

INNOVATION *on* Display

08

Finding new, more efficient ways to operate are essential in today's business world. Learn how some cold chain companies are innovating.

05

OSHA CRANE RULES GET A LIFT

13

BE WELL:
DEVELOPING A WELLNESS PROGRAM

21

COOL PEOPLE:
SAC MEMBERS TALK ABOUT
UNUSUAL REQUESTS



Customer expectations and competitive pressure create a constant need for performance improvement in the cold chain industry, and one of the most obvious ways to improve performance is with new technology.

The potential benefit of new technology is exciting, but carries some risks. To successfully employ it requires both confidence and caution, advises Michael Bolander, Vice President of Operations at Columbia Colstor, Inc. and Chairman of the GCCA Technology Forum.

One key consideration in adopting new technology is to ensure that it makes good business sense to do so, says Bolander. "Technology can be interesting and entertaining, but only makes sense if it improves task performance or permits tasks that could otherwise not be performed," he notes. "Otherwise, it's not a good investment."

As Bolander sees it, there are three primary functions that technological advancements affect: material handling, energy consumption, and information and communication. He suggests companies look at these organizational functions and then find a way to use technology to improve the speed, accuracy, or efficiency of tasks.

"If an organization can confine application to those circumstances, it will reduce the risk of making a bad investment in technology," he says.

Bolander explains that investment in the cold chain industry typically involves expansion to replicate an existing process. He adds that if bugs and risks have been identified in advance, it's just a matter of determining if the investment will pay back.

"With technology, there's the same financial commitment, but technology investment payback is dependent on economics as well as the performance of people using the technology," he notes. "And, it has to be reliable, user friendly/intuitive and flexible to adapt to changing customer expectations or changes in warehouse operations."

Here's a look at four new technologies that are improving material handling, energy consumption, and information and communication in warehouse operations.

NEW QFR ZONE SAVES ON UTILITIES AND LABOR IN BLAST FREEZING

Tippmann Group, a design/build company which also owns and operates a refrigerated warehousing and logistics division, set out to find a better way to blast-freeze products simply because the technology had not changed in years, according to Steve Tippmann, Executive Vice President of Tippmann Group/Interstate Warehousing.

Saving money has always been an important aspect of the cold storage industry — especially during the past three years — so that was also a motivating factor.

In 2008, Tippmann developed the QFR (Quick Freeze Racking) Zone process, which dramatically improved airflow, leading to more efficient freezing. Tippmann says labor and utility savings are the two most obvious advantages of the QFR Zone.

Unlike a traditional blast freezer, which blows air around pallets full of product, the QFR Zone uses static pressure to pull the air through the pallet, making sure every case is touched by the flow of air, creating a more even freezing process.

The freezing is also done at higher standard freezer temperatures, resulting in significant energy savings on blast-freezing utility bills. A high-powered fan is placed on top of each cell, which creates a vacuum chamber between two back-to-back racking configurations.

CONTINUED ON PAGE 10 >



The QFR Zone racking system allows for improved airflow, leading to more efficient freezing.



High-powered fans (shown at the top of this photo) are placed on top of each cell, which creates a vacuum chamber between two back-to-back racking configurations, forcing air to flow through the pallet spaces to create a more even freezing process.

When all locations of the freezing cell are full with pallets, a seal is created at the back of each full pallet, forcing air to flow through the pallet spacers, into the chamber, and up to the fan. The improved airflow means all product on the pallet is frozen at the same speed.

The QFR Zone uses significantly less energy than a traditional blast freezer because the refrigeration system runs at higher suction temperatures than a traditional blast cell. In a traditional blast freezer, utility cost per hundred weight (cwt) is US\$0.59, where the QFR Zone costs just US\$0.33/cwt.

If a company is currently blast freezing product at -35 degrees F (-37 degrees C), it can likely freeze the same product in a shorter timeframe at -10 degrees F (-23.3 degrees C). Those 25 degrees can save an estimated 50 percent on blast freezing utility costs. That translates into thousands of dollars in savings over the life of the system. Tippmann adds, "There is also no more batch freezing, and it does not have to go through the same process of shutting off and defrosting like a traditional blast cell does."

Labor savings related to loading pallets into and out of the QFR Zone is another significant benefit to this new system. The labor cost in the traditional blast freezer is US\$0.37/cwt, compared to just US\$0.133/cwt in the QFR Zone.

"Because of the configuration of the system and its location in the main freezer portion of the warehouse (not a small dedicated room like a traditional blast freezer), it's much easier and takes less time for warehouse workers to load and unload pallets into the QFR Zone than in a traditional freezer," Tippmann explains.

In addition, the aisles are standard warehouse width, and allow for easier movement of the pallets in and out of the QFR Zone. What may have taken six hours to load pallets in and out of a traditional blast cell with 40 pallet positions can be done in the QFR Zone in approximately two hours, according to Tippmann, saving both time and money on warehouse labor.

"There are a lot of great systems out there for individual case freezing," says Tippmann, "but the QFR Zone is a perfect fit for the cold storage warehousing industry and for PRWs that have customers who have blast freezing needs for products that are not frozen in case quantity."

THE SWISS ARMY KNIFE APPROACH TO SEAMLESS INTEGRATION

Ramp Systems is an integration software and services company launched in 2006 to provide solutions to the warehousing, transportation, and logistics industries. The company's solutions are designed to seamlessly enable businesses that must integrate with their customers and partners and be able to do so quickly, easily, and cost effectively.

Integration, also referred to as eCommerce, is one of the great information technology challenges for 3PL companies, according to Ramp Systems Founder and CEO Brian Mozhdehi.

"It's always been the case for 3PL warehousing providers that for each customer serviced by the company, an individual, customized, and highly flexible IT solution must be deployed to service their needs, meaning IT challenges in

our industry are more complex than any other and integration gaps are the norm," he explains.

Historically, this has been rectified by electronic data interchange (EDI) exchanges — the transfer of electronic documents or business data from one computer system to another computer system without human intervention. For example, organizations might replace bills of lading and even checks with appropriate EDI messages.

But, says Mozhdehi, EDI has its own challenges: "EDI has been around a long time and is a stable system and I would recommend anybody use it, but your order and my order may be two totally different things, and that creates big challenges for warehouses in general."

Mozhdehi believes that what 3PL companies need is a "Swiss Army Knife" to handle customers' needs. "If you try to solve each customer's needs individually, you won't have a global strategy, you'll have different packages for each client which ultimately creates additional integration challenges as you try to integrate the software."

Ramp Systems' philosophy, says Mozhdehi, is to offer everything in one seamless package, executable at a price point that is appropriate and justifiable for the typical warehousing industry profit margin.

He says the ROI is seen in increased performance and reliability; better service and functionality for customers; enhanced visibility of eCommerce transactions, tracing, and reporting; significantly reduced time spent resolving issues; and faster, easier, and more intuitive implementation of business requirements.

Mozhdehi has some advice for 3PL companies that want to successfully integrate their warehouse management systems with those of their customers. He recommends choosing a vendor that supports all standards currently in use and that commits to staying current with all eCommerce standards; what's in vogue today may be out tomorrow.

He also advises companies to not invest in "old technology" systems such as software that supports only VAN-based EDI, or partial solutions, because that will create the need for integration between multiple integration solutions. And, he says, don't invest in "new technology" systems like cloud solutions that lock you in and provide limited capabilities.

Mozhdehi is aware that cloud solutions are getting a lot of buzz in the industry and, like all IT professionals, he has an opinion on the matter. Mozhdehi says cloud technology is an excellent choice for stable applications that don't change and are not mission critical, such as accounting, customer relations management, contact management, email, and marketing.

But, he adds, cloud computing goes down from time to time. "What if you have a truck sitting at the warehouse and the cloud system goes down and you can't print a bill of lading?," he asks. "The truck can't leave without it and you're stuck paying charges to keep that truck at the dock for as many hours as it takes to get back into the system."

At the end of the day, says Mozhdehi, cloud computing is not ready for mission critical systems, of which the warehousing industry has many.