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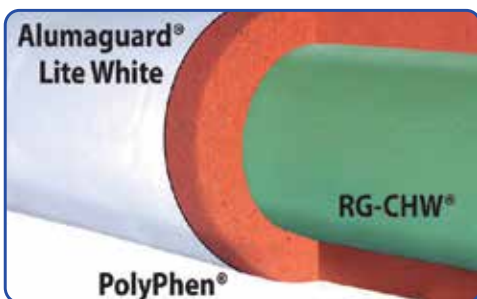
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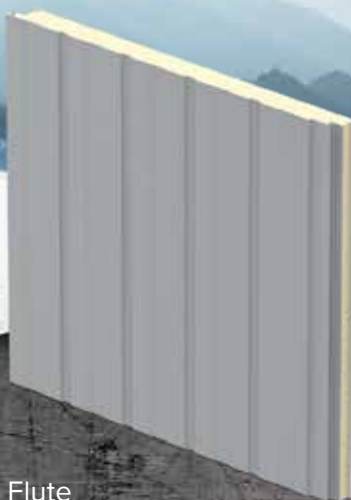


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MESSAGES FROM GCCA LEADERS

CEBEBA IS A PROUD PARTNER IN THE GLOBAL COLD CHAIN ALLIANCE, AND IT IS MY HONOR TO SERVE AS CHAIRMAN THIS YEAR. WE CONTINUE TO STAY LASER FOCUSED ON our strategy of achieving member recognition through building future talent, promoting value, and developing expertise that is driving significant growth and success across CEBA's events and programs.

As we fast approach our 44th CEBA Conference and Expo in Ponte Vedra Beach, Florida, it's a great time to reflect on how far we have come. As we gear up for another sell-out event, attendees can look forward to excellent speakers, valuable networking opportunities, CEBA suppliers, solution providers and the highly anticipated Built by the Best competition finale. See the preview article on page 26.

The CEBA Professional Training and Certificate program is also off to a strong start and we are excited to welcome students in Dallas this October. This follows a successful pilot program completed in the spring and I'm proud of the momentum it generates in developing and recognizing industry talent. This new training and recognition program, developed for the industry, is a vital part of fulfilling our mission and purpose as an association. Find out more at <https://www.gcca.org/about/controlled-environment-building-ceba-program/>

As a Board, we have a clear strategy to ensure that more customers choose CEBA members for their projects. We pursue this goal because we know that distinctive expertise matters in controlled environment construction, and that we achieve this through setting high standards. We are so excited by the positive response so far, not only from those that participated, but those that have shown interest in putting forward candidates.

CEBA continues to make real progress

in providing resources to the industry. Our recent work on the international fire code approach to smoke vents in controlled environment buildings is an example of engagement with code bodies and industry stakeholders. It's also a great example of the practical collaboration between GCCA and CEBA members on issues of shared interest.

The joint GCCA/CEBA Construction Codes Committee is just one case study of the great, rewarding work done by volunteers across our committees. Right now, we are asking volunteers from across member companies to step up and help shape your associations' resources and advocacy work. Places are also available on the GCCA Education Committee, CEBA Marketing and Business Development and International Committees – if you are interested, please contact the staff team.

As you look through this edition of Cold Facts, you will find some great content, including the first full interview with our new President and CEO, Sara Stickler (page 32). I am delighted to welcome her into the position of leading the GCCA, GCCF and CEBA. There are exciting times ahead.

This month, we have the Suppliers Buyers Guide alongside your magazine. It's a who's who of the specialist contractors and suppliers leading the controlled environment building sector. Make sure to keep it close by in the months ahead.

Thank you again to everyone involved in making CEBA a success in the past year. 🙏



SAM TIPPMMANN
CHAIRMAN, CEBA

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 warehousing, transportation and logistics industry.



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IMPLICATIONS FOR COMPLIANCE REGULATIONS IN US

A recent ruling by the U.S. Supreme Court could challenge the rule setting powers of federal agencies, potentially affecting environmental or safety regulations.

By Lowell Randel

In June 2024, the Supreme Court of the United States (SCOTUS) issued a ruling that could have wide ranging impacts on federal regulations. In the case of *Loper Bright Enterprises v. Raimondo* (*Loper*), a majority of justices ruled to overturn the decades-long precedent of Chevron deference.

The Chevron doctrine was adopted by SCOTUS in 1984 and required federal courts to defer to a federal agency's reasonable interpretation of ambiguous statutory provisions. The ruling gave federal agencies much greater latitude in developing regulations and has been the subject of much debate and litigation over the years.

The Chevron doctrine involved a two-step analysis by the courts. First, the courts would determine whether Congress directly addressed the specific issue before the court in statute. If the court found that the statute was ambiguous or didn't speak to the issue, then the court would proceed to step two. This required the court to defer to the agency's interpretation if it was found to be reasonable.

For 40 years, courts applied the Chevron doctrine, and for much of that time, deference was the likely outcome. However, in recent years SCOTUS has been showing less inclination to rule in favor of deference, signaling a

move away from Chevron and foreshadowing the recent ruling in *Loper*.

By a 6-3 margin, SCOTUS found that the precedent of Chevron deference "has proved to be fundamentally misguided." The court in *Loper* disagreed with the presumption that statutory ambiguity indicates Congress has implicitly delegated the authority to interpret the law to the implementing agency. The majority found that Chevron is inconsistent with the Administrative Procedure Act, which directs courts to decide legal questions by applying their own judgement. It is the responsibility of the courts to decide whether the law means what the agency says.

Writing for the majority, Chief Justice Roberts stated, "Chevron was a judicial invention that required judges to disregard their statutory duties." Justice Thomas concurred, stating that Chevron "improperly strips courts of judicial power by simultaneously increasing the power of executive agencies."

The minority opinion was heavily critical of the decision, arguing that deference to agencies is appropriate given their subject matter expertise, and that Congress is not in a position to perfectly construct statutes with all of the necessary details. In her dissent, Justice Kagan wrote "A longstanding precedent at the crux of administrative governance thus falls victim to a bald assertion of judicial authority ... Congress knows that it does not – in fact cannot – write perfectly complete regulatory statutes."

Changing Judicial Analysis

The *Loper* ruling means that courts will no longer automatically defer to agency interpretations. Instead, courts will apply a more rigorous textual analysis of statutes independently without defaulting to the agency's viewpoint. Courts will still provide some level of deference to agency decisions in rulemaking, but the calculations will be different.

The impacts of the *Loper* decision are already evident in the courts. For example, there is currently a legal challenge to a Federal Trade Commission (FTC) rule that places severe restrictions on the ability to establish non-compete agreements. The recently finalized rule has been challenged and a lower court in Texas has cited the *Loper* case in expressing doubts that the FTC rule is consis-

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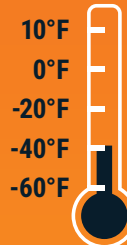
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tent with the Administrative Procedure Act without the benefit of Chevron deference.

Given the *Loper* decision, lower courts will now begin to change the way they look at questions related to regulatory authority. It also opens the door for more lawsuits to challenge regulations created by agencies that were relying on Chevron deference to justify the way they constructed rules.

Environmental regulations based on older statutes could be an active area for future legal challenges. For example, the Biden Administration has relied heavily on the Clean Air Act to regulate vehicle and power plant emissions and the Clean Water Act to regulate water pollution. EPA efforts to regulate per- and polyfluoroalkyl substances, known as “forever chemicals,” could be at risk of challenge. It is unclear if legal challenges to recent rule changes to the Risk Management Program will be among the regulations tested post-Chevron.

The full extent of impacts to existing regulations is hard to predict at this stage. However, the ruling is expected to lead to increased litigation as businesses and other stakeholders challenge regulatory interpretations. It is important to note that the court

clarified in the decision that the thousands of previous cases applying Chevron deference will not be affected.

Impacts on Future Agency Rulemaking

Another immediate impact of reversing Chevron deference will be how agencies develop new rules and proceed with rulemakings already in the pipeline. It is expected that the ruling will change how agencies approach rule construction, and the way they justify decisions based on statutory authority.

GCCA and coalition partners have recently sent a letter to the White House requesting a pause in rulemaking activity to review the impacts of the *Loper* decision on rules being considered.

In addition, a group of House committee leaders have written to the Biden Administration highlighting concerns over decades of expansive agency authority enabled by Chevron deference, which they argue has often exceeded the legislative intent envisioned by Congress. The committee members emphasize the need for a thorough review of existing and proposed regulations under the new legal framework established by *Loper*.

Renewed Focus on Legislative Construction

In recent years, Congress has tended to delegate many policy details to agencies when drafting legislation. In a post-Chevron environment, Congress will need to provide more detailed and specific language when constructing statutory authority for agencies. This could place a strain on Congressional resources and expertise to ensure legislation provides the necessary direction to agencies. Bills could become longer and more complex to accommodate in-depth policy needs. Given the closely divided and partisan dynamics in the U.S. House and Senate, finding consensus on more detailed legislative language could prove challenging.

GCCA will closely monitor legal developments in the wake of the *Loper* decision as well as actively work with agencies and Congress on rulemakings and legislation in a post-Chevron world. ☞

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

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A CALL TO ACTION IN AFRICA

The continent's cold chain revolution could secure our food future.

By Paul Matthew

At GCCA's recent Conference in Cape Town, cold chain executives from across Africa came together to hear about the launch of the GCCA's new Call to Action. This document, unveiled by new GCCA Africa Director Paul Matthew, sets out how governments and international agencies can support a transformation in the economic success and food security of this vital continent. He explains to Cold Facts why it's important.

When talking about Africa's potential to feed itself – and the world – the conversation often focuses on increasing agricultural output. While boosting production is essential, the tendency is to overlook one of the most critical components of food security: keeping that food fresh and safe from the farm to the fork. That's where the cold chain comes in.

Right now, Africa's cold chain infrastructure is not where it needs to be. For too long, the accepted status quo is up to 40% of perishable goods – everything from fresh fruits and

vegetables to meat and dairy – is lost before it even reaches the consumer. Imagine what that means for farmers trying to make a living, for families struggling with high food prices, and for economies losing billions in potential trade revenue. This is not just a logistical issue; it's a crisis of food security, economic growth and sustainable development.

The GCCA's Call to Action takes aim at this issue. The goal is simple: to build a cold chain system that works for Africa. That means creating the infrastructure, skills and

regulatory frameworks needed to transport, store and preserve temperature-sensitive goods efficiently. By doing so, post-harvest losses could be drastically reduced, food prices lowered, and African agricultural products compete in global markets. It's a game-changer not just for food security but for the continent's future prosperity.

Explaining Why the Cold Chain Matters

The importance of a reliable cold chain cannot be overstated. Right now, inefficiencies in Africa's cold storage and transport systems are major contributors to food loss. Without proper refrigeration, food rots. And with the continent's population expected to double by 2050, we simply cannot afford to continue on this path. To feed a growing Africa, the cold chain must be fixed.

But it's not just about food security – it's also about economic opportunity. The African Continental Free Trade Area (AfCFTA), the most ambitious trade agreement in recent history, offers a chance for Africa to unlock new markets across the continent and beyond.

However, to make this a reality, there must be infrastructure to support it. Better cold chain systems would enable farmers to export their products to neighboring countries, reducing reliance on imports and creating jobs across the food value chain.

The AfCFTA provides the framework; now the cold chain needs to bring it to life.

A Vision for Change

The GCCA's Call to Action sets out a bold vision for transforming Africa's cold chain. The first step is investment – in cold storage facilities, refrigerated transport and the energy infrastructure needed to power them. And given Africa's often unreliable electricity supply, this means looking at renewable energy solutions like solar-powered cold storage. Africa is uniquely positioned to harness clean energy to power its cold chain revolution.

We also need to build the local expertise to manage and maintain this infrastructure. Too often, Africa has relied on foreign contractors to build critical systems, only to see those

systems falter when the contractors leave. We must invest in training a local workforce skilled in cold chain logistics, refrigeration technologies and supply chain management. This isn't just about keeping the lights on – this is about African ownership and sustainability.

Partnering With Policy Makers

Of course, none of this can happen without the right policy environment. Governments must prioritize cold chain development in their agricultural and trade policies. This means offering incentives for private sector investment, simplifying cross-border regulations and subsidizing the cost of cold storage for smallholder farmers.

Africa's policymakers must also think creatively about financing – whether it's through public-private partnerships or leveraging international development funds to bridge the gap.

The Stakes Are High

The cold chain in Africa is at a critical juncture. Africa has the resources, the land and the people to be a global agricultural powerhouse. But without the ability to preserve and transport its food, much of that potential literally will go to waste. A functioning cold chain could reduce food loss, improve food safety and ensure African farmers can access markets both at home and abroad.

The transformation of Africa's cold chain is not a luxury – it's a necessity. If we are serious about feeding our people, growing our economies and tackling the challenges of climate change, then we must act now.

The Call to Action is our roadmap, and we will be sharing with governments and other decisionmakers across Africa in the months and years ahead.

Read the full Call to Action at www.gcca.org/africa 📄

PAUL MATTHEW is Africa Director at GCCA.

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BEST IN CLASS IN AUTOMATION AND COLD

Customer perspectives on delivering
controlled environment design-build.

Michael Adkins, Cold Storage Leader at BGO Cold Storage and Michael Lynch, Senior Vice President, Sustainable Energy at United States Cold Storage (USCS) share their perspectives, as cold storage building and design customers, on automation. You will be able to hear them both, along with other industry leaders, address this topic in the General Session at the CEBA Convention November 11-14.

Q: Is automation the right decision for every temperature-controlled environment?

Michael Adkins: Every facility should be designed with automation in mind. Facilities from the 1970s and 1980s are still in use, so I anticipate that new facilities built today will also be operational in the 2070s and 2080s.

The key to ensuring this longevity is to plan for automation.

Michael Lynch: A cold storage warehouse needs to be operationally flexible, and automation inherently is limited operationally, so understanding the requirements from a product handling and throughput standpoint is paramount. Automation projects are typically more expensive, take a longer time to complete and require additional knowledge and training on the automation equipment and software platforms (WCS).

Automation is not always the answer and the adage “one size fits all” does not apply. There are a lot of providers and solutions to choose from so finding what works for your company is important for success.

Q: What goes into the thinking around how automation is going to impact your business and your customers?

MA: Flexibility is key. We don't want to ever say to a customer that they can't do something. We look at automation options and ensure they can fit in what is being built today as well as future concepts. This ranges from utilizing conventional racking and AGVs, to Turrets and VNAs, to multidirectional pallet moles and layers pickers, as well as rack-support AS/RS with integrated picking, and we ensure we can do all of these things in our cold chain spaces.

ML: Getting started in warehouse automation is a big step for a company to undertake. You have to find a partner that will help develop the right solution for the warehouse and your customer(s). We always start with the data such as SKU profiles and velocity, order profiles, order inventory levels, pallet height and weights. From this a material flow diagram (MFD) is developed and tested through computer modeling. Once the MFD is confirmed, the project would move into early stages of design and rough order of magnitude (ROM) costing before moving forward with project justification.

Q: Do you have to educate your customer on what their needs are?

MA: We let the customers educate us through collaboration and shared best practices. We are clear if we think they are too focused on one item and help ensure we can all be successful. If needed, we will push back and support our beliefs with data.

ML: Automation does add another level of complexity, as we have to ensure that the pallets and product going into the automated systems meet the quality standards necessary to safely and efficiently move throughout the systems. Typically, we do come across products that will not work in our automation systems for any number of reasons, and we communicate with our customers, so they know what we are experiencing, and work with them to address any issues and challenges together.

Q: What's different when building an automated site that is not customer-specific?

MA: When a facility is not customer specific, it limits the depth of automation you can install from day one.

ML: When designing an automated facility, we need to consider room temperature and whether temperature convertibility is necessary, maximizing the throughput in the design so the operation can handle peak days, and ensuring that we can take taller pallets and pallets that sometimes don't fit in a standard 40x48 footprint. This is why the data and the development of the MFD is so important. Operational flexibility and adaptability are the keys to supporting our customers.

Q: How do you adapt to a new client and also ensure the building is sustainable and serviceable into the future?

MA: It starts with front-end planning and determining what should be automated versus what can be automated. I think it's key all products still come in on pallets and need to be stored. If you can be mindful of pallet heights and facility density, a large part of the core business can be automated.

ML: Along with our design process, we engage our business development and operations teams to understand the challenges and opportunities, and our automated systems are built with energy efficiency and longevity in mind.

Maintain substantial amounts of automation spare parts to maximize system up time. Also important are cooperative relationships with your automation providers, regular meetings to review systems performance, scheduling preventive maintenance and future upgrades – mechanical, electrical and software.

Q: Levels that rise and lower to fit different pallet heights? What would you like to see in the automated cold storage facility of tomorrow?

MA: Flexibility will remain crucial. I would appreciate automation options that are less integrated into the construction of the facility and can be added based on customers' needs. Possibly, moved or even sold back to third parties. Further standardizing operating systems to allow technologies from different companies to work together would allow for more entrants into the market performing specific tasks.

ML: Although low-oxygen fire protection exists, it is not yet prevalent here in the United States, therefore many automated systems still rely on in-rack fire protection, making the adjustment of pallet storage heights cost prohibitive. That being said, the ability to quickly change pallet location heights would be a game changer as it would allow us to maximize storage space and better utilize energy resources when cooling rooms.

Q: How important is it to have automation, integration and construction expertise under a single umbrella in one company?

MA: Each company should have its experts and teams constantly learning and expanding their automation expertise. It's okay to have multiple "umbrellas" as long as they can collaborate effectively. However, having that single source to bring it all together will continue to be a differentiator for companies.

I feel that the industry needs to look at automation like it does cold storage overall. The Built by the Best award presented by CEBA heavily considers the number of participating CEBA members as part of the project scoring criteria. It makes sense because these contractors are experts in cold storage and understand what is necessary for a project to succeed, not just for their trade but overall. CEBA members have excelled in this industry by providing exceptional service, understanding customer needs and providing education on aspects that may not be clearly defined in specifications or project drawings. Additionally, these members collaborate to construct top-notch cold storage facilities.

Successful cold chain automation teams must have firsthand experience in the field. This involves collaborating with customers and fellow contractors. If they can bring it all together, both automation and cold, they will be best in class.

ML: We have found some great partners to work with. Building a strong relationship with open communication has been key to our success. USCS continues to develop a team that understands all facets of our automation system and requirements.

Automation effects everything from operations to transportation to the customer. Change is not always comfortable but needs to be promoted and achieved. Getting everyone on board and engaged early in the process greatly helps. @

C&EBA

BUILT BY THE BEST

CASE STUDIES

By Keith Loria

PRIMUS SETS BENCHMARK FOR FUTURE COLD STORAGE

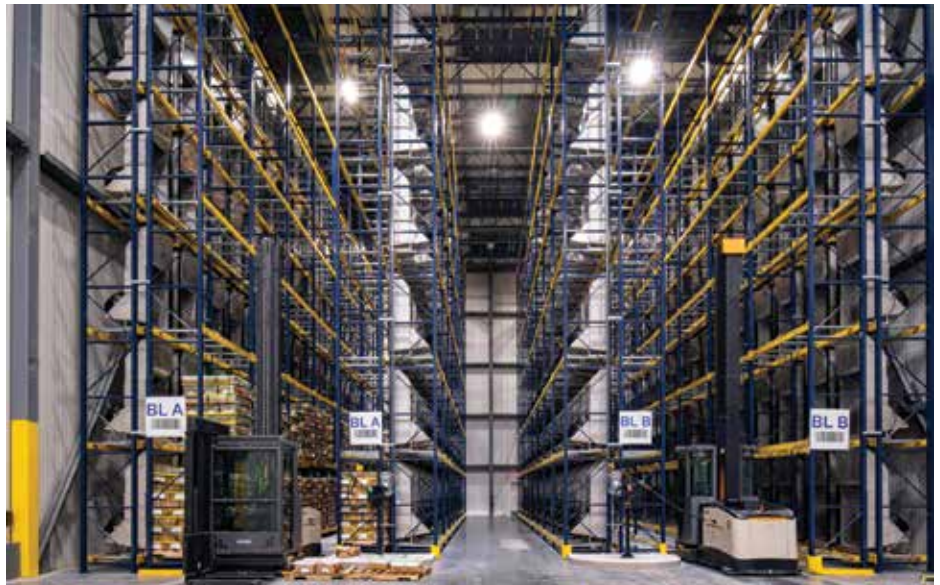
RL Cold and Maersk recently collaborated on a 300,000-square-foot cold storage facility located on 37 acres in Camp Hall, an industrial park in Ridgeville, South Carolina, designed around sustainability.

Primus Builders, which was also providing design-build services on the client's 283,050-square-foot cold storage facility in Baytown, Texas, was brought aboard for the job.

"In the initial meeting, the developer had clear requirements – a state-of-the-art cold storage warehouse designed and built to meet high-efficiency standards with the flexibility to attract a top-tier tenant," says Michael Cole, Project Director at Primus. "They emphasized the need for a 300,000-square-foot building with a robust refrigeration system that was not only reliable but energy-efficient and designed with the potential for future expansion. Sustainability was a key objective as well, with the project ultimately achieving LEED Gold certification."

To win the job, Primus proposed a strategy that balanced cutting-edge design with sustainability.

"We highlighted our experience with the client on a previous project that was nearing a successful end, our large portfolio of other similar projects, and our proven ability to manage complex builds," Cole says. "Our strategy included a design approach to accommodate tenant-specific modifications, ensuring we could adapt quickly to minimize potential delays to the project timeline. We



(Photos courtesy of Primus Builders.)

also presented a strong plan for incorporating green initiatives, such as a large roof-mounted solar array, rainwater collection/reuse systems, and EV charging stations, which aligned with the developer's sustainability goals."

A Project in Motion

The job began in the first quarter of 2022, with an anticipated 13-month timeline. Once a tenant was onboard, major design changes were made mid-project, which increased the original timeline to 16 months.

"We then developed a detailed schedule incorporating the tenant changes, collaborated closely with our subcontractors, and held

regular design development and construction coordination meetings to address any issues as they arose," Cole said.

Still, the design/scope changes brought on by the tenant mid-project were a major challenge that threatened to derail the project timeline and budget.

"For example, the tenant requested modifications to the internal layout to accommodate specific storage and processing equipment, requiring changes to the mechanical, electrical and plumbing scopes of work," Cole said. "To solve this, we immediately held a series of meetings with the client, tenant, design and construction teams to assess the impact."

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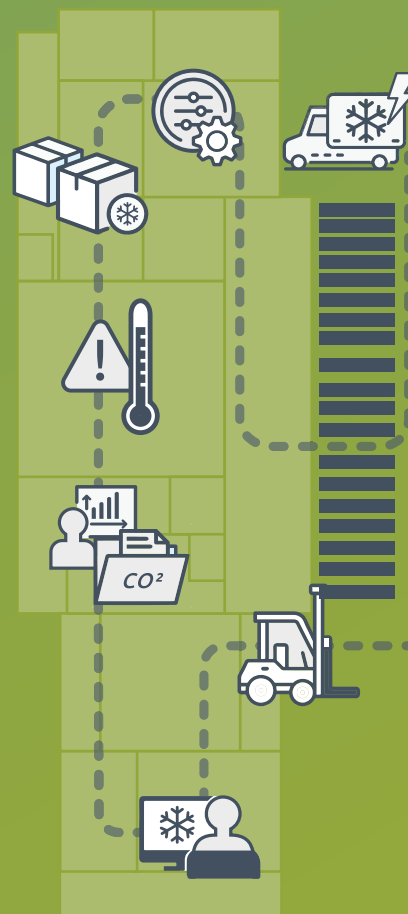
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Balancing the needs of both the client and the tenant, while navigating the challenges of material escalations, labor shortages, incredibly long permitting and inspection timelines created a highly stressful and dynamic environment. Facing these challenges in conjunction with the project's complexity and high sustainability standards made it unique.

By thoroughly investigating all aspects of each change, and collaborating with subcontractors, the Primus team was able to develop a full understanding of how each trade was affected from a cost and schedule aspect.

"As such, our contract amount and schedule were adjusted accordingly," Cole says. "We then fast-tracked the approval of revised plans and worked closely with our suppliers and subcontractors to expedite. We had a pull-planning session with all subcontractors on-site to get their buy-in on scope, duration and timing. To top it all off, we also encountered multiple material shortages and cost escalations, force majeure notices and subcontract labor shortages during this time, but we got through it."

Innovative Design

Cooling the building is a state-of-the-art Ammonia-CO2 Cascade system, which utilizes rainwater, captured and stored onsite in a 50,000-gallon tank to cool the condensers during peak demand. This resulted in a 30% gain in energy efficiency.

Other innovative design highlights include implementation of a Very Narrow Aisle (VNA) racking system, F-min 85 flat floors, advanced energy monitoring and an automated de-slatting system/conveyor line.

Sustainable Measures

To achieve its LEED Gold designation, the Ridgeville cold storage facility has numerous sustainability features.

"This project demonstrates a 32% improve-

ment in energy performance," Cole said. "This was achieved by incorporating the rainwater capture system, a tight and efficient thermal envelope, highly efficient LED lighting, an advanced energy monitoring system and a 1-megawatt rooftop solar array that back feeds to the energy grid offsetting a portion of the buildings overall energy costs. We also installed electric vehicle (EV) charging stations in the parking area to promote the use of green transportation."

Cole feels achieving LEED Gold was the biggest accomplishment of the job, though he's also particularly proud of how the entire Primus team managed to incorporate the last-minute changes in conjunction with balancing the expectations and needs of both the client and the tenant as well.

"The team demonstrated a steadfast adaptability throughout the project," Cole says. "It was an environment of open communication, where every member—from the design team to the subcontractors—was encouraged to

contribute ideas and solutions. This was not by accident. It was because each of us knew that it was the only way to pull this off successfully. The team's ability to work together, pivot quickly and stay focused on the end goal was critical to our success."

A Job Well Done

For Cole, one aspect that stands out to him about the finished project is the way the facility has set a new benchmark for future developments in the cold storage industry.

"The integration of advanced green technologies with the specialized requirements of cold storage is not something you see every day," he says. "It's a testament to what can be achieved when all stakeholders are committed to innovation and sustainability. This project wasn't just about building a warehouse; it was about creating a facility that meets today's environmental standards and challenging the rest of the industry to do more green cold facilities."





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Ti Cold Partners With Sierra Supply Chain to Launch Cutting-Edge Facility in Ontario

Sierra Supply Chain Services, a full-service cold chain provider, wanted a 164,000-square-foot expansion to its existing processing facility in Hamilton, Ontario, Canada, and called on long-term partner Ti Cold for the job.

“We met the owners four years before we even started this project,” says Rob Adams, Executive Vice President and Partner at Ti Cold. “Originally, it was a small addition, but that led to a very large addition.”

The \$65 million project added 36,000 pallet positions, and brought the facility to a grand total of 250,000 square feet, including 30,000 square feet of food processing space in a 65-foot-tall building.

From the beginning, it was clear Sierra was looking for an innovative temperature-controlled facility with efficiency in mind.

“Innovation is the name of the game for this Ti Cold build,” Adams says. “Pushing boundaries, outside-the-box problem solving, and dedication in the face of one obstacle after another, we successfully master planned and constructed this expansion.”

Innovative Ideas

From the outset, because Sierra was limited on space due to where the facility was located, Ti



(Photos courtesy of Ti Cold.)

Cold was tasked to maximize the footprint. It ended up building a two-deep, 65-foot-tall very narrow aisle, which was the first in North America that had that narrow an aisle with a push-back racking system.

Ti Cold also exceeded expectations by making Sierra the first in Ontario – and only the second in all of Canada – to use an Evapcold packaged approach for refrigeration systems.

In doing so, Ti Cold collaboratively engineered an intricate and fully customized

master control system that operates all the packaged refrigeration equipment. It allows the customer to take advantage of energy management features such as load shedding, on-peak and off-peak management, run time management, etc. This is to accommodate Canada’s IESO utility rate program, which incentivizes large consumers to reduce power or come offline during specific time windows.

“Ti Cold went the extra mile by creating inventive energy solutions and investing



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hours into detailed energy saving outcomes, which gained Sierra the largest to-date rebate from the Canadian Government Utilities Program, resulting in a seven-figure savings,” Adams says. “In addition, due to our package approach, the facility outperformed the nation’s strict operation standards and was granted a modified manpower requirement, eliminating 24/7 coverage and saving Sierra Supply Chain hundreds of thousands in operation costs.”

The builder also combined very narrow aisles, extended ceiling heights and added two deep push-back RBI racking to maximize density, decrease the total footprint, and increase storage capacity to 3.5 times the pallets per square foot.

“We had a dedicated room that we used for blast freezing, so we were doing things a little bit different,” Adams said. “We had a whole separate refrigeration system that we utilized for the blasting, which was very unique from the rest of the building.”

The cooler rooms were split between one larger cooler, set at 34°F, and one smaller 28° super chill cooler.

“Maintaining exactly 28°F is the perfect temperature for Sierra’s product and required us to specially engineer equipment in order to operate in only plus/minus 1.5 degrees (super low Delta T) as opposed to standard coolers, which range from 38-34°F,” Adams says.

All processing areas, including both slabs and curbs, are equipped with a durable troweled resinous floor coating, stainless steel floor and slot drains. Each room features custom-built stainless steel racks designed to support hot high-pressure water lines, compressed air lines, and multiple sanitizing lines.

Moreover, all processing spaces include galvanized structural steel and a suspended, walkable insulated panel ceiling, which enables utility piping to be conveniently installed in the interstitial space. The seams of all panels are sealed using USDA/CFIA-compliant sealants, and all doors in these areas are process-rated. This includes insulated fiberglass doors from Global Insulated Doors, Inc. and “clean” high-speed doors from Rite Hite.

Sustainability Matters

Ti Cold also thought a lot about efficiency and sustainability within the job.



For instance, it installed Variable Frequency Drives on most of the compressors and evaporator fans to take advantage of cube-root savings.

“This helps us control capacity requirements on a linear scale, not just stop/start, which is hard on the motors,” Adams says.

To meet the demanding requirements of temperature, pressurization, air purity, humidity and condensation control, the processing and production spaces also received state-of-the-art systems.

A waste heat floor heating system was installed in the process space to reduce floor condensation and wetness, improving operational safety; sloped floors with stainless steel slot floor drains were added to make clean-up easier for processing room employees; and there was a great deal of interstitial space included in the design, allowing for a cleaner production room.

“To meet the requirements of a third-party freezing provider for a local customer with a large variety of products, a new Quick Freeze System with much greater automation capability was installed,” Adams said. “This enabled a 13-minute process taking fresh product from a 45°F, 100% humidity processing room to an -18°F, 25% humidity blast freezing room, generating significant infiltration reduction.”

Additionally, Sierra’s choice to use Evapcold Low Charge Ammonia Systems resulted in a substantial reduction of ammonia on site.

Overcoming Challenges

Once the contract was signed to begin the project, COVID came, so that resulted in some immediate challenges.

“We couldn’t get people across the border and when we did, they had to isolate for two weeks, so we designed the whole building with the owners, over a year, via Zoom,” Adams says. “It was tedious with the installation of racking, fire protection, lighting and electrical because of the narrow-aisle format.”

One of the limiting factors of the project was the material handling equipment as the VNA racking system required extreme tolerances, with less than 3-feet of clearance between each side of the TSP truck and the face of racking.

Super-flat Fmin 100 slabs were required to support Crown’s TSP Turret fork truck, used to pick pallets from 60-foot-tall racking.

Due to the heights of this facility, normal integrated sensors on the fixtures wouldn’t work.

“We had to then integrate remote motion sensors within the racking in each aisle to maintain the same efficient lighting system,” Adams says.

Plus, network signals are blocked because of the height and density of the racking. Ti Cold assisted Sierra in designing the complex infrastructure required to have reliable coverage within this state-of-the-art freezer.

“We had weekly, and sometimes almost daily calls—they were way involved more than most clients are, and we had great collaboration throughout,” Adams says.

The Final Word

The job was completed on-time and on-budget, and Rob Vanden Broek, CEO of Sierra Supply Chain Services, praised Ti Cold for a job well done.

“We were excited to bring this state-of-the-



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art facility to market,” he says. “High density and high efficiency are the future in 3PL supply chain and Sierra Cold will lead the way.”

Adams called the day the facility opened, a happy day for all involved.

“Everything worked as we designed it, so that was very gratifying for them and us,” he says. “It worked the way we said it would.”

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

EMAIL: freelancekeith@gmail.com



44TH CEBA CONFERENCE & EXPO NOVEMBER 11-14, 2024 PONTE VEDRA BEACH, FL



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IDEA EXCHANGE WITH EXPERTS

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



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44TH CEBA

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Join Your Colleagues in November in Florida!

The 44th Annual CEBA Conference & Expo will be held November 11-14, 2024, at the Sawgrass Marriott Golf Resort & Spa in Ponte Vedra Beach, Florida. The annual CEBA Conference & Expo is the only event in the world dedicated to best practices in controlled environment facility construction, design and maintenance. The event draws more than 350 controlled environment facility construction, logistics and supply chain operations professionals from around the world who want to gain valuable insight to improving their business.

General Sessions

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

The 5 Es of Turning Customers Into Raving Fans

Jesse Cole, aka “the guy in the yellow tuxedo,” Founder of Fans First Entertainment and the owner of the world-famous Savannah Bananas as well as the Party Animals and Firefighters.

Jesse Cole, the inventor of Banana Ball, has introduced a fast-paced and entertaining ver-

sion of baseball with unique rules, including a two-hour time limit and the ability for fans to catch a foul ball for an out.

With the mantra “Fans First. Entertain Always,” the Savannah Bananas are on a mission to make baseball fun by creating the Greatest Show in Sports. The team has sold out every game since their inaugural season, growing a ticket waitlist of more than 2 million fans worldwide, and it boasts more than 15 million social media followers with features on major media outlets and a documentary series on ESPN+.



Keynote speaker Jesse Cole

The Customer Perspective: Delivering on Controlled Environment Building & Design

Moderator: Marko Dzeletovich, CEO & Founder, Coldbox Builders/Immediate Past Chairman, CEBA

Invited Panelists: Michael Adkins, Cold Storage Industry Leader, BGO; Michael Lynch, Senior Vice President, Sustainable Engineering, United States Cold Storage; Mike Tecza, Vice President, Construction, Americold

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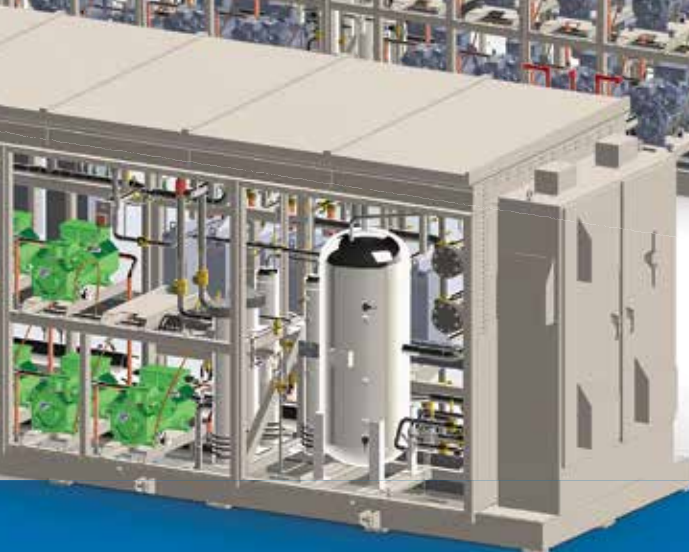
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highlight firsthand customer experiences with building designs, technologies and collaboration strategies that ensure optimal facility project delivery. Learn about the latest advancements, common challenges and how end-user collaboration is shaping the future of temperature-controlled infrastructure.

Whether you're involved in construction, facility management or supply chain logistics, this discussion will provide valuable insights into achieving efficiency, compliance and sustainability in temperature-sensitive environments. (Want to know what to expect from this session? See questions and answers with panelists Michael Lynch and Michael Adkins on page 14.)

Construction Café

The Construction Café is a roundtable discussion component of the program where attendees will participate in valuable dialogue with their peers. Participants will engage in up to three fast-paced, 20-minute discussions and choose from over 10 different topics.

How will this work? Each participant will receive a list of 10 different questions, topics and/or issues. Each topic will correspond to a numbered table in the ballroom. Participants join the table/topic of their choosing and spend the next 20 minutes discussing that topic with their peers. The goal is in 20 minutes, each group will share tools and ideas and have a stimulating conversation about a particular topic. That will happen two more times. By the end of the entire session, each participant will have spent 20 minutes with three different topics/issues/questions.

Why are we doing this? The Construction Café allows CEBA conference attendees the chance to share and discuss relevant topics important to them. Everyone will be sure to learn something new and carry on the discussion throughout the conference.

Previous topics for the Construction Café included:

- Supply Chain Disruptions & Dynamics
- Automation
- Recruitment & Retention
- Refrigeration Regulations
- Consumer Trends
- Economic Trends
- Energy Efficiency
- Technology/Innovation
- Emerging Markets/ Non-Food Channels
- Controlled Environment Design

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Built by the Best Award

The CEBA Built by the Best Award was created to acknowledge association members around the globe for their expertise and innovation in constructing, renovating and/or modernizing controlled environment buildings across the world. Buildings recognized with the Built by the Best Award seal represent some of the most innovative and complex facilities built around the globe according to the intricate, unique standards set forth by the controlled environment industry.

Going into its ninth year in 2024, the award program includes two award categories. One

award recognizes buildings constructed under \$35 million (USD) and the other award is for projects over \$35 million (USD). The award recognizes the varying level of controlled environment buildings being constructed globally throughout the cold chain. Applicants are welcome to submit projects in each category.

This award is open to project teams in any country comprised of contractor/design-build companies and processor/end-user/warehouse/third-party logistics companies that meet the following criteria:

- Contractor or design-build company

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must be a CEBA member. Processor/end user/warehouse/third-party logistics company does not need to be a member.

- Building must maintain a controlled environment.
- Projects must be completed within the timeframe of January 1, 2023 - March 31, 2024.
- Submission must be received by the submission deadline. Late applications will not be accepted.
- Project must have been completed on or ahead of schedule.

The Expo

The Expo is an experience not to miss, and features the latest technologies, solutions, products and services from some of the most respected names in the industry. Here's just a small sampling of the products and services that will be featured at this year's expo:

- Cold Storage Contractors
- Doors
- Energy Efficiency Solutions
- Fire Detection Systems
- Flexible Walls
- Flooring
- Insulated Panels
- Insulation
- Lighting
- Materials Handling
- Racking
- Refrigeration Solutions
- Roofing

Networking

Prominent social activities, receptions and the exhibit hall all give members and industry suppliers unparalleled access to build partnerships with construction/design-build, warehousing and food processor decision-makers. Other networking opportunities include a first timer and new member reception, an opening night reception, a rooftop networking reception, time, set aside to catch up with peers and vendors for private business meetings, a golf tournament, a pickle ball tournament and a farewell brunch.

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



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FROM CLASSROOM TO COLD CHAIN

Meet Sara Stickler, GCCA's new President and CEO.

Hurricane Helene was not the backdrop that anyone would have chosen for the first month as the President and CEO of the Global Cold Chain Alliance. Still, Sara Stickler showed the clear, calm and decisive leadership qualities that made her stand out in the selection process. She and the team delivered a successful GCCA Convention. Stickler talks to Cold Facts about her career journey and her ambitions for the GCCA.

COLD FACTS (CF): Sara, welcome to GCCA! Can you tell us what your first impressions are of the organization you lead?

Sara Stickler (SS): Thank you, it's an honour and privilege to be joining such a well-respected and impactful organization. It has been a phenomenal first month, and everyone has been very welcoming and supportive. My first impression is how dedicated

and engaged our membership is, and how committed they are in advancing GCCA. We also have a great staff who bring a vast array of skillsets and knowledge that allows us to deliver so much to our members.

Our boards at GCCA, the Global Cold Chain Foundation (GCCF) and the Controlled Environment Building Association (CEBA) are committed and ready to lead as we ensure the stability and growth of the organization. The cold chain is a vitally important

industry that has shown its importance and resiliency over the past few years. We face many new opportunities and challenges, GCCA is well positioned to lead on these matters, and I am optimistic for our future.

CF: You have led other associations, most recently WTS International that works to promote equity and access in the transportation industry. What has that taught you about the role and relevance of trade associations to the industries they serve?

SS: I have spent the last 15 years falling in love with association work, whether at WTS International or before that at the Household and Commercial Products Association, building their Educational and Research work and managing their Foundation. Now with GCCA included, I have had the privilege of getting to know three very different industries.



Each industry has had its own unique set of opportunities, but what I love about associations is the power of a unified voice and a joining together of competitors for the larger good of the industry. Associations help to drive innovation, adaptation, growth, and education within and of an industry.

The ability to deliver for our members and advocate for our industry are my guiding motivations every day. As I think about the priorities here at GCCA, the first is to continue to drive member value and return on investment. I'm already hearing from members about their hopes for GCCA, GCCF and CEBA, and I look forward to meeting and talking with many more people in the coming months to gain a deeper understanding.

CF: Earlier in your career you were a teacher and sports coach, and you have said you see your leadership role as “the coach” – can you explain?

SS: I am proud to be a former educator and coach, and that mentality and philosophy is still at the heart of everything I do. I see myself as “the coach,” and working with the Boards, members, and staff, we will collaboratively define our long-term goals – the “championship” we are working towards. As the coach, I have four main philosophies that drive me. Firstly, always be making continual progress. We're better today than yesterday and better tomorrow than today. It's not one big workout at the gym that will get results, but rather the consistency of showing up each day with an aspiration of being better than yesterday.

Second, leave things better than you found them. This will be vital to us in GCCA, GCCF and CEBA. There is so much potential to improve on our strengths. This mentality will shape how we collaborate with our colleagues, members, and stakeholders and build our

reputation as a team that others want to be on.

Third, if you do something, take the time to do it right the first time. To ensure a high standard of excellence in all that we do, we commit to transparent and open communications to ensure shared expectations.

And finally, as the coach, it's my job to build a great team and let that team play. This is your association. Whether the team is the GCCA staff, experts like our GCCF Council of Scientific Advisors or a cohort of members organized to educate members on Capitol Hill or in the European Parliament, it is building and supporting a team of professionals and utilizing and complementing the skills of each individual. And then getting out of the way to let their expertise shine.

CF: You talked to members at the GCCA Convention about the importance of GCCA as a global voice for the cold chain. Why is that important?

SS: I am very aware that I have not worked in the cold chain before, so I have a lot to learn about this industry. But I did recognize, alongside everyone else in the pandemic years, just how vital the cold chain is. The rapid deployment of the COVID-19 vaccine was an amazing feat of cold chain delivery as was how our industry delivered continuity of food supply chains during that period of unprecedented upheaval. The industry's success at that time created a new awareness of supply chains, in general, and cold chains, in particular.

The pandemic was a moment in time, but it has also proved to be an episode in a more extended period of disruption and uncertainty in our global economy and geopolitics. At the convention, we heard from world experts like Jason Schenker (the Futurist Institute) and Rachel Wilson (Morgan Stanley) about the future of our

economy and the cybersecurity threat. Their perspectives reinforced for all of us that while we are grateful that the global pandemic is behind us, people, governments and our customers face other upheavals and challenges.

Cold chain resilience is vital, and we must ensure that decision-makers across the world recognize that and support us in getting the job done. That allows us to build, expand and replace cold storage infrastructure and transportation hubs; keep trade routes open; and ensure we have access to the skilled workforce, technology and energy supplies we need to be effective and make investments.

We will do this by proudly telling our story in relevant media and government forums, bringing together our members' expertise, building broad coalitions and holding the key regulators to account. There is so much to do, and I am excited to get started.

CF: With so much on your plate, it may be hard to think about right now, but can you share some insights on what life is like for you outside of work and what your hobbies or interests are?

SS: While excited and ready to learn more about the cold chain and visit with members, my role as wife and mother are the two most important titles I will ever have. My family joined me at the GCCA Convention this year, and it was such a joy to see how we were all so welcomed into the GCCA family.

Outside of work, I enjoy spending as much time as possible with my family and most of that time is outside, which includes swimming, hiking, kayaking and even yard work. I pretend to be a runner, and I have completed four marathons. I think it's the teacher in me, but I love continuing to learn new things. I love non-fiction, and typically I'm reading two or three books at the same time. ☺



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A COLD CHAIN EDUCATION GEM

60 years of developing leaders in the GCCF Institute.

The Cold Chain Institute, the jewel in the crown of the Global Cold Chain Foundation (GCCF), offers this unique training and development program that has provided skills and career aspirations to thousands of cold chain workers over two generations. Some of the leaders of today's biggest cold chain businesses are graduates of the Institute. As the GCCF prepares for its 60th anniversary celebrations, Cold Facts asks cold chain leaders and existing Institute faculty and staff about what makes the event so special and important.

A Unique Program

When it started, it was a visionary idea. Launched in the middle of the swinging '60s, the first class met at the University of Oklahoma in a town called Norman. The Institute's core values were in place from the start.

GCCF Executive Director Adam Thocher explains. "The Cold Chain Institute is a three-year professional development and leadership program; it focuses on every single stage of the temperature-controlled supply chain. We educate everyone from warehouse supervisors and shift managers through the

project management officers and continuous improvement specialists to finance, HR and executive leadership across the cold chain. We've worked with specialists and scientists to establish a curriculum that is the best practice in the cold chain industry. The students receive a college-style experience with classes covering many practical topics."

There are many cold chain leaders quick to emphasize the unique identity of the Institute. Marty Steinmetz, longtime Institute faculty member and Chief Commercial Officer at Real Cold says, "The thing that stands out

Cold Chain Institute Wins Prestigious Award

The Global Cold Chain Alliance (GCCA) has been recognized by the American Society of Association Executives (ASAE) with a Power of Associations Gold Award for its successful Cold Chain Institute initiative.

"Congratulations to GCCA for exemplifying the impact associations have on the industries and professions they represent, and on society at large," said ASAE President and CEO Michelle Mason, FASAE, CAE. "It's always so incredibly satisfying to see associations going above and beyond their everyday mission to change the world. We're very proud to spotlight this award-winning initiative."

about the Institute program is the singular event, the one-stop shop. I think the variety of topics offered is one of the big things that makes [the Institute] a success."

Ashley Albers, Vice President of Human

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Resources at Nor-Am Cold Storage, says, “It’s hard to find industry-specific continuous education in our industry.” She highlights the unique role of the instructors, who are, in large part, operational leaders of cold chain businesses. “When a faculty member is in a class and talking to someone who has the same experience and a similar background, it does make it more impactful for the students.”

Larry Alderfer, President and CEO of US Cold Storage, graduated from the Institute in 1993. He highlights the networking value. “Our company supports the Institute because it is a fantastic program. In the last year, 100 of our supervisor-level employees benefitted from very specific training in the industry. They get to connect and to bond, they get to know people in other companies, learn how other folks are doing things, and as a result develop in themselves.”

Building Careers

Bradner Cold Storage President Tim Ludwig highlights the challenge of identifying and nurturing talent across cold chain businesses. “Nobody shows up at kindergarten career day wearing a freezer suit, so one of the things that we like so much about Institute is when we are able to identify high-potential young individuals, who usually end up getting a job with us by accident rather than by design. It’s a great way for us to quickly open up their eyes to the career potential of our industry, and how there is so much opportunity to build a lifelong career.”

A Winning Model

CEBA is celebrating the first successful year of its CEBA Professional program. With similar elements and objectives to the Institute, CEBA Pro is the first ever immersive training for concepts, terminology, techniques, and elements related to the design, construction, maintenance, safety, and long-term operations of a controlled environment facility.

The program fills an important training need for professionals such as Site Superintendents, Project managers, Project Coordinators, Project Engineers, Professional Engineers, Estimators, Architects,

Designers, and Pre-construction Coordinators/Managers/Directors from general and thermal contractors from CEBA member companies.

CEBA Executive Director Bryan Lynch said: We are immensely proud of the work that has been done to build and pilot this industry leading program. We are looking forward to fast growth in participation and recognition of this much needed program.

Find out more at: <https://www.gcca.org/about/controlled-environment-building/ceba-program/>

Rob Chambers, President of Americas at Americold Logistics, agrees. “As a leader in the cold chain industry, we are always looking to attract top talent, and top talent wants to have the opportunity to learn, to train to develop, and those types of programs are key to attracting the future leaders of our organization ... We have seen great success from people who have entered the Institute, gone through the entire program and become leaders in our company.”

Global Reach

As the Cold Chain Institute enters its 60th year, it can now be called a truly global program. In 2024, the first classes launched in Sao Paulo, Brazil and Rotterdam, The Netherlands. These

two new programs join the growing young programs in Australia and Mexico.

It is striking just how possible it seems to have been to be able to replicate the chemistry of the established programs in new places. Joris Olbrechts, Owner of JodiFrost, Belgium and Chairman of the GCCA European Logistics Council, attended the Atlanta Cold Chain Institute in January 2023. “I was nervous whether we could replicate the unique feel and appeal of the North America program in Europe, but I did not need to worry. Our first European event was just as engaging, if not more so. It was a great start, and we can only expect it grow.”

Francisco Moura, CEO of IceStar, shares this enthusiasm and brings big passion and

energy to grow the programs in both Portuguese- and Spanish-speaking South America. “Cold Chain Institute is a unique experience to meet, to teach and to learn for cold chain professionals. For me it’s a passion, and I hope to see the Institute grow from its strong momentum in Brazil and Mexico City, into other parts of the continent.”

As both a GCCA Board member and Chairman of Refrigerated Warehouse and Transport Association of Australia (RWTA), Graham Harvey, Vice President of Quality, Safety and Sustainability at NewCold, has been a vital supporter of the Cold Chain Institute in Australia. He emphasizes the role of the Institute in building ties. “I see one of the key benefits [of the Institute] to this industry is to build better understanding within the wider industry. We have common problems. We compete on a certain platform. But we have the same issues, cost pressures, labor pressures, and regulatory pressures that sit there.”

Ludwig outlines the scale of the potential and ambition for the Institute’s growth. “My hope for the Institute in the next 60 years is to have it available and accessible across the entire world, without having to fly somebody from Asia or Africa to North America or Europe, for many more people to enjoy the unique experience.”

Making Connections

Of all the value people place on the Cold Chain Institute program, it is the opportunity to build friendships and connections that stands out. Recent Institute graduate Hardeep Grewal, explains. “My favorite memory of Institute was interacting with my fellow students. What a joy and privilege to share my thoughts and learn so much and at the same time make friends and contacts.

The final word goes to Mickey Hoffmann of United States Cold Storage and Chairman of the GCCF, who had this advice for students at the 2024 graduation ceremonies. “No matter where you are graduating from, keep your network, keep your connections and continue learning. It’s really easy to go to work every day, get on your forklift or go to the office and do that every day, it’s when you get out of your comfort zone that you grow as an individual.”

If there is a way to sum up the purpose intended in Norman, Nebraska, 60 years ago, it probably can’t be summed up better than that.

The Institute’s 60th Anniversary events will start in February 2025 with Cold Chain Institute East, February 1-4 in Atlanta, Georgia,

and Cold Chain Institute West Tempe, Arizona. This unique program is undoubtedly well-positioned for growth not just in participation, but also geographic reach – the sky is the limit. 🌐

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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

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

Partnered with Improving Economies for Stronger Communities (IESC)

GCCF organized for six students and one project staff member to attend the GCCF Cold Chain Institute Latin America in July. The participants are from the project's target countries: Honduras, El Salvador and Guatemala. In addition to the Cold Chain Institute training program, Dr. Elhadi Yahia, Postharvest Technology and Tropical Produce Expert on the Council of Scientific Advisors, traveled to El Salvador and Honduras to implement training postharvest handling best practices with local stakeholders. GCCA staff member Lowell Randel and GCCF Technical Experts Debbie Corado and Salvador Figueroa Sanchez presented virtually on the importance of proper cold chain management to members of the government and private sector in El Salvador in advance of the Cold Chain Working Group that will start later this year.

Bangladesh Trade Facilitation (BTF) Project, 2020 – 2025

Partnered with Venture37 and LixCap

Working closely with the project staff and GCCA member LixCap, GCCF is developing a webinar presentation with U.S. Commercial Services to highlight opportunities for U.S. operators and suppliers to access the Bangladesh market. GCCF is also supporting curriculum to educate local commercial refrigeration technicians and engineers to provide service and maintenance for cold chain equipment and continues to advise on best practices in warehouse operation and design. Following Dr. Elhadi Yahia's technical assistance earlier in 2024, GCCF is looking to provide additional capacity building activities to improve postharvest management.



Participants from the TraSa project in the Dominican Republic and from the ATraCSI project in Honduras, Guatemala and El Salvador visited an Axionlog cold storage outside of Mexico City following the Cold Chain Institute in Latin America.

Dominican Republic TraSa Project, 2021 – 2025

Partnered with Improving Economies for Stronger Communities (IESC)

Through TraSa, GCCF facilitated the participation of eight students and one project staff in the GCCA Cold Chain Institute Latin America in July. Five of these students were in Year 3 and graduated from the Institute this year. Additionally, GCCF is updating a perishable handling manual in Spanish with the aid of Dr. Elhadi Yahia, member of the GCCF Council of Scientific Advisors. Additional training opportunities are under consideration as the project plans out its final year.

West Africa Emerging Markets Program, 2024 – 2025

As part of the USDA-funded Emerging Markets Program (EMP), GCCF will assess the technology, operations, and investment in cold chain logistics and food safety in Senegal, Cote d'Ivoire, and Ghana. In October, a team of GCCF Technical Experts will carry out a rapid assessment in West Africa to better understand the market opportunity, identify key players, and analyze skills gaps. In December, the team will present their findings and recommendations for future capacity building, including mentorship, training, consultations, and a study tour to South Africa.

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ATLANTA, GEORGIA



COLD CHAIN INSTITUTE WEST
FEBRUARY 23 – 26, 2025
TEMPE, ARIZONA



Join us this February for the 60th anniversary of the Cold Chain Institute at the East and West events! Celebrate six decades of excellence in cold chain education and innovation with industry leaders. Don't miss the special anniversary reception on February 25th at the Omni Hotel rooftop in Tempe. Register your teams now and secure your spots! For more details, visit our website.



FOR MORE INFORMATION AND TO REGISTER VISIT
WWW.GCCA.ORG/EVENTS



COLD CHAIN DEVELOPMENT

NEWS ABOUT GCCF INTERNATIONAL PROJECTS

in 2025. GCCF will also work with local associations to scale-up their cold chain programming for sustained support beyond the life of this project.

Storage Through Organized Refrigeration (STOR) App

Partnered with Warehouses4Good

GCCF is working alongside GCCA member Warehouses4Good to develop a pilot smartphone app that will connect food supply agencies with the owners of cold storage space in the Washington, D.C., Maryland and Virginia (DMV) area. The app has been launched and is in a pilot phase now as GCCF continues to onboard local organizations. GCCF invites any interested organizations located in the DMV to contact Amanda Brondy, abrondy@gcca.org.

Ongoing Industry Support to Reduce Food Loss and Waste

GCCF has completed one course planned for the 4-course virtual training that will be housed in the GCCF Learning Management System. Three other courses are in various stages of planning. GCCF is also working with the Federation of European Foodbanks (FEBA) to develop a toolkit for members that will provide information on how to donate product and provide ideas on activities that members can take to support their community with food rescue. The toolkit will also include regional policy-specific resources. 🌐

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The Global Cold Chain Foundation (GCCF) Council of Scientific Advisors 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.



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Fish Products Expert
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Dr. Patrick Brecht

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Dr. Paul Dawson

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Dr. Faris Karim

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Toxicology Expert



Dr. Subramaniam Sathivel

Louisiana State University,
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Dr. Victoria Salin

Texas A&M University, Agriculture
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Dr. Elhadi Yahia

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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 Council of Scientific Advisors (CSA) and the roster of advisors. Submit your cold chain questions to the Council of Scientific Advisors at www.gcca.org/inquiry.

Q: We have been moving frozen boxed pork, beef and poultry from our freezer into a separate processing room where we place fans on each pallet to temper the product, depending on customer requests. We regulate the room temperature by starting with approximately 55°F (12.7°C) and then lower the room temperature as the product warms up in the box. After two to three days of air movement on the boxes, the product is ready for shipment.

We have a potential customer that would like us to defrost for them, but their requirement is that the air temperature in the room cannot be over 45°F (7.2°C). This signifi-

cantly slows down our process and therefore decreases the volume we can handle each week. We contend that this customer should only be concerned with the product temperature and not the air temperature. We never allow the product temperature to go above 40°F (4.4°C).

A: Product in the box does not increase in temperature uniformly. Product near the surface will approach the temperature of the room much faster than product at the center of the box. If the boxes are on a pallet, the product in boxes near the outside of the pallet will reach room temperature more rapidly than the product in the center boxes.

The GCCA Food Freezing & Storage Calcu-

lator has a “tempering” application, so we can evaluate the impacts on product temperature over a range of room air temperatures. This would allow you to demonstrate that the product temperature does not exceed 45°F.

Alternatively, you could set the room air temperature at 45°F as per the customer’s requirement and increase the fan speed or add more fans to the room. Check the product temperature in two to three days and see whether you can achieve the desirable product temperature.

Answer was provided by Dr. Dennis Heldman, Food Process Engineering Expert and Dr. Subramaniam Sathivel, Frozen Food Quality Expert. 📧

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ASSOCIATION NEWS

NEWS ABOUT GCCA CORE PARTNERS

GCCA held its first Policy Forum event in Ottawa, Canada; senior members met with senior officials from Agriculture and Agri-Food Canada, the Food Inspection Agency, Transport Canada and Members of the Canadian Parliament. Lowell Randel, GCCA Senior Vice President for Government and Legal Affairs, says, "We have a longstanding commitment to being the voice of our members before the Canadian Government, and this event provides a great opportunity to showcase our importance and engage in dialogue with decision-makers."



CEBA completed its first Professional Certificate & Training Program in Dallas, Texas, in October. Over three days of immersive training, construction professionals learn concepts, terminology, techniques and elements related to a controlled environment facility's design, construction, maintenance, safety and long-term operations. Under the guidance of the CEBA Board of Directors, the CEBA Education & Training Committee developed the curriculum outline through industry validation, the learning assessment, and content presentations with industry subject matter experts. Students will be provided reference materials prior to class attendance.



To find out more contact Jenna Campbell, GCCA Manager of Training and Development at jcampbell@gcca.org.



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ASSOCIATION NEWS

NEWS ABOUT GCCA CORE PARTNERS

GCCF released an update to its well-respected and widely used “Commodity Storage and Handling Manual.” Maintained by the Foundation’s Council of Scientific Advisors and industry partners, the manual provides a one-stop resource for cold chain professionals seeking to validate the optimal storage conditions for more than 300 perishable commodities. The resource is available on the GCCA website (gccca.org/resource/commodity-storage-manual/). Members use their login details to access the manual. For questions about your membership login, contact email@gcca.org.uk



GCCA used the occasion of the United Nations International Day of Awareness of Food Loss and Waste to call on governments and development agencies around the world to support and facilitate the establishment and expansion of cold chain networks in emerging markets, for crucial progress in tackling global food loss and waste. Sara Stickler President and CEO, says “Effective cold chains make a transformative difference in tackling post-harvest food waste and loss. Cold chains are fundamental to food supply chain resilience in a world with fast-changing populations, increasing global temperatures, and more extreme and unpredictable weather events.”



GCCA’s first Canadian Cold Chain Policy Forum invited the Honorable Lawrence MacAulay, Minister of Agriculture and Agri-Food to be keynote speaker, and he discussed the Government of Canada’s work on a sustainable agriculture strategy, export growth and resiliency. Minister MacAulay is a key leader in agriculture and food policy. Other speakers included Conservative Shadow Minister for Supply Chain Matt Jeneroux, MP and Arun Thangaraj, Deputy Minister at Transport Canada. The event, the first of its kind, brought together members from across Canada to meet officials and politicians and discuss key issues. 🌐



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2024–2025 GCCA, GCCF and CEBA Global Events Calendar

OCTOBER

GCCA CANADIAN POLICY FORUM

23-24 OCTOBER 2024

Ottawa, Canada | Delta Hotels City Centre



GCCA Canadian Cold Chain Policy Forum
Ottawa, ON, Canada | October 23-24, 2024

The Canadian Cold Chain Policy Forum is the premier policy event for businesses in temperature-controlled logistics. It features education sessions and keynote presentations with Canadian government officials and Members of Parliament focused on regulations and legislation directly impacting the cold chain industry.

Audience: third-party transportation, warehousing and logistics providers, controlled environment construction and related businesses.

NOVEMBER

GCCA LATIN AMERICAN COLD CHAIN CONGRESS

7-8 NOVEMBER 2024

Panama City, Panama



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.

FEBRUARY

COLD CHAIN INSTITUTE EAST & WEST

1-4 FEBRUARY

Georgia Tech Hotel & Conference Centre, Atlanta Georgia

23-26 FEBRUARY 2025

Tempe Mission Palms, Tempe, Arizona



The Global Cold Chain Foundation (GCCF) is the primary source for training, research and technical information on the proper handling and storage of perishable products and the development of best practices for the safe, efficient, and reliable movement of food and other temperature sensitive commodities globally.

MARCH

28TH EUROPEAN COLD CHAIN CONFERENCE

26-28 MARCH 2025

Copenhagen, Denmark | Copenhagen Marriott Hotel



GCCA's European Cold Chain Conference is the one and only forum where the multiple segments of cold chain get together at one time: nearly 200 cold chain professionals from warehousing, transportation, construction, technology and equipment companies from across Europe and other regions are expected to attend.



GLOBAL COLD CHAIN ALLIANCE

COLD CHAIN CONNECTION

GCCA Cold Chain Connections are designed to bring together professionals working in the temperature-controlled warehouse, logistics, transportation, and design/build industries from around the region to network, build relationships and address industry and business issues in an engaging and informal setting.

These events are open to both members and non-members.

BRAZIL - RIO DE JANEIRO

24 OCTOBER,
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COPACABANA

SINGAPORE

24 OCTOBER,
INTERCONTINENTAL
SINGAPORE

WARSAW

7 NOVEMBER,
SOFITEL WARSAW
VICTORIA

Further Cold Chain Connections are planned in Singapore, Brazil, South Africa and Poland in October and November.

More details to be announced soon.

Find out more at www.gcca.org/coldchainconnections

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NEW MEMBER COMPANIES OF GCCA CORE PARTNERS

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Cardinal System Holdings

Houston, Texas, United States

Cold-Link Logistics

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Colorado Cold Connect

Fort Morgan, Colorado, United States

Excellent Holdings (Pty) Ltd.

Cape Town, South Africa

GLC

San Marcos, San Salvador, El Salvador

Korea Food Cold Chain Association

Seoul, Republic of Korea

M&L Refrigerated Terminals

Manteca, California, United States

Minnesota Cold Storage

Rochester, Minnesota United States

Polaris Cold Storage

Lockport, New York, United States

GCCA ASSOCIATE MEMBERS

5

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Calpine Energy Solutions

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Gurugram, Delhi, India

Contegra Construction

Edwardsville, Illinois, United States

Da Vinci

Anaheim, California, United States

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Glen Mills, Pennsylvania, United States

Divert, Inc.

Concord, Massachusetts, United States

Fisher Refrigeration, Inc.

South Bend, Indiana, United States

Global Energy Partners

Frisco, Texas, United States

Greek Design|Build

East Brunswick, New Jersey, United States

Industrial Refrigeration Pros

Dallas, Texas, United States

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Franklin, Tennessee, United States

American Motors Pilalis SA

Athens, Greece

Auto Mossa Equipment Inc.

Buford, Georgia, United States

Beam Professionals

Dallas, Texas, United States

Calpine Energy Solutions

Houston, Texas, United States

Carroll Daniel Construction

Gainesville, Georgia, United States

DDP Roofing Services

Glen Mills, Pennsylvania, United States

FHI

Fuquay Varina, North Carolina, United States

Fisher Refrigeration, Inc.

South Bend, Indiana, United States

Food Tech, Inc., an EMCOR Company

Rockland, Massachusetts, United States

(Continued on page 52)

MEMBER NEWS

NEWS FROM MEMBERS OF GCCA CORE PARTNERS



EMERGENT COLD LATIN AMERICA is constructing a food warehouse in Guadalajara, which expands its operations to a new region in Mexico. The new facility will have a

capacity of 12,000 pallet positions installed in a 30,000 square meter area, with enough space for future expansions.

LINEAGE INC., launched its initial public offering this summer and is trading on the Nasdaq under the ticker symbol "LINE."



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MEMBER NEWS

NEWS FROM MEMBERS OF GCCA CORE PARTNERS



PLM FLEET's Senior Director of Business Support Services, Christa Rugova, is named a winner of the 2024 Women in Supply Chain Award by *Food Logistics and Supply & Demand Chain Executive*. The award honors female supply chain leaders and executives

whose accomplishments and mentorship set a foundation for women in all levels of a company's supply chain network.



PLM FLEET has also opened a new branch in Fresno, California. Centrally located in the heart of the San Joaquin Valley, this new location serves the local farming and agricultural providers who are shipping perishable goods.



RAYMOND CORPORATION has hit a milestone in its mission to drive a culture of continuous improvement, as employees have reached their goal of filing over 150,000 kaizens. Kaizen is based on the idea that small changes over time will result in significant improvements. The goal is to

foster respect and teamwork, as well as create a challenge and go-and-see mindset, within the organization.



VALLEY COLD STORAGE & TRANSPORTATION, a purpose-built refrigerated warehouse system with facilities in Santa Teresa and Las Cruces, New Mexico, expects to complete a major expansion to its Santa Teresa facility in the first quarter of 2025. The expansion will enhance services to the retail, food service, food distribution, and agricultural industries in Southern New Mexico, West Texas and Northern Mexico, and will add 135,000 square feet to the facility with 21,000-plus new pallet positions. Once the project is completed, Valley Cold will encompass approximately 335,000 total square feet of storage capacity and a total pallet count of over 47,000 at the location. 🌐

NEW MEMBER *(continued from page 50)*

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NICOLA TWILLEY

Nicola Twilley is the author of “Frostbite: How Refrigeration Changed Our Food, Our Planet and Ourselves,” and has conducted extensive research on the history of refrigeration.

CF: What sparked your interest in the history and impact of the cold chain on the global food industry, economy and society?

NT: In 2010, when the farm-to-table trend was still new, most food writers were busy exposing the realities of industrial farming, while I got hung up on the preposition – the “to.” What happened between the farm and the table? The answer, for nearly three-quarters of everything on the American plate, is the cold chain – but, to most people, the vast mechanical winter we’ve built for our food to live in is completely invisible. I started visiting refrigerated warehouses, juice tank farms and banana ripening rooms. I quickly realized that these places weren’t just fascinating, they had radically transformed what we eat, what it tastes like, where it’s grown, and how good it is for us and the planet, remaking economies and ecosystems along the way. That seemed like a story worth telling!



Refrigeration seems to change where food waste takes place rather than eliminating it.”

CF: You provide compelling insights about the impact of the cold chain, like how the home refrigerator made the layout of modern cities possible. Can you explain?

NT: Refrigeration is an enabling technology, and the fridge’s impact on cities is a good example. In 1948, when only 2% of U.K. households owned a refrigerator, housewives made an average of three trips to the butcher and more than seven to the grocers each week. A family that owned a fridge could store more perishable food at home for longer. That shift had a huge impact on town centers: one U.K. government study found that a supermarket on the edge of town shrank business for smaller, more central shops by as much as three quarters.

CF: To what extent do you think the cold chain contributes, or is a solution, to the food loss challenges faced across the world?

NT: In the developed world, refrigeration has prevented a huge amount of food waste. In 1916, economist Arthur Barto Adams calculated that 40% of perishable produce rotted on its way to market. That figure has shrunk dramatically – but the actual volume of food waste hasn’t. Refrigeration seems to change where food waste takes place rather than eliminating it. The United States has the world’s most developed cold chain, yet it wastes almost as much of its food, by percentage, as Rwanda does for lack of one. Researchers have found that, following the spread of refrigeration, household food waste

in China’s urban areas has already begun to grow rapidly. It’s hard to prove, but the hypothesis is that the cold chain, with its promise of eternal abundance, encourages a more wasteful attitude at the consumer level.

CF: Do you foresee a time when refrigeration will no longer be needed in the food supply chain?

NT: I think refrigeration will always be a major part of the food supply chain – it’s too useful not to be. But I am really interested in ways that we can diversify our food preservation toolbox with new technologies like supercritical CO₂ treatment and nanoparticle coatings that can preserve freshness at ambient temperatures. If you can take produce out of the cold chain while maintaining its shelf life, for example, you can not only reduce your climate emissions, but also increase the diversity of fruits and vegetables that can be commercialized while reducing costs for smallholder farmers.

CF: Do you have plans to do further research and reporting on the cold chain?

NT: I find it an endlessly fascinating topic, so probably! Optimistically, I think rethinking food preservation and the cold chain is a very powerful lever with which to create a better food system.

Frostbite: How Refrigeration Changed Our Food, Our Planet and Ourselves - is on sale now – for details visit nicolatwilley.com/frostbite/ @

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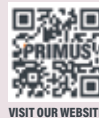
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