

Food Logistics[®]

- Why You Need a Telematics Solution Today
- Conquering Food Safety Through Safe Transport
- It Takes a Village to Build a Refrigerated Trailer



Global Supply Chain Solutions for
the Food and Beverage Industry

**HOW DO YOU
DRIVE SUPPLY CHAIN
EFFICIENCIES IN FLEETS?**



**REFRIGERATED
TRAILER FIRM PLM BRINGS
A FRESH APPROACH
TO FLEET SOLUTIONS**

IT TAKES A TRUE INDUSTRY LEADER TO SUPPORT A DYNAMIC MARKETPLACE
CHARACTERIZED BY CHANGING CONSUMER DEMANDS AND STRINGENT REGULATIONS.

GAUGE YOUR COMPLIANCE

THE FINAL FSMA RULES
FOR THE SANITARY
TRANSPORTATION
OF FOOD ACT HAVE
BEEN RELEASED!



Are you compliant? PLM is the only nationwide fleet management company dedicated exclusively to the refrigerated trailer saving customers time and money. Come talk to the experts to help develop a plan for regulatory compliance and beyond.



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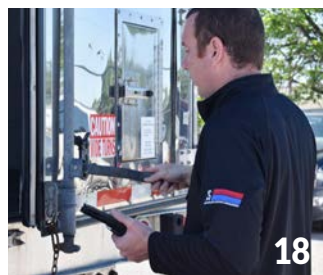


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SOWINSKI

The food supply chain is changing so quickly today that it's sometimes overwhelming. Today, shopping the perimeter of the grocery store is the norm because customers want fresh, nutritious food year-round, whether that means kiwis from New Zealand or kale from the local farm. They also want more choices at grocery stores and restaurants; they want online ordering and immediate delivery.

Supporting these dynamic marketplace changes is not easy. It requires a flexible and efficient cold chain, and one that's simultaneously safe and compliant for employees and the food products in their care.

PLM was one of the first to recognize and respond to this new and fundamentally different environment. When Keith Shipp, president and CEO joined PLM in 2011, he decided that focusing on refrigerated fleet management services and equipment would be the centerpiece of the business.

This presents an incredible value proposition for customers who require the most modern, sophisticated, high performance refrigerated trailers on the market to support the increasingly complex and demanding food supply chain.

There's more to this value proposition. PLM provides the latest software and technology, such as the ColdLink telematics solution and robust analytical reports, and they augment their value to customers with services like on-site maintenance

and customized application and design. Personalized leasing programs are another compelling advantage that attracts customers.

And it doesn't end there. The FDA's Food Safety Modernization Act is a genuine game changer. The requirements contained within the FSMA's Sanitary Transportation of Food regulations ushered in stringent requirements related to the transportation of human and animal food in order to assure proper temperature and food safety, and sub-par equipment is simply not acceptable today.

Moreover, state and federal environmental regulations designed to reduce greenhouse gas emissions also raise the expectations for operating with the latest, fuel-efficient trailers.

Equally important benefits offered by PLM's value proposition include safe, modern equipment for employees and operators and improved shelf life and reduced food waste for retailers.

PLM's customers are afforded the best of the best—unique fleet management solutions designed around your business—and so much more.

Food Logistics is proud to partner with PLM on this publication. I invite you to spend some time learning more about this industry leader on the following pages.

Enjoy the read.

LARA L. SOWINSKI, EDITORIAL DIRECTOR
LSOWINSKI@ACBUSINESSMEDIA.COM



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AC BUSINESS MEDIA INC.
201 N. Main Street, Fort Atkinson, WI 53538
(800) 538-5544 • www.ACBusinessMedia.com

WWW.FOODLOGISTICS.COM

PRINT AND DIGITAL STAFF

Group Publisher Jolene Gulley
Associate Publisher Judy Welp
Editorial Director Lara L. Sowinski
lsowinski@ACBusinessMedia.com
Editor John Yuva
jyuva@ACBusinessMedia.com
Assistant Editor Amy Wunderlin
awunderlin@ACBusinessMedia.com
Senior Production Manager Cindy Rusch
crusch@ACBusinessMedia.com
Creative Director Kirsten Wiskus
Audience Development Director Wendy Chady
Audience Development Manager Angela Kelty

ADVERTISING SALES (800) 538-5544

Associate Publisher (East Coast)
Judy Welp (480) 821-1093
jwelp@ACBusinessMedia.com
Sales Manager (Midwest and West Coast)
Carrie Konopacki (920) 542-1236
ckonopacki@ACBusinessMedia.com
National Automotive Sales Tom Lutzke
(630) 484-8040, tlutzke@ACBusinessMedia.com

EDITORIAL ADVISORY BOARD

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CIRCULATION & SUBSCRIPTIONS

P.O. Box 3605, Northbrook, IL 60065-3605
(877) 201-3915, Fax: (847)-291-4816
circ.FoodLogistics@omeda.com

LIST RENTAL

Elizabeth Jackson, Merit Direct LLC
(847) 492-1350, ext. 18; Fax: (847) 492-0085
ejackson@meritdirect.com

REPRINT SERVICES

Carrie Konopacki (920) 542-1236
Fax: (920) 542-1133
ckonopacki@ACBusinessMedia.com

AC BUSINESS MEDIA INC.

Chairman Anil Narang
President and CEO Carl Wistreich
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SUSTAINABILITY CONTINUES TO BE A DRIVING FORCE FOR NEARLY EVERY TYPE OF BUSINESS TODAY.

For companies in the food and beverage sector, taking an active role in promising sustainability throughout their operations is crucial, considering the urgency to reduce the food chain's carbon footprint and preserve the already thin profit margins.

Food Logistics' annual Top Green Providers list offers logistics professionals a guide to the providers, manufacturers and software/technology companies that have found new ways to promote sustainability throughout their operations and those of their customers.

CONGRATULATIONS!

PLM is committed to helping customers reduce greenhouse gas emissions through a holistic approach in refrigerated transport. With the razor thin margins of food distribution, it is difficult for companies to commit to going green unless there is a quick upside for the conversion.

In response, PLM takes the approach of helping customers consider the use of hybrid refrigeration units by walking

them through an evaluation process of existing technologies, a personalized fleet lifecycle management matrix, and on-site evaluations with results driven through comprehensive modeling tools and data analysis. Furthermore, PLM helps customers evaluate a true ROI that can help them make the decision to go green to reduce their carbon footprint while driving significant cost out of operations.

The results speak for themselves. PLM uses actual data provided by the customer, along with its own ColdLink telematics solution to translate optimal quantifiable carbon footprint reduction. They have documented results of as much as 84 percent carbon footprint reduction, with an added benefit of driving out up to 80 percent of the cost of fueling a refrigerated trailer within an operation.



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REFRIGERATED TRAILER FIRM PLM BRINGS A FRESH APPROACH TO FLEET SOLUTIONS

It takes a true industry leader to support a dynamic marketplace characterized by changing consumer demands and stringent regulations.

Frost on food cartons, soggy cardboard boxes and liquids of unknown origins puddling on floors. In the chilled-food delivery business, you never want to see that in your warehouse or trailer—neither does a customer visiting a local grocer or favorite restaurant.

Spotting existing and potential problems like these—and finding fixes for them—falls on the PLM Customer Solutions Team, the Newark, NJ-based provider of fleet consulting and management services that also ranks as the largest lessor of refrigerated and frozen food trailers in the U.S. with over 9,000 units.

Simply put, the PLM team investigates a company operation and reports. They won't fine you, cuff you or put you in jail, but they can prevent that from happening—and save your company serious time and money in the process.

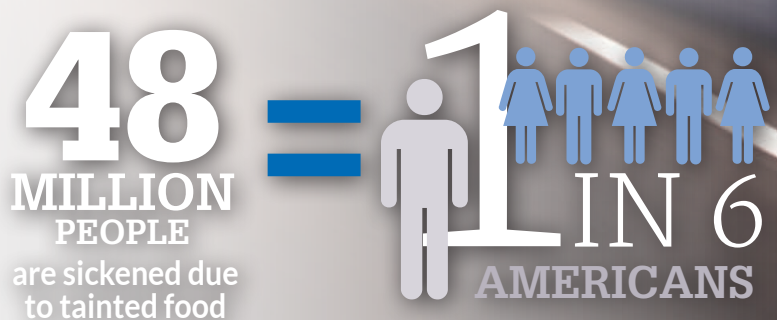
The Food Safety Modernization Act (FSMA)—a Game Changer

Of course, saving time and money is important for food producers, shippers, distrib-

utors and retailers that operate on slim margins. What's equally important is remaining compliant with the U.S. Food and Drug Administration's Food Safety Modernization Act (FSMA).

Signed into law in 2011, FSMA ushered in the most significant changes to U.S. regulations on food production, handling and safety in nearly eight decades. For refrigerated food transportation and, in particular, food handling, FSMA specifies new risk and hazard analysis, recordkeeping, procedures, and technology to ensure compliance with FSMA's regulations.

Some startling statistics were influential in driving FSMA and the resulting food safety regulations. Annually in the U.S., some 48 million people are sickened due



to tainted food—roughly one in six Americans—while another 128,000 are hospitalized and 3,000 die from foodborne illnesses, like salmonella, according to the U.S. Centers for Disease Control and Prevention. Causes include improper processing and cross-contamination, as well as refrigeration.

“A game changer,” says Andy Bailey of KeHE Distributors, when describing the impact of FSMA. Bailey, the company’s director of transportation, based in Dallas, Texas, says PLM’s ColdLink telematics system, which enables control, monitoring and documentation of trailer tem-

128,000 ARE HOSPITALIZED & 3,000 DIE FROM FOODBORNE ILLNESSES

peratures throughout deliveries, is key to FSMA compliance.

When it comes to compliance, “PLM has truly been a great partner

in helping us put together a FSMA program,” he says. “They’ve assisted by providing information, data, and recordkeeping information so that we can stay ahead of the game and remain compliant.”

PLM takes its role as a partner seriously and is committed to helping customers manage regulatory changes such as those associated with FSMA.

Aside from the signing of FSMA into federal law, another turning point occurred in 2011, when Keith Shipp took over as president and CEO of PLM.



There is more fresh and frozen food in the supply chain today, which requires careful handling to assure food safety, longer shelf life and reduced waste.

Some of Shipp's significant contributions include the implementation of a strategy focusing on customer needs and leveraging PLM's core strengths, as well as improving communication throughout the company. He has worked to develop, motivate and retain staff while simultaneously giving them more input in the creation of new products and processes to better serve the customer. Investing in new state of the art systems and software solutions to digitize processes to save customer time and identify fleet operating savings, is one example. In addition, Shipp carefully analyzed the expertise inherent at PLM and the requirements of its customers,



ultimately identifying eight core areas to focus on in order to help customers increase efficiency and cut costs while also bolstering the bottom line.

These solutions, part of Shipp's long-term strategy for PLM, include fleet planning, application & design, maintenance, reports & analysis, safety & compliance, rental, disposition and financial policy.

Never Saying "No" to a Customer

According to the International Foodservice Distributors Association, food distributors' margins are less than 2 percent. For a sector that survives on such slim margins, partnering with a refrigerated fleet solutions firm that is hyper-focused on its customers' needs is critical.

Where does this focus start? One area is the deep freeze.

During a recent visit to KeHE's Dallas distribution center, PLM's Don Durm, vice president of customer solutions, was seemingly unfazed in a freezer chilled to 10 degrees below zero, when he described the PLM Foodservice Trailer Needs Analysis (FTNA).

PLM utilizes a defined process as part of the FTNA to analyze customer operational procedures during the product handling and transportation process. This process has consistently identified areas of concern, defects in the process and ultimately ways for PLM to help the customer improve food safety and save significant amounts of time and money based on their final recommendations. Not only are Durm and the PLM team vigilant about identifying customer solutions, but they are considered experts on FSMA rules. In fact, he



REFRIGERATION IS FRONT & CENTER AT PLM

As part of his strategy at PLM, president and CEO Keith Shipp has put excellence in refrigerated transport front and center under his leadership.

Shipp has worked in the equipment-leasing sector his entire career. When he joined PLM in 2011, the company's fleet portfolio was focused on the rental of refrigerated trailers, but Shipp made the decision to expand the PLM lease portfolio and offer comprehensive fleet management solutions on refrigerated equipment.

"I decided that the core of our business would be 100 percent focused on refrigeration fleet management solutions," he says.

Admittedly, refrigeration comprises a smaller share of the broader leasing market than automotive or heavy trucks, but it requires a high level of specialization and expertise.

For instance, Shipp says that, "We've been doing maintenance on refrigeration units for years and we understand all the elements required to maintain them properly. The design of the air flow, the types of products that require refrigeration, and how the inside of a refrigerated trailer must be configured—the people on our team have been doing that for over 20 years and have acquired a tremendous amount of industry experience."

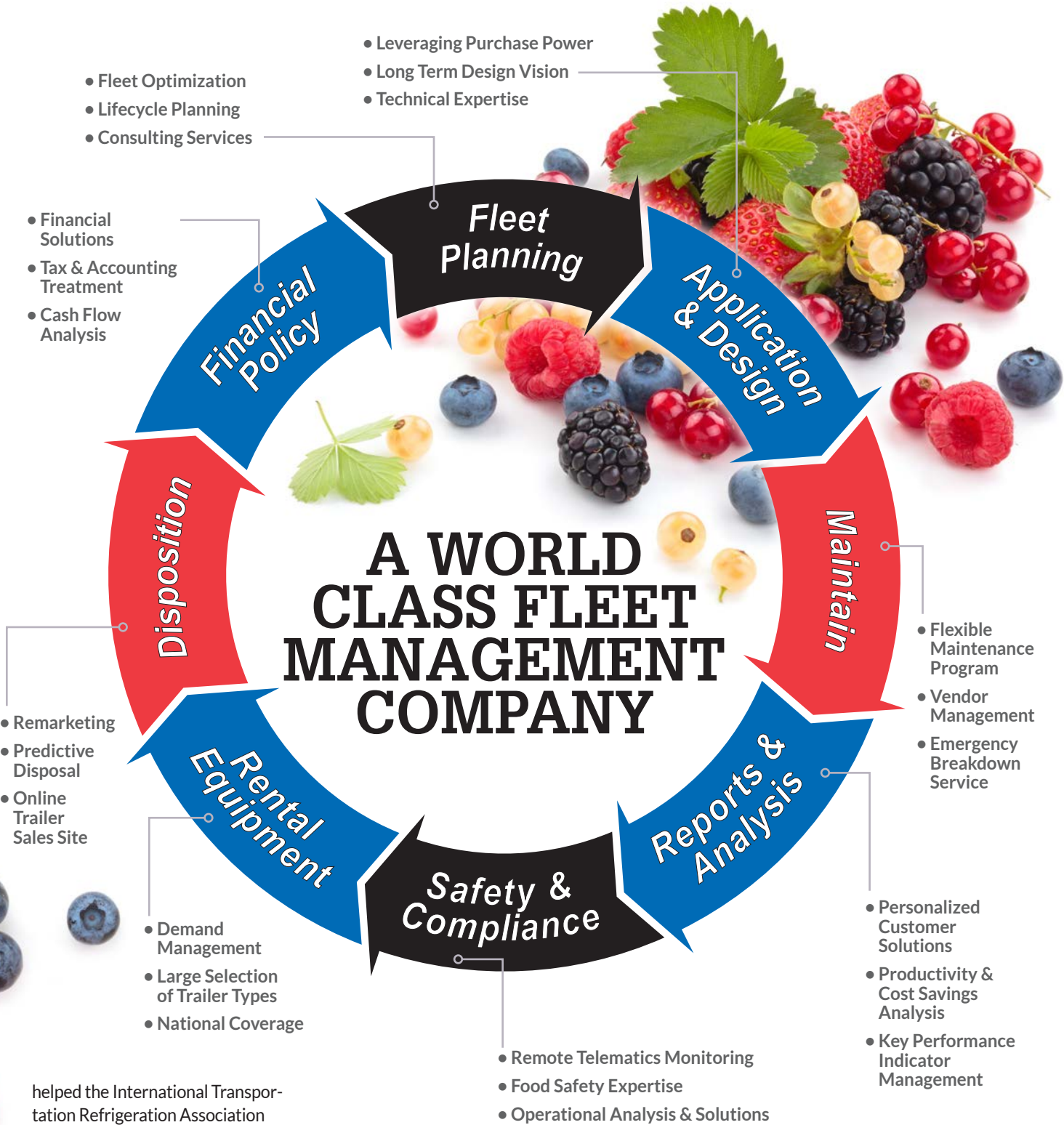
Therefore, "Each of these eight core areas that we focus on ultimately work together to provide a comprehensive solution for life cycle management and fleet management," says Shipp, who adds that this hyper-focus on refrigeration and the customers' specific needs gives PLM a competitive advantage.

Sometimes, the relationship between PLM and a customer starts with one or a few of the core areas. "But, because there is so much there, we often end up growing and expanding the relationship to add value for the customer in other areas," Shipp says.



Keith Shipp,
president and CEO





helped the International Transportation Refrigeration Association draft a best practices guide for FSMA's Sanitary Transport of Food regulation.

"We try to learn our customers' business to properly design a refrigerated trailer that meets their specific application," Durm says. "PLM is able to leverage its extensive expertise in key areas to serve our customers' specific needs, and our customers tell us that is unique in the industry."

Indeed, the noteworthy difference in PLM's success is not financing, but something seemingly more mundane—albeit critical—and that's trailer application and design, points out Mark Domzalski, PLM's senior vice president.

Trailer application and design provides an indisputable competitive differentiator. At the same time, PLM offers customer focused,

flexible financial solutions and terms that rivals do not provide, which reduce costs for customers.

PLM's Domzalski sums up the company's client culture the best, "We never want to tell a customer 'No.' We will work on a joint solution to meet everyone's need so our customers can continue to grow and succeed in their market." 

HOW DO YOU DRIVE SUPPLY CHAIN EFFICIENCIES IN FLEETS?

Keith Shipp, president and CEO, dives into the details to answer this all-important question.

When it comes to finding customer solutions, one size doesn't fit all. PLM's approach is unique in the marketplace and starts by taking the time to methodically and holistically evaluate each individual customer and their specific requirements. Let's find out what that looks like...

Q: How do you describe the PLM approach?

A: Our approach is to look at a customer's situation holistically to fully evaluate how we can save them time and money. At PLM, we talk about personalized lifecycle management. We start by looking at each company individually to determine the best solution for them. Then, we look at key areas of the fleet to determine how we can increase productivity, reduce business risk, manage the operation of the fleet, as well as the overall budget.

We ask a lot of questions. For instance, how are they financing their equipment? What's their access to capital? Do they have a replacement strategy? How long do they intend to keep the equipment? It really comes down to three areas: understanding their entire fleet operations; looking at the customer's access to capital and how they manage it; and determining if they have a cycling process.

Q: What are some of the considerations that PLM looks at when walking customers through the leasing vs. buying equation?

A: First, we start by truly understanding our customers and their specific requirements for serving their own customers. We look at application, design and how they are maintaining the equipment.

For example, we use hours and miles to measure how fast customers are "using" the asset. Some customers have light usage while others are very heavy users of assets. Also, we ask how long the customer expects to use the asset—for a couple years, or for a longer term? If they are a heavy user, then their operating costs for the asset is going to increase dramatically over time and they will also incur longer periods of down time. If they're transporting time- and temp-sensitive products like meat, produce, or pharmaceuticals, they cannot afford to have down time, while service levels can also be impacted.

We also want to know if the equipment is spread out among various locations, or if it's all coming back to one location each night.

For instance, what kind of information and reporting requirements do they have, i.e. the telematics and temperature tracking requirements?

We also consider driver satisfaction when determining when to cycle an asset—is it five years, six, or

seven years? Then we can accurately create a program that meets the needs of that customer.

Q: Is there a scenario when leasing isn't the right answer for a customer?

A: Yes, sometimes we go through the entire evaluation process and determine that owning the asset is the best option. For example, this can happen when customers have extremely low usage of the asset and take very good care of the trailers. Most times, however, customers will decide that doing a fleet management program with us is the best option.

Q: How do you help customers understand the costs associated with end-of-life decisions for assets?

A: We use modeling and analytics to establish and quantify a time and/or dollar savings for the customer, which is fundamental for them to make the right decision. Some of the questions we look at include, who in their organization does the assessment of each asset in terms of repair costs? How much would






Q: What are the differences between a short-term and a long-term leasing program?

A: For starters, anything less than one year is considered a rental, and rentals are best suited for seasonal demand or other short-term needs. However, if a contract is more than one year, that's defined as a lease.

PLM maintains equipment throughout our U.S. network. We can look at the customer's needs and provide an asset for a short- or long-term need from our available fleet.

Let's say they've just acquired a new customer or piece of business, and they need to scale up their operation immediately, this is one example.

A long-term lease is typically for customers looking to expand their business or using the equipment 100% for their company fleet operations. We've worked with them on the assessment to determine their needs; we order the equipment through the factory; and the assets are dedicated to the customer 100 percent. The lease term could be five, six or more years. 

“We use modeling and analytics to establish and quantify a time and/or dollar savings for the customer, which is fundamental to making the right decision.”

it cost to repair the asset, or is it better to sell it? What is the cost of having the asset simply sit in the yard? What are the depreciation costs, financing costs, the costs of hiring a broker to manage the sale of the asset?

Once a customer goes through this extensive exercise to quantify all the costs, the easier it is for them to appreciate the value of our core leasing product, which allows them to simply return the asset back to us when they're ready, then we deliver a new one.

CUSTOMER TESTIMONIAL: KL BREEDEN'S CFO JERRY BIEDIGER

K.L. Breeden & Sons' CFO Jerry Biediger says PLM's leasing program was pivotal in helping the Texas-based provider of dedicated transportation scale up quickly to meet the demands of onboarding a new account.

According to Biediger, “We needed to get trailers fairly quickly. Although we were going to need some new trailers added to the fleet at a later date, we had to first move quickly in a new facility fast. PLM was able to supply those trailers quickly to get us up and running, and then as time went on they were able to replace those trailers with the newer equipment we needed.”

It's worth noting that the new facility that Biediger mentions did not have a maintenance shop. “Some of our locations do have the ability to maintain trailers, but this particular location did not and we needed a partner that could supply the trailers and maintain them too, and we needed it fast.”

Finding a partner that can do both is sometimes difficult. Biediger says it's not uncommon to have a company that can supply trailers, but not maintain them. Other times, they lack the ability to scale up or down.

“PLM is a full service company and they are also much more flexible than any other leasing company we have ever used,” he says.

The seasonal nature of the food and retail industries adds to this requirement for flexibility.

“We have periods during the year when our customers are very busy. PLM is able to work with us on those changing schedules and supply us with trailers when the customer needs to ‘trailer up’ for a period of time, and then move back down,” says Biediger. “PLM can also supply us with trailers that have long-term leases and short-term leases, and that combination creates a really big advantage for us.”

Gaining access to the latest equipment is another advantage, explains Biediger, and it's one of the reasons that K.L. Breeden & Sons is expanding the number of leased trailers in its fleet.

“Over the last four years we have increased our percentage of leased equipment, in part because of the new requirements for trailers, and PLM has been able to supply us with that newer equipment.”

That's not always the case with trailer manufacturers, says Biediger. “There may be a longer wait if a company like ours went to the trailer manufacturer. But, PLM can help us fill that need a lot quicker.”

The combination of flexibility, quick response time, access to the latest equipment and the ability to provide maintenance has been a winner, says Biediger. “PLM has helped us grow other areas of our business.” It's been a real partnership and one that is poised to grow in the future.



FOUNDED IN
1933

PIONEERS IN
THE TRUCKING
INDUSTRY

THE PLM PATH...

NAVIGATING THE ROAD AROUND THE COLD SUPPLY CHAIN

PLM's fleet solutions deliver a proven, consistent track record of identifying a minimum savings of 10%

The refrigerated trucking industry generates
\$14.3
BILLION
IN REVENUE

Fruits, vegetables, dairy, and beverages account for

24.4%
OF REFRIGERATED FREIGHT TONNAGE

Meat and seafood make up another 17.8%

Grocery stores and restaurants are the largest commodity group for all refrigerated truck freight, comprising

41%
OF ALL REFRIGERATED TRUCK TONNAGE



2 DEEP EXPERIENCE



93% of new customers use PLM's **ColdLink** for temperature, GPS and FSMA compliance

REGULATIONS

1 FSMA 2 Labor 3 Environment 4 Taxation

FSMA COMPLIANCE AND FOOD SAFETY ARE KEY

FSMA changes FDA from a reactionary regulatory body to a law enforcement entity

EXCELLENT CUSTOMER SERVICE

1

3 SAVE TIME & MONEY



\$3,500
OPERATIONAL SAVINGS

through fleet management per trailer per year

The refrigerated trucking industry hauls

520.1
MILLION TONS OF FREIGHT

27
NATIONWIDE LOCATIONS

offering the largest selection of single-, multi-temp and electric units in varying sizes

\$7,000
FINANCIAL OPPORTUNITY

per trailer with PLM leasing*

FYI: More dollars were spent at restaurants than at the grocery store ②


226

MILLION MEALS

enjoyed by Americans away from home each day^②

Foodservice Distribution employs
220,000 ASSOCIATES
and delivers **25 MILLION CASES OF FOOD DAILY**^②



Annually, Foodservice Distribution generates

\$231
BILLION IN SALES

Refrigerated Loads
UP 43%
SINCE 2000

eCommerce

✓ eCommerce and online media is influencing customer purchase decisions in brick-and-mortar stores ④

✓ Online grocery has increased from 8% to 26% ④

✓ How disrupting is the "Amazon Effect"? Today, 37% of US households are Prime Members ④



WHY YOU NEED A TELEMATICS SOLUTION TODAY

PLM's ColdLink® solution provides comprehensive, real-time information essential to cold chain management with a leasing model that mitigates risk and costs.

The stakes for cold chain transport are high. A deviation in temperature, a breakdown in equipment, a delay in delivery can result in spoiled food or pharmaceuticals, which in turn can lead to the loss of contracts, damage to a company's reputation, consumer illness, lawsuits from victims, and fines from regulatory agencies. Customers are requiring that their transportation companies provide cold chain visibility to monitor quality and safety throughout the supply chain, prompted both by the consumer as well as the implementation of FDA's Food Safety Modernization Act (FSMA).

The FDA determined that best practices are key to keeping the cold chain safe. In response, the International Refrigerated Transportation Association (IRTA) embarked on a two-year task force project to produce the highly acclaimed Refrigerated Transportation Best Practices Guide as the go-to resource for cold chain industry associations. The guide identifies the use of real-time telematics solutions as an industry best practice to provide cold chain transparency, which is the goal of FDA's FSMA rules to protect the nation's food supply. Telematics as a best practice to meet regulatory compliance should provide and document the pre-cool satisfaction; temperature compliance during the delivery route; multiple data formats as to the customer's request, and data transfer capabilities.



In today's busy world, we all have a need for real-time information. Whether you are a business executive or a parent trying to manage the family activities—we all have smart phones on hand that we consider invaluable to navigate and manage our personal and professional lives in real time.

Likewise, today's operators must adapt to the approach of building a "smart trailer" with advanced monitoring systems that can substantially enhance their financial and operating performance. No longer do operators have the luxury of performing a post-trip analysis of failures to remain competitive and meet compliance of regulatory rules. It is necessary to understand in

ColdLink is a web-based management tool providing 2-way GPS tracking for real-time fleet visibility and temperature monitoring for your entire fleet.

real time the load in transport to maximize your position in the marketplace.

Dr. Patrick Brecht, founder and president of PEB Commodities, Inc. and a member of the World Food Logistics Organization's (WFLO) Scientific Advisory Council (SAC), who has expertise in refrigeration technology, states, "Our investigations and studies have found that human error accounts for up to 80 percent of cargo losses during transport."

tation.” He adds that, “There are tremendous opportunities available for integrating advanced trailer refrigeration technologies and telematics with food safety programs, and the computerized refrigeration systems today are not being fully utilized.”

A telematics solution should provide a utilization report to ensure proper asset management to run an optimal fleet. In addition, it also needs advanced geo-fence capabilities that provide the ability

for automatic data transfer of vital information when entering the field, such as location, fuel levels, temperature reports and just about anything that one would want to measure. Moreover, a telematics solution can generate a refrigerated unit health report to assure operators, drivers, and consumers of

the security of the cold chain that would include fuel levels, battery voltage, as well as the ability to remotely make changes to the refrigeration unit settings.

PLM, the leading cold chain fleet management company, was one of the first adopters of telematics solutions through its ColdLink two-way transport refrigeration real-time control and management system that meets or exceeds all the requirements. ColdLink products interface with Carrier Transicold and Thermo King refrigeration units, providing communication capabilities and all the reports, events and alarms needed to provide superior refrigerated transportation services to

reduce fleet operating costs and ensure regulatory compliance. The ColdLink solution gives the fleet manager complete visibility and control in real time and the ability to be notified of a possible issue while in transport, and can communicate with the TRU (transport refrigeration unit) directly to take corrective action. Finally, ColdLink can send notification of non-critical alarms to the fleet manager back at the facility, where the fleet manager can clear the alarm while the driver continues the route with no service interruption to delivery of products and services, saving the company time and money.

Knowledge is power. If you can't see it, you cannot manage it. Mark Domzalski, senior vice president at PLM, states, “The ColdLink management solution gives you complete transport visibility and offers reports that show information to optimize your cost of operation while maximizing the protection of temperature sensitive products.” He adds that, “Data is good, but if it is not used and is not actionable, then it becomes just another Excel spreadsheet in your inbox that you do not open.”

While there is a lot of promise surrounding the Internet of Things and Big Data, the fact is, if you cannot get that data down to bite sized—and to Domzalski's point, “actionable” format—can you truly use it? PLM's unique approach is to work together with customers to develop KPI's on what data to measure for their business to achieve the goal of saving time and money throughout their operation while also meeting compliance requirements. PLM's expertise

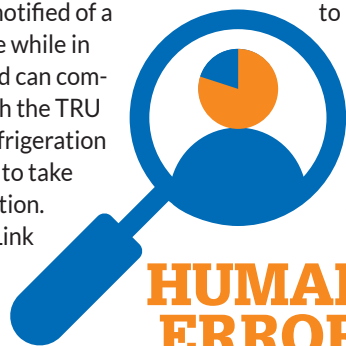
comes from decades of benchmarking and analyzing cold chain operational data and using this information to help customers in maximizing the use of technology to meet their individual business goals.

Simply put, ColdLink allows businesses to manage loads in real time versus being reactive and experiencing

cargo losses, that Dr. Brecht reports are the result of human error. The solution allows businesses to manage by exception in real time based on a personal commodity profile set up within the system,

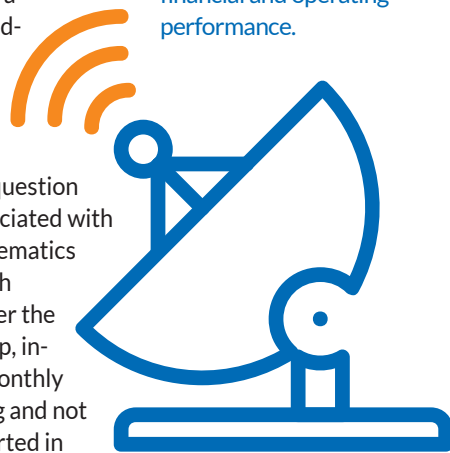
and view the transport asset and the condition loads in real time. Managing by exception means fleet managers are in control in real time when pre-set critical alarms are triggered, door openings occur, temperature set limits are exceeded, and driver behaviors and dwell times are recorded. ColdLink then allows control of the unit's function remotely by clearing the alarm, re-setting the temperature or advising the driver of a behavior modification.

Transportation companies sometimes question the risk associated with owning a telematics solution, with concerns over the cost of set-up, installation, monthly fees, training and not being supported in



HUMAN ERROR
ACCOUNTS FOR UP TO
80%
OF CARGO LOSSES
DURING TRANSPORTATION

Today's operators must adapt to the approach of building a **“smart trailer”** with advanced monitoring systems that can substantially enhance their financial and operating performance.





“There are tremendous opportunities available for integrating advanced trailer refrigeration technologies and telematics with food safety programs, and the computerized refrigeration systems today are not being fully utilized.”


Dr. Patrick Brecht, founder and president of PEB Commodities, Inc. and a member of the World Food Logistics Organization's (WFLO) Scientific Advisory Council (SAC)

the future by the provider or a third-party provider. PLM's strategy for risk mitigation enables companies to lease access to the information instead of owning hardware.

According to Domzalski, “Our ColdLink program allows a company to start using our advanced telematics product with only a monthly investment

for access to the information. There is no upfront hardware cost, no software cost, no installation fees, the warranty is covered, and companies get a fully functional solution with advanced reporting from day one with no initial capital investment.”

PLM has a national network of representatives that are experts in cold chain and telematics solutions and provides ongoing support and training that is unsurpassed in the industry. Furthermore, companies no longer want to own technology; what they truly want is access to the information that they need to save the business time and money.

ColdLink is the answer for companies' information needs, for regulatory compliance, and to save time and money with complete cold chain visibility and control. 

CUSTOMER TESTIMONIAL:

KeHE DISTRIBUTOR'S ANDY BAILEY

Andy Bailey, director of transportation at KeHE Distributors, says PLM offers a wide range of services that some other equipment providers do not, including telematics solutions.

“One of the things that's been really good is the ColdLink system that comes equipped on the trailers. ColdLink helps us maintain our temperatures and keep track of temperatures when we have issues. By identifying issues as soon as possible, we can then make the decision to get the trailer fixed or to change trailers.”

In addition, “PLM's analytics reports give us a broad range of information to help us drill down into what the specific problem areas are on a trailer,” says Bailey. “For example, we can pull down information from the reefer to pinpoint an exact problem, whether it's the driver leaving the trailer doors open too long, or the trailer being loaded while the reefer unit is running. All these things

can contribute to temperature integrity issues. But, with access to data via the analytics report we can identify these issues and change things, which improves our processes.”

PLM's analytics reports not only help improve KeHE's processes; it also helps with regulatory compliance, says Bailey.

“The Food Safety Modernization Act (FSMA) has changed the game, especially when it comes to recording information for refrigerated and frozen food products,” he explains. “PLM has truly been a great partner in helping us put together a FSMA program. They've given us information, data, and recordkeeping processes that keep us ahead of the game and in compliance with federal regulations like FSMA.”

Bailey credits PLM's complete portfolio of services, including telematics solutions like ColdLink, for KeHE's decision to expand its relationship with PLM.

“Over the last few years, we've had several different providers in most of our facilities, yet there has been no one like PLM when it comes to putting together deals, putting together the right spec for our drivers and putting together the right trailer for our business,” he says. “We have a specific design that we're looking for at KeHE. We want to be able to maintain several temperatures within a trailer. We have a portion that is frozen, a portion that's refrigerated, and we're always trying to keep products both cool and dry.”

Bailey was impressed with PLM's willingness to listen to KeHE's specific requirements and design the right solution for the distributor's needs.

“PLM sat us down. We came up with a plan based on the kinds of specs we needed within the trailer and on the outside; the safety issues we cared about for our drivers; and how to maintain product integrity.”

Bailey recalled when he first connected with PLM years ago. KeHE's business was growing and the company needed more trailers.

“I reached out to PLM and they were able to provide some rental units. But, one of the things that changed the game for me was their on-site mobile service. The people working on PLM's on-site mobile service are the same people today that were there 7 years ago when we started renting units from them.”

PLM's commitment to its customers is measureable. KeHE has steadily added PLM's units to their fleet, which is now comprised of more than 50 percent PLM trailers.

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1953

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NATURAL FOOD
DISTRIBUTORS

DAILY ROUTES IN
**US &
CANADA**

SANITARY TRANSPORTATION of Food Brief



Don Durm, vice president of customer solutions at PLM, is a true asset to the food logistics community. His efforts to raise awareness and knowledge about the Food Safety Modernization Act (FSMA), and Sanitary Transportation of Food (STF) regulation in particular, are helping many in the industry. He shared the following guidelines with *Food Logistics* for this special edition.

The Food Safety Modernization Act (FSMA) enables the Food and Drug Administration (FDA) to focus more on preventing food safety problems rather than relying primarily on reacting to problems after they occur. Contained within FSMA is FDA's Sanitary Transport of Food (STF) rule, which is nearly 300 pages in length. It was published April 6, 2016, and become final and enforceable on April 7, 2017, for most businesses.

Industry Position

Within the STF rule, the FDA defined regulatory roles for the shipper, loader, carrier and receiver, but more directly, identified the shipper as the key stakeholder charged with the responsibility of keeping food safe during transport by rail and/or motor carrier. Deliverable requirements will change by the role that the refrigerated transport company plays within the distribution channel.

If your role is the shipper, loader and carrier, you can accomplish all the written record requirements through a written internal standard operating procedures (SOP) that are maintained for a period of one year beyond their use. If your role is only the shipper, you are responsible for delivering in writing all the requirements to keep food safe during transport, which needs to be maintained for one year beyond their last use, to the carrier.

Within the **STF rule**, the FDA identified the **shipper as the key stakeholder** charged with the responsibility of keeping food safe during transport by rail and/or motor carrier.

Written Requirements

Written requirements include the following...

Trailer Specification & Design Compliance. Trailer design and construction should be made of materials that are cleanable to maintain sanitary conditions to ensure the safe transport of food.

Sanitization Compliance. Develop sanitation procedures for the different load types and frequency for food vehicles to ensure all food-contact surfaces are safe to prevent cross-contamination during the loading, transportation and unloading phase.

Temperature Compliance. Develop any necessary pre-cooling requirements for the load that are specific by commodity types. Document any temperature control requirements during transport, which may include any temperature records and data exchange requirements that the shipper and/or receiver may require.

Carrier Training Compliance. Carriers are required to provide driver training for food safety education that includes safe food handling for the commodities transported. Required documentation is the name of the driver trained, the date of training and what the training included. The training is provided upon employment, and the record must be maintained for one year beyond the last activity of the job function.

FDA FOOD SAFETY MODERNIZATION ACT

Regulatory Engagement

- Review to ensure current fleet trailer specification and design satisfy regulatory shipper requirements as to the construction of materials that keep food safe during transport.
- Review current trailer sanitation protocols by type and frequency, and maintain in writing as required by rule.
- Review current procedures for pre-cool activity to ensure safe food handling before loading. These must be in writing.
- Review current temperature profiles to ensure safe transport of food commodities and how that should be communicated to the carrier, and maintain the protocol record for one year.
- Train drivers by commodity types to ensure safe transport of temperature-controlled products. Carrier must maintain this record for a period of one year beyond their last activity in the job function.
- The FDA indicated it is going to rely on industry best practices. Conduct a gap analysis on written protocols from the International Refrigerated Transportation Association Best Practices Guide, available at the Global Cold Chain Alliance's website at www.gcca.org.

CONQUERING FOOD SAFETY THROUGH SAFE TRANSPORT

Keeping refrigerated trailers maintained and performing well shields companies from unexpected downtime and costly load losses.

A critical aspect of food safety involves keeping the trucks and refrigerated trailers used to haul food well maintained and performing at optimal levels. An ongoing preventive maintenance program for this equipment ensures meats, seafood, fresh produce and frozen foods reach their destinations on time and in conditions that are safe for human consumption. Not only that, but a quality maintenance program shields fleet operations from unanticipated equipment failures that can lead to costly load losses and complaining customers.

The Food and Drug Administration (FDA) added another level to the importance of well-maintained refrigerated trailers when it passed the Food Safety Modernization Act (FSMA) in 2011. At the same time, 2017 is being hailed as the year many of the mandates, including the safe transport of food, are met.

As a result, grocers, processors and food manufacturers seek to resolve several key issues: One, producing high quality, safe foods for consumers to eat; two, moving these products to customers on time and in safe condition; and three, meeting all the requirements of the new regulation.

PLM is a lease provider, operating a fleet of more than 9,000 refrigerated units from locations across the U.S. Most of the companies leasing from PLM also participate in its on-site maintenance program, where PLM manages the vendors and techni-

“We cover the TRU and the entire body of the trailer, the tires to the lift gate, everything. It’s really full-service maintenance.”

Idali Colon, director of business services



cians needed to keep refrigerated trailers in top working order. In this role, PLM captures the hard and soft costs incurred in maintaining this equipment.

“Because we are a leasing company as well as a maintenance service provider, we have systems in place to capture data and organize it into usable formats, to make decisions around it,” says Jodi Wishart, manager of financial policy at PLM.

The data helps the nearly 50-year-old company present customers with a compelling case for outsourcing maintenance. The reality is that a well-managed, preventive on-site maintenance program, as well as having top technicians performing regular field inspections, can save at least 10 to 20 percent in fleet costs annually,

not just in preventive maintenance, but in cost avoidance too.

Wishart explains that, “The most costly thing that can happen to a refrigerated fleet is when a loaded trailer for a strategic and important customer goes down in mid-transit in an area where help is not readily available, and you have load loss. I’m not sure how you put a dollar value on that, but a preventive maintenance program, when followed correctly, will help you avoid that most expensive cost to your fleet.”

The Proof is in the Pudding

Wishart works in PLM’s Personalized Customer Solutions team. In this role, she performs analytic modeling for potential customers to shed light on their current maintenance practices and showcase how outsourcing their maintenance might actually save money. In most cases, she unveils a strong case for outsourcing.

Wishart consults with potential

customers to demonstrate how a well-managed preventive maintenance program might work for them. This consultative approach helps potential customers make better maintenance decisions and determine whether contracting for emergency breakdown service or on-site maintenance is a good fit.

The first thing PLM does when it engages in talks with a potential customer is share the knowledge they have collected over the years. In the refrigerated trucking industry, the hard costs, which might include lease or loan payments, maintenance and fuel, are readily known. But digging into soft costs, which may include the expense associated with a breakdown or unplanned maintenance, a lost load, a reduced lifespan on a trailer/TRU (transport refrigeration unit) due to missed maintenance, and FSMA compliance issues, is complicated.

PLM aids companies with this daunting task by conducting a fleet walk, where members of its Personalized Customer Solutions team evaluate a company's existing assets and their ages, then discusses the applications they perform, the miles they put in and the hours they run to make sure they have the right assets in the right application at the right locations, reports Idali Colon, director of business services at PLM.

The activity paints a true maintenance picture for customers to build upon. "For refrigerated trailer bodies, we think of cost as a cost per mile; the maintenance that happens on a trailer, tires, brakes, and wear

and tear on the trailer body are figured into this," Wishart says.

The same calculations are done for refrigeration units. Preventive maintenance costs and larger expenses, such as installing a new compressor, are added up over time and divided by the hours the equipment ran to figure out the cost per hour.

"Refrigerated trailers have various life spans, so gathering all those costs and trying to make sense of them over five, seven or 10 years, can be a tremendous project," says Wishart.

The exercise helps PLM get a handle on the amount potential customers are currently spending on maintenance as well as their costs per hour and costs per mile. The Personalized Customer Solutions team then engages the potential customer about where PLM's maintenance program could take them.

Managed Replacement

While engineering and design improvements have boosted the sophistication of refrigerated trailers and made them more fuel efficient, durable and reliable, a disciplined maintenance strategy is still in order, and it's one that PLM is well positioned to provide through a solid preventive maintenance program and managed trailer replacement.

"Maintenance costs increase

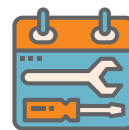
as a trailer ages, although tire costs tend to remain stable over time," Wishart explains.

The problem is the costs of an aging trailer are not always tangible. Consider the diesel engine providing the power; the more hours it accumulates, the more expensive it gets to operate, and the higher the risk for an unexpected and costly major breakdown.

This risk isn't one most companies can readily absorb. Fleet operations can better control maintenance costs through a managed replacement plan, and PLM's professionals can show them how by calculating when their costs per mile and costs per hour will begin increasing at a rate that makes the whole fleet more expensive. When this occurs, it's time to begin bringing on new trailers to replace old ones.

"If something starts getting more and more expensive as you go along, you're better off starting

We come to you.



On-Site preventative maintenance and services repairs by top technicians

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in fleet costs annually, not just in preventive maintenance, but in cost avoidance too.



“Each trailer operates at a different cost point depending on hours, miles and age.”

Jodi Wishart, manager of financial policy

fresh with a new piece of equipment,” Wishart explains.

When comparing costs, however, it’s essential that companies compare apples to apples. For example, each trailer operates at a different cost point depending on hours, miles and age. Accurate comparisons involve segmenting a fleet by natural groupings (usually by annual hours of operation) to compare operating costs. Accurate fleet management decisions become possible when trailers are compared by 2,000-, 4,000-, 6,000- and 8,000-hour groupings.

“The greater value is the data can also determine the fleet’s total cost of operation,” Wishart says. “We can then make a total fleet plan recommendation to help drive out costs.”

Maintenance in Motion

PLM partners with customers to manage every aspect of their maintenance program, from scheduling private maintenance to coordinating repairs, locally or over the road. PLM operates 27 branch locations across the United States, employs service technicians and operates fully equipped mobile repair vehicles to perform on-site maintenance. The company also

partners with a nationwide vendor network to provide routine and emergency breakdown service, 24 hours a day, seven days a week, across the continental U.S.

“We cover the TRU (transport refrigeration unit) and the entire body of the trailer, the tires to the lift gate, everything. It’s really full-service maintenance,” says PLM’s Colon.

PLM carries an extensive inventory of OEM parts

and its technicians are ready to perform all work on these units from checking the refrigeration unit for adequate cooling, unobstructed airflow, tightening electrical connections, performing oil changes, changing

tires, replacing worn brake pads and more. Once on-site, technicians go the extra mile and do an overall fleet check, looking for lights that are out, damages, low air in tires, and more—anything that could contribute to downtime further down the road.

Going on-site to perform maintenance, whether it’s preventive or major repairs, is the PLM differ-

ence. PLM’s professionals come on-site to fully understand the scheduling, the frequency of the different routes, and so on. Together, they work with the customer to establish a good operating rhythm for on-site maintenance.

“This eliminates the need for companies to find a driver to bring the unit into the shop, then wait for the repairs to be finished,” says Stephen Nicholas, director of field audit & compliance at PLM.

Instead, customers schedule maintenance at a time that’s convenient for them. To help customers plan, PLM employs technology to track the asset usage and keep customers apprised of when maintenance is due.

GPS placed on the units collect data

on hours of use and miles traveled, which is downloaded monthly to plan and deploy maintenance services. The technology also enables PLM to remotely watch for unexpected maintenance issues.

The data also aids companies with the U.S. Department of Transportation’s Federal Highway Administration reviews by ensuring specific preventive maintenance is performed and documented before these audits take place. The company utilizes an enterprise resource planning (ERP) system to track the maintenance requirements set forth in these mandates.

Keeping control in the customer’s hands by outsourcing maintenance provides tremendous productivity savings. Fleet operators no longer need to take trailers out of commission to meet someone else’s schedule for an oil change.

According to Wishart, “The more we’re able to participate in our customer’s process at their location, the less disruptive maintenance is to their overall operation, and that always saves time and money for our customers.”

THE KEY BENEFITS OF PREVENTIVE MAINTENANCE

- Reduces costly repairs and downtime
- Increases safety and reliability
- Extends the life of your assets
- Increases productivity
- Prevents problems before they arise



VERIFIED AND VETTED MAINTENANCE PARTNERS

With refrigerated trailers traveling many miles every day, there are times when maintenance is needed far from home. But with PLM, help is just a phone call away. Fleet operators can access PLM’s vendor network via its emergency breakdown service, which is available 24 hours a day, seven days a week, 365 days a year.

PLM has eased the burden of finding help in a pinch by building partnerships with maintenance vendors across the United States. These vendors have been evaluated not only on price, but on the quality of the service they provide, on-time performance, reliability, and customer experiences.

“Our maintenance team has experience and knows this equipment, our customers, and their expectations, so they are well suited for interviewing potential vendors to determine if they are a good cultural fit,” Wishart says. “This prevents us from introducing providers into the system that do not share our values for servicing customers and managing a fleet.”



Finally, PLM trains their vendor partners on the company’s best practices so they know exactly how to respond when time is of essence and a load is at risk.



46 MILLION
people served



4 BILLION
meals provided



1.25 BILLION
pounds of
produce sourced

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Hunger affects every community, including yours. That's why PLM supports Feeding America's campaign to end hunger.

PLM team members participate at local food banks giving back to their communities.

Source: Feeding America, Fiscal year 2016 annual results

TOGETHER WE CAN END HUNGER.
feedingamerica.org





Components made by multiple manufacturers and suppliers comprise today's modern refrigerated trailers, which are designed to meet the highest performance standards.

Though the saying goes, "It takes a village to raise a child," in the refrigerated transport world it might more aptly be said, "It takes a village to build a refrigerated trailer." There is no single manufacturer of a refrigerated trailer; rather there are multiple manufacturers that create the components that go into these trailers and finally a trailer manufacturer that pulls all the pieces together.

Crafting a refrigerated trailer this way is a lot like assembling a vexing jigsaw puzzle—all the unique pieces must fit together seamlessly to achieve a cohesive and cost-effective overall design. Not only that, but the pieces must assemble in a way that meets the Food and Drug Administration's Food Safety Modernization Act (FSMA), which has been hailed as the most sweeping reform of U.S. food safety laws in more than 70 years.

With this law, design and application of trailers has taken on a whole new dimension. Because food shippers now must specify in writing the sanitary requirements for transport vehicles and temperature control systems,

equipment design is going to play a huge role in meeting those requirements to keep food safe during transport. Everything on the refrigerated trailer has been impacted, from the insulation in its walls to the metals used in its construction to its door design.

PLM's Don Durm, vice president of customer solutions, shed light on these coming changes



“We need to ask, ‘What’s the best refrigerated trailer that can be built? We need to look at a wider range of materials. We still see some wood used in refrigerated trailers, and that has to stop.’”

Don Durm, vice president of customer solutions at PLM.

two years ago when he warned the readers of Refrigerated Transporter to get ready because with the new regulations, refrigerated trailer specifications would need a lot more attention.

He said, “We need to be asking: ‘What is the best refrigerated trailer that can be built?’ We will need to look at a wider range of materials. We still see some wood used in refrigerated trailers, and that has to stop.”

FSMA also puts the onus on shippers to set trailer cleaning requirements, and as a result they may implement cleaning procedures similar to those used in food processing. This too will require fleets to make some changes and design refrigerated trailers that are both easy to clean and made of materials that can withstand cleaning chemicals.

Durm continues, adding that, “Interior damage must be repaired quickly to prevent harmful microorganisms from being absorbed and growing in the insulation. Another issue is that when water gets into the insulation, a trailer can easily gain 1,000 to 2,500 pounds, which causes more weight for the power unit to pull, thus impacting the fuel economy. Additionally, the impact to the trailer results in less thermal efficiency and makes the refrigeration unit work harder to maintain temperature.”

These changes are impacting what companies are asking for when they design a trailer. PLM's Tim Anderson, product manager of refrigeration, points out that, “We now have to consider if we are designing and specifying components in a trailer that meet all of the FSMA requirements. Previously, a customer may have requested a specification of 2 ½-inch thick insulation in a trailer hauling frozen products at minus 10 degrees (Fahrenheit). That's not going to work anymore.”

The Devil is in the Details

PLM specializes in providing fleet solutions for refrigerated trailers for a variety of applications. These include: single-temp refrigerated trailers for haulers moving commodities that require one set temperature; multi-temperature trailers that can

be divided into three separate temperature-controlled compartments; applications where companies are delivering products that must be kept at different temperatures; and environmentally friendly, zero-emission, single-temp refrigerated trailers for applications that must meet the requirements of the California Air Resources Board (CARB).

But, to accurately determine trailer design, customers must fully understand their application and what's required by law. Things that change the design of a trailer include what type of commodities will be hauled, the regions of the country they will be hauled in, how they will be loaded and unloaded, and more.

PLM assists customers in analyzing their needs to make an accurate assessment of the application and design decisions.

The process begins by developing a customer profile before any equipment is ordered. The interviews get very specific in order to properly specify each part of the refrigerated trailer. For instance, hauling produce will require a very different specification than a refrigerated trailer that's primarily hauling ice cream or other frozen goods. Other items to consider include the amount of insulation added to the unit's walls, ceiling, floors and doors. Temperature is another variable. Even a moderate summer temperature of 87 degrees (Fahrenheit) ambient can radiate highway asphalt temperatures to more than 142 degrees. All told, where you operate your equipment ultimately impacts the application and design of your refrigerated trailer.

Another consideration is the size of the refrigeration unit itself, which includes its capacity and its BTU (British thermal unit) output.

Before FSMA, Anderson explains that customers sometimes got away with buying the cheapest unit they could find.

"Now they can't do that," he says. "They have to consider what will be needed to protect their product(s). They may need a refrigeration unit with a higher level of insulation and one that's got a 60,000 BTU capacity

at zero degrees, versus a unit that had only 45,000 BTUs five years ago."

Fortunately, he says, refrigeration manufacturers are way ahead of customers in this regard and have the right-sized products ready and waiting.

"Every time manufacturers come out with a new model, they've upped their BTU game," says Anderson. "They're tweaking this or that, and finding more capacity here and there. The units we have today are twice the capacity of the units produced 20 years ago."


Today's transport refrigeration units are "smart trailers" with advanced microprocessor temperature sensors that talk to each other. The electrical flow control valves check temperatures automatically and adjust accordingly 100 times per second to provide a much finer control and allow the units to maintain a more stable temperature.

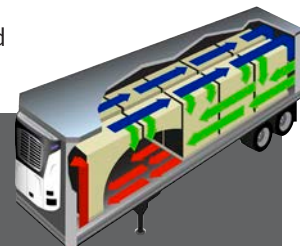
All of these sample issues listed and many more are critical to consider in assessing the customer's

application and the design of the refrigeration unit and trailer.

Keep It Clean

The FDA's FSMA rules arose from a series of incidents where contaminated food was sold and eaten by consumers who became very ill or even died afterward. The causes of these tragic occurrences were traced back to contamination and adulteration of the food products in the supply chain. Under FSMA, shippers must now specify in writing the sanitary requirements for vehicles carrying perishable food. While maintaining the correct temperature of the food has always been priority, the FDA has not previously mandated that the trailer must be kept clean.

As such, Anderson says, trailer specifications may need alterations to simplify cleaning. For instance, floor designs, gutter configurations, the location of the condenser and more should be considered in the design. 



A PROPERLY DESIGNED TRAILER PROMOTES FOOD SAFETY AND COMPLIANCE WITH FSMA

The FDA's ruling on the Sanitary Transportation of Human and Animal Food (STF) came into effect on April 6, 2017 for most businesses. This regulation requires shippers, receivers and carriers who transport food that will be consumed or distributed in the United States to take steps to prevent the contamination of human or animal food during transportation.

According to the FDA's website, the goal of the rule is to ensure "transportation practices do not create safety risks."

The FDA's ruling addresses three key areas, including ensuring food is properly refrigerated, vehicles and equipment are properly temperature controlled for safety and sanitized equipment, and finally, that food is properly protected during transportation operations. Therefore, the key requirements of this ruling are:

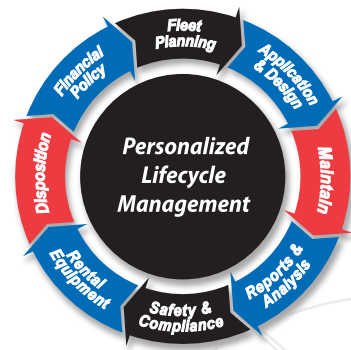
- **Vehicles and Transportation Equipment.** These units must be suitable, and adequately cleanable, for their intended use and must maintain the correct temperatures to safely transport food.
- **Transportation Operations.** This requirement impacts all measures taken during transportation to ensure food safety, such as adequate temperature controls, preventing contamination of ready-to-eat food from touching raw food, protection of food from contamination of non-food items in the same load or previous load, and the protection of food from cross-contact with food allergens.
- **Training.** The law regulates that carrier personnel be trained in sanitary transportation practices and that this training be documented. This training is required when the carrier and the shipper agree the carrier is responsible for sanitary conditions during transport.
- **Records.** Carriers will need to maintain records of written procedures, agreements and training. The required retention time for these records depends on the type of record and when the covered activity occurred.

PLM experts can help guide you through the rules and customize a plan for FSMA compliance. For more information contact PLM today at (877) 736-8756.



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