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LM EXCLUSIVE
NASSTRAC SHIPPER OF THE YEAR

Stein Mart's \$20 million save

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Stein Mart's supply chain team: from left, Bill Stover, Gregg Sayers, and Rick Schart.

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Management UPDATE

AN EXECUTIVE SUMMARY OF INDUSTRY NEWS

■ **YRCW restructuring: A done deal.** YRC Worldwide (YRCW) shareholders unanimously voted to have common stock of the financially-troubled LTL carrier diluted in the last step of its financial restructuring. This news follows a \$500 million restructuring announced in July that included a new \$400 million lending agreement. Before the restructuring, YRCW had 48 million outstanding shares; after the restructuring, it has 1.9 billion shares, meaning former shareholders will own just 2.5 percent. New shareholders comprised of lenders, bondholders, and labor union members now own the other 97.5 percent of the company. YRCW officials said the restructuring would enhance the company's liquidity and provide a "runway for the continued growth in revenues and earnings."

■ **Port Tracker predicts Peak Season.** Import cargo volumes at major U.S.-based container ports are slowly seeing annual monthly gains as retailers prepare for the holiday shopping season, according to the monthly Port Tracker report by the National Retail Federation (NRF) and Hackett Associates. The Port Tracker report is calling for September to come in at 1.5 million TEU for an 11.8 percent annual decrease. October is expected to reach 1.48 million TEU for a 9.5 percent increase. Hackett Associates President Ben Hackett said the 2011 Peak Season is already taking form in the U.S. with slightly improved freight rates and carriers implementing Peak Season surcharges. And with the amount of inventory that was being held, Hackett said a peak season of some sort is in effect although it will not be as strong as others due to a lack of strong demand.

■ **Boeing late for its 747-8 Freighter date.** Shippers anticipating the launch of Boeing's 747-8 Freighter last month were disappointed by a last minute cancellation. At issue, it seemed, was a contract negotiation with one of the manufacturer's key clients: Cargolux. Published reports contend that the disagreement between Boeing and the airline might have also involved compensation for Qatar Airways that owns 35 percent of Cargolux.

Qatar was promised 787 Dreamliner aircraft that had not yet arrived. According to the just published Boeing Current Market Outlook 2011-2030, long-term economic projections are fraught with difficulty. This episode certainly points to one them. "Many of the assumptions such as regional and national GDP growth underlying Boeing's projections are highly variable, influenced by short-term factors," the report said.

■ **Maersk wants to deliver the goods.** Following its promise to be more collaborative with shippers, Maersk Line is introducing a time-definite service in the booming Asia-EU trade lane that it's calling Daily Maersk. "Up until now, customers have had to adjust their production schedules and supply chains to accommodate shipping lines' unreliability, as they have never been able to trust that their cargo would be on time," said Maersk Line CEO Eivind Kolding. But Maersk promises that this will be a thing of the past, noting that the engine behind Daily Maersk is 70 vessels operating daily sailings between four ports in Asia (Ningbo, Shanghai, Yantian, and Tanjung Pelepas) and three ports in Europe (Felixstowe, Rotterdam, and Bremerhaven) in what amounts to a giant "ocean conveyor belt" in the carrier's busiest global service.

■ **Teamsters lawyer up.** Following the July announcement that the U.S. and Mexico had reached a cross-border trucking agreement, a *Wall Street Journal* report indicated that the Teamsters union has filed a lawsuit against the White House that intends to block the deal. According to the report, the complaint alleges that the "pilot program sets standards that aren't stringent enough for Mexican trucks and drivers," adding that the cross-border trucking program, which is expected to kick off with a pilot program in the next 30-to-60 days, waives a law requiring trucks to display proof of meeting federal safety standards. It added that the Teamsters believe the program is "faulty" because it includes standards that are impossible for Mexico to meet.

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Management UPDATE

continued

■ **Wanted: National airline policy.** The Air Transport Association of America, Inc. (ATA), the industry trade organization for the leading U.S. airlines, was calling on the Federal Aviation Administration (FAA) last month to accelerate its timetable for implementing new and more efficient air traffic procedures, a key pillar of a needed National Airline Policy. "Near-term FAA action will help government focus on priorities that can provide immediate economic and customer service benefits," said ATA President and CEO Nicholas E. Calio in a speech at the Boyd Group International Aviation Forecast Summit. As a first step toward executing a National Airline Policy, the ATA called on the Obama Administration and the FAA to focus its resources on expediting the most cost-beneficial elements, including performance-based procedures.

■ **UPS beefs up European hub.** UPS is making major expansions to its European air hub facilities at Cologne/Bonn Airport in Germany. Company officials said that the roughly \$200 million expansion, which is expected to be completed by the end of 2013, will consist of equipping the existing facility with additional state-of-the-art technology as well as an extension to the existing building. The goal is to allow the building to process larger freight shipments. UPS added that these efforts will boost the carrier's package sorting capacity from the current level of 110,000 packages per hour to 190,000 packages per hour. UPS has roughly 2,300 employees at the Cologne/Bonn Airport, and the company said this expansion should add up to 200 jobs by the end of 2013.

■ **Massport cleans up.** In keeping with a national trend, The Massachusetts Port Authority (Massport) began developing its own "Clean Trucks Program." Last month's announcement included news that the Environmental Protection Agency (EPA) had "teamed up" with the port to establish a program giving owners of older trucks servicing Conley Container Terminal an incentive to replace the vehicles with ones that are 2007 emission compliant or

newer. With a \$500,000 EPA Diesel Emissions Reduction Act, a total of \$1.5 million will be available to provide truck owners with 50 percent of the replacement cost. Massport Executive Director Mike Leone said unionization of drivers was not a mandate for this program. "This program regulates trucks not truckers," said Leone.

■ **Better, but not great says IATA.** The International Air Transport Association (IATA) announced an upgrading of its industry profit expectations to \$6.9 billion—up from \$4.0 billion projected in June. IATA emphasized that, despite the improvements, profitability at these levels is still exceptionally weak (1.2 percent net margin) considering the industry's total revenues of \$594 billion. In its first look at 2012, IATA is projecting profits to fall to \$4.9 billion on revenues of \$632 billion for a net margin of just 0.8 percent. "Airlines are going to make a little more money in 2011 than we thought. Given the strong headwinds of high oil prices and economic uncertainty, remaining in the black is a great achievement," said Tony Tyler, IATA's director general and CEO. "But we should keep the improvement in perspective. The \$2.9 billion bottom line improvement is equal to about a half a percent of revenue, and the margin is a paltry 1.2 percent," he added.

■ **Manufacturers look to the clouds.** The emergence of cloud computing is having a direct and positive impact on manufacturers' IT performance and subsequently supply chain operations, according to a report from IDC Manufacturing Insights. In its report *Business Strategy: Cloud Computing in Manufacturing*, IDC stresses how "cloud computing will have a very positive impact on IT performance for those firms that take a well considered approach to investment." Two of the report's notable findings include how 44.3 percent of the nearly 100 manufacturers surveyed are either implementing or currently evaluating cloud deployments, and more than 22 percent have already implemented cloud computing systems.



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Fifty Years Leading the Industry

VOL. 50, NO.10

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NASSTRAC SHIPPER OF THE YEAR

Stein Mart's \$20 million save

By re-engineering its supply chain, the fashion retailer reduced transportation expense, lowered store operating costs, enhanced labor planning, improved communication with its vendors, and was the hands-down winner of the 2011 NASSTRAC Shipper of the Year Award.

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Cover photo by Cy Cyr/Getty images



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TRANSPORTATION BEST PRACTICES & TRENDS

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- How to segment inventory for maximum cost reduction and profitability.

LABOR MANAGEMENT: Seven Steps to a More Productive Workforce

- The key steps that can be taken to improve workforce productivity.
- The technology enablers available to manage today's workforce.



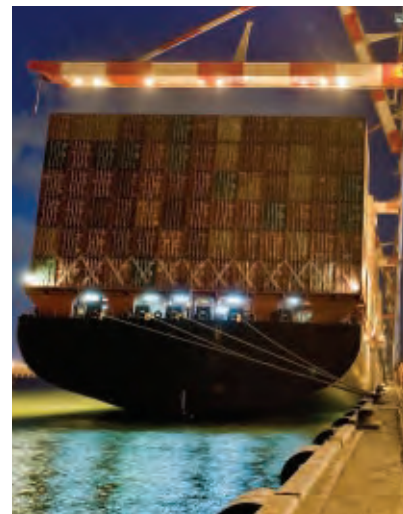
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▲ SPECIAL REPORT: LEADING AIR CARGO CARRIERS

Hong Kong calling

World air cargo traffic will triple over the next 20 years, with most of the growth being driven in the Asia Pacific marketplace. Is it any wonder that the biggest players in the industry are investing heavily in the region? **48S**

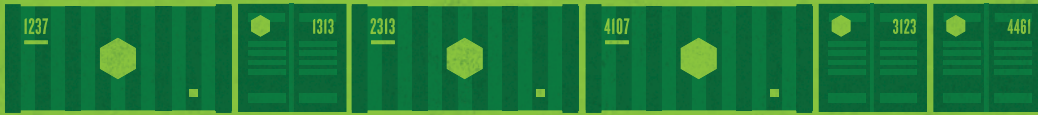


▲ SPECIAL REPORT: TOP 30 OCEAN CARRIERS

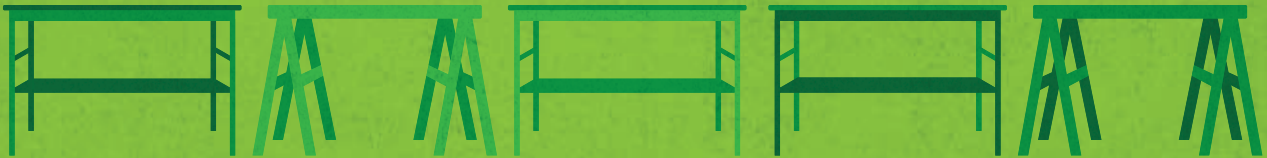
New era of collaboration?

Big shippers and the world's top carriers vow to work collectively towards leveraging technology to improve business processes and relationships. Will they make good on the promise or slip back to business as usual? **53S**

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Stein Mart proves power of innovation

ONE OF THE MOST SATISFYING RESULTS of any management decision is when the benefits not only exceed your departmental expectations, but also unexpectedly flow to other parts of the organization—thus creating operational improvements across the board.

While this may sound like the introduction to the latest best-selling management book, this is just what unfolded for the supply chain team at Stein Mart—a fashion retailer with 260 stores and \$1.2 billion in sales in 2010—when it re-engineered its transportation operations over the course of the past two years.

Prior to 2009, Stein Mart had been having some success in shipping product directly, and quickly, from its vendors to its network of stores via small parcel carriers. But while those carriers were doing a commendable job, the retailer was bumping into issues with packaging requirements compliance and floor-ready guidelines, freight visibility was limited, and store delivery times didn't always mesh with store hours.

"It was getting expensive," Gregg Sayers, director of supply chain transportation tells our John Schulz in this month's cover story (page 24). "There were expenses at the stores to get merchandise ready to sell; and there were also problems with managing the receipt of our product and the ability to reconcile anything that was not in compliance."

Newly appointed Vice President of Supply Chain Rick Schart reviewed the situation with Sayers and Bill Stover, his two new recruits at the time, and the team went to work to re-organize the retailer's transportation operations. First, the parcel carriers were replaced with a network of LTL and TL carriers, creating dedicated and pool transportation lanes. Then the team spent six months educating vendors on the new process just to get the ball rolling.

Beyond the expected benefits of the new transportation process, the team

started to see considerable labor savings at the storefront because managers could staff accordingly now that they knew when freight would arrive. Meanwhile, improved communication with vendors had merchandise ticketed and floor ready, thus cutting more time and expense once on the store floor.

According to the team, the overall cost savings is now rolling in at about \$20 million annually. "It came down to having the right team in place, the right carrier and 3PL partners, and having the Stein Mart organization, especially IT, aligned to support the new concept," says Schart.

The team started to see considerable labor savings at the storefront because managers could staff accordingly now that they knew when freight would arrive.

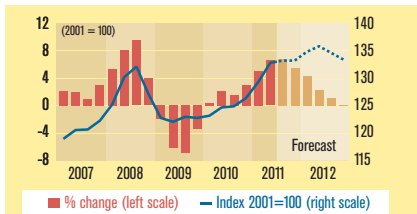
This dramatic example of how a supply chain re-design can improve overall operations has earned Stein Mart the 2011 NASSTRAC Shipper of the Year Award, the highest honor bestowed upon the council's membership and awarded in partnership with *Logistics Management*.

According to NASSTRAC Executive Director Brian Everett: "Stein Mart's innovative approach epitomizes the transportation and supply chain best practices that we encourage in our industry." And once you read this month's inspiring cover story, you'll find it tough to disagree with Everett's sentiments.

Michael A. Levans, Group Editorial Director

Comments? E-mail me at mlevans@ehpub.com

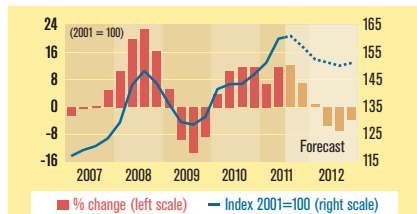
Pricing Across the Transportation Modes



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
General freight - local	-0.3	0.6	3.6
Truckload	0.0	3.5	7.0
Less-than-truckload	1.0	3.3	9.7
Tanker & other specialized freight	-0.6	2.3	5.2

TRUCKING

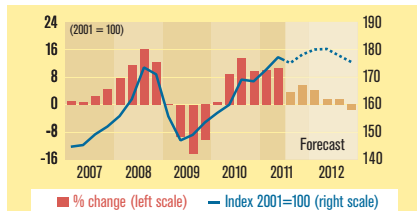
LTL truckers shifted gears, increasing average transaction prices 1.05% in August, on the heels of the previous month's 1.5% price cut. Meanwhile, truckload prices held steady and all other trucking categories registered price declines. For the trucking industry overall, average prices fell 0.1%. The trucking industry's year-over-year inflation rate nonetheless hit 4.8% in August 2011, which was the highest rate since March 2009. Looking down the road, our revised forecasts show all trucking industry prices up an average 5.9% in 2011 and up 1.9% in 2012. LTL prices are forecast to end 2011 up 8.2%, but will increase at a much slower 0.2% average annual rate in 2012.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
Scheduled air freight	0.0	6.6	11.3
Chartered air freight & passenger	-7.0	-5.4	-6.2
Domestic air courier	-0.1	4.3	14.7
International air courier	0.0	4.3	16.7

AIR

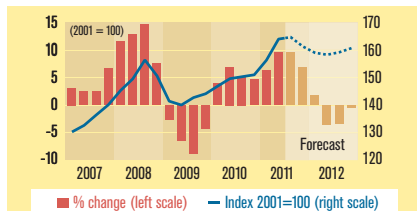
Although Drewry Consulting surveys show international air freight prices still descending at a 9% year-over-year pace, U.S.-owned airliners have reported more air freight price hikes. In August, average prices for flying cargo via nonscheduled, chartered planes landing on overseas airstrips increased 4% from month-ago and 5.5% from same-month-year-ago levels. Likewise, prices for moving freight and mail via scheduled flights, although unchanged from a month ago, still registered a 10.3% year-over-year price increase for the period ending August 2011. Looking at U.S.-owned airliners' scheduled flights alone, our airfreight price outlook remains: up 9.3% in 2011 and down 3.8% in 2012.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
Deep-sea freight	-7.9	-2.9	-2.1
Coastal & intercoastal freight	0.7	1.2	2.6
Grt. Lks.-St. Lawrence Seaway	0.9	1.7	12.8
Inland water freight	-2.4	3.9	9.1

WATER

The U.S. waterborne freight industry reported a surprisingly sharp 3.4% average price cut in August. The driving force for this cut came from the deep sea water transportation market where average transaction prices declined 7.9%. Prices for the inland waterways market also fell 2.4%. The last time we saw such large monthly price drops was in March 2009 during the transportation sector's deflation heyday. Another bout of sustained price cuts is not likely now, though we do expect this industry's inflation rate to slow significantly. In fact, we have revised the forecast for average water transportation prices upward to 7.4% in 2011 followed by a 1.5% average annual price hike in 2012.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
Rail freight	-0.5	5.8	10.0
Intermodal	0.1	5.0	11.3
Carload	-0.6	6.1	10.1

RAIL

The U.S. rail transportation industry reported a 0.5% decline in its average transaction prices in August. That decline was due solely to 0.6% drop in prices for carload service as intermodal rail transport prices increased 0.1% at the same time. In August, the Association of American Railroads also reported the strongest monthly drawdown of parked railcars since April. This suggests demand for carload rail service is strengthening. Our railroad industry inflation forecast calls for a relatively strong 8.1% price hike in 2011. If a double dip recession does indeed hit the U.S. economy in 2012, then rail industry prices are forecast to drop 1.4% next year.

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

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- **Court puts the brakes on Fed's push for "black boxes"**
- **USPS proposes changes to improve bottom line**

Congress agrees to extend federal transit funding through March

Short-term fix provides funding at current levels, but the need for a long-term bill remains.

By Jeff Berman, Group News Editor

WASHINGTON, D.C.—Funding for federal highway, transit, and highway safety will remain intact at current levels through March 31, 2012, with Congress passing H.R. 2887, The Surface and Air Transportation Program Extension Act of 2011. This marks the eighth extension of federal transit funding since the previous six-year, \$285 billion authorization (SAFETEA-LU) expired on September 30, 2009.

While this legislation clears the way for transportation projects to be funded through March 2012, larger problems remain when it comes to funding these efforts on a meaningful, long-term basis. The federal gasoline tax, which has been at 18.4 cents for gasoline and 23.4 cents for diesel and has not been increased since 1993, has served as the primary funding mechanism for transportation.

"Most people in transportation would agree that gasoline taxes need to be increased...in order to avoid the Highway Trust Fund being bankrupt," said Leslie Blakey, executive director of the Coalition of America's Gateways and Trade Corridors. "The schedule needs to be accelerated," she added. "The long-term stimulus effect of this would



The "American Jobs Act" would call for \$50 billion to be allocated for transportation spending and \$10 billion for an infrastructure bank—which President Obama has pushed for several times.

more than offset the relatively minimal economic drag that an increased fuel tax would have."

Along with the repeated call by freight transportation stakeholders to increase the gasoline tax has come the vital need for a new surface transportation reauthorization, rather than the continued slate of short-term extensions.

Janet Kavinoky, vice president of Americans for Transportation Mobility Coalition and executive director of Transportation and Infrastructure for the United States Chamber of Commerce, made this clear. "Now, Congress must turn to passage of a multi-year reauthorization measure,"

said Kavinoky. "The longer it takes to pass a multi-year bill, the more expensive the problems are to solve. Highway and transit investments facilitate national, regional, and local economic growth in the long term, and create direct jobs in the short term. The longer we wait, the longer the United States forgoes these opportunities."

Kavinoky added that a multi-year reauthorization bill must reform and refocus surface transportation policies and programs so that Americans get the greatest return on highway and transit investments.

Investment in transportation infrastructure was prominently mentioned

in a speech President Obama made to Congress last month, which focused on job creation and the economy. In his wide-ranging speech centered on a piece of legislation—the \$447 billion “American Jobs Act”—transportation infrastructure was one of the President’s key themes for job growth. “Everyone here knows we have badly decaying roads and bridges all over the country,” he said. “Our highways are clogged with traffic. Our skies are the most congested in the world. It’s an outrage.”

He went on to say that building a world class transportation system is what made the U.S. an economic superpower, while other countries like China are now building newer airports and faster railroads at a time when millions of unemployed construction workers could build them right here in America.

In pushing the urgent need for more infrastructure spending, the bill would call for \$50 billion to be allocated for transportation spending and \$10 billion for an infrastructure bank—which he has pushed for multiple times during his term as president.

Regarding the infrastructure bank, he explained it in simple but direct

terms. “We’ll set up an independent fund to attract private dollars and issue loans based on two criteria: how badly a construction project is needed and how much good it will do for the economy,” said the President. “This idea came from a bill written by a Texas Republican and a Massachusetts Democrat. The idea for a big boost in construction is supported by America’s largest business organization and America’s largest labor organization. It’s the kind of proposal that’s been supported in the past by Democrats and Republicans alike.”

The infrastructure bank legislation cited by Obama was drafted in March by Senators John Kerry (D-MA), Kay Bailey Hutchison (R-TX), and Mark Warner (D-VA) and is entitled the BUILD (the Building and Upgrading Infrastructure for Long-Term Development) Act. The main objective of the legislation is to support the establishment of an American Infrastructure Bank in the U.S. to leverage private investment.

But unlike other calls for an infrastructure bank in the past, this one is different in the sense that it would require a lower up-front investment, which would subsequently be supported by private sector investment. □

contract rates exceeded spot rates, the difference was between 30 cents and 33 cents in April-May but only 22 cents in June.

That’s because dry van rates rose in June across the board, according to Mark Montague, TransCore’s industry rate analyst who has spent decades developing and analyzing market-driven rate structures for transport companies.

“What we know is that the spot market has had a robust year and continues to be a great source of freight,” said Montague. “Things are tracking nicely.”

For shippers this means that tighter capacity across the board can become ultra-tight in some geographic regions, depending on time of year. But it’s worth analyzing the spot rate trends since they usually dictate what’s ahead for contract rates. About 75 percent of all truck freight moves under contracts, usually one year in length, but occasionally longer.

“The spot market is leading edge for the contract world,” Montague says. “Some of the contract shippers are holding back to see what develops. That creates more activity in spot market.”

David Schrader, TransCore’s senior vice president for operations, said the headlines about a slowdown belie what his data says is happening on the loading docks.

“What we’ve seen is very robust,” Schrader said. “There is a 40 percent increase in freight volume year over

RATES

Trucking freight rate pressure building as Peak Season nears

HARRISBURG, Pa.—Trucking rates are rising and will continue to outstrip the pace of inflation as carrier capacity tightens, say experts and industry officials.

One key indicator of tight capacity is the spot market. TransCore, which analyzes spot rates versus contract rates, has discovered a shift in freight buying habits that could be a harbinger of this predicted, future rate environment.

Usually, the spot market rates are about 15 percent lower than contract rates. But this year, according to TransCore’s analysis, on a national average, about 24 percent of lanes had spot market rates that were higher than contract rates during the second quarter.

Geography seemed to play a role as well. In April, nearly half of the lanes with higher spot market rates originated in the Midwest. But in May and June, the action shifted to the Southeast where half of the higher rates originated in Southeastern states.

Where spot market rates were higher than contract rates, the average difference was 19 cents a mile in April and 24 cents in June. When



year in August. Now, August 2010 wasn't a banner month, but it wasn't terrible either. There's a lot of freight looking for capacity and a lot of capacity looking for freight."

According to Montague, one thing is for certain: There's pressure for rates to rise.

There are several reasons. One is that so much capacity—as much as 20 percent—came out of the truckload market during the 2008-09 recession that truckers have been slow to re-enter the market. On top of that, truck equipment costs are growing by double-digit percentages. Even though Class 8 truck sales are booming, analysts say that's nearly all replacement vehicles to make up for the lack of fleet capitalization that occurred during the recession.

"There are a lot of factors impeding capacity in the short term," Montague

said. "It's like what you see in the airlines. They used to flood the skies with capacity, but not anymore. So far trucking fleets seem to be very disciplined in adding trucks."

Flatbed trucks are a good example. One thing unusual this year is flatbed capacity has been in tight supply. "There's not sufficient supply to meet demand," Montague added, so flatbed rates have continued to rise the entire year. "That equipment is in strong demand."

Refrigerated transport seems to be following suit. Reefer rates seemed to have a "second peak" during the third quarter. Again, that was because of tight equipment supplies, lack of drivers, and increasing demand even in this so-so economic environment. □

—John D. Schulz, *Contributing Editor*

REGULATION

Court puts the brakes on Feds' push for "black boxes"

WASHINGTON, D.C.—In a major victory for independent truck drivers fearing "big brother" harassment, the government has been forced into the legal slow lane in its attempt to crack down on unsafe truckers.

The Federal government's attempt to mandate electronic onboard recorders (EOBRs)—the so-called "black boxes" that record everything from speed to braking attempts during crash incidents—has run into a serious legal roadblock.

In a major blow to its truck safety reform program, the 7th Circuit U.S. Court of Appeals has told the Federal Motor Carrier Safety Administration (FMCSA) to go back to the legal drawing board on this ruling. Experts say the rule could be delayed as long as two years, perhaps longer.

That's because the court appeared to hint that the overall EOBR rulemaking process violated the 4th Amendment of the U.S. Constitution that forbids illegal searches and seizures.

"We conclude that the rule cannot stand because the Agency failed

to consider an issue that it was statutorily required to address," the court said in its ruling in late August. Specifically, the court ruled that FMCSA did not take adequate steps in the regulatory process to assure that the black boxes "are not used to harass vehicle operators."

That was a major legal victory for the Owner-Operator Independent Drivers

Ultimately, trucking officials expected EOBRs to be mandated on all new trucks later in the decade, but that prospect is now anything but clear.

Association (OOIDA). OOIDA had sued the government on grounds that EOBRs could be used to pressure drivers to drive when tired. The court agreed.

For shippers, the ruling means another layer of uncertainty in the regulatory process regarding the trucking companies they utilize. Already, the government is mulling whether to

reduce the legal hours of service truckers can operate by one hour. That ruling is expected late this year or early 2012.

EOBRs, which cost about \$800 on the low end and can run as much as \$3,000 depending on the amount of add-on electronic capabilities, were a central tenet of the government's attempt to crack down on unsafe operators. They're attached internally to commercial vehicles and automatically record the number of hours a driver spends operating a vehicle.

At the outset, they were being mandated in trucks operated by about 5,700 carriers that have been deemed to have significant HOS violations. That ruling was to have gone into effect in mid-2012, but now is delayed indefinitely. Ultimately, trucking officials expected EOBRs to be mandated on all new trucks later in the decade, but that prospect is now anything but clear.

The court's ruling was worded so strongly against the government, trucking experts say, that any attempt to mandate EOBRs on all 700,000 truckers registered at the Department of Transportation will need to be carefully crafted to ensure privacy rights for individual truck drivers.

"The agency needs to consider what types of harassment already exist, how frequently and to what extent harassment happens, and how an electronic device capable of contemporaneous transmission of information to a motor carrier will guard against (or fail to

guard against) harassment," a three-judge panel in the 7th Circuit said in its ruling.

That is almost precisely what OOIDA had argued. "Companies can and do use technology to harass drivers by interrupting rest periods," said OOIDA Executive Vice President Todd Spencer after the ruling. He added that the court's decision focused on harassment issues but

also indicated there were other “problematic” issues as part of the EOBR rule.

Many shippers and carriers have told *Logistics Management (LM)* that if used effectively and correctly, EOBR usage would be a main cog in future driver safety efforts and initiatives. Several large fleets, including U.S. Xpress and Werner Enterprises, have already outfitted their fleets with EOBRs because of scheduling efficiencies and payroll accuracy.

U.S. Xpress Co-Chairman and President Pat Quinn recently told *LM* that the drivers at his \$1.4 billion company, the nation’s sixth-largest truckload carrier, have “adapted well to the use of electronic logs which have made them more efficient.” He added that EOBRs made for safer trucking operations because they help eliminate HOS violations and fatigued driving. □

—John D. Schulz, *Contributing Editor*

GOVERNMENT

USPS proposes network changes to improve bottom line

WASHINGTON, D.C.—The United States Postal Service (USPS) announced proposed changes to its network last month that it said would deliver \$3 billion in annual savings.

Among the network changes proposed by the USPS were to:

- consolidate or close 250 mail processing facilities;
- reduce mail processing equipment by up to 50 percent;
- dramatically decrease its nationwide transportation network;
- adjust its network size by as much

as 35,000 positions from its current total of 151,000 mail processing employees; and

- change its First Class Mail service standard from a one-day to three-day window to a two-day to three-day window, with customers no longer receiving mail the day after it was sent.

If enacted, USPS officials said these changes would result in fewer facilities; greater utilization, and efficiency; earlier mail availability driving more efficient local delivery; and more retail partners and kiosks, as well as fewer brick and mortar Post Offices.

“We are forced to face a new reality today,” said Postmaster General Patrick Donahoe. “First-Class Mail supports the organization and drives network requirements. With the dramatic decline in mail volume and the resulting excess capacity, maintaining a vast national infrastructure is no longer realistic.”

According to Donahoe, the USPS

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SHANGHAI 7:52 P.M.

has closed 186 facilities, removed more than 1,500 pieces of mail processing equipment, decreased employee complement by more than 110,000 through attrition, and reduced costs by \$12 billion since 2006.

Through these proposed changes, which the USPS will file with the Postal Regulatory Commission later this year, the USPS is eyeing \$20 billion in cost reductions by 2015, coming from \$6.5 billion in network changes for sorting and transport, \$5 billion in compensation and benefits, and \$8.5 billion in legislative changes.

Among the chief legislative changes are going from a six-day to five-day delivery schedule, receiving \$6.9 billion in overpayments to the Federal Employee Retirement System in the form of a



refund, and resolving the mandate to pre-fund retiree health benefits by \$5.5 billion annually and manage the legacy cost going forward and allow the USPS to restructure its healthcare system to make it independent of federal programs, among others.

“By changing the service standard, which is today far faster than most people need, it’s easy to cut the number of processing facilities in the network dramatically,” said Jerry Hempstead, president of Hempstead Consulting, a parcel express consultancy.

“There is significant investment already in state of the art automation which allows the USPS to process mail extremely efficiently and accurately,” added Hempstead. “The fact is that with the

decline in mail there is far more capacity in the ability of the automation, in the facilities themselves, and on the transportation network to be able to rationalize the system and close half the plants. This change is long overdue.” □

—Jeff Berman, *Group News Editor*

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Truckload pricing and your TMS

It's BECOME COMMONPLACE for shippers to “benchmark” truckload rates with the market either through a consultancy or by accessing one of several web sites with a listing of origin-destination (OD) pairs and a recent market price.

While this is a relatively quick process, and may give shippers a reference point for what you're paying, it falls well short of what you could do with real “optimization” using a modern, web-accessible transportation management system (TMS) and some smart negotiating.

In the quest to make rate reference tables simple in a TMS, the majority of shippers I've worked with often have simple mileage or “flat” line-haul rates for truckload. The only mathematical addition is the fuel surcharge calculation. While this makes loading and retrieving rates easy, it doesn't leverage the power of a modern TMS—nor does it help shippers to manipulate the many factors that make up the cost of truckload transport in order to save the carrier and the shipper some money.

The first group of costs, often reflected in carrier rate schedules, includes items such as: minimum charges; stop-off; detention; and load cancellation. These items are less dynamic and can be negotiated as standards for all loads in a contract period. Be advised that carriers do try to maintain a margin in these accessorial charges, so be sharp about learning the carrier's labor rates and operating ratio (profitability) so that a fair price is arrived at in advance.

A second group of costs are more dynamic. They assume that the TMS is interfacing with a sophisticated rate engine with capabilities to deal with transactions as unique events with one-time cost variables. If both the shipper and carrier systems are capable of dealing with unique transaction pricing then several dynamic pricing scenarios emerge.

First, we look at day-of-shipment “capacity sale”

pricing. A carrier makes available one or more trucks on a given time and day at a sale price. Conversely, the shipper makes additional freight available in a reverse bid for rates on a given day for a given lane or set of lanes. To make this manageable, the two companies interact at the machine level, and offers and responses are made online via the web. The rate tables for both parties record a new agreed rate that is good for a limited time and for limited usage.

Second, an inbound backhaul is arranged and the Incoterms state that the supplier is covering the cargo through to the destination despite the fact that the receiver is arranging for and paying the carrier. If the load is covered for loss by the supplier,

If both the shipper and carrier systems are capable of dealing with unique transaction pricing then several dynamic pricing scenarios emerge.

then the shipper should get a break for both the volume of backhaul and the reduction of liability for the carrier.

The third has to do with the problem of over coverage of cargo insurance. Too much insurance often results when a shipper insists on high levels of insurance for all loads when they have a percentage of low-value loads (e.g. return packaging). Often I hear that the shipper's TMS doesn't distinguish cargo insurance needs and coverage.

For more than one carrier the excess in premiums to shippers is a profit maker that they would rather not discuss. For the shipper, savings in this area can cover that new TMS you've been thinking about.

Despite the many years the industry has been buying and shipping truckload freight, there is always something new to learn. Keep your people and yourself in learning mode, revise processes to enable more dynamic pricing, and identify and acquire the best TMS technology for moving freight efficiently and effectively. □

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Supply chain mastery requires talent

COMPANIES RESPONDED TO THE ECONOMIC downturn in diverse ways. Many streamlined operations and became more efficient. Some invested in new technology, capital, and infrastructure. But not too many focused on acquiring exceptional people or luring talent from less fortunate companies.

However, the latter move—enhancing skill sets—could end up paying the biggest dividends, particularly as cost cutting reaches its natural limits and technology assets are deployed more or less equally across competitors.

Leveraging talent is far more complex than just acquiring the right bodies. In supply chain management companies need “human capital strategies” that maximize their people potential by integrating operational performance objectives with the organization’s big-picture goals. But how do you create a human capital advantage? Following are three cornerstones.

1. Remove complexity. Minimizing supply chain complexity is one of the best ways to create more efficient, more agile organizations that can respond rapidly to existing and emerging consumer demands. From a human resources perspective, less complex supply chain processes and structures allow companies to leverage talent more effectively. Plus, an agile organization is a strong drawing card for attracting and retaining the best people.

A natural starting point for reducing complexity is to identify the operational and organizational improvements most likely to affect business results. An example might be a retailer that focuses on improving fulfillment without raising inventory costs. To do this, Lean Six Sigma and advanced analytics could be leveraged to more effectively link process improvements, business performance, and organizational priorities.

When it comes to complexity reduction, companies focus too often on obvious pain points (reducing budget overruns, eliminating transport delays, reducing employee turnover) rather than on the root causes of complexity. More often than not, the right complexity-reduction rationale is increased agility. Supply chains that attack and remove process and organization complexities are “suddenly” able to

respond more quickly to shifting markets, changing customer demands, and new value paradigms.

2. Create environments for supply chain talent to succeed. Several characteristics are often present in companies where supply chain talent flourishes. Among the most important is role clarity, which in turn drives predictability and accountability in the execution of supply chain processes. When an organization rigorously follows competency standards, people at all levels of the organization know what they must do to execute their jobs well.

With clearer supply chain roles, skills-management leaders may be able to hone their talent strategies by:

- *Segmenting the workforce* (e.g., based on learning styles, values, personality, wellness profiles, mobility).
- *Offering modular choices from a list of defined and sanctioned alternatives* (e.g., international job rotation opportunities).
- *Putting more emphasis on innovation* (like Google’s insistence that engineers spend 20 percent of their time on projects that create value for the organization).

Flexible learning and training systems also help to create a talent-optimized workforce. Ideally, this involves structured learning combined with deployment of multiple information sources such as social media. Insights from conference calls, presentations, and third-party vendors can be turned into short podcasts that are rapidly and easily accessible to workers. Cross-training through job rotations or collaborations is another, important part of the learning/training mix.

3. Align talent and supply chain analytics. In addition to using descriptive analytics to determine what happened and why it happened, companies can now leverage predictive analytics that use sophisticated statistical modeling, forecasting, and optimization to help forecast business outcomes and determine how supply chain activities relate to those predictions. Organizations seeking to leverage their skills base can use analytics in much the same way to predict the talent needed to optimally staff their organizations and deliver on consumer expectations.

Though unemployment is high, there is a shortage of ultra-skilled talent—people who can help companies move ahead in ways that are economical, sustainable, and difficult for competitors to replicate. That is why the three approaches discussed above, pursued as a single, integrated initiative, are so important. □

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Andreoli on



Oil prices and the economy: predator and prey

THERE IS AN ENTICING LINE of argument employed by some economists and analysts that is loosely based on the predator-prey model, one of the earliest models in mathematical ecology.

From an ecological perspective, the populations of predators and prey affect one another. For instance, as a population of lynx expands, the population of hares upon which they feast contracts. But as the population of hares recedes, the carrying capacity for lynx is reduced, and the population of lynx falls into decline. Of course as the population of their primary predator declines, the number of hares rapidly expands, and so on. Visually, we might imagine a graph of the two populations as two sine waves, one lagging the other.

Similarly, many believe that high or rapidly rising oil prices cause recessions; but in turn, during a recession, industrial production and demand for transportation decline. Consequently, the price for oil and fuel falls, and as it declines, the economy is stimulated.

This makes sense because, to a large degree, dollars not poured into our gas tanks are used to make other purchases or investments that have a greater stimulatory effect on the economy. In this adapted model, rising oil prices are the lynx that menace the helpless economy.

The fact that oil price spikes preceded all but one of the seven post-1970 U.S. recessions certainly lends *prima facie* support for the predator-prey model, but correlation does not prove causation and the economy is clearly affected by more than just the price of oil.

According to the research of a pair of university economists and a member of the Federal Reserve Board, however, the rate of unemployment can be accurately predicted using just two inputs: oil prices and real interest rates. To be clear, their model passes the Granger causality test, hence the researchers can state beyond a statistical shadow of doubt that an oil price or interest rate movement in period one *causes* a movement in the unemployment rate in period two.

This discussion of the predator-prey model begs important questions, not the least of which include: “Are we headed back into recession?” “And, with the economy sputtering, why are oil and fuel prices so high?”

Derik Andreoli, Ph.D. is the Senior Analyst at Mercator International, LLC. He welcomes any comments or questions, and can be contacted at dandreoli@mercatorintl.com.

Hear Derik Andreoli's keynote address “How Energy Trends Will Impact Our Supply Chain Future” on Wednesday, October 26, as part of *Logistics Management's* virtual conference *Supply Chain Best Practices: Boost Productivity And Cut Costs*. Register today: supplychainvirtualevents.com

Regarding the former, evidence is certainly mounting that the U.S. is on the cusp of a double dip, if not already sliding into recession. The unemployment rate remains over 9 percent, with 14.8 million unemployed and another 11.6 million discouraged or underemployed. The four-week average for unemployment benefit requests was up for the fourth straight week (as of September 15), and the poverty rate has ascended to a level not reached in more than 50 years.

On the housing front, foreclosures jumped 33 percent between July and August—the biggest single-month jump in four years. Given the state of the job and housing markets, it should come as no surprise that in August consumer confidence dropped a staggering 14.7 points and CEO confidence retreated 12 points.

Then there is my favorite leading indicator, the

We know there's a turn up ahead, but it's still difficult to see whether the road is going to take us to recovery and even higher fuel prices, or stagnation with high fuel prices.

Ceridian-UCLA Pulse of Commerce Index (PCI), which is a measure of fuel consumed by truckers purchasing diesel from cardlock facilities. The seasonally and workday adjusted PCI fell 1.4 points in August after declining 0.2 points in July, indicating that fewer goods were in transit for two consecutive months. Needless to say, this decline does not inspire warm and fuzzy feelings about U.S. economic prospects.

That's a lot of bad news, but to prove that I'm not a pessimist, I'll share the Ceridian interpretation, which urges caution to those who might interpret the decline in the PCI as a harbinger of recession. In the September report, the Ceridian folks said that “we experienced similarly sluggish PCI and GDP growth in the aftermath of the 2001 recession. During that time, the economy didn't really get moving until a wave of new home ownership rose. Best therefore to consider a slow-growth alternative to a recession—stumbling forward, waiting to get the energy to run again, but not falling down.”

I find this quote particularly compelling because it points out that the economy did not recover from the last oil-price-spike-led recession until the housing

bubble had grown well beyond the “froth” stage. Hopefully, this time around we can build a recovery on a more solid foundation; however, without a dramatic improvement in consumer confidence it is hard to imagine where the demand for goods and services is going to come from.

In the past, the government could goose the economy by “spending against the wind” and building reserves through taxation during periods of expansion. Unfortunately, the government is now hamstrung by concerns over federal debt.

Going back to the Ceridian quote, I appreciate the insight contained in what must be an accidental choice of words. If there really is something to the predator-prey model, and there clearly is, we are quite literally “waiting to get the energy” for a full recovery. Unfortunately, on the supply side of the energy equation, tensions in the Middle East/North Africa (MENA) region remain extremely high, and the resumption of the flow of light sweet crude from Libya and the U.S. Gulf of Mexico remains a long way off.

From the demand side, China’s growth rate remains near double digits (though it is showing signs of weakness), and India’s growth rate hovers around 8 percent. Ergo, any marginal declines in consumption here won’t have much of an impact on prices given growing demand in emerging markets.

In short, it’s difficult to imagine where the energy for a full recovery is going to come from. Light sweet crude from the Bakken formation in North Dakota is certainly growing robustly, but U.S. exports of gasoline and distillate have surged.

On the natural gas front, while the shale gas revolution is still going strong, there’s reason to question the sustainability of low prices. Along these lines, the U.S. Geological Survey (USGS) recently revised their estimate of the total shale gas resource, cutting the initial estimate by 80 percent—a fact that won’t come as a surprise to those shippers who read my shale gas column.

Of course, this downward revision is not the first of its kind. In October 2010, the USGS reduced its estimate of undiscovered crude in the National Petroleum Reserve-Alaska (the NPR-A, not to be confused with ANWR) by a whopping 9.7 billion barrels, a 90 percent downgrade. To put this downgrade into perspective, 9.7 billion barrels is the equivalent of 70 years of production from the Bakken at current rates.

Resource downgrades and credit downgrades certainly don’t instill confidence in those of us who understand that a healthy economy requires the efficient movement of goods, people, and capital.

Looking forward, the U.S. economy is clearly not out of the weeds, a fact that makes it difficult for supply chain managers to keep their eyes on the road. We know there’s a turn up ahead, but it’s still difficult to see whether the road is going to take us to recovery and even higher fuel prices, or stagnation with high fuel prices. The wise logistics and supply chain manager will have thought these options through and developed strategies for both. □

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NASSTRAC Shipper of the Year: Stein Mart's \$20 million save

By re-engineering its supply chain, the fashion retailer reduced transportation expense, lowered store operating costs, enhanced labor planning, improved communication with its vendors, and was the hands-down winner of the 2011 NASSTRAC Shipper of the Year Award.

BY JOHN D. SCHULZ, CONTRIBUTING EDITOR

There are times when a company realizes that the old methods of doing business just aren't efficient any longer; and that usually calls for a complete overhaul in an attempt to reap rewards commensurate with the risks. For the supply chain team at Stein Mart, a fashion retailer with 260 stores and \$1.2 billion in sales in fiscal year 2010, going "all in" was definitely in the cards.

For years, Stein Mart relied on parcel carriers to deliver merchandise to its stores. Although this direct method enabled the product to get to its stores quickly, there were a number of obstacles—primarily related to transportation and store operating expenses.

"If you spoke with our merchants, they probably would have given us a grade of B," says Rick Schart, vice president of supply chain. "They were under the impression they were getting things fast. But if you talked to our store managers, they would have probably given us a D. Maybe a C-minus."

Stein Mart executives are no longer grading themselves so harshly thanks to a complete overhaul of its supply chain operations. Parcel carriers were replaced by a network of less-than-truckload (LTL) and truckload (TL) carriers. Although Stein Mart was receiving discounts from its parcel providers, a foundation of the retailer's new network—launched in March 2009—was to move freight via LTL and TL providers.

Changing operations to this approach has certainly proven more cost effective; in fact, shifting to those carriers and creating dedicated and pool distribution lanes resulted in savings well beyond just transportation.

According to the supply chain team, the company has

also realized labor savings due to the fact that the stores now know exactly—down to the half hour—when their freight will arrive, and new vendor requirements ensure that the merchandise is already ticketed and floor ready, reducing labor costs at the store end. Now, if workers are needed, they arrive at roughly the same time as the trucks.

The success of its supply chain redesign was so dramatic that Stein Mart has been chosen to receive the 2011 NASSTRAC (National Shippers Strategic Transportation Council) Shipper of the Year Award. It's the highest honor that NASSTRAC awards to its members, and, according to Executive Director Brian Everett, it is designed to recognize innovative methodology in the shipper community.

"NASSTRAC chose Stein Mart as the 2011 Shipper of the Year due to the retailer's willingness to take bold steps in fully implementing an innovative, new supply chain," says Everett. "By incorporating a new inbound network of LTL, truckload, and intermodal carriers, as well as an outbound network of dedicated fleets and pool distribution companies, Stein Mart was able to significantly improve shipping performance, create efficiencies, and decrease costs. Clearly, Stein Mart's innovative approach epitomizes the transportation and supply chain best practices that we encourage within our industry."

This year's winning team is led by three retail veterans recruited by Stein Mart in 2008 and 2009 to engineer this feat, including: Rick Schart; Gregg Sayers, director of supply chain transportation; and Bill Stover, director of supply chain operations. Together they hired a group of individuals with varying degrees of supply chain expertise to build out



CY CYR/GETTY IMAGES

Bill Stover (left), director of supply chain operations; Gregg Sayers, director of supply chain transportation; and Rick Schart, vice president of supply chain, Stein Mart.

what's now a cohesive supply chain team focused on providing support to their merchant, store, and vendor partners—and, of course, keep costs in line.

So, what are the total cost savings? Try about \$20 million annually; and that's ongoing, year after year, says Schart.

DEFINING THE CHANGE

Historically, Stein Mart was shipping freight directly from its vendors to its 260 stores via small parcel carriers. Even though the parcel carriers were doing a commendable job of delivering the merchandise in a timely manner, this process had its drawbacks.

Compliance with packaging and floor-ready guidelines was difficult to monitor and measure, freight visibility was limited, and store delivery appointment times were not consistent and often occurred while stores were open for business.

“From a cost standpoint it was expensive,” says Sayers, who adds that these costs were not limited to moving the cartons from vendor to store. “There were expenses at the stores to get the merchandise ready to sell; and there were also problems with managing the receipt of our product and our ability to reconcile anything that was not in compliance.”

In 2008, at the low point of the Great Recession, many U.S. businesses were hurting. Stein Mart made a conscious decision to review all expenses and make the organization work more efficiently. Part of that decision was to take an overall look at its supply chain and to ultimately move to a more sophisticated, cost-effective model.

“Based on the business review that occurred in 2008, and with full support of the organization, we began to transition our supply chain,” says Schart. “I

arrived in November 2008, and Bill and Gregg were my first hires. We were confident we could pull it off, but we were concerned *how fast* we could pull it off.”

According to Schart, it came down to three keys: getting the right people on board to develop and manage this new strategy; finding the right carrier and 3PL partners; and partnering with the rest of the Stein Mart organization, especially IT, to align and support the new concept.

The groundwork for launching the new supply chain took about six months. It involved educating vendors on new processes and expectations, working with finance to develop systems to capture costs, launching technology (including EDI for billing), as well as hiring a new set of 3PLs and TL and LTL carriers. “Those six months were grueling, but worth it,” says Sayers. “We all aged in dog years in those six months.”

PUTTING IT TO WORK

In May 2009, Stein Mart launched its new supply chain network. The four-wall network is comprised of consolidation centers (CCs) and stores distribution centers (SDCs). The inbound transportation network is comprised of TL, LTL, and intermodal carriers. The outbound transportation network is comprised of dedicated fleets and pool distribution companies.

Almost immediately upon launch of Stein Mart's new supply chain, things changed. Through its vendor support program, the company began partnering with its vendors, educating and communicating new expectations and guidelines. These included pre-ticketing and pre-hanging requirements to ensure the merchandise was "floor ready."

The team also included several new EDI transactions, which replaced a less sophisticated method of billing. Goods are all identified through the use of industry standard bar coded shipping labels. "We did very little EDI before this started," says Stover. "We had to lay all of that groundwork."

The result of this partnership was that stores were able to receive the product by scanning the carton, as opposed to having to open and tally each unit within the carton. This significantly reduced the time a carton spent in the back room of the store and ensured merchandise could be on the selling floor immediately after receipt. "Our vendors deserve a tremendous amount of credit for their efforts to adjust their processes to support our new supply chain," says Schart.

Stein Mart's distribution centers took over the role of inspection and value added services such as ticketing and validation of carton contents. This ensured that when cartons arrived at the stores, the merchandise inside was exactly what the stores had been allocated by the merchants. A new delivery network introduced day/time definite deliveries so the stores could plan on—within a half-hour—the expected delivery of their merchandise, making labor scheduling much more efficient.

Stein Mart's shipping performance on both inbound and outbound was also dramatically improved. Through its vendor program, the supply chain team can

see whether a vendor is shipping early, on time, or late so appropriate communication and steps can take place with both the vendors and the merchants.

The inbound transportation network is tracked at the purchase order level, enabling the supply chain to communicate the arrival of trailers into the store distribution centers, allowing for better labor planning within these operations as well.

From a delivery standpoint, Sayers says that the on-time percentage runs over 95 percent—measured down to the hour. "The small package guys simply don't measure it that closely. They measure on-time in terms of days, we now measure in terms of hours," says Sayers, adding that the team needed to get much more surgical in its commitment to the stores.

"We needed to develop a delivery method to ensure that stores can accurately plan the number of associates that they're going to need to receive the product," says Sayers. "Our goal is to have all our merchandise on the floor before the store opens; so, when a customer walks into our store, the customer sees a fresh assortment of merchandise ready. That's another benefit."

Stein Mart's three consolidation centers and three store distribution centers are operating by 3PLs. In addition, Stein Mart operates its own building near its Jacksonville, Fla., headquarters to store offseason buys and to provide pick pack and warehousing services. "One thing that we're most proud of is that once we went live with our network in May of 2009, we went from zero to running 90 miles per hour overnight," says Stover.

REAPING REWARDS

There are not many retailers in America able to boast of a supply chain initiative that contributed \$20 million directly to the bottom line. According to Schart, these savings came from reduced transportation expense; lower store operating costs from better labor planning and reduced floor-ready processing; new visi-



bility to purchase order delivery status; and improved communication and cooperation with vendors.

"The small parcel carriers are great service providers, so getting our packages to stores was not the issue," says Schart. "But

by setting up our new network and establishing new vendor expectations, we were able to improve the quality of the delivery experience that now results in the merchandise being received, unpacked, and on the store's selling floor before the store opens. That's a huge benefit."

Because Stein Mart utilizes a small core carrier base, it's able to keep those carriers busy consistently throughout the year—resulting in favorable rates. It initiates regular conference calls with its carrier base to keep them up to speed on recent trends in the flow of freight, the upcoming seasons, or changes in processes that will affect the carriers, the stores, or the network.

"We want to be a good steward for our merchant partners," says Schart. "At the end of the day, our buying and allocation teams drive product into our stores. Being supply chain experts, we use our skills to correct issues and set higher expectations for every shipment to ensure timely, floor-ready delivery. If the right merchandise gets to the right store at the right time, that's a win for everybody."

Despite winning Shipper of the Year, Stein Mart is certainly not resting on its laurels—true to its corporate culture. "We're always analyzing what we can do better, faster, and more efficiently and looking for additional process improvement opportunities," says Stover.

Sayers adds that much of the credit goes to Stein Mart's organization for agreeing to this revolutionary logistics operations change. "This was a major change," he says. "The support we received from the top down across our entire organization was phenomenal. It could have gone a number of different ways, but because of that support it went exactly how it was planned." □

John D. Schulz is a Contributing Editor to Logistics Management

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MillerCoors taps dunnage innovation

When the beer giant revamped its dunnage processes, it realized significant cost savings, ushered in a safer work environment, and found a more fluid freight model—all while helping the company get a little greener.

BY JEFF BERMAN, GROUP NEWS EDITOR

When two large companies merge into one, there's inevitably going to be a convergence of operational facets. This proved to be no exception—especially on the logistics and transportation side—when domestic beer magnates Miller and Coors joined forces to become MillerCoors in 2008.

One of the biggest challenges right off the bat was for the new entity to get its sudsy products loaded onto trailers in a more productive and cost-efficient manner. For example, when the merger became official, MillerCoors discovered that they were using different sized pallets for loading beer onto trailers, says Raymond Reehm, strategic sourcing manager at MillerCoors.

“The decision was made to standardize on a 32 x 40-inch pallet and begin looking at optimizing our loading pattern in trucks,” says Reehm.

Miller had historically used a 32 x 40-inch pallet and a bulkhead system, which was comprised of permanent, semi-permanent, and portable bulkheads using e-track bars, plywood, and 2 x 4 “A” frames. Reehm says the type of bulkhead previously deployed varied by carrier and brewery.

This led to a situation where the combined MillerCoors initially needed to determine what the optimal approach was for creating a false bulkhead at the front of a trailer.

“With beer being such a heavy product from the weight to

the volume occupied, we had to create a false bulkhead at the front of the trailer,” explains Reehm. “Our loads are only going to occupy 40 of the 53 feet in a trailer, and the load has to go into the center of the trailer and be able to come off the nose of the trailer before the first pallet is put in. It also has to be secured so loads don’t shift forward and become disrupted.”

To do this, the team created a bulkhead using various methods of disposable or highly unfriendly dunnage systems that were essentially wood and some cardboard.

Given the fact that MillerCoors typically relies on a common carrier network to more than 500,000 outbound shipments per year, it was providing each carrier it used with a bulkhead extension comprised of e-track bars, plywood, and 2 x 4 “A” frames for each trailer.

When the loads made it to a distributor, sustainability was not a core component of the process. In a typical scenario, they would remove the plywood and 2 x 4s, with the plywood, which Reehm said was good for 10 to 12 uses, usually getting returned, and the 2x4s getting thrown out.

According to Reehm, this expense of this first system, multiplied by the number of shipments, cost the company in the neighborhood of more than \$10 million annually. “This was viewed as a necessary cost, given the processes we had at that time,” he says. “Without that process, we could not ship beer.”

What’s more, injuries to staff were occurring as a result



By using a “false” bulkhead at the head of its trailers, MillerCoors is able to load more cost effective and productive shipments.



of handling two 55-pound sheets of plywood per load. The team found that this was a major contributor of stresses, strains, and splinters that were responsible for about 25 percent of MillerCoors' recordable employee injuries.

ROLLING OUT THE NEW

The relative inefficiency of this process, coupled with a total annual freight spend bill of \$20 million when factoring in expenses related to dunnage and dunnage placement inside trailers,

what enhancements we could deploy to make it more useful to us," says Reehm. While doing its due diligence the team came across Paylode, a provider of reusable, plastic dunnage systems, and decided to dig deeper into the company's offerings.

"We worked with Paylode to determine the optimal way of creating the proper space in the nose of the trailer," says Reehm. Ideally, the team was looking for a product that was adjustable because the load lengths vary between

served as the impetus for Reehm and his team to see if they could find a way to handle things more efficiently and safely while also reducing costs.

38 feet and 42 feet. "So we needed something that had some variability in it and was cost-effective, making the reusability factor critical, too," he adds.

The testing rollout was launched in mid-2008 at the MillerCoors Trenton, Ohio, facility. The team started out with 20 loads and then another 100 loads a month later, followed by another 100-load test back in Trenton, and then more testing in Albany, Ga.

At this stage, the business case was finalized and MillerCoors went ahead and purchased its bulkhead spacers and separation pads—a move that set the change management process in motion. From there, the company sent initial truckloads to each of its eight national breweries so each location could get familiar with how things worked with the new dunnage system. This was followed by a major rollout in Trenton, followed by each of the other breweries.

"We first worked with the carriers without bulkheads because we had to construct 2 x 4 frames in their trailers," says Reehm. "We then went back and populated the remaining trucks, and then did distributor training. We ship to thousands of distributors in the U.S., so they needed to get trained on the returns process."

As with any type of change management process, this transition was not without a "pint" of employee pushback. But as soon as MillerCoors' staff started using the new dunnage, it quickly became "their new best friend," quips Reehm. One major reason for this was shifting from a 55-pound sheet of plywood to an 18-pound plastic separator pad, which is light, easy to use, and does not cause splinters. Shifting from plywood to plastic also brought about a 25 percent reduction in recordable injuries for MillerCoors.

"Change management became easy at that point," says Reehm, "because this new process was such an improvement in their eyes."

And while the new system was meeting with approval across the board, it wasn't without a few kinks that needed to be worked out, such as when the initial truckloads were transported to each of the eight brewery facilities.

MillerCoors had to intentionally make sure that its product was going to be able to be stored outside, which Reehm noted is a huge advantage of using plastic dunnage. While in theory, the cone-like shape of the dunnage was not supposed to hold any water, this is precisely what happened in the dunnage used in the Ft. Worth, Texas-based MillerCoors brewery. Reehm says they found that the dunnage was holding a small amount of water in the bottom, although it was supposed to drain water

Taking it to the rails

While trucking is the predominant transportation mode for MillerCoors—90 percent of its product moves over the road—the remaining 10 percent is rolling on the rails.

And because rail is a mere 10 percent of its total freight mix, it is not any less of a challenge, says Reehm. In fact, moving beer via rail is a completely separate challenge from a cost perspective when it came to determining how MillerCoors could increase its rail shipment weight.

"We were only using a single tier of pallets per rail car, and we would have about 101,000 pounds for average weight with a capacity of 137,000 pounds—so we were shipping a lot of air," says Reehm.

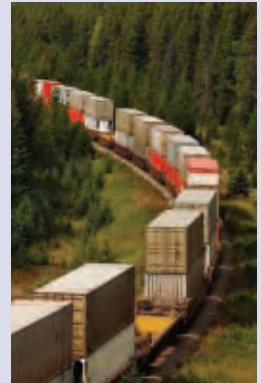
Because MillerCoors couldn't make its pallets any taller, it took a different approach to increasing rail shipment weights: it made them shorter. This required double-stacking pallets inside of rail cars. To pull this off, MillerCoors worked with Paylode to develop custom-made dunnage that's now used to secure its rail loads.

"The rail environment is violent, so the

ability to take the forces that occur in those rail cars have to be mindful of the design and take the abuse," notes Reehm. "To be in the rail environment, products need to be approved by the Association of American Railroads, which requires a lengthy certification test to make sure a shipper has the right product for the right environment."

The next step from here was to take these custom rail shipments to the MillerCoors testing facilities in Pueblo, Colo., and crash rail cars in impact tests at 6 miles per hour to make sure the dunnage worked in harsh environments. According to Reehm, this effort proved to be successful, leading to more efficient rail shipment processes for MillerCoors.

—Jeff Berman, Group News Editor



out whenever it rained.

"We met with Paylode to do a redesign on it in which they drilled a bigger hole in the bottom so the water would drain out better," adds Reehm.

Making a quick fix by drilling a bigger hole in the bottom of the dunnage eliminates having rain or stagnant water collect in it, which is considered unsanitary.

CELEBRATING THE BENEFITS

The move to reusable, plastic dunnage has certainly ushered in significant cost savings for MillerCoors. The company has reduced its total annual spend on dunnage and packaging for its trailers from \$20 million to \$12 million; and freight damages, that were once ringing in at around \$3 million per year, are now down to less than \$1 million.

On the sustainability front, MillerCoors met its 2015 goal to eliminate 20 percent of waste sent to landfills five years early, eliminating almost 7,700 tons of solid waste and saving 41,500

trees per year.

While MillerCoors has seen significant savings since this undertaking slightly more than three years ago, Reehm insists that more work needs to be done.

"One of the requirements of this system was that it needed to be very flexible, meaning we can adjust for things like changing truck weight limits on highways, which could happen in time," he says. "We need to be flexible enough to take advantage of future changes on the legal or regulatory front and will be ready to scale up when we need to."

And with such a flexible system intact, MillerCoors is looking at new and improved equipment like ultra lightweight and specialized trailers designed to carry heavier weights that will allow the company to be nimble while using a secure dunnage system. □

—Jeff Berman is Group News Editor of the Supply Chain Group

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SQUEEZE

more out of your

TMS

BY BRIDGET MCCREA,
CONTRIBUTING EDITOR

Maximizing software value often takes more elbow grease than today's companies are willing to put into it, yet these efforts frequently yield results that are hard to overlook in an era where every penny counts. Frequently run in a bare-bones manner and relied upon for just a handful of functions, transportation management systems (TMS) fall into a supply chain software category that's particularly ripe for optimization.

"In many cases, corporations try to find the low-hanging fruit of the TMS, in search of functions that will provide the most value," says Greg Aimi, research director of supply chain at Gartner. "They then integrate those functions as 'phase one' of their TMS implementation and never go beyond that point."

Over the next few pages, we'll help shippers break out of that TMS shell, determine where the gaps are in their current systems, and come up with a plan of action to fill them on the way to effectively optimizing their purchase-and-install or on-demand TMS investment.

FILLING THE GAPS

Whether a TMS' capabilities are fully optimized depends on three factors, according to Aimi: The amount of time the system has been in place; the strength, involvement, and expertise of the team that's running it; and the level of sophistication of the software itself. These three factors have the most impact on a firm's ability to optimize a TMS.

A sophisticated TMS that's been in place for five years and has been largely left to run on its own, for example, is probably not being leveraged to its full capacity.

Another factor that prevents companies from squeezing the most from their TMS investments is a lack of regular maintenance. Rates, routes, carriers, customers, fuel costs, and other variables

are in constant flux, and the TMS that's optimized today won't necessarily be fully leveraged a year from now.

"Your TMS today is reflective of your firm's current operating environment," explains Adrian Gonzalez, director of Logistics Viewpoints, a blog focused

on logistics trends, technology, and services. "Fast forward one or two years. Without current, accurate modeling, you end up with a classic garbage-in, garbage-out problem." Even worse, says Gonzalez, you may have resorted to faxes and spreadsheets, assuming

Your transportation management system (TMS) is installed and running, but are you getting the most out of it? Our technology correspondent helps shippers determine where the utilization gaps exist and formulates a plan to effectively optimize a TMS investment.



that the TMS is “broken” and no longer making sense.

“In most cases, it’s not the TMS that’s broken,” says Gonzalez. “The problem is that you set it up two years ago, and the same conditions no longer apply.” So, how does a company avoid this trap and

ensure that its TMS is optimized not only today, but in the future?

SQUEEZING THE LEMON

One of the easiest ways to determine if your new or existing TMS is running on all cylinders is to simply pick up the

product brochure to see exactly what features are included with your specific setup. “Look at all of the pieces and parts, and see if you’re using all of them,” Aimi suggests. It sounds simple enough, but how often do you really go back and review product guides *after* the systems are up, running, and managing the basics functions as promised?

If the brochure turns up interesting features that you haven’t seen used in your own operations, it’s time to talk to your software vendor or systems integrator to find out why those features weren’t mobilized. A shipper that hires a third-party provider to pay its freight bills, for example, would benefit financially by folding that function into its TMS and using the system’s auto-pay feature. “That’s a pretty simple example that could lead to some significant savings,” says Aimi.

Jim Davis, senior manager at the consulting firm Capgemini, says shippers should also ask themselves whether their installed or hosted TMS has lived up to its initial vision. Is it performing the functions that you thought it would? Has it automated tasks that were previously handled manually? Has it helped reduce paper, phone calls, and faxes? Is it saving the company money, time, and hassle?

If the answer to any of those questions is “no,” then Davis says it’s time to revisit the scope of the project—that initial vision—and whether or not you’re leveraging the toolset to its fullest capacity. Davis states that the latter is often to blame, and the problem is fairly easy to solve. “It’s really just a matter of learning what your TMS really has to offer, including new releases and versions,” says Davis, “and adding the missing functionalities to your own lineup.”

Take dashboards, for example. Used to retrieve and review metrics and analytics on the fly, TMS dashboards are often left by the wayside when the

software is rolled out. “Being able to quickly measure how well you’re doing, and what your TMS is doing for you,” says Aimi, “can be a valuable addition that helps squeeze out a few more percentage points of savings.”

Maintaining close ties with TMS vendors and/or developers (for home-grown systems) can also go a long way in helping a shipper get the most out of its TMS. This holds true not only during installation and implementation, but also in the months and years that follow. “Your vendor can clue you into upcoming releases and new functionalities that you might not otherwise hear about,” says Davis.

Aimi, whose firm expects the TMS market to experience double-digit growth in 2011 and a five-year compound annual growth rate of 9.4 percent, also advises shippers to turn to their vendors for help conducting TMS audits that very often turn up “missing links” in the software’s value stream.

“Software vendors usually have very good examples of customers that are leveraging their products to their fullest potential,” says Aimi. “In many cases, a quick meeting with the vendor can help you detect any gaps and help you prioritize your next optimization moves.”

Outside consultants can also help. For example, Aimi points to Chainalytics as one of several firms that specializes in supply chain performance improvement, and that offers a TMS audit service. “They’ll come out and help you understand what you’re getting from your TMS,” says Aimi, “and what more you could be gleaming from it.”

GETTING WITH THE PROGRAM

In today’s business environment it’s easy to get caught up in the day-to-day tasks and forget about the software engines that are driving productivity and savings. But you wouldn’t drive an automobile for years without regular oil changes, tire rotations, and brake fluid flushes—so why would you allow your TMS investment to languish?

“A TMS is not something that you set up once and forget about,” Gonzalez says. “It’s a living, breathing solution that needs to be maintained regularly in order to perform at optimal capacity.” Gonzalez advises shippers to take

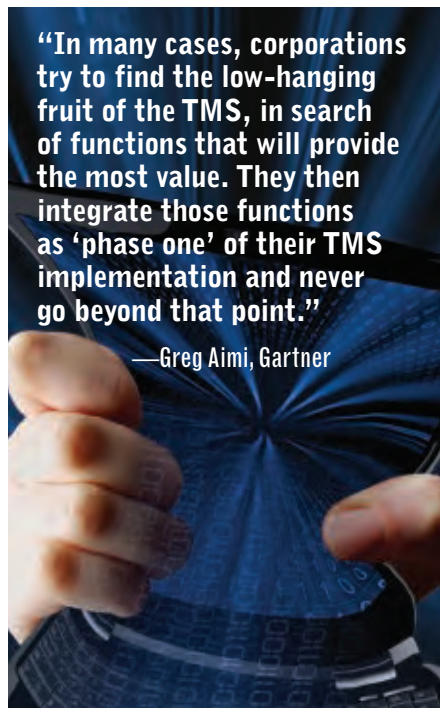
TMS cost reduction opportunities

TMS operation / capability	Typical savings potential
Rate negotiations and compliance	4-15%
Route and mode optimization	5-25%
Carrier assignment optimization	4-8%
Electronic communications w/ supply chain partners	2-6%
Continuous moves and dedicated fleets	3-5%
More efficient and automated operations	1-5%

*Based on approximately 10 years of evidence from various customers of TMS systems, starting point proficiency/efficiency greatly determines the magnitude of savings from each of the areas.

Source: Gartner

quarterly “snapshots” of their TMS to see how they’re performing and what adjustments need to be made. Also consider the new software releases, upgrades, and/or patches that have been released recently, and determine



whether they should be integrated into your existing setup.

And don’t forget that freight rates and other charges change regularly—a fact that should be reflected in the TMS. “To maintain data quality,” Gonzalez suggests, “the content regarding carriers, rates, and ship to and from locations should be validated at least once a year, if not more regularly.”

Gonzalez, who recently attended a TMS conference hosted by vendor MercuryGate, says shippers looking to optimize their transportation operations should keep an eye on concepts like “embedded analytics” and “competitive intelligence.” Put simply, Gonzalez says these features will allow shippers to use real-time data points such as carrier lead times and create rules in their TMS—which in turn will make automatic adjustments when the “trigger points” are reached.

“There’s definitely a push to help automate more processes and keep TMS up to date and aligned with what’s happening in real-time,” says Gonzalez. For example: Let’s say preferred carrier Y has been missing on-time delivery deadlines or rejecting loads for no apparent reason for the last month. Using a pre-determined trigger point, the TMS will automatically generate an alert to the problem, thus allowing for quick action—such as an e-mail or call to the carrier, or a switch to another provider—on the shipper’s part.

These and other advanced features blend well with transportation management systems’ inherent mission of automating the transportation component of the supply chain. Shippers that realize this—and that continue to work on optimizing their hosted and installed software on a regular basis—will be well positioned to squeeze maximum ROI from their investments. “Just like a car,” says Gonzalez, “a TMS needs to be regularly reviewed and tweaked in order to run at its fullest potential.” □

Bridget McCrea is a Contributing Editor to Logistics Management

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Logistics in China: Thinking ahead

What is the country doing to ensure the efficiency and effectiveness of those global supply chain networks that have tapped its resources and fueled its rise to power?



View of cargo containers at Hong Kong harbor.

BY BILL FU, BROOKS A. BENTZ, AND MARK T. MCCALLA, ACCENTURE

To varying degrees, China has become the world's factory: supplying North America, Europe, and other locales with all manner of apparel, electronics, food products, appliances, and components for manufactured goods. But how is China's transportation and logistics infrastructure coping with such rapid growth? Even more important, what is the country doing to ensure the efficiency and effectiveness of those global supply chain networks that have tapped its resources and fueled its rise to power?

Despite China's huge successes, it's never been a smooth ride. According to the China Federation of Logistics and Purchasing, logistics costs accounted for 18 percent of the country's GDP in 2010. This is twice the level of most developed countries. Tax burdens, expensive tolls, and chaotic competition in the logistics market are the main reasons logistics costs are so high. In fact, some of the country's manufacturing concerns are moving to nearby lower-cost countries as China's costs—particularly labor—continue to rise.

Still, China's logistics infrastructure has

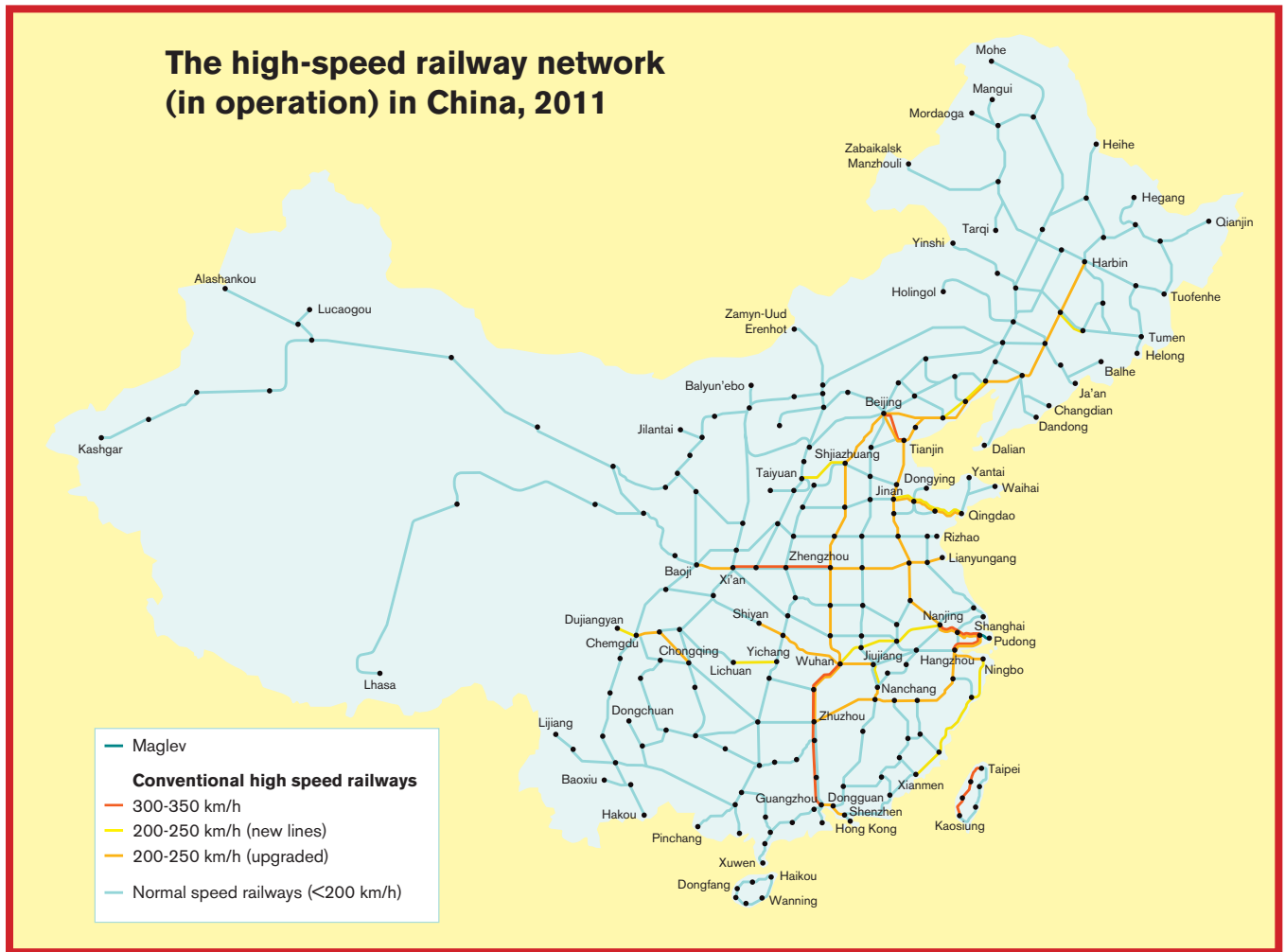
improved significantly during the implementation of the country's eleventh Five-Year Plan (2006-2010). Acknowledging that economical labor wouldn't be enough to ensure long-term growth, China has increased its investments in highways, railways, and other transportation facilities.

However, logistical inadequacies still exist, including sub-par distribution facilities, roads, and railway networks—especially in the western (less developed) provinces. This is a clear reflection of China's unbalanced economic growth and a major detriment to its ongoing competitiveness.

TRENDS AND DEVELOPMENTS

In a logistics context, China is clearly thinking ahead. On June 8, 2011, Premier Wen Jia Bao announced that "we must make a complete set of policies and measures, and promote the healthy development of the logistics industry." The resulting logistics improvement initiatives, known as the Eight State Regulations, focus on:

- tax preference;
- land policy support;
- road traffic improvement;



- business environment improvement;
- resource integration;
- technology innovation and application;
- government investment and bank credit support; and
- logistics support for agriculture.

These initiatives should help buoy logistics and transportation performance in at least seven major supply chain areas:

1. Domestic freight. The domestic freight market, while very fragmented, is making progress in procedure standardization and oversight. As noted above, China’s State Council promulgated the new Eight State Regulations to stabilize and reinforce development discipline in the logistics industry. China also is making efforts to regulate the freight market—a potentially impactful move designed to deal with rising labor costs and more expensive fuel.

Thus far, pending regulatory increases haven’t dissuaded some Chinese transport companies from becoming competitive players in the global logistics market. The emergence of domestic 3PL providers is also viewed as a step toward better efficiency in the freight market.

2. Marine freight. China’s investment in ports has been

unrivaled globally, with more than \$357 billion Yuan invested during the last Five-Year Plan alone. These investments have enabled China to experience strong and sustained progress in spite of poor global economic conditions.

The top Chinese mainland ports handled 13.5 million twenty-foot equivalent units (TEUs) in January 2011. This translates to 17 percent year-on-year growth, which is relatively consistent with increases at major coastal ports from 2001 to 2010. During this period, Shanghai became the largest port in the world, with 29.06 million TEUs exported in 2010.

In the bulk cargo markets, surplus capacity resulted in a drop in freight rates, especially for oil tankers and dry bulk cargo. The problem here is simply an imbalance of supply and demand. On the one hand, numerous Chinese ships have come on-line, thus increasing capacity. On the other hand, debt crises in many developed countries have suppressed global demand.

As a result, port investments are actually going down relative to China’s previous Five-Year Plan. In fact, enough capacity already exists to handle reduced demand from the European Union and the U.S.

3. Rail transport. China has invested heavily in its railway

Global Logistics: China Update

infrastructure for both freight and high-speed passenger services, and this is playing a critical role in the growth of the country's logistics industry. In the first half of 2011, total goods transported by rail in China increased to 1.94 billion tons—an 8 percent year-on-year increase.

By the end of 2011, China's total miles of rail is expected to top 99,000 km. The volume of goods transported by rail should also increase, given accelerated railway construction and expansion, and more high-speed railways. Longer term rises in rail freight are also expected, even though military traffic, resources, and passenger rail take precedence over the transport of goods.

4. Road transport. The largest portion of Chinese domestic freight—as is the case in North America and the EU—moves by highway. To accommodate these high volumes, China's road-transport network is improving gradually, especially in the country's second- and third-tier cities. Road transport network expansion is a particularly high priority among local governments. Road-oriented service levels are also improving, due largely to fierce competition in the logistics market. More multinationals in China, including more U.S. conglomerates, are sourcing logistics services locally.

Despite the popularity and rising demand for road transport, cost concerns keep topping the list of development stress points. Rail transport prices are 20 percent to 30 percent cheaper than road transport. Barge shipments are approximately 50 percent cheaper. For these reasons, many believe that better-integrated transportation networks will become the dominant new trend in the Chinese freight market.

5. Air freight. While air cargo volume has risen steadily, approximately 6 percent annually, the increase is not dramatic when compared to China's overall logistics market. Like many countries, China uses air transport mainly to move high-value or highly compact goods.

Container exports from major Chinese ports in 2010

(Thousand TEU)

Shanghai	29,069
Shenzhen	22,509
Ningbo	13,144
Guangzhou	12,555
Qingdao	12,012
Tianjin	10,080
Xiamen	5,820
Dalian	5,242

Source: China Container Industry Association, 2010

In this sector, international logistics giants are facing fierce competition from local Chinese air companies. China Southern, the leading Chinese air-freight carrier, reported revenue of 42.4 billion Yuan for the first half of 2011—a year-on-year increase of 22.3 percent. UPS achieved 10 percent revenue growth in the China air-freight market.

6. Inland and short-sea shipping. Short-haul waterborne transport is taking a more important position in the economic growth of mid-western China. A primary reason is that traditional manufacturing is moving west due to increasing costs in China's eastern cities, and supply chain decision makers are striving to carve new channels into inland areas.

7. Forwarding. Forwarding and brokerage services are enjoying sustained growth. Chinese forwarders, for example, are providing more complete, more customized supply chain



Hong Kong Container Terminal.

Global Logistics: China Update

solutions for international customers and thus reaping the benefits.

They're also opening new branches in the U.S., Europe, and elsewhere. These moves should help foreign companies trade more closely and effectively with China. Kerry Logistics, headquartered in Hong Kong, is a good example of a China-based 3PL expanding within China, across APAC countries, and in the EU.

DOWN THE ROAD

China's logistics industry faces great opportunities and challenges. However strong support exists throughout China's government, and this could allow new domestic entrants to compete more effectively against the country's traditional players and perhaps even on the global stage.

But established companies should enjoy success as well. Take China Ocean Shipping (Group) Company—China's largest global shipping and logistics specialist. China Ocean Shipping was the sixth largest shipping company in the world at the beginning of 2011. Within six months, it had jumped to fourth place, with a capacity of 650 thousand TEUs.

Integrated transport will likely be an increasingly hot logistics topic in China. Combined marine and road freight is being used more and more to move goods to inland provinces. Transport from inland locations to major ports is also growing fast, thanks to construction of improved road networks, river routes, and logistics facilities. Other forms of integration could become more prominent. In some Chinese coastal cities, for example, buyer consolidation is being used by major logistics companies to optimize costs and efficiency.

Traditional transport modes, such as rail and water,



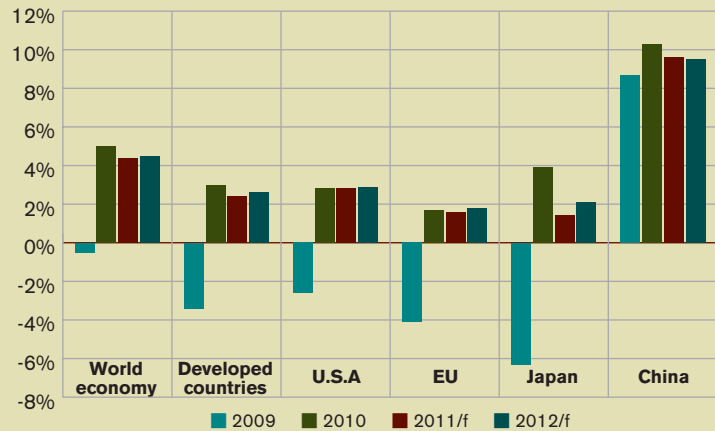
China's logistics infrastructure has improved significantly during implementation of the country's eleventh Five-Year Plan (2006-2010).

are already seeing a significant revival as viable modal choices, with large-scale investments enabling expansion and improvement. Rail transport volumes, however, will probably grow faster than ever, given rapid rail-system expansion and significant progress in railway technologies. More supportive policies will be issued and more positive measures will be taken by the Chinese government for development of rail transport.

Another significant logistics influencer may be tax relief. In China's recently issued Eight State Regulations, tax rationalization is a top priority and could bring welcome changes to the logistics industry. A uniform tax rate for the logistics industry is not out of the question.

World economic growth

(%, 2009-2012)



Source: IMF World Economic Outlook

Logistics enterprises could also receive more tax incentives due to a series of accommodative government policies. In fact, for promoting export, preferential tariff rates are now provided by some local governments. Companies will need strong local knowledge and deep local relationships to keep on top of emerging incentives and regulatory changes.

It's also a given that positive moves in China's logistics industry will be driven by factors that many westerners find unfamiliar or even distasteful: extensive government guidance and intervention. Chances are good, in fact, that governmental policies and supervision will strongly favor logistics.

Constructions of logistics parks, rail tracks, and ports will be given priority in terms of funding, credit, and permissions. Not surprisingly, domestic companies will be the principal beneficiaries.

Nonetheless, non-Chinese companies will also have myriad chances to leverage improvements in China's logistical underpinnings. China clearly recognizes its growth potential and wants a world-class transportation

and logistics infrastructure to support its progress.

Toward this end, 700 billion Yuan will be invested annually in rail projects, according to the country's twelfth Five-Year Plan. By the end of 2015, road networks will connect 90 percent of all municipalities. More than 1.5 trillion Yuan will be invested in aviation. The net effect is extensive opportunities for any company with strong ambition, strategies, and operational capabilities—combined with serious supply chain smarts. □

Bill Fu is a Manager at Accenture, Brooks A. Bentz is a Partner at Accenture, and Mark T. McCalla is a Senior Manager at Accenture

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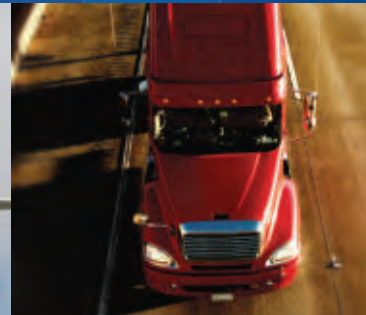
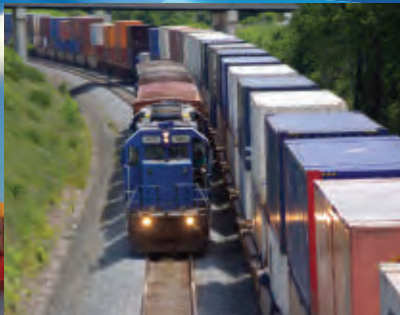
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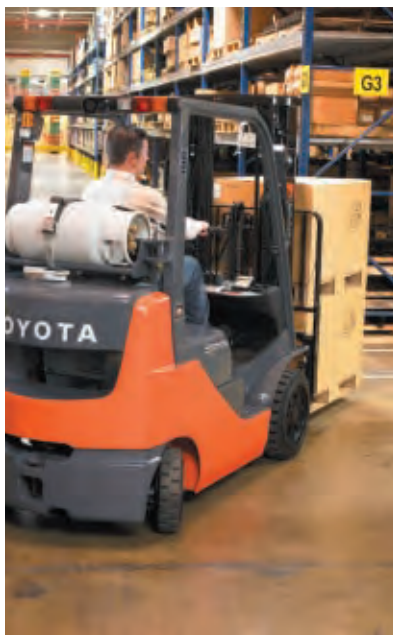
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15 ways the lift truck



Today's lift trucks offer more in the way of technology, power, and performance than ever before. Here's a look at the latest innovations available in today's trucks.

BY **BOB TREBILCOCK**, EDITOR AT LARGE



Remember that old commercial: This is not your father's Oldsmobile? The same can be said for lift trucks. If you haven't replaced your fleet of lift trucks in recent years—and, thanks to the recession, many readers parked some of their fleet during 2009—you may be surprised by the technology being built into today's offerings. The developments include everything from ergonomic improvements for operator comfort to fully automated lift trucks that operate just like an automatic guided vehicle (AGV).

But, not all of the changes are as revolutionary as converting a lift truck into an AGV. "We are an evolutionary industry, not a revolutionary industry," says Jeff

Bowles, product line manager, Mitsubishi Caterpillar Forklift America (MCFA).

If you think about it, that approach makes sense. New lift trucks have to go right to work in existing applications without disrupting operations. What's more, the basic lift truck remains the backbone of most warehouses, DCs, and manufacturing plants. Those evolutionary changes are resulting in trucks that are more productive, smarter, and reliable than ever before.

We recently spoke to 10 of the leading lift truck manufacturers in North America to learn about the 15 most important advancements found on the next generation of lift trucks. Here are the results.

is evolving

1 Automating lift trucks. Automation is coming to lift trucks as Crown, MCFA, Toyota, Nissan, and Raymond ready lift trucks that can operate as automatic guided vehicles. Raymond, for instance, has plans to introduce an automated lift truck incorporating a camera-based navigation system from Seegrid in early 2012. The justification for automation is simple: Labor is expensive. “If you look at the five-year economic life of a lift truck, labor represents 70 percent to 75 percent of the total investment,” says Frank Devlin, manager of advanced technologies at Raymond. “If you can maximize your labor force, there is a tremendous need for this.”

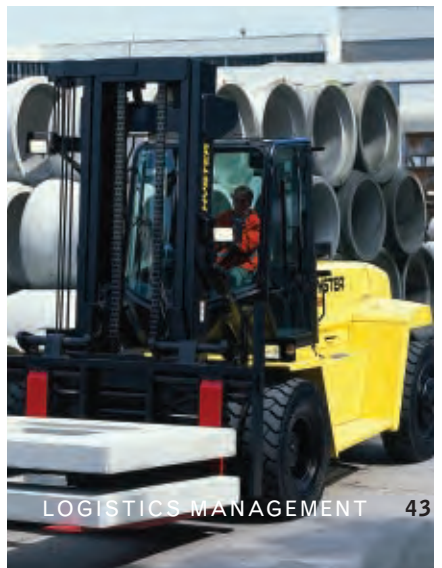
2 Bringing RFID to lift trucks. In addition to automated lift trucks, manufacturers are exploring semi-automated solutions. Through its relationship with Jungheinrich, MCFA is bringing RFID- and transponder-based technologies from Europe to very narrow aisle lift trucks in the North American market. One solution relies on a warehouse navigation system that knows where the truck is located based on encoders and transponders in the floor and RFID tags at the pick and pallet locations. Once order picks are loaded into the system, the truck calculates the most efficient way to pick the orders; it will also calculate the lift and drive speeds that are most productive for the process.

“The system will automatically drive and lift the truck in an automated fashion from pick location to pick location without going to a completely automated truck,” says Bowles. MCFA is also installing transponders and sensors

on the truck for safer operations. On man-up trucks, for instance, the system will monitor what’s in front of the truck at the ground level. “It’ll slow the truck until the obstruction is moved when the operator has limited visibility,” says Bowles.

3 Remote-controlled trucks. Crown is also developing semi-automated solutions that serve the gap between conventional lift trucks and AGVs: a remote-controlled vehicle for case picking. An order selector can drive the truck into a pick zone; while picking, the operator moves the truck from one pick location to the next using a remote control device. That saves the time usually spent getting on and off the truck between picks. “We are trying to bring functionality to the truck that adds value,” says Tim Quellhorst, senior vice president of Crown. “This is a good example of a solution that can drive labor productivity in the less than full automation area of operation.”

4 Lift truck, phone home. Lift trucks are getting smarter, thanks to telematics—an industry term for the convergence of telecommunications and data collection technologies such as sensors and RFID technology. Telematics allow the lift truck to collect data about the operation of the truck and then communicate that information to a system of record. The onboard computer on a Raymond lift truck, for instance, has the ability to send fault codes and the serial number of a truck by e-mail to a technician’s smart phone or computer. “That allows



Warehouse & DC Management



a technician to diagnose a truck and bring the tools, parts, and components they need for the job,” says Devlin.

Integrating the lift truck with the WMS. Most of the information being collected by telematics systems today is being used to support maintenance and fleet management initiatives. The next step, says Jonathan Dawley, vice president of marketing for NACCO Materials Handling Group (NMHG), is to integrate telematics with a warehouse management system (WMS). That integration would allow lift truck data to become part of the workflow of a facility. “Using data from the lift truck to improve the productivity of labor could be more important than running your lift truck 1 mph faster,” Dawley says.



The ergonomic lift truck. Ergonomics and worker comfort have long been a priority in Europe, where distributors and manufacturers have a longer term relationship with their employees. That thinking is beginning to permeate U.S. enterprises, especially those with a global footprint. That, in turn, is driving the demand for more European style trucks here in the United States. “We see some of our U.S. and Canadian customers creating a different type of environment for their employees in the warehouse,” says NMHG’s Dawley. “They want a smarter, more productive operator, not a stronger operator.” He believes the attention to ergonomics not only improves productivity, it helps retain skilled employees.



Fingertip controls. Multi-functional controls that can be controlled by an operator’s fingertips are one example of improved ergonomics. With one control, an operator can work the lift of the forks, the tilt angle and the side shifter. “Fingertip controls were introduced in Europe,” says Steve Cianci, director of marketing and product management for Nissan Forklift Corporation of North America. “While they’re not popular yet in the United States, we’re seeing

increased interest because they provide a more ergonomic experience for the operator.”

Smarter lift trucks. What might the lift truck of the future look like? According to Lyndle McCurley, sales and marketing manager for Doosan Industrial Vehicles America, it’s a truck that’s smarter, more ergonomic, and flexible. Last month, Doosan previewed an electric concept vehicle at the British Open. The glass on the truck’s cab is clear when operating indoors and tints to keep out sunshine and heat when it’s operating outside. As the forks are raised, the cabin rises slightly and tilts backward so that the operator can look up at higher elevations without straining his neck. Heads up displays include graphics of the height of the forks, the weight of the load and the tilt angle. Finally, the truck can change its center of gravity and wheel base—automatically elongating or retracting the length of the wheelbase—depending on the size of the load and the operating environment. “Instead of a 5,000-pound truck, we’re developing multi-capacity trucks that can adapt to the operating requirements,” McCurley says.

Inhibitor functions. Inhibitors are designed to predict the unsafe operation of the truck for the operator, says Cianci. These functions automatically reduce the forward and reverse travel speed of the truck at different heights and automatically control tilt angles.

Get on the bus. The lift truck industry, like other mechanical solutions, is moving from preventive maintenance toward predictive maintenance. “We’re not there yet,” says Ed Campbell, sales manager for the materials handling group at Landoll Corp. “But with the CAN BUS system, we get two-way communication with the components. That lets us know whether we’re operating a higher temperature, which allows us to react to something before it fails.”



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11 Hydrostatic drives. “The vast majority of the equipment in use today is powered conventionally with IC engines or battery power,” says Mark Roessler, general product manager for Linde Material Handling North America. “Because of that, our focus has been on optimizing those designs for the end user.” At Linde, that translates into hydrostatic drives that use oil flow and pressure to accelerate and decelerate the truck in either direction. “With hydrostatic drives, there are no friction brakes, no mechanical transmissions, no drive shafts, and no U joints,” says Roessler. “That allows you to eliminate the wear and tear in the drive system.”

12 Getting narrower in narrow aisle. As warehouses strive to get more storage in the same amount of space, narrow and very narrow aisle lift trucks are key. “When we first started in this business, our trucks operated in a 7-foot aisle,” says Landoll’s Campbell. “Today, we’re operating in less than 6 feet in articulating trucks.” Part of that is attributed to redesigning the articulation assembly of the trucks so they are more compact and thinner to work in a narrower aisle. Another is to design a front end that can rotate 200 degrees instead of 180 degrees.

“As you’re pulling the forks out, they start to turn. That allows you to keep the forks straight until you get them out of the pallet, which makes it easier to stack in a narrow aisle,” Campbell explains. Because narrow aisle trucks are often working in high elevations, Landoll has added a low-cost camera system to provide visibility above 25 feet as well as software that can detect and display the height elevations in every row in a warehouse.

13 Integrated scales. Burger King created a business out of letting customers have it their way. Toyota Material Handling

U.S.A. (TMHU) sees a similar interest in customization among lift truck users. “Forty percent of our orders are customized by the customer and many of those innovations turn into options that are later integrated into options on the trucks,” says Cesar Jimenez, national product planning manager for TMHU. The recently introduced integrated forklift scale is an example of a feature that was developed for a customer and is now a standard option on Toyota trucks. The scale, which is accurate to within half a pound and is legal for trade, allows an end user to weigh and capture the weight of a load while lifting a pallet and loading it on a truck. In its current configuration, the

that can be replaced by the operator with no special tools. “The size of the battery results in a very maneuverable truck,” says Bowles. “But, as with most new technologies, cost is the issue and at present, the cost per kilowatt hour is greater than a lead acid battery.”

15 A hybrid lift truck. In Japan, Toyota has introduced a true hybrid diesel truck in an 8,000-pound capacity truck. The truck operates on electric power for applications like travel, but automatically switches to diesel when extra power is required for an application, just like the consumer car Prius. And, like a Prius, the batteries are recharged when the truck is under



“Forty percent of our orders are customized by the customer and many of those innovations turn into options that are later integrated into options on the trucks.”

—Cesar Jimenez, national product planning manager, Toyota Material Handling U.S.A.

system can store information about 350 loads that can be downloaded to an enterprise system. “We have the ability to add Bluetooth and Wi-Fi to automatically transmit the data,” Jimenez says.

14 Lithium ion batteries. Earlier this summer at CeMAT, Jungheinrich introduced a walkie for the European market powered by a small lithium ion battery the size of a brief case

diesel power. “Because you’re not consuming electricity from the grid, the design has resulted in a 50 percent reduction in fuel consumption and emissions,” says Jimenez. Toyota plans to introduce a propane-based indoor cushion tire hybrid truck in North America. “Propane is the No. 1 selling fuel for us in the United States,” says Jimenez. “That’s what we’re pushing our parent company to design.” □

The big names in transportation will be out of the office for a few days in January.



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**Special Report:
Leading Air Cargo Carriers**

Hong Kong calling

World air cargo traffic will triple over the next 20 years, with most of the growth being driven in the Asia Pacific marketplace. Is it any wonder that the biggest players in the industry are investing heavily in the region?

By Patrick Burnson, Executive Editor

In the course of providing a detailed overview of trends shaping air cargo today, the recent World Air Transport Statistics (WATS) report notes that Asia will continue to be at the forefront of the freight industry, expanding at a pace approaching 7 percent by the end of 2029.

A cursory look at WATS figures tells the rest of the story. Of the top 10 international and domestic leaders, only one—Cargolux—is a relatively new player in this marketplace. This comes as scant

surprise to the Boeing Company—China’s leading provider of aircraft—which maintains that the Asia Pacific region’s air traffic growth will exceed the world average by a “large” margin over the next two decades.

Randy Tinseth, vice president of marketing for Boeing Commercial Airplanes, says the region will account for one-third (10,320) of new airplane deliveries worldwide over the period. “This is sweet music to an airplane manufacturer’s ears,” says Tinseth.

According to Jim Edgar, regional director of cargo marketing for Boeing, China represents 40 percent of the trans-Pacific cargo market, and Hong Kong is a key gateway for air cargo connecting China with the world.

“This area stands to benefit greatly from future increases in air cargo traffic,” says Edgar. “Of local interest and in line with the cargo recovery, Hong Kong Air Cargo Terminals Limited announced that total annual tonnage for 2010 hit a new handling record of 2.9 million metric tons, an increase of 24.8 percent over 2009.”

Tinseth says that rising cargo traffic is creating pressure for fleet growth. Boeing researchers say that airlines will need 30,900 new passenger and freighter airplanes through 2030, valued at U.S. \$3.6 trillion. Forty-four percent of these aircraft will replace older, less efficient airplanes, while 56 percent will account for new aircraft needed to meet air traffic growth. The world fleet is projected to expand twofold from 18,890 to 36,300 airplanes during this span.

“The near doubling of the world fleet size is an indicator that airlines will not only plan for growth, but will take the economically rational step of modernizing their fleets as a hedge against high and unpredictable oil prices,” says Tinseth. “The global economic recovery is helping airlines rebuild their balance sheets, leading toward a demand for newer, fuel efficient, and environmentally progressive airplanes worldwide.”

Growth in developing and emerging markets, and the need to replace aging fleets, are but two main reasons driving this trend, say Boeing analysts—an observation being echoed by the top air cargo providers.

At the same time, however, some analysts are sounding a cautionary note on this strategy. Charles Clowdis, Jr., managing director of transportation advisory services for IHS Global Insight, says shippers may opt for slower ocean carriage in the trans-Pacific if the economic rebound

Scheduled freight tons per mile					
INTERNATIONAL			DOMESTIC		
RANK	AIRLINE	MILLIONS	RANK	AIRLINE	MILLIONS
1	Cathay Pacific Airways	9,587	1	FedEx	8,322
2	Korean Air	9,487	2	UPS Airlines	4,979
3	Emirates	7,913	3	China Southern Airlines	1,295
4	Lufthansa	7,422	4	Air China	904
5	FedEx	7,421	5	China Eastern Airlines	713
6	Singapore Airlines	7,001	6	Hainan Airlines	421
7	China Airlines	6,410	7	All Nippon Airways	417
8	UPS Airlines	5,215	8	United Airlines	413
9	EVA Air	5,166	9	Japan Airlines	405
10	Cargolux	4,901	10	Delta Airlines	363

SOURCE: WORLD AIR TRANSPORT STATISTICS (WATS)

is not robust.

“Even some high-end consumer goods are moving on water now,” says Clowdis. “If this trend continues, air cargo providers may have a hard time getting this volume back.”

“Flat world” strategy

Nevertheless, air cargo leaders maintain that there’s no reversing a “flat world” business strategy.

“We all benefit from a world that’s more connected than ever,” says Fred Smith, chairman, president, and CEO of FedEx. “In fact, the largest economy in the world no longer belongs to a single country but to the realm of global trade. It’s driven by emerging markets, such as China and India, and worldwide gains in manufacturing.”

Smith says that global trade will continue to be the prime source of growth for FedEx, especially in Asia, where they have the strongest transportation network in the industry. But he’s also concerned that his company may be approaching a tipping point, noting that he expects higher margin revenue from international operations to approach—if

not eclipse—U.S. domestic revenues at FedEx Express for the first time in its history.

“Our commitment to provide companies of all sizes with access to new markets in every corner of the world has never been stronger,” adds Smith. “FedEx not only sits at the nexus of global trade—we are indispensable to global trade.”

But does this beg the question: Who isn’t? Certainly, UPS must comprise another piece of that pantheon. For Scott Davis, chairman and CEO of UPS, that means a more balanced air cargo relationship.

“When it comes to trade, we’re letting other countries move to the forefront,” Davis cautions. “What is needed is much stronger economic growth fueled by U.S. exports.”

Davis, who is also a member of the President’s Export Council, acknowledges challenges facing the U.S., including unsustainable federal deficits and the persistently weak job market. But he counters this by advocating a series of solutions, including:

- *Streamlining export controls.* This



would boost U.S. GDP by \$64 billion and create about 160,000 manufacturing jobs over the next eight years.

“That’s low hanging fruit,” says Davis.

• *Passing job-creating free trade agreements* with South Korea, Colombia, and Panama, which he said were “stuck in the mud of partisanship” in Washington.

“We have the means to compete with any country in the world and win,” Davis says. “Let’s clear away the barriers to exports and let global commerce shift into high gear and create much needed jobs here at home.”

Airlines remain optimistic

This bullish attitude seems to be shared by the airlines themselves. “Forward bookings are not showing signs of weakening, and they remain strong...as does overall pricing,” says Dahlman Rose investment bank analyst Helene Becker.

At the same time, however, they’re managing the sluggish economy with capacity cuts and less competition because of airline consolidation. The most recent was Southwest Airlines acquisition of AirTran Airways.

In the U.S., the industry has gone from 12 major carriers to seven, including the combinations of United and Continental Airlines and Delta Air Lines and Northwest Airlines. But shippers say that this is no cause for alarm. “There’s plenty of capacity for existing demand,” says Becker.

Brandon Fried, executive director of the Air Forwarders Association, says his constituents are reporting that ocean carriers are relieving the pressure for the time being. “This trend, though, is going to be reversed soon,” he says. “This is a cyclical business, and we see high-tech and the fashion industry as drivers for future demand.”

Fried also pointed to American Airlines as taking the lead in anticipating emerging markets for high-end perishables in food and pharma. “Maintaining cold chain integrity is going to be key in the recovery,” says Fried. The manufacturers of

Safety benefits and increased efficiency through greater choice of route selection

The International Air Transport Association (IATA) announced the successful completion of the first iFlex trial between Johannesburg and Atlanta. The iFlex concept provides for a greater and more flexible choice of routes on long-haul operations which cross multiple flight information regions to deliver shorter flight times, improved fuel efficiency, and reduced CO2 emissions while maintaining safety.

With iFlex, airlines will be able to fly more optimum routings that take maximum advantage of wind conditions. While airlines have long planned flights considering wind conditions, air traffic management restrictions often limited flexibility within fixed corridors on parts of routings. The innovation that iFlex brings is the flexibility to extend this practice consistently across the entire journey.

Delta Air Lines reported that the implementation of the iFlex concept between Johannesburg and Atlanta resulted in average time saving per flight of 8 minutes, equating to 900 kg of fuel and 2.9 tons of CO2. Annualized and on the basis of two daily flights, this translates to savings of some 100 hours of flight, 690 tons of

fuel and a reduction of 2,150 tons of CO2 emitted.

A more flexible routing structure also provides a safety benefit in that airlines have more options to avoid adverse weather. Routing decisions can be taken at the planning stage to avoid potential tactical en-route deviations that can significantly increase controller and pilot workload.

“This initiative demonstrates just what can be achieved when we work together as an industry to reduce aviation’s impact on the environment while at the same time enhancing efficiency and safety,” says Guenther Matschnigg, IATA senior vice president, safety, operations, and infrastructure. “We look forward to future successes based on this first trial.”

The iFlex implementation did not change existing air traffic management procedures, separation standards or communication, navigation, or surveillance requirements. In certain areas, short cuts (direct routings) given by different air traffic control authorities, on a day-to-day basis, were formalized. This formalization provides better situational awareness for all airspace users.

—Patrick Burnson, Executive Editor

containers and cooling systems are among the most positive players in our industry today. They see tremendous growth in the future.”

Which brings us full circle back to a forecast made by that other global mega-manufacturer, Airbus. “The aviation sector is an essential element for today’s global economy,” says John Leahy, Airbus COO. “Geographically, over the next 20 years, Asia-Pacific will account for approximately 34 percent of demand, followed by Europe (22 percent) and North America (22 percent).”

But tellingly, both Boeing and Airbus are now saying that it’s not just about Asia leading the way. Aircraft manufacturers are anticipating a rebound around the world during the next decade.

“Looking back at our forecasts

over the past 10 years reveals that our projections for long-term market growth tend to be conservative, compared to actual industry performance,” says Tom Crabtree, who oversees Boeing’s cargo industry forecasting effort.

Boeing has been admirably accurate, however, on the crucial forecast of the market share that each airplane size category will capture. “High fuel costs are compelling airlines to accelerate replacement of older airplanes,” says Crabtree. “In addition, the increased capabilities of the latest long-range airplanes create opportunities for operators to take advantage of the ongoing liberalization of air transport markets to open new nonstop routes.” □

—Patrick Burnson is Executive Editor of Logistics Management

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SUPPLYCHAIN MANAGEMENT REVIEW



FEATURES

8 The Supply Chain Top 25: Leadership in Action

The 2011 rankings of the Top 25 supply chains from Gartner Inc. are in. They include repeat winners and some new entrants. Perhaps even more important than the actual rankings, says Gartner Research Director Debra Hofman, are the lessons that can be learned from analyzing the leaders. This year, six specific qualities stand out.

16 The Greening of Walmart's Supply Chain...Revisited

In 2007, *SCMR* ran an article on Walmart's sustainability program, focusing on eight specific initiatives being pursued. Four years later, the author of that original article, Erica Plambeck of Stanford, and colleague Lyn Denend revisit those initiatives to assess just how Walmart is doing on the sustainability front.

24 Achieving Flexibility in a Volatile World

A new global survey from PRTM confirms the importance of operational flexibility in supply chain success and identifies five levers that leaders employ to make it happen. The consultants report that the financial and performance advantages of improved flexibility can be profound. They outline five basic steps that companies can take to start realizing those benefits.

32 What's Your Mobility Index?

Mobile devices are everywhere these days. But what's the real potential of mobility in the key supply chain processes. And what's the best way to identify and tap into that potential?

Sumantra Sengupta of EVM Partners says the first step in answering these questions is to carefully determine your "Mobility Index." This article tells how it's done.

40 The Case for Infrastructure Investment: Lessons from Medco and Staples

Smart investment in supply chain infrastructure—and in particular automated materials handling and distribution systems—can pay big dividends. Medco and Staples have proven that convincingly, as these case studies demonstrate. Their stories point to seven key take-aways that supply chains professionals in any business sector can learn from.

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Top 30 Ocean Carriers: New era of collaboration?

Big shippers and the world's top carriers vow to work collectively towards leveraging technology to improve business processes and relationships. Will they make good on the promise or slip back to business as usual?

By Patrick Burnson, Executive Editor

One of the biggest stories to unfold this fall in the ocean carrier arena was when The GT Nexus Shipper Council announced the challenge for the Top 30 players to make good on their promise to collaborate. Created in 2007, the GT Nexus Shipper Council is a group of large shippers, across many industry verticals, with combined annual revenues in excess of \$1 trillion. Collectively, the group moves over 5 million twenty-foot equivalent units (TEUs) of ocean freight each year.

The Council has now engaged Maersk Line in response to the carrier's recently announced "Manifesto" that calls for changes in the way carriers and shippers conduct their business. The Shipper

Council is also working with executives at other leading carriers to drive change at an industry level.

"Maersk has risen steadily from its initial low ranking in our annual Ocean Carrier Performance Survey," says Peter Friedmann, executive director of the Agriculture Transportation Coalition. "This comes as the direct result of diligent efforts to address specific issues identified by shippers relating to documentation and bills of lading."

Maersk Chief Executive Officer Elvind Kolding unveiled the Manifesto initiative a few months back, stating that "reliability is not good enough, the industry is too complicated for customers, and transparency of its environmental performance and record needs to be greatly improved."

Prominent members of The Shipper Council agree, saying that they share in a mission to work collectively towards leveraging technology to improve business processes and relationships with common industry partners. “The Shipper Council has been advocating change for the past two years,” says Mike Murphy, associate director of logistics procurement at Kraft Foods Global, Inc. “When we saw Mr. Kolding’s announcement, we immediately saw an opportunity to take action.”

Dennis Melgert, strategic sourcing manager of logistics at chemical products producer Celanese Corp., shares Murphy’s vision: “We believe that there is an opportunity to engage the liner industry as a group and make broad substantial change that benefits everyone. We were thrilled to see Maersk Line take the lead.”

The Shipper Council has already established a dialogue with Maersk and executives from several other leading carriers. The group says that it’s committed to coming up with specific ideas that can be implemented quickly to the benefit of both shippers and carriers. Ideas on the table include:

- managing allocations and improving forecasting on a secure neutral platform;
- streamlining documentation and substituting electronic bills of lading for paper to act as “one version of the truth;”
- using technology to improve business-to-business processes between shipper and carrier; and
- collaborating “in the cloud” by using our virtual community to its full potential.

“Reliability, predictability, and simplicity creates value,” says Siva Narayanan, head of maritime and warehousing at Rhodia Inc., a specialty chemicals company. “We believe that collaboration fused with neutral, industry-wide technology

Alphaliner Top 30

(Operating fleets as of September 2011)

RANK	OPERATOR	TEU	SHARE
1	APM-Maersk	2,455,014	15.7%
2	Mediterranean Shg Co	2,029,482	13.0%
3	CMA CGM Group	1,324,174	8.5%
4	COSCO Container L.	650,840	4.2%
5	Hapag-Lloyd	627,725	4.0%
6	Evergreen Line	611,678	3.9%
7	APL	586,364	3.7%
8	CSCL	505,913	3.2%
9	Hanjin Shipping	494,654	3.2%
10	CSAV Group	468,562	3.0%
11	MOL	421,303	2.7%
12	OOCL	412,182	2.6%
13	Hamburg Süd Group	405,897	2.6%
14	NYK Line	397,473	2.5%
15	K Line	342,763	2.2%
16	Yang Ming Marine Transport Corp.	336,328	2.1%
17	Zim	332,845	2.1%
18	Hyundai M.M.	306,443	2.0%
19	PIL (Pacific Int. Line)	266,042	1.7%
20	UASC	234,815	1.5%
21	Wan Hai Lines	170,510	1.1%
22	HDS Lines	88,744	0.6%
23	TS Lines	77,500	0.5%
24	X-Press Feeders Group	62,477	0.4%
25	CCNI	60,293	0.4%
26	MISC Berhad	55,192	0.4%
27	Matson	49,530	0.3%
28	RCL (Regional Container L.)	49,339	0.3%
29	KMTC	48,404	0.3%
30	Grand China Logistics	47,576	0.3%

Source: Alphaliner

adoption will help achieve the vision that Maersk put forward.”

Patrick Halloran, director of global trade and logistics at Cardinal Health, is also on the same page with his fellow council members, noting that the key now is to move past dialogue and into action. According to Halloran, The Shipper Council is

committed to making this happen. “Members are contacting carrier executives and hosting meetings to develop specific plans,” he says. “The group will then determine what it can do to collectively address some of finer details in the relationship.”

Better late than never

This development is coming just in time, say analysts, who note that carriers were beginning to go too far in their zeal to recapture rates this year. The European Commission’s investigation of “price-fixing” has vessel operators scurrying for cover, but regulators in the U.S. are doing their part to keep the game board free from collusion.

The European Commission’s investigation of ocean carrier antitrust rules ramped up to a new level last spring as Asian companies were also brought into view. Meanwhile, the Federal Maritime Commission is listening to U.S. shipper complaints that Transpacific “talking agreements” represent an added monopolistic threat.

“In the old days of conference pricing, this kind of behavior was called ‘independent action,’” says Dirk Visser, managing director of the Dutch consultancy Dynamar. “But the government is now becoming much more vigilant where this is concerned.”

Indeed, the Commission reports that when antitrust officials raided European headquarters, Asian carriers were among the others targeted for investigation. Neptune Orient Lines, OOCL, Evergreen Marine, and Hanjin Shipping—all leading operators in the transpacific trade—are said to be complying with the price-fixing probe.

Just last May, EU regulators began searching through the files kept by Maersk, CMA-CGM, and Hapag-Lloyd. The unannounced visit was made to enforce the abolished exemption from antitrust activity the Commission enacted three years ago. Spokesmen for OOCL confirmed that the Commission’s raid was not “carrier specific,” and



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that it was complying with investigators. Meanwhile, Visser tells *Logistics Management* that the few remaining U.S.-flag carriers were unlikely to face similar scrutiny. “Only APL is at risk,” says Visser, “but of course, that belongs to a Singapore-based company now.”

But that’s not to say that this segment is without the stain of malfeasance. Earlier this year, Horizon Lines, a pure-play domestic carrier based in Charlotte, N.C., was fined \$45 million for a scheme of its own following Justice Department charges that it had conspired with Crowley, Sea Star, and Trailer Bridge to fix prices and increase fuel surcharges on shipping lanes to Puerto Rico.

Dissecting talking agreements

Shippers comprising the Agriculture Transportation Association and the National Industrial Transportation League (NITL) allege that carriers in the transpacific are also quietly colluding on prices through *sub rosa* “talking agreements.”

The Federal Maritime Commission (FMC) is currently looking into that matter, says spokesperson Karen Gregory.

Number 2 MSC is gaining ground

Maersk Line countries of origin for U.S. imports, TEUs

PLACE RECEIPT COUNTRY	2011	2010	% CHANGE
China	474,064	512,960	-7.58%
India	48,737	53,025	-8.09%
Indonesia	46,517	44,816	3.79%
Hong Kong	37,859	45,203	-16.25%
Vietnam	31,479	35,493	-11.31%
Netherlands	30,254	32,426	-6.70%
Japan	29,472	31,336	-5.95%
Korea, South	23,644	23,648	-0.01%
Germany	21,812	26,511	-17.73%
Pakistan	19,886	23,107	-13.94%

MSC Mediterranean Shipping countries of origin for U.S. imports, TEUs

PLACE RECEIPT COUNTRY	2011	2010	% CHANGE
China	456,313	384,078	18.81%
Germany	72,614	66,326	9.48%
Italy	70,354	54,947	28.04%
Belgium	44,903	35,756	25.58%
Brazil	39,371	39,203	0.43%
Chile	37,274	33,442	11.46%
Spain	22,829	18,769	21.63%
India	22,249	12,822	73.53%
Vietnam	20,484	15,781	29.80%

Source: Alphaliner

Meanwhile, responding to a request for comments from the FMC on the effect of slow steaming on U.S. ocean liner commerce, most shippers found little or no rate or service benefit.

“This was particularly true on the transpacific, where carriers engage in a collective assessment of the rate structure,” says Peter Gatti, NITL executive vice president. “We, of course, agree that there are environmental advantages to slow steaming, but shippers were also counting on a pricing break from the carriers comprising the Transpacific Stabilization Agreement (TSA) and that hasn’t happened.”

Indeed, says Gatti, one non-conference carrier, Matson, which has been operating a dedicated shuttle from Shanghai to Long Beach, has been running at normal knot-speed and delivering goods at a competitive price point. “So from a money-saving perspective, slow steaming’s advantages are negligible,” adds Gatti.

Spokesmen for the World Shipping Council (WSC) have also been telling *Logistics Management* that while its member’s comments were largely in support of continued slow steaming, the issue was largely confined to the transpacific lanes.

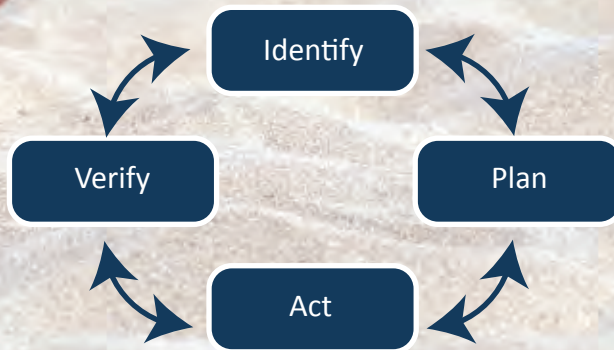
“To my knowledge, we don’t face this problem anywhere else in the marketplace,” says WSC spokesperson Anne Kappel. “Besides, the FMC does not have the enforcement powers to regulate any trade lane based on request for comments.”

According to the NITL’s Gatti, supply chains have suffered negative impacts as a result of slow steaming. He says that shippers are reporting



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that transit times have risen, effective vessel capacity has dropped, shortages in containers and equipment have been exacerbated, and meeting customer expectations is more difficult.

“One of the key aspects of the supply chain is that transit times affect inventory,” says Gatti. “Initially, slow steaming accelerated the depletion of inventory making it harder for shippers to fill their store shelves and manufacturer’s production lines in a timely manner.” Over time, however, shippers have been forced to adjust to lengthened voyage times by increasing the amount of inventory they carry, at higher costs, Gatti adds.

“Goods that sit in inventory are

simply not producing real economic output or providing any societal benefit,” says Gatti.

Reversal of fortune

While the world’s leading cargo vessel operators had seen a remarkable reversal of fortune last year, industry analysts predict the turnaround will be “short-lived.” Alphaliner, the Paris-based shipping consultancy, reports that 19 of the top 25 ocean carriers it surveyed earned an estimated \$14 billion in 2010, after losing \$15 billion just the year before.

“Container carriers’ margins recovered strongly in 2010 to a positive 7 percent from a negative 16 percent in

2009,” says Stephen Fletcher, Alphaliner’s commercial director. But analysts add that margins in the Asia-EU trade have softened, and that 2011 is likely to be a much weaker year in general.

Indeed, container rates have been sliding on all the major trading lanes since July 2010, with the exception of a small “hiccough” last winter, as liner companies tried to push for implementation of general rates increases in a weakening market, say analysts at the Baltic and International Maritime Council (BIMCO) in Copenhagen.

“The anticipated strong volume rebound following the Chinese Lunar New Year last February did not mate-

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Asset-based carriers face new competition

There's an old joke still circulating in the commercial maritime community. It goes like this: "It's easy to end up with a million dollars by the time you retire from this industry. But first you have to invest 10 million."

This is not necessarily the case for non-asset-based middlemen, however. The Federal Maritime Commission had lifted the rate-tariff publication requirements for Non-Vessel-Operating Common Carriers (NVOCCs) earlier this year, thereby reducing regulatory burdens and bringing cost savings and flexibility to the ocean cargo marketplace.

The Shipping Act gives the Commission authority to grant exemptions from its requirements if doing so will not result in substantial reduction in competition or detriment to commerce. According to comments filed with the Commission, this action could save each of these businesses up to \$200,000 per year.

The final rule establishes an instrument called a negotiated rate arrangement. Licensed NVOCCs who enter into negotiated rate arrange-

ments with their customers will be exempted from the requirement of publishing their rates in tariffs if they meet the following conditions:

- NVOCCs would continue to publish rules tariffs containing terms and conditions governing shipments.
- NVOCCs would be required to provide those rules to the public free of charge.
- Rates charged by NVOCCs must be agreed to and memorialized in writing by the date cargo is received for shipment.
- NVOCCs must retain documentation of the agreed rate for a period of five years, and must make that documentation available promptly to the Commission upon request.

"After a year of work and many years of debate, the Commission has provided thousands of dollars per year in cost savings to these critical U.S. supply chain businesses and the hundreds of thousands of exporters and importers they serve," says FMC Chairman Richard A. Lidinsky, Jr.

—Patrick Burnson,
Executive Editor

rialize, and that resulted in continued descending rates on most trading lanes," says BIMCO's Peter Sand.

Oversupply in the main routes is the reason behind the weak freight rates. The idle fleet of container ships now stands at 84 vessels, with a total cargo capacity of just 185,000 twenty-foot equivalent units (TEUs), the lowest level since November 2008. At the peak in January 2010, 1.5 million TEUs were idle.

"Severe overcapacity is poison to any freight market, as rates continue to decline even though volumes are growing fast...but not enough," says Sand. "Cascading remains a part of the game. It gives little comfort that freight rates on minor intra-Asian routes have



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recently gone up by 10 to 20 percent.”

Meanwhile, on the supply side, scores of “mega vessels” have been delivered into the Asia-Europe trade during 2011. BIMCO analysts say that spot rates would not be returned to sustainable levels until the Peak Season in the third quarter on main trading lanes from Asia to Europe and the U.S. West Coast.

“The fact that no major companies ‘went to the wall’ still seems to have insulated the industry from the despair of 2009, and there is now the feeling that perhaps the dark days did not happen.”

— Neil Dekker, editor, *Drewry Container Forecaster*

“To restore freight rates significantly over the coming quarter, idling of vessels ought to be considered an option,” says Sand. “That is, however, not expected to happen and that could jeopardize Peak Season earnings even if solid consumer confidence is restored and the high unemployment figures start to come down.”

London-based Drewry Shipping Consultants believes that the industry has emerged from the global

recession with both carrier profitability and demand figures recovering. But Drewry analysts raise the question: Have the carriers learned from their experience?

“The fact that no major companies ‘went to the wall’ still seems to have insulated the industry from the despair of 2009, and there is now the feeling that perhaps the dark days did not happen,” says Neil Dekker, editor of the *Drewry Container Forecaster*.

In essence, Drewry observes that its “back-to-normal” operating conditions for the market. “Perhaps the biggest carriers are happiest with no long-term profitability as long as they have market share,” says Dekker. “However, the utopia of freight rate stability sought by shippers seems a long way off if carriers abandon their short-lived prudence and profitability,” says Dekker.

—Patrick Burnson is Executive Editor of *Logistics Management*

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A. Total no. copies (net press run)	52,938	51,759
B. Legitimate paid and/or requested distribution (by mail or outside the mail)		
1. Outside County paid/requested mail subscriptions stated on PS Form 3541	51,266	50,583
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3. Sales through dealers and carriers, street vendors, counter sales and other paid or requested distribution outside USPS	20	27
4. Requested copies distributed by other mail classes through the USPS	None	None
C. Total paid and/or requested circulation	51,286	50,610
D. Nonrequested distribution (by mail and outside the mail)		
1. Outside County nonrequested copies stated on PS Form 3541	681	797
2. In-County nonrequested copies stated on PS Form 3541	None	None
3. Nonrequested copies distributed through the USPS by other classes of mail	None	None
4. Nonrequested copies distributed outside the mail	267	100
E. Total nonrequested distribution (sum of 15D 1, 2, and 3)	948	897
F. Total distribution (sum of 15C and E)	52,234	51,507
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I. Percent paid and/or requested circulation (15C divided by F times 100)	98.19%	98.26%
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Evaluating and recognizing carrier performance is critical for success

By John A. Gentle, DLP

LOGISTICS MANAGEMENT'S 28TH ANNUAL Quest for Quality Award winners were announced in the August edition of *Logistics Management* magazine. On October 5th, Michael Levans, group editorial director for *LM* presented the awards to the winning companies on the last evening of CSCMP's annual meeting in Philadelphia. Congratulations to the winners, and thanks to all of the shippers and receivers who took the time to select the carriers and rank them based on their service performance.

Every time I read stories about recognizing carriers for overall excellence I think about carriers that I held in very high esteem, but traditionally didn't make the Quest for Quality list or other recognition lists. The reasons are numerous. Certainly the size of the carrier makes a difference, as well as what groups within the company measured the carriers. Then there are the criteria to be considered and how the scores are weighed.

This article and its rankings are not about whether the winners deserved being best in class. Rather it's about the importance of the effort that your teams should be putting into the evaluation and recognition of your carrier base. It is a well-known fact that inspection brings opportunities for improvement, and recognition is a vital impetus to excellence.

Initially, I recall doing performance reviews by myself that were focused on "service performance," as this generated the highest degree of visibility in our company. Over time, and as the "quality process" emerged, it became clear that the internal customers of the transportation process were numerous and included customer service; contract and rate departments; dispatch teams that tendered loads, handled turnbacks, expedited shipments, and rescheduled late deliveries; warehouses that loaded the trailers and needed to ensure the safety of equipment and personnel on and around the loading docks; freight payment and claims teams; and finally the transportation management team.

The challenge then became how to involve all of these teams. We needed to decide what each group wanted to measure; how it would be measured; how

the parties would participate; the frequency of the reviews; where the reviews would be held; the weighting for the final score; and how this would be presented to the carriers.

Suddenly this "carrier evaluation process" appeared to be a big project, and there were questions about the overall value of doing performance reviews. Could the in-depth review be done only with quantitative measurable data? Or was there value in collecting subjective feedback that could be open to bias and personality conflicts.

In the end, all internal company teams willingly participated, some with quantifiable information and others with some simple assessments of whether or not a carrier company was helpful or a hindrance.

For example, questions were prepared to allow teams to rank carriers from 4 to 9 on how well they solved process problems, responded to information

The annual and public recognition of carriers and their successes must be a vital part of your carrier management program.

requests, and provided quality information the first time. Teams suddenly found it easier to do both quantitative and subjective evaluations and develop a numeric performance profile for the carrier at each plant and distribution center.

In subsequent articles I'll share information about what each of our groups measured and how we weighted the overall score. But, we quickly destroyed a commonly held view that a carrier that excels in one area of the country operates with the same excellence across the country. That's simply not true, and we pursued a program that rated and recognized carrier performance regionally—or by plant and distribution center—and not nationally.

The annual and public recognition of carriers and their successes must be a vital part of your carrier management program. Not only does it drive consistently exceptional performance across all functional areas, but it also sends a clear signal about your company's interest in investing in your carriers and the industry. Don't let a few budget dollars preclude measurement and recognition. □

John A. Gentle is president of John A. Gentle & Associates, LLC, a logistics consulting firm specializing in contract/relationship management and regulatory compliance for shippers, carriers, brokers, and distribution centers. A recipient of several industry awards, he has more than 35 years of experience in transportation and logistics management. He can be reached at jag@RelaTranShips.com.



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