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LEADOFF

MESSAGES FROM GCCA LEADERS

THE START OF A NEW YEAR IS A NATURAL TIME TO TAKE A MOMENT AND REFLECT ON THE PAST YEAR'S ACCOMPLISHMENTS AND LOOK FORWARD TO EXCITING PLANS.

I want to express my gratitude to everyone in our readership and membership community for their fantastic support and enthusiasm for our activities throughout the past year. It was a record-breaking year in regards to member engagement with numerous events taking place in more places around the world with larger numbers of cold chain professionals participating in GCCA activities. This occurred at the same time as we made significant progress in our education, insight and advocacy activities. We have much to be proud of for how our industry and association represent the global cold chain.

That momentum carries us into 2024. It's energizing to start our year with our GCCF Cold Chain Institute classes in Atlanta, Georgia and Tempe, Arizona. We are proud of our unique program where emerging cold chain leaders meet to share and learn from business leaders and other experts. The optimism and positivity of these events set up our year, especially because in 2024 our Institute program will be expanding to more locations and reaching more students across the world.

Bringing cold chain people together is at the core of our purpose, and as soon as we finish the Institute, our program will continue apace with conferences and conventions planned on four continents. We have also expanded our Cold Chain Connections and virtual events program, which complement our conferences by providing different ways for cold chain businesses to access the resources and opportunities that GCCA has to offer.

We are entering a significant year of political change and elections around the world. For that reason, the association has expanded its efforts to emphasize the importance of the cold chain to government and agency leaders

worldwide. With members in 90 countries, GCCA is dedicated to advocating where it can make a difference. Our unique global presence and proactive global strategy will unite people in our industry to influence policy where it is most needed. In this, as in many other association activities, member engagement is critical.

We couldn't do what we do without the volunteers that take up positions on our global boards, our regional councils and our committees. We thank the outgoing chairmen Mike McClendon, GCCA Warehouse; Greg Laurin, GCCF; and Marko Dzeletovich, CEBA. They have each played an instrumental role in guiding us through 2023. We welcome our new 2024 GCCA Warehouse chairman, Jason Dreisbach; GCCF chairman, Mickey Hoffman; CEBA chairman, Sam Tippmann and Don Durm, GCCA Transportation chairman (who is continuing into his second year).

The year ahead is another vital one for our industry and your association. In the coming weeks, we will begin a period of seeking your quantitative and qualitative feedback on what you value about your association and what industry issues, trends and opportunities you think we can place at the heart of our next Strategic Plan. We ask for your help with this vital exercise and look forward to sharing the data with leaders and members worldwide in the coming months.

We look forward to hearing from and seeing you in the year ahead. 📧



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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
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@wearenci.com for advertising opportunities in GCCA publications.

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REDUCING FOOD LOSS AND WASTE

Three U.S. government agencies release joint draft national strategy.

By Lowell Randel



In December 4, the U.S. Food and Drug Administration (FDA), the U.S. Department of Agriculture (USDA) and the U.S. Environmental Protection Agency (EPA) released a draft national strategy intended to make progress toward the national goal to reduce food loss and waste in the United States by 50% by 2030. The rollout of this strategy holds great potential to showcase the vital role that the cold chain plays, and GCCA is committed to doing that.

The strategy cites data showing that in the United States, the average family of four spends \$1,500 each year on food that ends up uneaten. It goes on to report that there are 66 million tons of food in the U.S. municipal waste stream. Food is also the single most common material found in landfills, comprising 24% of municipal solid waste in landfills.

It's estimated that in 2021, food loss and waste and surplus food was valued at \$444 billion, which represents roughly 2% of the U.S. gross domestic product.

The goals of the National Strategy for Reducing Food Loss and Waste and Recycling Organics are to prevent the loss and waste of food, where possible; increase recycling of food and other organic materials to support a more circular economy for all; reduce greenhouse gas emissions (GHG); save households and businesses money; and build cleaner, healthier communities.

Implementation of the strategy is intended to provide social and economic benefits such as:

- Increasing food access for food-insecure Americans and increase the recovery and donation rate of wholesome food, for example through the emergency food system.
- Creating materials management or food waste reducing innovation-related new jobs, industries and sectors of the economy.
- Increasing supply chain resiliency.
- Delivering financial savings to households.

The National Strategy proposes the following four objectives:

1. Prevent food loss where possible.
2. Prevent food waste where possible.
3. Increase the recycling rate for all organic waste.

4. Support policies that incentivize and encourage food loss and waste prevention and organics recycling.

Objective 1:

Prevent food loss where possible.

The strategy suggests that innovation, collaboration and market development will drive progress toward preventing the loss of foods and enable significant social, environmental and economic benefits from farm to table. Some actions, such as policy adjustments and innovations, can apply to both food loss and waste and can allow the equitable development of new technologies at all levels of government that help the United States meet its National Food Loss and Waste Reduction Goal.

Opportunities to reduce food loss at the production and distribution stages of the food supply chain can lead to greater economic returns for producers, manufacturers and distributors. One of the keys to achieving this objective is optimizing the harvest or collection of raw commodities and foods. This will require enhanced collaboration across the food supply chain to develop new models and data to support new policies that use a greater share of foods produced.

The strategy highlights examples that include whole crop purchase and/or partial order acceptance by retailers, procurement models to source local produce (such as between farms and schools that accept produce donations), better integration of



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production and processing facilities, improved on-farm storage, and technical assistance on loss reduction approaches through public-private partnerships.

The strategy identifies the need for technological innovations, such as improvements in demand forecasting, leveraging predictive analytics (i.e., artificial intelligence), strengthening on-farm food rescue and the equitable distribution of surplus food. The strategy also calls out the need to optimize handling, routing and storage; improve transportation, inventory and supply chain management with best practices and technologies, such as artificial intelligence, blockchain technology and remote sensing.

GCCA is already actively working with food banks and is well positioned to play a role in advancing this objective.

**Objective 2:
Prevent the waste of food where possible.**

Food waste from consumers and consumer-facing businesses (retail and food service) comprises roughly half of U.S. food loss and waste. This carries larger environmental and economic costs than food losses upstream (i.e., on-farm or within food processing and distribution), since costs accumulate as food is wasted further down the supply chain.

Suggested actions to achieve Objective 2 include:

- Developing a national consumer education and behavior-change campaign.
- Educating children and youth about strategies to reduce food waste and encouraging adoption of lifelong best practices in schools to reduce food waste.
- Partnering with the private sector to find upstream solutions to consumer food waste.
- Facilitating and incentivizing food donations to improve access to healthy and affordable food.
- Identifying and addressing drivers of U.S. food loss and waste and the incentives to reduce it.
- Investing in behavioral science to determine the most effective strategies to change household behaviors related to food waste.
- Identifying technology-based solutions and best practices to reduce food loss and waste among retailers, manufacturers and food service providers, including in their supply chains.

**Objective 3:
Increase the recycling rate for all organic waste.**

Recycling organic waste offers the opportunity to recover valuable resources, such as nutrients and energy, and create healthy soils. Certain types of organic waste can be converted to animal food, composted, anaerobically digested, or converted into energy or other products, thus providing nutrients to livestock, returning nutrients to the soil, or displacing the use of fossil fuels—all while reducing GHGs. Organics recycling can help build a more circular economy and reduce landfill methane emissions.

**Objective 4:
Support policies that incentivize and encourage food loss and waste prevention and organics recycling.**

The strategy calls for the development of policies that incentivize and encourage the prevention of food loss and waste, redistribution

of surplus food, development of additional organics recycling infrastructure, and expansion of markets for recycled products made from organics and soil amendments made from food and other organic waste to help the United States meet its food loss and waste reduction goals. These policies can be federal, state and local, and many states and cities have already enacted policies to reduce food waste.

GCCA is encouraged by the release of the draft national strategy and will continue working closely with USDA, FDA and EPA as the agencies work towards implementation. GCCA will also build on its collaboration with food industry partners, food banks and others in the private sector to advance our shared goal of reducing food loss and waste. 🌱

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

EMAIL: lrandel@gcca.org

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ARE YOUR SYSTEMS CYBERSECURE?

An interview with expert Barbara Rasco on best practices for protecting against attacks.

No one would want to work in a building without a fire detection and evacuation procedure, few would be willing to leave their building without locks, surveillance and burglary alarms and yet still today, too many cold storage businesses are not investing enough focus and resources in defending their business against cyberattacks.

In a recent meeting with Dutch cold storage businesses, experts “Techniek Nederland” put the challenge in stark terms. The risk that a European cold storage business might face a fire incident is 1 in 8,000, the risk of being burgled is 1 in 250, but the chance of being subjected to a serious cyberattack is 1 in 5.

In today’s interconnected, increasingly automated world it is not a matter of IF your business will be victimized by a cyberattack, but when. So, businesses across the cold chain must act, and even if businesses remain reluctant or inert to doing so, regulators across the developed economies are putting in place regulations that will require them to do so.

One individual determined to help prevent GCCA member companies from being victimized by cyberattackers is Dr. Barbara Rasco, BSE, PhD, JD. She is a food safety and food safety regulations expert at the University of Wyoming and a member of the Global Cold Chain Foundation (GCCF) Council of Scientific Advisors. She is assisted by Susan Borhan, a cybersecurity faculty member at Colorado Technical University.

Cold Facts Editor in Chief Alexandra Walsh sat down virtually with Rasco, who shared her thoughts on the importance of cybersecurity awareness in the industry.

AW: Why is cyber security awareness so vital in the food industry?

BR: The food industry supply chain can be vulnerable to cyberattacks. Hackers may target critical components such as logistics software, IoT (internet of things) devices or communication systems to disrupt the flow of goods or gain unauthorized access to sensitive data.

User awareness training is an extremely cost-effective form of defense. An untrained user is often the entry point of a breach, which can be prevented with the proper training and system configurations.

Companies store a vast amount of data related to shipments, routes, inventory and

customer information. Data breaches can lead to the exposure of sensitive information, including trade secrets and personal data, which can be exploited by cybercriminals. If the company’s records are hacked, the personal information of all the companies’ staff may be exposed. Think about how often social security numbers appear on documents.

In addition to potentially exposing the personal information of employees, vendors and customers, and disrupting the food supply chain, one of the most distressing problems these targeted companies face is downtime, the losses from which can cost billions of dollars. I know of a number of food companies that have been hit with ransomware attacks.

AW: Where are the greatest vulnerabilities?

BR: Looking at the problem realistically, human error is the greatest risk to a company’s cyber security. Insider attacks can also pose a threat but far more common are unintentional acts by employees that can lead to a data breach or compromised information.

Legacy systems (those that haven’t been updated) provide major vulnerabilities to cyberattack. If the company has an older IT infrastructure, it is harder for IT staff to keep up with needed upgrades and patches. The consequence of not remaining updated is you can’t protect your systems against attacks. Updating and applying patches to your devices and systems is crucial.

Anywhere there is an exchange of information between you and another person, there’s risk of a cyber breach. For this reason, end-to-end encryption plays an important role in the exchange of data as well as access control settings on accounts.

Personal phones are a huge vulnerability. How can we assure employees’ personal phones are secure? The company might make a decision to ban personal phones or limit apps on the worksite. Or it could come up



Dr. Barbara Rasco, BSE, PhD, JD, University of Wyoming, and member of the Council of Scientific Advisors.

For more advice on how to protect your business from cyber threats go to:

U.S. Federal Trade Commission
<https://www.ftc.gov/business-guidance/small-businesses/cybersecurity>

Canadian Center for Cyber Security
<https://www.cyber.gc.ca/en>

European Cybersecurity Competence Center and Network
https://cybersecurity-centre.europa.eu/nccs-0_en

U.K. National Cyber Security Center
<https://www.ncsc.gov.uk/section/advice-guidance/all-topics>

with another solution, such as geofencing that can disable personally enabled phones in the company vicinity.

The IoT devices or smart devices are increasingly used in operations, logistics and transportation from tracking shipments to monitoring temperature and humidity in refrigerated containers. IoT devices can be vulnerable to cyberattacks if not properly secured or their software/firmware updated. This could affect the integrity of food products during transit or lead to data breaches.

Not just internal systems can be vulnerable, so can any interface with vendor, state and municipal governments. Power grid and water systems across the United States have been targeted already and present another risk for those companies generating electricity to sell back to the grid.

It is crucial that security stays up to date and one step ahead of attackers as technologies become more sophisticated and networks more interconnected.

Hacked systems can also represent a facility safety issue and the lack of physical security that is integral in a company's security at large. This could ultimately impact any physical access method or infrastructure that is connected to entry systems, traffic lights, lifts and of course, food temperatures.

AW: What are the most common methods of attack?

BR: Attackers use vulnerabilities in devices, take advantage of legacy systems and exploit insecure networks and IoT devices.

Ransomware targeting networks is the most common attack within the industry. But also exploiting the IoT is a vulnerability that is becoming more common.

Most concerning is phishing and other social engineering scams that have become very sophisticated. Cell phones, laptops, workstations, RFID tags (and there are lots on food packaging), IoT software or firmware, entry systems operated by Bluetooth devices all now have some type of software that interfaces with a facility's network. A switch used to turn on a light. Now lights turn on through hardware built into the network. If a network is compromised, all of these devices can be subject to manipulation from a threat actor.

Employees in the food and transportation industry may be targeted through phishing

Know Your Enemy

Here's your Cold Facts guide to the contents of the cyberhacker's toolbox.

Malware

Malware is harmful software that disrupts computer systems, steals private information, or gains unauthorized access to information or systems. It includes viruses, worms, Trojan horses, ransomware, spyware, adware, rogue software, wipers, and keyloggers.

Ransomware

Ransomware is a type of malware that blocks access to personal or business data unless a ransom is paid. It disguises itself as a legitimate file and encrypts the victim's files, making them inaccessible.

Adware

Adware is software that generates revenue for its developer through online advertisements. It can be either legitimate or malicious, with the latter designed to damage and disrupt a system.

Phishing

Phishing is a type of scam where attackers deceive people to get sensitive information or install malware. It's becoming more sophisticated, often mirroring the targeted site and bypassing security measures. As of 2020, it's the most common type of cybercrime.

Smishing

SMS phishing or smishing is a type of phishing attack that uses text messages to deliver a bait message. The victim is usually asked to click a link, call a phone number or contact an email address provided by the attacker. Smishing messages may also come from unusual phone numbers.

Vishing

Vishing is a type of phishing attack carried out using telephony, often employing Voice over IP (VoIP) features such as caller ID spoofing and automated systems to avoid detection. Attackers pose as legitimate entities, like banks or internet providers, and use live callers or automated text-to-speech systems to steal personal information such as credit card numbers for identity theft.

emails or social engineering tactics. If successful, these attacks can compromise sensitive information or provide attackers with access to critical systems.

Adware can be hidden on website click ads, icons, graphics, and links associated with ads. Using the same password across multiple sites might save time, but it also poses a major vulnerability. Artificial intelligence (AI) makes it even easier to figure out passwords. Targeting c-suite emails for passwords isn't such a challenge when AI can find patterns for passwords.

Insiders with access to logistic systems and data can pose a significant cybersecurity risk. For the most part, it is unintentional acts by employees that can lead to data breaches or system compromises.

The same is true with vendors, customers and even IT experts. It can be hard to screen a software solutions vendor. Any third party could introduce an additional cyber risk to your system in a way that leaves it vulnerable if adequate security measures are not in place.

CF: What kind of cyberattacks are impacting the cold storage industry?

BR: A cold storage operation was victim of a ransomware attack in 2023. A food processor's facility shut down for days impacting just-in-time delivery and first in/first out operations with a significant impact on regional supply chains. Any day of lost productivity in a highly concentrated and vertically integrated sector can have a massive



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impact on the income of the company, its suppliers and customers and cause significant interruption to the food supply.

A U.K. logistics company was forced into bankruptcy because of a data breach. The company was unable to secure urgent investment after the breach. It was considered a high risk and was unable to secure short-term bridge funding.

In Alaska where rail is vital to trade, a third party gained unauthorized access to the railway's systems. All kinds of sensitive and personal information were taken.

For the individuals victimized by these hacks, having their personal information hacked is more than just a huge hassle – it can ruin their life.

State-backed hackers conduct a massive quantity of espionage operations each year and capitalize on any flaw or mistake in critical services to wreak havoc. Utilities and key infrastructure is being targeted. Recently, Chinese hackers targeted Hawaii because of its isolated military installations and proximity to Taiwan. Also targeted are infrastructure at major ports and oil and gas pipelines in the U.S. Northwest.

AW: Can you offer a few best practices in preventing a cyberattack?

BR: Everybody shares the responsibility for maintaining security, and there are lots of preventive measures that can be taken.

Most important, be vigilant and operate on updated systems. Learn what you can about your networks and systems, so you are able to detect something. If IT tells you to update your password, make sure it's a legitimate request. Update passwords frequently, and ensure they meet a high level of complexity.

Ensure only certain people have access to systems and that accounts allow and limit access based on the relevance of the particular role. These can be implemented with role or attribute-based controls on particular accounts. For example, a staff member in the billing department doesn't need access to the same functions as someone in the HR department. If you can effectively segment the roles, you can strengthen company networks as a whole.

In a facility, you might need an outside expert to direct you to do that. Many companies don't have team members with the expertise to prevent hacking. Think about

Regulators Take Action Around the World

European Union

In January 2023 the European Union adopted an update to its NIS2 (cybersecurity) Directive. This set rules for what each EU Member State must implement in national law, this includes requirements on the government and on private companies. The new law expands the scope of affected companies, from only the largest companies, to medium size (more than 50 employees) in key sectors that include both transport and food processing/distribution. This means new requirements to have in place policies, training and reporting obligations for many cold chain businesses across Europe coming in to force in 2024.

Brazil

In May 2023, the Lula administration proposed new legislation to create a new national cybersecurity policy (PNCiber), including the creation of three new institutions: a national cybersecurity agency, a national cybersecurity committee, and

a national management office of cyber crises. The Carnegie Foundation called this "the administration's boldest, clearest, and most ambitious vision for reforming Brazil's approach to cybersecurity." But they also noted that there were big hurdles and uncertainties over the speed at which they would be implemented.

United States

In July 2023, the Securities and Exchange Commission (SEC) adopted rules requiring public companies to disclose material cybersecurity incidents they experience and to disclose on an annual basis material information regarding their cybersecurity risk management, strategy, and governance.

The new rules will require registrants to disclose any cybersecurity incident they determine to be material and to describe the material aspects of the incident's nature, scope, and timing, as well as its material impact or reasonably likely material impact on the registrant.

bringing on a specialist to monitor regularly your cybersecurity.

If you haven't already, consider implementing biometrics and multifactor identification. Face ID, fingerprints, iris scans and even images can all be used in combination with a memorized password.

AW: Individually, what can we do to take personal responsibility for cybersecurity?

BR: You are expected to take a security-sensible approach by asking yourself these things about any outside communication you are receiving:

- Does it lack context?
- Is it from someone you don't know?
- Were you expecting it?
- Does it pressure you with urgent or threatening language to click a link, or pass on sensitive information?

Also beware of fake invoices – stop and think whether you're the person who usually gets that invoice.

And remember, if it's too good to be true, it probably is. ☹️

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

EMAIL: awalsh@associationvision.com

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FISHER CONSTRUCTION GROUP AND TI COLD WIN 2023 BUILT BY THE BEST AWARDS

Top cold storage design competition recognizes two best-in-industry projects.

By Keith Loria

Recognizing the increased level of competition and outstanding work submitted for 2023, the Built by the Best awards, created by the Controlled Environment Building Association (CEBA), a core partner of the Global Cold Chain Alliance (GCCA), honored two winners – one for a project under \$35 million and one for a more than \$35 million project.

The winners were announced at the 2023 CEBA Conference with Fisher Construction Group taking first place in the over \$35 million project category and Ti Cold went home with first place in the under \$35 million group.



Ti Cold's 2023 Built by the Best award-winning project for Core X. The facility's tight proximity is evident in an aerial shot. (Photo courtesy of Ti Cold.)

Under \$35M Winner – Ti Cold

Core X Complete is noted for providing frozen and refrigerated warehousing and truckload shipping solutions throughout New England and the entire Northeast of the United States. When it was time to expand, the company hired Ti Cold to master plan a high-density, 83,000-square-foot cold storage facility with 17,700 pallet positions in Sturbridge, Massachusetts.

Challenges From the Start

“They started kicking around a site in Massachusetts that was compact and tight, and they needed to get as many pallets as they could,” says Rob Adams, Executive Vice President of Ti Cold. “We looked at a traditional layout but we just couldn’t get that many pallets, so we needed to make the facility as dense as we could, and we ended up with mobile racking.”

The \$28.5 million facility was selected as the winner of the Built by the Best due to Ti Cold’s investigative and creative engineering team, fine-tuned implementation from project management, and commitment to excellence, all of which resulted in a facility that will contribute to the supply chain for decades to come.

“Every square foot of this project is simply well built; from the installation of major components like the mobile racking down to the minute details of curbs,” Adams says. “When you walk into Core X, you know you are standing in something solid.”

The project was not without its challenges. From a timeline standpoint, there were some initial issues. As it had to be built on only 7.05 acres, that created some logistical pressure. Plus, the project site was next to a busy highway with

a number of residential and industrial areas nearby.

COVID-induced supply chain shortages demanded proactivity to ensure switchgear delivery, so the project schedule stayed intact.

Plus, being in Massachusetts, which is known for its rocky earth, blasting was required on the site. Add to that the fact that winter conditions froze the subgrade, it required a high level of coordination to progress permitting.

“Construction on such a tight site resulted in two off-site storage locations and their ensuing logistics coordination, as well as complex storm drain construction in lieu of a retention pond,” Adams says. “COVID-induced supply chain shortages demanded proactivity to ensure switchgear delivery, so the project schedule stayed intact.”

Additionally, spot-on sequencing was necessary for intricate concrete and rail installation for mobile racking and coordination with pre-punched beams for in-rack sprinklers.

“We had a timeline, but we needed to deal with all of these things,” Adams says. “The project was also halted by the Massachusetts Department of Transportation. But we overcame all challenges, including supply chain disturbances, and the budget was sustained.”

Advanced Design

Some of the innovative features include convertible rooms cooled by transcritical CO2 refrigeration, which allow for easy adaptation to the client’s needs. Three underground storm basins were engineered in order to coordinate the necessary above-ground space (truck parking, employee parking, fire loop, and water tower) while maximizing the facility’s square feet. And also installing convertible cooler/freezer rooms that are adaptable at very low cost and allow the facility to meet future needs without having to add on to its footprint.

“It was the mobile racking that was probably the biggest accomplishment,” Adams says. “The facility hosts 17,700 pallet positions, compared to less than 10,000 pallets with standard stationary racking.”

Ti Cold has built many similar facilities, but Adams believes the craftsmanship for this project is one of its best.

“When you just look at this facility, the fit and finish of this building is just over the top,” he says. “It was a very intricate building and really fits within the landscape of the community.”



M&M Carnot's Transcritical Co2 Refrigeration System. (Photo courtesy of Ti Cold.)



Flex space mobile racking in the finished facility. (Photo courtesy of Ti Cold.)

2023 Built by the Best Award-Winning Supplier Profiles

These are the companies integral to the success of the Ti Cold winning project.

Albany - Dynaco High Performance Doors.

All Weather Insulated Panels

Coldbox Builders

Colmac Coil Manufacturing Inc.

CSI of Virginia

Fastener Systems Inc.

Frank Door Company

FREEZ Construction

Jamison Door Company

M&M Carnot

Metl-span

Puga Thermal Services

Rite-Hite

Shambaugh & Son, L.P.

The Fricks Company

Ti Cold



The racking rails, seen here pre-pour, had to be precision calibrated. (Photo courtesy of Ti Cold.)



Underground storm drainage basins were used because of the tight site space. (Photo courtesy of Ti Cold.)



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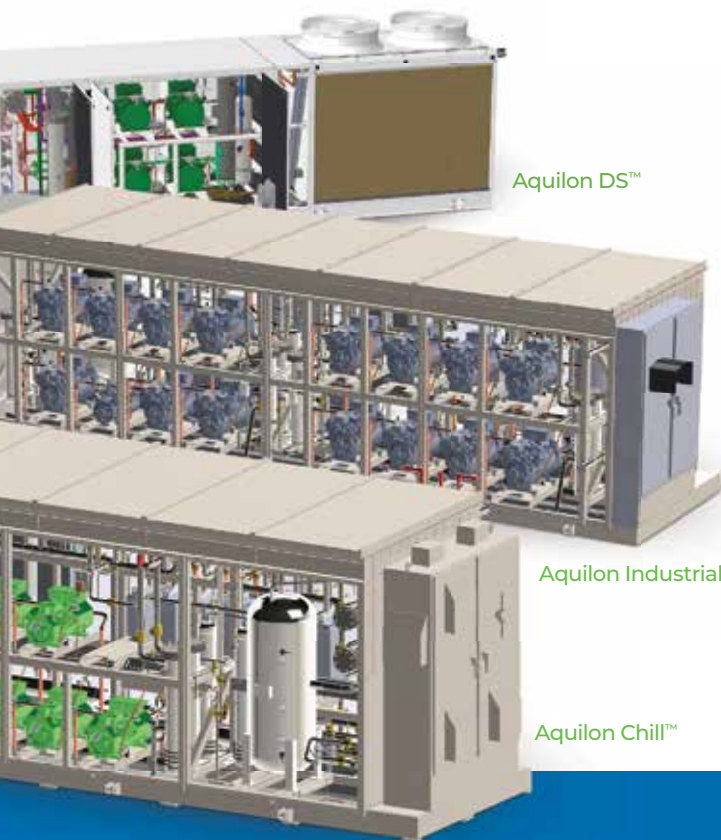
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Fisher Construction built an automated cold storage facility for NewCold that won the 2023 Built by the Best award in its category. (Photo courtesy of Fisher Construction Group.)

Over \$35M Winner – Fisher Construction Group

When Netherlands-based NewCold, which specializes in temperature-controlled warehousing and distribution, was seeking to have built the largest automated cold storage facility in Indiana, it turned to Fisher Construction Group.

“This was our third negotiated high-rise cold storage in the United States with NewCold,” says Christopher Wright, Project Manager for the job. “NewCold was looking for a partner it could count on, and it trusted and selected Fisher for its third-consecutive project. Fisher’s strategy is to provide NewCold – and all of our customers – with the best value and best service on all their projects to help them meet their customers’ needs.”

The \$62.3 million job was selected as the winner of the Built by the Best award in the over \$35 million category. The completed 464,646-square-foot Indianapolis cold storage facility was designed with state-of-the-art technology, including automated storage and retrieval systems (ASRS) to automatically move and store products in the dark high-bay warehouse.

“Like many others, the project started during the pandemic, which required our team to pivot from a LEAN Construction just-in-time approach to a batch and queue process to ensure procurement aligned with our client and construction needs,” Wright says. “The primary portion of the building was done on time, but our racking, on the other hand, was directly impacted by global

supply chain challenges and arrived after the anticipated start date.”

To ensure it was able to meet the needs of NewCold and their client, the Fisher team needed to crash the racking construction schedule.

“For approximately four months, our site was open from 4:30 a.m. to 2:30 a.m., seven days a week, with a 250,000-square-foot area fully illuminated to ensure preassembly measures could occur during the hours of darkness,” Wright says. “The hard work and efforts of both Voestalpine and Global Metal Construction truly allowed the project to be

delivered on time for NewCold and its client’s “first pallet in” date.”

Overcoming Challenges

The project was divided into three sections, the 250,000-square-foot highbay, dispatch area and layer pick area, and each presented its challenges.

“Ordering material well ahead of time was a constant challenge,” Wright says. “On NewCold Phase I, our roofing division, Fisher Roofing Services, spearheaded by Darrell Kidwell with alignment and agreement amongst our team members and shareholders, purchased



The rack-supported building, which allows for greater storage heights, is 130-feet tall. (Photo courtesy of Fisher Construction Group.)

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Once a pallet is unloaded, it is placed on an inbound conveyor where the system tracks each pallet and designates it a position in the freezer. (Photo courtesy of Fisher Construction Group.)

approximately two football fields of under-floor insulation,” Wright says. “During this period, many projects were impacted by the global challenges and lull in production of insulation.”

Kidwell looked ahead, identified this early on, and made a substantial purchase long before it became an issue on the project.

“In my opinion, all challenges have solutions; this example is just one of many that was identified, mitigated and addressed long before becoming a true challenge to the project schedule and deliverable to NewCold,” Wright says.

In addition, in the Midwest, at the time, this was the largest project as it related to the needs and requirements of concrete reinforcement.

“Tyler Vuurman from B&B Site Maintenance looked ahead at the issue and pulled as much rebar as he could out of local facilities,” Wright says. “When they were depleted, he moved to the next resource. During the construction of NewCold Phase I, by the end of the required procurement process, we were pulling rebar out of South Carolina 630 miles away from the project site.”

For Wright, all challenges have solutions, the driver is how badly one wants to address the challenge.

Another challenge was the thermal principles separating areas by zones. With multiple elevations connecting separate portions of the building and environments, ranging from -19 F to chilled 40 F environments to an exterior that can often have a heat index well over 100 F, it took a lot to ensure everything was done perfectly.

To solve this, Fisher’s thermal team designers and onsite team conducted multiple thermal detail reviews prior to construction, collecting insight from various members of both companies to create a working value engineered solution that made sense to both parties.

Innovative Features

Unlike typical large storage spaces, the NewCold facility is innovative in several key areas. For example, the structure that carries the weight of the walls and roof, also doubles as the racking for the product stored on pallets.

“Traditional storage facilities usually comprise a steel supported building, with stand-alone racking independent of the structure,” Wright says. “Rack-supported buildings allow for far greater storage heights. This project in particular is 130-foot tall. Typical cold storage facilities rarely crest 50 feet in height.”

Fire protection within the freezer was accomplished by lowering the concentration of oxygen and replacing it with nitrogen, so any fire that potentially starts quickly is snuffed out by lack of oxygen to sustain burning. This method is used as an alternative to traditional water sprinkler systems.

“Because of the low oxygen nature of the freezer, all pallets in and out of the freezer are handled by an automation system comprised of conveyors, monorails and cranes,” Wright says. “Forklifts are only used to unload and load the trucks. Once a pallet is unloaded from a truck, it is placed on an inbound conveyor. From there, the system tracks each pallet, designating a position in the freezer where through a system of conveyors, mono-

rails and cranes, a pallet is delivered. The process is reversed when the pallet is designated to be loaded onto an outbound truck.”

The NewCold facility was unique in its design for the sheer size and scale of the facility. Other elements include the almost total automation of product storage and retrieval with 17 ASRS cranes; the requirements set forth with a layer picking building with a chilled environment and a -19 F environment; and for the alternative method used for fire protection within the freezer environment that replaced traditional water sprinklers with a low oxygen system provided by Wagner Fire Protection.

A Top Team

At 141-foot high, half the size of the mammoth Lucas Oil stadium, home of the Indianapolis Colts football team, the completed facility offers more than 100,000 pallet positions and its advanced cold chain solution ensures that processes are sustainable and traceable.

Wright believes that the largest accomplishment behind any project is the people, and the Fisher team helped make this project award winning.

“Working as a traveling project manager requires a personal investment in communities and the ability to quickly build relationships with trade partners,” Wright says. “On NewCold Phase I, more than 425,000 hours were worked and at peak times, over 140 men and women were on the project. Building a team from all walks of life, from the laborer to the structural engineers and architects, and putting a goal in place that all parties can get behind is by far the largest accomplishment. I am personally proud of all of the work that went into achieving this goal, and the successful completion of NewCold Phase I.”



Because of the low oxygen nature of the freezer, all pallets in and out of the freezer are handled by an automation system comprised of conveyors, monorails and cranes. (Photo courtesy of Fisher Construction Group.)

Among those who played a big part in the project were Jeff Coville, Senior Superintendent; Anthony Prus, Project Superintendent; Travis Fernandez, Onsite Safety Manager; and Josh King, Project Engineer.

The Fisher motto is “Builders First,” meaning that when a challenge occurs, the solution or start of a solution lies in front of them with its onsite team, coordination and assistance as needed from industry experts, and a hands-on approach, often involving whiteboards and team calls, to ensure all parties agree, are aligned, and can support the works, according to Wright.

“Our company, which is based out of the Pacific Northwest, is made up of like-minded individuals spearheaded by leaders within the company who believe no matter what the client’s needs are, that it is important to address the needs and challenges of a project head on,” Wright says. “Dan Powers’ leadership has and continues to exemplify that no project is too small nor too large and that solutions can always be found when working together as a team.”

2023 Built by the Best Award-Winning Supplier Profiles

These are the companies integral to the success of the Fisher Construction Group winning project.

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Ricker Thermline

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License: CA 00823860



Luis Ortega
Cold Storage Specialist
Direct: 858.373.3214
luis.ortega@marcusmillichap.com
License: CA 02071282



Mark Antinucci
*Beverage Manufacturing/
Distribution Specialist*
Direct: 858.373.3241
mark.antinucci@marcusmillichap.com
License: CA 02186109



Vince Krantz
Airport-Served Specialist
Direct: 858.373.3180
vincent.krantz@marcusmillichap.com
License: CA 01976199



Pablo Ortega
Rail-Served Specialist
Direct: 858.373.3168
pablo.ortega@marcusmillichap.com
License: CA 02100280



Shawn Arnett
Fiber Lit Specialist
Direct: 858.373.3207
shawn.arnett@marcusmillichap.com
License: CA 02080620



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MODERNIZING OUR REFRIGERATED FLEETS

Regulatory climate and ESG concerns are driving electrification of Heavy Goods Vehicles across the United States.

By Karen Thuermer

The transportation sector is increasingly required to cut emissions and go green. In fact, some U.S. states have set goals and specific targets for doing so.

California, in particular, has a goal of fully transitioning the trucks that travel across the state to zero-emissions technology by 2045, and is requiring that no more internal combustion engines (ICE) vehicles be sold in the state by 2035. California officials claim that while trucks represent only 6% of the vehicles on California's roads, they account for more than 35% of the state's transportation gener-

ated nitrogen oxide emissions and a quarter of the state's on-road greenhouse gas emissions.

According to a report by McKinsey & Company, around seven million medium- and heavy-duty freight trucks circulate the United States today, and almost all are powered by ICEs. The Environmental Protection Agency (EPA) estimates that these vehicles generate more than 25% of total greenhouse gas emis-

sions (GHGs) from the transportation sector.

For the last few years, California and its zero emission regulations by the California Air Resources Board (CARB), and other environmental, social and governance (ESG) goals have been the primary force behind refrigerated transportation companies investing in the electrification of fleets, explains Don Durm, Vice President of Strategic Customer Solutions at PLM Fleet.

"The Governor's Executive Order N-79-20 requires that by 2035, all new cars and passenger trucks sold in California be zero-emission vehicles. Under the order, CARB is mandated to develop and propose strategies

to achieve 100% zero-emissions from medium and heavy-duty on-road vehicles in the state by 2045 where feasible and by 2035 from drayage trucks," he says.

Meanwhile, another 15 states are supporting the rapid adoption of zero emission vehicles (ZEV) that will drive new regulatory requirements for these states. "California of course is the blueprint for this accelerated adoption of ZE commercial vehicles," Durm says.

Durm emphasizes, however, that ESG is the main driver today for companies that may not even consider the regulatory environment. "Ninety-six percent of the top global corporations all have sustainability/ESG goals that are well defined and messaged," he says. "Trading partners to consumers are all wanting to know what you are doing in this arena to do business with them. We have all become social buyers."

He points out how today, there are even services that keep ESG scores. "These are an essential tool for investors to assess a company's sustainability and ethical performance," Durm adds.

These scores typically range from 0 to 100, with a score of less than 50 considered relatively poor and more than 70 considered good.

"Companies are not only evaluated by their return on the investment, but also their ESG scores," he says. "Companies need to be aware of this important subject."

Overwhelmingly Complicated

Switching to a ZE fleet, however, is not simple by any means. "In fact, the issue is overwhelmingly complicated," says Peter Schneider, Director of Sales & Project Management, GirdMarket.

While trucking companies continue to invest significant money on research and development and introduce commercially viable products, the options are few on the trailer side of the business, Schneider reports. "There are probably about two to three products on the market that you can use. Each of them has problems," he says.

The other problem is infrastructure at cold storage facilities that is required to handle the environmentally friendly trucks and trailers, such as chargers. In California, there's also the reality of how utilities are going to be able to handle the additional electricity requirements,

"There is so much complexity, uncertainty and frustration in the market about how all of this is going to come together."

Peter Schneider, Grid Market

especially given the state's history of rolling black outs, limited power supply, and high cost of electricity, Schneider points out.

"When you look at a facility – even a big, refrigerated facility – and you want to electrify a fleet of 20 to 50 classic trackers, the demand profile of that building is going to change by a magnitude of two to three – minimum," he says. "Consequently, so many operators feel the odds are stacked against them. There is so much complexity, uncertainty and frustration in the market about how all of this is going to come together."

Creating systematic and programmatic electrification systems also vary greatly depending on the size of the company. That's because the conversation is not the same when talking to large, refrigerated distributors versus smaller companies. Among some of the issues that might be addressed are how to reduce a facility's electrical load, and, in that process, consider the right location for accepting customer ZEVs that are dropping off and picking up shipments and require electric chargers.

"It's less of a requirement for some that do not have a fleet to direct or operate," Schneider says. "However, it's a business/revenue opportunity despite the fact it's uncertain what it will look like and how much will be needed."

Rapid Demand

Industry experts emphasize that despite the many complications, the need and demand for electrification systems is going to start happening quickly.

"The better positioned you are early on, the more revenue you will be able to take and the better you will be able to operate your

business development," Schneider stresses. "And, you'll be better able to attract different types of customers over your competitors and help their needs. That is really where the thinking is."

Not many entities are focusing on these developments with the exception of those in states with the most aggressive regulatory requirements such as California. And there it's especially companies in California involved in drayage.

"They are basically saying that starting in January, you cannot register a new drayage vehicle that is not electrical," says Schneider. "All existing ICE must be registered by the end of 2023 and grandfathered in. That means soon all drayage vehicles will be electrified."

But a bigger question is, who holds the charging infrastructure? The ports, the drayage operator, the drop location? "It's most likely a healthy mix of all," says Schneider.

Ports are working hard on electrifying and creating charging infrastructure. But many in the industry question whether or not there will be enough. "What will the ports be able to offer in terms of the right level of support for this requirement they are creating?" Schneider asks.

His company is already in conversations with 3PLs that are operating out of the Ports of Los Angeles and Long Beach regarding installing Level 2/Level 3 chargers at their locations.

"The idea is to create a revenue model and see what happens," Schneider says. "It's not a massive investment and the hardware should work well during the next six years. Let's set this up and create the right kind of risk of environment for your entity and see how we can start the pilot test."



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He further notes how many 3PL providers let hybrid trailers operators, of which there are many, charge these at their facility free of charge. Schneider suggests recapturing revenue that is being lost by letting operators bleed electricity and creating a new revenue.

Durm notes that a new regulatory environment is shifting the burden of energy expenses from fleets to warehouses.

“When you are utilizing ZE units that you plug in at the warehouse and no longer need to wet hose diesel, that cost needs to be accounted for on the P&L from the fleet to the warehouse,” Durm says. “If you are strictly a warehouse and you have no assets plugging into your warehouse, there must be a way to capture and pay for that so that you do not bare the expense.”

An answer would be adopting the Tesla charging business model – hiring companies to come in and build them for you and pay as you use them – Durm suggests. “One thing, industry needs to settle on one universal plug, or this will a nightmare,” Durm adds.

Funding Availability

Multiple funding options, such as grants and incentives, are available for transportation companies to move to these more sustainable models.

For tractor trailer operators, make-ready programs such as those in New York, California, New Jersey and Massachusetts help fund the infrastructure aspect of charger projects. But to be eligible, trucking companies need to prove they are taking ICE vehicles off the road.

3PLs/warehouse operators may be able to take advantage of specific grants, depending on their utility.

While some available funding such as California’s Clean Off-Road Equipment Voucher Incentive Project (CORE) has been used up, other available funding coming is the Inflation Reduction Act of 2022 tax credits for clean energy, which is intended to increase U.S. manufacturing of solar, wind and batteries and offer tax credits for U.S. electric vehicle production.

“It is important for companies to collaborate with the right partner to help them navigate the complexities of grants and funding for their projects,” says Durm. “It is nearly impossible for companies to figure this out on their own.”

But Durm likes to dwell on the fact that simply going green saves a company “green,” i.e., money. “It is our experience in the deployment of ZE refrigerated trailers over the past decade, with a number of companies, that operational efficiencies can save real dollars that far exceed what you can secure in funding,” he says.

Final Advice

Meeting regulatory requirements and devising a plan that makes business sense for the next 12 months is hard for most companies to conceptualize.

“A lot of fleet operators are struggling with this,” says Schneider. “When you extend that to a warehouse operator (3PL), it becomes even harder for them to wrap their heads around it.”

Many are not certain what the industry will look like over the next 18 months, so the uncertainty on how to deploy resources and capital is very confusing.

“Many are holding out to see where things stand a year into the drayage rule,” Schneider says. But the issue remains: how do providers set themselves up for success not too early and not too late.

Consequently, the biggest takeaway advice is for providers to partner with an experienced vendor to help manage the process and avoid the mistakes that would normally be made while implementing a ZE strategy.

Further, Durm emphasizes the need to understand how this will change management. “You really need to understand human behavior and how this will need to change,” he says. “Again, partnering with the right vendor will help guide you through this process.”

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

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By Julie Hanson

The Global Cold Chain Alliance (GCCA) will host the 27th European Cold Chain Conference from April 10-12, 2024, in Brussels, Belgium.

At a time of fast-paced change, the European Cold Chain Conference is your opportunity to meet, learn and share experience with fellow senior executives that are facing the challenges head on. With more than 200 executives expected, it really is an event not to be missed.

The European Cold Chain Conference consistently receives outstanding reviews. "What makes a GCCA program unique is

that it is designed by supply chain leaders for supply chain leaders, and we are proud of the unique blend of thought-provoking outside speakers and practical real-world experience that our delegates are exposed to," explains Joris Olbrecht, Europe Council Chairman and owner of Belgium-based cold storage business Jordifrost. "Also, the carefully curated program of presentations, discussions

and networking opportunities in the expo provide a perfect balance between the sharing of new ideas and opportunities to make new contacts to share ideas and solutions. It's also a lot of fun!"

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Conference speakers include:

Celebrated author and adviser to global supply chain businesses and governments **John Manners Bell** will set the context for the event, explaining how the changing geo-political and environmental considerations will shape the next decade for our food and other supply chains.

Global trade expert **Dr. Anna Jerzewska** will provide invaluable insights into how businesses can prepare for the changes that will shape the flow and regulation of trade in and out of Europe in the years ahead. From carbon border taxes to shifting trade alliances, it's a not-to-be missed overview.

Turning high sustainability aspiration into practical plans is a challenge shared by businesses across the cold chain, and **Sofie Lindegaard** from DFDS will explain how they are making that happen across their maritime, transport and warehousing operations.

AGENDA SETTING

With elections and a new Commission taking place in 2024, GCCA Senior Vice President for Global Communications Shane Brennan and guests will share the first-ever cold chain industry manifesto. This new collaboration supported by the GCCA will ensure delegates are ready not just for how changing European policy will affect their business, but also how to influence it.

Georgios Tetradis-Mairis, Head of Research and Development at Nomad Foods, will share the results of a groundbreaking research study. The study's results introduce the possibility of saving energy and reducing emissions from the cold chain, by increasing the temperature in warehouse and transportation of frozen food.

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As well as our top-quality keynote and plenary speaking sessions, we also provide other great ways to get maximum value from the event.

Learning Opportunities

The conference education program will offer parallel sessions focusing on industry innovations, business cases or technological development. Delivered in a workshop format, these sessions are designed to nurture idea sharing and widen perspectives. Topics addressed may include energy management and alternatives, refrigeration technologies, decarbonation, building performance, transport efficiency, cold chain transparency, market analysis and more.





Cold Chain Café

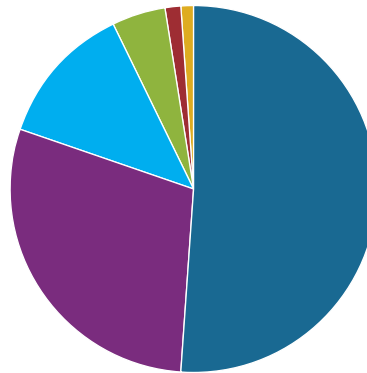
Rated as one of the most impactful features of the education program, the Cold Chain Café is an open forum where attendees can participate in roundtable discussions with their peers on specific topics. It is a unique way of sharing views and triggering new ideas, while strengthening relationships. At the end of the session, groups will share the outcome of their table conversation.

Cold Chain Exhibits

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

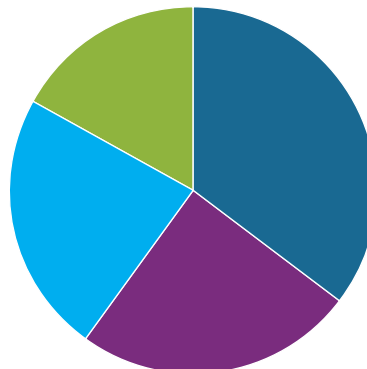
- Automation
- Battery and Power Systems
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- Construction, Doors
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- Insulated Panels
- Lighting
- Material Handling
- Racking/Materials Handling

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- 51% Logistics & Transport
- 29% Equipment & Technology
- 13% Institution
- 5% Construction
- 1% Press
- <1% Food industry

2023 ATTENDEE DEMOGRAPHICS BY FUNCTION



- 23% Executive/CEO, President, Owner
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GCCA STANDS WITH YOU. THE TIME TO ACT IS NOW.

Never before has our industry faced such uncertainty and vulnerability from America's policy makers, both in the White House and in both chambers of Congress. The Administration and Congress represent challenges and opportunities that we will need to face as an industry, together.

The Administration and Congress are considering a wide range of policies that could impact the cold chain in 2024. Key issues:



FARM BILL

- GCCA will be actively engaging with Congress to advance cold chain industry initiatives and priorities.



CLIMATE CHANGE

- Pursuing aggressive policies to address climate change, through both executive action and legislation
- Implementation of the AIM Act to phase down HFCs



TAXES

- Increasing the corporate tax rate, phasing out deductions for pass-through entities
- Raising the top marginal income-tax rate



LABOR

- Strengthening worker organizing, collective bargaining and unions through executive action and legislation such as the PRO Act
- NLRB advancing labor initiatives, like 'micro-unit' organizations and joint employer policies



BURDENSOME REGULATIONS

- Revising EPA's Risk Management Program (RMP) regulation and making additional requirements
- Changes to OSHA's Process Safety Management regulation
- Implementation of FDA's Food Traceability Rule

THERE IS SOMETHING YOU CAN DO.

To learn more about how you can contribute contact
Lowell Randel (lrandel@gcca.org) or visit advocacy.gcca.org.
Visit **ADVOCACY.GCCA.ORG** for more information.



- Refrigeration Equipment
- Roofing
- WMS/TMS Solutions

Facility Visits

Immediately following the educational program on Friday, April 12, a visit will be organized to industrial facilities showcasing innovations in operations, automation, sustainable initiatives and other areas of specific interest to attendees. Registration for this program is required.

Networking and More

The conference offers participants numerous occasions to connect with international colleagues and strengthen existing relationships. Networking functions include group activities, networking breaks, lunches and dinners. Throughout the event, attendees will have additional opportunities to mingle with peers during the Cold Chain Café, expo time and a happy hour.

SPONSORING AND EXHIBITING

The European Cold Chain Conference is a supplier's best venue for reaching temperature-controlled warehousing and logistics executives throughout Europe and beyond. Vendors can increase their brand and visibility at the event through sponsorship that has been designed to spotlight their company

throughout the entire program and exclusively at specific event functions. Exhibiting at the event is a great add-on to showcase the power and benefits of products, technology or services.

Location

The conference will be held at the Marriott Brussels Grand Place Hotel. For more information on the conference visit www.gcca.org/europeancoldchainconference.

For any general, sponsorship or exhibiting inquiries, please contact:
Sharon Mughal Global Business Development Director – smughal@gcca.org @

JULIE HANSON is Europe Director at GCCA.
EMAIL: jhanson@gcca.org





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CONVENTION**

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COLD CHAIN DEVELOPMENT

NEWS ABOUT GCCF INTERNATIONAL PROJECTS

This column features news about key projects of the Global Cold Chain Foundation (GCCF) 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.

ACTIVE PROJECTS

ACES Kenya & Rwanda, 2023

Partnered with Postharvest Education Foundation

Working in collaboration with the Postharvest Education Foundation, GCCA received funding from the United Nations Environment Program to provide four postharvest training sessions in Kenya and one train the trainers session in Rwanda. In total, 88 individuals were trained, and the training closed with site visits to two packhouses and one visit to Nairobi-based GCCA member, Cold Solutions.

Agricultural Trade and Climate Smart Innovations (ATraCSI) Project, 2023 – 2027

Partnered with IESC

From November 26 to December 2, 2023, individuals from the public and private sector in Honduras, El Salvador and Guatemala traveled to meet with cold chain logistics providers, ports, importer/exporters and government officials in Miami, Florida. The study tour is part of the 5-year U.S. Department of Agriculture Food for Progress-funded Agricultural Trade and Climate Smart Innovations (ATraCSI) project. Many thanks to our members in the region that hosted the tour – Florida Freezer, LixCap, Emergent Cold LatAm and Lineage Logistics!

Bangladesh Trade Facilitation (BTF) Project, 2020 – 2025

Partnered with Venture37 and LixCap

GCCF continues to provide design-build assistance to various private sector companies interested in cold storage investments and organized an exchange visit to India in collaboration with the GCCA office in New Delhi. The next year will focus extensively on pairing the design assistance with customized training.



Robert Hernandez (United States Cold Storage) leads training in Vietnam on food storage, preservation and safety.

Dominican Republic TraSa Project, 2021 – 2025

Partnered with International Executive Service Corps (IESC)

On December 5 and December 7, GCCA provided a training on egg handling for the TraSa project. In addition, GCCA member Korber presented a webinar to educate participants on traceability.

Southeast Asia Emerging Markets Program, 2019 – 2023

From December 2 to December 15, Tamara Palefsky (United States Cold Storage), Robert Hernandez (United States Cold Storage) and Bob Tippmann III (QuickFreeze), traveled with Madison Jaco to Cambodia, Vietnam and Thailand to provide in-person training and consultations on cold chain management. More than 140 participants attended across the three trainings, 40% of whom were women

in the cold chain. Additional virtual trainings on refrigeration systems, energy management and sanitary transportation, led by Bob Tippmann and Don Durm (PLM Fleet), have been made available to all participants via GCCF's Cold Chain eCampus. This is the final phase of the U.S. Department of Agriculture Emerging Markets Program in Southeast Asia, which GCCF has led since 2019.

Ongoing Industry Support to Reduce Food Loss and Waste

GCCA is supporting the Global Foodbanking Network (GFN) with a webinar on Cold Storage 101. Francisco Moura will work with GCCF to deliver a GFN-hosted webinar to some of their smaller and newer members on considerations for cold storage options and investments. This will take place on January 25, 2024.



The delegation from Honduras, Guatemala, and El Salvador poses for a photo at Port Everglades in Miami, Florida.

COMPLETED PROJECTS

Egypt Rural Agribusiness Strengthening (ERAS) Project, 2019 – 2024

Partnered with Abt Associates Inc.

The ERAS project closed effective December 2023. This project served small-scale farms and businesses and benefited primarily from the postharvest training and technical assistance (TA) provided by Dr. Elhadi Yahia on the Scientific Advisory Council who delivered repeated TA on mangoes and pomegranates. 🌱

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The Global Cold Chain Foundation (GCCF) Scientific Advisory Council is an eminent group of food scientists, logistics, and packaging experts from around the world. The council provides cutting-edge research and advice to members of the Global Cold Chain Alliance and its Core Sectors.



Dr. Michael Jahncke

Virginia Tech University,
Fish Products Expert
SAC CHAIRMAN



Dr. Brian Fugate

University of Arkansas, Supply
Chain Management Expert



Dr. Jeffrey Brecht

University of Florida, Cool-
Climate Fruit & Produce Expert



Dr. Cody Gifford

University of Wyoming, Meat
Products Expert



Dr. Patrick Brecht

PEB Commodities, Refrigerated
Transportation Expert



Dr. Dennis Heldman

The Ohio State University, Food
Process Engineering Expert



Dr. Paul Dawson

Clemson University, Poultry
Products Expert



Dr. Faris Karim

Kansas State University,
Ammonia Contamination & Food
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Dr. Donald Fenton

Kansas State University,
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Expert



**Dr. Barbara Rasco, BSE,
Ph.D., JD**

University of Wyoming,
Food Safety & Food Safety
Regulations Expert



Dr. S. Paul Singh

Michigan State University,
Packaging & Labeling Expert



Dr. Kees Jan Roodbergen

University of Groningen,
Logistics & Operations
Management Expert



Dr. Donald Schaffner

Rutgers, The State University of
New Jersey, Microbiology Expert



Dr. Victoria Salin

Texas A&M University, Agriculture
Economics Expert



Dr. Charles White

Mississippi State University, Dairy
Products Expert



Dr. Subramaniam Sathivel

Louisiana State University,
Frozen Food Quality Expert



Dr. Elhadi Yahia

Universidad Autónoma de
Querétaro, Mexico, Postharvest
Technology, Tropical Fruit &
Produce

Have a burning cold chain question?
Submit an inquiry to the Scientific Advisory Council
at www.gcca.org/inquiry

COOL SOLUTIONS

SCIENTIFIC ANSWERS TO COLD CHAIN CHALLENGES

This section highlights a cold chain question and answer submitted through the GCCA Inquiry Service to the team of experts on the GCCF Scientific Advisory Council (SAC) and the roster of SAC members. Submit your cold chain questions to the Scientific Advisory Council at www.gcca.org/inquiry.

Q: What are some irradiation or other processes for sterilizing fresh fruits, specifically with respect to trading with the United States? We are familiar with irradiation but would like to know if there are alternatives.

A: If there are any quarantine requirements, they are often very specific to the country of origin. Meaning, if the product is subject to quarantine restrictions, it may be necessary to either show that the production area is free from the pest of interest or develop a protocol for the exporting country, even if treatment protocols already exist for the same product and pest from other countries.

Getting United States Department of Agriculture (USDA) treatments approved is a time

consuming and arduous process. Moreover, there can be collateral damage to the fruit with approved USDA Animal and Plant Health Inspection Service (APHIS) treatments. A treatment may kill all stages of the regulated insects (i.e., probit-9) but may also seriously damage the fruit. The USDA APHIS treatment manual states: "Manual instructions must be followed. Nevertheless, some treatments may damage commodities."

I suggest that the importer and exporter refer to the USDA APHIS Commodity Import Reports (CIR) for guidance relating to the import requirements for the fresh fruits they handle from a country of origin into specific U.S. ports.

Additionally, it is important for the importer and exporter to determine the "current" all-in transit times by land and sea since the transit times may exceed the postharvest life of the fruit. Currently, house-to-house transit times by land and sea are markedly longer than they were several years ago. As a result, some exporters are transporting shelf-life constrained items by air freight at substantially greater costs (per kg) than by sea.

This answer was provided by Dr. Jeff Brecht, Cool-Climate Fresh Fruit and Vegetable Expert, University of Florida and Dr. Patrick Brecht, Transportation Expert, PEB Commodities. @

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2024 GCCA, GCCF and CEBA Global Events Calendar

FEBRUARY

59TH GCCF COLD CHAIN INSTITUTE EAST

4-6 FEBRUARY 2024

Atlanta, Georgia, United States | Georgia Tech Hotel & Conference Center

This event, designed for employees with clear management potential and executives new to the industry, features more than 40 classes in warehouse management and transportation management taught by leading experts in the industry.

Audience: Warehouse managers, operations managers, warehouse supervisors, shift leads, customer service managers, transportation managers, workers with high potential for management, and executives new to the industry.

59TH GCCF COLD CHAIN INSTITUTE WEST

27-29 FEBRUARY 2024

Tempe, Arizona, United States | Tempe Mission Palms Hotel at Arizona State University

This event, designed for employees with clear management potential and executives new to the industry, features more than 40 classes in warehouse management and transportation management taught by leading experts in the industry.

Audience: Warehouse managers, operations managers, warehouse supervisors, shift leads, customer service managers, transportation managers, workers with high potential for management, and executives new to the industry.



APRIL

27TH GCCA EUROPEAN COLD CHAIN CONFERENCE & EXPO

10-12 APRIL 2024

Brussels, Belgium | Brussels Marriott Hotel Grand Place

Here, delegates gain a better understanding of market trends, industry challenges, business solutions, and technological innovations. The conference also provides ample networking opportunities, enabling attendees to meet and connect with professionals from throughout Europe and around the world.

Audience: Executives and managers from temperature-controlled, third-party logistics companies.



MAY

GCCF COLD CHAIN INSTITUTE AUSTRALIA

21-23 MAY 2024

Melbourne, Australia | Sheraton Melbourne Hotel

This event, designed for employees with clear management potential and executives new to the industry, features more than 40 classes in warehouse management and transportation management taught by leading experts in the industry.

Audience: Warehouse managers, operations managers, warehouse supervisors, shift leads, customer service managers, transportation managers, workers with high potential for management, and executives new to the industry.



JUNE

GCCA BRAZILIAN COLD CHAIN CONGRESS

19-20 JUNE 2024

Sao Paulo, Brazil | The Grand Estanplaza Berrini

This educational event focuses exclusively on the temperature-controlled logistics industry and features opportunities and solutions for business development.

Audience: High-level executives in temperature-controlled warehousing or logistics.



GCCA COLD CHAIN POLICY FORUM

24-26 JUNE 2024

Washington, DC, United States | The Royal Sonesta Washington, DC Capitol Hill

The GCCA Global Policy Forum offers education and interaction with government and agency officials in regards to the rules and regulations that impact the cold chain.

Audience: Executives with compliance and regulatory responsibility, members of safety and government affairs committees.



JULY

GCCF COLD CHAIN INSTITUTE LATIN AMERICA

15-17 JULY 2024

Mexico City, Mexico | Hilton Mexico City Reforma

This event, designed for employees with clear management potential and executives new to the industry, features extensive classes in warehouse management and transportation management taught by leading experts in the industry.

Audience: Warehouse managers, operations managers, warehouse supervisors, shift leads, customer service managers, transportation managers, workers with high potential for management, and executives new to the industry.



AUGUST

GCCF COLD CHAIN INSTITUTE BRAZIL

13-15 AUGUST 2024

Sao Paulo, Brazil | The Grand Estanplaza Berrini

This event, designed for employees with clear management potential and executives new to the industry, features extensive classes in warehouse management and transportation management taught by leading experts in the industry.

Audience: Warehouse managers, operations managers, warehouse supervisors, shift leads, customer service managers, transportation managers, workers with high potential for management, and executives new to the industry.



GCCA SOUTH AFRICAN COLD CHAIN CONFERENCE

21-22 AUGUST 2024

Cape Town, South Africa

This event is South Africa's one and only venue bringing together cold store operators, controlled-environment builders, equipment suppliers and service providers to discuss opportunities and innovations of this essential sector.

Audience: Executives and managers from temperature-controlled, third-party logistics companies.



SEPTEMBER

GCCF COLD CHAIN INSTITUTE EUROPE

2-4 SEPTEMBER 2024

Amsterdam, The Netherlands | TBD

This event, designed for employees with clear management potential and executives new to the industry, features extensive classes in warehouse management and transportation management taught by leading experts in the industry.

Audience: Warehouse managers, operations managers, warehouse supervisors, shift leads, customer service managers, transportation managers, workers with high potential for management, and executives new to the industry.



133RD GCCA CONVENTION

23-26 SEPTEMBER 2024

Bonita Springs, Florida, United States | Hyatt Regency Coconut Point

This annual gathering for GCCA and GCCF features education, networking and business development opportunities for third-party logistics companies and warehouse operators.

Audience: Owners, CEOs, presidents, executive leadership teams.



NOVEMBER

GCCA LATIN AMERICAN COLD CHAIN CONGRESS

7-8 NOVEMBER 2024

Panama City, Panama | TBD

This meeting enables GCCA members and leaders in the temperature controlled industry to interact, learn about industry trends and expand their knowledge. The Congress also serves as a discussion forum for issues of interest to multi-regional cold chain industry leaders.

Audience: Senior executives in temperature-controlled warehousing or logistics.



44TH CEBA CONFERENCE & EXPO

11-14 NOVEMBER 2024

Ponte Vedra Beach, Florida, United States | Sawgrass Marriott Golf Resort & Spa

This annual meeting of CEBA members offers education, business development opportunities and networking for company executives managing the building of new cold storage facilities and cold storage builders.

Audience: Chief engineers, regional facility managers, regional facility maintenance leads, construction engineer managers, owners/CEOs who are building or expanding facilities.



MEMBER NEWS

NEWS FROM MEMBERS OF GCCA CORE PARTNERS



(Photo courtesy of A M King.)

A M KING was recognized by Associated Builders and Contractors of the Carolinas (ABC Carolinas) for its exemplary delivery of ALDI's Regional Headquarters and Distribution megafacility in Loxley, Alabama. A M King was presented with a "Best in Class" Eagle Award – ABC's highest-level award in the Industrial/Over \$50 million category – and was singled out with the exclusive 2023 Carolinas Design-Build Award.



ARCADIA COLD STORAGE AND LOGISTICS has leased approximately 81% of a 1.7 million-square-foot cold storage portfolio recapitalized by Saxum Real Estate and equity capital partner BGO. Each of the six properties has newly built, state-of-the-art cold storage facilities featuring 50-foot clear heights and convertible rooms at each facility with temperature capabilities between -10 to 38 degrees F. The cold storage facilities are located in major distribution hubs across the country with a seventh facility in Atlanta, Georgia, expected to close shortly.



EMERGENT COLD LATAM raised \$500 million for investment in refrigerated logistics in Latin America to reinforce its expansion and consolidation plan in the region. The company secured \$700 million in earlier funding rounds, totaling at least \$1.2 billion earmarked for the modernization of the Latin American cold chain. Part of the funds has been allocated to the acquisition and construction of new warehouses. Currently, the company operates more than 70 warehouses in 11 Latin American countries.



(Photo courtesy of Arcadia Cold.)

MHW GROUP opened a CSX Transportation-served public refrigerated/cold storage facility in Perryville, Maryland. Located near Interstate 95, the facility is designed to accommodate high-volume rail and truck traffic and provide rail-to-truck cross-dock services to customers without direct rail access.

The facility features 33 truck dock doors, eight rail doors, a rail-car storage track with capacity for 50 cars, a 60-foot refrigerated dock and trailer staging area. MHW Group operates refrigerated cold storage facilities, refrigerated rail-car leasing company Cryo-Trans Inc. and trucking provider Cryo-Trans Logistics.



NEWCOLD opened a \$300 million facility in Lebanon, Indiana. The highly automated warehouse is capable of running 24/7, thanks in part to power generated from a variety of sources so it can be grid-independent and operate about 50% more energy-efficiently than traditional warehouses, the company said.

Phase one of the building has been operational for almost a year with a capacity of 100,700 industrial pallet positions. Construction of phase two is now underway and will see its capacity double to more than 200,000 industrial pallet positions when it becomes operational in summer 2024.



MEMBER NEWS

NEWS FROM MEMBERS OF GCCA CORE PARTNERS

TI COLD has designed and built a fully-racked, state-of-the-art facility for **ARCADIA COLD STORAGE AND LOGISTICS** in Reno, Nevada. It has five fully convertible rooms with a 60-foot deep refrigerated dock and doors to manage distribution and container handling services. With 254,460 square feet of space, the 37,260 pallet positions are situated in modern 50-foot clear height rooms with 6-8 high pallet racking. The facility has **EVAPCO's** low charge ammonia refrigeration system that is not only environmentally friendly, but is blast freeze ready. 🌱



Ti Cold's Logan Stuller (left) and Sam Tippman. (Photo courtesy of Ti Cold.)



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ASSOCIATION NEWS

NEWS ABOUT GCCA CORE PARTNERS

GCCA recently announced its new Board of Directors roster for the warehouse division. Jason Dreisbach from Dreisbach Enterprises is the 2024 Chairman; Tim Ludwig from Bradner Cold Storage is Vice Chairman; and Francisco Moura from IceStar is now Treasurer. Michael J. McClendon from Lineage Logistics will serve as Immediate Past Chairman.

For the GCCA Warehouse Directors-at-Large positions, the GCCA membership approved the following slate of candidates to serve 3-year teams starting January 1, 2024. Scott Albers, Nor-Am Cold Storage (renominated); Rich Burke, Konoike-Pacific (KPAC) (renominated); Paul Gibbons, Commercial Cold Holdings (new); West Hutchison, Vertical Cold Storage (new); Andrew Lawrence, Magnavale (new); Nicholas Pedneault, Congebec Logistics (renominated); and Karen Reece, Eskimo Cold Storage (renominated).

The GCCA Warehouse Board would like to thank outgoing Board Members Manuel Kabana from Friopuerto Investment and Tim Siddiq from Vertical Cold Storage for their thought leadership and commitment to the association during their time as Board Members.

The GCCA Transportation Board Roster remained unchanged. Visit the GCCA website to view the complete GCCA Warehouse and GCCA Transportation Board Rosters.



The **GCCF** Board voted to elect Mickey Hoffmann from United States Cold Storage as their 2024 Chairman; Ken Whah from CORE X as Vice Chairman; and Adam Forste from Lineage Logistics as Treasurer. Greg Laurin from Conestoga Cold Storage will serve as Immediate Past Chairman.

For the GCCF Governors-at-Large positions, the membership approved the following slate of candidates to serve 3-year terms starting January 1, 2024.

Owusu Akoto, Freezalink (new); Justin Brandt, Nor-Am Cold Storage (renominated); Niels Lundgaard-Svenstrup, Lineage Logistics (renominated); Mathew Moore, Americold

(new); Joris Olbrechts, Jodifrost NV (new); Tom Poe, Crystal Distribution (renominated); Marty Steinmetz, RealCold (renominated); and David Stuver, Capital Ventures LLC (Public Member).

The GCCF Board would like to thank outgoing Board Members Daniel Kaplan, Vertical Cold Storage and Rack Builders Inc., Mike Pokel, Midwest Refrigerated Services and Kirk Robertson, Terra Vista Capital for their thought leadership and commitment to the foundation during their time as Board Members. Visit the GCCF website to view the complete roster of GCCF Board Members.



CEBA announces its new Board of Directors roster for 2024 with Sam Tippmann from Ti Cold confirmed as the 2024 Chairman; Scott Guimond from Fisher Construction Group as Vice Chairman; and Michael Jones from Primus as Treasurer. Marko Dzeletovich of Coldbox Builders will serve as the Immediate Past Chairman.

The CEBA Membership approved the following board members starting January 1, 2024, for 3-year terms.

General Members: Carl Morse, A M King; Steven Hansen, Jr., Hansen Cold Storage Construction; Zach Norris, Evans General Contractors

Associate Members: Quinn Vo, Mayekawa, Frank Siedler, WAGNER Fire Safety Consulting, Chuck Zimmermann, 4Front Engineered Solutions

Affiliate Member: Michael Lynch, United States Cold Storage

The CEBA Board would like to thank outgoing Board Members Vince Free, FREEZ Construction; Eric Brown, ALTA Refrigeration; Ryan Gusewelle, Power Construction/ United Insulated Structures; Steve Mauro, formerly of Kingspan Insulated Panels, NA; and Charles Woolley, Controlled Environment Systems for their leadership, contributions and commitment to CEBA during their time as Board Members. Visit the CEBA website to view the complete roster for the CEBA Board of Directors. 🌐

2024 CHAIRMEN, BOARDS OF DIRECTORS



Jason Dreisbach,
GCCA Warehouse



Don Durm,
GCCA Transportation



Mickey Hoffmann, GCCF



Sam Tippmann, CEBA

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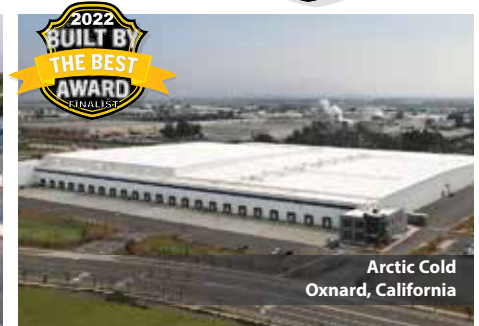
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In logistics, let's be honest, nothing always goes according to plan, and with that, there is an absolute beauty in what each day will bring."

— STACEY COOK

STACEY COOK

Stacey Cook of NewCold Advanced Logistics in Australia was awarded the 2023 Global NextGen Award, which recognizes outstanding young professionals in the world's cold chain industry.

CF: Why were you drawn to a career in cold storage and logistics?

SC: During COVID, I was the state operations manager for Coles Supermarkets. At this time, the importance of temperature-controlled logistics and the critical impact it has on our communities was exacerbated. I wanted to make temperature-controlled logistics my next career focal point, exploring ways to further secure the industry's ability to provide continuity and stability to the market.

CF: You have said you don't manage – you lead. What do you think it takes to be a good leader?

SC: A manager says "go," a leader says "let's go." Both roles are critical to the success of any organization, however my priorities and focus are in creating confidence and understanding for our employees and stakeholders. Providing strong communication, giving direction, and aligning outcomes with purpose and vision

creates an environment where individuals can thrive, in turn producing a thriving business. Leaders focus on ensuring the "what" has a logical "why" and course correcting, where needed, without fear.

CF: What can the industry do better to recruit and retain young talent?

SC: Supply chain and logistics overall have trouble attracting young talent. The industry is complex with so many layers of functions and support that contribute to the overall outcome – forklift driver, truck driver, picker/packer, manufacture – yet only the front-facing roles get exposure.

The organization needs a marketing makeover. I would create a recruitment campaign that talks more about what type of person we are looking for and how those personality traits, values and motivations relate to specific roles in our industry. When I hire someone, I care more about what drives them so I know what the starting point is for that person, and then where they can grow to in our industry.

Retention is all to do with the environment and morale our teams need. We all need to do better at being stronger leaders and communicating to engage and support. Our younger generations' values and personalities have shifted from previous generations. Understanding this allows for stronger employee satisfaction creating lasting retention.

CF: What is the next step in your career?

SC: I'm passionate about people, and my greatest satisfaction is taking on complex challenges and delivering outcomes above expectations. This leads me to developing a global strategy for continuity in the implementation and onboarding of clients within new projects, aligning CI initiatives and focusing on providing the right tools and support for our teams, and the onboarding of new staff.

While it's a monumental task across Asia-Pacific countries, the United States, United Kingdom and Europe, it's a goal I'm determined to champion and believe it will be a cornerstone tool in ensuring client satisfaction and supporting our people.

CF: What excites you most about the future of your industry?

SC: We aren't going anywhere. While technology and advancements can often bring uncertainty to a role or industry, our industry will be walking into these changes and making them work for the growth and success of our businesses.

In logistics, let's be honest, nothing always goes according to plan, and with that, there is an absolute beauty in what each day will bring. Through the challenges, you see teams endure, and grow resilience and sense of community that is truly special to be a part of.

Our industry's ability to react with speed, adapt to changes in economies, technology and governance is just exciting to be a part of! 🌐



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