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# Management UPDATE

AN EXECUTIVE SUMMARY OF INDUSTRY NEWS

■ **USPS price hikes go live.** Changes in shipping prices that were introduced by the United States Postal Service (USPS) in November took effect last month. Express Mail went up 3.9 percent, Parcel Select went up 5.9 percent, Parcel Return Services are up 5.3 percent, and International Shipping Services are up 8.5 percent. USPS officials said that this is the first time the USPS has adjusted prices for its shipping services on a different schedule from its mailing service price adjustments. These pricing changes came about from a piece of legislation signed into law by former President George W. Bush in late 2006 called The Postal Accountability and Enforcement Act. When first introduced, the common consensus regarding the bill was that it would put the USPS in a better position to compete with private sector heavyweights UPS and FedEx, as well as enable the USPS to introduce volume-related and other price incentives for various service offerings

■ **Ocean cartel challenged.** In a move to thwart the price-fixing efforts of the Transpacific Stabilization Agreement (TSA), one of the nation's largest shipper coalitions told federal regulators that "it had serious concerns" about expanding the carrier cartel's antitrust immunity. The National Industrial Transportation League (NITL) told the U.S. Federal Maritime Commission (FMC) that it objects to a proposed amendment to the TSA's effort to gain new authority for member ocean carriers to compare business strategies and share information in the eastbound Asia to U.S. trade. The published amendment to the carrier agreement contained little explanation regarding the reasons for the

proposed change other than to note it would "provide authority for the (TSA) members to discuss cost savings and more efficient use of vessels and equipment assets and networks."

■ **The price isn't right.** Soon after the House Appropriations Committee unveiled its \$819 billion economic stimulus plan, which allocated roughly \$43 billion for transportation infrastructure spending, several political and industry groups flatly stated that this number is far too low for to help get the economy moving in the right direction. Before these figures were disclosed, the House Transportation and Infrastructure Committee proposed \$85 billion in transportation infrastructure spending. House Highway and Transit Subcommittee Chairman Peter DeFazio blasted the proposed funding in a recent "Marketplace" radio interview, saying that the transportation sector has received only 7 percent of the proposed stimulus package despite the potential of transportation funding to create jobs and help spur an economic recovery.

■ **Fewer vessels in the future?** Although vessel operators worldwide have been reducing capacity and shifting deployment schedules, it may be a case of "too little, too late," say industry analysts. "Shipping lines and ship owners are in a precarious position because they can do almost nothing to determine freight rates, charter rates, and asset values for their ships," said Neil Dekker, a maritime analyst and author of Drewry Shipping Consultant's quarterly

*continued, page 4 >>*

■ **Have you had a remarkable logistics triumph?** If so, tell us about it! *Logistics Management* is accepting entries for our 2009 Best Practices Awards contest from shippers who want to share their success stories. Three winners will be chosen from among entries that demonstrate how an innovative logistics strategy has cut costs and improved efficiency. All three will be profiled in the June issue of the magazine; the Gold Award winner will also walk away with an iPod nano and will be featured on the cover. Submissions are due by March 20. To fill out your entry form, go to [logisticsmgmt.com/bestpractices](http://logisticsmgmt.com/bestpractices).

# Management UPDATE

*continued*

Container Forecast. "Even at such low prices, it is not a buyer's market for potential charterers or ship purchasers because demand and credit lines have dried up," Dekker added. Indeed, the forecast concludes that this year will be the toughest test yet for the container industry and further casualties are a real possibility.

■ **Contraction in the forecast.** While ProMat 2009 in Chicago last month had a surprisingly upbeat buzz about it, don't take that to mean that the materials handling industry is immune to current economic conditions. The show's sponsor, the Materials Handling Industry of America (MHIA), reported that new orders of materials handling equipment manufacturing grew 2.3 percent in 2008, but are expected to decline 18 to 20 percent in 2009, with a rebound expected to begin in late 2010. The MHIA also reported that shipments expanded 6.9 percent in 2008 but are predicted to contract by about 15 percent in 2009 and 3 percent in 2010.

■ **Lufthansa cuts capacity.** In an attempt to offset lagging demand, Lufthansa Cargo AG freighter capacities will be reduced by around ten percent for 2009. Simultaneously, Lufthansa Cargo will reduce its cooperation with World Airways, which up to now has operated two freighters of the MD-11F type and a Boeing 747-400F for the airline. Those routes will be served in the future by Boeing 747-400ERF aircraft in the fleet of the German-Chinese airfreight carrier Jade Cargo International. "Lufthansa Cargo is adapting capacity in face of increasingly difficult economic conditions and a distinct falloff in demand," said Lufthansa Cargo Chairman Carsten Spohr. "We will continue operating all our 19 MD-11 freighters, while utilizing the capacity adjustments to further improve our quality, reliability, and punctuality," he added.

■ **Evergreen trims offices.** Citing the "economic downturn, Evergreen Shipping Agency (America), agents for Evergreen Marine Corporation, announced that the company will

consolidate some North America offices and reduce staff. "The worldwide economic turmoil has created a situation we have not seen in our lifetimes," the company said in a statement to all North American-based employees. "The measures being taken will reduce costs and put EGA on a more sustainable structure moving forward." Late last year, Evergreen Line had announced capacity reductions on several trade lanes affected by a downturn in ocean shipping business due to the worldwide financial crisis.

■ **Retail sales softer than expected.** A deep recession, severe winter weather, and five fewer Christmas shopping days combined to create the most challenging sales environment in years for the nation's retailers. According to the National Retail Federation (NRF), retail industry sales for December declined 2.2 percent unadjusted over last year and decreased 1.4 percent seasonally adjusted from November. At the NRF annual convention and expo in New York last month, members were told that November sales were revised down to a 3.4 percent decline unadjusted year-over-year from the original reported 2.2 percent. As a result, initial 2008 holiday sales, which combine November and December sales, declined 2.8 percent to \$447.5 billion, weaker than NRF's projected 2.2 percent holiday forecast. Holiday sales in 2007 were \$460.2 billion.

■ **The winner takes it all.** *Logistics Management's* staff would like to congratulate Jeff Siewert, director of international logistics for The Home Depot, for winning this year's Logistics Quiz contest. Jeff's name was pulled from among the hundreds of readers who scored a perfect 100 percent on this year's quiz—which, we heard, has been getting tougher over the years. Jeff wins an iPod nano and earns bragging rights through December 2009. He told *LM* that it took him about 20 minutes to complete the 25 question quiz, and he plans to play everything from Big Head Todd to Big Audio Dynamite on his new iPod.



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COVER STORY

## Zappos.com goes Space Age

The online retailer recognizes order fulfillment as the key component of its mission and views the distribution function as its major competitive advantage. Here's how it adopted Space Age automation to realize skyrocketing productivity and meteoric sales growth.

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LM EXCLUSIVE

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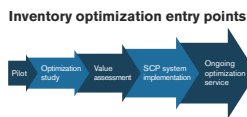


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When it comes to telling a good news/bad news story about ocean vessel trade this year, most of it is bad. Having acknowledged this, however, leading domestic port authorities are now emphasizing their plans for enhanced infrastructure and repositioning for the economic rebound.



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## You can't afford to stop learning

IN HIS SAGE ADVICE COLUMN this month, our good friend Wayne Bourne tackles a topic of vital importance, especially in these trying times (page 44). Bourne declares that companies are forcing managers to trim continuing education/conference travel money from their budgets with little consideration of the overarching benefit these events bring to a logistics and supply chain operation.

"It's ridiculously short-sighted," Bourne told me over the phone from a conference in New York. "I'm hearing about companies taking money away from the educational opportunities that will eventually produce solutions to current and future problems. You simply can't put a price tag on the long-term benefit." I couldn't agree more. Shippers may need to "go to the mattresses" this year and Bourne offers a few weapons you can use to help in the battle.

And while travel might be tight, we know for certain that continuing education continues to be top of mind for logistics and supply chain managers who are eager to secure and advance their positions on the corporate ladder. This is supported in the findings of our 2009 Salary Survey that you'll see in our webcast next month, as well as in our growing attendance figures for our online conferences over the past year.

In fact, I was joined by more than 650 shippers at the end of January for our hour-long 2009 Logistics Outlook webcast—attendees and panelists are still engaged in online discussions that spun off of the event, a terrific indication of our reader's increased desire to learn. The event is now available on-demand, so if you missed the live version, drop in at [logisticsmgmt.com/outlook09](http://logisticsmgmt.com/outlook09).

With demand for education at an all time high and travel money scarce, we've

decided to take the next logical step in our online educational offerings. This month we officially launch "Transportation, Logistics, and the Law," an online course based on Bill Augello's landmark textbook that explains the laws governing transportation. The course is taught by Brent Primus, an attorney and dear friend who made a promise to Augello just before his passing that he would carry on his transportation law teachings.

"Transportation, Logistics, and the Law" is essentially Augello's renowned day-long course that covers limits of liability for cargo loss and damage, insurance, contracts, bills of lading, freight charges, and billing disputes among other often misunderstood and costly concerns. And since the entire course rolls out in six hours of video, we've

**If you're negotiating carrier contracts, filing claims, or paying freight bills, this course is an essential resource. Go to [logisticsmgmt.com/law](http://logisticsmgmt.com/law) for a free preview.**

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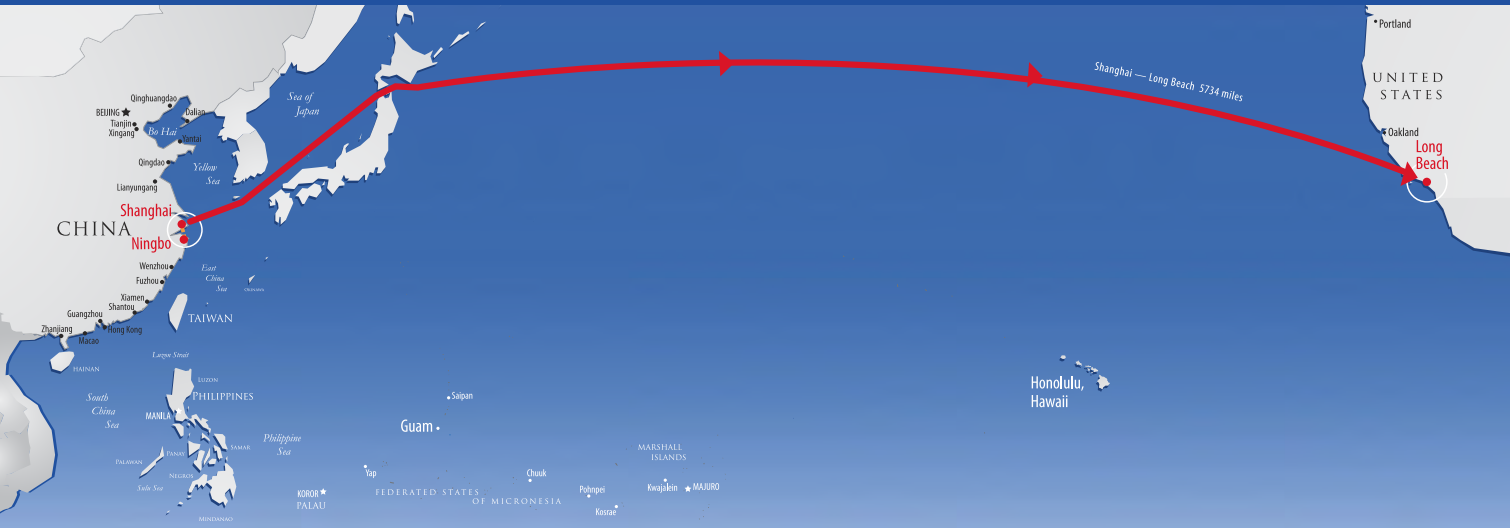
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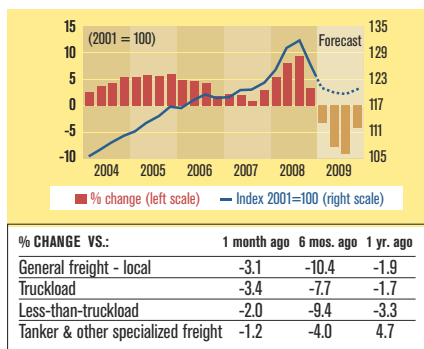
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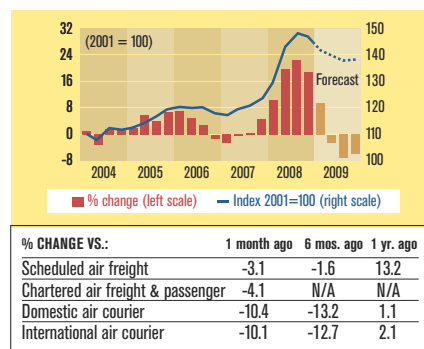
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## Pricing Across the Transportation Modes



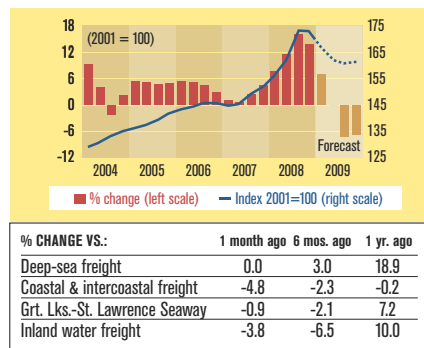
### TRUCKING

The economic recession drove average TL prices down 3.4% and LTL down 2% in December. In Q4 of 2008, average prices reported by the entire trucking industry declined an unprecedented 4.2% from the previous quarter. These price data from U.S. Labor Department surveys include fuel surcharges, so part of what we're seeing reflects big drops in fuel costs. More downward revisions to our truck forecast indicate the industry will cut prices again by 4.1% in Q1 of 2009, followed by two more quarters of weaker price declines before stabilizing at the end of 2009. The trucking industry's annual inflation rate registered 6.4% in 2008. We now expect average trucking tags to fall more steeply in 2009, down 6.2%.



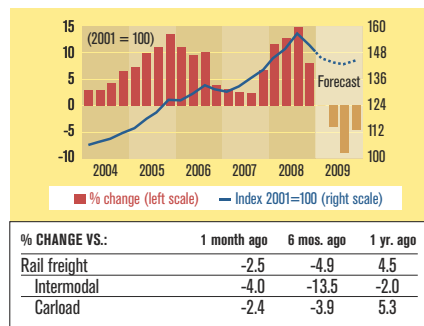
### AIR

Air freight price data from Labor Department surveys finally conceded to the recession. Average prices for shipping freight on scheduled flights and for shipping on chartered unscheduled flights fell in December by 3.1% and 4.1%, respectively. Air courier prices plummeted by over 10% from November to December. Due to lack of historical data for chartered flights, our forecast for air freight prices is limited to scheduled flights. Looking at this, we see that average prices for airfreight charged by U.S.-owned airlines soared by a fuel-surcharged 17.9% in 2008. We are still forecasting a 1.8% annual price cut in 2009. Next month when we will add analysis for 2010, the forecast for 2009 will likely be revised even farther down.



### WATER

The U.S. water transportation price index fell 2.4% again in December, mirroring the 2.4% drop registered in November. For the entire fourth quarter of 2008, however, prices were down only 0.1% from Q3 and still stood 13.7% higher than prices set one year ago in the Q4 of 2007. These data are transaction prices reported by U.S. carriers, which means the 2008 rate collapse in international containership and bulk ocean tankers do not show up here. Nonetheless, the worldwide recession is having an effect on our water transportation price outlook. We now forecast U.S.-based waterborne freight carriers will cut average prices 2% in 2009, following 2008's 12.3% price hike. Like airfreight, don't be surprised by more forecast revisions next month after we add the 2010 outlook.



### RAIL

With more severe price cuts reported in December 2008, weakness in line-haul railroads has accelerated our recession-driven forecast revisions. All told, in the final quarter of 2008, intermodal rail prices plummeted 8.6% and carload tags fell 2.7%. For the rail industry as a whole, average prices were down 3.3% in the fourth quarter and ended 2008 with an 11.8% annual price increase. Last month, we had forecast rail industry prices would fall 2% in 2009. Now we have drastically cut that number and are forecasting rail industry prices to drop 4.5% in 2009. This outlook is predicated on a more severe recession scenario, which is also reflected in downward revisions to our trucking industry price forecasts.

Source: Elizabeth Baatz, Thinking Cap Solutions. E-mail: ebaatz@alertdata.com



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- Trucking failures plummet in Q4 of 2008

# Donahue declares infrastructure investments a must

*U.S. Chamber of Commerce President supports Obama's commitment to recovery package, urging that Washington needs to take "a defibrillator to the U.S. economy."*

By John D. Schulz, Contributing Editor

WASHINGTON—The new Obama administration needs to invest in "quick turnaround" infrastructure projects in transportation and energy sectors to help the nation recover from a deepening recession, the nation's top business lobbyist recently declared. "We applaud the new President's commitment to make infrastructure a central part of his economic recovery package," said U.S. Chamber of Commerce President Thomas J. Donohue during the Chamber's 11th annual "State of American Business" report presentation in Washington last month. "Washington needs to take a defibrillator to the U.S. economy," he said.

To do that, Washington will spend more federal money than anyone ever thought it would, and infrastructure spending is at the core of that spending—which is good news for all who operate in the freight and logistics sectors. "Let's get America moving again," added Donohue.

A record Highway Trust Fund bill that should get passed by the end of 2009 could do exactly that. With estimates that it will cost \$500 billion over four years, it will be nearly twice as large as the current Highway bill that expires on Sept. 30 of this year.

Donohue urged the entire business community, including logistics managers and freight transportation carriers,



**The House Transportation and Infrastructure Committee has identified at least \$35 billion in what it calls "shovel-ready" projects to help jump-start the struggling economy.**

to ask themselves one simple question: "What are you doing to make this economy work better?"

Certainly, President Barack Obama and transportation officials in Congress seem to have asked that question of themselves recently. Transportation and logistics are a part of the solution, they say. The House Transportation and Infrastructure Committee has identified at least \$35 billion in what it calls "shovel-ready" projects to help jump-start the struggling economy. These projects are now part of the Obama team's nearly \$1 trillion economic stimulus package that it would like have passed by Congress in the first 100 days.

But Donohue would like to see smarter infrastructure investments, including infusions from the private

sector. Already, at least one expert is seeing an uptick in activity that should aid freight carriers as the nation gets ready to pour concrete and steel to improve the infrastructure. "There are some definite bright spots in construction," said Ken Simonson, chief economist of the Associated General Contractors of America, a trade group. Although home construction remains in the doldrums, other areas such as military, hospital, schools, and other institutions have begun an uptick in construction activity, Simonson noted.

"I hope they put a substantial part of that stimulus package into infrastructure projects," said Simonson, former chief economist of the American Trucking Associations back when Donohue led that group. For every \$1 billion in investment about 28,000



## INFRASTRUCTURE, CONTINUED

jobs are created, Simonson added—and more than half those jobs are non-construction-related.

He added that increasing infrastructure spending by the government is just a “down payment” on what could be a larger improvement. As the private sector recovers, it is prepared to make “all kinds of investment from seaports to airports,” Donohue said.

Business will make these investments when the government eliminates what the Chamber calls the “legal and regulatory impediments” that Donohue predicts would “unlock” private sector infrastructure investments as the U.S. recovers from what economists are calling a deep, continuing recession.

The U.S. economy began contracting

in the fourth quarter of 2007, enjoyed two quarters of anemic growth, and then declined again in the fourth quarter of last year. An anticipated first quarter GDP decline will mean that the U.S. economy will have contracted in four of the past six quarters.

Martin A. Regalia, chief economist for the U.S. Chamber, is predicting a 3 percent decline in GDP in the first quarter before the U.S. economy bottoms out in mid-year. Unemployment could exceed 9 percent this summer, he predicted. “We are going to get out of it but not before we set records for longevity and some notable records for decline,” Regalia said.

However, the Chamber is optimistic that there is “much common ground” between the business community and the

new Obama administration. Still, Donohue predicted that there will be inevitable clashes, including what he called an “abusive” Employee Free Choice Act, which many trucking executives fear could help unions organization.

“If they try to do too much too fast and pile too much on the business community, it could topple the entire system,” Donohue said. In fact, he’s urging the government to make “smart, effective, targeted, and temporary” spending to spur the economy, but warned: “We cannot afford and will not tolerate another New Deal.”

The last thing the Chamber wants is long-term government interference with business. As Donohue said, “With all due respect to members of Congress, most of them could not operate a candy store.” **L**

## SUPPLY CHAIN TECHNOLOGY

# New report says SCM technology market will hit \$9.2 billion by 2012; shippers concur

BOSTON—Capital expenditures are being reduced or kept at current levels due to the shaky economy, but shippers are still investing in IT. And a new report from AMR Research says this is not likely to abate anytime soon, with the firm predicting an annual 7 percent compound annual growth rate through 2012.

This projection suggests that the overall supply chain management (SCM) technology market will grow

from \$6.5 billion in 2007 to roughly \$9.2 billion in 2012. The likely driver for this growth, says AMR, is that “the economic challenges of the coming years will offer greater opportunity for supply chain technology adoption.” These economic challenges include: high inflation, rising commodity prices, threats to brand security, and cash preservation. (For a deeper look into the growth of TMS see page 41)

While AMR predicts a consistent increase in SCM technology growth in the coming years, so, too, do a group of more than 50 transportation and logistics executives that participated in a recent *Logistics Management* survey. Nearly 60 percent of respondents indicated their investment into SCM technology would remain at current levels in the coming years with 21 percent saying it would increase, and another 21 percent saying it would decrease.

Some of the reasons cited by the *LM* survey respondents for increased spending include improve visibility to customers, increased delivery speed, and the need for better or more updated tools and processes. Those that said IT investments would be reduced pointed to issues like budget cuts, project delays, and the slowdown in overall business.

It’s interesting to note that *LM* survey respondents reported that they are currently most interested in adopting inventory optimization (48 percent); warehouse management systems (42 percent); and demand planning (40 percent). AMR noted that it also found that these segments are viewed as “high growth application categories.” **L**

—Jeff Berman, Group News Editor

## News Capsule

### Trucking failures plummet in Q4 of 2008

The steady decline in diesel fuel price has allowed critically ill truckers to “run on fumes,” says a January report from Avondale Partners, an independent investment banking firm. The continual drop in fuel prices—and resulting margin and cash flow boost—has helped sustain truckers who may have otherwise exited the industry.

#### Trucking company failures (\*)

Q4 2007



Q3 2008



Q4 2008



\* An average fleet size of 28 trucks is assumed

Source: Avondale Partners, LLC



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# The importance of freight classification in today's pricing market

IF YOUR COMPANY ships less-than-truckload (LTL) shipments via LTL carriers of general commodities, chances are that those shipments are subject to some provisions published in the National Motor Freight Classification (NMFC).

Nearly 1,000 LTL carriers operating interstate and/or intrastate are participants in the NMFC, including major LTL carriers such as Yellow Roadway, Con-way, FedEx Freight, ABF Freight System, Saia, and UPS Freight, to mention a few.

The NMFC, in effect since 1935, applies nationwide, and to a number of carriers that operate from or to Canada. It contains descriptions of more than 10,000 commodities or articles, classification ratings (Classes), rules (primarily protective packaging rules), and specific protective packaging requirements for named products.

Even if your company has negotiated reduced exception ratings or FAK (freight all kinds) ratings with individual LTL carriers that are lower than classes in the NMFC, those exceptions or FAK ratings may well be based on ratings in the NMFC, or your shipments may be subject to rules or packaging specifications in the classification. And most LTL carriers of general commodities base their class rates on the 18 classification ratings published in the NMFC—so don't kiss off the NMFC as being totally irrelevant.

## THERE'S A NEW GROUP IN TOWN

For years, the NMFC was kept current by a group of 100 elected representatives of U. S. and Canadian carriers called the National Classification Committee (NCC). That group decided what changes, additions, or deletions would be

made to descriptions, ratings, rules, and packaging specifications in the NMFC.

But now the NCC is no longer in existence. Back in 2007, the Surface Transportation Board (STB) decided the motor carrier rates bureaus, which included the NCC, should no longer be granted anti-trust immunity that had allowed carriers to act collectively in setting general rate increases, classification ratings, etc. That immunity was cancelled on December 27, 2007.

Rather than allow the NMFC to become dormant, the National Motor Freight Traffic Association (NMFTA), which owns the NMFC, decided to create a new group composed of classification specialists who were not employees of any carrier. The new group is called the Commodity Classification Standards Board (CCSB) and Joel Ringer is the chairman. Ringer was formerly the manager of classification development on the staff of the NMFTA when the NCC was in existence.

The new CCSB functions much the way the NCC did in the past, but there are several procedural changes you should be aware of that will be covered later in this column.

The board holds three public meetings a year—one in early February at a resort area, and the other two in Alexandria, Va., in June and October. Just 60 days prior to these meetings, the CCSB issues a docket listing all proposals for changes in the NMFC that will be

*(continued)*

CCSB density guidelines	
Minimum avg. density (in lbs. per cubic ft.)	Class
50	50
35	55
30	60
22.5	65
15	70
13.5	77.5
12	85
10.5	92.5
9	100
8	110
7	125
6	150
5	175
4	200
3	250
2	300
1	400
Less than 1	500

The density guidelines are used in the assignment of classes where average density is representative or reflective of the range of densities exhibited. Further more, the density/class relationships set forth in the guidelines presume that there are no unusual or significant stowability, handling, or liability characteristics, which would call for giving those characteristics additional or different "weight" in determining the appropriate class.

**Ray Bohman**, a well-known consultant and author, is editor of several highly successful newsletters on transportation and is a consultant to a number of national trade associations. He is president of The Bohman Group, consultants and publishers in the freight-transportation field. His offices are located at 27 Bay Lane, Chatham, MA 02633. Phone: (508) 945-2272.

## Bohman on

considered and voted on. Interested parties are required to submit data in support or opposition to a proposal at least 30 days prior to the public meeting.

You can access every CCSB docket at [nmfta.org](http://nmfta.org). Click on public dockets and go to the latest docket, CCSB Docket 2009-1. There you'll see a full rundown of each subject, along with present provisions and changes being proposed, data the CCSB has gathered concerning density, liability (value per pound), loadability, and stowability.

### ROCK THE VOTE

You should know that any interested party may attend any CCSB public meeting; and if you wish, you may speak to the board in favor of or in opposition to any docketed proposal. This includes shippers, receivers, parties representing shippers or receivers such as attorneys, consultants, or third-party providers, and yes, even motor carriers—although they don't have a vote.

Once all parties are heard and any discussion among board members is concluded, the entire board votes. The results of the vote are immediately posted; and if you're a party of record to any particular subject and you're not satisfied with the vote, you may request reconsideration by the board.

Unlike the procedures that were in effect when the NCC was in business, the CCSB allows any interested party not satisfied with its vote on a docketed proposal to request reconsideration. However, such a request does not automatically stay any decision by the board. If the board feels it did not have sufficient information on the transportation characteristics of a particular commodity when it took its vote, it may decide to hold the proposal in abeyance until its next public meeting.

On the other hand, if the board believes reconsideration is not warranted, it may deny the request within days after it receives it, thus allowing publication to go forward as scheduled. Previously, the former NCC procedures allowed any party of record to a proposal to appeal the decision of an NCC Classification Panel to the full NCC. Such an appeal automatically stayed with the panel's decision until the next meeting of the full NCC four months later. Unfortunately, the STB is now out of the picture and would not intervene even if a petition for suspension and investigation were filed.

Once the CCSB adopts a proposal as it was docketed, or adopts it with modification, it's

published in a supplement to the NMFC with an effective date of about 2.5 months later. This gives you time to sit down with your carrier (or carriers) and try to work out something better than what would be forthcoming in the NMFC—something that would apply for the sole account of that carrier (or carriers).

One new procedure that has evolved is a listing on [nmfta.org](http://nmfta.org) of commodities that the CCSB is reviewing. Some reviews might take months before they show up on a CCSB docket, but at least you'll have a heads up on what might be in the offing.

Any time you find out that a classification rating increase is under consideration, check out the CCSB density guideline on page 19. If you see that your densities (weights per cubic foot) warrant a rating (class) lower than what the CCSB density guidelines would call for, provide the CCSB with that information (cube, shipping weight, and weight per cubic foot) making reference to the product under review.

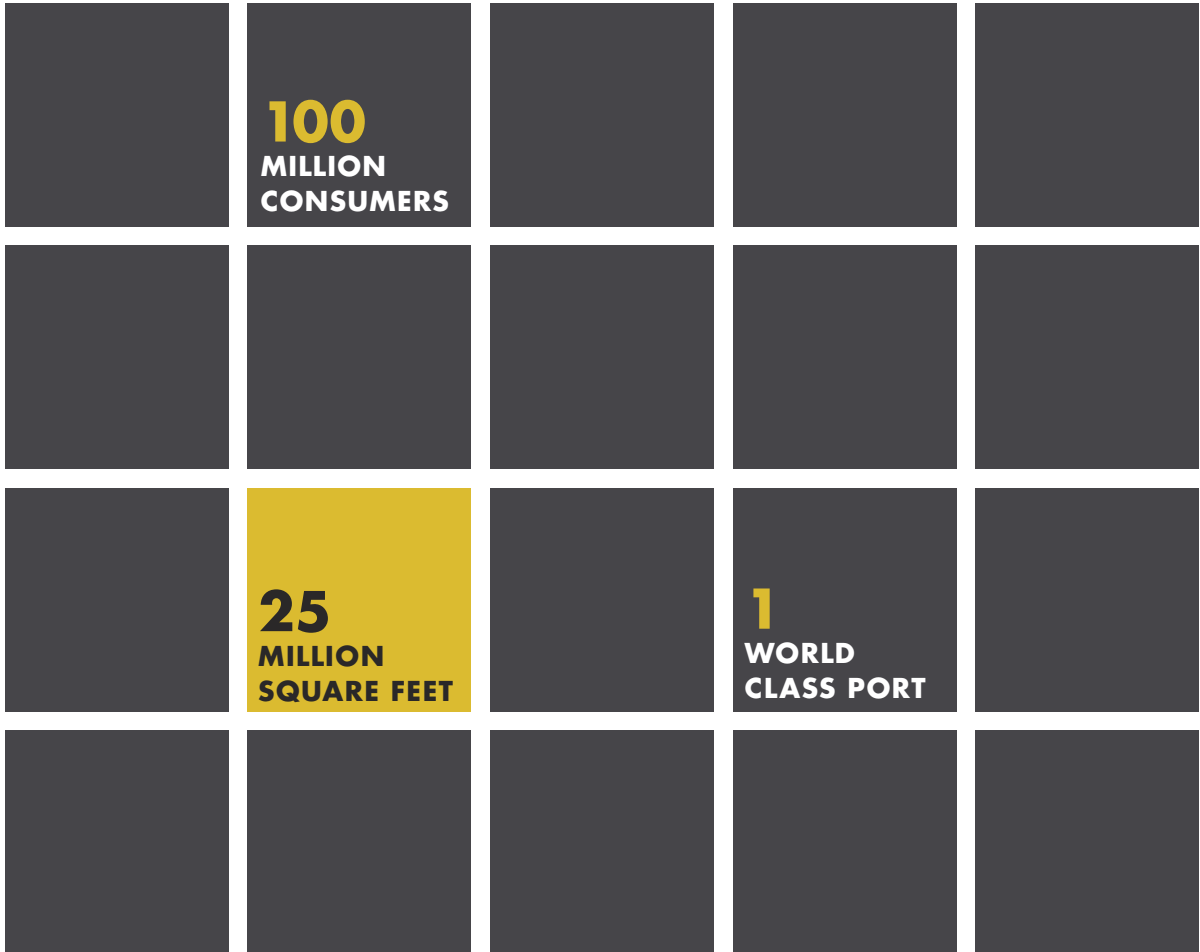
### CHANGES AHEAD?

Looking ahead, what changes might be in the offing? One ongoing project the CCSB has underway is a review of all articles in the NCC that are subject to NOI (not otherwise indexed) descriptions. This is a final catch-all item that does not cover articles more specifically described.

If the CCSB finds a wide range in densities, they usually propose a multiple scale of ratings based on density. One scale runs from class 70 (on articles having a density of 15 pounds per cubic foot or greater) to a high of class 400 (on articles having a density of less than one pound per cubic foot). A second scale ranges from a low of class 60 (on articles having a density of 30 pounds per cubic foot or over) to a high of class 400. Altogether, over 150 NOI items are subject to one of those two density scales—with more to come in the months or years ahead.

Even though your products may be subject to negotiated FAK ratings, many LTL carriers put a class 125 or possibly class 150 cap on their FAK. If a proposal should come along for a rating higher than class 125 in the NMFC, you could lose that favorable FAK rating because the NMFC rating would exceed that carrier's cap.

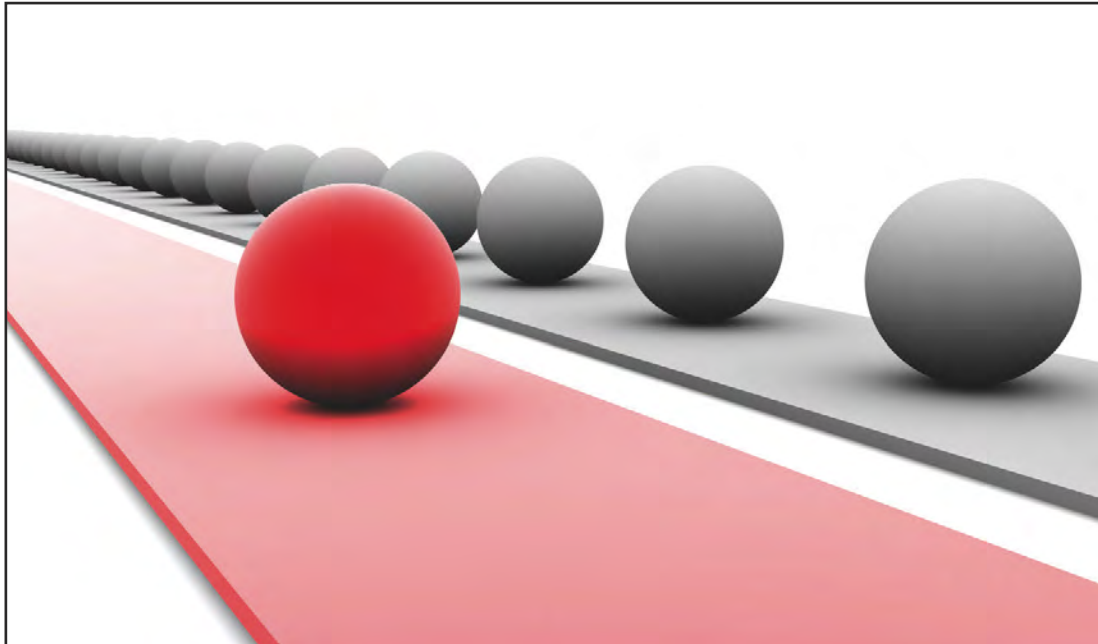
Here again is another reason why you should keep checking CCSB dockets so you can take appropriate action to protect your company's interest as far in advance as possible rather than trying to respond after an adverse change takes effect. ■



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## The case for inventory optimization

WHEN IT COMES TO supply chain management, no company excels in everything. Of course, no company should aspire to be tops in every supply chain management category, because the required effort and expense would be unjustifiable. Instead, most organizations correctly focus on identifying and optimizing those supply chain capabilities with the greatest potential to help maximize efficiency, growth, and profitability.

The above reality—the need for tradeoffs—is inescapable. Yet it is surprising how many businesses have not made “inventory optimization” a top priority. A large number, in fact, perceive their inventory management competencies to be satisfactory and have chosen to pursue excellence in other supply chain processes, such as sourcing/procurement, manufacturing, and transportation. This is not wrong, but Accenture has frequently observed that companies underestimate the value that high performance in inventory management provides.

One reason is limited visibility of the influence of inventory practices and policies across the supply chain. For example, if the information needed to establish minimum safety stock levels is routinely unavailable, inaccurate, or incomplete, the negative effect on costs, service, and flexibility may also be difficult to discern.

Even more common, however, is that companies don't fully consider the range of benefits associated with superior inventory management. They probably know that reducing stock levels can free up working capital and improve cash flow—often by as much as 30 percent. But this alone may not be sufficient to build an ironclad business case. Other potential improvements must also be acknowledged:

- **Lower carrying costs:** Less inventory

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reduces expenses associated with warehousing, insurance, damage, shrinkage, administration, and taxes.

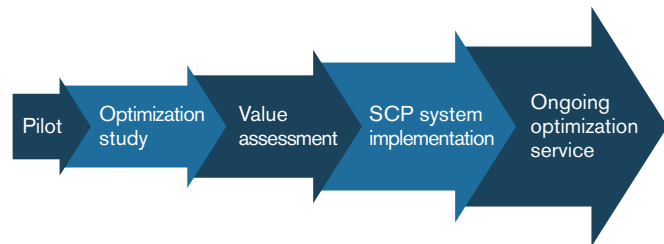
- **Improved asset utilization:** Reducing inventory frees up assets such as warehouse space and material handling equipment.

- **Higher customer service levels:** Improvements in defined customer service levels have been known to reach 10 percent. Increased customer loyalty naturally follows.

- **Reduced operating costs:** Decreased warehousing, labor, and freight costs improve the bottom line.

- **Improved supplier relationships:** Smoother, more predictable order flows are a boon to suppliers, and may even save money

### Inventory optimization entry points



by allowing suppliers to manufacture and ship more efficiently.

- **Increased revenue and gross margin:** Inventory optimization programs can raise sales volumes by reducing stockouts. Sales volumes may also be buoyed by improvements in product mix realized by better aligning service and cost to serve.

Given these benefits, inventory optimization could be one of the few initiatives that belongs at, or near, the top of every company's to-do list. A detailed diagnostic and cost-benefit analysis are needed to know for sure. But if even the most general symptoms are present, a closer look is probably warranted.

For example, it is relatively easy to know if frequent stockouts are an ongoing problem: Below-target service levels combined with

*(continued)*



## Mulani on

above-target inventory levels are a sure sign of inventory-optimization opportunities. Companies with highly complex or decentralized supply chain networks also tend to be good inventory-optimization candidates because aggregating demand by synchronizing and coordinating infor-

mation flows can significantly reduce inventory buffers.

Long supply chains are another red flag: Global sourcing tempts some companies to maintain higher inventory levels to protect against increased lead-time variability. Other companies, however, underestimate

globally sourced inventory requirements and thus encounter service failures and lost business. Either way, failure to properly consider the inventory impacts of offshore sourcing can result in costly implementation of the wrong sourcing network.

Improved accounting for lead time variability can help keep safety stocks realistic and minimize the tendency to order large quantities. A final harbinger is numerous products or product lines. The more products a company offers the more slow-moving products it's likely to have. Inventory optimization programs focus most intently at the SKU level, thus helping to minimize slow-moving product stocks, while ensuring availability of fast-moving products.

### MAKING IT HAPPEN

The mission of this article is not to describe the specifics of an inventory optimization project, but rather to emphasize the importance of investigating such an initiative. Still, most companies can expect an inventory optimization program to begin by identifying the minimal level at which stock should be replenished and the amount of stock needed to stay within a cost-effective ordering frequency.

This is typically done at the local level—for a single production tier or distribution node—and may escalate to include every SKU within each production tier or distribution node. Either way, this first step of setting safety stock levels would take into account all the factors that affect inventory levels and inventory turns, including lead time, lead time variability, supply quantity variability, demand and demand variability. With this information in hand, an organization is positioned to make practical decisions about optimal replenishment parameters and optimal inventory placement.

As shown in the graphic, an inventory optimization initiative may begin and end as a pilot study for a single distribution node, encompass all SKUs throughout the production and distribution network, and even continue on an ongoing basis to accommodate changing variables. The key, however, is setting the stage: understanding the myriad potential benefits and taking steps to assess their applicability. ■

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**DEMATIC**

# Zappos.com goes S

**The online retailer recognizes order fulfillment as the key component of its mission and views the distribution function as its major competitive advantage. Here's how it adopted Space Age automation to realize skyrocketing productivity and meteoric sales growth.**

BY MAIDA NAPOLITANO, CONTRIBUTING EDITOR

If you're like most online consumers, you're not ordering in case or pallet quantities. You're buying only one or two pieces of one or two different items, and you almost certainly want your order the very next day—for free, of course. This growing consumer demand is exactly what's putting the pressure on online retailers to find automated order fulfillment solutions that can improve the productivity and accuracy of the piece-pick order while reducing the fundamental reliance on costly, manual labor.

So, if you're an Internet retailer, you better be paying attention.

One retailer that's worked to uniquely position itself to meet increasingly finicky consumer need is Zappos.com. Founded in 1999, this retail maverick started out selling just shoes; however, now it offers over three million items including shoes, clothes, handbags, and accessories from over 1,000 brands. By focusing on providing customers with the widest selection imaginable and the quickest service, sales grew from \$597 million in 2006 to \$840 million in 2007—that's an amazing 40 percent in one year.

And despite the bleak retail picture in today's economy, the company still expects sales to grow to about \$1 billion in 2008. It's no surprise really, because to savvy Internet shoppers, this service-oriented company is doing everything right. Their site offers free, 365-day returns, 24/7 personalized customer service, and free shipping on every order with no minimum order size required. And the kicker: Zappos.com makes every attempt to get your order to you the very next day.

They believe that speed is the key to their success. In fact, they're making sure that items get picked and ready to ship about 12 minutes after customers click the "submit order" icon. And to make that happen, they keep careful stock of everything that they sell and they don't make an item available for sale unless it's physically present in their Shepherdsville, Ky., facility.

The bottom line: Zappos.com recognizes that order fulfillment is an integral component to its business mission and views the distribution function not as a money pit, but as a



# pace Age



competitive asset. By investigating innovative ways to increase capacity and improve order picking, its order fulfillment operation has improved at light speed. Here's how they did it.

## GROWING PAINS

From its inception in 1999 all the way through 2006, the company had been processing shoe orders in mostly manual operations using paper pick lists with very little automation. By 2006, with sales escalating, the company moved from a 280,000 square-foot building into a 832,000 square-foot fulfillment center in Shepherdsville, Ky., just 12 miles from a main UPS shipping hub. Leaving half of the space empty for expansion, Zappos installed a state-of-the-art, radio-frequency (RF) driven order processing system in 416,000 square-feet of space.

The new system included a four-story, rack-supported mezzanine filled with steel shelving, a four-story, 32-pod horizontal carousel system transporting products to pickers on mezzanines, and a network of powered conveyors and sortation systems to move and sort products from receiving to shipping. This mechanized system was designed to handle larger shipment volumes of shoe orders with shorter order cycle times than previous manual operations.

By early 2008, plans were already underway for the retailer to eventually sell “anything and everything.” But with product expansion came a small issue: According to Craig Adkins, vice president of services and operations, “Over the past year, we’ve seen a significant increase in apparel and we knew we’d eventually be branching into sporting goods like as tennis rackets and golf clubs...and we already had some limited cosmetics,” says Adkins. “But our current mechanized equipment was really just designed for shoes.” Shelving units and conveyors were optimized for shoe boxes and not meant for plastic-wrapped apparel.

The broadening SKU assortment, coupled with triple-digit annualized sales growth, was slowly creating gaps in capacity. Adkins knew it was time to put serious thought to equipping the adjacent empty expansion space with a cutting-edge order fulfillment system that would help the retailer further realize its vision of being the premiere store online.

## EVALUATING TRADITIONAL OPTIONS

Together with his project team, Adkins quickly evaluated three tried-and-true options: adding more static racking optimized for apparel; using carousels exclusively; and rolling back into their previous 280,000 square-foot building where they had already static shelving and conveyors built in.

But there were mounting concerns. “As instruments of traditional distribution, these systems weren’t really optimized for our type of business,” says Adkins. The shelving/carousel

**Craig Adkins, vice president,  
services and operations, Zappos.com**



**With the Kiva system, Adkins reports orders can be completed in just 12 minutes. With travel time eliminated, picker productivity has skyrocketed.**

system still required extensive manual material handling support and downstream sortation which increases labor costs and the time an order spent in the facility.

Adkins also wanted flexibility within the operation. “If we didn’t like the layout, we wanted to be able to change it with ease, and that’s tough when dealing with four stories of mezzanines, racking bolted onto the floor, and 23,000 feet of conveyor,” he says. The pick modules also had to handle the broad and rapidly changing SKU assortment expected by their e-commerce customers. “We wanted something that would be able to handle just about any kind of category, whether it’s as big as a set of golf clubs or as small as a deck of cards.”

#### OPTION 4: DID SOMEONE SAY ROBOTS?

Because the traditional options did not quite meet the project team’s expectations for flexibility, throughput, and labor cost savings, Adkins and his team decided to explore a fourth option: a relatively new automated system that used a fleet of small, mobile, robotic drive units that would retrieve shelves of inventory and transport them to workers at picking stations equipped with pick-to-light technology.

Sound far-fetched? Let’s break it down: When an order for six items hits Zappos’ WMS, the WMS immediately communicates with the robotic fleet’s central server to fill the order. If the items are located in six separate inventory pods, the system dispatches six robots to locate the correct pods and transport them to the pick station, forming a queue in front of the pickers.

Unlike traditional pick-to-light modules equipped with expensive built-in light displays, this particular picking station uses an overhead rotating laser pointer to direct the worker to pick from the correct bin. A monitor at each station indicates the number of pieces that must be picked. A worker picks the item, scans the UPC, and places the piece in the appropriate shipping box. To minimize robot travel, a picker works on multiple orders that require many of the same item—in short, travel once, fulfill many orders.

Robots navigate the DC using technologies that do not involve wire, rails, or laser guidance. Inexpensive 2D barcode stickers are applied on the floor. The robots use scanners and cameras to look up to identify the pods they are carrying and down to track where they are going. And there’s no need to

feed them. The robots charge themselves when they need it. Adkins explains that the charging schedule is built into the capacity of the number of robots so there are always robots being charged, but it doesn’t slow down the operation.

Perhaps the key to this automated storage and retrieval system is its massive parallel processing system. Mitch Rosenberg, vice president of marketing for Kiva Systems, Inc., the system provider for this picking solution, explains: “By keeping track of the velocity of each item, we can project the maximum number of times at one single moment that an item will be demanded for orders and slot the items accordingly into multiple pods to accommodate the filling of simultaneous orders for that item.”

Say goodbye to hours spent re-slotting. In fact, computer algorithms enable this mobile inventory to organize and re-slot itself, automatically adapting to changing product velocity and market conditions. If an item is ordered more frequently, robots locate the pods for quicker access to an area closest to the pick station. Complementary items, or items frequently ordered together, are kept within the same pod for quicker order completion.

While the system has worked well inside Zappos’ specific need, it’s not a cure-all solution. “If there was something that needed to be figured out...it would have to be how to go vertical,” says Adkins. Rosenberg adds that the vendor does not recommend the system to process pieces that weigh more than 25 pounds, as it will need some sort of human assist. He adds that it also doesn’t make much sense for high-volume cross-dock operations, for low-turn operations with items that move only two or three times a year, or for businesses with only a few hundred SKUs.

#### COMPUTING THE BENEFITS

According to Adkins, on their traditional shelving/carousel system, from the time the customer clicks to submit an order until the order is on a truck, completely labeled and boxed, it takes Zappos an average of 48 minutes—which is pretty darn good. With the Kiva system, Adkins reports orders can be completed in just 12 minutes. With travel time eliminated, picker productivity has skyrocketed. “It’s using about 40 percent as much labor as a comparable volume on the other side of the



**Zappos’ system uses 72 robots to process non-shoe orders in 110,000 square feet of expansion space.**



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building," he adds.

Wherever a robot can go, people are typically not allowed—keeping people safe and the product secure. According to Adkins, confining the robots to a limited area also results in substantial energy savings compared to traditional conveyor-driven racking systems. "You only have to light the area where the picking stations are. The robots can work in complete dark." This leads to a lower heat load on the facility, and with no conveyors transporting totes it generates considerably less noise.

Adkins also likes its portability. "We lease our building, and if I decide eight years from now that we're going to move into a different building, I can take the entire system with me—nothing's bolted down."

### CHECKING AND DOUBLE-CHECKING

Because it's a fairly new technology, applying some "investigative diligence" was vital to ease any up-front concerns. Adkins and the Zappos team visited two other Kiva-run fulfillment centers, observing the system in action and talking to management and operators on the floor.

The team also checked the bottom line. According to Adkins, its low-cost approach to automation made the robotic storage and retrieval option competitive with traditional mechanized systems involving powered conveyors and sortation systems. "We did a seven year economic analysis and we found that Kiva's system was the least expensive of the four options," says Adkins.

With its due diligence behind them, Zappos signed a contract in February 2008 and was up and running by July. "The Kiva team was really easy to work with and they customized our station designs to meet our needs." In total, 10 picking stations were installed with the ability to process about six orders at a time. Zappos' system now uses 72 robots to process non-shoe orders in 110,000 square feet of expansion space.

"It was the smoothest integration in my career," adds Adkins. "We don't use an off-the-shelf WMS. Our shopping cart, website, and WMS are all homegrown, so Kiva worked with our development team to make sure that all our communication sockets were in place."

As with any new automated technology, that first step can be the hardest step to take, adds Adkins: "If there hadn't been any other companies using it, I'm not so sure we would have wanted to take the risk. But I give all the credit to the company who became Kiva's first customer. They were twilling to take the chance." ■

*Maida Napolitano is a Contributing Editor to Logistics Management.*



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# SAME GAME, HIGHER STAKES

BY BRENT WM. PRIMUS, J.D., PRIMUS LAW OFFICE, P.A.

**Our legal expert helps shippers become familiar with two vital tactics necessary for surviving in an economic slow down—cash flow management and establishing metrics for your own performance.**

A working knowledge of the laws and regulations governing the supply chain and the relationships between the parties in transportation (shippers, carriers, and intermediaries) is fundamental information that transportation professionals must understand

in order to maximize net revenues and minimize risk to their organizations. One of Bill Augello's primary goals was to impart a working knowledge of this information to transportation professionals to empower them to "move one rung up the corporate ladder"—and I intend

*Author's Note: I would like to thank the editors of LM for the opportunity to author the annual logistics and the law feature that was started by my colleague William J. Augello many years ago. In a recent conversation with Bill's wife, Betty Augello (betty@transportlawtexts.com), she mentioned that Bill always said that the people he wanted to help were those who were actually doing the work—the person filing the claims, negotiating the contracts, rating and paying the freight bills. So, if you're one of those people, I hope that you find this article helpful.*



to maintain Bill's mission for the foreseeable future.

The title of the last logistics and the law feature was "5 challenges you can't ignore" ([logisticsmgmt.com/08law](http://logisticsmgmt.com/08law)). As I summarized in that piece, these challenges were and still are: (1) determining and documenting a carrier's rates and charges; (2) determining the limits of liability; (3) determining the time limits for filing claims for overcharges and for loss and damage; (4) becoming an advocate for industry interests; and (5) staying current. The challenges for 2009 are the same, but there's a new twist—the stakes are now higher.

While I hesitate to sound a pessimistic note, the reality is that many manufacturers, distributors, carriers, and other businesses in the supply chain are now fighting for their existence, while logistics professionals are at risk of losing their positions. Thus, for many of our readers, it is vital that they exert every possible effort in order to maintain their own status.

Accordingly, this year we'll go deeper into those five challenges and focus on two aspects for surviving, or better yet, prospering in an economic slow down. The first aspect is the need to learn and understand the laws having a particular impact on the management of cash flow. The second is the need for transportation professionals to develop a system to measure their own performance in order to demonstrate their value to upper manage-



ment in a quantitative manner. Today, being "a great guy" is no longer sufficient.

### CASH MANAGEMENT: LEGAL ASPECTS

When times are good and cash is flowing, a "\$1,000 goof" here and a "\$10,000 oops" there tend to get overlooked. However, when margins are thin, there is no room for error. Any needless expense or lost revenue will be given great scrutiny. Here are four elements of cash management that absolutely need to be understood in tough economic times.

**1. Avoiding late payment penalties:** Transportation veterans vividly recall the "undercharge crisis" of the 1980s and 1990s. Although the passage of the Interstate Commerce Commission (ICC) Termination Act repealed the filed rate doctrine, carrier closings or bankruptcies still pose a substantial risk for shippers—liability for late payment penalties.

The credit regulations established by the ICC have been carried forward by the Federal Motor Carrier Safety Administration (FMCSA). For motor carriers, the "default" credit term is payment within 15 days of "the presentation of the freight bill" with carriers having the option to extend the credit period up to 30 days, which most do. Thus, any payment made 31 days or later from the time of the carrier's invoice is "late."



The credit regulations allow carriers to impose penalties for "late" payments that can include attorney fees, one-time collection fees, and a loss of discount. For shippers, this means that if your company has pricing in place which is based upon receiving a 75 percent discount from a higher base rate, and even if your company routinely pays its freight bills in 31 to 60 days, your company is subject to a loss of the discount and a penalty.

Based upon the public tariffs of one large LTL carrier (see "Pay up... or else!"), an annual freight bill of 1 million dollars could be increased to 4 million dollars by losing the 75 percent discount and then increased to 9 million dollars by imposition of a 125 percent penalty.

While some carriers impose late payment penalties on a regular basis, the more common situation is for a carrier to not impose the penalties while it is in business and the shipper is doing business with them. Once a shipper stops giving the carrier freight or if the carrier goes out of business—well, get out the checkbook.

It should also be noted that the potential for late payment penalties is not limited to trucking. Air carriers, ocean carriers, rail carriers, surface freight forwarders, brokers, and other intermediaries can, and presumably do, have provisions in their standard terms and conditions relating to late payments. Accordingly, the first step in avoiding late payment penalties is to determine what the penalties are and the circumstances under which they will be applied.

Once having determined or verified the existence of the penalties, the question arises as to how to avoid them. There are at least three ways in which this can be done. The first is to pay every freight bill within the time specified. For some shippers that are either very small with a limited number of bills to pay or for larger shippers with sophisticated automated payment systems, getting a freight bill paid within the credit term may be possible.

However, for most shippers it's very hard as a practical matter to pay every

## Pay up...or else!

**Excerpt from Item 775 of a major LTL carrier's current tariff as posted on its Website (emphasis added):**

**F**AILURE TO MAKE PAYMENT OF FREIGHT charges to subject carriers for services performed as a common carrier by subject carriers, which subsequently results in legal action (such as collections) taken against the debtor, will be subject to the following:

- 1. Forfeiture of all discounts, allowances, commodity rates, brokerage agreements, incentives or any other rate reductions enjoyed by such debtor, if any, on all unpaid freight bills.**
- 2. A penalty of 125 percent of the remaining freight bill amount due subject carriers after having added back any forfeitures as described in Paragraph 1.**

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*This course has been approved for 6.5 hours of Continuing Education Credits by The Certified Claims Professional Accreditation Council, Inc.*

freight bill within 30 days. This is especially true if a shipper has multiple locations or uses an outside freight payment service.

The second way to avoid a loss of discount for any reason is to formulate your pricing in terms of the actual charges to be paid, not formulated as an artificial price less a discount. If there is no discount, then it cannot be lost. Nevertheless, most LTL motor carriers and their shipper customers continue to incorporate discounts into their pricing formulas.

Thus, for most shippers, the best way to avoid late payment penalties is to negotiate a contract covering all aspects of the transportation services to be provided; or, at a minimum, to include a provision for no late payment penalties in a written agreement with the carrier and instead set a commercially reasonable alternative—for example, a 1 percent per-month service charge.

It should also be noted that for those shippers who pay their bills through a web-based system or traditional electronic data interchange (EDI), an opportunity exists to negotiate an “early payment” discount—for example, 2 percent when the freight bills are paid within 10 days.

As a special note for those of you involved in any aspect of freight payment, Part 6 of our new on-line course, “Transportation, Logistics, and the Law” ([logisticsmgmt.com/law](http://logisticsmgmt.com/law)), covers payment of freight charges including the issue of late payment penalties.

### 2. Expediting payment of loss and damage claims:

Accompanying last year’s article was a chart (see [logisticsmgmt.com/law08](http://logisticsmgmt.com/law08)) prepared many years ago by Bill Augello to demonstrate the relationship of loss and damage claims to net profits. While “the math” summarized in this chart is still true, there is no benefit until the claim has actually been paid by the carrier. While many carriers process and pay claims in a timely, professional manner, there are many others who fail to do so. Lower rates are always attractive, but a lower rate must always be evaluated in light of the amount of unpaid or slow-paid claims. For readers wishing to know more about the laws relating to loss and damage claims, Part 2 of the “Transportation, Logistics, and the Law” course ([logisticsmgmt.com/law](http://logisticsmgmt.com/law)) is recommended.



### 3. Re-evaluation of limits of liability for loss and damage:

At one time, the default position for a carrier’s liability for loss and damage claims was the full value of the product shipped. At the same time, there was an option for the shipper to elect a lower limit of liability in exchange for a lower freight rate. With the current deregulated environment for most categories of transportation services, the opposite is now the case.

Unless a shipper takes affirmative action to obtain a higher limit of liability in exchange for a higher charge, the shipper will be subject to whatever limit

of liability the carrier cares to place in its tariffs, service guide, or other terms and conditions. For instance, it is now quite common with motor carriers to have a limit of “\$25 per pound, per piece” or for parcel carriers to have a “\$100 per shipment” limit.

Here is a twist from last year’s feature: Then I opined that a shipper needs to determine the limit of liability in order to negotiate a higher limit necessary to ensure that the products shipped are fully covered. The flip side of this for this year is to determine whether a lower limit of liability would be appropriate for the products shipped—for example, a “\$10 per pound, per piece” and then to try and negotiate a lower rate based upon a limit of liability lower than the carrier’s standard.

**4. Issues relating to carrier selection:** The largest potential risk faced by carriers, shippers, and intermediaries is the vicarious liability arising out of the selection and use of a trucking company. If you are involved in carrier selection and haven’t heard of “Schramm v. Foster” or “the C.H. Robinson case,” you had better learn soon.

When there is an accident on the highway with serious injuries or fatalities by a carrier you selected, you can expect to be sued. The best place to get up to speed fast is Part 9 of the “Transportation, Logistics, and the Law” course ([logisticsmgmt.com/law](http://logisticsmgmt.com/law)) which focuses on exposures to liability for parties in the supply chain.

The necessary due diligence and



## The potential for late payment penalties is not limited to trucking. Air carriers, ocean carriers, rail carriers, surface freight forwarders, brokers, and other intermediaries can, and presumably do, have provisions in their standard terms and conditions relating to late payments.

best practices for carrier selection are beyond the scope of this article, however, no matter how careful one is, accidents do happen. Thus, in addition to being very prudent in selecting carriers, one also needs to examine the options available for insurance coverage and, in particular, whether there is an “errors and omissions” or “hired, non-owned automobile liability” policy available and affordable.

### DEVELOPING METRICS

While there can be no doubt that knowledge of the laws and regula-

tions affecting the supply chain are vital for a transportation professional to perform their job and advance their career, the old saying of “no good deed goes unpunished” comes to mind as I write this. The all too common situation where the logistics professional knows very well what they are doing while upper management is “in the dark,” especially when it comes to the legalities of the supply chain, can lead to an ironic result.

Consider this: When a plant manager goes to his performance review and says that he increased production

150 percent and lowered production costs by 50 percent, he gets a raise. When the national account manager goes to her performance review and says she increased sales 300 percent, she gets a raise.

When a transportation professional goes to upper management and says, “I have collected all the back log of loss and damage claims, I have all of our carriers paying claims within 30 days, I have negotiated rates which are highly competitive and meet our necessary transit times, and finally I have negotiated contracts with all our carriers to avoid any financial surprises such as late payment penalties,” upper management says, “Great, now that the problems are solved your position has been eliminated.”


This is the reality facing professionals in risk management. Regardless of one’s title, risk management is an integral part of a logistics and transportation professional’s function.

Thus, it is incumbent upon the transportation professionals to develop performance metrics for their function so that when they go to their employment review they get a raise—not terminated. An example of this would be the chart mentioned in last year’s Logistics and the Law article ([logisticsmgmt.com/law08](http://logisticsmgmt.com/law08)) relating to loss and damage along with the financial information specific for your company.

This could well be a difficult task and one may wish to solicit the help of others. For larger companies this could be done within the logistics department itself. For others, perhaps a committee could be formed by your local CSCMP Roundtable, Delta Nu Alpha chapter, or Transportation Club to develop such metrics.

To conclude, not only is it necessary for a transportation professional to educate themselves regarding the laws relating to the supply chain, it is equally vital for the professional to educate the people to whom they report. While that may not be easy, in hard times it’s vital for not only moving one rung up the ladder, but just for staying on the ladder. ■

*Brent Primus may be reached at [Brent@transportlawtexts.com](mailto:Brent@transportlawtexts.com)*



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# Cutting LTL costs: Going to the bench

BY JOHN D. SCHULZ, CONTRIBUTING EDITOR

**Savvy shippers are realizing substantial LTL savings and improved supplier relationships with an assist from some newfound “bench strength”—their 3PL partner. Here’s how two recently saved more than 10 percent on their LTL rates and by putting their secret weapon in the game.**

Everybody is struggling. The nation is in the second year of recession, bankruptcies abound, storefronts are closing, credit is tight, and budgets are pinched.

But we’re finding that savvy shippers are using these tough economic times to squeeze inefficiencies and costs out of their supply chains. Sometimes it’s through direct involvement with their core carriers; but increasingly new efficiencies, as well as some substantial cost savings, are coming about through closer partnerships with third-party logistics (3PL) providers.

“The thing that our 3PL does very well is figure out how to use information,” says Josh Creasman, senior director of supply chain and sourcing for Yakima Products, a manufacturer of vehicle racks for bikes, boats, ski equipment, and other gear. “It’s really an information clearinghouse. Not only does our provider give us the best-in-class freight rate, but it’s able to give us best-in-class advice to wrap solutions for our supply chain.”

The following two shippers recently found new cost savings solutions through the 3PL option. Besides saving more than 10 percent on their LTL rates, these shippers are enjoying ongoing efficiencies in their supply chain, continuous improvement with vendor and supplier relationships, and are planning for even greater savings in the future. Here are their stories.

## ACE MITCHELL BOWLS FOR DOLLARS

Cuyahoga Falls, Ohio-based Ace Mitchell Bowlers Mart is a wholesale distributor of bowling supplies and accessories. Established in 1959, Ace Mitchell does about \$30 million of business annually, carries over 40,000 products, and services hundreds of bowling centers and pro shops throughout the U.S. and abroad.

According to Todd Williams, the company’s vice president, Ace’s recent transportation transformation began about two

years ago. At that time he thought he was managing his network of one national and seven regional LTL carriers pretty well, but he decided to have C.H. Robinson bid on his approximately \$1 million in annual transportation spend—and give him a better look at what was actually happening.

“We were working mainly on price,” Williams says. “We thought we had a pretty good handle on things.” But he soon realized that there were unseen problems due to inefficiencies in the company’s existing LTL network, as well as a lack of shipment coordination by its vendors; and, to top it off, they unveiled some costly carelessness by freight workers on the docks.

The reality was that vendors were shipping Ace Mitchell’s products on their own schedules with very little coordination, which in turn created an inefficient network of LTLs hauling very small loads. There was also congestion on loading docks; but worst of all there were damages. Workers were stacking skids of bowling balls on top of each other—some were even being delivered in damaged condition. Worst yet, some lift truck operators were actually puncturing the product skids, but those damages were not discovered until final delivery to customers.

“The lift truck operators were puncturing the boxes and then turning the damaged side to the inside of the pallet,” says Williams. “That way, it looked fine from the outside of the pallet. But when the skid was being dismantled, there were all these damaged boxes inside.”

Ace’s 3PL partner first conducted an examination of its vendor network. Immediately the team designed a coordinated delivery system to combine LTL shipments into more cost-efficient truckload moves. Besides saving money, it cut down on handling; and thus damages sharply decreased. Some direct-to-customer intermodal movements were planned as well, further

increasing efficiencies.

“We were beginning to get multiple shipments coming on one truck,” says Williams. “Our freight was not being routed through as many hubs and it wasn’t being touched by as many people.”

While both Ace Mitchell and its bowling center customers were pleased with the reduction in damaged freight, Williams was most pleased with the bottom-line savings. Overall, Ace was saving 21 percent on its annual transportation spend, not counting customer service gains.

As a result, Ace has turned most of its freight over to its 3PL partner, which Williams says has worked well. On top of the rate savings, Williams says that the somewhat surprising secondary benefit was the shipment scheduling improvements that let directly to damage reductions. That initial cost savings turned into more because of consolidated shipments. “We now have fewer trucks showing up,” Williams adds.

### YAKIMA RACKS UP THE SAVINGS

Josh Creasman, senior director of supply chain and sourcing for privately-held Yakima Products of Beaverton, Ore., turned to his 3PL back in May 2006 for assistance in organizing inbound logistics.

At the time, Yakima was paying 13,000 bills a year, including 2,000 inbound. Yakima was using just three LTL carriers back then; but because the company was negotiating directly with the carriers, the process was creating a ton of paperwork.

“The challenge with inbound was that we had more than 300 suppliers and



**Overall, Ace saved 21 percent on its annual transportation spend, not counting customer service gains, by simply improving shipment scheduling.**

vendors in North America,” Creasman explains. “Some were prepaid and some were collect. Freight we paid for was very difficult to administer.”

Besides these challenges with payments, there were inefficiencies in routing. Even though Yakima wanted to transform its supply chain, it had no internal systems to manage suppliers and it had no ability to track freight because it fell outside the company’s systems. “It was just a big mess,” Creasman says.

Creasman soon realized that in order to achieve efficiencies Yakima needed to reduce delivery total cycle time. In order to strengthen margins, there needed to be consolidation of both domestic and international inbound logistics. Like Williams at Ace, Creasman decided to turn to his 3PL for a network analysis to identify any new ways to consolidate his inbound logistics network. What Creasman ended up with was a way to deploy purchase order (PO) management technology through C.H. Robinson as well as a new hybrid LTL strategy that addressed key geographic markets, particularly on the East Coast.

As a result, Creasman and the logistics team at Yakima were able to drive more than \$1 million in shipping inefficiencies out its supply chain in two

years—a 28 percent savings. In addition, on-time delivery performance jumped by 8 percent, and for the first time ever the company enjoyed integrated end-to-end logistics visibility across the enterprise. A second level of savings came from suppliers, who were consolidated into combined orders to reduce paperwork.

Yakima also began implementing precise shipping cycles for its deliveries. It was using a variety of suppliers, some very small. Those contracts were renegotiated so today all those suppliers call the 3PL, using a consistent PO number, resulting in coordinated inbound deliveries.

Before, Yakima was using three LTL carriers, but it didn’t really qualify as a “Tier 1” supplier to get rich discounts. Today, Yakima’s LTL volume is pooled. It gets one healthy national discount from the likes of FedEx Freight and UPS Freight as well as other regional LTL carriers. But Creasman adds that the big savings today are coming from efficiencies throughout the entire supply chain—not just by beating up carriers over a nickel a mile rate. As he says, “There’s more money to be saved in supply chains than just rates.” **L**



**Creasman drove \$1 million in shipping inefficiencies out of Yakima’s supply chain in two years.**

*John D. Schulz, is a Contributing Editor of Logistics Management*

# Time's up!

BY PATRICK BURNSON, EXECUTIVE EDITOR



**The clock has been ticking for several years, and now shippers must acknowledge that the time for embracing regulatory standards has arrived. Who's ready for the onslaught of regulatory change? Good question...**

While “change” may be the operative word when it comes to regulatory compliance this year, shippers realize that “or else” is the unstated maxim. Industry analysts have been suggesting for years that by conforming early to government mandates, shippers may actually be gaining something beyond improved security—a sharpened competitive edge. Well, your friends at Department of Homeland Security (DHS), Customs and Border Patrol (CBP), and The Transportation Security Administration (TSA) certainly think so, as do many supply chain specialists who maintain that security equals efficiency.

At this moment, the much-maligned 10+2 rule is being fine tuned during its “interim period” for ocean shippers, and air shippers are trying to cope with 50 percent screening of inbound and outbound cargo. Here’s where things stand on the regulatory front—and where things may be going if there’s enough resistance.

## AIR CARGO: READY FOR TAKE-OFF?

The TSA has told shippers that 2009 will be a year of accountability. “Or it equals at least a significant measure of transparency,” says Brandon Fried, president of the Air Forwarders Association in Washington, DC. “We wholeheartedly embrace the cargo screening initiative, but we want to have it implemented in an organized and measured manner.”

Other prominent forwarders, however, are saying that TSA—which announced that it would begin security certification process for targeted freight forwarders late last year—was not providing enough compliance information to those not involved in the pilot programs. These programs were conducted only at the “mega” load centers in Los Angeles, Seattle, and San Francisco.

“We have invited TSA officials to speak with us at WESCCON [Western Cargo Conference], but they declined,” says John Leitner, an executive with forwarder WJ Byrnes & Co. in South San Francisco. “They said that they would only meet in a closed-door session, and we found that unacceptable.”

Meanwhile, spokesmen for TSA in Washington maintain that the agency is moving ahead with tests of high-tech systems designed to inspect cargo loaded aboard passenger airlines. The agency’s mandate is to screen at least half of all cargo by the first of this month. It will rise to 100 percent in August 2010 as part of the DHS mission to provide a level of security for cargo commensurate to that for passenger baggage. According to TSA, these deadlines are congressionally imposed and not subject to change.

Security analysts point out, however, that while

this is an achievable goal, not all shippers will be able to fully participate. "The system, as it stands now, really favors the big global players," says Albert Saphir, principal with ABS Consulting in Marietta, Ga. "And it leaves the guys who ship four or five times a day out of a place like Tampa out in the rain. An airport of that scale simply doesn't have the money to purchase the equipment."

Saphir, a veteran industry analyst who consults with Fortune 500 companies, says that some shippers will be able to compete if the airlines themselves buy the screening stations. "But air shippers are still facing more stringent security measures than those using any other mode," he says. "This TSA program contains details that are SSI [sensitive security information] and are not released to the shipping public."

This also means, adds Saphir, that there's a virtual "Catch-22" that will take time to iron out. Meanwhile, he advises shippers to work with forwarders who have a track record and are prepared for the new regulations.

Tom Mathers, communications director for the National Customs Brokers and Freight Forwarders Association (NCBFAA), agrees, observing that association members are working hard to keep cargo in the air.

"Many of our members function as IACs [Independent Air Carriers] and are required to have special numbers registered with Customs before they can book cargo," says Mathers. "To qualify for a number is a super-secret process, but we understand why it's so hard. Planes move a lot faster than

ships, and are harder to stop if one gets away with a dangerous payload."

### OCEAN: 10 + 2 = MIGRAINE

So much for high-value and expedited cargo. But as any shipper knows, real volume moves by sea, and a whole different set of standards and imperatives are being put in place for ocean carriage. Analysts note that 2009 will bring in unprecedented changes for inbound logistics, as the new Importer Security Filing (ISF) is imposed by CBP in June.

This is a refinement of the current 10+2, which is still in its interim stage, and subject to change after shipper comments are received. Analysts say that the compliance is really not that hard to understand—but shippers need to be prepared.

"In a nutshell, all ocean importers will need to provide 10 (or possibly more) specific data elements electronically to CBP 24 hours prior to their shipments loading at the foreign port of departure," says Saphir. "Failure to do so will result in penalties of \$5,000 per shipment levied by CBP against the importer."

Again, preparation is key, stresses Saphir. While some importers have adjusted to the 10+2 rule and are ready to step up, there may be as many as 800,000 shippers still struggling with compliance, says Saphir. "It will take a lot of hard work to get this accomplished," he adds. "Luckily, CBP has provided for a 12-month phase-in period, which hopefully will not lead to procrastination by importers in getting this done."

Mathers maintains that NCBFAA members are ahead of the curve in this regard, partly due to the lagging economy.

"Business for our members has been very steady, although volumes are down. This has given them time to adjust to the new regulations and to be prepared for the rebound," he says.

And for importers in the Customs-Trade Partnership Against Terrorism (C-TPAT) program, it may be somewhat easier to accomplish ISF compliance, as they have already completed an extensive supply chain review.

### ON THE HOME FRONT

So, you're a shipper who doesn't bother with overseas transactions at all. In fact, one might include you in the vanguard of visionaries who opt for "nearshoring" by keeping to one's hemisphere.

But if you think you're free and clear from mounting regulation—think again. Security analysts adamantly object, saying that you are hardly out of harm's way just yet, and there are more compliance details coming down the pike.

Enter Janet Napolitano, the first Democrat to lead the DHS. "From a prevention and protection stand point, surface transportation inside the U.S. is a work in progress," Napolitano says. "We haven't done as much there as we have done on the aviation side." She is especially concerned with rail and border security. "Let's go where the gaps are," she says, referring to the vulnerability of truck and DC stops.

While no new specific domestic security requirements are scheduled for trucking companies or their domestic customers, security analysts say that C-TPAT is a "must" for shippers doing business in the North America Free Trade Agreement (NAFTA) arena. "Compliance with C-TPAT and maintaining C-TPAT status will continue to be the biggest challenge for trucking companies and importers as we have such large trading volumes via truck with Canada and Mexico," says Saphir.

This is confirmed, he says, when considering the CBP-published C-TPAT statistics. In fact, the category with the highest suspension or removal rate from the C-TPAT program is highway carriers. "This is especially true for truckers dealing with Mexico," he adds. "They are highly exposed to the ongoing risks of drug smuggling and human trafficking into the U.S. **L**

*Patrick Burnson is Executive Editor of Logistics Management*

## Skeptical shippers abound

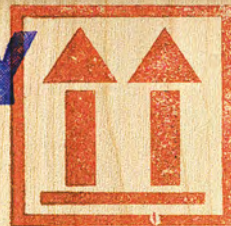
**T**HE VARIOUS FEDERAL SECURITY INITIATIVES HAVE been scrutinized by a number of shipper associations over the past several months and have been chronicled in the daily news posts on [www.logisticsmgmt.com](http://www.logisticsmgmt.com).

If you've been out of the loop, check out the National Industrial Transportation League's objection to 10+2 which called into question "the major repercussions for U.S. companies" in the news story "10 +2 may be less burden on U.S. importers" [www.logisticsmgmt.com/skeptical1](http://www.logisticsmgmt.com/skeptical1)

Shippers shared some positive feedback on the initiative, but freight intermediaries expressed mixed feelings on 10+2 in the news story "So far, so good for 10+2 Rule say shippers" [www.logisticsmgmt.com/skeptical2](http://www.logisticsmgmt.com/skeptical2)

Air cargo shippers, too, told *LM* that they view the new laws as suspect at best, draconian, at worst in the news story [www.logisticsmgmt.com/skeptical3](http://www.logisticsmgmt.com/skeptical3)

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# Still growing

BY BRIDGET MCCREA, CONTRIBUTING EDITOR

Tough economic times haven't stopped shippers from investing in new or upgrading their existing Transportation Management Systems (TMS). And that trend makes perfect sense because the technology has long been known as a tool to increase supply chain visibility and cut redundant costs. Here's what the analysts are saying and users are doing to help feed that growth.



**T**imes might be tight for shippers, but that hasn't stopped many of them from investing in new or upgrading their existing Transportation Management Systems (TMS). And that trend makes perfect sense because the technology has long been known as a tool that can make companies work smarter, better, and faster in the best of times—and in the worst of times. Analysts agree that the TMS option fits well in that equation with its ability to eradicate repetition, increase supply chain visibility, and cut redundant costs.

According to ARC Advisory Group of Boston, the TMS market exceeded the research firm's growth projections for 2007 by growing nearly 10 percent to \$1.2 billion. The market continued to grow in the first half of 2008, with over two-thirds of the vendors surveyed reporting increased sales and larger pipelines

compared to the first half of 2007.

According to Adrian Gonzalez, director of ARC's Logistics Executive Council and author of the new study "Transportation Management Systems Worldwide Outlook," 2007 was a banner year for almost all TMS vendors. And while the study revealed a few changes in market share rankings among the vendors, Gonzalez says "the reality is that most vendors continue to grow their revenues and client bases. In short, there are plenty of TMS sales opportunities available in the market.

## FERTILIZING THE MARKET

ARC is forecasting the TMS market to exceed \$1.6 billion by 2012, representing a compounded annual growth rate (CAGR) of 7.4 percent, although Gonzalez points out that several

factors could limit the market's growth potential in 2009 and beyond. The crisis facing the financial markets, coupled with slowing economic growth, for example, is "by far the biggest threat facing the TMS market in the coming year," he adds.

On one hand, Gonzalez says, companies often look for ways to reduce costs during weak economic times as a way to boost net income and earnings per share. Transportation is a natural target because most C-level executives still view it as a "cost center" and a "low-hanging fruit" opportunity to add hundreds of thousands of dollars, or even millions of dollars, to the bottom line. "From this perspective, the economic environment could benefit the TMS market," says Gonzalez.

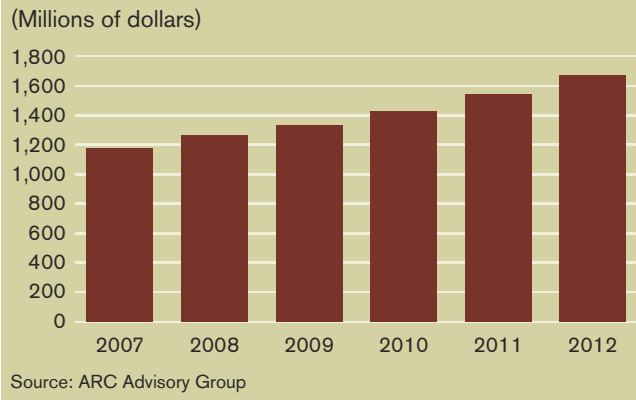
But on the other hand, companies also have a tendency to delay IT investments during tough economic times, so it's "highly probable that TMS vendors could see longer sales cycles in 2009, at least during the first half of the year," says Gonzalez. Key market drivers include an ongoing need for improved supply chain visibility, cost reductions and better productivity, along with the still-looming threat of higher fuel costs—despite the fact that fuel dropped significantly during the third quarter of 2008.

Another key TMS market driver is the fact that some logistics managers are still poring over spreadsheets and using the phone to schedule carriers. "Those activities incur high labor costs," says Gonzalez, who expects vendors to use that argument as part of their sales pitches in 2009. "If vendors are going to put an IT solution out there this year, it had better be able to cut costs for the buyer."

The fact that on-demand TMS solutions have gained significant ground over the last few years is also helping to drive the overall market. (Search "catching fire on logisticsmgmt.com.") The opportunity to use this model—and avoid the upfront costs and lengthy software integration process associated with the purchase-and-install option—is especially attractive for companies looking to get up and running quickly and affordably.

Greg Aimi, director at AMR Research in Boston, says the TMS market is also being propelled by the fact that more

## Steady growth for the TMS market



companies are doing business globally, and therefore cannot get away with using spreadsheets and telephones to manage their logistics operations. "There's a need for visibility and planning capabilities to handle not just national moves," says Aimi, "but also international moves."

The fact that fuel prices aren't expected to stay low for long is another driving factor for TMS sales, says Aimi. "The CFO's office has been alerted to the potential for higher fuel costs," says Aimi, "which in turn has translated into a continued emphasis on optimization and control of transportation activities."

As shippers strive to cut costs, optimize their supply chains, and gain improved visibility over their transportation activities, expect to see the TMS market grow, be it via purchase-and-install or on-demand options. Here are a shipper that made the investment and is now reaping the rewards of its automated systems.

### CONTECH CHAMPIONS THE CAUSE

When Rick Gaynor joined Contech Construction Products, Inc., of West Chester, Ohio, in 2004, he immediately set out to bring the firm's transportation operations into the new millennium.

"Everything was being handled manually," says Gaynor, vice president of logistics. Already familiar with TMS from past positions, Gaynor started shopping around immediately. He selected Sterling Commerce's on-demand TMS solution in late 2005.

Gaynor, who is responsible for over \$50 million in transportation spend (both inbound and outbound), headed up the implementation process for the company, which manufactures bridges, storm water

erosion control products, and related goods for customers within a 500-mile radius. Relying on a combination of 3PL, company trucks, and outside carriers, the firm uses mainly flatbed trucks to haul its large products.

It took 30 days for Contech's TMS to get up and running, according to Gaynor, who calls the process "extremely easy" with no snags or hang-ups to report. Benefits were immediately obvious, he adds, and came in the form of improved visibility for the firm's freight staff. The company also gained

access to various freight-tendering methods, including contract (a set contract over a specific period of time with one carrier) and auction (gives various carriers the chance to bid on the opportunity).

According to Gaynor, having a state-of-the-art TMS in place also helps Contech accurately and quickly audit its freight bills to ensure reliability. The system also serves as a repository for all transportation-related data that Gaynor and his team can review at any time and use to make the best possible decisions.

Finally, the system has helped the company save about 9 percent in "real" transportation costs, according to Gaynor, who after implementing a TMS at multiple firms, sees the systems as a critical technology investment for all shippers. "Even if you have \$20 million in transportation spend annually, you really should be thinking about a TMS."

### MORE GROWTH TO COME?

Going forward, Gonzalez says companies are likely to take one of two approaches to weathering the economic downturn: freeze all spending until things get better, or realize that now is a good opportunity to invest in technology—otherwise known as the "Warren Buffet approach"—and gain an edge on competitors before conditions improve.

"It's already been proven that TMS investments can lead to cost reductions while helping companies strengthen their positions in the marketplace," says Gonzalez. "Whether companies act on this in 2009 is still up in the air." ■

*Bridget McCrea is a Contributing Editor to Logistics Management*

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## Don't step over a dollar to save a dime

By Wayne Bourne

WE CALL THIS COLUMN "SAGE ADVICE," and I've often wondered if our editor, Michael Levans, was referring to the 75 combined years that my co-columnist John Gentle and I have in the business or the fact that he considers us mystics of sorts—maybe a little of both. Well today, I'm coming to you straight from the perspective of my many years of experience.

I offer our faithful readers some unsolicited advice on what I've observed as an irrational approach to the floundering economy. As the business community rallies to stave off the ill effects of the current economic downturn, budgets have been cut both discriminately and indiscriminately, headcount reduced or salaries cut, increases and bonuses frozen, technology enhancements postponed, and my favorite, all "unnecessary" travel and conferences eliminated.

First of all, if the travel or the conference is now deemed unnecessary, how on earth did it make it in the budget in the first place? During the construction phase of the budget process, all those expenses should have been successfully defended and approved. And now, all of a sudden, they're grouped into an arbitrarily disposable category. What's wrong with this picture?

Well, if you think that we all must be stewards of our company's wallet, then nothing is wrong. However, when you flip it around and consider how canceling that travel interferes with the manager's ability to properly prepare and execute their duties, then everything is wrong.

I would suspect that the reason for travel centers on finding better—more efficient—ways to conduct business. The very purpose of most of the conferences I have attended in the past is to educate, train, and provide research and options to shipper attendees. Supply chain conferences that are designed and managed by professionals

Wayne Bourne is founder and president of The Bourne Management Group, a consulting firm specializing in supply chain, logistics, and transportation network creation, economics, organizational development, and process analysis. A recipient of several industry awards, he has nearly three decades of experience in transportation and logistics management. Mr. Bourne may be reached at [WLB1144@aol.com](mailto:WLB1144@aol.com).

provide access to current views on changes in public policy, the latest technology applications, and how to best manage your logistics and transportation operations in the current economic climate. These conferences need to be attended.

Conferences like RILA's Logistics Conference (Feb. 8-11), NASSTRAC (April 26-29), NITL Annual Meeting (Nov. 13-18), and CSCMP (Sept. 20-23) are a few of the really well done conferences. These groups work hard to provide topical agendas, inspirational and motivational speakers, industry experts, and a abundance of purveyor exhibits.

Some of the attendees are there to learn, others are there to teach. These opportunities are rich with value, and what is learned or acquired can be shared with others directly upon return, thereby maximizing the expense of the event.

What else is acquired may be employed immediately to reduce operating costs. I believe that only good can come from meetings like these. It's a part of the on-going education that we all

need in order to keep our tools sharp.

While I understand that expenses need to be managed in these times, my advice is to not take money away from the conferences that will eventually produce solutions to the problems you're currently facing. Send two or three people instead of four or five. If you can't fund all the people that you would like to attend, send the group you can afford. Don't just cut them all in an attempt to dutifully comply with reactionary budget cuts.

To maximize the benefits, insist that each attendee provide a "teach-out" on what they gained from the conference when they return. Perhaps they need to write a paper and share what they learned. Sure, make them work for the privilege to spend the company's money, but allow them to attend. Fight for your right to be fully prepared so you can do your job effectively and competitively.

Don't step over a dollar to pick up a dime. You will surely be glad you didn't. **L**

**My advice is to not take money away from the conferences that will eventually produce solutions to the problems you're currently facing.**

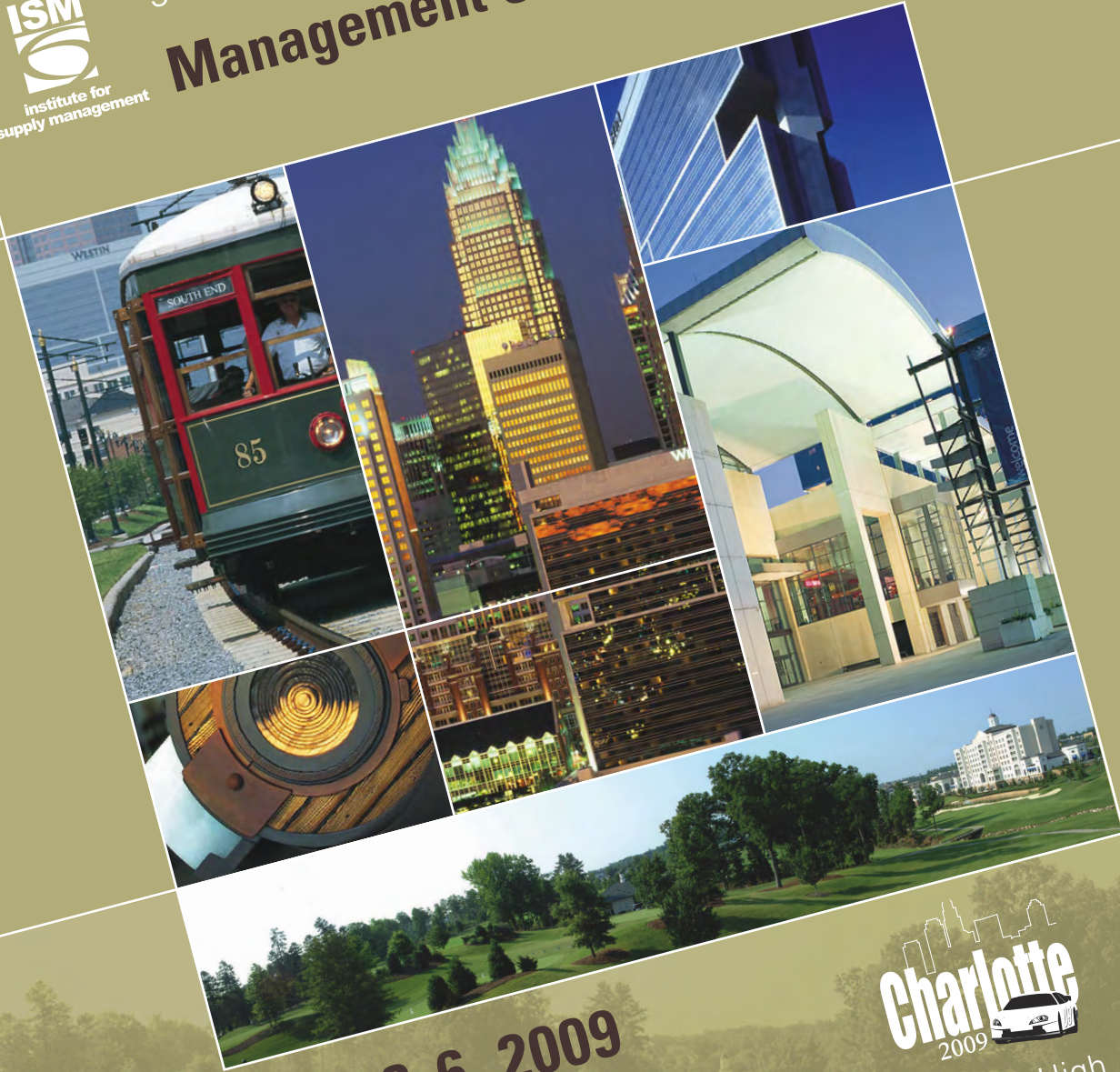
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**SPECIAL REPORT**

**DC SITE SELECTION:**

# Time to scrutinize the details

By Karen E. Thuermer

*In today's economy, factors such as unpredictable fuel prices, shifts in global trade, new warehouse technologies, and environmental sustainability weigh heavily on site selection decisions. Flexibility and resiliency are now the watch words.*

**M**irroring today's retracting economy, logistics and supply chain professionals charged with site selection for warehouse and distribution center (DC) locations are being increasingly challenged. With all aspects of today's economy off, companies involved in purchasing and locating warehousing and transportation services must take a hard look at their physical assets—and dig deeper into the details of their network.

In fact, Dan Albright, vice president for supply chain management consulting at Capgemini urges companies to spend less time adding capacity to solve immediate needs and more time upfront on network planning for near and long-term requirements.

"Firms should have a continually updated five to seven year horizon for distribution networks," Albright advises. "In addition, firms should always include two elements in their site selection program: flexibility and resiliency."

Flexibility and resiliency are, without a doubt, two vital survival skills for today's DC site selectors. In today's weak economy, all spending or expansion decisions are being scrutinized more heavily than ever.

"Shippers or suppliers may choose to hold off and operate from an existing facility, but outsource another facility as a means of reducing their fixed costs," states Bill Butler, president and CEO of Los Angeles-based Weber Distribution, a nationwide provider of logistics solutions.

Although historic trends driving DC site selection have not really changed, those regarding DC development have. "Industry-wide, speculative development has all but halted," remarks Mike Peters, first vice president at ProLogis in Denver, Colo. "Build-to-suit development, albeit at a much slower pace, is likely to be the status quo among the development community for the foreseeable future."

This means companies will have access to fewer readily-available DCs and need to be more involved in the development of new DC space. And while most site selection decisions focus on minimizing transportation costs and proximity to customers, factors such as unpredictable fuel prices, shifts in global trade, new warehouse technologies, and environmental sustainability now also influence site selection.

"Companies are planning for a different future than six months ago," states Albright. "When companies



consolidate to reduce costs, they use these factors to decide which sites to consolidate, then how to move inventory to satellite sites and remain nimble in their distribution.”

These decisions can be challenging, particularly since it is unclear how much further the economy will drop, whether or not fuel prices will spike again, and how many and what companies will not survive this downward recession.

### Fuel effect

Instability of fuel prices is of particular concern for companies that spend a considerable amount of their budgets on transporting goods. Although fuel costs have eased since last summer, most executives expect them to spike again in 2009. “Firms now consider this component over others such as labor and real estate costs in making DC site selection decisions,” says Albright.

Although most companies have already adopted the strategy of locating DCs close to transportation hubs and gateways, such fuel spikes still have a huge impact on transportation and distribution costs. Consequently, more firms are analyzing their network optimization strategies, which include proximity to key interstates, vehicle traffic patterns,

state and federal infrastructure improvement plans, proximity to alternative transportation modes such as rail, and the potential impact of environmental legislation.

Long haul shipping costs are not the only concern. Short haul transportation can also be masked with costs. “If you are going to locate a DC outside of congested cities like Atlanta or Washington, D.C., you are going to pay a lot for trucks to sit in traffic,” Albright warns.

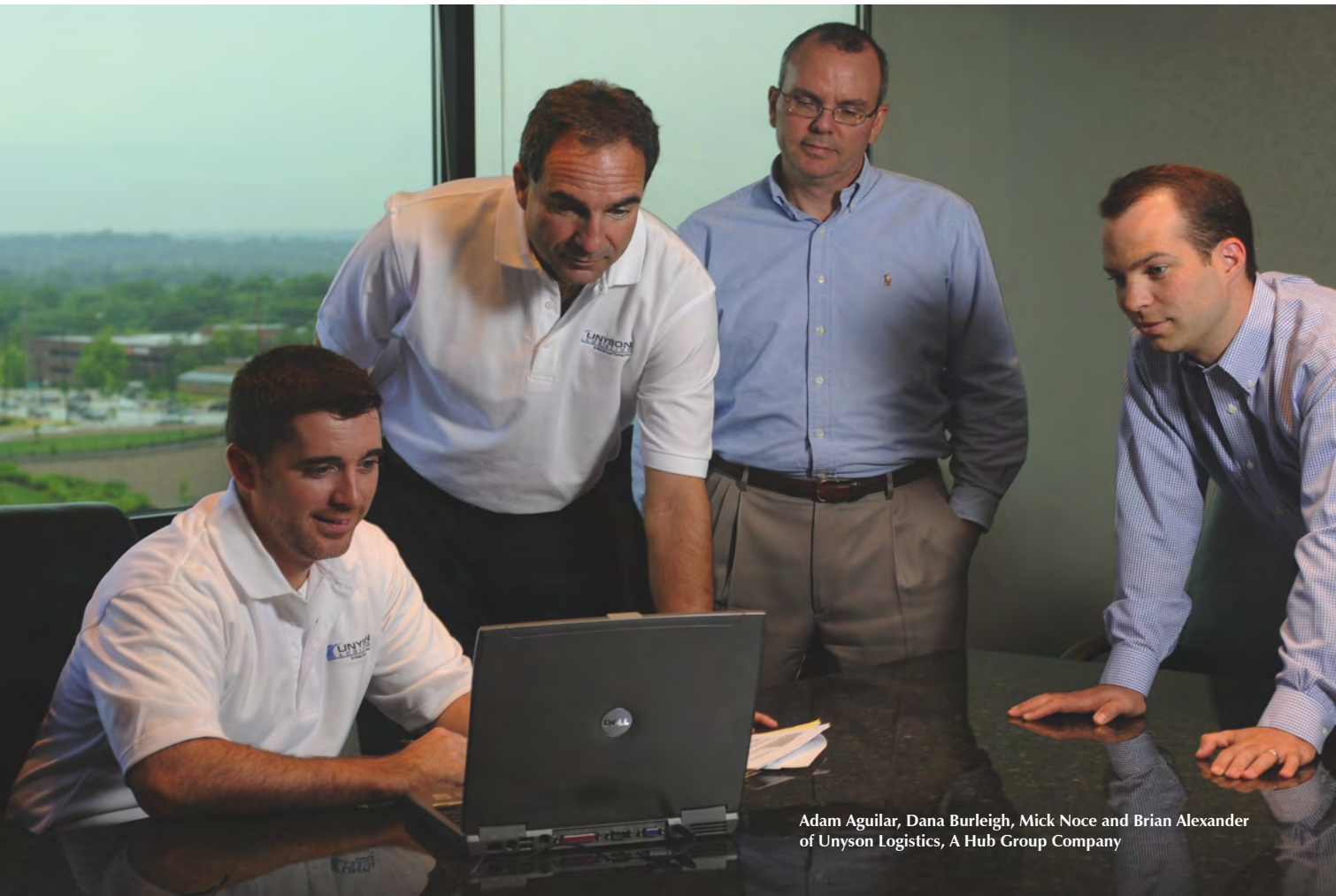
Another issue to consider is whether a location is primarily served as an outbound or inbound market. “For example, Memphis has more outbound than inbound trucking service,” states Jeffrey Brashares, president of the logistics services group at Pacer Distribution Services, Inc. “If you put a DC there then you’ll need truck services that are going in.”

Of course, one of the best ways to optimize distribution costs is to make sure trucks are leaving DCs as full loads to single locations rather than less-than-truckload (LTL) to multiple distribution points, Peters suggests.

Yet another concern these industry voices suggest is that the bad economy could result in increasing numbers of trucking com-



**The ProLogis Kaiser Commerce Center, which comprises approximately 5.9 million square feet in nine buildings, is now fully occupied with a recent lease agreement of 484,000 square feet to a leading 3PL.**



Adam Aguilar, Dana Burleigh, Mick Noce and Brian Alexander of Unyson Logistics, A Hub Group Company

pany failures, which could cause capacity issues. "This could sway site selectors into considering locations close to intermodal options," Brashares says.

Already, many large companies that ship high volumes over distances longer than 500 miles are employing intermodal, a mode that combines trucking with the more economical service of rail. "Companies are looking at what railroads have to offer and co-locating near or on their property," Brashares adds.

### Impact of global trade

Shifts in global trade are also influencing site selection, particularly as more steamship lines from Asia call on U.S. East Coast seaports. Consequently, increasing numbers of companies find benefits in locating DCs or import centers at or near these ports to create increased distribution network efficiencies.

On the West Coast, distribution facilities are locating inland from the heavily congested areas surrounding the Ports of Los Angeles/Long Beach. As a result, devel-



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operators like AMB Properties are continuing to see demand for infill-located, Class A facilities at core hub and gateway markets that have strong ties to trade flows.

The cost of shipping from China, however, is causing some companies to move production closer to the United States to countries like Mexico and those in Central America. Consequently, Albright suggests that some West Coast DCs may be displaced to other regions of the country closer to customer regions.

That's because products made in Mexico can be directly transloaded to the DC. "This, of course, depends on the nature of the product and required transportation modes," he says.

Albright adds that consolidations among steamship companies, fewer volumes, and the trend towards mega-container vessels are all issues leading carrier operators to call on only seaports capable of handling these large ships.

**It's the economy...**

Despite the fact that many retail products are imported and therefore redistributed from import centers or DCs, retail store closings are not affecting DCs unless they are dedicated to a particular area that has been hit hard by store closings. In those cases, closures will add to the downward pressure on real estate prices and create opportunities for companies needing space in those specific areas.

"If a supplier's warehouse lease is soon expiring, they will have good leverage in renegotiating rates or have better opportunities in securing more desirable properties that have come on the market that were not available before," says Butler.

Depending upon the length of the recession, companies may choose to consolidate multi-facilities to help reduce their overall footprint and operating expenses. Reduced consumer demand could alter how retailers order shipments from large quantity purchase orders to fewer, smaller ones. "Retailers may choose to hold fewer inventories and replenish orders in shorter

cycles," Butler says. "Other sectors may decide to follow suit and hold less inventory in their own warehouses, thus adjusting their production volumes."

To save costs, many companies are already converting fixed costs into variable costs by outsourcing distribution and warehouse functions to third party logistics (3PLs) providers, a practice that has been ongoing for 20 years. "Right now the market is seeing a lot of pursuits, but it remains to be seen how this

ment for AMB Property Corp.

Companies are still considering either large and small DCs or a combination of both. "I've watched customers go to where they now have smaller DCs or actual cross docks to get closer to their ultimate customer," says Brashares. "If you're trying to get as close to your customer as possible, you probably are going to want more DCs rather than less. No size fits all."

**THE BENEFITS OF GOING GREEN**

Public opinion against companies that outsource and contribute to global warming can also influence DC and warehousing site selection. And it's becoming readily apparent that organizations that make conscientious efforts to reduce CO2 emissions will win favor.

Simple efforts can improve your DC's "green" footprint. These include considering traffic patterns and access to key roads and rail; locating a DC in temperate climate locations; and leasing space in a LEED certified DC versus a standard facility.

"Green" construction products have also become available. These include white roofing to reduce heat island effects and indoor heat build-up, occupancy sensors on light fixtures to turn lights off when rack aisles aren't being used; and solar hot water systems that use the sun to heat water for building use.

"Location is one of the most overlooked factors in reducing carbon emissions," says Timothy Nolan, vice president, Customer Development for AMB Property Corp. "If an energy efficient DC is 100 miles from the urban center it services, the benefits of its operational efficiencies are negated multiple times over by the transportation distances required for goods delivery," says Nolan. "Selecting sites in close proximity to the distribution network reduces fuel cost and carbon emissions. Overall, the biggest impact on carbon emissions is to select locations in infill locations," he adds.

will play out," remarks Peters.

Meanwhile, as more and more domestic manufacturers consolidate their production/manufacturing sites, they, too, are outsourcing their overflow to 3PLs. This has resulted in increased demand by 3PLs for DC and warehouse space. "In fact, contract logistics providers are one of the strongest growing segments of industrial space demand at the moment," says Timothy Nolan, vice president of customer develop-

**Technologies new role**

Warehouse technology especially plays into today's DC mix. "Companies must be able to predict and react to demand more quickly, otherwise they will find themselves in a poor position very rapidly," Capgemini's Albright says.

For the auto industry, for example, Albright imagines the day where giant lots full of cars will be obsolete. "We'll go to the European model with only a handful of cars in a showroom," he states. This, however, requires better demand planning, and product lifecycle and inventory management. "Companies have to get serious about inventory control technology," he says. "Their risk is too great."

Some firms are already consolidating large facilities while "forward deploying" quick turning inventory in satellite locations to handle heavy customer geographies. "Technology plays a major part in demand planning, inventory, transportation, and labor management," Albright says. "Firms operating advanced systems can do more with less space."

While no one can predict how long this economic down turn will last and the final impact it will have on warehouse and DC site selection trends, one thing is for certain. Those firms that remain flexible and resilient in determining their DC needs will be more capable of addressing company needs once confidence is restored to the economy. **L**

*Karen E. Thuermer covers air cargo and site selection for Logistics Management*



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**E**xecutive directors at our nation's leading seaports rarely agree on a single issue, but this year may be the exception.

A global recession has had a profound impact on containerized traffic moving in both directions, and that fact has been broadcast in every annual report issued by these ocean gateways in 2009. Furthermore, spokesmen for the American Association of Port Authorities (AAPA) contend that it may be years before the numbers are back to those posted earlier in the decade when the trade juggernaut was perceived as an unstoppable force.

Fiscal accountability will be a major priority for all ports, especially in light of past indiscretions committed by a few players in recent years regarding outside contracting. Enhanced multimodal connections and surface networks will also be needed for leading ports to remain on top. Finally, the

top ports will have to adjust to new trends being shaped by the oncoming changes in the Panama Canal and shifting vessel deployment cycles.

**The dynamic trio: Los Angeles, Long Beach, & New York/New Jersey**

At the Port of Los Angeles, most of the media attention has been placed on how it is working with the community to "green" its cargo operations. And it's been a good story, too. But at the same time, authorities here are maintaining that there's a significant tale for shippers that may have been only related through the trade press.

Late last winter, for example, the port awarded an estimated \$383.7 million in construction contracts, fueling a surge of construction activity that will create thousands of jobs in the region. "The rise in construction activity underscores our mission to continue upgrading port infrastructure and cargo

» Special Report

# TOP U.S. SEAPORTS: Slower trade means time to rebuild

*When it comes to telling a good news/bad news story about ocean vessel trade this year, most of it is bad. Having acknowledged this, however, leading domestic port authorities are now emphasizing their plans for enhanced infrastructure and repositioning for the economic rebound.*

Patrick Burnson, Executive Editor



## NORTH AMERICA CONTAINER PORT: 2007 RANKING BY TEU VOLUME

2007 Rank	Port (State/Province)	Country	2007 TEUs	2006 TEUs	Absolute Change	Percent Change	2006 Rank
1	LOS ANGELES (CA)	United States	8,355,039	8,469,980	-114,941	-1.4%	1
2	LONG BEACH (CA)	United States	7,316,465	7,289,365	27,100	0.4%	2
3	NEW YORK/NEW JERSEY	United States	5,299,105	5,092,806	206,299	4.1%	3
4	SAVANNAH (GA)	United States	2,604,312	2,160,168	444,144	20.6%	6
5	OAKLAND (CA)	United States	2,388,182	2,391,598	-3,416	-0.1%	4
6	VANCOUVER (BC)	Canada	2,307,289	2,207,748	99,541	4.5%	5
7	HAMPTON ROADS (VA)	United States	2,128,366	2,046,285	82,081	4.0%	8
8	SEATTLE (WA)	United States	1,973,504	1,987,360	-13,856	-0.7%	9
9	TACOMA (WA)	United States	1,924,934	2,067,186	-142,252	-6.9%	7
10	HOUSTON (TX)	United States	1,768,627	1,606,786	161,841	10.1%	12
11	CHARLESTON (SC)	United States	1,754,376	1,968,474	-214,098	-10.9%	10
12	SAN JUAN (PR) <sup>(fy)</sup>	United States	1,695,134	1,729,294	-34,160	-2.0%	11
13	MANZANILLO (COL)	Mexico	1,411,146	1,249,630	161,516	12.9%	14
14	MONTREAL (QU)	Canada	1,363,021	1,288,910	74,111	5.7%	13
15	HONOLULU (HI) <sup>(fy)</sup>	United States	1,125,382	1,113,789	11,593	1.0%	15
16	PORT EVERGLADES (FL) <sup>(fy)</sup>	United States	948,687	864,030	84,657	9.8%	17
17	MIAMI (FL) <sup>(fy)</sup>	United States	884,945	976,514	-91,569	-9.4%	16
18	VERACRUZ (VER)	Mexico	729,717	674,872	54,845	8.1%	19
19	JACKSONVILLE (FL) <sup>(fy)</sup>	United States	710,073	768,239	-58,166	-7.6%	18
20	Baltimore (MD) (1)	United States	610,466	627,947	-17,481	-2.8%	20

SOURCES: AAPA SURVEY; SECRETARÍA DE COMUNICACIONES Y TRANSPORTE, COORDINACIÓN GENERAL DE PUERTOS Y MARINA MERCANTE, VARIOUS WEBSITES.

minals in the most environmentally sustainable fashion," says port executive director Geraldine Knatz, Ph.D. "After a seven-year hiatus in our capital development program, this construction activity is a sign that we are back in business in a big way."

At neighboring Port of Long Beach—the nation's second leading ocean cargo gateway—the emphasis on infrastructure includes keeping its financial house in order. Port spokesmen are justifiably proud that Long Beach recently received a Certificate of Achievement for Excellence in financial reporting for its 2007 Comprehensive Annual Financial Report from the Government Finance Officers Association (GFOA).

"The port has a strong commitment to transparency, and one of the ways we demonstrate this is through our comprehensive financial reporting," said Richard D. Steinke, the port's executive director.

This is hardly a landmark event, however. Indeed, Long Beach has earned the certificate for 25 years in a row from the GFOA, an association of more than 17,000 state/provincial and local finance officers

in the United States and Canada. The GFOA established the certificate program to recognize governmental agencies that produce a high quality and thorough financial report.

Finances are top-of-mind with the third largest port, too, but that's not going to stop it from expanding. The Port Authority of New York and New Jersey is going to remain committed to its capital spending plans despite the slowdown in world trade, says Richard Larrabee, director of port commerce.

"No matter how long or how deep the recession is, the next couple of years are going to be tough for us," he says. "But from our perspective, we truly believe the forces in play are going to bring cargo back here; perhaps not what we saw in the 'go-go years' of the last decade, but at a moderate pace."

Larrabee takes the long view about competitive forces shaping the NY/NJ strategy.

"When you look around the country at places like the West Coast you realize we are in fairly decent shape," he says, observing that while total cargo volumes here are off about 0.3 percent this year compared to 2007, loaded container volumes are actually

5 percent higher than last year.

Moving forward, The Port Authority Board of Commissioners has approved a \$6.7 billion 2009 budget that provides for a robust \$3.3 billion in investment in capital projects.

### Ports on the rise: Savannah, Oakland, & Hampton Roads

Now let's move on to a few aspirants that have a real chance of capturing more market share when the nation comes out of the current economic doldrums.

The AAPA lists Savannah as the leading contender to advance in "the top ten" by 2010, and that should be no surprise given the fact that it is relying on more traffic through the Panama Canal in future years. Currently, though, the gateway is keeping pace under current market conditions.

Why? Just take a look at Garden City Terminal, a secured, dedicated container terminal owned and operated by the Georgia Ports Authority (GPA). It's supported by the port industry's only "client relations center," designed to respond to customer needs through a single point of contact. Services

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offered here range from pick-up/delivery verification to problem resolution. Customers also obtain guidance regarding government inspections and electronic data interchange (EDI). The closer though, is that it represents the largest single-terminal operation in North America.

"The facility's single-terminal design allows the port to operate in an environment of maximum efficiency and flexibility, as well as increased security, due to the concentration of all manpower, technology, and equipment in one massive container operation," say port spokesmen.

Add to this a pro-business, pro-port state versed in the unique requirements of international trade and investment, as well as an experienced labor force from one of the top-six fastest growing populations in the nation, and the opportunities offered by Garden City Terminal are remarkable among U.S. ports.

Two Class I rail providers serve the Garden City Terminal location, which also offers immediate interstate access to the more than 100 trucking companies that service the Savannah area. And with land available for future development, the facility has strategic plans in place for its expansion. Industry analysts say that this project, together with numerous others identified under the GPA's long-term strategic development plan, will increase throughput capacity from the current 2.62 million TEUs (twenty-foot equivalent units) to 6 million TEUs in 2018.

The Port of Oakland, meanwhile, is facing some unique challenges due to the ongoing global financial crisis. As the leading outbound West Coast load center, the slack demand for U.S. exports is having an impact. China, which is Oakland's largest export market, is a special concern for shippers.

"As the third largest export market and a major source of foreign direct investment, China's slowdown has certainly added to the U.S. economy's woes," says Saji Daniel, president and CEO of Tradex International, one of the largest suppliers of vinyl, latex, polyethylene, and nitrite disposable gloves in the U.S.

According to Daniel, China also seems poised for a measured recovery, thanks in large part to an industrial sector comprising low-tech manufacturers with minimal capital requirements. And that's good news



At Port of Long Beach, the nation's second leading ocean cargo gateway, the emphasis on infrastructure includes keeping its financial house in order. The port has a strong commitment to transparency in financial reporting,

for Oakland, which has been continuing to deepen its harbor in an effort to attract more direct, fully-loaded "mega-vessel" calls, and hopes to be ready for a rebound in outbound loads as well.

The Port of Hampton Roads, on the other side of nation, has no such concerns. Plenty of deep water and an evolving rail network are making it the port to watch as ocean gateways realign for the next generation of container vessels.

It has now become the premier mid-Atlantic load center, and has the deepest channel on the East Coast, with both inbound and outbound lanes dredged to fifty feet. Container throughput here is not the only part of the story, however, as it is a world leader in coal export shipments. Also noteworthy, is the fact that more than 50 million tons of bulk cargo, including grains and petroleum, is shipped through Hampton Roads annually.

**Genuine movers and shakers: Seattle, Tacoma, Houston & Charleston**

The Port Commissions for Seattle and Tacoma met late last year to discuss ways the two ports can cooperate to better serve the region's economy. Joint regional promotion and the need to invest in transportation infrastructure topped the agenda, as the two ports identified projects crucial to expanding trade throughout Washington State.

"More than ever, we need to focus our efforts on creating jobs and building the transportation infrastructure that keeps Washington at the forefront of global trade," says Seattle Commission president John Creighton.

The two commissions plan another joint meeting this month. Commission and staff work groups on joint promotion, transportation infrastructure, environmental efforts, and port security will continue to meet

regularly in the interim.

Developing a shared hemispheric strategy is moving the Port of Houston Authority (PHA) closer to its neighbor in Panama. "The PHA is becoming the leading alternative to traditional West Coast cargo landings, which has resulted in above-average growth rates," says Adsinar Cajar Bocek, consul general of Panama. "Together, we have acted as ambassadors to the trade community. The expansion of the Panama Canal will provide an entryway to the Gulf Coast from Asia and is a

tool for the port and the region to grow."

With the Panama Canal representing a strategic link between the Port of Houston Authority and East Asia—the fastest-growing PHA containerized cargo market—the PHA recently relocated its regional office for trade growth within Central and South America, excluding Brazil, to Panama City, Panama, under the leadership of Arturo Gamez. The PHA has also renewed and extended its Memorandum of Understanding for three years with the Panama Canal Authority.

And finally, some news that should be greeted by shippers with open arms this year. The South Carolina State Ports Authority (SCSPA) is instituting an across-the-board rate discount in the Port of Charleston to provide near-term relief to customers hit by the current global economic situation.

Through March 31, the SCSPA's "Mid-Winter Rate Roll-Back" will reduce contract unit fees for container carrier customers by five percent. "Our carrier customers are facing some very challenging market conditions," said Bernard Groseclose Jr., president and CEO of the SCSPA. "We heard from them and we're responding. This sends a clear signal that we are serious about their business today and in the future."

The SCSPA's action is aimed at maintaining the viability of current service levels from its carrier clients, avoiding cuts that would negatively affect the local maritime industry and jobs statewide. Additionally, this rate reduction could be attractive to those customers who may wish to concentrate business in Charleston. Could this be a trend adopted by the top ports in the U.S. for the rest of the year? *LM* will be tracking it closely in 2009. **L**

*Patrick Burnson is Executive Editor of Logistics Management*

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