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February 2014

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management UPDATE

AN EXECUTIVE SUMMARY OF INDUSTRY NEWS

◆ **XPO's grand entrance into intermodal.** Non asset-based third-party logistics provider (3PL) XPO Logistics said last month that it has entered into a definitive agreement to acquire Dublin, Ohio-based Pacer International, a freight transportation and logistics services provider and the third largest provider of intermodal services in North America. The total purchase price of the acquisition, which XPO said is expected to close in the second quarter, is $335 million. XPO Chairman and CEO Brad Jacobs told *LM* that there were multiple reasons to bring Pacer into the fold. "The intermodal sector is one of the fastest growing areas of transportation, and Pacer is the third largest provider of intermodal services in North America," said Jacobs. "Pacer is the largest provider of intermodal cross-border services into Mexico, which is growing fast due to near-shoring manufacturing in Mexico, with more than one-third of its business focused on cross-border Mexico operations."

◆ **Surface transportation reauthorization efforts underway.** The push for new surface transportation reauthorization was evident during a House Transportation and Infrastructure Committee (T&I) hearing in January. The hearing follows last October's report from the House T&I Committee, "Panel on 21st Century Freight," that called for a major push to modernize freight infrastructure in the U.S. This recent push comes months before the current authorization, MAP-21, is set to expire at the end of September. House T&I Committee Chairman Bill Shuster (R-Pa.) stressed at the hearing that transportation is a critical part of how the supply chain functions and vital in allowing American businesses to be competitive in the global marketplace.

◆ **Year Zero?** A new analysis by AED's Government Affairs Office based on recent data from the Federal Highway Administration shows the potentially devastating economic impact of the impending collapse of the federal highway program. AED is an international trade association representing companies involved in the distribution, rental, and support of equipment used in construction, mining, energy, forestry, power generation, agriculture, and industrial applications. The Congressional Budget Office reported in July 2013 that, due to inadequate resources in the federal Highway Trust Fund (HTF), Congress "would need to reduce the authority to obligate funds in 2015 to zero in both the highway and transit accounts." This "Year Zero" scenario will put an entire year's worth of federal highway and transit investment at risk, create enormous uncertainty for transportation planners, and send economic shockwaves through the construction industry, contends AED.

◆ **POLA and POLB finish strong.** Both the Port of Los Angeles (POLA) and the Port of Long Beach (POLB) finished 2013 on a high note, lending further credence to the slow but steady trajectory of the economic recovery. Total POLA volume—at 653,358 TEU—was up 11.09 percent annually in December. Imports, which are primarily comprised of consumer goods, increased 8.63 percent, while exports, which are primarily comprised of raw materials, were up 16.85 percent. December volumes at the POLB were up 4 percent annually at 582,443 TEU. Imports fell 1.4 percent and exports headed up 9.3 percent. For 2013, total cargo volume at POLB was up 11.3 percent to 6,730,573 TEU, placing 2013 as the third highest on record, with only 2006 and 2007 totals ahead of last year.

◆ **Golden State outbound.** California's exporters turned in a particularly exuberant performance in November, according to Beacon Economics' analysis of foreign trade data released by the U.S. Commerce Department. For the month of November, the state's merchandise export trade totaled $15.22 billion, a nominal 14.2 percent increase over the $13.33 billion in exports recorded in November 2012. By comparison, overall U.S. merchandise exports rose by 5.9 percent over the same period. The uptick in California was led by a solid $1.38 billion jump in manufactured exports, which rose by 16.8 percent to $9.63 billion from $8.25 billion in November 2012.

◆ **Vitran now to be acquired by TransForce.** Less than three weeks after Toronto-based less-than-truckload (LTL) carrier Vitran Corp. said it had entered into a definitive agreement to be acquired by Manitoulin Transport Inc., Vitran said that the agreement with Manitoulin has been terminated. Instead of being acquired by Manitoulin, an Ontario-based provider of LTL, Vitran has entered into a definitive arrangement agreement with TransForce,

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management UPDATE

AN EXECUTIVE SUMMARY OF INDUSTRY NEWS

a provider of transportation and logistics services, for $6.50 per share. Prior to this announcement, Transforce owned roughly 20 percent of Vitran's total outstanding shares according to a *Toronto Globe and Mail* report.

◆ **Survey says re-shoring could have major impact on U.S. economy.** More than one-third of U.S. businesses will move goods and services work back to the U.S. in the next 12 months, according to the results of the *Grant Thornton Realities of Reshoring* survey. The findings imply that as much as 5 percent of overall U.S. procurement may come back to the U.S. "The idea of going overseas was to drive costs down," said Wally Gruenes, Grant Thornton's national managing partner for industry and client experience. Greunes went on to suggest that many companies have identified cost savings in the sophisticated analysis of data that they receive from business partners in the supply chain. "Now, most manufacturers are looking for partnership to share information at a very detailed level. They need collaboration or face-to-face meetings, and the proximity of a supplier can be important."

◆ **AfA taking flight.** The growth in the number of freight forwarding companies joining the Airforwarders Association (AfA) has reached unprecedented levels, with the organization's regular membership rolls expanding by nearly 25 percent over the past year. More than half of the increase in the association's regular membership—composed of freight forwarding companies that focus on air cargo—has come in just the past few weeks. The AfA now represents 230 such enterprises in addition to more than 120 other businesses and organizations, including major airlines that work with or serve freight forwarding operations. "As they contemplate increased business in an improving economy, forwarders are likely realizing that the regulatory framework for air freight and other commonly used modes is now more extensive and complex than ever," says Brandon Fried, the AfA's Executive Director.

◆ **Green property takes the spotlight.** Prologis Inc., a leading global owner, operator, and developer of industrial warehouse and distribution real estate, announced its inclusion in the 2013 *Global 100 Most Sustainable Corporations in the World* list. The Global 100, announced annually at the World Economic Forum in Davos, Switzerland, is recognized as the gold standard in corporate sustainability analysis and consists of the 100 top-performing companies worldwide based on a range of sector-specific "sustainability" metrics. Steve Campbell, senior vice president and head of environmental, engineering, and sustainability, says that the company has a "comprehensive" approach to sustainability, encompassing three dimensions: environmental stewardship, social responsibility and governance. "As a major global provider of certified sustainable logistics space, Prologis has developed more than 43 million square feet of facilities meeting green building standards," he says.

◆ **IANA enhancements.** The Intermodal Association of North America (IANA) has announced a series of enhancements and additions to its Intermodal Expo. Taking place Sept. 21-23 in Long Beach, Calif., the 2014 Intermodal Expo will be a stand alone event for the first time in 11 years. Plans are underway for increased opportunities for shipper interaction and more than double the number of educational sessions over previous years. "The Intermodal Expo has become one of the largest freight transportation events in North America since its inception over 25 years ago," says Joni Casey, IANA president and CEO. "This year's refocus on intermodal, combined with an emphasis on connections, dialogue, and education, will enhance the Intermodal Expo's value for our core audience and key intermodal stakeholders."

◆ **Popular move.** While New Jersey Governor Chris Christie faces a series of political setbacks and investigations related to campaigning, he has signed S2747/A4170 into law. This legislation, which received unanimous bipartisan support from the entire legislature, will eliminate the Port of New York and New Jersey cargo facility fee. In 2011, the ports became the only agency in the country to impose a cargo facility charge on all containers, including empties. The fee charged is $4.95 for 20-foot containers, $9.90 for 40-foot containers, and $1.11 per unit for vehicle cargo. The fee is costing Maersk Line alone $3.5 million on an annual basis. "This legislation goes a long way in ensuring that the Port of New York and New Jersey remains competitive with ports across the country," says Doug Morgante, Maersk Line's director of state government relations. "We are grateful that Governor Christie recognized how critical removing this onerous fee is to the vitality of the maritime industry." □

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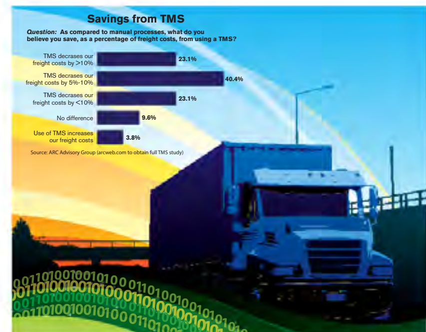

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2014 Rate Outlook: Managing costs via multiple modes

logisticsmgmt.com/2014rateoutlook

Where are your freight transportation rates headed in 2014?

Our panel of top economic and transportation market analysts agree that freight rates will most certainly see gains in 2014.

Join our panel as they share their insight on where rates are headed and the issues that will be driving those rate increases over the next 12 months. Attendees will gain a better understating of:

- The current state of the U.S. economy and its impact on transportation;
- which way oil and fuel prices are likely to go in 2014; and
- what to expect in terms of rates and capacity across all modes.

SPECIAL SUPPLEMENTS

U.S. Ports Update: Investing in the future

A $46 billion investment gap by 2040 threatens U.S. seaports—critical economic lifelines that rely on connecting transportation infrastructure to deliver prosperity for millions of Americans. With this nation's trade volume expected to quadruple after 2030, and port connections in poor condition, industry experts agree that now is the time to invest. Page 60S

2014 Modex Preview: Converge and connect

With more than 750 exhibitors, three keynotes, and an extensive educational program, Modex 2014 is adding 50,000 square feet of show floor space. Here's a guide to every inch. Page 76S

SCT USA Preview: Explore the possibilities

Co-located with Modex 2014, Supply Chain & Transportation USA, the nation's newest transportation and logistics show, promises something for everyone who is in charge of moving freight. Page 82S

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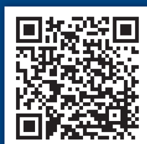

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President and Group Publisher
Kenneth Moyes
President and CEO
EH Publishing, Inc.

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Peerless MEDIA, LLC

Improving the human/technology connection

WE USE OUR FEBRUARY ISSUE each year to peer inside the nation's four walls to get a better view of how materials handling equipment and automated distribution systems are evolving to become even more closely tied to overall logistics and transportation operations.

In fact, we kick off this month with the findings of our annual *Warehouse & DC Equipment Study,* a survey conducted by Peerless Research Group (PRG) designed to reveal the current and future spending plans logistics professionals have for warehouse and DC equipment, automation, and software—purchases traditionally aimed to tighten the knot between distribution and transportation and improve overall supply chain operations and enhance shipment visibility.

In today's retail environment, one can easily argue that the two functions are now unconditionally tied, and that the seamless integration of product delivery—fulfilled through multiple channels—and DC management is literally the foundation of any successful e-commerce business. In the meantime, manufacturing operations are gearing up to deal with similar multi-channel challenges brought on by the changing nature of sourcing and procurement.

And while the integration of transportation and DC operations improves each year with the growth of omni-channel distribution and e-commerce, our latest *Warehouse & DC Equipment Study* tells us that today, there is more emphasis on the relationship between the technology and the workforce tied to the equipment.

This year's findings make it clear that it's in the improvement of this "marriage" that respondents believe they'll see the next big bump in productivity.

"We see activity levels in warehouse and DCs increasing considerably," says Editor at Large Josh Bond, who put this year's findings into perspective for us (page 26). "This growth is due to readers continuing to do more with less, truly optimizing their existing facilities instead of building new—and they say they're doing this with data-driven improvements like improving tracking and picking, inventory management, and better overall labor management through the technology investments put in the hands of the worker."

In fact, hidden in this data surrounding planned equipment and technology investments is the imperative to increase the productivity of the human worker that uses the technology. According to Bond, this bodes well for the next spurt in U.S. productivity growth.

We can only hope that the discussion revolving around the improved human/technology connection won't be lost on the floor of the upcoming Modex 2014 trade show in Atlanta (page 76S). If you're one of the 50,000 warehouse, DC, and logistics professionals walking the aisles to visit the more than 750 equipment and technology vendors, keep asking yourself how these investments will integrate with your most important asset: your workforce.

"The DC worker is now, more than ever, being considered an integral part of the equation, not just a body that services some piece of speedy technology," adds Bond. "The impact on labor management is a factor in nearly every buying decision highlighted in this year's survey, and we'll only see that growing as the race to do more with less remains a constant."

Michael A. Levans, Group Editorial Director
Comments? E-mail me at
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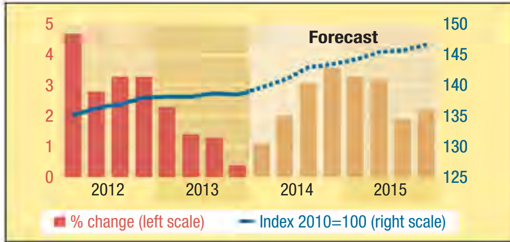
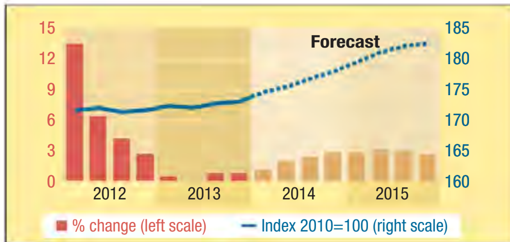
Pricing across the transportation modes



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
General freight - local	0.0	0.0	-0.5
TL	-0.1	-0.6	-0.3
LTL	-0.2	0.3	1.0
Tanker & other specialized freight	0.0	0.0	0.6

TRUCKING

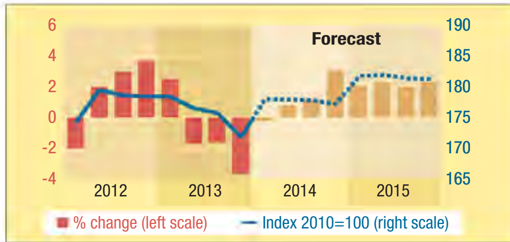
With the 2013 books now closed, we see that transaction prices for TL service inched up 0.4% and LTL increased 3.1% last year. This was a significant slowdown from 2012 when TL prices grew 4.5% and LTL grew 6.2%. Prices for tanker and other special freight trucking services also climbed at a molasses-like 0.7% pace in 2013. Thankfully for the bottom line, the industry's operating costs escalated even more slowly than prices. Fuel costs, the biggest potential budget buster, declined 5%. Adding it all up, we estimate total costs grew only 0.3% in 2013. With costs idling, we're forecasting average trucking prices will accelerate 2.5% this year and 2.7% next year.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
Air freight on scheduled flights	-0.1	0.7	0.8
Air freight on chartered flights	-7.3	-1.1	-9.6
Domestic air courier	-0.2	0.4	2.4
International air courier	-0.5	0.5	1.4

AIR

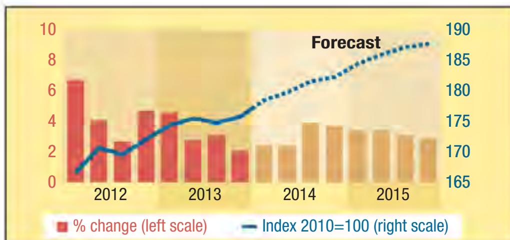
Despite winning a 4.8% one-month price hike in December, U.S.-owned airline companies collectively suffered a 0.5% annual rate of *decline* in average prices last year. Deflation woes were centered primarily in the airfreight chartering side of the business where average transaction prices fell 5.3% in 2013. Looking at domestic airfreight on non-scheduled flights, we see that in December alone prices fell 10.7% from month-ago and were off 12.5% from same-month-year-ago. Meanwhile, U.S. airliners hauling freight in the belly of scheduled flights sputtered with a 0.5% average annual price increase in 2013. We predict more lift ahead with prices up 2.1% in 2014 and up 2.9% in 2015.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
Deep sea freight	1.4	-1.1	-2.5
Coastal & intercoastal freight	0.1	-10.1	-8.7
Great Lakes - St. Lawrence Seaway	-0.6	0.0	-5.5
Inland water freight	-4.6	-3.1	-8.5

WATER

Companies that ply inland waterways reported a 2.6% drop in average transaction prices last year. That's a clear course change from the previous year's 4.1% price increase. U.S.-owned deep-sea water transportation companies also reported a 1.1% price cut in 2013. Prices to move freight over the Great Lakes and St. Lawrence Seaway, however, continued rising at a 2.5% pace. In aggregate, the U.S. water transportation industry netted a 1.1% average annual price *decline* last year. At the same time, the industry's operating costs escalated at a 2% pace. All this spells persistent margin pressure. The revised forecast calls for average industry prices to rise 1.2% this year and increase 2.2% next year.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
Rail freight	-0.2	0.4	1.9
Intermodal	0.0	0.1	1.3
Carload	-0.3	0.4	1.9

RAIL

U.S. rail operators cut their monthly transaction prices in the final month of 2013 as carload rail prices fell 0.3%. That was the seventh monthly price cut of the year, yet carload rail carriers nonetheless ended up with a 3.3% average annual price increase in 2013. Intermodal rail as usual failed to keep pace and closed with a 2.4% price hike. Eerily similar to last year, the good news for rail carriers (and any buyers with negotiation leverage) is this: the railroad industry's materials and labor costs are estimated to have increased at only a 1.1% annual pace last year. Our price escalation forecast for the rail transportation industry remains unchanged: up 3.1% in 2014 and up 3.2% in 2015.

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- 2013 intermodal volumes set new record, carload down slightly reports AAR, Page 14
- ATA reports sharp gain in seasonally-adjusted truck tonnage in December, Page 15

YRC wins latest five-year wage concession package by 2-to-1 margin

Teamsters chief says it will hold YRC management's feet to the fire to ensure job protection and better financial management by the company.

By John D. Schulz, Contributing Editor

OVERLAND PARK, Kan.—YRC Worldwide was given a badly needed financial lifeline when continuation of a five-year wage and pension concession agreement was ratified by a 2-to-1 margin by its Teamsters-covered employees.

Voting results were announced late last month, approximately three weeks after a less-harsh concessionary package was rejected by a 61-39 percent margin. This time, Teamsters working for YRC Worldwide approved a tentative agreement aimed at protecting more than 30,000 jobs. Workers at YRC approved this latest proposal by a vote of 12,267 to 6,314.

Teamsters President James P. Hoffa called it "a very difficult vote for our members." YRC officials had threatened bankruptcy filing had the wage concession not passed. The labor agreement is seen as key to new bank refinancing of some $1.4 billion in debt. Approximately $300 million of that debt is due in the next six months, and the labor package is seen as giving the company wiggle room to refinance at more favorable terms.

"In the end, they did what they believe will give this company the best chance to stay in business and protect their jobs," Hoffa said. "Now we will hold management's feet to the fire to make sure our members' jobs are protected and redouble our efforts to make sure this company handles its finances responsibly."

The plan will provide a pathway for substantial debt reduction and refinancing initiatives that will permit the company to protect jobs, YRC has said.

Tyson Johnson, director of the Teamsters national freight division and co-chairman of the union's negotiating committee, said "once again, our members' sacrifices are providing the lifeline for the company."

The agreement contained significant improvements over the company's prior rejected proposal, the Teamsters said. But the deal continues a 15 percent wage concession first won in 2009 as well as a 75 percent cut in company contributions to the pension plan. Together, those concessions are worth an estimated $300 million annually to YRC.

YRC is facing about $953 million in debt coming due in the next 15 months. It has a $69.4 million bond issue that matures on Feb. 15, and it has $325.5 million of loans due in September and $556.7 million of loans and bonds maturing in March 2015. All told, YRC is operating with more debt than all the other publicly held LTL carriers combined.

Within days of the initial 61-39 percent rejection of the original five-year proposal in early January, YRC made another appeal to Teamsters leadership. This latest package lessened some fringe benefit cuts such as vacation time while also ensuring that fewer YRC road driver jobs will be lost to non-union contractors.

YRC can still use third-party trucking companies, but only for line haul and not at the direct expense of YRC road drivers. YRC can, however, file for a change of operations that forces drivers to

relocate, giving the company the opportunity to replace those drivers by non-union subcontractors.

"We believe more change of operations and more terminal closures are likely," noted David Ross, trucking analyst for Stifel Nicolaus in a research note.

Over-the-road purchased transportation is capped at 6 percent of line-haul miles and 26 percent of overall rail- and truck-purchased transportation under the new agreement.

YRC CEO James Welch said the new agreement gave prospective lenders and equity investors "the path they need for the company to achieve a complete recapitalization and achieve a healthy capital structure" for the 90-year-old LTL carrier.

In an interview with *Logistics Management*, Welch said that the agreement is especially important at YRC Freight, its largest segment, which has gained greater operational flexibility "to make sure we give the right kind of service and keep the network more in balance."

That would be in areas where YRC Freight could have shortages of drivers. Specifically, the new agreement gives YRC much greater use of purchased transportation, Welch added. "Flexibility is one part of cost efficiencies," he said. "The other things are the hard cost savings where we'll have lower new-hire rates and wage application bonuses for the first two years of the five-year agreement."

Specifically, YRC won immediate savings in its base pay rates for the first two years. Instead of annual 40-cent hourly pay raises due on April 1 of each of the next two years, YRC is paying full-time workers a $750 one-time bonus for each of those years. They'll start receiving those 40-cent hourly wage increases in 2016, 2017, and 2018, Welch said

"The reason we feel good about this, even with the wage concession extension, is that our employees are still in the top tier of total compensation for the market place," Welch said. "Our wages are competitive and our benefits are way above market rates."

Welch said that he was grateful for support of both Teamsters and non-union workers who have sacrificed billions in wages the past six years to help keep the company afloat.

"No doubt all employees have sacrificed, non-union and union personnel alike," Welch said. "I think the focus needs to be on the fact that these are very well-paid jobs. But the marketplace will win. We're competing with other carriers with lower cost bases than we do, and it's a matter of staying competitive in the marketplace."

Despite the wage concession by labor, Welch added that shippers still hold the keys to long-term survival of the company.

"One of the things that makes me feel good is that our customers have remained very loyal as we went through this process," Welch said. "Our customers continue to tell us that we continue to fill a need in the market place and our three regional carriers are best in class. We know we still need to improve, but shippers say they value the capacity we bring and the services we bring to the market." ☐

INFRASTRUCTURE

Multi-year transport funding programs key part of U.S. Chamber's 2014 goals

WASHINGTON, D.C.—The U.S. Chamber of Commerce will make a major push this election year to get Congress to pass multi-year surface transportation funding programs that are due to expire at the end of the September, the nation's top business lobbyist vowed late last month.

In delivering his annual "State of American Business Address," U.S. Chamber of Commerce President and CEO Thomas Donohue said: "The state of American business is improving and the economy is gaining strength." But he added that a "safe, seamless, and modern infrastructure" was necessary to help speed that economic recovery.

"Trading around the world and moving energy across the country requires a safe, seamless, and modern infrastructure," Donohue told U.S. business leaders and others at the Chamber headquarters, which is across the street from the White House. "Families, workers, visitors, tourists, and our environment need it too—to speed mobility, conserve energy, clean the air, and save lives."

Toward that end, Donohue vowed that the Chamber would work for a multi-year reauthorization of the nation's core surface transportation program, which expires at the end of September. The Chamber has estimated that aging infrastructure and bottleneck delays cost this nation $200 billion annually—or 1.6 percent of Gross Domestic Product.

The Chamber is also backing its "Rebuild America" initiative, a movement to raise the federal taxes on motor fuels. The Chamber says that by paying more in user fees and taxes, investing up to $250 billion in public-private partnerships, bringing together the latest technology and management practices, and building support for smart investment, the country can modernize its infrastructure and grow the economy at the same time.

The Chamber's other 2014 legislative priorities include:

• Expanding global trade by passing Trade Promotion Authority, or TPA. TPA allows Congress to set negotiating objectives for new trade pacts.

• Advancing and protecting the U.S. energy revolution. In 2012, unconventional oil and gas alone added $284 billion in GDP; generated nearly $75 billion in federal and state tax revenues; and supported 2.1 million jobs, Donohue said.

• Reining in entitlements such as Social Security, Medicare, and Medicaid. "We won't have the money to invest in infrastructure until we stop ignoring the big smelly elephant in the room—American's entitlement programs," Donohue said. "We still have a serious overspending problem—and entitlement spending is the primary cause."

• Addressing health care reform by "fixing" the Affordable Care Act. Notably,

Donohue did not call for repealing the law known as Obamacare.

• Trimming regulations and advancing tax reforms.

• Expanding opportunities for all by growing the American economic pie.

"The fact that we have many Americans who are successful is not a problem," Donohue said. "The fact that many Americans don't get a fair chance to succeed is a problem. We know what doesn't work. Getting stuck in stagnant growth, as has been the case for the past five years, doesn't work. And doubling down on the policies of tax, spend, regulate, and mandate won't work."

The Chamber unveiled its 2014 lobbying agenda by saying that its goals for this election year are to "expand trade, produce more domestic energy, and improve our infrastructure."

—John D. Schulz, Contributing Editor

RAILROAD-INTERMODAL

2013 intermodal volumes set new record, carload down slightly reports AAR

WASHINGTON—U.S. railroad and intermodal volumes were again mixed in 2013, according to data issued by the Association of American Railroads (AAR).

Carload volume was down 0.5 percent compared to 2012 and 3.6 percent below 2011's numbers. AAR officials said that going back to 1998, when it initially began collecting data, the only year which saw lower total carload volumes was 2009, the height of the recession. According to AAR data, the peak year for U.S. carloads was 2006 at 17.3 million, with 2013 coming in 15.6 percent below.

U.S. intermodal volumes reached an all-time high at 12,831,692 trailers and containers, which topped 2012's 12,282,221 by 4.6 percent annually and 2011's 11,892,418 by 7.9 percent. Last year also outpaced the previous high, 2006's 11,732,750, by 8.6 percent.

Putting the 2013 intermodal output into perspective, the AAR said that, in 1990, containers accounted for 44 percent of intermodal volume. By 2000, their share was up to 69 percent, with 2013 setting a new record at 88 percent. AAR reiterated that it's much more cost effective to move rail intermodal shipments in containers than in trailers, largely because containers can be double-stacked and are easier to load onto and take off a railroad flat car than trailers.

"Last year ended the way it began—strong intermodal, weak coal, and mixed performance for other commodities, resulting in a year for rail traffic that could have been much better, but also could have been much worse," said AAR senior vice president John Gray. "A variety of indicators seem to be saying that the economy is slowly strengthening, a trend we expect to continue in 2014."

Of the 20 commodity groups tracked by the AAR, 11 saw gains in 2013. Petroleum products were up 31.1 percent, and crushed stone, gravel, and sand were up 8.3 percent. Coal dipped 4.3 percent, and grain was down 8.0 percent. But when coal and grain—which was down 4.1 percent—are excluded, total U.S. carloads are up 3.4 percent annually from 2012 to 2013.

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Carload growth continues to trail intermodal growth for a few reasons, according to Anthony Hatch, an independent railroad analyst and principal of New York-based ABH Consulting.

"One part has to do with this economic recovery being slower than normal as this was a bigger than normal recession and was a much bigger shock to the system than any other recession since 1933," Hatch explained. "Another reason is the 50-year drought that hit grain and a secular one-time permanent hit to coal, which accounted for 39.5 percent of all 2013 carload volume."

According to Hatch, coal peaked in 2008, and since then has taken about a 20 percent hit, dropping about 12 percentage points of market share in terms of U.S. utility fuel use to natural gas. "If you look at just the cyclical carload traffic minus bulk commodities, and even taking out intermodal, volume would likely look closer to 2006," he said.

Looking at 2014 and beyond, Hatch said that there is plenty to be optimistic about when it comes to growth on the tracks due to the downward growth rate of coal stabilizing from about 15 percent to low single digits; the drought ending by the fourth quarter; cyclical traffic remains growing at decent low single-digits; the capital investments being put into production around the U.S. chemical industry; and the Mexican auto industry, among other factors.

"This all means we should be past the transition into the second phase of railroad growth," Hatch added.

—Jeff Berman, Group News Editor

TRUCKING

ATA reports sharp gain in seasonally-adjusted truck tonnage in December

ARLINGTON, Va.— With the economy continuing to show modest signs of progress, truck tonnage volumes ended 2013 on a positive note, according to data issued late last month by American Trucking Associations (ATA).

Seasonally-adjusted (SA) truck tonnage in December ticked up 0.6 percent following November's impressive 4.7 percent gain.

The ATA's not seasonally-adjusted (NSA) index, which represents the change in tonnage actually hauled by fleets before any seasonal adjustment, was 123.0 in December, falling 1.4 percent below November's 124.8. The December NSA was up 10.3 percent annually.

"Tonnage ended 2013 on a high note, which fits with many economic indicators as trucking is an excellent reflection of the tangible goods economy," said ATA Chief Economist Bob Costello in a statement. "The final quarter was the strongest we've seen in a couple of years, rising 2.2 percent from the third quarter and 9.1 percent from a year earlier."

Costello added that the improvement is not limited to the tank truck and flatbed sectors like earlier in the year. "With manufacturing and consumer spending picking up, coupled with solid volumes from hydraulic fracturing, I look for tonnage to be good in 2014 as well," he said.

This sentiment from Costello matched up with commentary from carriers that indicated the second half of 2013 was stronger than expected, as the manufacturing sector shows continued strength, coupled with good, but not great, holiday retail shopping a well as solid growth in the housing and automotive sectors.

In as recent interview with *LM*, Noel Perry, senior consultant at freight transportation consultancy FTR said paying attention to the general economy is where the assessment regarding future trucking capacity and growth really begins.

"There are two main concerns," said Perry. "With the exception of the third quarter of 2013 [which saw GDP grow 4.1 percent], the economy has not truly accelerated in the last couple of years, and the multipliers on GDP that produce truck freight are relatively low. The combination of a relatively slow economy and low multipliers indicate trucking will grow between 2 percent and 3 percent in 2014 on a base case."

—Jeff Berman, Group News Editor

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Newsroom Notes
with Jeff Berman

Jeff Berman is Group News Editor for the Supply Chain Group publications. If you want to contact Jeff with a news tip or idea, please send an e-mail to jberman@peerlessmedia.com.

Truckload capacity trends are worth watching

FOR LOGISTICS AND TRANSPORTATION stakeholders, keeping an eye on over-the-road capacity at its current levels and speculating on future levels has become more than a passing interest.

With undertones of economic optimism afloat, coupled with an ongoing regulatory drag in the trucking industry, there's more than enough news to pay attention to for both shippers and carriers. Noel Perry, senior consultant at freight transportation consultancy FTR, says that paying attention to the general economy is where all interested parties can begin their capacity assessment.

"The economy has not truly accelerated in the last couple of years," said Perry, "and the multipliers on GDP that produce truck freight are relatively low. The combination of a relatively slow economy and low multipliers indicate that trucking will grow between 2 percent and 3 percent in 2014 on a base case."

On top of that is the repercussions of motor carrier drivers' hours-of-service (HOS) rules that took effect on July 1. The rules have been blasted by shippers and carriers, noting that the regulations have been a production killer to varying degrees.

Yet, Perry maintains that the true impact is still unclear, with some industry stakeholders indicating that the new rules are having more of an effect than most realize, especially now that the truckload market has been relatively tight and has become tighter over the last four to five months. Perry adds that there's potential for the tightness to continue at least through the first half of 2014 due to the current "regulatory lag."

"What that means is that rates could head up 3 percent to 5 percent. However, the real story in 2014 is the upside exposure, as it's possible that the economy will grow more rapidly," explained Perry. "Historically, when it does, freight has grown by double digits."

If 3.6 percent GDP growth continues for two or three quarters, Perry believes that would translate into freight growth in the 9 percent to 12 percent range.

If 3.6 percent GDP growth continues for two or three quarters, Perry believes that would translate into freight growth in the 9 percent to 12 percent range. He adds that that type of growth stress on capacity, which has very little margin for error, could portend a return to 2004 rates. Were that to happen, fleets would begin ordering additional trucks as a result of the need to increase capacity.

From a service provider perspective, capacity became harder to obtain as of late last year, according to Tom Nightingale, president of transportation logistics for Pittsburgh-based third-party logistics provider Genco. "It's gotten tighter, and it's gotten harder to get volume and active capacity for our customers," he said. "It takes more phone calls and effort than before."

As for 2014, Nightingale said that there's some uncertainty in the growth rate, but he expects capacity to be taut as the "long tail" of HOS takes hold, coupled with a annualized truck tonnage growth rate that he expects to be in the 5 percent range—a number that's consistent with the estimate provided by FTR's Perry.

In this current environment, it stands to reason that capacity will continue to remain tight. And based on Perry and Nightingale's commentary, it's clear to see why. However, it could really only be the tip of the iceberg should the economy continue its steady uptick.

Either way, it's a story that requires full attention from shippers, carriers, and every supply chain stakeholder involved in transportation decision making. □

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Moore on **Pricing**

Peter Moore is Adjunct Professor of Supply Chain at the University of Denver Daniels School of Business, Program Faculty at the Center for Executive Education at the University of Tennessee, and Adjunct Professor at the University of South Carolina Beaufort. Peter writes from his home in Hilton Head Island, S.C., and can be reached at peter.moore@du.edu.

Capacity pricing and LTL freight

BY NOW YOU'VE SURELY HEARD a U.S. Postal Service spokesperson talk about a parcel deal that they call "If it fits, it ships" with a simple form of capacity pricing.

Shippers and carriers need to think about a future in LTL freight with loads up to 19,999 lbs.—or even more—that are sold on a capacity basis. If it fits with carrier operations, it ships with optimum pricing.

Our LTL pricing systems should look like airline systems in which the carrier sets pricing in their own web-based application and allows shippers and third parties to access the pricing, including contract pricing on a real time basis. The carrier can adjust rates based upon available capacity with pricing adjusting for capability, advanced booking, and long-term contracts.

Variable prices for insurance waivers, fuel hedging, and transit time (express vs. flexible delivery times) could be established and adjusted as capacity is consumed in a lane. And like the air providers, the carrier price system becomes the system of record for auditing.

The implication for a shipper with a transportation management system (TMS) is that instead of a static rate, the system would call out to the carrier's system for current pricing from an existing contract or to a market of carriers in real time. The shipper system has to be able to disclose dimensions, weight, value, delivery deadline, and availability time in order to get a dynamic rate from the carrier.

Like the airline, the carrier system uses these variables, contract agreements, and internal operating practices to quote for a given day and class of service. The carrier rate system then sends the shipper's TMS the contract or bid price and records it for settlement. This is the equivalent of issuing an airline ticket. The implication for freight payment is that we will only need to audit for service levels (e.g. on-time delivery) and will not need price matching third party audits. With current tracking software, carrier delivery times could be confirmed automatically, thus simplifying settlement of charges.

Carriers have expressed frustration with having to respond to shipper RFPs based on old fixed-price tables. They want to have a way to incentivize shippers to better utilize their changing capacity; and for carriers this means creating an audit friendly pricing system that is accessible by shippers' computers. This pricing system would display and distribute pricing by density, day of week, value, and other variables the shipper can impact with their internal decisions. This approach incentivizes the shipper to reduce package size, work on shipping and receiving hours, and book the carriers days in advance to allow them to match capacity to coming demand.

This may seem idealistic, but I have seen demonstrations of systems that will do this type of pricing and tracking for highway carriers. There are third party services with thousands of shippers and carriers connected doing complex rating—and air providers do it every day.

For some reason we're stuck in the old, static National Motor Freight classification-based pricing system with extra costs for shippers and carriers in tariffs, pricing tables, and outside auditors. Carrier discounts have reached an absurd 90 percent level to sustain antiquated price structures, and we're unable to take advantage of dynamic changes in carrier operations and volumes that create opportunities for both carrier and shipper margins on any given day of the week.

> **Shippers and carriers could work together dynamically to optimize the various factors that make up service and cost in LTL freight.**

Shippers and carriers could work together dynamically to optimize the various factors that make up service and cost in LTL freight; however, the slow shift of service rate bureaus to "density pricing," while admirable, is delaying the major change that industry needs to make.

The shipper action list is short but critical. First, shippers should meet with carrier executives and discuss their willingness to move to dynamic and collaborative LTL pricing. Second, have the IT departments of the carrier meet with your TMS folks or your third-party TMS provider. You then need to agree on the price and service variables that both parties feel are important and measurable as well as the protocols for communication.

Third, write an internal procedure that books freight as early as possible in the order cycle to give carriers maximum planning time. Fourth, establish standard costs for major freight lanes and begin measuring how dynamic pricing delivers savings while improving both carrier margins and your customer service performance. ☐

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Pearson on Excellence

Mark Pearson is the managing director of Accenture's Supply Chain Management practice. He has worked in supply chain for more than 20 years and has extensive international experience, particularly in Europe, Asia, and Russia. Based in Munich, Mark can be reached at mark.h.pearson@accenture.com

Cornerstones of an emerging market supply chain

In previous centuries, international trade volumes typically flowed east to west, with more goods, materials, and components journeying from emerging markets—largely in Asia—to mature economies in Europe and North America.

Now however, the global economy is more of a two-way street, with huge volumes of finished goods also heading east to burgeoning markets like China, Singapore, India, and Vietnam, as well as south to fast growing economies such as Venezuela, Colombia, Argentina, Uruguay, and Peru.

This new reality may be good for business, but it can be problematic for supply chain decision makers. That's because many of supply chain management's deeply held mantras—lean inventories, standardized operations, highly rationalized supplier bases—can work against global companies' efforts to accommodate the diversity of emerging markets.

Take consumer needs: Tech-savvy young adults in Mumbai often have more in common with New Yorkers than with other young adults across India. Similarly, the purchase habits of affluent consumers in Shanghai may be more aligned with high income Parisians than with middle class or rural Chinese. Diversity—the traditional enemy of supply chain efficiency—is often the hallmark of emerging markets.

Emerging market infrastructures can also be inhospitable to lean supply chain approaches. According to a report in *Indonesia-Investments*, the ratio of logistics costs as a percentage of total GDP averages 9.9 percent in the U.S. In Malaysia, the average is 13 percent. In Thailand, Vietnam, and Indonesia, logistics-to-GDP ratios are 20 percent, 25 percent, and 27 percent respectively. In emerging markets, therefore, lean can be mean.

Emerging markets are also a hodgepodge of unclear and frequently contradictory regulations. This complicates companies' ability to enact focused programs and policies. *The 2012 Enabling Trade Index* noted that Singapore is the world leader in developing "institutions, policies, and services facilitating the free flow of goods over borders and the destination." Hong Kong ranked second. However, China ranked 56th, Indonesia 58th, South Africa 63rd, Brazil 84th, India 100th and Russia 112th.

The point is that heterogeneity is the overarching reality when it comes to emerging economies when you consider the geographically dispersed markets; diverse business and social culture; myriad stages of business maturity; varying work cadences; non-standardized taxation systems; and broad deviations in labor availability and efficiency.

So what are supply chain leaders doing to address emerging markets—places where one size fits none? Some organizations have chosen to excel at rapidly sensing, capturing, and analyzing external and internal data.

The idea is to overcome emerging market challenges such as growing to understand diverse, fragmented

customer groups as well as maximizing visibility into far-flung supply chain operations.

Take Procter & Gamble for example, a company that built a supply network that includes near constant POS updates that quickly signal shifts in product consumption. Internal and external partners now use the company's accumulated data to quickly create replenishment plans.

Another innovator, Nextel, developed a "control tower" approach to overseeing dozens of South American contractors, giving the company near real-time visibility into the progress of equipment installation, testing, and integration.

Complementing the rapid acquisition and assessment of information is the ability to quickly make supply chain changes. This is often a function of flexible, win-win relationships with supply chain partners.

Lenovo, the world leader in PC production, is a good example. The company's hybrid supply chain model uses advanced segmentation and analytics to maximize transportation and distribution efficiency across captive and contract manufacturing facilities in Brazil, China, India, Mexico, and the U.S. The combination of in-house and external operations helps Lenovo ameliorate risks associated with volatile emerging markets.

Leaders also tend to agree that "rapid innovation" is as important as "rapid response" and that positioning emerging markets as dumping grounds for stripped-down versions of existing products is a ham-handed strategy.

Far more productive is redesigning products to meet the unique needs of emerging markets. In India, 60 percent of the population lives in poor rural areas without hospitals. As a result, hospitals must often go to consumers, which is why General Electric developed a fully portable ultrasound machine.

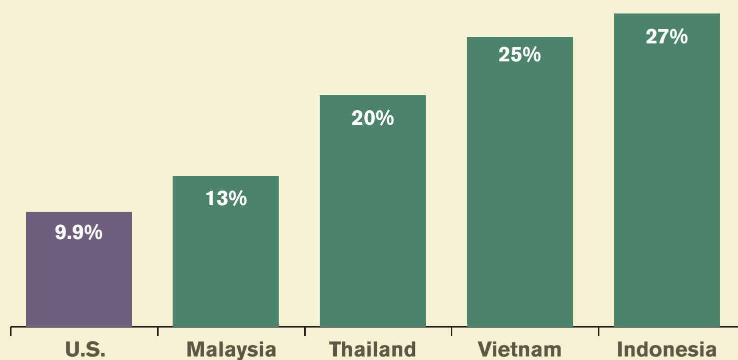
Also focused on Indian consumers' financial and storage constraints, Novartis offers small, low priced medicine packets, with packaging information printed in local dialects.

Lastly, businesses may need more extensive, more flexible sales and distribution networks to connect with diverse, largely rural markets. Tata Motors solved this problem in an interesting way: Because its potential customers are often too dispersed to reach a dealership, Tata recruited local sales people who generate leads on a commission basis. To identify and feed prospects to Tata dealers, the company also developed a network of corporate partners with established presences in rural areas.

Some emerging markets may not be "emerging" for long. But it's unlikely that these new dogs will ever respond to old tricks. Which is why supply chain innovators are likely to remain successful far into the future. ☐

Emerging market infrastructures: Lean can be mean

(Ratio of average logistics costs as a percentage of total GDP)



Source: *Indonesia-Investments*

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

Outrunning the Red Queen in the shale oil fields

IN LEWIS CARROLL'S HALLUCINOGENIC NOVELLA, *Through the Looking Glass*, the Red Queen explains to Alice that she too can become a queen by reaching the opposite side of the playing board. But Alice, who has been running as fast as she can, finds that, despite her efforts, she remains in the same spot.

The Red Queen explains that in Wonderland, "it takes all the running you can do to stay in the same place, and if you want to get somewhere else, you must run at least twice as fast as that."

Critics of the shale oil boom have compared oil production in the Bakken and other shale oil fields to Alice's race with the Red Queen. The average new well produces fewer than 500 barrels of oil per day in the first month. By the end of the first year of production, output has typically fallen to slightly less than half of the initial flow rate. By the end of the second year, daily output from the average well declines to just over 15 percent of the initial flow rate.

Consequently, a significant and growing amount of new oil production is required to cover declining output from the many thousands of legacy fields that have been drilled over the last few years.

As a consequence of low average production and high decline rates, shale oil critics draw an analogy to the Red Queen race, arguing that as time goes on, the amount of drilling will have to increase exponentially just to keep production from declining. Sooner than later, oil production from the shale fields will reach a plateau and inevitably fall into decline despite the significant size of proved shale oil reserves.

It's difficult to refute this line of reasoning precisely because rising production means that the Red Queen problem is becoming ever more pronounced—as production rates go up every year, so too do the legacy decline rates.

Toward the end of 2013, the Energy Information Agency (EIA) began publishing a monthly *Drilling Productivity Report* that suggests trouble looms on the horizon.

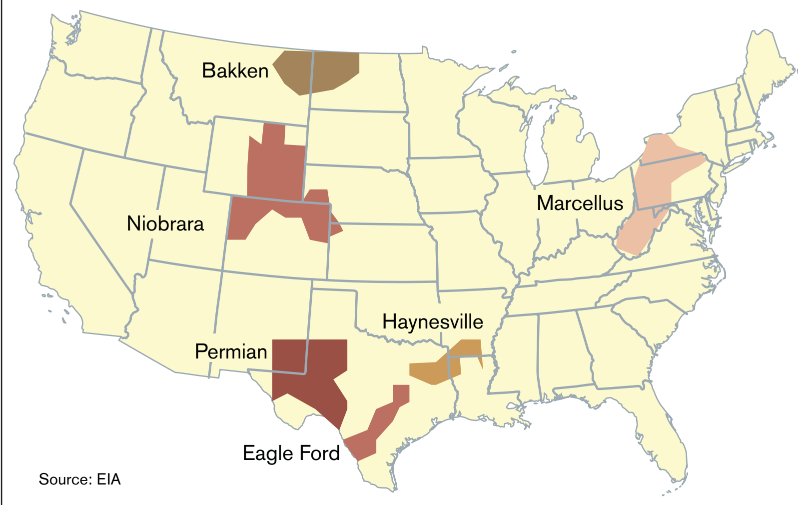
There are three primary shale oil fields: the Bakken in North Dakota and the Eagle Ford and Permian in East Texas and West Texas, respectively. On a daily oil output basis, the Permian is the largest, producing nearly 1.4 million barrels per day (mbpd). Output from the Eagle Ford has climbed to approximately 1.3 mbpd, and production from the Bakken has recently risen above 1.0 mbpd.

Collectively, oil production from these three fields in December 2013 was nearly double the December 2012 volumes. With such strong growth, there seems little reason for concern that oil production will soon become, like Alice, trapped on the Red Queen's treadmill—but decline rates from legacy fields have been climbing faster than net production.

Oil and gas production by region

	Oil production thousand barrels/day			Gas production million cubic feet/day		
Region	January 2014	February 2014	change	January 2014	February 2014	change
Bakken	1,011	1,036	25	1,117	1,143	26
Eagle Ford	1,251	1,285	34	6,112	6,223	111
Haynesville	52	52	0	6,376	6,259	-117
Marcellus	40	42	2	13,837	14,225	388
Niobrara	284	290	6	4,326	4,293	-33
Permian	1,370	1,373	3	5,055	5,056	1
Total	**4,008**	**4,078**	**70**	**36,823**	**37,199**	**376**

Source: EIA



New wells drilled in the Permian field are expected to add 42,000 barrels per day (bpd) to total production between January and February 2014. On a net basis, however, oil output is expected to rise by only 3,000 bpd because output from legacy fields is declining at a rate of 39,000 bpd, and is increasing more rapidly than new well productivity.

In January 2011, the legacy decline rate was estimated by the EIA to be just 25,000 bpd, but has since then increased at a compound annual rate of 16 percent. By contrast, new well productivity in this field has remained flat. Consequently, in order for oil production to remain flat, the number of wells drilled every month must increase.

New wells drilled in the Eagle Ford field are expected to add 127,000 bpd between January and February 2014, but on a net basis, output is expected to increase by just 34,000 bpd as production from legacy wells is expected to decline by 93,000 bpd. Since January 2011, the legacy decline rate has increased eight-fold, and decline rates continue to accelerate.

The legacy production decline problem in the Bakken is similarly troublesome. The newly-drilled wells there are expected to bring 86,000 bpd of new oil online between January and February 2014, but 61,000 bpd will be lost to declining production from legacy fields. The legacy decline rate in the Bakken has more than tripled over the last three years, and decline rates are accelerating there as well.

To a large degree, legacy declines have been offset by rising new well productivity, but gains are not distributed evenly across all fields. Well productivity has been flat in the Permian, but since 2011 the oil output per well has been growing at a compound annual rate of 43 percent in the Eagle Ford and 36 percent in the Bakken.

Assuming new well productivity continues to increase at these rates, and the number of rigs in operation remains the same in each of these fields, production from new wells in the Eagle Ford would be expected to grow from 127,000 bpd to 181,500 bpd, as the decline in legacy production grows from 93,000 bpd to 167,000 bpd. Consequently, net new production, which increased by 34,000 bpd in January 2014, would be expected to increase by just 14,000 bpd in January 2015.

Though still positive, the rate of growth in net new oil production from the Eagle Ford will fall to less than half of what it is today over the course of the coming year.

> **The average new well produces fewer than 500 barrels of oil per day in the first month. By the end of the first year of production, output has typically fallen to slightly less than half of the initial flow rate.**

A similar process is unfolding in the Bakken, but a different story prevails there. Assuming the recent trends continue, production from new wells in the Bakken would be expected to grow from 86,000 bpd to 117,000 bpd, while the decline in legacy production would be expected to grow from 61,000 bpd to 92,000 bpd. Consequently, net new production would be expected to grow by 25,000 bpd in January 2015, which is exactly how much it grew in January 2014.

It may be concluded that the rate of growth of shale oil production is likely to slow markedly over the next 12 months. For now, the industry continues to outpace the Red Queen, but the exponential growth of legacy decline rates suggest that sooner than later the industry will have to “run twice as fast” if output from these fields is to grow.

What this means for oil and fuel prices is difficult to discern so far in advance because there are so many interconnected moving parts. I don’t see the Red Queen problem as a looming catastrophe, but rather as a challenge—a serious and growing challenge that shippers and carriers need to monitor. ☐

Global Links

By Patrick Burnson

Patrick Burnson is Executive Editor of *Logistics Management.* If you want to contact Patrick with feedback or a story idea, please send an e-mail to pburnson@peerlessmedia.com.

When it comes to risk management, think small

Analysis shows no correlation between a manufacturer's total expenditure with a supplier and the cost of a supply disruption. Evaluating sub-tier partners is key.

INDUSTRY ANALYSTS AGREE that it's important to make risk assessment an ongoing process, allowing for frequent plan updates as political conditions, fuel prices, tariffs, currency exchange rates, labor costs, and other supply chain security threats arise.

Until now, the focus for most U.S. manufacturers has been on protecting its most asset-intensive suppliers, to ensure that key high-value components are always available. But a new body of research on supply chain risk suggests that there may be no correlation between the total amount a manufacturer spends with a supplier and the profit loss it would incur if that supply were suddenly interrupted.

This finding defies a basic business tenet that equates the greatest supply chain risk with suppliers of highest annual expenditure.

When applied to Ford Motor Company's supply chain, the quantitative analysis by Professor David Simchi-Levi of MIT's Department of Civil and Environmental Engineering and Engineering Systems Division shows that the supply firms whose disruption would inflict the greatest blow to Ford's profits are those that provide the manufacturer with relatively low-cost components.

"This helps explain why risk in a complex supply network often remains hidden," says Simchi-Levi, who is co-director of MIT's Leaders for Global Operations program. "The risk occurs in unexpected locations and components of a manufacturer's supply network."

A paper on the application of this work to Ford's supply chain by Simchi-Levi and former graduate students William Schmidt, now an assistant professor at Cornell University, and Yehua Wei, an assistant professor at Duke University, will appear in the January/February issue of *Harvard Business Review.*

Focus on low-probability, high-impact risk

Traditional methods for identifying the suppliers and events that pose the highest risk depend on knowing the probability that a specific type of risk event will occur at any firm and knowing the magnitude of the problems that would ensue. However, risks—which can range from a brief work stoppage to a major natural disaster—exist on a continuum of frequency and predictability, and the sources of low-probability, high-impact risk are difficult to quantify. Manufacturers generally assume that their greatest supply chain risk is tied to suppliers of highest expenditure.

But Simchi-Levi reasoned that because a company's mitigation choices—maintaining more inventory or an alternative supply source, for example—are the same regardless of the type of problem that occurs, a mathematical model of supply-chain risk should determine the impact to the company's operations if any disruption occurs, rather than estimating the probability of specific types of risks.

His model incorporates bill-of-material information (the list of ingredients required to build a company's products); maps each part or material to one or more of the firm's facilities and product lines; captures multiple tiers of supplier relationships (tier 1 are direct suppliers, tier 2 are suppliers to tier 1 firms, and so on); includes operational and financial impact measures; and incorporates supplier recovery time if a problem occurs.

As nodes are removed one at a time from the supply network, the model determines how best to reallocate inventory and obtain alternatives, and predicts financial impact. The resulting analysis divides suppliers into three segments depending on the cost of the individual components they provide and the financial impact their shortage would have: low-cost components/high financial impact; high-cost components/high financial impact; and low-cost components/low financial impact.

Highest risk from 2 percent of suppliers

When Simchi-Levi, Schmidt, and Wei applied the model to Ford's multi-tier supply network—which has long lead times from some providers, a complex bill-of-materials structure, components that are

shared across multiple product lines, and thousands of components from tier 1 suppliers—the model predicted that a short disruption at 61 percent of the tier 1 firms would not cause profit loss. By contrast, a halt in distribution from about 2 percent of firms would have a very large impact on Ford's profits. Yet each of those firms in the 2 percent furnishes Ford with less expensive components rather than, say, expensive car seats and instrument panels that fall into the high financial impact segment.

"The ability to manage and respond to supply chain disruptions is becoming one of the critical success factors of executives," says Hau Lee, a professor of operations, information, and technology at Stanford University's Graduate School of Business, who was not involved in the study. "Addressing low-probability disruptions has often been viewed as black magic, as standard quantitative methods simply do not work. The authors have come up with an innovative, structured approach, so that executives could use a rational decision process to gain control of this problem."

The relevance of this methodology can be seen in light of a disruption in 2012 at a plant in Europe, which caused a shortage of a polymer used by most manufacturer-suppliers to make fuel tanks, brake components, and seat fabrics. It took six months to restart production, a delay that had a large financial impact on the auto industry.

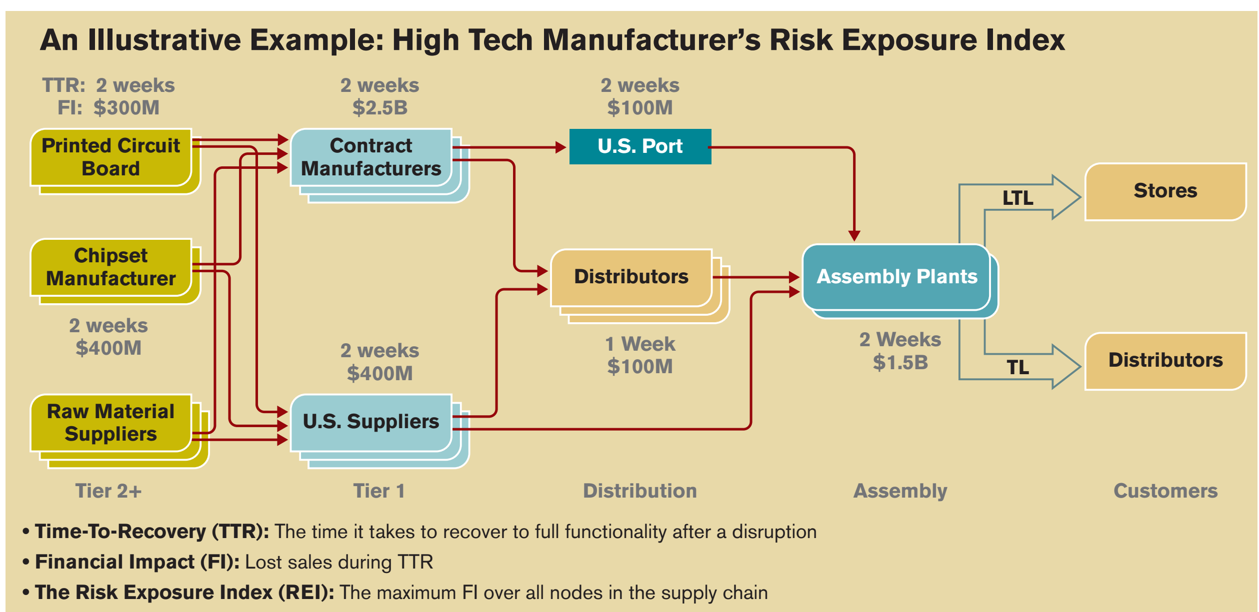
Keeping track of supplier solvency

Creating back up plans and due diligence reports for smaller suppliers should also be a priority says Rose Kelly-Falls, senior vice president, supply chain risk management at Rapid Ratings International, in Indianapolis, Indiana. She posed this rhetorical question to shippers last year: Are supply chain managers paying proper attention to their suppliers' solvency?

From her point of view, the answer is a resounding no. "Solvency is the degree to which current assets exceed liabilities," Kelly-Falls explains. "If supply chain managers miss any 'red flags' in this area, they do so at their own peril."

Kelly-Falls likes to tell a story about a small private machining company that was a second tier supplier of clutch gears for a major U.S. auto manufacturer. It was located in a remote community, and was quietly purchased by a toy manufacturer without much fanfare.

"When the auto maker needed a crucial piece of equipment for a new product launch, it was suddenly unavailable," she recalls. "Why? Because this big multinational corporation did not ever bother keeping track of what it perceived to be a minor business partner." The result, she recalls, was a missed deadline and the loss of millions of dollars in revenue. Had the relationship not been underestimated, the risk could have been mitigated. ☐



2014 WAREHOUSE/DC EQUIPMENT STUDY

Respondent demographics

In December, Peerless Research Group e-mailed survey questionnaires to readers of *Logistics Management* and *Modern Materials Handling,* yielding 412 qualified respondents from manufacturing (36 percent), warehousing (22 percent), corporate (26 percent), and aligned logistics professionals (15 percent). The median revenue of responding companies is $91.9 million. Qualified respondents—those managers and personnel involved in the purchase decision process of materials handling solutions—hold influence over an average of 136,885 square feet of warehouse or DC space.

Our annual look into spending plans inside the four walls highlights growing interest in automation and software as workforce issues factor heavily into equipment investments.

BY **JOSH BOND,** EDITOR AT LARGE

Over the last few years, the results of Peerless Research Group's (PRG) *State of Warehouse/DC Equipment and Technology Survey* have reflected an industry scrambling to adjust.

The recession, the e-commerce boom, and advances in materials handling equipment and software have rewritten the rules on what seems like an annual basis. Just since 2010, the average anticipated spending on such equipment has spiked by 15 percent or fallen by 26 percent from one year to the next.

Whatever survey respondents are doing with their money, it seems to be working. Activity levels as a percentage of capacity are at their highest since at least 2007, while 95 percent of respondents believe that their activity levels will increase (by an average of more than 20 percent) or stay the same in the next two years.

Yet even as the number of potential investors taking a "wait and see" approach declines from 50 percent to 43 percent and the number "proceeding with investments" jumps from 19 percent to 27 percent, spending figures have been trending downward. Having spent heavily to set the aircraft carrier in the right direction, the industry is transitioning to targeted investments aimed at keeping the ship on course.

Continued interest in automation

We know activity levels have grown in manufacturing (75 percent, up from 63 percent in 2012), warehousing supporting manufacturing (69 percent, up from 56 percent in 2011), and standalone warehousing (68 percent, up from 60 percent in 2011).

That growth is largely due to a focus on doing more with less—optimizing existing facilities instead of new building. Technology and equipment investments have already helped support data-driven improvements, but many respondents feel there is much more to be done.

"Technology is expected to become even more critical in the upcoming years as a growing percentage of operations plan to automate inventory control and handling, distribution processes, and labor management," says Judd Aschenbrand, director of research for PRG. "In warehouses and DCs, continuous improvement, workload planning, and lean processes are key initiatives going forward."

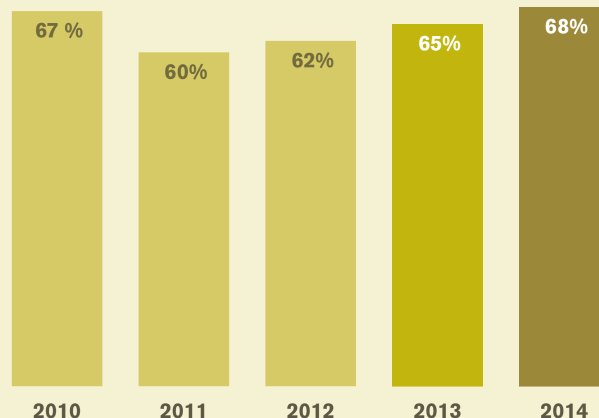
The survey results point to significantly increased interest in automated processes in the next two years. There are sizable gaps between the number of respondents currently using automation to evaluate productivity in various functions and those who expect they will have transitioned to automated approaches within the next two years.

Those soon-to-be-automated functions include the tracking of inventory levels (58 percent currently automated, 76 percent in two years), order fulfillment costs (40 percent, 60 percent in two years), and daily throughput (44 percent, 69 percent in two years).

This is reflected in the increased percentage (54 percent, up from 50 percent) of respondents who plan to invest in information technology hardware or software in the next 12 months. But respondents are also keen to optimize the productivity of each and every worker, anticipating growth in automated tracking of picking accuracy (33 percent currently automated, 62 percent

What is your current activity level for stand-alone warehouses/distribution centers?

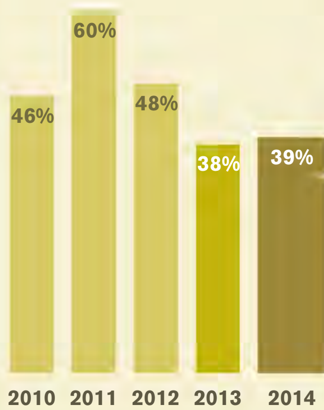
(Average % capacity utilization)

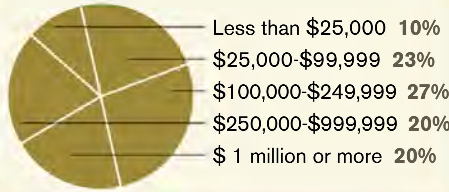


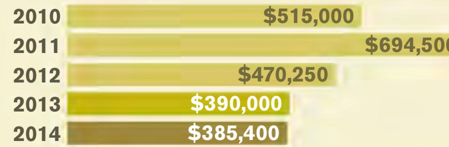
Source: Peerless Research Group (PRG)

Do you have a pre-approved annual capital expenditures budget for materials handling solutions?

(% rated very important)







Source: Peerless Research Group (PRG)

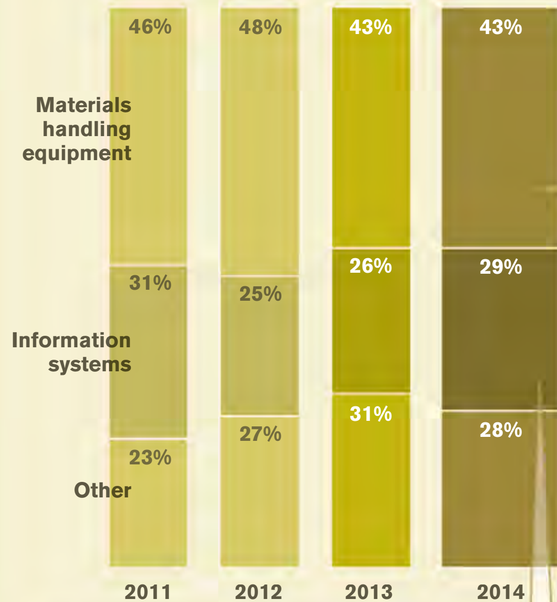
in two years) labor hours (51 percent, 69 percent in two years) and on-the-job injuries (18 percent, 37 percent in two years).

Investing to curb workforce challenges

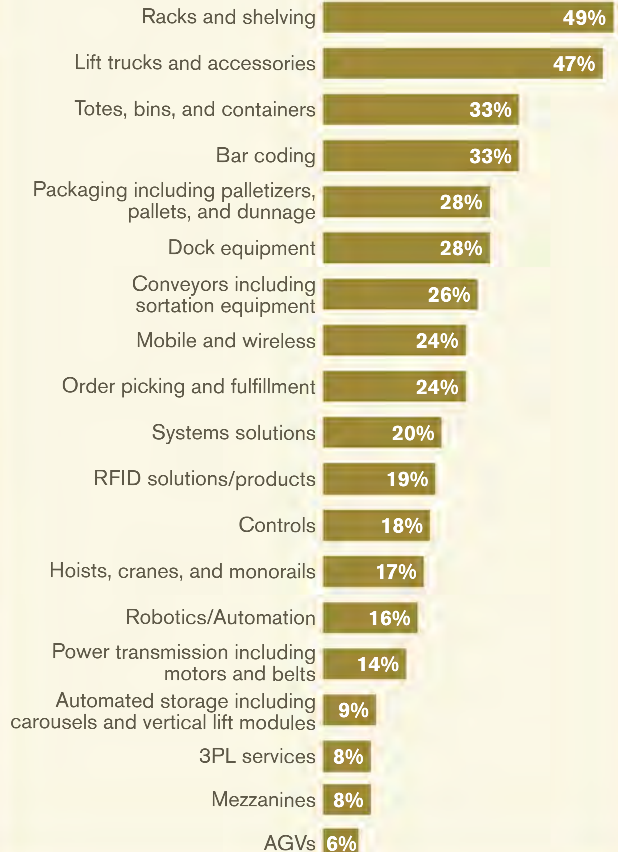
The growth of multi-channel distribution and e-commerce have pressured the distribution center and supply chain to run ever more efficiently, according to Norm Saenz, managing director at supply chain consultancy St. Onge Company.

"In an effort to cut operating costs, some might have performed layoffs in recent years," Saenz says. "Now that activity levels are up, the back is breaking in many facilities, and thus the willingness to spend on automation to enhance the productivity of those workers. But while technology and automation receive

And, what percent of your overall spending during the next 12 months will be on…



Which systems and equipment are you likely to evaluate or consider during the next 12 months?



Source: Peerless Research Group (PRG)

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the headlines for improvement in operations, more businesses understand it's the labor force that sustains productivity and high service levels."

When asked to identify the issues that are most relevant now and to estimate their relevance in two years, 89 percent of respondents again placed safety at the top of the list. Just two years ago, cost containment topped the list, but it now sits in second place with 76 percent. Labor-related issues like training (63 percent), labor availability (52 percent) and ergonomics (48 percent) are expected to become more pressing in coming years.

"The sophistication of the skill sets required to operate leading-edge equipment and system solutions in the material handling, logistics, and supply chain industry will require an equally sophisticated and well-trained workforce," says George Prest, CEO of supply chain association MHI. "Hiring, training, and retention of workers is the most important issue facing this industry."

But none of the listed issues saw a greater jump in anticipated relevance than environmental sustainability. Currently, 40 percent of respondents see it as an important issue, and 51 percent believe it will be within two years.

"Because they are elective and not mission-critical, green initiatives go hand in hand with how well the global economy and the individual company are doing," says Aschenbrand.

Supply chain visibility

In a new question added to the survey this year, respondents were asked about the level of end-to-end visibility across their supply chains.

An impressive 36 percent indicated that they have full end-to-end visibility across their supply chains, while another 27 percent described their manufacturing and warehousing operations as a group of discrete silos. In the middle, 61 percent stated they are in the process of improving integration among supply chain nodes. "End-to-end supply chain visibility will be a requirement for future supply chains," says Prest.

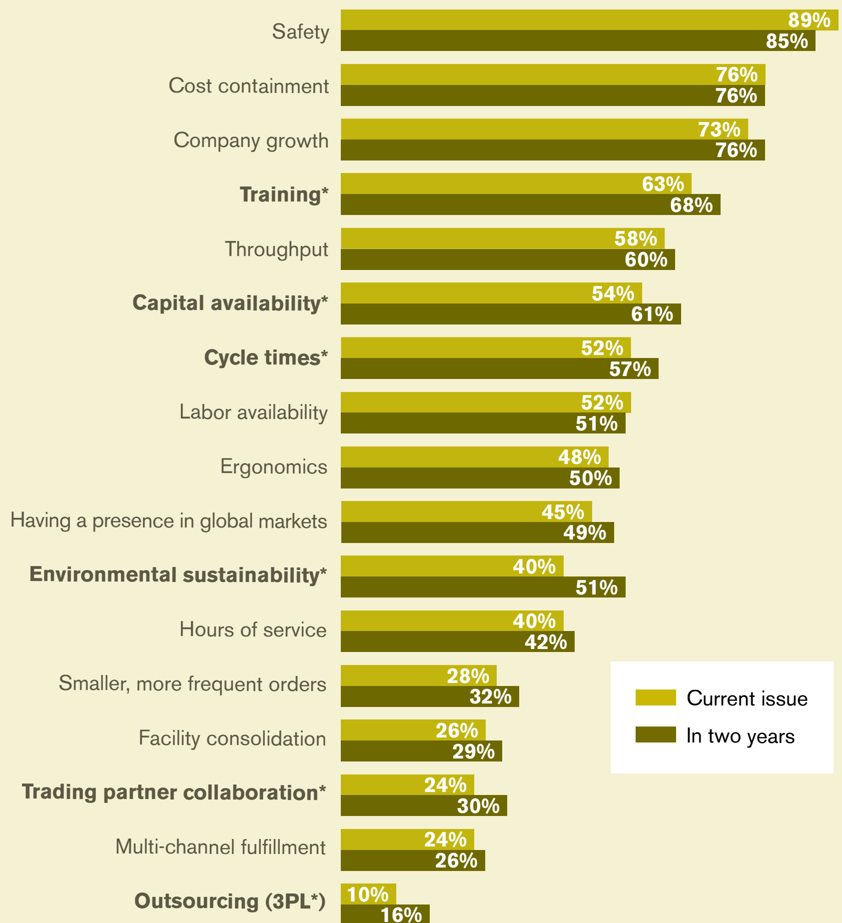
For example, the multi-channel model requires it, says Prest. "While many companies have traditionally maintained dedicated facilities to serve demand from specific channels, companies adopting multi-channel strategies must maintain real-time visibility of inventory at different facilities and synchronize operations across the supply chain," he says. "This visibility will improve efficiencies by maintaining one common pool of inventory."

Cloud-based or software as a service (SaaS) approaches are gaining some ground in this space, although overall adoption remains modest. Only about a third have either adopted (13 percent) or are currently evaluating (18 percent) SaaS or cloud computing strategies. Twenty percent have determined "it's not for us," 36 percent aren't sure of their company's interest, and 10 percent are not sure what cloud computing is.

"Those who are adopting these strategies cite cost savings, data reliability across the enterprise, streamlining of operations, ease of information access, and improved communications with customers and suppliers," says Aschenbrand. "But concerns over security, privacy, data integrity and system reliability remain as reasons for non-adoption."

Software: Cornerstone for improvement

In the next 12 months, 43 percent of planned spending will go toward materials handling equipment like racks



and shelving (49 percent), lift trucks and accessories (47 percent), bar coding (33 percent), conveyors and sortation (26 percent), mobile and wireless solutions (24 percent), and robotics and automation (16 percent).

In past years, investment in equipment might have been independent from investment in information technology solutions, but Saenz says that's no longer the case.

"There is a close relationship between equipment and IT investments," says Saenz. "At some point, when automation is included in the investment, certain software and handling control systems are required to efficiently manage the automation. Generally, as the investment in equipment and IT increases, the relationship becomes much closer between the two."

Planned spending on information technology suggests businesses will work to improve the collection and management of data from every corner of the supply chain. In the next year, roughly a quarter of respondents will invest in each of the following: enterprise resource planning (ERP), warehouse management systems (WMS), warehouse control systems (WCS), and asset management systems. Labor management systems (15 percent), and voice recognition technologies (15 percent) also placed high on the list.

"WMS has evolved into a sophisticated $1 billion-plus industry that operates in a highly competitive environment," says Prest. "The top providers have expanded their solution offering beyond the warehouse and the term 'supply chain execution' has been widely adopted to reflect the shift to more comprehensive logistics applications. Thus the WMS category for this type of solution may be too limiting."

For companies not yet ready to shed their legacy WMS, Saenz says that many can enjoy strong returns from bolt-on modules. "At a fraction of the investment, an LMS can greatly improve the control and productivity of the labor force, and stronger inventory management module can be a significant cost savings opportunity," he says. "This could be a 'Band-Aid' approach to enhancing their systems, should the company replace the entire WMS in the future."

As they move forward with information technology initiatives, 61 percent of companies prefer to work with a suite of applications from a single vendor, as opposed to the 39 percent who prefer a best-of-breed strategy employing software from various suppliers.

Once businesses have established a solid baseline of internal data, they will expect trading partners to be able to share comparable information. Today, 24 percent see trading partner collaboration as an important issue, and 30 percent expect it to be more important in the next two years.

—Josh Bond is Editor at Large for Logistics Management

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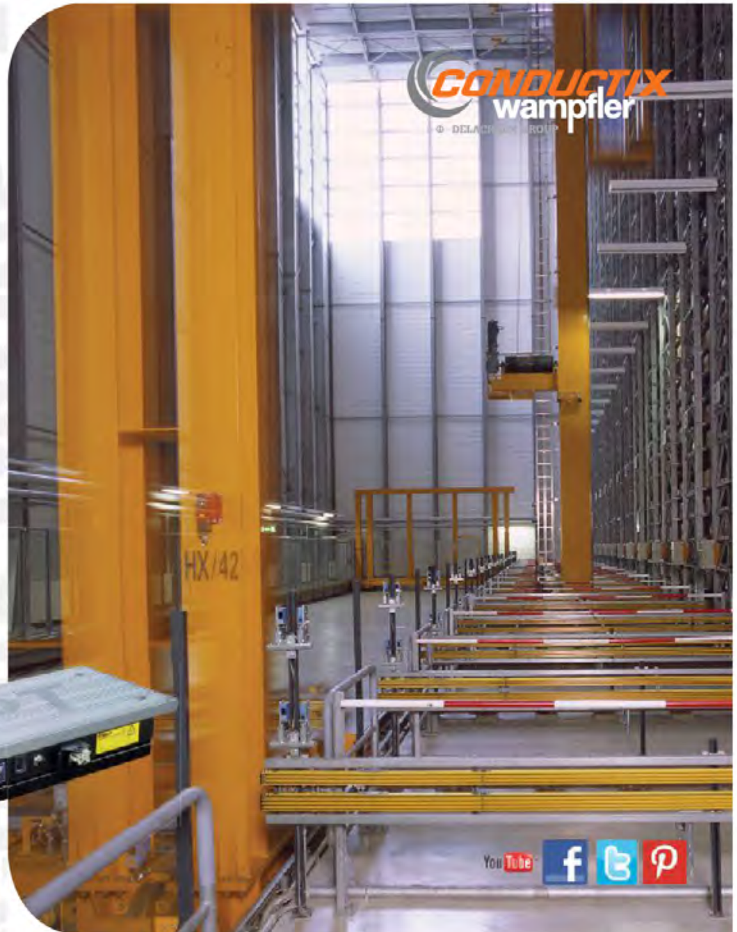

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2014 Parcel Express Roundtable: Do your homework

Our distinguished trio of analysts provides insight into current parcel market trends and suggests that now, more than ever, high-volume parcel shippers need to carefully vet their providers, comparison shop, and match service levels to actual needs.

BY **JEFF BERMAN,** GROUP NEWS EDITOR

When it comes to assessing the various facets of the transportation and logistics landscape, it's no secret that parcel express and ground activities follow a different playbook than other modes.

One big page of that playbook centers around the fact that this sector, unlike others, is still largely predicated on the actions of its largest players—the duopoly of FedEx and UPS. But that's not to say that this sector is solely about these two bellwethers, as the United States Postal Service (USPS), despite its financial travails, continues to make steady progress with its shipping and package group.

In fact, the ongoing emergence of e-commerce has also helped to further open doors for regional parcel express players of all sizes, although the pricing power of the big two makes justifying alternatives a bit of a challenge.

To help *Logistics Management* put the current market into perspective, we've called upon Jerry Hempstead, president of Hempstead Consulting; David Ross, transportation and logistics director at Stifel Nicolaus; and Rob Martinez, president and CEO at the parcel shipping consulting firm Shipware LLC.

In the following few pages, this distinguished trio will provide their insight into what's currently driving parcel market trends, the pricing picture, and what to watch for in the future. However, one prevalent takeaway the panel shares is for shippers to do their homework when it comes to assessing rates and service in terms of comparison shopping.

They agree that now, more than ever, high-volume parcel shippers need to carefully vet their providers and open their eyes to the small but growing role that regional parcel express providers are now playing.

***Logistics Management* (LM):** *How would you describe the current parcel marketplace?*

David Ross: We've seen consistent growth in demand for U.S. small package deliveries, with ground-deferred shipments preferred to air-expedited shipments.

Rob Martinez: David is right on. I would actually describe the market as exciting. Many industry developments occurred in 2013, including significant growth in USPS Shipping Services; emergence of regional parcel express carriers as viable alternatives to UPS and FedEx; double-digit growth in e-commerce; and as a result of that growth we saw new players in the same-day delivery market, including Amazon Fresh.

Jerry Hempstead: But don't forget that at the beginning of 2013 there were uncertainties regarding the negotiations between UPS and the International Brotherhood of Teamsters. From the ebb and flow of package counts divided between the two big carriers, it was obvious that fear, uncertainty, and doubt played well for FedEx and dampened the early numbers of UPS. This variable was eliminated midyear and the playing field has once again been leveled.

LM: *How would you describe the current rate and pricing environment for parcel shippers?*

Martinez: For FedEx and UPS customers, 2013 was a bear and 2014 will be no different. Annual rate hikes again outpaced inflation, many surcharges were increased, and the dimensional weight changes implemented in 2011 continued to adversely affect shipper costs.

UPS and FedEx continue to be focused on yield management, and shippers report that it's more challenging than ever to negotiate UPS and FedEx parcel contracts with multiple sets of list rates, different fuel surcharges, complex revenue-based

Dan Vasconcellos

incentives, discount exclusions, minimum charges, and multiple punitive contract clauses.

Ross: The rate environment puts shippers at a disadvantage because there are really only two major players controlling roughly 90 percent of the volume. They set the pricing. Optimizing modes is where the savings opportunity is for shippers, not in pure rate negotiations.

Hempstead: Dave and Rob are certainly correct. No matter how good a negotiator you are or have been, chances are your delivery cost has gone up, and gone up much faster than the CPI for the last five years. The exit of DHL from the domestic playing field in 2009 has left shippers at the mercy of a duopoly. Shippers have little recourse. If one marries a carrier, chances are that there are yearly increases built into the agreement someplace.

One of the largest effects has been in the escalation of the minimum charge. This is important because shippers with big discounts often experience the biggest jump in minimums. Since DHL departed, the ground minimum is up over 35 percent. The benchmark ground commercial base price for a Zone 5, 5-pound transaction is up over 45 percent. Their net profits have soared since DHL exited, and for those that follow pricing nuances, FedEx has matched the price of UPS for the most part on the ground tariff.

***LM:** Where do you see rates going in 2014 and what's driving them?*

Martinez: Effective January 6, 2014, FedEx rates increased an average of 3.9 percent for air and 4.9 percent for ground, while UPS implemented 4.9 percent average increases for both air and ground products on December 30, 2013. These "average" increases, however, are misleading.

Two- and three-day air products increased 5.25 percent to 5.55 percent, and lightweight ground packages increased an average of 7.5 percent for 1-5 lbs. and 7.0 percent for 6-10 lbs. Lightweight FedEx SmartPost packages increased an average of 7.5 percent for 1-5 lbs. and 7.1 percent for 6-10 lbs. Ground minimum charges increased 6.8 percent to $6.24, and many accessorial charges increased. Rate increases are being driven by a combination of UPS and FedEx's yield management strategy, few competitive alternatives, and the market's tolerance for GRIs.

Hempstead: When you consider all of the complexities of carrier pricing—service types, zones, fees, surcharges—I can't envision many shippers skating by without some pain. The carriers have become very sophisticated in where and how they tinker with the tariff.

The announcement of "average" increases by all of the carriers is rather deceptive, and there is no shipper that has a shipping profile that matches the way carriers determine this average. With that in mind, the only certainty is directionality. Shippers know rates are going up, but the amplitude is impossible to approximate.

"The announcement of 'average' increases by all of the carriers is rather deceptive, and there is no shipper that has a shipping profile that matches the way carriers determine this average."

—Jerry Hempstead, president of Hempstead Consulting

LM: How are market conditions affecting service and what role is the up and down economic recovery playing?

Ross: Market conditions are having an impact on service. Whether the economy is up, flat, or down, parcel service continues to improve—with the exception of the recent snag around Christmas, but that was poor peak readiness.

Martinez: Outside of the holiday season, in which a combination of high package volumes and inclement weather affected service performance, overall service at FedEx and UPS has been relatively stable. We were concerned when FedEx announced in 2012 that the company was revamping the Express segment through a combination of cost reductions, payroll reduction, and service repositioning to shed $1.7 billion by 2016. However, service performance at FedEx Express continues to meet historical levels.

Hempstead: The impact of the havoc that the economy brought on is seen in the downtrading of international shipments and the use of more intelligent shipping software that can correctly select the lowest possible price option to fulfill customer expectations. This has caused the carriers to rationalize networks, in particular in the air, to maximize profits without compromising service.

The reality is that the number of available shipments has been constantly increasing. The variable has been the services purchased by the shippers, and it has taken the carriers some time to adjust to those changing demands. For example, USPS Parcel Select has aided both the integrators and the USPS so that shippers have a system for residential delivery that makes sense for all parties.

LM: How is the ongoing emergence of e-commerce changing the parcel marketplace?

Martinez: It's safe to say that e-commerce is having an enormous impact on the parcel marketplace. We're commonly seeing 40 percent year-over-year annual package volume growth with many of our e-commerce clients. And while UPS Surepost and FedEx SmartPost package volume posted significant growth in 2013, the USPS stands to be the real winner because it handles the final mile delivery for the vast majority of these shipments. Moreover, these USPS products will be taking a healthy rate increase later this month.

In addition, the explosive growth of e-commerce is creating new opportunities in parcel delivery. Regional carriers like OnTrac—that provides parcel services to the eight Western U.S. states—are gobbling up market share from Amazon, NewEgg, and many other high-volume e-commerce companies. And in the ever intensifying battle to exceed customer expectations and using delivery as a competitive advantage, same-day services are springing up in major metropolitan areas.

Hempstead: The most significant change is the rapidity at which the mix of business, from commercial to residential, has occurred. It appears to be on a hockey stick trajectory. The e-commerce companies have gained the trust of purchasers, and this allows the buyer the convenience of shopping and comparing from the privacy of their own home. This trend will only continue, and I see the future of shopping malls threatened as they are quickly being obviated by the online experience.

LM: Given the financial challenges of the USPS, what possible changes might shippers expect?

Hempstead: The only politically saleable solution for the USPS is to raise its prices to cover its operating expenses. Going to five-day delivery, closing unproductive post offices, tinkering with employee retirement and benefits are just not going to garner any support from either side of the aisle in Congress.

Ross: I agree. We expect further rate increases, but parcel is not where the USPS financial challenges lie—it's mainly on the mail side. With Congress still involved, we don't expect the financial struggles to improve much. Still, as parcel is the bright spot at USPS, investments are being made to improve service—like increased track/trace capabilities—so shippers should expect better shipping options for small packages.

Martinez: While it's certainly true that the USPS faces significant financial and legislative challenges, declining mail volumes, as well as increased labor, health care, and pension costs, the shipping and package services segment is actually doing quite well. It's been the bright point, boasting consistent and solid revenue and package volume growth.

Therefore, I don't believe we'll see negative changes at all. If anything, the Postal Service is likely to continue to offer new service and product enhancements like we saw with Priority Mail this past year. With all this in mind, we believe that the USPS will continue to grow its shipping business segment, and play a major role in the delivery of lightweight, residential deliveries well into the future.

LM: What advice do you have for parcel shippers in 2014?

Ross: Know your freight and your lanes and figure out what service level is really needed. Carriers are targeting specific package weights with their

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annual rate increases, and if shippers keep shipping as they always have, they may take unnecessary rate increases. Ground service has improved in terms of transit times and reliability; so regional shippers that are using express should take a hard look at shifting to the carriers ground products.

Hempstead: There are just so many complexities now—different services, different zones, and different accessorial charges. This makes it easy to get distracted. The two things shippers should have in their toolbox is a robust shipment processing system that complies with the changing carrier requirements, and the services of a qualified, experienced expert in the parcel industry.

Martinez: Analyze, optimize, and diversify. We're seeing shippers save 25 percent to 40 percent through a combination of least-cost routing and modal optimization strategies as well as carrier optimization including the USPS, UPS, FedEx and regional parcel carriers.

***LM**: Have regional parcel players made inroads in market share gains in the last year? What can they do to better compete with the "big boys"?*

Hempstead: The regional carriers continue to grow and prosper. However, this really doesn't seem to have the attention of the national integrators. FedEx has entered into a new service offering of same-day city deliveries using delivery partners. As the USPS continues to raise the Parcel Select prices, the regional carriers become more relevant.

This option becomes available to shippers who can use the services of a regional carrier within their footprint, but also as a practical alternative to the USPS for the hybrid services. Some of the regionals are already beginning zone skip pools to facilitate moving orders across regions for entry onto their networks.

Martinez: Indeed, the "super" regional carriers—OnTrac, Eastern Connection, LaserShip, Pitt-Ohio, Sir Spee-Dee, Lone Star Overnight, Courier Express, TransTek—have been making inroads and growing market share. The regional carriers offer many benefits over UPS and FedEx including cost savings, larger next-day delivery footprint, later pickups, earlier deliveries, easier contracts with fewer accessorial charges, same day-delivery options, and customized solutions.

An industry trend that favors the ongoing expansion of regional carriers is the trend to move inventory closer to customers. Companies like Amazon have opened dozens of regionalized distribution facilities all over the country to decrease shipping times, reduce costs and better serve customers. Regional carriers stand to benefit immensely.

"The USPS will play a major role in parcel delivery and will take considerable market share away from FedEx and UPS. Within five years, the USPS will be the single largest player in residential parcel delivery."

—Rob Martinez, president and CEO, Shipware LLC

Ross: Yes, but keep in mind that the regionals only have less than 3 percent of the market. Even increasing their market share by 35 percent is barely noticeable to FedEx or UPS. In our view, they just need to keep doing what they're doing—providing fast, reliable service at a competitive rate on a regional basis. We don't envision a national network being established, as that would require significant real estate infrastructure investment, and the "big boys" would likely hold rates flat or cut them to prevent any new national parcel company from gaining enough density to make money.

***LM:** How much different could the parcel landscape be in five years?*

Martinez: We see it changing in a few ways. First, the USPS will play a major role in parcel delivery and will take considerable market share away from FedEx and UPS. Within five years, the USPS will be the single largest player in residential parcel delivery.

Parcel select companies that leverage the USPS for final mile delivery will continue to grow faster than air and ground services. With the growth in e-commerce, return shipments will continue to rise. Companies like Newgistics, that specialize in returns, will be the beneficiaries of the trend. Finally, the same-day delivery market will grow as online shoppers realize the benefits and convenience of receiving an order the same day it is placed. Once the shipping operators find the right price point, we can expect rapid growth and expansion of same day service offerings.

Ross: B2C is driving all of the change, and Amazon is certainly experimenting quite a bit. USPS should remain king of B2C delivery, as the low-cost home delivery option, while FedEx should continue to slowly take share from UPS. We don't see DHL re-entering the U.S. market, but small local B2C start-ups should emerge to handle e-commerce deliveries. Regional carriers are likely to grow at above-market rates, but still not capture any more than 3 percent to 4 percent of the total.

Hempstead: The potential exists that the USPS may intentionally, or unintentionally, put itself in a position that it's not the optimum method to accomplish residential deliveries for FedEx, DHL, and in particular UPS. The economics are such that UPS Surepost already diverts many transactions over 10 pounds to their own driver to deliver—the price increase slated for January 26 most likely slips this number to 8 pounds or less.

Amazon has sent a warning message out to the private carriers that it's willing to explore alternatives to traditional services. However, I don't see their flying device as the solution. The reality is that Amazon now has sufficient critical mass in its control to become its own parcel shipping company and sell that service to other sellers. So, although Amazon may be a big customer of FedEx and UPS, they could become a threat as a competitor. What's most likely is that they will find creative ways to work together to leverage each other's strengths.

Jeff Berman is Group News Editor for the Supply Chain Group

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2014 State of TMS: Cost reductions and

Top supply chain software analysts assess growth in the transportation management systems (TMS) market, highlight emerging trends in adoption, and predict the future of this highly beneficial, yet consistently underused application.

BY **BRIDGET McCREA,** CONTRIBUTING EDITOR

In its 2012-2017 *TMS Global Market Research Study* published in 2013, research firm ARC says that transportation management systems (TMS) continue to offer a strong ROI for shippers—namely in the way of lower freight spend. And that trend shows no signs of slowing down any time soon.

ARC says that over 40 percent of respondents felt that if they were forced to give up their TMS and go back to more manual processes for planning and execution, their total freight costs would increase by 5 percent to 10 percent. Twenty-three percent of shippers surveyed felt that their total freight costs *not* under the control of the TMS would increase by over 10 percent.

According to Steve Banker, ARC's director of supply chain solutions, TMS achieves these savings based on process enforcement, visibility, analytics, and optimization—with virtually no other supply chain application offering so many different forms of optimization.

"TMS is one of those applications that has good payback," says Banker. "When a company installs a TMS, the savings expectation is about 8 percent for most industry verticals." That means that the company that spends $100 million annually on freight can invest, say, $1 million to $2 million in a TMS and can expect to save an average of $8 million in freight costs. "That's a pretty good return," says Banker.

Eager to tap into those returns while also gaining visibility over their global supply chains, today's shippers are exploring their options on the TMS front. In most cases, that means selecting between the traditional, purchase-and-install format or one that resides online in the "cloud" and is accessible to users on a 24/7 basis on the web.

"Cloud has always been very strong in the TMS market, in fact roughly one quarter of revenues in this market are SaaS [Software as a Service] revenues," says Banker. By definition, cloud computing is the deployment of software on virtualized servers where the TMS runs on multiple different servers as demand increases or decreases, whereas SaaS involves applications that are hosted by a vendor or service provider and then distributed to customers via the web.

Rick Brunson, manager of supply chain technologies for consulting firm Capgemini, also sees more potential ahead for cloud-based TMS, namely due to the lower barriers to entry presented by the online software delivery option.

He says that JDA Software is one of several TMS providers that are helping to drive that trend. "JDA is pushing the cloud for their customers," says Brunson. "The cloud-based TMS market will continue to grow because it makes things easier for IT departments, which don't have to maintain and deploy yet another application."

TMS Defined: Tasked with helping companies reliably, efficiently, and cost effectively move freight from origin to destination, transportation management systems (TMS) represent one of the fastest growing segments of the established enterprise application market. TMS is typically focused on either planning and execution (for carrier-based freight movements) or fleet management (for moves that involve a company's transportation assets), according to ARC Advisory Group.

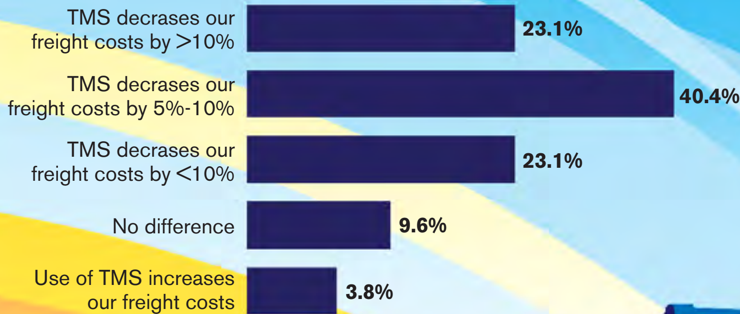
TMS trend tracking

In assessing the top TMS providers in the market today, Banker says that both Oracle and SAP had strong sales in 2013, and that

ROI continue to soar

Savings from TMS

Question: **As compared to manual processes, what do you believe you save, as a percentage of freight costs, from using a TMS?**



Source: ARC Advisory Group (arcweb.com to obtain full TMS study)

both could repeat those winning performances this year. Banker says SAP's efforts to produce a best-of-breed TMS started paying off with the software's most recent release.

"About two years ago SAP finally got it right," says Banker. "By that time, there was a lot of pent-up demand to fulfill." Since introducing its latest TMS, SAP has grown quickly in the space, says Banker, namely due to that pent-up demand and the fact that it has been hawking its solution to logistics service providers, "where the average selling price is significantly higher than it is for shippers."

Banker says that SAP's efforts actually suppressed some of the growth on the cloud side of the TMS market. Despite that sub-trend, Banker says the multi-tenancy capabilities of SaaS—where a single instance of the software runs on a server, handling multiple tenants—make the online variations of TMS software especially attractive for new users.

"Cloud continues to grow, but its growth has slowed somewhat over previous years," says Banker. "Still, there are certain benefits associated with multi-tenancy and the associated networks that you can't get with traditional solutions."

Visibility is clearly one of those benefits. Focused on streamlining and gaining better visibility over their global supply chains, many firms are turning to TMS to help them achieve those goals. "We're definitely seeing more demand for global visibility," says Brunson. "Shippers want to know where everything is located across the entire supply chain at any given point."

Right now, companies want improved visibility of outbound domestic shipping, although Brunson says that more and more are requesting enhanced inbound visibility across all modes of transportation. The latter will likely spur demand for a TMS that can handle multi-modal processes with ease.

"Going forward," says Brunson, "we'll start to see more inbound freight visibility and the routing of that freight across the supply chain via differ-

Filling the gaps with TMS

For more than 80 years, Harrison, Ohio-based Wayne Water Systems has provided homeowners with durable, reliable, worry-free water handling solutions. But up until 2012, the manufacturer's transportation management system was stuck on "autopilot" and in need of an overhaul.

To help fill that gap, Jamie Graf, manufacturing operations manager, says that the firm went in search of a strategic partnership with a third-party logistics provider (3PL) that could go the extra mile to learn the ins and outs of the company's supply chain.

"We knew if we looked deeper into our supply chain, there was room for improvement," says Graf. "We needed a TMS that could drive efficiencies." After shopping around, the company partnered with Transportation Insight and began using the firm's Insight TMS. Graf says that the selection was made based on the low upfront and ongoing costs—and the fact that Wayne Water Systems would retain control over its logistics decisions.

"We can customize the TMS to meet our specific needs and match what we're trying to do," says Graf. For Wayne Water, the solution provides a customer-specific routing guide that factors in routing rules for the firm's big box retail customers—most of whom require approved carriers versus "lowest cost" carriers. Integrated with Wayne Water Systems' ERP, the TMS handles shipment creation to delivery and all steps in between.

"When our team receives an order via EDI, routing instructions are applied, with few exceptions," says Graf. "In one system, we can rate shop, auto-tender loads, generate shipping documents, and acquire tracking information." Rate Shop, for example, is a TMS function that gives the manufacturer visibility over its entire carrier base and allows it to make selections based on cost and/or service needs.

Graf, who says that Wayne Water Systems has gained efficiencies and saved money using its new TMS, advises other shippers to select technology vendors or 3PLs that can grow and adapt to changing business needs without much additional investment in capital and time.

And don't overlook the need for a solid support team, Graf adds. "It's important to have a TMS that fits your business," he says, "but the support team behind the TMS is equally, if not more, important than the application itself."

—Bridget McCrea, Contributing Editor

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ent modes of transportation—motor carrier, rail, ship."

When asked whether TMS vendors are stepping up to the plate on the global multi-modal front, Brunson says it's already happening "to a degree," but notes that as more shippers move in that direction an increasing number of providers will probably jump into the fray.

"There aren't a lot of shippers utilizing their TMS for those functions right now," says Brunson. "As more clients start moving in this direction, vendors will have to come up with additional features that no one is really thinking about right now."

Measuring the market

Transportation management systems may have been around for a while, but that doesn't mean they are a shoe-in for companies that want to gain better controls over their transportation operations.

According to the *Logistics Management 2013 Technology Usage Study,* just 34 percent of respondents are currently using TMS. Of the 33 percent of shippers that were planning to buy supply chain software over the coming 12 months, 41 percent planned to acquire TMS.

Dwight Klappich, research vice president at Gartner, says that his results show that roughly 50 percent of firms with $100 million+ in revenues are currently using a TMS, while only about 10 percent of those in the $25 million to $100 million range are doing so.

Of those current TMS owners, just 25 percent say they are "fully utilizing" their systems. "There are many shippers that are using pieces and parts of their transportation systems and aren't realizing the full benefits of their investments," says Klappich. "Between the low adoption rates for TMS and the fact that many users aren't fully optimizing their systems, Klappich says vendors will have their work cut out for them during the year ahead.

"Vendors basically went after the big fish and abandoned the rest of the market," Klappich points out. "That's why companies like MercuryGate, which is focused on mid-tier companies, are growing like weeds. Next to Oracle, MercuryGate is one of the fastest-growing TMS companies right now."

Looking to the future

When Simon Ellis, practice director at research and consulting firm IDC Manufacturing Insights, looks at the TMS market, he sees a number of key trends being driven by large vendors like SAP and Oracle. Fleet management continues to be a strong focus for both providers, says Ellis, with both adding capabilities to attract third-party logistics providers (3PLs) that have traditionally been using homegrown transportation management systems.

"We're seeing 3PLs move away from that strategy and start using more off-the-shelf packaged TMS," says Ellis. "As part of that push, software vendors are adding fleet management to make their products more appealing."

Ellis says that TMS providers are watching global supply chain trends closely and coming up with ways to incorporate global trade management capabilities into their solutions. "Inevitably, as manufacturers and retailers look at sourcing products from overseas," he explains, "the ability to manage customs and regulations and coordinate across multiple carriers becomes very important."

Whether those global capabilities fall under the TMS header—or in an adjacent category—Ellis says that shippers can expect to see significant developments in that realm in the coming months. "Up until now, the tools have been deficient in this area because manufacturers and retailers weren't asking for them," says Ellis. "That is changing."

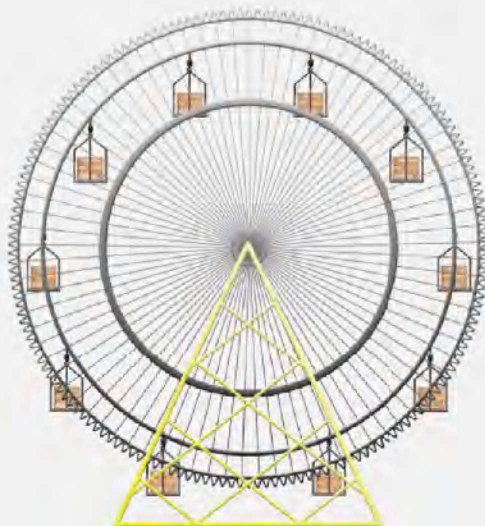
From their TMS, retailers are also demanding improved omni-channel visibility. Two other opportunity areas for vendors within the supply chain space include distributed order management (tools necessary to manage, monitor, and optimize cross-channel order management) and the placement of warehouse-like solutions in retail stores.

"Right now, omni-channel is the largest supply chain opportunity that's out there in the TMS space," says Banker. "It's an interesting niche that's worth paying attention to and that we'll be watching pretty carefully in 2014."

—Bridget McCrea is a Contributing Editor to Logistics Management

"We're definitely seeing more demand for global visibility. Shippers want to know where everything is located across the entire supply chain at any given point."

— Rick Brunson, manager of supply chain technologies, Capgemini



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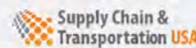

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Reverse Logistics: Time to close the loop

Shippers and their service providers are outlining plans for the new year by identifying pain points in the reverse loop. Key to that process is developing a returns management strategy designed to provide customers with multi-channel visibility.

BY **PATRICK BURNSON,** EXECUTIVE EDITOR

Let's face facts: Despite a significant impact on the bottom line, most retailers and manufacturers simply don't have policies, processes, or infrastructure in place to manage returns.

According to Dr. Dale Rogers, professor of logistics and supply chain management and co-director of the Center for Supply Chain Management at Rutgers University, this fact should not come as a surprise. "The reverse movement of products offers many challenges and opportunities not present with forward logistics," he says. "And most companies are not there yet. They still need to spend more quality management time carefully examining and constructing their reverse logistics processes."

Rogers adds that U.S. companies also need to work harder at managing reverse processes once they are established or they will experience a "constant leak of profit."

In fact, recent research conducted by supply chain technology stalwart Intermec found that more than half of all businesses they surveyed don't have the capability to determine if returned goods should be discarded, returned to a vendor, or moved back into inventory. The survey also found that 44 percent of distribution center managers consider returns a "pain point" in their operations.

Industry analysts and consultants maintain that the challenge is well worth taking on, especially when considering the payoff.

Plumping up the top line

Reverse logistics—the process of controlling the efficient flow of goods from the point of consumption to the point of origin for purposes of recapturing value—has long been regarded as a critical component of the bottom line. But industry analysts are now saying that with the rate of returns expected to continue on an upward trajectory, savvy shippers can plump up the top line, too.

"Given the substantial positive effect reverse logistics can have on your business, we still find it troubling to see that many ignore this found money," says Michael Blumberg, a certified management consultant and president of the Blumberg Advisory Group.

Blumberg maintains that a good reverse logistics strategy can cut operational cost while increasing sales and securing customer loyalty. "Not having a clear planning process is pure insanity," Blumberg says. "And it happens because many shippers don't understand the market opportunity and its dynamics."

Steve Dollase, supply chain president at Inmar, an intelligent commerce network, agrees. He says that logistics managers need to consider the entire product lifecycle before returns begin. "Products find their way to the reverse supply chain for many reasons, and an effective strategy must consider these factors to most effectively affect the top line," he says.

Dollase offers the following tips that are focused on how to better manage returns that are discontinued, damaged, or consumer generated:

• **Turn failures into successes.** The sad reality is that up to 90 percent of new products fail. Every product launch plan should be accompanied by an exit strategy that is coordinated with retailers. A component of this strategy can include tactics to increase sell-through of discontinued products.

Data from product returns can also be leveraged to improve replenishment planning for new products or inform promotion strategies such as targeted digital promotions to move discontinued items off the shelves. Transporting these products quickly to secondary markets can also generate revenue while preserving valuable shelf space for higher profit-producing products. Data can also be leveraged to inform redistribution of excess returned inventory to stores where the product will sell.

• **If it's broken, understand why and fix it.** Consumers are understandably reluctant to buy damaged and expired

goods. The harm to the top line comes not only from lost sales, but from brand degradation. The result is a negative effect on top line sales if the cause is not identified and corrected.

Repair and refurbishment of returned products can also help to generate revenue, and lower priced refurbished products may appeal to segments that would not purchase a product at full price. Data from failure analysis and product returns can be used to inform a host of changes, including product design, manufacturing, packaging, promotion and even pricing—all of which can lead to improved top line revenue.

• **A return can be a future sale.** Consumers are known to change their minds, and today's consumers believe that they're entitled to do so. When they do return a product, whatever the reason, the ease of the return process and how they are treated have a huge impact on repeat sales.

Many retailers have recognized this reality and have adjusted their returns policies to be hassle free. Some retailers even encourage returns and have made return shipments as simple as possible. Customer and brand loyalty contribute directly to the top line, and data from customer returns can help inform this strategy.

"A reverse logistics strategy is much more than simply figuring out how to be more efficient in shipping and processing returns and cutting costs," concludes Dollase. "Today it's about driving top line sales and long-term brand loyalty through a more holistic view."

Reverse lessons learned

Curtis Greve, principal at Greve Davis, a reverse logistics consultancy, observes that when retailers, service providers, and manufacturers convene to discuss the latest trends in reverse logistics, the focus inevitably turns to consumer electronics returns.

It's always a hot topic, says Greve, because this category has the greatest potential while facing the greatest risks. Furthermore, managers in all product sectors can profit by examining this sector.

"The biggest issue affecting consumer electronics returns is the combination of rising costs and lowering price points," says Greve. "Everyone is feeling this compression, and the service providers are stuck right in the middle. It's a tough market, and many retailers and manufacturers are trying to figure out how to improve recovery rates and reduce processing costs."

Many experienced retailers and manufacturers fail to examine the total net recovery value and don't think about the time requirements, Greve contends. He says that they should instead focus on total liquidation revenue and yield rate. Companies that do this have a big opportunity to dramatically improve profits.

Shippers operating in the global consumer electronics reverse logistics world must know their "net recovery value," says Greve.

A diagram of the Net Recovery Value (NRV) looks like this:

NRV=Total Liquidation Revenue + Recycling Revenue – Repair Costs – Processing Costs – Transportation Costs – Cost of Parts

"Take a look at your last quarter's results," Greve advises. "Having a defined time period where you use actual costs and revenue is critical." Greve also suggests that shippers calculate their NRV for all products liquidated, including anything sold "as is." Then they should next figure out NRV for products that are "repaired and liquidated" versus products that are sold "as is."

"After logistics managers have gone through this exercise, they will have all they need to make adjustments to their reverse logistics program, and they will be better prepared for the peak season," says Greve.

David Griffith, senior vice president at Neovia, formerly Caterpillar Logistics, concurs that consumer electronics and other consumer package goods represent the greatest challenges in the reverse loop.

"The planning horizon is much smaller and the order profiles are more fluid," says Griffith. "Season forecasts should be used to partner with suppliers on a long season buy. We learned a lot by examining this sector. Cell phones, for example, go through three selling seasons a year—the aftermarket implications are huge."

Are drones really in the conversation?

With the reverse logistics world chattering about Amazon's drone delivery development, most analysts are voicing skepticism about its viability.

"It is a great concept that has potential," says Curtis Greve, principal at Greve Davis, a reverse logistics consultancy, "but there are a number of issues that will have to be addressed before it becomes a reality."

For example, he notes that there are no Federal Aviation Administration regulations developed yet, and delivery to apartments and office buildings will be a big challenge. Weather related accidents and other liabilities must be addressed, and shipping container standards along with weight limits on the "forward side" are waiting to be worked out, says Greve.

"On the reverse side of the supply chain, using drones for returns presents a much more complicated set of issues," Greve adds. "In thinking this through, it seems that these issues will require Amazon to handle returns as they are today—that is, via small parcel pickup. Consider the fact that for many categories, the return rate for internet sales can be three times higher than traditional brick and mortar stores. For categories such as shoes, this is a big deal."

Greve observes that transportation costs are typically based on running routes that drop off and pick up. If the volume of outbound deliveries decreases and there are fewer trucks running routes, the cost of returning products will increase.

The analyst believes that Amazon could develop drop off points or leverage existing options like small parcel consolidation points, but small parcel carriers will be reluctant to support any program that they view as a direct competitive threat.

"I am sure that there are hundreds of executives at UPS and FedEx talking about drones and how they could affect their business, or at least they should be," says Greve. "These same executives should also be discussing how they could develop similar delivery systems and the real threat drones pose to their business model."

However, Greve warns that if the parcel duopoly simply dismisses Amazon's drones as a publicity stunt, they risk becoming the "buggy whip" manufacturers of the 21st century.

—Patrick Burnson, Executive Editor

Mitigating loss

How a shipper deals with allocation of costs and the repurposing of products varies widely, says David Vehec, senior vice president of retail at third-party logistics giant Genco. He maintains that a "focused triage" and refurbishment solution has benefits across commodities.

"The purpose of reverse logistics is to mitigate loss," says Vehec. "Products that can be resold in their existing condition or through a refurbishment process can deliver additional value for shippers." And when all costs are factored for the handling, shipping, promotion, allowances, and product devaluation, he adds, the focus is on recovery of lost value. "Time is the enemy, especially in the case of consumer electronics."

For Alan Amling, vice president of global logistics and distribution marketing at UPS, the reverse objective will only gain more importance as e-commerce gathers momentum.

He notes that the *2013 UPS Pulse of the Online Shopper* study indicates that returns volumes are only growing, with 62 percent of consumers stating they had returned or exchanged an item over the past year—versus 51 percent in 2012.

"More importantly," says Amling, "when consumers have a positive returns experience, it can drive sales dramatically. As we have recently learned, 81 percent of online shoppers surveyed said that they would complete the purchase if they could return the item to a store or have return shipping."

Compounding the impact made by increasing returns from e-commerce and the short life span of consumer products, are environmental concerns, says Amling. "Consolidation of end-to-end reverse logistics processes partnerships between 3PL providers can help here," he says, "but in this dynamic industry, one must always be ready for change."

—Patrick Burnson is Executive Editor of Logistics Management

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Why sustainable design still matters

Warehouse and distribution center construction is making a comeback—and so is the desire to get back to green. Our facility design experts offer their take on the evolving benefits and share why sustainable design holds more value than ever.

BY **ROBERTO MICHEL,** CONTRIBUTING EDITOR

Back in the mid-2000s, when the economy and the construction of commercial buildings were on a tear and energy prices were on the rise, everyone was talking about retrofitting or building green warehouses and distribution centers (DC) packed with energy saving designs. Then, the worldwide recession hit, and the sustainability focus seemed to fade away.

"Interest in sustainable warehouses didn't fall off the table," says Ed Klimek, a partner with KSS Architects. "The fact is that all types of new development fell off the table. However, there were still some sustainable projects going on, and there were many companies making those types of long-range decisions."

The numbers now show that warehouse and DC construction is making a comeback—and so is the desire to get back to green. After bottoming out in late 2010, quarterly U.S. totals for warehouse construction put-in-place have mostly risen, especially since early 2012.

What's more, warehouse and DC designers say that most of their projects are steeped in energy saving, sustainable features, and many are getting certified under the U.S. Green Building Council's LEED (Leadership in Energy & Environmental Design) program. In December 2013, the council announced the 20,000th LEED certification for a commercial project.

"Over the last five years, more and more of our buildings are being built to a LEED certification," says Tripp Eskridge, a senior vice president with Jones Lang LaSalle, a commercial real estate services firm. "There has been greater and greater acceptance of LEED."

Klimek also sees sustainable warehouse and DC design becoming the norm. "Of our work right now, at least 80 percent of it is sustainable, and a good chunk of it is LEED," he says.

There are multiple reasons why green DCs continue to make sense, but the biggest remains energy savings. According to the New Buildings Institute, best practices in the design of lighting and the building "envelope" (the shell of the building, including its roof and walls) can save at least 40 percent on energy use, and up to 50 percent when the effects of a heating, ventilation, and cooling (HVAC) system selection are factored in.

Even for established facilities, there are smart, lower cost ways to go green, such as motion sensors on lighting. Some bigger ticket features, such as photovoltaic (PV) solar panels, can bring quicker payback than commonly thought.

And as the nature of distribution operations changes to accommodate e-commerce fulfillment, DCs are becoming more highly automated—but also in need of labor for piece picking and kitting. This is driving the need for more energy efficient facilities closer to urban areas that are also more "conditioned" than warehouses of the past, in that they need better lighting and a more comfortable air temperature.

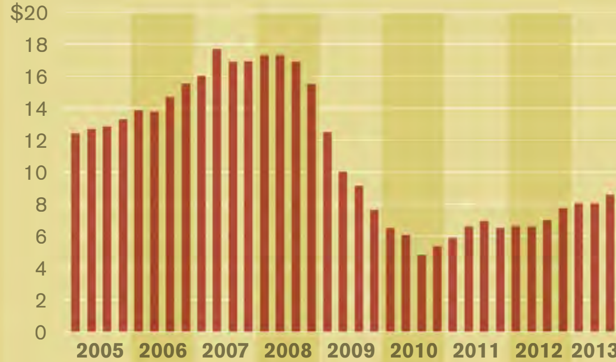
While most design experts say that corporate social responsibility programs and branding are sustainability drivers for some companies, they also point out that for many, the bigger driver behind sustainable warehouses is bottom line savings—whether it's from energy efficient lighting or the ability of a well designed network to slash

transportation costs.

Here's a look at the evolving benefits of going green and why sustainable design holds more value now than ever.

Big bang for small bucks

When it comes to lower cost ways of being green within the four walls, the most common tactic is to go after lighting. In particular, moving from older metal halide lighting over to newer T8 or T5 fluorescent lighting that is outfitted with motion sensors so that lighting only comes on when needed.



After bottoming out in 2010, the value of new warehouse construction put-in-place has been on a mostly upward curve.

"Your payback with efficient lighting is often less than three years, but lighting is usually around a buck a square foot, so if you have a 200,000 square foot facility, that's not cheap," says Eskridge.

When it comes to the electric bill, Don Derewecki, a senior consultant with St. Onge Company, agrees that high efficiency lighting with motion sensors is a smart move, even for existing facilities. "If you have 20-year-old lighting system, it's probably eating your lunch," he says.

There are some other relatively low cost means of improving sustainability. Switching to green cleaning products and better management of the waste stream and recycling, for example, are low cost, says Eskridge. "Some of the lower cost methods help the environment quite a bit, and you know that they are the right thing to do," he says.

White roofs that reflect sunlight have all but become the norm for new, larger warehouses, says Eskridge, but aren't typically justifiable for an existing building unless a new roof is needed.

Prismatic lens for skylights are another effective green feature, Eskridge adds. These lenses scatter light over a broad area, and can be combined with photocell sensors on artificial lighting so that the lights stay off when the natural "daylighting" is producing sufficient light.

Being green, of course, also entails water management. Rainwater runoff from roofs, known as grey water, can be captured and used for lawn care, notes Derewecki. If parking lots or access roads need repaving, new semi-porous paving material can reduce run off.

Installation of circulation fans is another low cost energy saver, adds Derewicki. These fans cut heating and cooling costs by promoting even air temperature.

Encouraging green commuting can also can be seen as a sustainability goal. One low cost tactic, notes Klimek, is to provide designated parking spaces and signs for employees with high efficiency vehicles.

However, bigger ticket systems also tend to produce bigger savings, with quicker payback than many might expect. Solar panels, for instance, might only carry a five year payback, given the right mix of incentives, local climate, and the energy profile of the building, notes Klimek.

In New Jersey, which has a strong solar program, KSS designed a warehouse and office facility for Somerset Tire Service (STS) outfitted with a roof-mounted, 1.2 megawatt photovoltaic solar array. The payback period is expected to be five years, says Klimek, in part because of state incentives, but also because the adjoining office space makes use of the renewable energy.

Not every facility can expect similar payback on big ticket items, but nearly all new distribution facilities today utilize green features such as high efficiency lighting, motion sensors, or daylighting. In other words, adds Klimek, green features are becoming the norm as new construction picks back up.

"There was a time during the recession where there wasn't a lot of building going on, and much of the activity was in trying to lease existing space," says Klimek. "Well, we've absorbed that existing space, we're developing again, and much of that new development is sustainable."

E-impact on sustainability

Whereas the more traditional supply chains featured large warehouses with racks for storing full pallet loads, digital commerce and the move toward omni-channel distribution are driving the need for very rapid fulfillment of small orders. As a result, warehouses and distribution centers now need to excel at tasks such as item sortation, kitting, piece picking, and goods-to-person automation.

To adapt to e-commerce, says Klimek, DCs are using intelligent

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Prismatic lenses for skylights disperse natural sunlight into a facility more effectively. Combined with photocell sensors on high efficiency lights, such "daylighting" technology can cut lighting costs dramatically.

sortation and conveyor systems, but there's also the need for more labor for final picking, even if the process is partially automated.

"We're doing more e-commerce-centric projects, and as a result, there are more employees in many of the buildings," says Klimek. "So, we're seeing the need for a more 'conditioned' building and also more intensive use of automation, which consumes energy."

In these cases, various sustainable features help make a facility more comfortable and efficient. Skylights can improve lighting conditions without inflating the lighting bill, for instance. Architects are also working more closely with materials handling system vendors to model energy needs and identify high efficiency drives and motors.

DCs of the future are likely to be closer to urban areas, says Derewecki, in part to place consumer goods closer to customers, but also because of a larger pool of potential employees. Mass transit availability can help attract a workforce, especially with the trend of a smaller percentage of young people becoming drivers, he adds.

New distribution facilities in urban areas, says Derewecki, will likely be more high-rise and denser to maximize space. Systems such as automated storage and retrieval systems (ASRS), very narrow aisle (VNA) layouts, and mezzanines make it possible to pack more into a smaller footprint, as do multi-story designs.

Such designs are common in Japan and Europe, says Derewecki, and will likely be seen more in the U.S. "I think that we will go higher and higher, and use more of the cube," he says.

Big picture considerations

One of the biggest opportunities for energy savings falls outside of the four walls and can be found in the design of the overall distribution network, says Derewecki.

"Looking at where your distribution points should be is more important than ever," Derewecki says. "Anytime you can reduce transportation distance, time, and costs for your network, you are also providing a green benefit."

Sourcing strategy, such as whether to nearshore or use domestic sources, can also be part of a network analysis, along with considering alternative modes of transportation, like more rail, or pooling transportation with other companies.

"While there is much that can be done within a warehouse to save energy, optimizing the network is where some of the biggest bang for the buck is," says Derewecki.

Other site considerations also affect sustainability. For example, proximity to public transportation, or availability of state incentives for systems like solar panels, may help decide which site is best. "Factors like knowing the available incentives are all part of due diligence involved in site selection," says Derewecki.

Distribution centers, in Klimek's view, should not be viewed simply as buildings, but as points in a supply chain. "If you really want to affect energy use, bring the building closer to the customer or closer to ports where the goods are unloading," he says.

Roberto Michel is a Contributing Editor to Logistics Management

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Looking ahead to a

The 2013 holiday season highlighted the importance of warehousing and distribution processes. With Modex around the corner, five thought leaders take stock of what may lie ahead for the industry and its customers.

new year in distribution operations

BY BOB TREBILCOCK,
EDITOR AT LARGE

With January behind us, we're only one month into the new year. Yet, it seems as if so much has changed since last fall. The industry is a little topsy-turvy, and much of that is the result of the 2013 holiday season, which was marked by inadequate planning and a failure of order fulfillment processes to deliver on customer service promises. Meanwhile, many people are abuzz with talk about using drones and even more automation for same-day delivery. Forget that drones aren't currently legal for civilian use. The seeds have been planted.

Both scenarios shine a light on the fact that materials handling and distribution systems are more important than ever. Moreover, those systems will have to work more closely together than ever and will rely more heavily on data and software. Those are absolute necessities if the industry is going to address the age-old bugaboo of gaining visibility into demand, capacity, and constraints so that we can fill and deliver orders in a timely fashion.

With Modex around the corner, a trade show that brings together both the materials handling and delivery sides of the supply chain, we asked five thought leaders from the consulting and academic worlds to comment on how they think the most talked about trends of the day will affect our industry in the years to come.

Jim Barnes, CEO, enVista

Understanding the data

End users have more materials handling tools and technologies available to them than ever before. At the same time, order fulfillment requirements are more complex and service-level agreements are more demanding. Moreover, today's facilities are likely to have more than one order fulfillment engine—more than one tool—to serve a variety of order profiles. Data is the high-octane fuel that powers these new engines. Without it, they fall flat. Jim Barnes, CEO of enVista, says that understanding order profiles is one of the most critical metrics to choosing the right tool for the job.

"I don't think end users spend enough time analyzing their data to understand what is happening today and what will happen in the future—what I call the 'what is' and the 'what is to be,'" says Barnes. "Order profile data is the baseline for a solution."

One key metric is peak demand. However, the definition of peak demand is changing, especially because of e-fulfillment. Where peak once

referred to variations based on seasonal and holiday demand, there are now average-to-peak periods within a shift. "If your service-level agreement is that you will pick and ship anything that drops into the warehouse management system by 3 p.m., you better understand the order flow on a minute-by-minute or hourly basis," Barnes says. "When you get that granular, you're going to find that what happens at 1 p.m. is different from what happens at 3 p.m."

The result, says Barnes, is that facilities have to balance order flow with their staffing levels and materials handling systems. "You can't put everything in a mini-load or shuttle system for goods-to-person picking because it may not be able to keep up with peak demand for that hour or two when you're trying to meet service-level agreements," Barnes says. "Or, you may need different slotting strategies during peak versus non-peak periods." None of those decisions, he says, can be made without a deep understanding of data.

Helgi Leja, senior account executive, Fortna

Packaging is the new bottleneck

In the past, distribution system design came first and transport packaging was an afterthought. As the demand for direct-to-consumer and even direct-to-business orders grow, packaging "is a fundamental part of the design of new DCs," says Helgi Leja, a senior account executive with Fortna. "Packaging has become the new bottleneck within the distribution center," says Leja.

Leja refers to these orders as a "batch of one," because every order is unique. "The batch of one is allowing end users to use their packaging for marketing and to make customers feel special," he says. Orders from fashion retailers are likely to include designer tissue paper and a sticker that communicates something about the quality of the organization. It's a way to build customer loyalty. The emphasis on batches of one, however, means that packaging can no longer be taken for granted. "It used to be that picking was your most labor-intensive process, so we worked to make that efficient," Leja says. "Now, if you're productive in picking, packaging is the bottleneck, especially with the emphasis on fulfillment speed."

A pick, for example, can be transacted in seconds. Packaging, on the other hand, can take more than a minute and a half per order. "Automation is the only way for packaging to keep up with picking," he says. "That's the next frontier of automation."

One example of this phenomenon is MSC Industrial, a Fortna customer. Before the growth of MSC's e-commerce channel, most customers phoned or faxed orders throughout the day. That allowed MSC to spread the workload across a shift. Manual packaging was sufficient for that scenario.

Today, customers are likely to add items to an order queue throughout a shift and then release it right before the order cut-off time. What used to be a day's work has to get done in two to three hours. What's more MSC is adding promotional literature and value-adds directed at specific customers. The only way to get the work done efficiently was to automate the packaging process.

"There is an automation technology for each of the steps associated with packaging, from right-sizing the carton and applying the shipping label," says Leja. "This is being driven by the competitive landscape and customer expectations. We expect to see more emphasis on packaging going forward."

Steve Banker, service director, supply chain management, ARC Advisory

Keep an eye on software agents

Inside the distribution center, the software world has traditionally been divided into two camps: warehouse management systems (WMS) managed inventory, orders and people while warehouse control systems (WCS) managed automated materials handling equipment.

In recent years, WCS applications have assumed some of the order fulfillment functions that were previously the domain of a WMS. While some have called for a new name for this layer of functionality, Banker thinks we need a new software architecture that takes distributed intelligence, or software agents, into account.

"Intelligence is being pressed down into discrete pieces of equipment," says Banker. "A segment of conveyor now has its own motor, a sensor and logic that allows it to automatically close the gap between cartons or divert a carton based on a bar code. In essence, you're putting a small WCS into a discrete piece of equipment."

Banker calls this piece of distributed intelligence a software agent. In human terms, agents are similar to people who have a task to perform, a point of view and a mission to optimize their specific task. "A piece of conveyor's goal is to divert a carton or speed it up and close the gap," he says. While that's important, agents alone aren't enough to optimize an end-to-end process. "Agents don't get you to global optimization. To do that, you need another layer of software with a global view of a process."

That new architecture might look something like this: A WMS sits at the top of the stack and maintains a global view of order and inventory information. The WMS also has visibility into what's happening across the functional areas of the warehouse as other systems report back on their progress.

In highly automated warehouses, where all of the equipment needs to work together, a WCS has a global view of what's happening across the equipment. It can optimize the movement of goods based on what is going on in various parts of the warehouse. However, it may also defer to the WMS for optimization. "The WMS has visibility into manual packing stations, but a WCS does not," says Banker. "If that's your bottleneck, the WMS would be able throttle that back so you don't overwhelm the pack stations."

Next is a conventional layer of WCS to manage the islands of automation within a warehouse. A shipping sorter, an automated storage and retrieval system (AS/RS) or a pick module have their own WCS that communicates

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The last layer consists of software agents distributed at the equipment level, including software that closes the gap between cartons on a section of conveyor or reports to maintenance that a roller or motor needs replaced.

"In the end, the upper tier WMS and WCS systems are working toward making the overall process as efficient as possible," says Banker. "The other layers are optimizing individual tasks, right down to the level of the equipment."

John Hill, director, St. Onge

Three trends shaping WMS

It's not just WCS that is evolving. The WMS is evolving as well. While WMS functionality has matured, the WMS market is in flux, says John Hill, a director at St. Onge who has been involved with warehouse management systems since their inception. Hill is following three important developments affecting these systems that are essential to managing warehouse processes.

Enabling tomorrow's workforce: At any gathering of materials handling and logistics professionals, the leading topic of conversation isn't the latest technological innovation (and, more about innovation in a moment). It's the shortage of labor and talent for the warehouse of the future.

No doubt, many are trying to figure out how to relieve our dependence on labor through the use of automation, such as robotics. On the other hand, others are focused on how to make distribution jobs more appealing to millennials, who are the workforce of the future.

"We need to offer the same types of communications tools that they are using in their daily lives," says Hill. "That means industrially hardened versions of the technology with which they are already familiar."

Hill expects to see more applications deployed on mobile phones and tablets, such as the use of iPads equipped with RFID readers to locate inventory and assets in a warehouse. "These aren't necessarily new ideas," says Hill, who points out that Gillette was using handheld palm devices to receive inventory 15 years ago. "But they're more topical because of the improvements in the technology and the tie-in to the gap in the workforce," he says. He also expects to see the adoption of more visualization and gamification in WMS systems, with graphics that mimic video games.

The big get bigger: Like analyst Dwight Klappich at Gartner, Hill sees a shift underway in the WMS market, as the leading enterprise resource planning (ERP) suppliers capture a bigger share of the pie among large end users with run-of-the-mill warehousing processes. Meanwhile, JDA/RedPrairie and Manhattan Associates continue to dominate in facilities with complex order fulfillment processes. "There is always going to be an important role for suppliers like HighJump, Tecsys, Accellos and Softeon in the small-to-mid-size market," says Hill, pointing to the sheer number of warehouses. "But the top end of the market is currently being dominated by a handful of providers."

Visibility is more important than ever: Visibility continues to be the Holy Grail for warehousing, distribution and logistics providers. "With so much emphasis being placed on network-wide control, the WMS provider that can't assure its client that it can play in that space will be at a distinct disadvantage," says Hill. "Even small companies that provide products critical to their customers will be equipped to support the transfer of data to a host of trading partners, raw materials suppliers and logistics services providers." The cloud is, and will, have a big impact on visibility, since it provides connectivity while relieving people of the burden of maintaining an infrastructure on their own, Hill says.

James B. Rice Jr., deputy director, MIT Center for Transportation & Logistics:

Innovate, with caution

For those who see innovation as a panacea for what ails us—especially new technology—James B. Rice Jr. has a word of caution: Technology alone will only get you so far. "Users should target cost improvements from applying new technologies in innovative applications in the supply chain," says Rice, who researches innovation as deputy director of the MIT Center for Transportation & Logistics. "But, in most cases, I don't see earth-shaking, arm-waving changes coming from the use of these technologies."

Instead, most supply chain innovations, or SCIs, deliver meaningful, but incremental, improvements. "The genius for a lot of supply chain innovation isn't the technology itself, but the selection of an economically feasible application and bringing it to scale," Rice says. "That's where the magic happens."

In a column on Innovation Strategies in the January/February 2014 issue of *Supply Chain Management Review*, *LM's* sister publication, Rice writes about two types of SCIs: disruptive innovations that bring dramatic change, and sustaining innovations that move companies forward at a steadier pace.

Disruptive innovations make our pulses race because they challenge the status quo, what researchers call the "dominant design." They promise a whole new way of doing things.

"Leaders tend to be inspired by disruptive SCIs and demand dramatic change," Rice writes, "even when they lack a thorough understanding of the processes involved."

The better choice, he adds, is often the sustainable choice. "Sustaining innovations make products better through, say, lower prices or added features," Rice says. That might not be as exciting as reinventing the world, but those solid, incremental improvements may be the winning strategy that sustains a company's market position. "Industry will be better off when they either focus on disrupting the supply chain to create a new design or focus on sustaining innovation for incremental change. Rice says. "More focus, less waste." ☐

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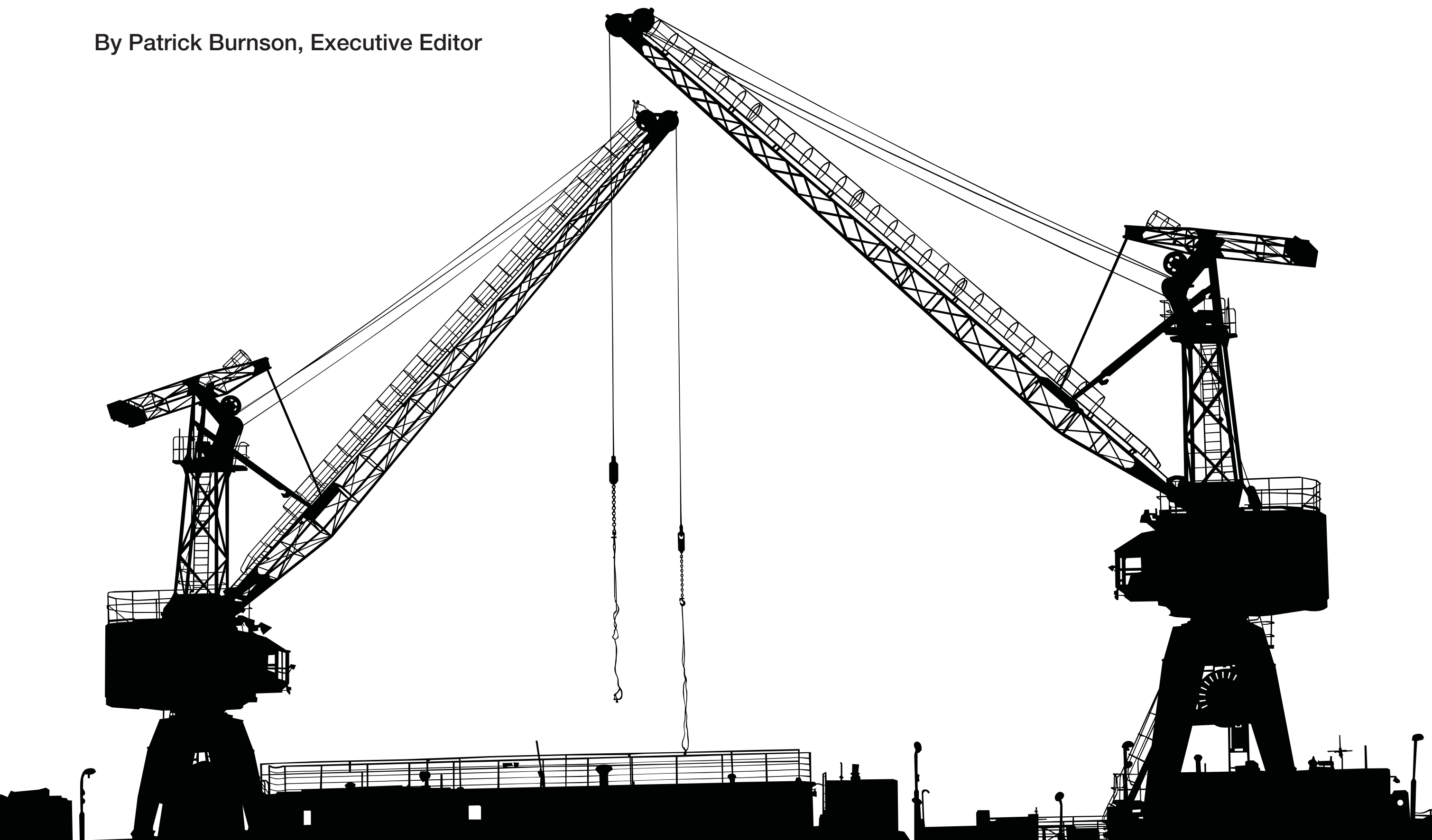
A $46 billion investment gap by 2040 threatens U.S. seaports—critical economic lifelines that rely on connecting transportation infrastructure to deliver prosperity for millions of Americans. With this nation's trade volume expected to quadruple after 2030, and port connections in poor condition, industry experts agree that now is the time to invest.

Special Report

U.S. Ports Update:
Investing in the future

By Patrick Burnson, Executive Editor



Last month's Congressional passage of the $1.1 trillion Consolidated Appropriation Act of 2014 ensures that several high-priority programs crucial to the safe, efficient, and competitive operation of U.S. seaports are included in the appropriations mix. For many trade analysts, the timing for such a move couldn't be better.

"U.S. imports were up 3.7 percent by volume in 2013, which is the largest year-over-year increase seen since 2010," says Paul Rasmussen, CEO of leading trade intelligence resource Zepol Corporation. "U.S. trade has continued to expand during the recent economic recovery and we expect this to continue as we move into 2014."

Rosalyn Wilson, senior business analyst with Delcan Corporation, agrees with Rasmussen, noting that a more balanced outbound picture should emerge next year as well. "China's economy, along with the economies of other Asian trading partners, has been picking up steam lately, which should translate into higher exports to those countries," she says. "U.S. ports will need to accommodate carriers with the outbound move when this happens."

Meanwhile across the nation, ports will receive funding for Transportation Infrastructure Generating Economic Recovery (TIGER) discretionary grants, U.S. Corps of Engineers' navigation-related programs, FEMA State and Local Programs grants that include dedicated funds for port security, EPA's Diesel Emissions Reduction Act (DERA) grants, and funding for several subprograms that aid navigation.

"In this era of fiscal restraint and belt-tightening, we're pleased to see that a number of the priorities of America's ports were important enough to lawmakers that they included them throughout this government-wide spending bill," says Kurt Nagle, American Association of Port Authorities (AAPA) president and CEO. "The funding provided to port-related infrastructure programs is recognition that lawmakers appreciate that seaports are vital to creating and sustaining jobs, economic growth, and enhancing U.S. international competitiveness."

Shipper agenda will change

Leading industry analysts insist that as the ports get their houses in order, shippers will be reexamining their sourcing and distribution strategies with total landed cost in mind.

"Port executives know that direct investment in

U.S. Imports by Top U.S. Ports (Twenty-Foot Containers and Shipments)

U.S. Port	2012 Quarter 4 TEUs	2013 Quarter 1 TEUs	2013 Quarter 2 TEUs	2013 Quarter 3 TEUs	2013 Quarter 4 TEUs
Los Angeles/ Long Beach	1,681,083.33	1,666,866.51	1,831,104.33	2,039,650.33	1,888,652.47
New York / Newark	594,697.46	626,393.23	692,252.17	765,310.73	705,893.30
Savannah, GA	235,841.22	254,748.71	289,567.44	313,148.94	300,165.36
Norfolk, VA	196,699.23	195,014.98	216,469.72	251,885.89	239,324.52
Oakland, CA	174,459.98	178,417.29	200,086.64	214,009.99	188,491.63
Tacoma, WA	174,209.68	174,853.11	181,501.39	186,944.24	181,435.68
Houston, TX	143,840.56	151,817.76	174,135.47	186,644.22	169,959.79
Charleston, SC	150,447.13	156,745.02	163,258.09	172,103.30	166,247.82
All Others	705,575.43	774,199.77	793,336.09	816,105.61	751,142.80
TOTAL	**4,056,854.01**	**4,179,056.39**	**4,541,711.33**	**4,945,803.25**	**4,591,313.36**
U.S. Port	**2012 Quarter 4 Shipments**	**2013 Quarter 1 Shipments**	**2013 Quarter 2 Shipments**	**2013 Quarter 3 Shipments**	**2013 Quarter 4 Shipments**
Los Angeles/ Long Beach	850,211	850,600	940,645	1,042,256	955,534
New York/ Newark	368,927	380,267	430,003	474,798	446,178
Savannah, GA	99,412	102,241	115,088	133,521	122,485
Norfolk, VA	90,684	87,096	101,219	118,749	108,193
Tacoma, WA	82,822	83,003	89,496	95,985	92,702
Oakland, CA	82,089	79,988	89,861	96,163	85,933
Charleston, SC	71,988	73,817	81,078	86,072	81,592
Houston, TX	69,729	72,083	83,415	95,744	81,489
All Others	343,775	360,743	369,907	386,700	361,926
TOTAL	**2,059,637**	**2,089,838**	**2,300,713**	**2,529,988**	**2,336,032**

Source: Zepol Corporation

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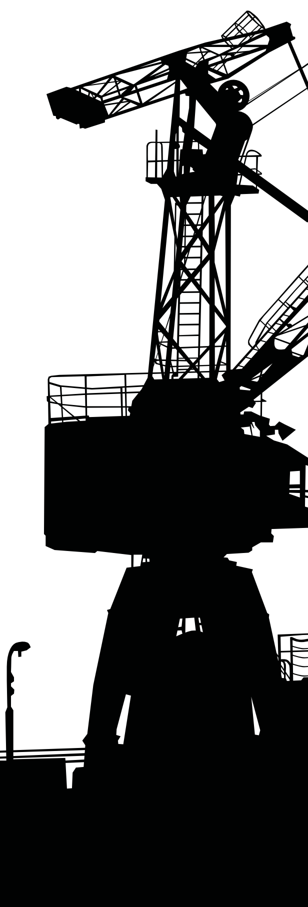


infrastructure makes them more attractive to beneficial cargo owners," says Robert L. Phillips, Jr., first vice president at real estate advisory firm Cushman and Wakefield. "And that makes them more attractive to ocean cargo carriers as well."

According to Phillips, The Port of Virginia is well positioned for growth, noting that it expanded its containerized cargo business by 5 percent this past year. "The Richmond/Greensboro inland triangle is a solid industrial base that can generate exports," he says. "Once the Panama Canal expansion is completed in 2015, Virginia can bring vessels in and send them out fully loaded."

At the same time, the South Carolina Ports Authority (SCPA), which owns and operates Charleston and Georgetown, has seen volume increases across all business segments in 2013—a year marked by the successful opening of the inland port and significant progress of both the construction of the Navy Base container terminal and the Post-45 harbor deepening project.

"We typically see a modest first quarter of the calendar year followed by a stronger second quarter, and we expect 2014 to follow a similar trend," says Jim Newsome, president and CEO of SCPA.

2013 total U.S. container exports vs.imports

	December 2013	Year-over-year change	Month-to-month change
Exports	987	-16.7	+5.7
Imports	1.395	+10.7	+17.7

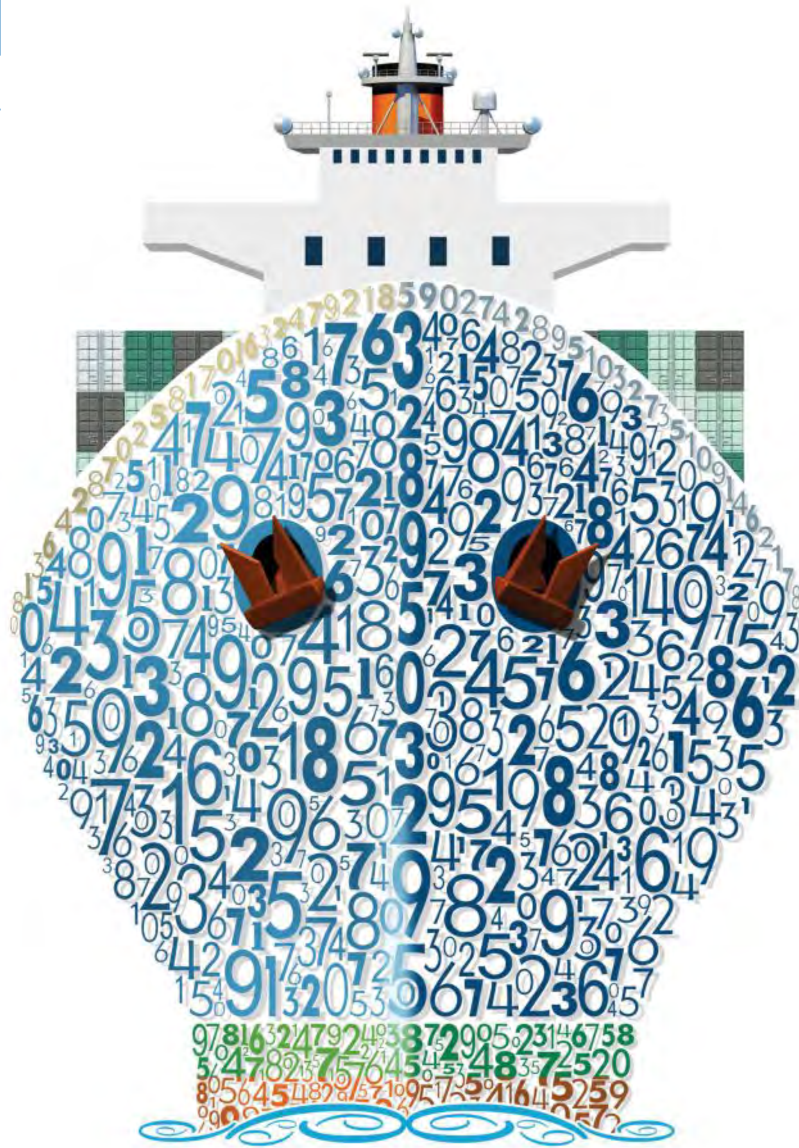
Source: 2013 INTTRA and Cass Information Systems, Inc.

"Much of our growth from April to June will be affected by developments in export business and the implementation of the mega-alliance deployments by ocean carriers…if and when approved."

Steve Medwin, managing director and head of brokerage at real estate services firm Jones Lang LaSalle in Miami, says that shippers there are mitigating risk by using by several Florida ports. "Miami is the closest U.S. gateway to the Panama Canal," he says, "but shippers are hedging their bets by sourcing some of their goods through the Suez to the Port of Jacksonville where inland rail connections are well developed."

Where's the real estate?

Prime real estate near ports for warehousing and distribution center development may soon become even scarcer, say other Cushman and Wakefield analysts.



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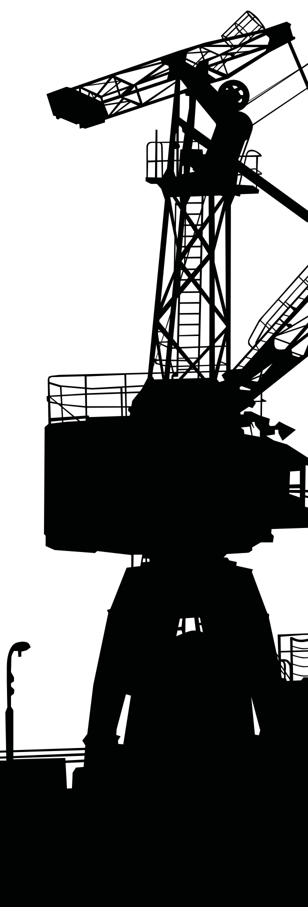
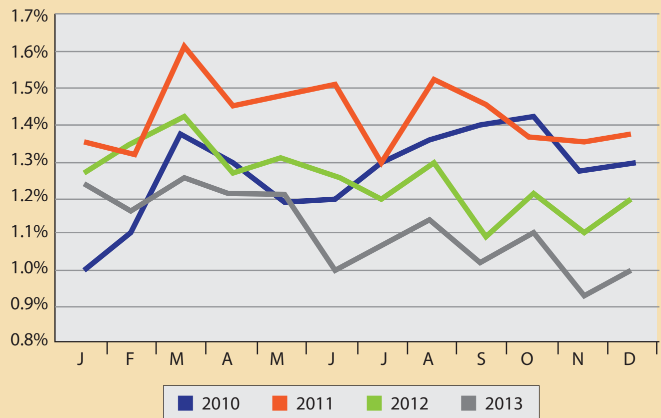
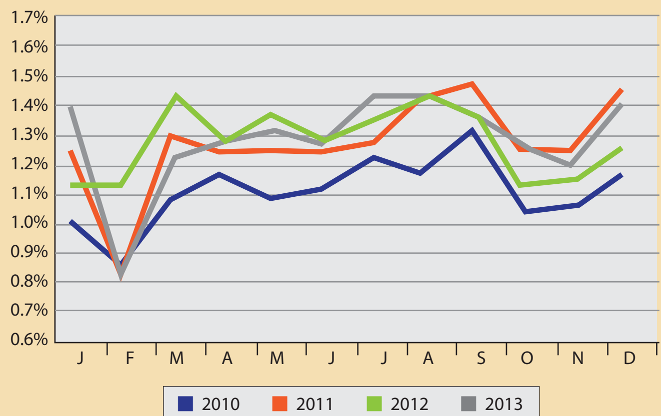


"Growing demand for goods from consumers and businesses is propelling the industrial sector into its most positive state since before the Great Recession," notes John Morris, Cushman and Wakefield's leader of industrial services for the Americas. "Manufacturing production and shipments are increasing at a healthy pace, as are imports and exports. Real estate demand has responded accordingly, resulting in a very good year for our industry."

In its strongest performance since 2005, the U.S. industrial real estate market saw 328.5 million square feet in leasing activity and 117.2 million square feet of positive absorption in 2013. Industrial leasing activity was up 6.2 percent year over year, and analysts say that this reflects a more robust future for the nation's leading container seaports.

"The Port of Houston, for example, is growing by leaps and bounds," observes B. Kelley Parker, III, executive vice president at Cushman of Wakefield in Texas. "Petrochemical exports are continuing to ramp up, and inbound calls serving the mega-retailers are higher than ever."





Colliers International, another leader in global real estate services, has recently defined Houston "as the most irreplaceable" ocean cargo gateway. While the "irreplaceable" designation was bestowed last year based on the vital nature of the port's physical aspects, the latest award recognizes the Port of Houston Authority's operational excellence. The report says that the port is not only "vital to U.S. energy interests, it's also highly profitable."

Gulf port neighbors Corpus Christi and Galveston are also contributing to this surge say analysts. "Corpus Christi has been targeted as a key ocean entry for plant machinery and container cargo destined for South Texas as well as to important industrial conglomerates of Northern Mexico," notes Parker. "Galveston provides direct access to the open Gulf of Mexico, and has cargo facilities less than 10 miles from the open sea."

Regional collaboration

Leveraging the infrastructure of regional ports has been a dream for some time, but political barriers to such an arrangement have been difficult to overcome—until now.

Just last month, the ports of Seattle and Tacoma filed a discussion agreement with the Federal Maritime Commission that will allow them, under federal regulations, to gather and share information to identify potential options for responding to "unprec-

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edented" industry pressures.

"While the ports of Tacoma and Seattle have many advantages, such as naturally deep water and strong highway and rail connections to the second largest concentration of warehouses and distribution centers on the West Coast, we must use our combined marketing strengths in the face of continued soft demand and increasing competition," says Port of Seattle CEO Tay Yoshitani.

Meanwhile further down the coast, the Port of Portland is using its economies of scale to specialize as a niche gateway for auto exports.

Ford's slogan is "Go Further," which is exactly what an estimated 30,000 Ford vehicles will do this year when they're exported through Portland to China for the first time. Following inspections by Chinese government auditors, Auto Warehousing Company's (AWC) facility at Terminal 6 received full approval, meaning that export shipments can now begin through Portland. The country recently opened its doors to a variety of new Ford cars and trucks coming from several plants in the U.S., Canada, and Mexico.

"We're proud to be serving as the primary gateway for exports of new Fords to China and furthering our mission to provide access to international markets," says Bill Wyatt, executive director for the Port of Portland. "This fulfills a national role for Ford vehicles manufactured in plants throughout North America."

Finally, no mention of West Coast shipping can end without a cursory look at Southern California, where industrial leasing activity was up 6.2 percent year over year. According to Cushman and Wakefield analysts, the Greater Los Angeles region continued to lead the nation with 35.8 million square feet in activity.

This is welcome news

Port of Oakland names new maritime chief

John Driscoll

Last July when Chris Lytle assumed his duties as the Port of Oakland's Executive Director, the shipping community was eager to learn what moves he would make to demonstrate decisive leadership. Chief among them was the choosing of a maritime chief capable of attracting new business.

By all appearances, Lytle has found his man. The port recently announced the hiring of John Driscoll, a distinguished industry veteran, as its director of maritime.

Driscoll has more than 30 years of commercial experience in international maritime transportation, having worked for Sea-Land Service, Maersk Line, and CMA CGM. It's also important to note that during Driscoll's eight years with CMA CGM, the average annual increase in business volume was 14.1 percent. This time span, many will recall, included the Great Recession and the ongoing ocean carrier capacity crisis.

Can Driscoll work the same kind of magic for Oakland?

While the port has long led the West Coast as a gateway for export cargo, it lags significantly behind several others in attracting "first call" inbound vessels. Lytle has told shippers that this will be part of his ongoing mission in the years ahead, as Oakland positions itself as a logistical hub for new enterprises moving into the Bay Area.

Given Driscoll's noteworthy achievements for CMA CGM in the Caribbean, Central America, and Latin America in the recent past, one may assume that developing more hemispheric business could also be in the offing.

—Patrick Burnson, Executive Editor

The Port of Oakland is No. 5 on the list of Top U.S. Ports by Imports.

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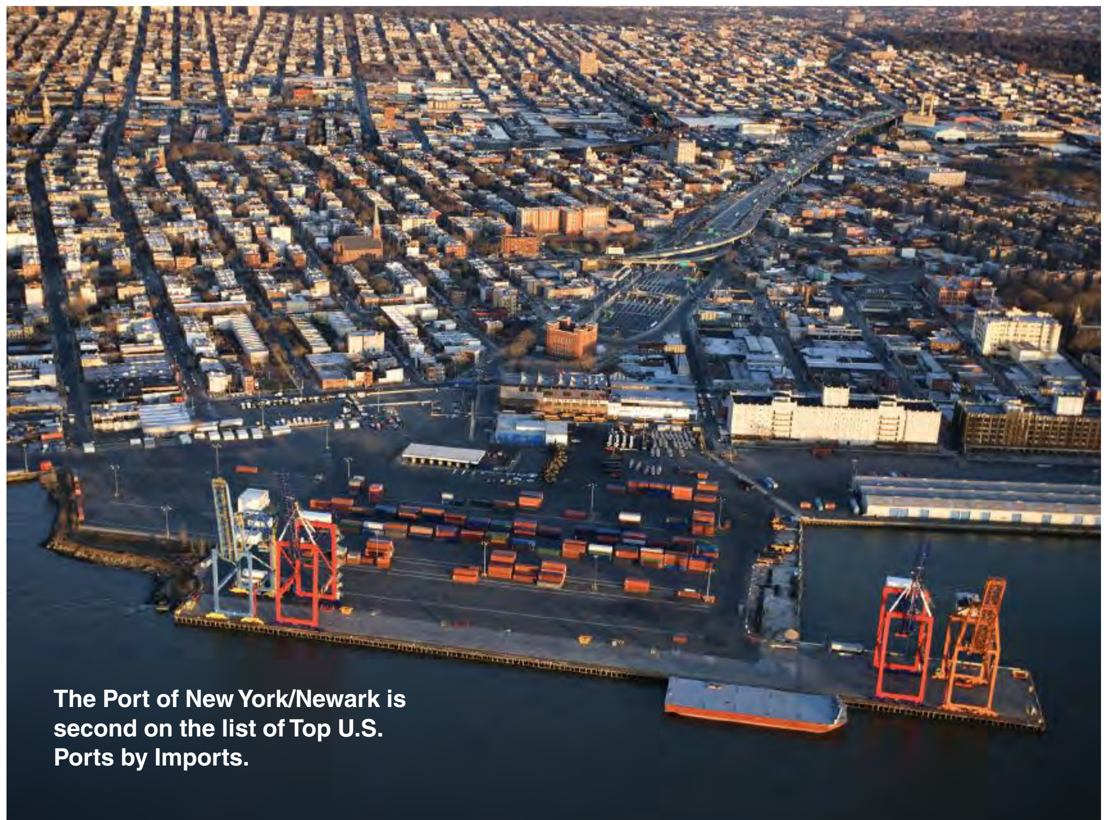

The Port of New York/Newark is second on the list of Top U.S. Ports by Imports.

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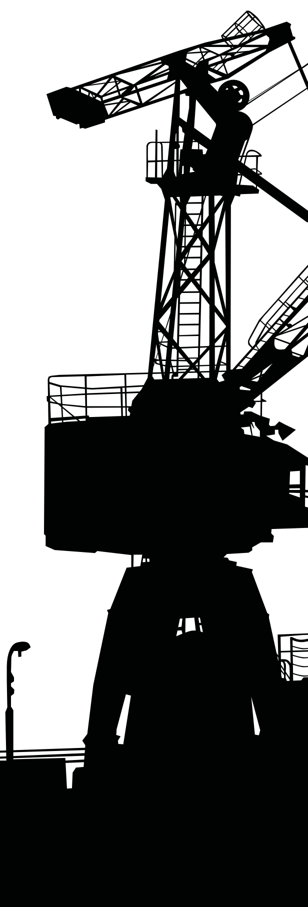

for the Port of Long Beach, which expects big things in 2014. Cargo volumes here rose 11.3 percent last year to 6,730,573 units—making 2013 the port's third-busiest year ever behind only 2006 and 2007.

In 2013, imports were up 12.8 percent to 3,455,323 twenty-foot equivalent units (TEU), exports rose 10.7 percent to 1,704,932 TEU, and empties were up 8.8 percent to 1,570,318 TEU. Shipping container volume rose in part because major shipping lines—CMA CGM and Mediterranean Shipping Co.—started to increase their services to Long Beach at the end of 2012.

"Our economy is getting better, and the port is providing a shot in the arm for Long Beach and all of Southern California," says Al Moro, acting executive director of the Port of Long Beach.

That upturn, along with the much needed monies for enhanced infrastructure, represents not only a "shot in the arm" for U.S. ports in 2014—but also a kick in the pants.

—Patrick Burnson is Executive Editor of Logistiics Management

AAPA workshop to focus on further investment

Among the key topics on the minds of port development and logistics executives in the Western Hemisphere is how to implement and fund transportation infrastructure projects for the growing volumes of goods that are flowing through their facilities as world economic conditions improve.

To address these and related questions, the American Association of Port Authorities' (AAPA) 2014 Maritime Economic Development Workshop (Feb. 20-21) in San Diego will feature a host of business and logistics experts, shipping company executives, infrastructure development case studies, and a unique, three-hour "facilitated dialogue" session to bring the collective knowledge of the entire audience to bear in solving some of the port industry's toughest economic challenges.

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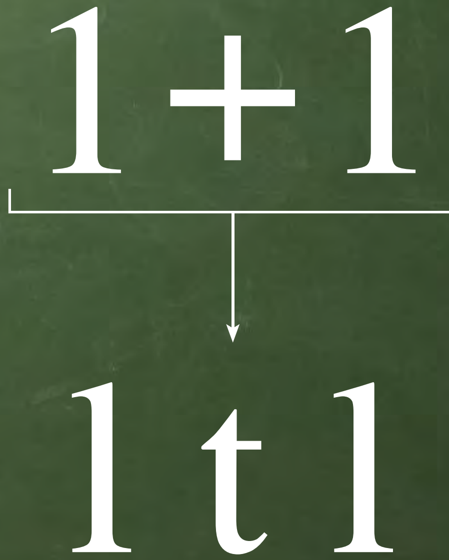

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expand their services, enhance their cargo handling capabilities, create jobs, and assist businesses looking to tap into the increasing global demand for both raw materials and domestically manufactured products," says Nagle. "In order to effectively compete, seaports must deal with issues ranging from finding investment partners and passing effective freight policy legislation at the federal level, to convincing their local and regional stakeholders the investments they are proposing are necessary and worthwhile."

—Patrick Burnson, Executive Editor

Private sector partnerships sought for port dredging options

Seaports across the nation are confronting one similar challenge: how to develop a sustainable strategy for distributing dredged materials.

Continuing their commitment to attract private sector expertise to address unique transportation challenges, the Maryland Department of Transportation's Maryland Port Administration (MPA) recently issued a Request for Information (RFI) seeking ideas and best practices for converting material dredged from Baltimore Harbor shipping channels into an environmentally safe aggregate used in the construction and building industries.

MPA said that it is exploring the potential of developing a public-private partnership to take material already placed at the Cox Creek Dredged Material Containment Facility and convert it into a light-weight aggregate used in masonry blocks, concrete, hot-mix asphalt, and geotechnical fill.

"Dredging is the lifeline of the Port of Baltimore," says MPA Executive Director James White. "Without properly maintained shipping channels, the huge ships of today and supersized ones of tomorrow could not safely travel to and from the port.

With a 50-foot-deep shipping channel, Baltimore is one of only two ports on the U.S. East Coast currently able to handle large Super Post-Panamax ships that will use the newly enlarged Panama Canal when construction is completed by 2015. To maintain these shipping channels, approximately 1.5 million cubic yards of material must be dredged from the Baltimore Harbor annually. Dredged material from the harbor is then placed at containment facilities, including Cox Creek and Masonville.

While capacity remains at these sites, the MPA has been investigating best practices to increase dredged material placement capacity while researching possible beneficial reuse ideas. According to officials, the MPA will analyze the industry feedback to determine the potential for partnerships and develop next steps for a possible solicitation process. MPA is targeting late winter 2014 for a decision regarding next steps and for a potential solicitation process.

—Patrick Burnson, Executive Editor

Port Tracker report shows positive themes heading into 2014

Optimism appears to be the operative term in describing growth prospects at U.S.-based retail container ports in 2014, according to the most recent edition of the *Port Tracker* report from the National Retail Federation (NRF) and maritime consultancy Hackett Associates.

For November, the most recent month in which data is available, *Port Tracker* said that the surveyed ports handled 1.37 million twenty-foot equivalent units (TEU), which dipped 4.3 percent from October—the month that is viewed as the busiest month of the year for imports.

The report is pegging December at 1.35 million TEU, which would represent a 5 percent gain over December 2012. "Retailers are still assessing the holiday season, but they're also looking ahead to see what will happen in the new year," said Jonathan Gold, vice president for supply chain and customs policy at NRF. "Based on these early numbers, 2014 looks like it should be off to a good start."

Port Tracker expects January to be up 4.8 percent annually at 1.37 million TEU, with February

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down 7.5 percent at 1.18 million TEU, and March up 15.9 percent at 1.32 million TEU. April and May are currently estimated at 1.4 million TEU and 1.46 million TEU for 7.7 percent and 4.6 percent increases, respectively.

Hackett Associates founder Ben Hackett observed in the report that 2014 looks to stands as an improvement to 2013 due to better than expected GDP figures, lower unemployment rates, and continued low inflation—coupled with expectations of a stronger dollar that will also help to increase consumer confidence as import prices continue to fall.

Yet Hackett cautioned that the inventory-to-sales ratio is still high at a time when it should be declining seasonally, a fact that could mean that current GDP growth is stemming from the services sector. While this is not necessarily a negative, it could translate into retail sales not being the growth engine for import volumes.

But even if that's the case, Hackett said that expectations of a stronger dollar could help to bolster consumer confidence with import prices falling.

"We're seeing a trend from 2011 into 2014, with each peak getting higher and the troughs not as deep as what we have had in the past," said Hackett. "This serves as confirmation that the recovery is ongoing."

—Jeff Berman, Group News Editor

Maersk to bring back SeaLand brand for new intra-Americas service

Ocean shipping giant Maersk Line, a subsidiary of A.P. Moller Maersk Group, said last month that it has re-established the SeaLand brand to form a regional, containerized shipping company focused on the intra-Americas market.

Maersk officials said that SeaLand will be comprised of local sales and support personnel positioned in North, Central, and South America, as well as the Caribbean, to meet the unique needs of customers throughout the region. They added that SeaLand will be similar in terms of structure to its other regional carriers, including intra-Asia carrier MCC Transport and intra-Europe carrier Seago Line.

Tim Simpson, director of marketing and communications for North America for Maersk Line and SeaLand, told *Logistics Management* that there were multiple drivers for this endeavor.

"We're always looking at the network and looking at how we best serve our customers and also deliver the kind of results our shareholders want," said Simpson. "There has been a team at Maersk looking at what would be a way to best serve this market. They went through some different scenarios and landed on the model that has worked for us. We felt that would make sense for the intra-Americas market, based on what we hear from customers and shippers in that region."

In the past, Maersk Lines' presence from Latin America up through North America has not had what Simpson described as a sense of permanency that customers and shippers in that market really value.

"Previously in the Latin and North America market we have announced services and taken services out with not that much continuity," said Simpson. "But with SeaLand, we think we have a solution that is really going to work for this market. Customers have told us we are not 'all in' in this market, and that they want a supplier that is focused on being there and delivering for them."

In terms of services provided by the new SeaLand, Simpson said that the plan is to take the existing network Maersk Line has and put it under the ownership of SeaLand, effective January 1, 2015,

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with Craig Mygatt serving as CEO. At that point, it will assess what types of other ways it can additionally serve customers, with that rationalization process taking place throughout 2014.

The plan, he noted, is to move its ocean products under the ownership of SeaLand, with the difference being in how they are managed, with things "closer to home" and not be managed in multiple continents. With a U.S. headquarters in a location to be determined, Simpson said SeaLand will have a greater opportunity to be more nimble and more flexible in helping customers. He did note that the headquarters might be based in the southern region of the U.S. on the Gulf coast or Atlantic coast.

From a services side, Simpson said that it will provide the ability to have sales and customer service teams co-located in these markets, working with small- to mid-sized customers that results in a higher level of personalization from a service perspective, better relationships, and being consultative toward customer supply chains.

—Jeff Berman, Group News Editor

U.S. seaports address infrastructure progress at WERC conference

When the Warehousing Education and Research Council (WERC) stages its annual conference in Chicago (April 27-30), seaport infrastructure will be top of mind, say organizers.

The session "U.S. Port Update: Investing in the Future" will feature a panel of three industry leaders from East Coast, Gulf Coast, and West Coast ports discussing their relative challenges and opportunities.

The current line-up includes:

- Tim Van Wormer, Marine Planning and Development Manager, The Port of Portland
- Russell Held, Director of Economic Development, The Port of Virginia
- Reggie Gray, President of the Houston Intercontinental Chamber of Commerce

Logistics Management's Executive Editor Patrick Burnson will moderate the hour-long session and will follow up with a post-conference report. For more details visit www.werc.org.

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Tuesday, March 18	10:00 am - 5:00 pm
Wednesday, March 19	10:00 am - 5:00 pm
Thursday, March 20	10:00 am - 3:00 pm

A SPECIAL SUPPLEMENT TO:

Logistics MANAGEMENT

With more than 750 exhibitors, three keynotes, and an extensive educational program, Modex 2014 is adding 50,000 square feet of show floor space. Here's a guide to every inch.

In just about two months, the Georgia World Congress Center Hall B will be set to welcome 25,000 visitors to Modex 2014—the industry's newest expo for the manufacturing, distribution, and supply chain industries, sponsored by MHI.

Attendees will find more than 750 exhibits from industry, commerce and government spread throughout the 230,000 square foot show floor (an increase from 180,000 square feet at the inaugural Modex in 2012). Also included are three keynotes and more than 90 educational sessions over four days.

Our sister publication, *Modern Materials Handling*, checked in with George Prest, CEO of MHI, to get a sneak peek into what's being planned for the show, which is being held from March 17-20, 2014.

"It's shaping up to be an incredible show," says Prest. "We've moved from Hall C to Hall B to accommodate the demand for exhibit space, as well as to add 15,000 square feet to co-locate the inaugural Supply Chain & Transportation USA Exhibition & Conference (SCT)."

To further make the event a one-stop destination, registered attendees not only gain full access to Modex, but also free entry into the

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SCT exhibits. There, four solution centers—transportation, logistics, industrial real estate, and the future of supply chain—are located inside the Modex show, to the left of the main entrance.

"Adding the SCT show gives attendees more opportunities to maximize their time, and reinforces Modex's position as the largest supply chain show in North and South America," Prest added.

Although this is only the second Modex show, the event's growth wasn't a surprise to MHI, he says. "It validates all of the research we did before we launched Modex that said supply chain professionals were looking for an event like this."

The growth in attendance and exhibit space mirrors the growth at MHI's other major show, ProMat. MHI held its space draw for ProMat in December 2013, setting a new record of 229,375 square feet sold—representing 75 percent of the planned exhibit area of 305,000 square feet, said Prest.

"Our industry is at a really strong place in the economic cycle right now. Companies are looking to invest in productivity," he adds. "We saw industry growth of 8 percent in 2013, and we're projecting double-digit growth for 2014."

Because of that, Prest anticipates that attendees will be trolling the exhibit aisles with project plans in hand. They'll also be looking to get new ideas about how to improve their supply chain efficiencies. To accommodate that, MHI places a strong emphasis on creative solutions, hosting the second installment of the Innovation Awards for new and existing products.

"We debuted the Innovation Awards at ProMat 2013, and it was

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Narrow aisle forklift navigates compact spaces

A line of narrow aisle forklifts features compact construction and minimal turning radius for operation in confined areas. As one of 15 different models of 100% AC powered, electric, counterbalanced, moving mast reach trucks, the 13BOP-7 forklift uses a travel speed control system that limits acceleration based on the height of the platform. As the platform rises, speed is increasingly restricted to keep the operator safe. Other features include a self-diagnostic LCD monitor that displays system operation in all environments, overhead operator protection guard meeting EEC and ANSI regulations, and efficient, high-powered 5.2kW AC motor. For smooth, quiet operation and protection from low and high voltage, overheating, and fault recording, the vehicle uses an 8 KHz high frequency, ZAPI controller. **Hyundai, 877-509-2254, www.hceamericas.com. Booth 7431.**

a huge success, with more than 75 entries," says Prest. "With the speed of change happening exponentially, attendees have told us in exit surveys that they specifically come to MHI shows to seek out new ideas about how they can increase their productivity and maximize their bottom line."

Additionally, he adds, Modex has 13 co-located education partners presenting events at the show, the largest being the Georgia Logistics Summit, held Tuesday and Wednesday upstairs from the Modex show floor.

Information about all Modex-related events can be accessed from the official Modex app. The app offers an interactive map, exhibitor search, educational sessions search, and information about the three keynotes. Attendees can also access their personalized agenda using the mobile app. Available free at both Android and Apple app stores, downloading information can be found at **www.Modexshow.com/app.**

To make it easier for attendees to find the solutions they need, the Modex 2014 show floor is divided into four solutions centers:

- **Manufacturing & Assembly:** Featuring automated assembly support, intelligent devices, robotics, ergonomic and safety equipment, workstations, light-rail and other assembly assist equipment and systems for the manufacturing environment.
- **Fulfillment & Delivery:** Showcases solutions for traditional or e-commerce order fulfillment, order picking and packaging, third-party logistics, warehousing, distribution, or transportation.
- **Information Technology (IT):** Highlighting supply chain software solutions, RFID, auto-ID and data

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collection, transportation management systems, manufacturing execution systems, logistics execution systems, enterprise resource planning and order management systems.

• **The Knowledge Center:** Offering resources to educate and build awareness of what the materials handling and logistics industry has to offer the supply chain as a whole.

Keynotes talk trends and technologies

This year, Modex features three keynote presentations, each offering critical insights from experts into shipping trends, building successful supply chains, and the latest issues and trends in materials handling and logistics.

The first runs Monday from 8:30 to 9:45 a.m. in the Georgia World Congress Center Hall B's room B312-314, and features Edward H. Bastian, president of Delta Airlines. In an address entitled "Shipping Trends for Global Supply Chains," Bastian will take a look at current and future trends and issues in the global supply chain from both carrier and shipper perspectives. He will also offer insights into advanced manufacturing customer needs and potential technology applications. Additionally, he will discuss Delta's role in global commerce, and share his perspective on future challenges and technologies essential to competitiveness.

Bastian's speech is presented by the Metro Atlanta Chamber's Supply Chain Leadership Council. The council is also sponsoring a moderated shippers panel discussion taking place immediately after the keynote concludes. Panelists representing companies in the aerospace, automotive, and pharmaceutical industries will examine supply chain challenges and note opportunities for advanced manufacturing companies.

Tuesday morning, from 8:30 to 9:45 a.m. in the Georgia World Congress Center Hall B's room B312-314, businessman Lee Scott, Wal-Mart's president and CEO from 2000 to 2009, will detail how to build a logistics and supply chain organization that is a market differentiator. As the company's third-ever CEO—following Sam Walton and David Glass—Scott reinvigorated Wal-Mart's mission, transforming it into a respected corporate leader on many of the major issues facing today's global businesses.

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will share what it takes to match supply chain performance to a company's needs: hire the right people and give them the right experiences. During his tenure, the company emerged as the world's largest retailer with more than 2.1 million associates and 7,390 retail operations in 16 markets around the world. The company earned the Fortune No. 1 spot six times between 1998 and 2008 and had sales of more than $405 billion in 2009.

Battle-tested in the war to deliver products to consumers at the lowest prices, Scott will offer tips on how to cope with today's rapid rate of change in an increasingly complex world.

On Wednesday, the final keynote presentation unveils the key findings of the annual MHI Industry Report, conducted in partnership with Deloitte Consulting. The "Preview of the MHI Industry Report—Trends Driving Supply Chain Innovations" will be presented by George Prest, CEO of MHI, and Scott Sopher of Deloitte from 8:30 to 9:45 a.m. in the Georgia World Congress Center Hall B's room B312-314. The extensive report on supply chain and materials handling trends and technologies draws upon a series of surveys conducted in January. Both MHI members and supply chain end users were asked to verify and rank what each group expects to focus on in the next two to three years.

Among the topics explored in the study:

- Supply Chain Analytics and the tools and techniques companies are using to track performance and identify areas for improvement.
- Mobile Supply Chains and the use of sensing and data collection technologies across all supply chain areas, including production, inbound and outbound logistics, inventory management and more.
- 3D Printing/Additive Manufacturing technology, its expanded use and its potential impact on manufacturing, logistics and transportation.
- Multi-Channel Fulfillment and its effect on distribution strategies as companies strive to provide consistent customer experience and service levels. □

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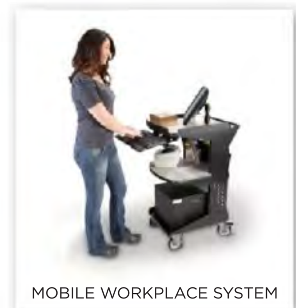
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Supply Chain & Transportation USA by SITL

Show Preview:

Explore the possibilities

Co-located with Modex 2014, Supply Chain & Transportation USA, the nation's newest transportation and logistics show, promises something for everyone who is in charge of moving freight.

SPECIAL SUPPLEMENT TO:

Logistics MANAGEMENT

BY **BRIDGET McCREA**, CONTRIBUTING EDITOR

Logistics and supply chain executives who attend Modex 2014 in March at Atlanta's Georgia World Congress Center will get a bonus this year. The materials handling centric event is co-locating with Supply Chain & Transportation USA (SCT) to create the largest international expo and conference of its kind to be held in the U.S. and South America in 2014.

Sponsored by MHI and run by Reed Exhibitions (RX), SCT is expected to attract over 100 exhibitors who will showcase their solutions on the event's 15,000-square-foot show floor. Tens of thousands of supply chain professionals from over 100 countries around the globe will attend this combined event.

According to Laurent Noel, vice president of transportation and logistics at RX, Supply Chain & Transportation USA will showcase a complete range of innovative products and services dedicated to transportation, logistics, real estate, and the future supply chain. The co-location will include approximately 230,000 square feet of exhibits as well as educational sessions.

"The decision to co-locate Modex and Supply Chain & Transportation USA was made for several reasons," says George Prest, MHI's CEO. "Co-locating the two events will allow manufacturing and supply chain professionals unparalleled education and networking opportunities as well as exposure to the largest equipment and technology display of any show of its kind in North America. In today's world where agile and innovative supply chains are a necessity, the co-location is a win-win for participants and attendees."

Noel says that the combined event creates the first U.S. exhibition that offers a one-stop shopping experience for supply chain executives. "The event will also include free educational content designed to meet the needs of vertical industry segments," he adds, noting that MHI's move to incorporate the area "outside of the warehouse's four walls" represents the next step for Modex.

Natural fit

Noel says that the idea of combining SCT with Modex came about when event coordinators realized that no such event existed in the U.S.

"There's no other show that provides total supply chain services and equipment in one place for the supply chain community," says Noel. "There may be a few different events covering the space, but none provide the same one-stop-shop approach that we're giving attendees."

Atlanta was a natural selection for the show's location not only because Modex was already taking place there, says Noel, but also because the city is centrally located and representative of what's taking place in the logistics field across the country.

"When you factor in the growing rate of trade and exchange taking place between the U.S. and Europe, for example," says Noel, "Atlanta is a major hub and a great representation of the transportation activity that is going on."

Already entrenched deeply on the materials handling and equipment side of the supply chain industry, Noel adds that Modex presented a unique co-location opportunity for SCT. "Today's vice president of supply chain or logistics and transportation wants to find what he or she is looking for in one place," says Noel. "Being able to bring the transportation components to a single location with Modex—which is already bringing all of the intra-logistics together—is a perfect fit."

And because the SCT team has already successfully rolled out similar shows around the world (Paris, Brazil, and Indonesia, for example), Noel

List of Exhibitors

EXHIBITOR	BOOTH NO.
Tracking Solutions	3220
Acuitive Solutions	2313
AFS Logistics	2515
AGILE Network	2819
American Expediting Company	2113
American Society of Transportation & Logistics (ASTL)	2314
APICS	3115
APL Logistics	2316
Avery Trucking	2715
BLG Logistics Inc.	2310
Bluestar	3219
Cardinal Health Integrated Logistics Services	2116
ClearTrack	2919
Con-way Multimodal	2513
DART Entities	2416
Data2Logistics, LLC	3318
DB Schenker, Schenker Inc.	2213
Delta Airlines	2215
DigitalShipper Logistics Software	2820
Escro Transport Ltd.	2115
Evanhoe & Associates Inc.	3118
Exmile Industry & Construction Tyre Co., Ltd	2713
Eyefreight	2913
Freightwatch International	2719
French A.m.erican Chamber of Commerce	2708
GEODIS Wilson	2613
German American Chamber of Commerce of the Southern US Inc.	3014
Gold Cold Chain Alliance	3114
HA Advantage	2718
Hartsfield-Jackson Atlanta International Airport	2019
HOPPECKE Batteries Inc.	2013
Insert Information Technologies GmbH	3320
Integral Strategic Solutions	2018
International Business Systems	2918
INTTRA	2816
KRC Logistics	2115

Continued on page 84S

is confident that the co-located event will be well received here in the U.S.

"We know that it's a concept that works for shippers," says Noel, whose team has organized eight supply chain, transportation, and logistics events on four different continents. Each event follows a similar concept of dividing the conference up between logistics and transportation services on one side and materials handling and equipment (intra-logistics) on the other.

"In some cases we will organize both sides of the event," says Noel, "but in the U.S. we felt that Modex would be the best partner to conduct the material handling and equipment component."

Sharing information and best practices

In terms of attendance, Noel expects 25,000 participants—50 percent of whom will be manufacturers and retailers who influence transportation and logistics decisions—to be on site during for the combined event. He says that the efficiencies created by both events taking place at the same venue will help push up attendance numbers.

"Our competitors are taking a similar approach, knowing that shippers today have less time to visit events and get up close and personal with the newest products and services," says Noel.

In addition, this year's Modex/SCT event will include panel discussions, best practice sessions, case studies, and other features that encourage networking and peer-to-peer information sharing. "We're educating without competing with CSCMP, which is purely educational," says Noel. "Our event is more deeply rooted in exchanging information with peers and the sharing of best practices, information, and insights among attendees."

At the event, most of the world's top freight forwarders will be on deck, including UPS, BLG Logistics Group, Panalpina, and APL Logistics. "This is the only trade show that will feature so many leaders in the freight forwarding industry exhibiting at the same time," Noel points out. "Some will be speaking at the sessions and conferences, but most will also be exhibiting and available for discussions."

Another one of the event's notable features will be an IT-focused exhibitor area for technologies concerning the management of information flow in the supply chain, including software vendors, integrators, and manufacturers of products and services for tracking traceability or geolocation. "Most of these exhibitors will be focused on warehouse management systems and other warehousing-related products and services," says Noel, "although a portion of them will be dedicated to transportation."

Under one roof

Noel says that the co-located event will be most applicable for logistics and supply chain professionals from the retail, distribution, and manufacturing sectors.

Retailers, for example, need to understand concepts like supply chain optimization, visibility, and agility. They also need to be able to deftly explore and move into new markets, says Noel, who feels that the show will help such attendees realize those goals in 2014. He points to the event's long list of exhibitors as proof that no attendee will walk away from the Atlanta event empty handed.

"When you look at our exhibitors, we have a long list of freight forwarders, transportation companies, and other entities that are well equipped to help manufacturers and retailers build their businesses, explore new markets, and optimize their supply chains," says Noel, adding that a lengthy lineup of educational sessions is also on tap.

In fact, the SCT event will feature 40 such sessions across a three-day period and will include a mix of panel discussions and case studies. The latter will include real-life stories of how global organizations found new ways to track shipments and optimize their supply chains, among other examples.

"We want to cover a diverse range of topics so that there's a little bit of everything for everyone," says Noel. "We want retailers, manufacturers, and distributors alike to be able to learn something new, share with their peers, and enjoy the camaraderie and networking that this world class event provides." □

List of Exhibitors *(Continued)*

EXHIBITOR	BOOTH NO.
Lanter Distributing	2115
Livingston International Inc.	2813
LLamasoft Inc.	2916
Manhattan Associates	2716
Metalcraft Inc.	3018
Metro Atlanta Chamber	2019
Monode Marking Products Inc.	3020
Next Generation Logistics Inc.	3016
Numerex	2614
Old Dominion Freight Line Inc.	2516
ORTEC	3013
Palisades Logistics	2616
Panalpina Inc.	2518
Peerless Media	3215
PINC Solutions	3216
Port Canaveral	2415
Ports of HAROPA	2318
Protrans	2720
Purolator International Inc	2015
Ramp Systems Inc	2920
Rasco Industries Inc	3319
Roush CleanTech	2615
Saddle Creek Logistics Services	2216
Seagull Scientific	3218
SENATOR International Freight Forwarding	3015
ShenYang Shining Fortune Container Seal Co. Ltd	2414
Site Selection Magazine	2914
TICONTRACT Inc/ TRANSPOREON Group	2818
Transwide	3116
UPS Corporate Headquarters	2118
Urban Area Bourges	2016
US EPA SmartWay Transport Partnership	2315
USSA	2507
Worldwide Aeros	2510
XTL Inc.	2018
YRC Freight	2413

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Supply Chain & Transportation USA 2014 Conference Schedule

Monday, March 17

Time	Title	Speaker	Session type	SCTUSA Theater
8:30a.m.-9:45a.m.	Shipping Trends for Global Supply Chains	Edward H. Bastian, President, Delta Airlines	Keynote Presentation	B312
10:15a.m.-11:15a.m.	Found Money/ Using Modeling Technology to Find Hidden Savings in your Supply Chain	Toby Brzoznowski, Co-Founder and Executive Vice President, Llamasoft, Inc.	Presentation	B
10:30a.m.-11:30a.m.	Employee Engagement and Certification in the Supply Chain	Dominic Longo, CSCP Director, Corporate services, APICS	Presentation	A
11:30a.m.-12:30p.m.	Embracing Lean: How an asset-based truck line is using Lean principles to eliminate waste in transportation	Jeff Rivera, Vice President, National Sales, Con-way Freight; Brain McGowan, Vice President, Lean, Con-way Freight	Case Study	B
12:45p.m.-1:45p.m.	Dock Scheduling; Bringing Order to Your Logistics Universe	Elie Hiller, Director, Sales & Marketing, North America, Transwide	Case Study	B
1:00p.m.-2:00p.m.	The Benefits of Business Process Re-engineering in Supply Chain Operations	Kyle Salem, UPS	Case Study	A
2:00p.m.-3:00p.m.	Has Technology Changed The Way We Train Employees?	Elaine Puri, CTL Director of Workforce Development, American Society of Transportation and Logistics (AST&L); Wayne Kline, GLA, Program Director, Polk State Corporate College	Case Study	B
2:15p.m.-3:15p.m.	Near-shoring and the “New Normal”	Wade McDaniel, VP of Supply Chain Solutions, AVNET Velocity	Presentation	A
3:15p.m.-4:15p.m.	Urban Logistics and Supply Chain Efficiency	Chip White, Professor, Georgia Tech; Alan Erera, Professor, Georgia Tech and Tim Staroba, Freight’s Eastern Area VP, Con-Way	Case Study	B
3:30p.m.-4:30p.m.	Global Manufacturing (Off-, Near-, and Re-shoring)	Larry Lonagham, Senior Executive, Logistics Unlimited	Presentation	A

Tuesday, March 18

Time	Title	Speaker	Session type	Theater
8:30a.m.-9:45a.m.	A Conversation with Lee Scott	Lee Scott, Former CEO, Wal-Mart	Keynote Presentation	B312
10:15a.m.-11:15a.m.	Supply Chain Technology: Transportation Management Systems (TMS) Gaining Altitude in Today’s Omni-Channel Landscape	Mike Mulqueen, Senior Director of Product Management, Manhattan Associates	Case Study	B
10:30a.m.-11:30a.m.	Trends in Omni-Channel Retailing	Randy Strang, UPS	Case Study	A
11:30a.m.-12:30p.m.	The Collaborative Network: Succeeding in a New Era of Supply Chain Shipment Visibility	Kristen Celecki, Product Marketing Director, Visibility Solutions, INTTRA; Mike Levans, Group Editorial Director, *Logistics Management*; and a Manufacturer (TBD) and Retailer (TBD)	Panel Discussion	B

Time	Title	Speaker	Session type	Theater
11:45a.m.-12:45p.m.	Fueling a Competitive Edge: How Top Fleets are Succeeding with Propane Autogas	Steve Whaley, Director of Business Development, ROUSH CleanTech	Panel Discussion	A
12:45p.m.-1:45p.m.	Bar Code, RFID, RTLS and Mobile Computing Solutions Impact Operations Worldwide	AIM	Presentation	B
1:00p.m.-2:00p.m.	DB Schenker Case Study	DB Schenker	Case Study	A
2:00p.m.-3:00p.m.	North America-Europe Logistics Solutions	William Behrens, North American Representative, USA/Canada, Ports of HAROPA; Shannon Feeley, Assistant Director of Cargo Business Development, Port Canaveral	Panel Discussion	B
2:15p.m.-3:15p.m.	Need and Future of Workforce Training	BLG/Mercedes/German-American Chamber of Commerce	Panel Discussion	A
3:15p.m.-4:15p.m.	Ortec Case Study	Ortec	Case Study	B
3:30p.m.-4:30p.m.	Size Matters: How Very Large Ships, Trains, and Terminals Are Changing America's Ports	Ken Uriu, Marketing Manager, Port of Long Beach	Presentation	A
Wednesday, March 19				
Time	**Title**	**Speaker**	**Session Type**	**Theater**
8:45a.m.-9:45a.m.	Preview of MHI Industry Report	George Prest, CEO, MHI; Scott Sopher, Principal, Deloitte Consulting LLP	Keynote Presentation	B312
10:15a.m.-11:15a.m.	Strengthening Relationships in the Cold Chain—Beginning with Rail	Global Cold Chain Alliance	Panel Discussion	B
10:30a.m.-11:30a.m.	Strategies for Optimizing Data in the Global Shipping Industry	Kristen Celecki, Product Marketing Director, INTTRA; an Ocean Carrier (invited) and a Shipper (invited)	Panel Discussion	A
11:30a.m.-12:30p.m.	Global 3PL Distribution: Thinking Outside the Borders	Greg McKinley, VP of Warehousing and Logistics, Incomm	Presentation	B
11:45a.m.-12:45p.m.	Top Healthcare Strategies Revealed	Robin Hooker, UPS	Case Study	A
12:45p.m.-1:45p.m.	Omni-Channel—The future of shipping	Agile Network	Case Study	B
1:00p.m.-2:00p.m.	The SmartWay Transport Partnership—Enhancing Supply Chain Efficiency by Managing Carbon Emissions	Buddy Polovick, Team Leader, US EPA SmartWay Transport Partnership; Run Guzzi, Sr. Manager Carrier Relations, The Home Depot and Ed Connally, Manager Logistics, Admin & Compliance, Colgate Palmolive (invited)	Panel Discussion	A
2:00p.m.-3:00p.m.	Livingston International Case Study	Livingston International	Case Study	B
3:15p.m.-4:15p.m.	Is Your Supply Chain Optimized?	Rayford Collins, UPS	Case Study	B
3:30p.m.-4:30p.m.	Urban Area Bourges Case Study	"Urban Area Bourges/French American Chamber of Commerce"	Case Study	A

Pacific Rim Report

By Patrick Burnson

Patrick Burnson is Executive Editor of *Logistics Management.* If you want to contact Patrick with feedback or a story idea, please send an e-mail to pburnson@peerlessmedia.com.

Sourcing accountability placed under greater scrutiny in Asia Pacific

ASIAINSPECTION, (AI) A LEADING provider of quality control services for businesses importing from emerging Pacific Rim nations, observes that 2013 was a challenging year for brands and retailers.

For example, strikes and riots erupted throughout the year in factories across India, Bangladesh, Cambodia, and Myanmar with workers demanding higher wages. In Bangladesh—where the collapse of a garment factory took the lives of 1,129 people—the minimum wage is half that of China.

Figures from AI reflect brands and retailers are finally taking action, showing a 61 percent increase in its audits of multinational companies in Asia for 2013 compared to 2012. While Bangladesh was in the spotlight, buyers took to securing their supply chain in all sourcing regions, with audits in Bangladesh up 47 percent year over year. Increases in audits in China were up 58 percent and up 112 percent in India.

Furthermore, child labor was put back in the spotlight when a report was published by the U.S. Department of Labor late last year cited that 78 million children are engaged in child labor in the Asia and Pacific region.

Sourcing forecast

Despite fears that China's competitiveness would be eroded by the appreciation of the Renminbi and wage inflation, China's exports continue to set new highs.

November was up 12.7 percent compared with a year earlier, and for the period of January to November 2013 showed a 9.3 percent increase compared to 2012. This puts China on track to report the largest annual trade surplus since 2008.

AI's inspection figures mirror this with a 17 percent increase in ordered inspections in China in 2013 compared with 2012. In 2013, China remained, by far, the largest sourcing region used by AI clients. To put it in perspective, Bangladesh exports amounted to a mere 1 percent to that of China.

"Despite fears that China's competitiveness would be eroded by the appreciation of the Renminbi and wage inflation, China's exports continue to set new highs. November was up 12.7 percent compared with a year earlier.

Safety last?

China continues to dominate toy manufacturing, producing more than 80 percent of all toys sold in western countries. With another Christmas season well behind us, a period when up to 70 percent of all toy sales occur, consumer safety was high on the agenda last quarter.

In November, 200,000 dolls made in China were seized at U.S. ports for containing high levels of phthalates, a banned chemical used in plastic. The same happened this December in France, with 30,000 non-compliant Chinese toys destroyed by customs. Concurrently, a U.S. public interest research group analyzed 50 toys from China and found them to contain 29 times more lead than the safety limit, banned phthalates, excessive levels of cadmium, and choking risks.

AI data on the toys and products in the recreational industry shows a worrying trend, with the number of failed toy inspections in Asia rising from 27 percent in 2012 to 33 percent in 2013. While most failed inspections were for minor non-life threatening issues, more than 4 percent of toy testing by AI did not pass safety standards.

In terms of percentage growth, 2013 confirmed the trend for new sourcing regions, with Africa seeing a 47 percent increase in the second half of the year. Vietnam was up by 71 percent, and Cambodia doubled despite protests over wage concerns.

It's important to note that 2013 was the year when logistics and supply chain management—or rather the lack thereof—made headlines and became a concern not only for sourcing professionals, but for consumers as well.

"A Western buying office that does not know precisely where the products they purchase are manufactured and what's going on in their outsourced factories is doomed," says Sebastien Breteau, CEO of AsiaInspection.

"Major names like H&M, Apple, and HP have published their lists of approved suppliers," Breteau says. "We will see more initiatives with major brands taking back full control and enforcing visibility."

AI analysts say we may see 2014 be the year that transparency becomes a reality in global supply chains. Let's hope they're right. ☐

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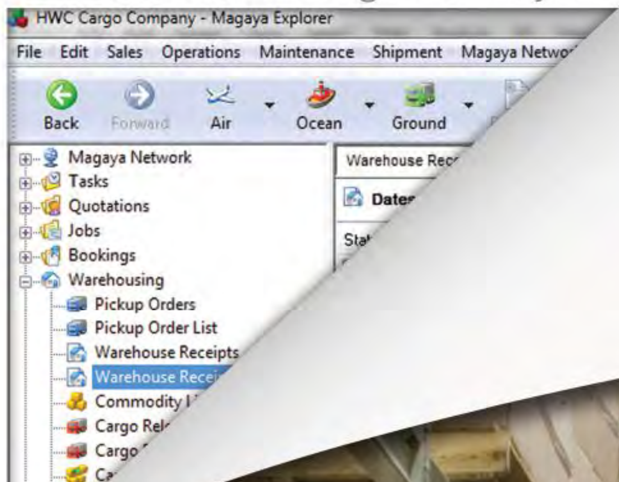

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