Cold Chain Warehousing: INNOVATIONS THAT KEEP FRESH FOOD FRESH





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lot of emphasis is placed on the safe, reliable transportation of fresh foods, especially in this climate of escalating legislation as spelled out in the Food Safety Modernization Act (FSMA). One critical component of transportation is the warehouse, where the safe storage and transfer of foods plays a key role in determining the reliability and security of our food supply.

To be safe and compliant, the food warehouse must have a logical design and layout, maintain the right temperature zones for specific products, and utilize the right software for optimal efficiency.

SIX WAYS TO MAXIMIZE WAREHOUSING OPERATIONS AND DELIVERIES IN THE FOOD SECTOR

Maximizing space within a warehouse and positioning items to improve efficiency can add up to significant financial and time savings. "The layout and design of a warehouse and a distribution network should be an ongoing process," said Andy Moses, senior vice president-global products for Penske Logistics.

Moses explains how shippers can improve their warehousing and distribution with six strategies.

1. IMPROVE SLOTTING PATTERNS

Placing high-velocity pick items as close to the door and as tightly together as possible can help warehouses improve their efficiency. In many cases, engineers can help determine where products should be positioned.

To determine which products to stock, shippers can look at and share their historical sales data along with their forecasted demand. That data will not only tell shippers and their warehouse management providers what to stock, but also where to position it.

To help pick items more efficiently, some warehouses use a voice-pick system and employees can close out orders as they pick them, using their voice and an index finger scanner.

2. EXAMINE LABOR STANDARDS

As a best practice, warehouses should have labor management time standards. Utilizing software can help manage the movement of people and track their productivity. The results should then be evaluated every day after every shift to ensure employees are meeting their productivity standards.



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In some cases, a logistics provider will stock customers' shelves as well.

3. INCREASE COMMUNICATION

Many companies can have operations throughout multiple divisions, and frequently they operate independently of each other and very little communication exists between the divisions. "As a 3PL, that is where we can add value and look at their network. We may also find another customer that has complementary activities or different seasons, and we can work together," Moses said.

4. UPGRADE TECHNOLOGY

Improving a location's warehouse management software can provide several benefits, including the traceability of products, which will become even more important as new food safety standards take effect.

5. CREATE A CONTINGENCY PLAN

Contingency planning can range from pre-planning for a natural disaster to knowing how to ramp up operations if business increases suddenly. "It can mean knowing what you'll need to do if you have to flex to 120 percent, understanding what that looks like and having it predefined rather than scrambling to build it," Moses said.

6. REPLENISH AT THE SHELF LEVEL

In some cases, a logistics provider will not only deliver goods they pick up at the warehouse, but will stock customers' shelves as well. Drivers can replenish the end-users' shelves at night when the business is closed.

"More and more, that is what companies are looking for," said Moses. "They want a program where they send us a replenishment order, and we stock down to the shelf level. This way it is much more customer-service focused."

For those types of relationships to be successful, the drivers receive additional training and gain an understanding of the store managers' preferences. "The driver has a relationship with the store manager. It is basically customer service with a delivery attached," Moses said.

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UTILIZING TECHNOLOGY IN THE FOOD WAREHOUSE

The world of food warehousing is exploding with new technological advancements to ensure product safety and reliability while reducing spoilage and improving accuracy.

Food Safety Modernization Act (FSMA) regulations demand certain baseline protocols for product efficacy, and companies are responding by upgrading their Warehouse Management Systems (WMS).

The FSMA regulations require food warehouses to have a food safety plan in place while monitoring and tracking temperature and any aberrant events that could cause contamination. The increasing demand – from both the government and consumers – for product traceability and process transparency make the implementation of sophisticated WMS a necessity.

THE BENEFITS OF WMS IN FOOD WAREHOUSES ARE MULTI-LEVEL

Besides providing the essential elements of monitoring and tracking within the warehouse component of the food supply chain, WMS provides other benefits that can boost warehouse productivity and allow individual accountability.

Consider the time and labor savings of a solution that can view all tasks within the warehouse and prioritize them. Moreover, such a system can guide the workers through the warehouse, enabling them to complete multiple tasks simultaneously.

In a food warehouse environment, better warehouse management also translates into better space utilization, a critical component when handling perishables that must be moved through the system with alacrity. High-volume-pick items are strategically placed together and near the door. More logical space assignment, along with a leaner inventory (due to WMS efficiencies), results in dramatically decreased holding costs.

Increased Visibility, Decreased Time – As the emphasis increases on visibility into the food warehouse, WMS systems provide the perfect scenario for viewing the entire process and enhancing it based on the findings. This kind of visibility also promotes greater accuracy of shipments and facilitates better use of space and personnel.

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The food and beverage vertical demands a nimble software solution, where higherend functionality is critical.

"This kind of software provides a continuous stream of information for the user that allows them to optimize the work they're doing inside the building," says Moses. He also notes that WMS within the food warehouse provides complete visibility and transparency into warehouse practices — a non-negotiable element when it comes to food — and that the productivity gains are exponential.

HIGH-END FUNCTIONALITY MEETS FOOD SAFETY

The food and beverage vertical demands a nimble software solution, where higher-end functionality is critical. In the event of a spoiled or contaminated unit, the offending product can be identified down to the item level, where it can be isolated from the rest.

WITH PERISHABLES, TIME IS OF THE ESSENCE

Food warehouses also have special time demands that can be facilitated by WMS. With the obvious need to push fresh products through the system quickly, WMS provides the kind of high-end functionality that can handle high volumes of complex orders.

LABOR MANAGEMENT SOFTWARE COMPLETES THE SOLUTION

Dovetailing with sophisticated warehouse management software is labor management software, which measures the productivity of individual workers. This effectively puts workers in control of their earnings, empowering them to identify areas within the warehouse that need improvement. Each associate's statistics and productivity are tracked, and they are mentored if they need improvement and rewarded for exceeding personal or team gains in productivity.

Labor management software also works to remove the stress from warehouse personnel; with voice-pick (or pick-by-voice or voice-picking) technology, workers wear headsets that allow a two-way flow of information, so there's no guessing about what to do next. They are directed to their next task, using a small bar code reader that is wrapped around their finger to scan each item pulled and replaced.





The moment the product arrives at your facility you need to know where it's headed.

SIX STEPS TO ASSESSING YOUR WAREHOUSE EFFICIENCY

- 1. Yard Process You need a plan for handling the trailer before it arrives at your gate. Does it go straight to a door, sit and wait based on priority, or is it arriving as replenishment stock and only needs to be dropped off? Do you have the necessary refrigerated units ready at the correct ambient temperature?
- **2. Inbound Process** The moment the product arrives at your facility you need to know where it's headed, how it needs to be handled and how long it may need to stay there. We call it a "Plan For Every Part" (PFEP).
- **3. Outbound Process** A big step that you can't overlook is the final piece of the puzzle the outbound process. Two keys to shipping the perfect order are ensuring you have done all the required previous steps for handling at your location, and doing it on time.
- **4. Task Management** Once all available product is on hand and the work required is known, how do you prioritize what needs to be handled to achieve maximum efficiency? The most efficient way to execute this is by using your WMS as the backbone, and letting it optimize task assignments.
- **5. Inventory Management** Last-In-First-Out (LIFO), First-In-First-Out (FIFO), first available, cross-docked product how you choose to stock and use your inventory will greatly affect the required handling, racking and the processes within the building.
- **6. Warehouse Labor** This component drives roughly 70 percent of your overall cost of doing business in a warehouse. It's easy to throw extra staff at a problem to meet demand, but the trick is planning and optimizing to minimize the single largest line item in your warehouse budget.

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Enacted in 2011, FSMA continues to roll out new standards.

IS YOUR WAREHOUSE FSMA READY?

Enacted in 2011, Food Safety Modernization Act (FSMA) continues to roll out new standards that need to be met for the safety of our food supply in the areas of prevention, inspection, response and imports.

This law impacts all the food that passes through the warehouse environment and calls for complete transparency through enhanced product tracking, recordkeeping, third-party import certification, testing and international contamination prevention.

When a food recall occurs, the entire food supply chain needs to be able to respond with instant traceability down to the product level. Therefore, the emphasis on prevention has never been stronger.

IS YOUR WAREHOUSE COMPLIANT?

Here are some tips for keeping a safe, compliant food warehouse:

- Monitor all personnel in the facility, including visitors, suppliers, contractors and guests
- Identify areas where food could be vulnerable to contamination
- Hold your own mock recall and encourage your 3PL provider to do so, too; demonstrate that
 you could track and trace any item by its lot number if you ever needed to do so
- Make sure your warehouse management system (WMS) is robust enough to perform the detailed tracing that would be necessary during a recall
- Ensure your company audit standards are reliable and compliant with operational and regulatory standards that meet best practices for food safety
- Use a single-source, third-party logistics provider for both warehousing and transportation to shorten your supply chain and make it more transparent

While the specific requirements of this provision have not yet been disclosed, the scope of the controls will undoubtedly center on complete product traceability, with the ability to respond instantly to a potential food recall event with flawless accuracy.

For more information: fda.gov/Food/GuidanceRegulation/FSMA/.



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To learn more about ways that Penske helps food and beverage shippers, visit gopenske.com.

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Our Expert:

Andy Moses is senior vice president of global products for Penske Logistics. Prior to this role, he was vice president of sales at Penske Truck Leasing. Moses has more than 25 years of experience in the transportation industry, serving in product and sales leadership positions with both Penske Truck Leasing and Rollins Truck Leasing. A Six Sigma Master Black Belt, Moses earned a bachelor's degree in accounting from Brooklyn College and a master's degree from Pennsylvania State University in leadership development.

THE IMPORTANT ROLE OF FOOD WAREHOUSES

With an effective combination of advanced warehouse technology, FSMA-compliant features, and reliable 3PL partners, food warehouses are becoming vibrant centers of efficiency and productivity. As critical components of a robust supply chain, today's food warehouses help propel the quick, safe delivery of fresh foods to the customers who are demanding them.

WHY PENSKE

WE BRING YOU EXPERIENCE AND RELIABILITY

Consistently delivering a great customer experience, along with fresh, temperature-controlled groceries, is an enormous task for any food and beverage distributor. When you need a reliable logistics and supply chain partner to help plan your daily operations, trust the experts at Penske. We have the experience, industry know-how and reliability to provide the right mix of deliverables, tailored to your operations, production levels and market demands.

WE HELP MOVE YOUR BUSINESS FORWARD

Our approach is simple. We make it a priority to understand your supply chain needs and meet those needs by delivering your products fresh and on time. Our routing tools and industry knowledge allow us to engineer distribution networks that exceed our customers' expectations. By helping to reduce miles and time, you get the benefit of delivering a fresher product, and, in turn, creating an extraordinary customer experience.

ABOUT PENSKE

Penske Truck Leasing Co., L.P., headquartered in Reading, Pennsylvania, is a leading global transportation services provider. Penske operates more than 200,000 vehicles and serves customers from more than 1,000 locations in North America, South America, Europe and Asia. Product lines include full-service truck leasing, contract maintenance, commercial and consumer truck rentals, used truck sales, transportation and warehousing management, and supply chain management solutions. To learn more about Penske's products and services please visit gopenske.com.

