced, such as the bankruptcy of Hanjin Shipping that created havoc at the Ports of Long Beach, Los Angeles, and Prince Rupert in British Columbia and the Port of Virginia. In early September 2016, the Port of Virginia refused to allow Hanjin to dock at its marine or inter-modal terminals.



The Port of Oakland has implemented a number of changes recently to increase port efficiencies. (Photo courtesy of Port of Oakland.)



Refrigerated containers and racks at the Port of Oakland’s Oakland International Container Terminal. (Photo courtesy of Port of Oakland.)

“...Every day more shippers are moving their cargo direct to the port instead of using off docks or external terminals near the port. These actions add cost, risk and time — enemies of perishable cargo...”

—JUAN FELIPE LLONA SILVA, Commercial Manager, General Cargo, APMTc

Bigger ships and consolidated alliances present challenges in terms of cargo volume impacting productivity, vessel bunching when large ships arrive at the same time and create confusion, chassis management systems, gate turn times, on-dock and near-dock rail capacity, and labor staffing.

The Ports of New York/New Jersey have suffered the consequences, albeit temporary.

Its Ports Elizabeth and Newark are unable to receive post-Panamax vessels until the Bayonne Bridge raising project is completed late next year.

PANYNJ's 50-foot harbor deepening project was completed in September 2016. A CKYHE Alliance ship had to dock at GCT Bayonne terminal outside the Bayonne Bridge late last year and its containers had to be transferred to barges to Port Elizabeth, New Jersey, where the ship normally calls.

Trucks also faced turn times of up to eight hours as GCT Bayonne dealt with volumes from large ships, some arriving off schedule.



When you think about the enormity of changes that will occur, fasten your seatbelts," Ruda says. "There will be interesting dynamics."

—SAM RUDA, Assistant Director of Port Department, Port Authority of New York/New Jersey (PANYNJ)

Traffic congestion was also aggravated by a multiyear project to rebuild the New Jersey Turnpike exit to the terminal.

Port Expansions in Peru

Terminal operators at Peru's Port of Callao are addressing congestion issues, despite off-terminal issues related to the land portion where investment lacks.

Over the past five years, APM Terminals Callao S.A (APMTC) – one of three large terminals at the port, has invested more than \$460 million to expand and modernize the multipurpose terminal. Eighty percent of all Peruvian trade is handled at the port's three terminals: DPW, APMTC, and CTCSA. "What we have done is helping to improve the cold chain," stresses Juan Felipe Llonca Silva, Com-



Protecting you
Protecting your business

Protecting your future

Get the cold, hard facts.

Warehouse Legal Liability • Property and Casualty
Transportation

Your IARW service team:
Connie Phipps . Joe Howard . Paige Lowder
Call 816.960.9946 or visit www.lockton.com.




444 W. 47th Street, Suite 900, Kansas City, MO 64112 • 816.960.9000
WE LIVE SERVICE![®] Insurance • Risk Management • Employee Benefits
© 2009 Lockton, Inc. All rights reserved. Images © 2009 JupiterImages Corporation



20TH EUROPEAN COLD CHAIN CONFERENCE
8-10 MARCH 2017 | BRUSSELS
Global Cold Chain Alliance

SAVE THE DATE



EXPLORE THE EUROPEAN COLD CHAIN ALONGSIDE KEY INDUSTRY EXECUTIVES

- Innovation & Trends
- Knowledge Transfer
- Networking
- Products & Services

Visit www.gcca.org/events to learn more



mercial Manager - General Cargo, APMTC.

APMTC investments include expanding pre-gates and lanes for better cargo flow (the result of which is +50 percent of new gate capacity since first quarter 2016); improving operational capacity through new berths and equipment to allow the port to handle more cargo and vessels faster and more efficiently; and expanding of reefer cargo storage capacity with a new reefer rack station that includes more than 500 new plugs since first quarter 2016.

“As a result, every day more shippers are moving their cargo direct to the port instead of using off docks or external terminals near the port. These actions add cost, risk and time – enemies of perishable cargo,” says Silva. “Our terminal is gaining more container market share, reefer cargo included. Every year we are shipping over 40,000 reefers per year.”

Recent statistics support these trends. Year-to-date reefer movements through July 2016 show direct dispatches to the port up 40 percent compared to year to date July 2015, and indirect dispatches through off docks down 15 percent for the same period. Total reefers handled year to date July 2016 are 21,276 TEUs compared to 19,882 TEUs for YTD July 2015.

Reefer cargo volumes have also increased 7 percent through APMT and DPW,” Silva says.

The situation is changing particularly for shippers who import perishable commodities from Peru. “Ten years ago it was standard to operate outside the port,” Silva says. “But now shippers trust us and ship direct from warehouse and packing plants to the terminal. This is critical for exporters who need to ship their goods in a specific short window of time.”

Silva admits that remaining challenges must be fixed through a combined effort between terminals, authorities, client associations, and the industry deployed in nearby areas. But at least things are moving in the right direction. ☺



APM Terminals Callao S.A. at the Port of Callao, Peru.



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

EMAIL: kthuermer@aol.com

PRIMUS

PLANNING • ARCHITECTURE/ENGINEERING • PROCESS DESIGN
MATERIAL HANDLING • CONSTRUCTION MANAGEMENT
770.928.7120 • www.primusbuilders.com

GCCA CELEBRATES 15 YEARS OF INTERNATIONAL PROJECTS



Member expertise on the preservation of food is more in demand than ever.

By Amanda Brondy and Meghana Venkatesh

Global Cold Chain Alliance's (GCCA) President and CEO Corey Rosenbusch was invited to join several East African heads of state and the U.S. Department of Commerce in a roundtable discussion on the U.S.-Africa trade relationship in September 2016.

This discussion targeted solutions to strengthen the African cold chain by expanding the use of data and technology to promote food security, lowering the risk associated with private sector agribusiness investments, and expanding access to agricultural markets.

GCCA's invitation to this high-level event signifies the culmination of 15 years of support from the association for development projects in lower income countries, to grow the cold chain globally, and ultimately, to feed the world.

As a global organization, GCCA recognizes that the cold chain industry in many countries has not yet developed to a point where consumers can feel confident that the food

they are purchasing is of high quality and safe. Many businesses struggle to establish proper procedures while faced with myriad challenges including poor roads, inconsistent energy supply, and an untrained workforce lacking the skills needed to run a basic warehouse, let alone one that requires temperature control.

Fifteen years ago, GCCA decided to do something about it.

In 2002, GCCA initiated its first international development project with the U.S. Department of Agriculture (USDA) in the Philippines. Working through the World Food Logistics Organization (WFLO), GCCA promoted the development of fresh, chilled, and frozen warehousing and trained industry personnel in proper receiving, storage, processing,

and food handling practices. The project advised and strengthened the newly formed Cold Chain Association of the Philippines (CCAP), a national association that today still maintains its status as a GCCA member. This first project opened the door to what has become a flood of international development activity over the past 15 years.

By partnering with aid organizations and international development partners, the GCCA and WFLO help emerging economies and lower-income countries meet the challenges that arise when growing a global cold chain.

Over the last 15 years, GCCA has worked on 91 projects in 60 different countries, including 21 in Africa; four in Central Asia; seven in Eurasia; 12 in Latin America; seven in the Middle East and North Africa; five in South Asia; and four in Southeast Asia.

Through this work, GCCA has amassed a vast amount of reports, contacts, information, and other cold chain resources in a wide variety of countries. The international team is working to make this information more accessible to members in 2017.

GCCA Technical Expert Dick Dowdell speaks about the importance of using temperature monitoring devices, even just basic units. He visited the Republic of Georgia with a team from GCCA to share cold chain best practices with alumni of the Special American Business Internship Training Program implemented by the International Trade Administration of the U.S. Department of Commerce.



The team that deployed here was very serious and professional, and provided excellent recommendations to CNFA and to the USAID Mission. Based on the strength of the deliverable that was presented, CNFA will invite some GCCA team members to return to implement some of the recommendations.”

—DANIEL GIES, CNFA COP, Liberia LADA Project

More important than the number of projects is the impact they have had on developing the cold chain. The work with CCAP has continued to grow – in 2016, CCAP will submit its first proposal to develop an undergraduate curriculum for cold chain management. If approved, this curriculum will go a long way in building the capacity of young Filipinos to work within the cold chain, and reducing the need for one of the most cited recommendations and requests for cold chain assistance in any country – training.

In 2002, GCCA partnered with Louisiana State University (LSU) on a project in Namibia in Southern Africa. GCCA’s recommendations for cold chain industry development and improvement, combined with LSU’s expertise on meat production, led to a decade-long effort to improve the beef industry. In July 2016, Namibia became the first African country to be allowed to export beef to U.S. markets.

In 2009, the Bill and Melinda Gates Foundation awarded GCCA \$1.2 million to identify the most effective post-harvest technologies to combat food loss in Sub-Saharan Africa and South Asia, which are regions with the highest combined levels of food loss and poverty. It remains GCCA’s largest grant to date. This work resulted in the first post-harvest loss assessment for Sub-Saharan Africa and South Asia and is widely referenced today as the first baseline assessment ever conducted.

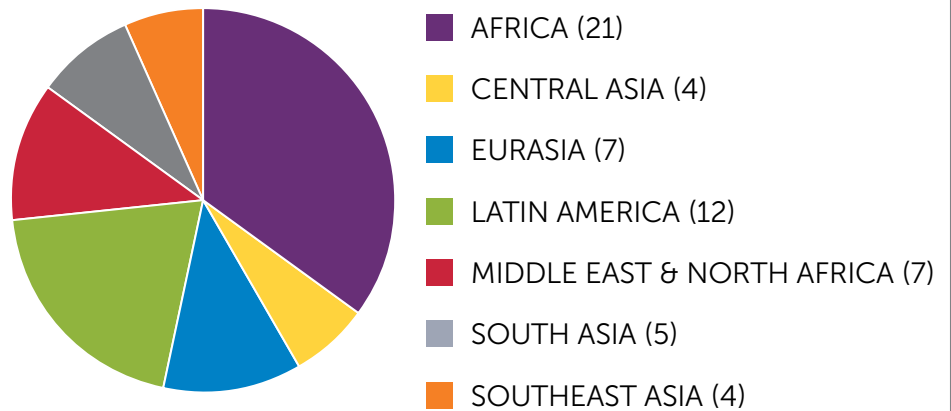
In 2011, GCCA support of a U.S. Agency for International Development (USAID) project in Morocco led to a joint venture between GCCA members Lixia Capsia (LixCap) and Friopuerto Invest SL and a local business partner, Yacout Investissement, to develop a cold storage facility at the Port of Tanger Med. With a total investment commitment in Morocco of \$15 million (USD), the first phase of the facility opened in February 2016. It includes cold and fresh storage, packaging, processing, and handling services.

“This project is an excellent example of how the development work of the WFLO and GCCA staff Richard Tracy and Amanda

GCCA NEEDS YOU!

GCCA members interested in lending their expertise to an international cold chain project are encouraged to contact Amanda Brondy at abrondy@gcca.org.

GCCA INTERNATIONAL PROJECTS BY REGION





I thoroughly enjoy working with GCCA because they have been flexible, responsive, results-oriented and understand the importance of the local environment in adjusting programs... We have recommended GCCA to international partners in this region."

—CHUCK MAY, DAI COP, Uzbekistan AVC Project

Brondy can be used to create for-profit investible opportunities for GCCA members that serve important development needs. We are actively looking for other opportunities like this with WFLO," said Matthew Meredith, Partner at LixCap.

GCCA has worked in Uzbekistan since 2011, hiring local cold chain expert Mumin Isamiddinov to engage full-time with a USAID project. In 2016, reports indicated that three cold store operators receiving assistance from this project were able to increase the volume of their cold stores significantly through new investments recommended by GCCA. One of the operators located a partner to share the space with while another added an additional 65 metric tons. The third operator used the techniques and technical assistance taught during GCCA training to increase the volume of his facility by 200 tons. GCCA has demonstrated its value and established itself as a cold chain expert over the last 15 years through projects such as these.



GCCA Consultant Eric Sorensen (left) and Hank Bonar (second from left) of Bonar Engineering & Construction Company raise a toast after spending a week in Odessa, Ukraine to inspire facility owners to invest in cold storage.



GCCA provided our projects with the best and brightest practitioners of post-harvest management and cold chain development. WFLO can design and implement competitive post-harvest strategies within the context of a rural off-grid village operation or a modern multi-million-dollar facility and anything in between."

—ELISE DERIEL, Former Winrock Program Manager

With the first 15 years demonstrating huge growth in the international project portfolio, GCCA anticipates additional growth during the next 15 years through the addition of private donor funding — a priority for 2017. Initial inroads have been laid in 2016 with the development of proposals to the Rockefeller Foundation, an organization focusing on reducing food waste and food loss. Other donors are expected to follow suit as the United Nations set the reduction of food loss as one of its "Sustainable Development Goals" for 2030.

As the world's attention has turned to fighting and reducing food waste and food loss, GCCA member expertise on the preservation of food is more in demand than ever before. ☺

AMANDA BRONDY is Director, International Projects at GCCA.

MEGHANA VENKATESH is an Intern at GCCA and a student at Texas A&M University.

EMAIL: abrondy@gcca.org and mvenkatesh@gcca.org.

MEMBER NEWS

NEWS FROM MEMBERS OF GCCA CORE PARTNERS

ALL WEATHER INSULATED PANELS is the first company of its kind in North America to employ Honeywell's Innovative Solstice Liquid Blowing Agent. Honeywell customers worldwide who have integrated Solstice low-global-warming-potential materials in other products have already realized the reduction of nearly 30 million metric tons of greenhouse gases to-date.



CAVALIER PRODUCE opened a new 35,000-square-foot commercial cold storage facility with the help of Tippmann Innovation's construction services. The ribbon cutting was conducted in July 2016.



DK ENERGY US acquired Groom Energy Solutions. As an American subsidiary of French Mega-Utility EDF's energy services arm, Dalkia, DK Energy US has been seeking a delivery partner to help build its American business and sell its energy analytics software.



EVAPCO was recently honored with a Spirit of Excellence Award from Hormel Foods Corporation for Evapco's exceptional service to Hormel in 2015.



FRIOZEM GROUP acquired the Brado Logistica unit located in the city of Colombo in the Metropolitan Region of Curitiba, Brazil.



HENNINGSEN COLD STORAGE CO. has received Safe Quality Foods (SQF) Level 2 Certification for its Salem, Oregon facility.



HENNINGSEN COLD STORAGE CO. will build a new 166,000-square-foot facility in Salem, Oregon at Mill Creek Corporate Center.



LINEAGE LOGISTICS has acquired Consolidated Distribution Corporation. With the acquisition of CDC, Lineage becomes the largest customized re-distribution network in the United States.



MERCHANDISE WAREHOUSE COMPANY conducted the ribbon cutting on its new multi-temperature facility in Indianapolis, Indiana with Indianapolis Mayor Joe Hogsett, Rob Adams of Tippmann Innovation, and Merchandise Warehouse Company Vice President Tim Siddiq doing the honors. The 100,000-square-foot refrigerated warehouse was completed with the help of Tippmann's construction services and adds to Merchandise Warehouse's existing 400,000 square feet of cold storage.



Tippmann Innovation designed this advanced refrigerated building for Merchandise Warehouse in Indianapolis, Indiana.

MTC LOGISTICS earned a recertification through the British Retail Consortium (BRC) under the Global Food Safety Initiative (GFSI), achieving a perfect score for its Port of Wilmington, Delaware distribution center.



PREFERRED FREEZER SERVICES is developing a new 314,424-square-foot warehousing distribution and processing center in Federal Way, Washington. The industrial-zoned site will also house a 75,000-square-foot processing facility independently operated by Orca Bay Seafoods Inc.



TIPPMANN INNOVATION was selected by Bridge Development to build an advanced convertible refrigerated/freezer building new

the Seattle Sea-Tac Airport. Western Distribution Services (WDS) will operate the facility. The building is unique on multiple levels, and addresses several design and engineering challenges. WDS wanted a versatile building that is fully convertible and can be utilized as a freezer or cooler. The building will be able to manage a range of temperatures, from 40 degrees Fahrenheit to -10 degrees Fahrenheit, accommodating everything from meat and produce to frozen foods.




The groundbreaking for the new facility to be built by Tippmann Innovation included (L to R) Steve Poulos, Bridge Development; Rob Adams Tippmann Innovation; Brian Niven and John Naylor, Western Distribution; Jonathan Pozerycki and Sam Tippmann, Tippmann Innovation; and Mark Christensen.



UNITED STATE COLD STORAGE broke ground for a 3.6 million-cubic-foot addition to its Warsaw, North Carolina warehouse. The Phase Three expansion, nicknamed "Project Frosty," is expected to be completed in December 2016 and includes a new cooler with pick tunnels (+26 degrees F) and a new freezer (-5 degrees F) and 13,000 additional pallet positions. Upon completion, USCS Warsaw will span approximately 8.6 million cubic feet with 30,500 pallet positions.



WESTERN GATEWAY STORAGE COMPANY chose Evapcold Low Charge Ammonia packages for its new 30,000-square-foot freezer facility in Ogden, Utah. The small 580-pound ammonia charge significantly reduces Western Gateway's regulatory compliance costs, particularly because of the comprehensive product and system documentation provided by Evapco. The local utility awarded Western Gateway an electrical rebate of \$60,000 for installing Evapcold. 

ASSOCIATION NEWS

NEWS ABOUT GCCA CORE PARTNERS

The 2016 **GCCA** Global Cold Storage Capacity Report was released in September 2016. It shows that the refrigerated warehouse capacity worldwide grew to 600 million cubic meters this year, an increase of nearly 9 percent since the report was last published in 2014. The Capacity Report provides industry growth trends, market development indicators and market comparisons. *The Wall Street Journal* published an article, "Global Refrigerated Warehouse Capacity Grows Amid Emerging Market Gains," which focused on a general overview of the report's results. The WSJ article attracted larger attention and a follow-up story in *The Washington Post*. The *Post* story, "How an Apple Grown in the U.S.A. Becomes a Status Symbol Overseas," put a spotlight on cold chain advances as an indicator of growth in particular regions.



The "new and improved" **IARW** Productivity & Benchmarking Report (PBR) online tool recently re-launched with a streamlined survey. This new survey distilled over 450 questions down to a manageable 64-question survey and is built on a new easy-to-navigate, on-line platform. A significant change from allowing corporate-based or pooled/aggregated data from multiple warehouses to a warehouse-specific survey will allow for much better comparisons, evaluation of KPIs (Key Performance Indicators), and cluster reporting. The revised survey allows for some immediate auto-calculations as

well as 17 useful KPIs after the user completes the survey. Once completed, users can filter information using three basic filters (region, size of warehouse, and type of warehouse operation). Additional filtering options are available for Premium members, and allow for an additional five filtering options including age of warehouse, ownership status, percentage of case pick operations, inventory turns per year, and type of use across temperature zones.



WFLO was recently invited to attend an East African Heads of State roundtable in New York City hosted by U.S. Secretary of Commerce Penny Pritzker. Held alongside the United Nations General Assembly meeting and the U.S.-Africa Business Forum, the roundtable brought together East African leaders to discuss business development, investment opportunities, and economic growth in their respective countries. Hailemariam Desalegn, Prime Minister of Ethiopia, Yoweri Kaguta Museveni, President of Uganda, Paul Kagame, President of Rwanda, and William Ruto, Deputy President of Kenya participated, along with multiple U.S. and African CEOs from companies doing business in the region, including Corey Rosenbusch, President & CEO, GCCA. The discussion was aimed at accelerating regional integration through practical and actionable private sector driven proposals in the areas of travel and tourism, agribusiness technology, and infrastructure. The African leaders all

spoke specifically to the infrastructure of the cold chain in their countries and the need for assistance in developing their capacity.



The **IACSC** Built by the Best Award competition received numerous submissions by project teams that completed exceptional work on a temperature-controlled new building or expansion of an existing building between January 1, 2014 and July 30, 2015. One of the requirements of the award is that the project must include a number of IACSC member companies — from design/build firms and contractors to companies that provide walls, doors, flooring, and more. This new award was developed to bring attention to excellence in building the cold chain with particular attention on members of the International Association for Cold Storage Construction (IACSC), a core partner of GCCA. The award-winning team presented a keynote presentation during the recent IACSC Conference & Expo. Judging for the award was based on a scorecard, which featured six areas: IACSC Member Participation; Project Complexity; Innovation; Project Management; Sustainability Consideration; and Contribution to Larger Society or Temperature-Controlled Supply Chain.

Continued on the next page.

SAC 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).

Q: If we apply a sell-by date to the retail unit of a food product (shrimp), do we need to have U.S. Food and Drug Administration (FDA) inspections? We will receive frozen imported

shrimp, temper it to a 34-38-degree temperature to coincide with product needs from the storage customer, and then, prior to ship, and now tempered to a refrigerated temperature, we will open each case and put a sell by date on each retail package.

A: You will find that there are no Critical Control Points (CCPs) needed, since

these are sealed packages. This means that it is not reasonably likely to occur that any chemical, biological or physical hazard will contaminate these products. Also since these are refrigerated, pathogen growth is also controlled.

Answer provided by Dr. Michael Jahncke, Chairman of the Scientific Advisory Council from Virginia Seafood Agricultural Research & Extension Center.

NEW MEMBERS

NEW MEMBER COMPANIES OF GCCA CORE PARTNERS



IARW-WFLO WAREHOUSES

Friofort S.A., Moreno

Santiago, Chile

Hilltop Ranch Inc.

Ballico, California, United States

Polo Norte Cold Storage International

Alajuela, Costa Rica

Royal Cargo Inc.

Manila, Philippines



IARW ASSOCIATE MEMBER

Avison Young

Chicago, Illinois, United States



IACSC MEMBER

Stanker & Galetto Inc.

Vineland, New Jersey, United States



IACSC ASSOCIATE MEMBERS

Logix Refrigeration Controls

Kirkland, Washington, United States

Republic Refrigeration, Inc.

Monroe, North Carolina, United States



IRTA MEMBER

Utility Trailer Manufacturing Co.

City of Industry, California, United States

ASSOCIATION NEWS

Continued from page 28

GCCA Technical Expert Stephen Neel will represent **IRTA** and deliver an education session at Cargo Logistics Canada in Vancouver, Canada, February 8-9, 2017. The session will focus on the recently published IRTA Refrigerated Transportation Best Practices Guide; a brief Summary and User Guide to better understand the FDA Final Rule; and a Compliance Matrix to help shippers. These documents were created for freight loaders, carriers, and receivers to better understand who has primary and secondary responsibility for each requirement within the FDA rule. IRTA will also host a Cold Chain Executive Connection (CCEC) during the event. Please visit the GCCA Event Calendar at www.gcca.org for more information. ☎

2016–2017 CALENDAR

NOVEMBER 8, 2016

GCCA & ABIAF Cold Chain Executive Connection

Sao Paulo, Brazil

NOVEMBER 10-12, 2016

36th IACSC Conference & Expo

Ft. Lauderdale, Florida, United States

NOVEMBER 10-11, 2016

GCCA Latin America Cold Chain Congress

Santiago, Chile

DECEMBER 16-17, 2016

2016 Indian Cold Chain Expo (ICE)

Indore, Madhya Pradesh, India

FEBRUARY 19-22, 2017

53rd WFLO Institute – East

Atlanta, Georgia, United States

MARCH 19-22, 2017

53rd WFLO Institute – West

Los Angeles, California, United States

APRIL 23-25, 2017

126th IARW-WFLO Convention

Dana Point, California, United States

JUNE 13-15, 2017

Global Cold Chain Expo

Chicago, Illinois, United States

JULY 31 – AUGUST 2, 2017

2017 Assembly of Committees

Washington, D.C., United States

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

COOL PEOPLE

PROFILING INFLUENTIAL PEOPLE CONNECTED TO THE COLD CHAIN INDUSTRY



BRIAN BEAZER

General Manager and CEO
WCS Logistics/Winchester
Cold Storage Company

In addition to his duties at WCS Logistics/Winchester Cold Storage Company, Brian Beazer is an instructor for the new WFLO Institute Latin America and volunteers to lend his warehouse operations expertise to improve the cold chain in other countries under the auspices of U.S. Agency for International Development and U.S. Department of Agriculture grants.

CF: You have volunteered to share your warehouse operations expertise with, and technical assistance to, cold chain operators in a number of Central American countries over the past few years. What do you hope is the impact of these efforts?

BRIAN BEAZER: It has been a great experience for me to be able to participate in these projects and offer support through some of my experiences. I feel that there is a two-layer impact from these experiences. First is the opportunity to share knowledge with those in other countries that are very interested in bettering their own companies and countries. The second impact is that by doing so, I feel like it makes the entire cold chain more intact. These companies and countries seem to implement suggestions and by doing so make their product safer and therefore makes the process of export from their country and



As to why I volunteer, I enjoy teaching and sharing knowledge with others and feeling like I may have helped someone gain a passion for the cold chain."

import to the destination country that much easier. It also makes me feel more confident when I go to the local supermarket and see products from these countries on the shelf and know that I have helped.

CF: You recently returned from the Dominican Republic where you were part of a team assessing the country's cold chain. Is there anything unique about the DR's cold chain that might surprise readers?

BB: Honestly, it was a great experience because it seemed that every sector of the cold chain was interested in bettering what it was doing and how it was doing it. I think that a unique aspect of the DR is the fact that it has 14 ports and eight international airports from which to export product. For a small island country, it has a very good infrastructure in which the cold chain is based and it is getting better at making all the pieces work together. All this makes it a natural hub for Central America and the Caribbean.

CF: You have been an instructor for all three years of the new WFLO Institute Latin America, which has just seen its first class graduate. Can you describe what that teaching experience has been like?

BB: It has really been a wonderful experience for me. I love to teach and share what I know, but also I have been able to see a group of professionals learn, progress, and share their own experiences with one another and continue this sharing and learning with each other outside of the Institute through continued contact. It is also good to see the next classes to graduate going through the same process.

CF: Why do you volunteer and would you recommend it to your GCCA colleagues?

BB: This is a good question and I will answer the last part first...yes, I would recommend it to other GCCA members. It is a great experience. As to why I volunteer, I enjoy teaching and sharing knowledge with others and feeling like I may have helped someone gain a passion for the cold chain. And, on a business level, I am able to make professional contacts in countries that export a lot of product to the United States. The networking is invaluable. ☺

JAMISON: INDEPENDENT THIRD-PARTY TEST LAB RESULTS

The HCR Door results are in: ***80% efficient*** in blocking air infiltration



The HCR calorimetric environmental test chamber at CTS Labs in Urbana, IL

HCR pioneered the air door market 37 years ago and now has over 4000 worldwide installations. Until recently there was no authoritative, independent third-party test lab data that documented the efficiency of the unique HCR air door. A three-month evaluation was recently completed, and those results are now available to the marketplace.

Creative Thermal Solutions (CTS) is a leading test lab for products in the HVAC and refrigeration industries. They test products that claim to offer increased energy efficiency, reduced energy consumption, and environmental sustainability. CTS labs recently conducted an extensive thermal performance analysis on HCR air doors. **The results verified that the HCR Model AC (Single Air Door) is 80% energy efficient* when stopping air infiltration and energy transfer between rooms with different temperatures.**

HCR Air Doors - Remove All Obstacles

HCR demonstrates the greatest energy efficiency for doorways with over 10% DOT (door-open time), and can represent considerable and even dramatic energy savings in the right application. In addition to energy savings, HCR significantly reduces moisture from entering the cold room, and prevents icing and condensation on floors, walls, and products. Reduced frosting of the refrigeration cooling coils will result in fewer defrost cycles.

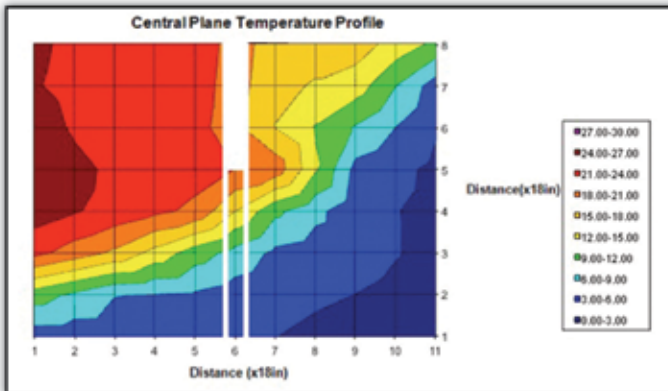
For more details about the CTS test results, visit www.hcrairdoors.com

JAMISON | HCR Air Doors

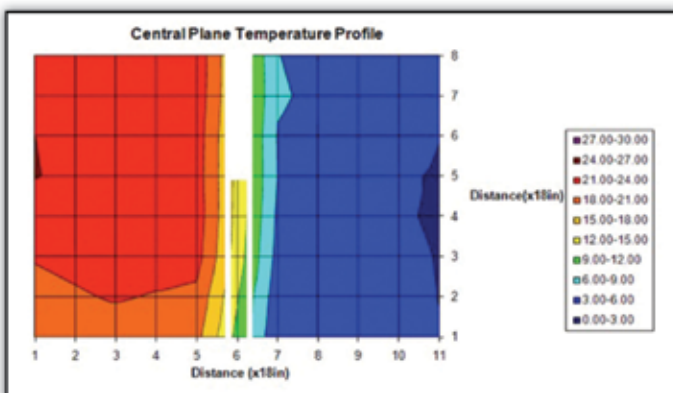
www.jamisondoor.com

800-326-7700

*For details and the lab performance report visit www.hcrairdoors.com, contact your Jamison or HCR representative, or call 800-326-7700. Request the White Paper on the Evaluation of Horizontal Recirculatory Air Curtain Efficiencies – Cooler to Conditioned Space, D. Rhyner, HCR, Inc.



Temp profile: air door off



Temp profile: air door on

FLOOR FACTS



- 1** 1/5 the joints of regular floors,
1/2 the joints of 'jointless floors'
= reduced axle and transmission repairs and smoother rides
- 2** Low operator fatigue and better pick rates
= higher employee retention and easier management
- 3** Long lasting surfaces that clean more easily and reflect light well
= increased morale and faster, safer driving

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



INDUSTRIAL FLOOR CONTRACTOR

KALMAN
FLOOR COMPANY, INC.

Building Value For You
WORLDWIDE SERVICE

HOME OFFICE

1202 BERGEN PARKWAY, SUITE 110
EVERGREEN, COLORADO 80439

(303) 674-2290

KalmanFloor.com

info@kalmanfloor.com

FASTER FREEZER FLOORS

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

KALMAN FLOORS HAVE UP TO 90% FEWER JOINTS



ESTABLISHED 1916