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OCTOBER 2012

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NASSTRAC Shipper of the Year

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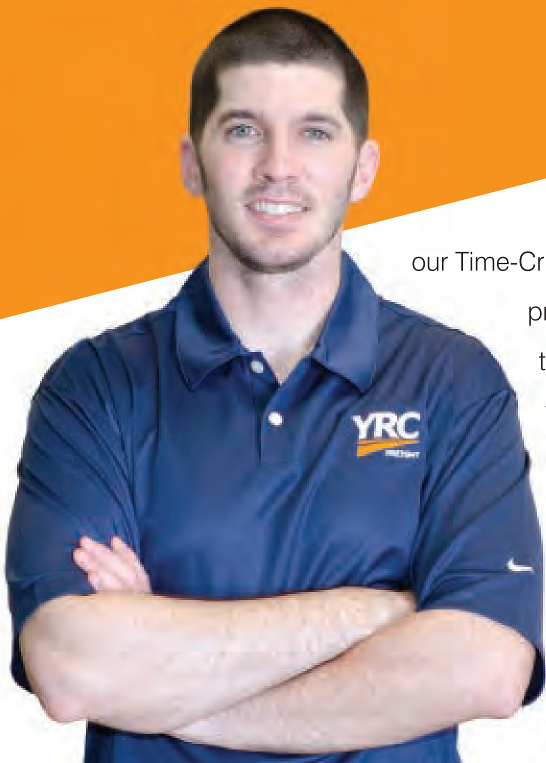

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Management UPDATE

AN EXECUTIVE SUMMARY OF INDUSTRY NEWS

Trucking costs going nowhere but up. The American Transportation Research Institute's (ATRI) findings for its study *An Analysis of the Operational Costs of Trucking*, that identifies trucking costs from 2008 to 2011 derived directly from fleet operations, showed upward momentum relating to trucking expenditures. ATRI reported that the marginal cost per mile in 2011 of $1.71 was the highest in the four-year period. And even with decreasing fuel prices between 2008 and 2009, ATRI stated that industry costs went up steadily through 2010 and 2011. Fuel and driver wages (excluding benefits) continued to be the largest cost centers for carriers, representing 62 percent of the average operating cost in 2011, according to ATRI.

DOT Freight Policy Council making inroads. Following the launch of the Department of Transportation's (DOT) Freight Policy Council in August, DOT Secretary Ray LaHood wrote in his blog that the department is "kicking off the new council's work by listening to the people who know freight—the states, the freight and logistics industry, businesses, consumers, and other stakeholders." The objective of the Freight Policy Council is to focus on improving the condition and performance of the national freight network to better ensure the ability of the U.S. to compete in the global economy. DOT says the council will develop a national intermodal plan for improving the efficiency of freight movement and also work with states to encourage development of a forward-looking state freight strategy.

USPS chief stresses need for legislative help. United States Postal Service (USPS) Postmaster Patrick Donahoe said that despite the myriad challenges the USPS is facing, the service has a solid business plan to return to long-term financial stability. Donahoe added that resolving legislative issues geared towards making the USPS more profitable and sustainable are front and center for the organization's future. Two of the biggest challenges currently facing the USPS are declining First Class Mail volumes and substantial annual net losses, among others. "The Postal Service is moving forward with the parts of our business plan that we can control, and securing comprehensive legislation will allow us to implement the rest of the plan," said Donahoe. "Our industry is fundamentally strong and has a bright future."

FedEx less than bullish on economy. Transportation and logistics bellwether FedEx reported that fiscal first quarter net income of $459 million fell 1 percent annually from $464 million. This decline followed guidance issued by the company on September 4, citing weakness in the global economy constrained revenue growth at FedEx Express. Looking ahead, FedEx expects earnings per share of $1.30-$1.45 in the fiscal second quarter and $6.20-$6.60 per share for fiscal 2013, which is down from previous full year guidance of $6.90-$7.40 per share. FedEx said this guidance assumes weaker economic growth in the economy than expected.

Air forecast up. While the current air cargo industry is underperforming this year, Boeing is predicting a robust rebound, particularly in Asia Pacific. In its Current Market Outlook report, Boeing predicts that there will be a long-term demand for 34,000 new airplanes, valued at $4.5 trillion. "These new airplanes will replace older, less efficient airplanes, benefiting airlines and stimulating growth in emerging markets and innovation in airline business models," noted the report. Boeing admitted that while commercial aviation has weathered many downturns in the past, recovery has followed quickly as the industry reliably returned to its long-term growth rate of approximately 5 percent per year. China has been a particularly bright spot. "It's impressive that over 75 percent of the demand in China will be for growth instead of replacement," said Randy Tinseth, vice president of marketing for Boeing Commercial Airplanes. "Sustained, strong economic growth, growing trade activities, and increasing personal wealth are some of the driving forces."

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Management UPDATE

Continued

Ocean cargo dip in August. Zepol Corporation, a leading trade intelligence company, reports that U.S. import shipment volume for August, measured in twenty-foot equivalent units (TEUs), is down from July by 3 percent and 0.3 percent from August of 2011. According to Zepol, it's unusual to see a drop in imports from July to August, since the trend for the past three years has been a spike. In 2010 and 2011, August was actually the peak month of the year for TEU imports. "The lower August numbers could be due to early holiday purchases in July, which saw abnormally high TEU numbers," said Zepol's CEO Paul Rassmussen, who added that it may have had something to do with fear of the potential East Coast port labor strike before the new 90-day extension was announced late last month.

Port investment needed…now. The American Society of Civil Engineers (ASCE) unveiled a new economic study late last month that makes a compelling argument for seaport investment. The fourth report in ASCE's Failure to Act series quantifies the macro costs to the economy of unmet investment needs in America's waterborne and airport infrastructure—including job losses, impacts on GDP, U.S. exports, household budgets and personal incomes. It also projects the level of investment needed by 2020 to circumvent these consequences. Jerry Bridges, executive director of the Virginia Port Authority, noted in a panel discussion convened by ASCE that 99 percent of U.S. trade is waterborne. "But without a national freight policy, our ports are in danger of underperforming," said Bridges. Aging infrastructure for marine ports, inland waterways, and airports threatens more than 1 million U.S. jobs according to ASCE. Between now and 2020, investment needs in the nation's marine ports and inland waterways sector total $30 billion, while planned expenditures are about $14 billion—leaving a total investment gap of nearly $16 billion.

Sourcing sanctions. According to the American Resources Policy Network, a non-partisan education and public policy research organization, recent legislation may discourage responsible development of U.S. mineral resources. At the same time, supply chains for sourcing minerals and other raw materials may be severely effected if the U.S. Environmental Protection Agency has its way. Among the miscellaneous provisions contained in the Dodd–Frank Wall Street Reform and Consumer Protection Act is one mandating disclosures on "conflict materials" in or near the Democratic Republic of the Congo. "Initial analysis of Dodd-Frank (Section 1502), indicates that it contains too many loopholes to have a meaningful impact," said Dan McGroarty, American Resources Policy Network president. McGroarty noted that the legislation brings to the fore America's growing mineral dependence on nations with abysmal labor practices and human rights violations in countries like China, Russia, and Kazakhstan.

Moving to a new home. Damco, the global third-party logistics and freight forwarding subsidiary of A.P. Moller-Maersk, is re-locating its headquarters from Copenhagen, Denmark, to The Hague, Netherlands. The company said that the move should be completed during the first quarter of 2013, and added that it "brings Damco closer to the heart of the European logistics community and supports its strategy to become a top five industry player." CEO Rolf Habben-Jansen told *Logistics Management:* "The Hague was chosen…because we consider it the best location when we take all factors into account. Costs are lower, and we have an established presence and good experience already with APM Terminals—and yet it is still close to Copenhagen and The Group."

Full steam ahead for CN. Last month, Class I railroad carrier CN rolled out plans to increase its assets by acquiring more than 2,200 new freight cars this year and 1,300 new containers. Company officials said that the impetus for this is to support traffic growth and improve service. Included in these asset acquisitions, said CN, are 600 premium 60-foot double-door payload cars for forest products and metals traffic, which

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Management UPDATE

Continued

the carrier says augment customer loading efficiency, and 1,300 containers for grocery and consumer goods, as well as 558 high-capacity modern covered hoppers for grain exports."CN's rolling stock acquisition strategy is responding to evolving market conditions and is intended to ensure reliable, predictable supply chains for our customers," said Jean-Jacques Ruest, CN executive vice-president and chief marketing officer.

A good read. Most executives today readily acknowledge the critical value of supply chains. A sobering truth, however, is that thousands of U.S. companies never even consider supply chain strategies when creating business plans—even though they account for roughly 60 percent of a firm's total costs, 100 percent of the inventory, and are essential to providing the customer service required to drive sales. This shocking fact is at the heart of J. Paul Dittmann's latest book, Supply Chain Transformation. Dr. Dittmann, executive director of the Global Supply Chain Institute at the University of Tennessee, and a frequent contributor to Logistics Management, is among the panelists featured in this issue's roundtable Transportation's role in the global supply chain (Page 44).

C.H. Robinson expands into Poland. C.H. Robinson Worldwide Inc. (CHRW) recently announced that it has agreed to acquire Warsaw, Poland-based freight forwarder Apreo Logistics S.A. Apreo provides various services for shippers, including dry van temperature-controlled and liquid and dry bulk capabilities as well as warehouse, air, and ocean services. According CHRW, this acquisition expands the company's presence in Europe and supports its goals to strengthen capabilities in its core business and further diversify its modal offering, both of which benefit its European and global customer base. This follows a July announcement by CHRW that indicated that its subsidiary, C.H. Robinson Europe, opened a new office in Rotterdam, Netherlands, that will specialize in temperature-controlled logistics services.

Cyber sales surge. According to IHS Global Insight, the first half of the year marked another record-breaking performance for e-commerce retail sales. "On a seasonally adjusted basis, the second quarter's gain pushed sales to their highest level and claimed more share of total retail sales," says Chris Chrisopher, Jr., senior principal economist at IHS Global Insight. "Currently, e-commerce retail sales account for 5.1 percent of all retail sales." He added that the rise of online retail sales is placing tremendous demand for residential parcel delivery services from companies such as UPS and FedEx. IHS Global Insight projects e-commerce retail sales to increase about 17 percent during 2012 to reach somewhere in the $230 billion range, for another big year.

CP is speeding things up. Canada's other Class I railroad carrier, Canadian Pacific (CP), said last month that it has introduced new intermodal services that offer faster transit times that connect Vancouver to Toronto or Chicago. According to company officials, CP's new intermodal schedules eliminate one day from the 2,600-mile Toronto to Vancouver transcontinental trains and two days from the 2,200 mile Vancouver to Chicago train service. CP told Logistics Management that these one- and two-day reductions bring CP's transit times between Vancouver and Chicago or Toronto to four days.

AAPA love fest. Mobile, Ala., has long been known for its charm, history, and a whole lot of Southern hospitality—and more recently for attracting major international businesses like Airbus and ThyssenKrupp. Evidence of these and the Port City's many other attributes can be witnessed firsthand Oct. 21–25, when hundreds of seaport industry and related transportation professionals descend on Mobile for the American Association of Port Authorities' (AAPA) 101st Annual Convention, presented by the Alabama State Port Authority (ASPA). Two governors, a noted Wall Street financial strategist, a top-ranked design firm vice president and a host of port and maritime industry leaders will lead the convention's business sessions while a busy exhibition hall and other activities will keep convention registrants busy and engaged. □

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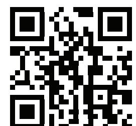

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Whatever It Takes!

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Cover Photography: Steve Neidorf/Getty Images

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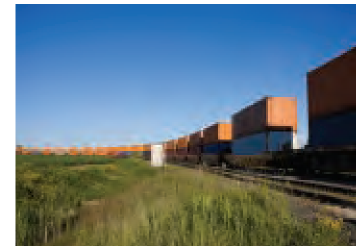

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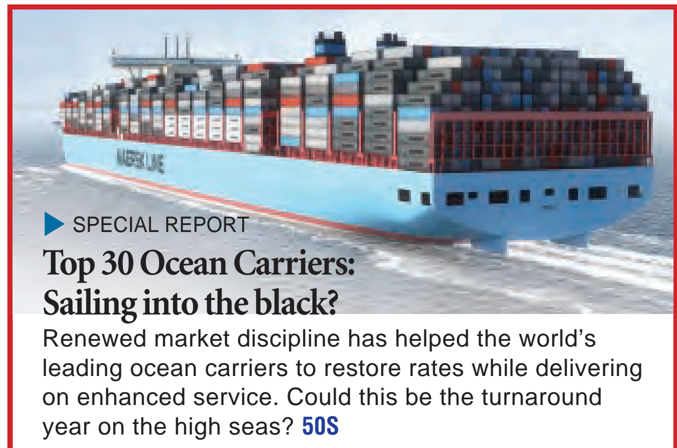

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- the breakdown of the nation's current modal mix;
- how improved transportation management is transforming U.S. business; and
- how the nation's top shippers are running their logistics operations.

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Mary Collins Holcomb, Ph.D., the University of Tennessee

Karl B. Manrodt, Ph.D, Georgia Southern University

Tommy Barnes, President. Con-Way Multimodal

Tony J. Ross, Senior Manager, Ernst & Young LLP

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VIEWPOINT

Meeting the multi-channel challenge

MULTI-CHANNEL SELLING has revolutionized the retail industry—and I'm not sure if you can find anyone in the market who would argue that statement.

It has pushed logistics professionals in this vibrant sector to recalibrate everything—from transportation networks, distribution center location and design, utilization of materials handling equipment, to carrier and supplier partnerships. In fact, it would be safe to say that efforts to meet the multi-channel challenge have connected logistics operations to overall business strategy more than any other trend over the past 20 years.

The job of successfully managing inventory to be sold in store, online, through a catalog, or a hybrid of all three—with a variety of delivery options to meet any customer demand—rests solely on the backs of the logistics and supply chain team. But the only way savvy retailers are able to implement these complex systems is through a finely-woven line of communication that starts in the C-suite, snakes through marketing, procurement, and facilities planning, and then makes its way into the distribution center.

Just ask Peter Zedler, senior manager for transportation planning and support at Best Buy, how critical his role has been in the "big box" retailer's multi-channel solution. Not only did Zedler's team implement an innovative transportation and distribution plan to execute the multi-channel strategy at the company's newly renovated stores, but the team was also vital in the execution of the remodeling process itself.

In fact, Zedler's coordinated efforts with Best Buy's logistics, properties, and global procurement teams to meet a variety of complicated fulfillment challenges has earned the retailer the 2012 NASSTRAC Shipper of the Year Award. *Logistics Management*, in conjunction with this logistics and transportation advocacy organization, present this annual award to shippers that have demonstrated excellence in the execution of a logistics strategy designed to advance the company's overall mission.

This is the second time in eight years that Best Buy has received the award, and marks the first time a company has won multiple times. "They're constantly innovating to stay competitive in an increasingly complex market," NASSTRAC Executive Director Brian Everett told me during our selection process. "This new transportation program clearly demonstrates that a retailer, or any shipper for that matter, now has to think about more than just product movement throughout the supply chain."

Efforts to meet the multi-channel challenge have connected logistics operations to overall business strategy more than any other trend over the past 20 years.

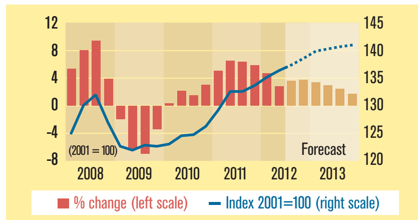
Best Buy's winning success story, told by Contributing Editor John Schulz, unfolds on page 28.

"Customers can always order online, but often they like to go to the new stores to get a look at the products or actually put them to use," says Schulz. "Once there, the customer can buy on site, but if they don't have it in stock the store they can quickly pull it from the nearby warehouse for pick up that day or order it online to be shipped to the customer's home. We take this stuff for granted these days, but it's logistics innovation that's making it possible."

Michael A. Levans, Group Editorial Director

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

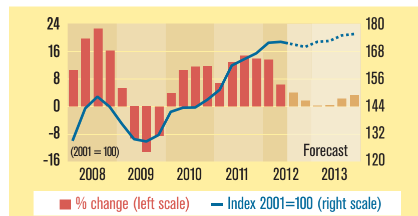
Pricing Across the Transportation Modes



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
General freight - local	0.1	-0.3	1.0
TL	0.8	1.1	4.2
LTL	2.1	4.1	6.5
Tanker & other specialized freight	0.8	0.6	1.0

TRUCKING

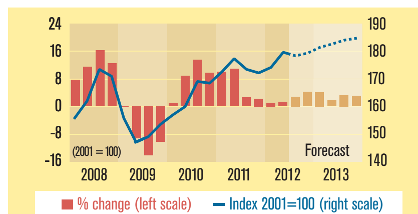
Inflation in the trucking industry picked up steam this past summer and boosted margins. LTL transaction prices jumped 2.1% in August on the heels of the previous month's 1.1% uptick. Truckload general freight carriers also pumped prices up 0.8% in August, but that followed two consecutive monthly price declines. Analysis of cost/price trends suggest that the trucking industry did make progress at repairing margin damage incurred from high fuel costs. We estimate the industry's gross operating surplus (before taxes) had inched back up to $19.50 for every $100 worth of services sold this past summer. The trucking inflation forecast remains 3.7% in 2012 and 2.6% in 2013.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
Air freight on scheduled flights	-0.1	-0.4	4.2
Air freight on chartered flights	-4.9	-1.5	0.3
Domestic air courier	-1.8	-1.4	2.5
International air courier	-1.8	-2.2	1.0

AIR

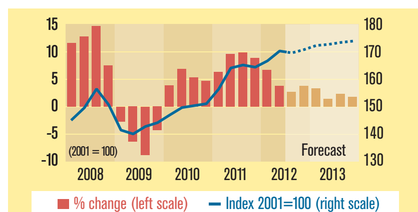
Average prices in the U.S. airline industry increased by 1% in August, but with no help from air freight business. Average transaction prices for flying freight on scheduled flights slipped down 0.05%. Chartered planes flying domestic routes also slashed air freight prices 7.1% while those flying international routes cut tags 0.3%. Despite these one-month cuts, cost/price trends are favoring airliners again. This past summer, the U.S. airline industry's labor costs and fuel costs both fell from same-month-year-ago levels. As a result, industry margins increased by an estimated $6.72 (per $100 of sales) in July 2012 from same-month-year-ago. Scheduled air freight inflation forecast remains 6.2% in 2012 and 1.5% in 2013.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
Deep sea freight	0.1	3.9	1.7
Coastal & intercoastal freight	-0.1	6.3	7.0
Great Lakes - St. Lawrence Seaway	-1.3	-8.6	4.2
Inland water freight	-1.5	-0.7	1.3

WATER

U.S.-owned water transportation service providers reported their third monthly price decline in a row with average tags down 0.5% in August. For the three-month period ending August, however, prices were up 2.1% from year-ago. Freight carriers that operate over water no doubt would like to return to the profit environment enjoyed in October 2008. That's when gross operating surplus (before taxes) hit a maximum estimated at $28.19 for every $100 worth of services sold. As of mid-summer 2012, margins still stood at a respectable $22.62 (per $100 sales), though down $2.86 from July 2010. The inflation forecast for this industry continues to be 2.3% in 2012 and 3% in 2013.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
Rail	-0.5	1.2	2.5
Intermodal	0.3	0.5	0.8
Carload	-0.7	1.3	2.7

RAIL

At first glance, in August 2012, carload and intermodal rail prices appeared to ride diverging tracks as average prices declined 0.65% in the first case and increased 0.32% in the second. But compared to same-month-year-ago, prices increased for both, up 2.7% for carload and up 0.8% for intermodal rail service. Comparing to 2010 average price levels, we see carload tags up 13.4% and intermodal running close behind, up 12%. As for the margin picture, we estimate the rail industry's gross operating surplus (before taxes) stood at $19.66 for every $100 worth of services sold this past summer. Meanwhile, our new rail industry inflation forecast has been revised upward to 4.2% in 2012 and 2.2% in 2013.

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

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- Driver turnover situation is not abating, according to ATA data
- Port Tracker report is positive for 2012 volumes
- UPS, FedEx receive limited domestic delivery licenses in China

NEWS & ANALYSIS

Transportation is the "phantom issue" in presidential race

By John D. Schulz, Contributing Editor

Supply chain stakeholders lament the absence of a tangible transportation conversation in presidential candidates' policy agendas.

WASHINGTON, D.C.—You've seen them: Attack ads are usually somewhat over the top as both President Barack Obama and Republican challenger Mitt Romney try to gain an edge in a race that most polls show to be extremely close.

But in all those attack ads, both Republican and Democratic, there is one thing missing: There is no mention of transportation. In fact, on this particular issue, there seems to be bipartisan support in Washington. On both candidates' Web sites, there isn't a single mention of transportation—passenger or freight—among the 25 or so major "issues" cited by both.

Considering that freight and passenger transportation account for about one-fifth of this nation's Gross Domestic Product, top officials in transportation tell *Logistics Management (LM)* that they are growing concerned that the topic is getting a presidential brush-off.

"I'm disappointed, but not surprised," said Lana Batts, a veteran Washington transportation official and managing partner of Transportation Capital Partners. "Transportation is rarely mentioned when budgets are tight, and neither party wants to address the fact that the infrastructure is crumbling beneath their very feet because it means raising taxes to pay for it. Building the interstate system took a visionary; maintaining it takes politicians with the guts to raise taxes and not just cut ribbons."

Jean Godwin, executive vice president and general counsel of the American Association of Port Authorities, got the *LM* eagle eye award for scoping out the vague lip service to infrastructure spending on both parties' platforms—yet, neither side has established a way to fund such investments.

"Both the Republican and Democratic national convention platforms highlighted infrastructure, includ-

ing specifically port infrastructure, as critical to creating jobs and growing our economy," Godwin said. "As our nation recovers from its economic troubles and our population continues to grow, we know that demand for goods will rise, cargo volumes will expand, and that ports are crucial in this equation."

Kelly Kolb, vice president of global supply chain policy for the Retail Industry Leaders Association, said it was "disappointing" that while both parties presented their vision for growing the economy, neither made meaningful reference to a strong and efficient transportation system.

"Reliable infrastructure is the lifeblood of our economy and should be featured in the current dialogue," Kolb added. "I have little doubt that both parties recognize the need for investment. The questions will be when, where, and how much."

In separate letters to the presumptive nominees for the Office of the President of the United States, The National Industrial Transportation League (NITL) has requested that President Barack Obama and Gov. Mitt Romney outline their views on addressing investment in the nation's transportation infrastructure with a particular emphasis on freight transport.

Additionally, they were asked to provide views on the rising costs of energy, greenhouse gas emissions, and security impacts on transportation. At press time, NITL President and CEO Bruce Carlton said he had not heard back, but mentioned that it was still relatively early in the campaign.

Carlton added that NITL members are "very concerned" about existing problems in the nation's transportation infrastructure. "Of particular concern is the need to identify new sources of funding not only to meet growing demands on our infrastructure, but the resources that are needed to maintain the existing system," said Carlton. "It is important to the future of the economic health of our nation that we understand how both candidates will address these vital areas."

The issue of funding infrastructure is front and center. The U.S. now ranks 23rd in the world in overall infrastructure spending—Spain is 22nd. The U.S. spends just 2.4 percent of GDP on roads and bridge and other projects—Europe spends 5 percent and China spends 9 percent.

To simply maintain highways and bridges to satisfactory condition will require $89 billion a year over the next 20 years—current funding levels are not even half of that. Even though Congress finally passed an 18-month transportation bill last summer, it keeps funding at levels that were established nearly 10 years ago, or about $55 billion a year, including mass transit.

"Roads and bridges are not like fine wine—they do not get better with age," said Lane Kidd, president of the Arkansas Trucking Association. "Highways upon which the trucking industry depends are decaying. Our industry pays its fair share for their upkeep, but not enough." ☐

TRUCKING

Driver turnover situation is not abating, according to ATA data

WASHINGTON, D.C.—The American Trucking Associations (ATA) reported in its quarterly Trucking Activity Report that the annualized turnover rate for linehaul truckload fleets of all sizes increased in the second quarter, as turnover at large fleets eclipsed the 100 percent mark for the first time in more than four years.

Driver turnover has increased six times in the last seven quarters. ATA officials said that the turnover rate for large truckload fleets—those with more than $30 million in revenue—increased 16 percent to 106 percent, which is the highest level of turnover since the fourth quarter of 2007, and the first time the driver turnover rate topped 100 percent since the first quarter of 2008.

And for smaller truckload fleets, the turnover rate increased 15 percent to 86 percent in the second quarter from the first quarter, putting small fleet turnover at its highest level since the third quarter of 2007, said ATA.

On the less-than-truckload side, where driver turnover is traditionally less prevalent due to shorter transit times and less time spent away from home, the second quarter turnover rate was 9 percent, marking a gain of 1 percent from the first quarter of 2012.

"We continue to see steady, albeit sluggish, growth in freight volumes, which increases demand for drivers," said ATA Chief Economist Bob Costello. "That, coupled with continued pressure on fleets to improve their safety records as a result of regulatory oversight changes, is increasing competition among carriers for drivers with clean histories."

The ATA executive added that ATA has believed that the driver shortage is more qualitative than quantitative and that in raw numbers the trucking industry is short by roughly 20,000 to 30,000 drivers. But if freight volumes are to continue growing, Costello contents that the number could increase soon and make matters worse.

What's more, regulations like CSA and HOS, as well as electronic on board recorders (EOBR), continue to play a major role in carriers' being hesitant to increase capacity and subsequently hire

drivers, which continues to be challenging, as evidenced by ATA data.

Stifel Nicolaus analyst John Larkin recently observed that the truckload driver shortage may in fact represent the biggest obstacle for carriers to increase existing capacity.

"The regulations are blackballing a certain number of people out of the industry," said Larkin. "And as the Generation X/Generation Y folks enter the workforce, probably one of the last things they want to do is become a truck driver. The industry is struggling to attract people who meet their criteria in terms of passing drug tests, are willing to follow instructions, and can succeed in getting a commercial drivers license."

Projections from freight transportation forecasting consultancy FTR Associates estimate that this problem is likely to get worse, and by 2014 the driver shortage could be in the 250,000 range, which Larkin said is going to create a capacity shortage which will translate into "fairly sizable rate increases" that might be steeper than what has occurred during the slow growth period over the last couple of years.

—Jeff Berman, Group News Editor

TRADE

Port Tracker report is positive for 2012 volumes

NEW YORK—Even with the specter of a significant labor strike at East and Gulf Coast ports, which saw a September 30 negotiation deadline extended to December 29, the trend lines for holiday import cargo flows remain solid, according to the most recent edition of the Port Tracker report from the National Retail Federation (NRF) and Hackett Associates.

The report is calling for September import cargo volume at U.S.-based retail container ports to increase 8.5 percent annually, which is up from a previous estimate of 7.3 percent. And it added that "strong gains" are expected in subsequent months into the holiday season.

The ports surveyed in the report include: Los Angeles/Long Beach, Oakland, Tacoma, Seattle, Houston, New York/New Jersey, Hampton Roads, Charleston, Savannah, Miami, and Fort Lauerdale, Fla.-based Port Everglades.

Port Tracker reported that the first half of 2012 accounted for 7.7 million twenty-foot equivalent units (TEU), which is up 3 percent annually and ahead of previous estimates in the 7.3 million TEU range. And for all of 2012 the report is expecting 16 million TEU, which would be up 4.2 percent annually.

The 2011 total was 14.8 million TEU, which was up 0.4 percent over 14.75 million TEU in 2010. Volume in 2010 was up 16 percent compared to a dismal 2009. The 12.7 million TEU shipped in 2009 was the lowest annual tally since 2003. According to NRF estimates, retail sales are expected to increase by 3.4 percent to $2.53 trillion.

A Northeast-based retail shipper who told *LM* that in anticipation of a possible East and Gulf coast ports strike, her company had done an inventory review and arranged to bring in inbound inventory ahead of time, coupled with discussing alternate routes with the company's freight forwarders.

Hackett Associates Founder Ben Hackett said in the report that the potential port strike resulted in earlier orders so goods would arrive to the U.S. in time, coupled with many switching deliveries originally headed to the East Coast to the West Coast.

This, he explained, resulted in August being a decent month, and he noted that September should also be above average. If a strike did occur at the end of September, Hackett said that West Coast ports would have likely benefitted through the end of October should cargo have been diverted.

Hackett also explained that any requirements for orders for back-to-school season in

Port Tracker reported that the first half of 2012 accounted for 7.7 million twenty-foot equivalent units (TEU), which is up 3 percent annually and ahead of previous estimates.

August and the beginning of holiday shopping in November will result in increased volumes, adding that new housing starts are also continuing to grow and are still positive.

"We think things are not as bad as perhaps some economists and commentators are making them out to be," said Hackett.

And while growth is expected through the rest of the year, Hackett said an abundance of ocean capacity still remains. This situation, he said, is likely to put pressure on pricing, which has fluctuated to a fair degree.

—Jeff Berman, Group News Editor

PARCEL

UPS, FedEx receive limited domestic delivery licenses in China

ATLANTA/MEMPHIS—Being prohibited to conduct domestic delivery services in China has commonly been viewed as a hindrance for transportation and logistics bellwethers UPS and FedEx.

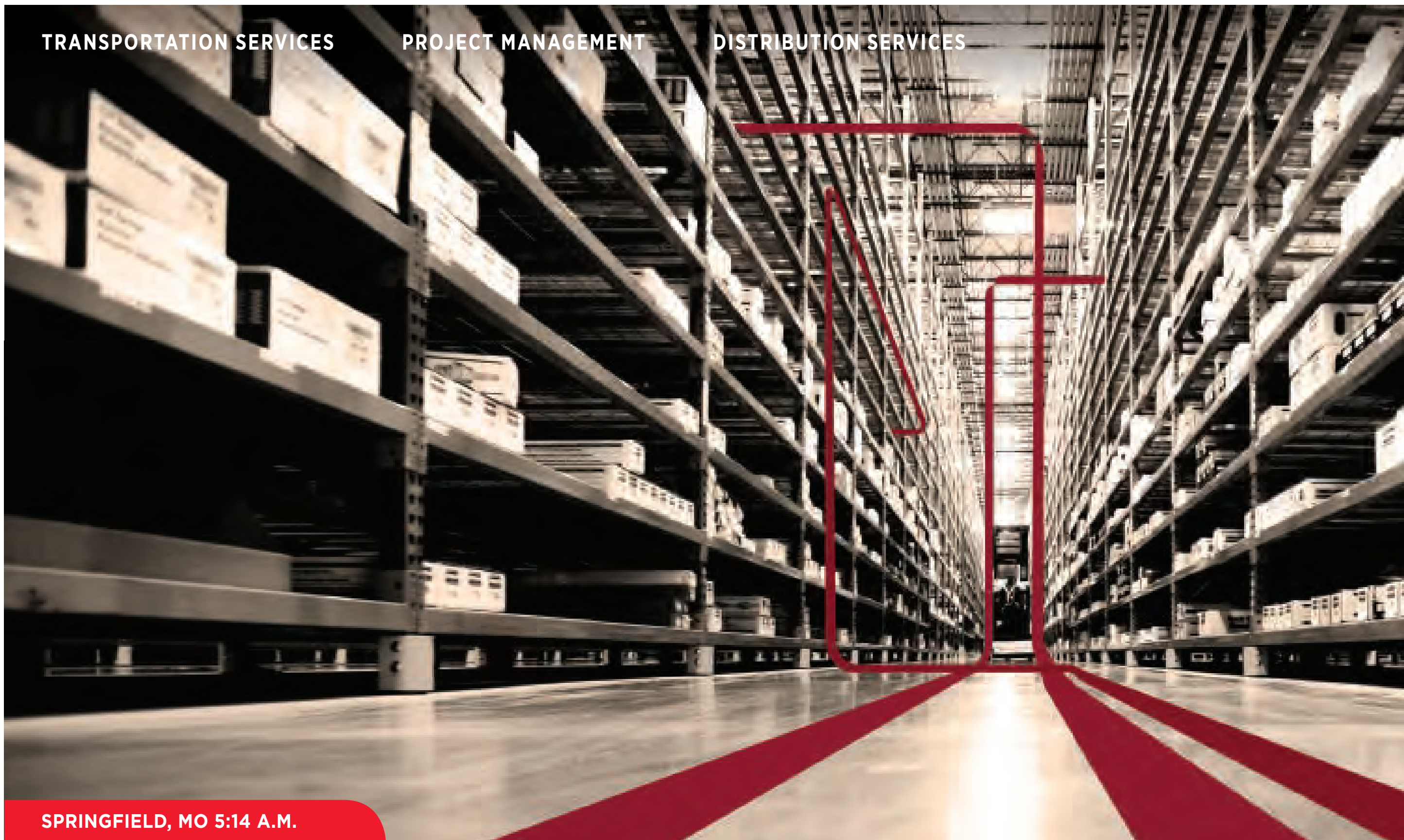
But according to a *Wall Street Journal* (*WSJ*) report, the Chinese government has granted both companies the green light to provide intra-China express package services.

The reason neither UPS or FedEx has been able to set up shop in China for domestic delivery services is that, as per Chinese law, non-Chinese air providers are only permitted to fly in and out of China, but not from point-to-point within China. So in order for FedEx or UPS to send an overnight package from Beijing to Shanghai, they have to fly the package on an aircraft that it is not theirs.

In October 2009, a new Chinese postal law took effect that created a new permitting system for the express sector through the China State Postal Bureau (SPB). This law excludes non-Chinese from competing in the domestic document and letter delivery market and gives China Post a monopoly on letters and documents—with private carriers allowed to deliver inbound and outbound documents, but not intra-China.

The recent *WSJ* report stated that FedEx was granted rights to serve eight cities in China: Shanghai, Guangzhou, Shenzhen, Hangzhou, Tianjin, Dalian, Zhengzhou, and Chengdu.

FedEx entered China in 1984 and pro-



vides international and domestic service for shippers doing business in China. FedEx officials told *LM* that it operates as a wholly-owned enterprise in China and has direct custodial control of operations, allowing for flexibility and improved speed-to-market.

FedEx has been operating a domestic delivery business in China since receiving an investment certificate from the Ministry of Commerce in December 2006 and a business license for domestic services from the State Administration of Industry and Commerce also received in December 2006. Its domestic air services are provided by Yangtze River Express (YRE), while its ground trucking operations are operated by FedEx in conjunction with local agents.

"For our customers, there is no change at all," said Shea Leordeanu, FedEx spokesperson. "FedEx is committed to China and remains focused on growing our business. We are aware of the September 7 notice on the State Postal Bureau website. For FedEx and our customers, it's business as usual for our international and domestic services in China."

The report said that UPS was granted rights to serve the same five cities: Shanghai, Guangzhou, Shenzhen, Hangzhou, Tianjin, Dalian, Zhengzhou, and Chengdu.

UPS has offered domestic services to shippers on a contract basis since 2005. In 2008, it opened a major hub in Shanghai in the Shanghai Pudong International Airport, and in July 2011, it began operating flights into Chengdu, China, as part of an effort to expand its connections between Asia, Europe, and the U.S.

UPS spokesman Norman Black said that while this license initially covers domestic service to five large cities, UPS is looking forward to expanding its service to customers in China's domestic express market over the coming years and connecting those customers to the world through our global network.

Jerry Hempstead, president of Hempstead Consulting, said that this decision relegates UPS and FedEx to competition with the local messenger companies.

"Ground delivery in China is very fragmented," said Hempstead. "For all intents, anyone who has a bicycle is a courier company in China, and as a result, pricing is extremely competitive. What is lacking in China, and will continue to be with this ruling, is that there is no real effective national hub and spoke ubiquitous surface network with custodial care within the confines of one provider."

What's more, he explained that the Chinese prefer that the network be developed by a Chinese firm and not

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a foreign national like DHL, UPS, or FedEx. Domestic China is not where the money is, but where the future is, and Hempstead said "the Chinese will always give the edge to the Chinese."

The *WSJ* report said that China Postal Express & Logistics Co., which is preparing for an IPO in China, is the largest player in the fragmented domestic China express market; and it also noted that while FedEx and UPS declined to comment on the potential size of China's domestic delivery market, FedEx has forecast that the market would grow to $26.3 billion on 2020 from $5.1 billion in 2010.

Hempstead said China Postal Express & Logistics Co. is the story to watch, because it is privatizing and will be given the edge by the government.

Stifel Nicolaus analyst David Ross previously told *LM* his firm is uncertain if shippers would even benefit much from UPS and FedEx having domestic service—at least not in the near-term.

"It looks like the document traffic will still be off-limits," said Ross. "If FedEx and UPS can build out domestic China networks, that could potentially offer better service at a lower cost. But that would require significant density, and we are a long way away from that, in our view. We believe both companies should continue to grow China import/export business, but should remain relatively non-existent in domestic China over the next few years."

—By Jeff Berman, Group News Editor

LABOR

Teamsters President Hoffa says pensions, full-time jobs top issues in UPS talks

WASHINGTON, D.C.—The most important labor contract talks in freight transportation began September 27 in Washington when UPS and the Teamsters union began negotiations on a new contract.

The current five-year deal expires next July 31, but already the jockeying has begun. Teamsters union President James P. "Jim" Hoffa, in a speech to the National Press Club on September 13, outlined his priorities in trying to gain the best deal that he can for 250,000 UPS Teamsters.

Calling UPS "a unique company," Hoffa said winning better health care benefits and pensions and creating more full-time jobs would be as important as better wages. Currently, UPS Teamsters earn about $70,000 in wages, and another $35,000 or so in fringe benefits such as pensions and health care.

"It's going to be more wages, more pensions, and we want to maintain health care benefits," Hoffa said when asked what the top priorities were in the UPS talks. "We've got a pretty good idea where we want to go in this contract, and there's going to be a lot of pressure to increase our pensions to make them better."

The internal union strategy has already started. The International Union met with local union officers in late September to finalize the Teamsters bargaining proposals for negotiations with UPS and UPS Freight, the company's heavy freight LTL union.

Approximately 13,000 Teamsters work at UPS Freight, which will negotiate separately but concurrently through its freight division.

UPS is the biggest and most profitable transportation company in the world. Last year it earned $3.8 billion net income on $53.1 billion revenue, up from the $3.3 billion net income on $49.5 billion revenue in 2010.

In 2007, UPS made a one-time payment of $6.1 billion to pull out of the Teamsters Central States multiemployer plan. It paid that money because of the deteriorating financial position of the Central States plan, the Teamsters' largest plan.

When those multiemployer plans were formed in the 1950s, Hoffa's legendary father, James R. Hoffa, was a force within the Teamsters. At that time, the Teamsters had more than 500,000 workers in the freight sector. Now, except for the 250,000 UPS Teamsters, there are barely 60,000 unionized workers in the LTL sector. Those multiemployer plans are struggling financially because so few active workers are supporting many more retirees.

According to Hoffa, converting some of the 125,000 part-time jobs at UPS (which start at a much lower salary scale and top out around $19 an hour, compared with $27 for a full-time UPS Teamster) is also a top priority. UPS has promised to create 20,000 full-time jobs, but that has not always been the case, the union says.

"We're always working to make sure we get more full time jobs," Hoffa said. "There are a lot of part time jobs there, and we're always trying to move that (full-time) number up."

—John D. Schulz, Contributing Editor

TRADE

Exports mark the spot for inland port growth, says Jones Lang LaSalle

CHICAGO—Following up on a white paper it issued on inland ports and their increasing importance as a critical link in the global supply chain, a new paper from global real estate firm Jones Lang LaSalle (JLL) explains how an increase in U.S. exports is driving the need for more U.S.-based strategic inland ports.

According to JLL, by definition, an inland port is a hub designed to move

international shipments more efficiently from maritime ports inland for distribution throughout the U.S. heartland. The firm added that while the concept of inland ports is not new, where they are located is becoming increasingly critical to the global supply chain and affect logistics decisions ranging from shipping routes to warehouse locations.

JLL cites three main factors that are front and center in terms of making the case for inland port development: U.S. export growth, including agricultural products sent to China; increasing fuel costs spurring intermodal and rail usage; and growth in containerized shipping.

John Carver, head of JLL's Ports Airports and Global Infrastructure Group, said that as the real estate industry really began to make the connection between ports and inland real estate, it initially focused on import activity. The reason for this, he said, was that most developers and investors are comfortable with building warehousing, distribution, and logistics-based industrial real estate facilities.

"But the reality is that development only addressed half the business," said Carver. "To be able to drive only that half there needed to be a solution for the other side, which is the export side."

Historically, Carver explained that the export side has not been a real attractive piece for the development community and does not always result in large-scale industrial buildings. Instead, exports tend to be geared towards more outside storage, green silos, or commodity-specific things like hay-bailing operations, he said. But exports can be leveraged for viable land uses and leverage truck and rail traffic in order to attract warehousing on the inbound side.

JLL's onus on U.S.-based exports is not a stretch by any means. The white paper points out that according to the U.S. Department of Commerce, U.S. exports of goods and services in February 2012 hit $181 billion, which set a new monthly record, and 2011 exports—at $2.1 billion—topped the previous high in 2008 by almost $300 billion. According to Commerce, U.S. exports to China in 2011 increased 12 percent and topped $100 billion for the first time.

"The message we are trying to get out to developers is: Look at the export piece."

— John Carver, head of JLL's Ports Airports and Global Infrastructure Group

"The message we are trying to get out to developers is: 'Look at the export piece,'" said Carver.

One of the inland ports referenced in the white paper—Casa Grande, AZ-based Inland Port Arizona—was driven as an export project. But with a strong export business, Carver said the biggest problem is getting enough containers to fill up and send back to ports.

Inland Port Arizona, in which JLL serves as a global marketing partner, is largely supported by one of the largest providers of containerized hay and alfalfa, which is baled and shrink wrapped and stuffed into containers and shipped to Asia-Pacific markets.

"This shipper developed Inland Port Arizona to attract importers to the Arizona marketplace that will find value in having empties being shipped back to their origin destination," said Carver. "This port will be served by Union Pacific, with direct access to the Port of Long Beach.

Other notable inland port locales include Chicago, Memphis, St. Louis, and Kansas City, according to JLL. And it added there are new locations under development, including a 4,000-acre inland port in St. Lucie, Fla. Inland Port Arizona.

—Jeff Berman, Group News Editor

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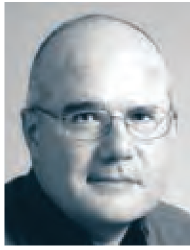

Keep your eyes on rail rates

THE U.S. RAILROAD INDUSTRY, consisting of over 600 large and small service providers, has successfully engineered itself into a viable and largely profitable segment of the nation's logistics marketplace.

This mode is a critical element for "captive" shippers who are dependent on railroads for transport of coal, agriculture, and chemicals. And, of course, rail is a significant player in the trailer/container transport market both domestically and internationally. However, rail shippers, and those who would consider rail as an alternate mode, need to be paying attention to some forces that may have a significant effect on pricing in the coming months.

This month, the stock analysts and talking heads on financial shows are raising alarms about the large coal-carrying railroads. After a very positive first quarter and a fair second quarter, some rail carriers are lowering earnings estimates according to the current banter.

The reason given by at least one of the Class I railroads is the transition to natural gas by the utility companies. This may be a good thing for coal shippers who want to negotiate unit train rates, but for non-coal shippers it possibly signals more than a temporary slacking of demand.

In the years ahead, the U.S. is expected to increase the use of natural gas for utilities and industry due to price and environmental pressures. Keep in mind that natural gas uses pipes, not rail, which translates into less demand for transportation of coal that represents a substantial portion of the revenue and margins of the U.S. rail carriers.

When the rails feel revenue and margin pressure they historically turn first to captive shippers—steel, heavy equipment, agriculture, and chemicals—and then to intermodal markets for additional revenues through price increases. In addition to this scenario, there is the potential competitive price pressure on transcontinental intermodal rail movements due to the widening of the Panama Canal that will increase the capacity of water carriers.

Some railroads may very well experience less than stellar improvement due to the economy, the loss of coal revenues, downward pressure on intermodal pricing, as well as the stabilization of oil-based fuel prices putting a combined pressure on the railroads' revenues. The ones to watch are the Class I railroads who account for 90 percent of the $50 billion in annual rail spend. Shippers will need to keep an eye on their service providers to see how they're managing these shifts in the market.

Rail shippers, and those who would consider rail as an alternate mode, need to be paying attention to some forces that may have a significant effect on pricing in the coming months.

Rail shippers who are non-captive need to dust off alternate modal routing plans to counter upward price pressure. Rail-dependent shippers need to refresh the supply and distribution models with information on alternate routes, alternate production sites, and rail-water or rail-highway combinations that might introduce some competition for service providers.

One popular option is for commodity shippers to swap rail-served customers with competitors who are closer to the customer's plants enabling shorter highway delivery. In this strategy, the railroads lose the freight as both companies satisfy demand by a ton-for-ton exchange in local markets.

In short, shippers need to pay attention to the market forces affecting their service providers and realize that if they are threatened, your company's ability to compete may be threatened as well. It's time for rail shippers to step up and get creative when planning over the next six to eight months. □

Peter Moore is a Program Faculty Member at the University of Tennessee Center for Executive Education, Adjunct Professor at The University of South Carolina Beaufort, and Partner in Supply Chain Visions, a consultancy. Peter can be reached at pete@scvisions.com.

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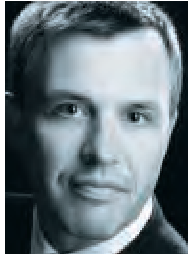
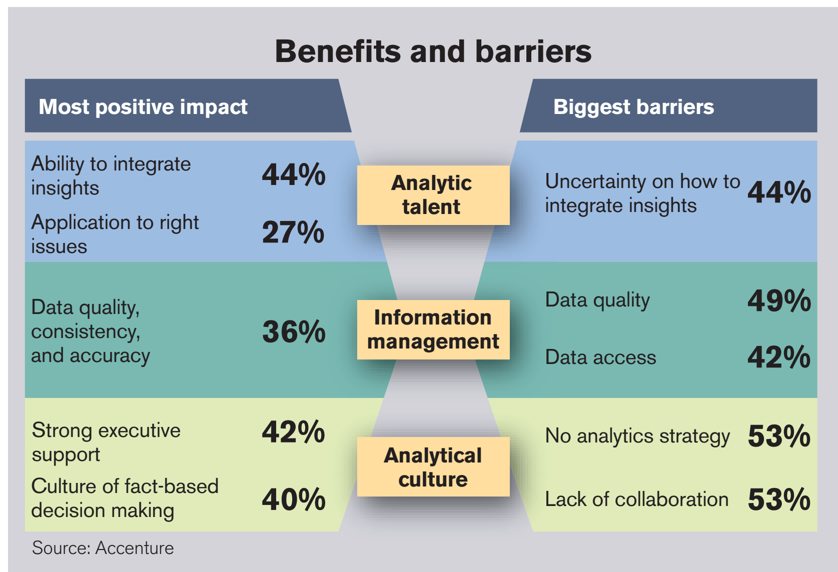


New insights on analytics

EFFECTIVE USE OF BUSINESS ANALYTICS—using quantitative methods to derive forward-looking insights from data—is essential for companies that are serious about supply chain excellence. Why? Because with analytics, supply chain managers gain a deeper understanding of what is happening upstream and downstream. As a result, they're better able to assess the operational impacts of prospective supply chain decisions.

And in fact, more and more companies are using business analytics. According to Accenture research, 45 percent of large North American companies increased spending on analytics in 2011, and 65 percent will do so in 2012. Bloomberg *Businessweek* Research Services reports that 97 percent of companies now use some form of business analytics. And IDC predicts that the market for analytics software will grow at an annual rate of more than 8 percent through 2015.

But even with increasingly high adoption rates, most organizations aren't always able to make advanced analytics click—to fully leverage the technology's ability to turn raw data into usable information and prescient decision-making. Here are five things that may be holding companies back.



Accenture survey respondents identified the most positive benefits and most daunting barriers associated with reaching a high level of analytical proficiency.

The first big barrier is the quantity and competency of human resources. In some cases, companies' enthusiasm led them to acquire analytics technology before obtaining the capabilities to use the new tools effectively. According to Accenture's research, more than 60 percent of survey respondents believe their companies have a dearth of analytical talent.

A second problem is that companies are often stymied by technological issues—not installing/acquiring analytics, but maximizing the quality, consistency, accuracy, and accessibility of analytically derived data. More than 40 percent of Accenture's survey respondents said that they are uncertain about how to integrate analytics-based insights into their business decisions.

A noteworthy exception is Staples, which recently sought to develop a deeper understanding of its shoppers' online buying habits. By using analytics, Staples discovered that strong Web traffic wasn't translating to sufficiently high sales, and that the problem was customer drop-offs at cumbersome points in the page-navigation stream. A subsequent site redesign made a huge difference.

A third pressing factor is culture: organizational resistance and discontinuity. For analytics to work, collaboration is clearly essential. But as businesses grow, data becomes more dispersed, silos form, and access and cooperation become more difficult.

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As a major bank discovered, these growing pains are largely a culture problem. According to the institution's director of analytics, staff members frequently ask for data, but they don't know precisely what they're looking for. Analytics has helped the bank's people ask better questions and, subsequently, get more valuable answers. According to the director, "all of this benefits our customers: The customer gets the right offer because of our research, and this directly impacts the bottom line."

With analytics, supply chain managers gain a deeper understanding of what is happening upstream and downstream.

A fourth issue is lack of a strategy. In most organizations, business analytics began as an ad hoc endeavor—focused on one issue or department. Over time, its use may have expanded to other parts of the business. This piecemeal approach makes it difficult to step back and examine analytics' use in a holistic, forward-thinking manner.

The fifth obstacle is measurement of success. Many companies—about one in four, according to Accenture research—do not know if they actually have achieved a positive return on their analytics investments. The logical conclusion is that these organizations have not developed the necessary success metrics. In some cases, an overall "culture of measurement" may be absent.

Becoming a high performer in analytics

Given these five critical hurdles—talent, technology optimization, culture, strategy, and success measurement—it isn't hard to see what, in Accenture's view, defines a high performer in the analytics arena.

Such companies are successful in their use of business analytics as measured by the effective use of analytics in decision making and a positive, measurable ROI for analytics expenditures. The most obvious difference between high performers and non-leaders is that the former have the right talent in place.

High performers also enjoy strong executive support for analytics and a culture that supports fact-based decisions. And although analytics may not be in force across the company, it has spread in a logical and integrated fashion beyond individual functional and department use.

And how are high performers rewarded for their analytics prowess? A short, high-level list could include new opportunities to identify profitable customers, "right price" products, accelerate innovation, optimize supply chains, minimize risk, create differentiated services and (perhaps most important) recognize the key drivers of financial success. □

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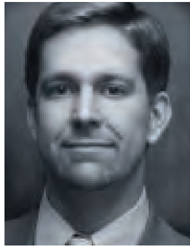


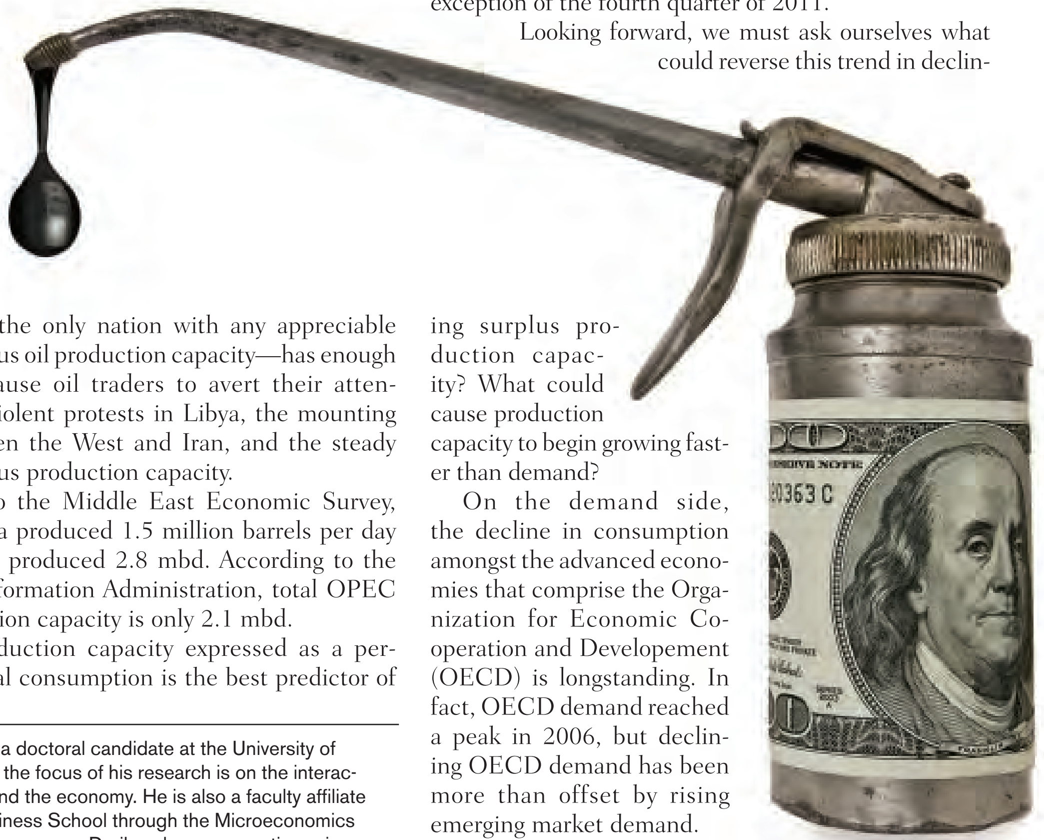
OPEC to the rescue… maybe not

STAYING ABREAST OF DEVELOPMENTS that impact oil supply and demand helps shippers and carriers understand and plan for fuel price fluctuations. So, the recent news coming out of Saudi Arabia must have left many in the logistics and transportation industry scratching their heads.

A recent Saudi statement said "the current price is too high…we would like to see oil prices back to $100 per barrel." This statement, released on September 18, caused oil traders to speculate that the country will ramp up production and the price for a barrel of Brent crude fell from $117 per barrel to $112.

It's one thing to suggest that production will increase, and another to actually open the taps wide enough to push oil prices down. Today's prices are a far cry from $100, and over the last year, oil prices have dipped below this level only once during a six-week period between June and July.

Instability in the Middle East North Africa (MENA) region, which provides one out of every three barrels of oil that the world consumes, continues to drive risk premiums up. And it's doubtful that Saudi Arabia—the only nation with any appreciable amount of surplus oil production capacity—has enough firepower to cause oil traders to avert their attention from the violent protests in Libya, the mounting tensions between the West and Iran, and the steady decline in surplus production capacity.



According to the Middle East Economic Survey, in August, Libya produced 1.5 million barrels per day (mbd) and Iran produced 2.8 mbd. According to the U.S. Energy Information Administration, total OPEC surplus production capacity is only 2.1 mbd.

Surplus production capacity expressed as a percentage of global consumption is the best predictor of oil price movements. Prices spike severely whenever surplus production capacity dips below 1.5 percent of global demand, and prices rise when surplus production capacity declines.

Currently global demand is 89.5 mbd, and surplus production capacity is hovering at 2.5 percent of global demand. If just 750,000 bpd of production is lost, surplus production capacity will dip below 1.5 percent, and prices will skyrocket. Alternatively, demand rising faster than the addition of new capacity will drive the same result.

With the advent of hydraulic fracturing and the rapid rise in production of shale oil, one might be inclined to think that surplus capacity has been on the rise. But this is not the case. In fact, surplus production capacity peaked at 5.1 percent in the fourth quarter of 2009, and the average price refiners paid for a barrel of oil was just $73. Surplus capacity as a percent of global consumption has declined each and every quarter since then with the exception of the fourth quarter of 2011.

Looking forward, we must ask ourselves what could reverse this trend in declining surplus production capacity? What could cause production capacity to begin growing faster than demand?

On the demand side, the decline in consumption amongst the advanced economies that comprise the Organization for Economic Cooperation and Developement (OECD) is longstanding. In fact, OECD demand reached a peak in 2006, but declining OECD demand has been more than offset by rising emerging market demand.

Derik Andreoli is a doctoral candidate at the University of Washington where the focus of his research is on the interactions between oil and the economy. He is also a faculty affiliate of the Harvard Business School through the Microeconomics of Competitiveness program. Derik welcomes questions via email at derik.andreoli@gmail.com.

Though much ink has been spilled discussing the "faltering" Chinese economy, what often gets lost is that China's economy is still growing at nearly 8 percent per year. Historically, the double-digit, year-over-year increase in Chinese GDP growth has driven Chinese oil demand up faster than any other country.

Since 2000, Chinese oil consumption has increased at a compound annual rate of 6.6 percent, so shaving three points off their average annual GDP growth rate of 11.4 percent (2000 to 2011) shouldn't drive the growth in oil demand down much under 5.5 percent. Even at 5 percent, Chinese demand in 2012 will be nearly 500,000 bpd greater than in 2011.

Backing this growth out from the 750,000 bpd that separates current surplus production capacity from dropping into the danger zone (1.5 percent of total consumption), we are left with only a 250,000 bpd buffer.

Turning to India, we see that 2011 consumption was up 140,000 bpd over 2010 levels, on the back of an economic expansion of 7.25 percent. Looking forward, India's GDP growth rate is expected to slow to 5.5 percent, but even if it slows to 5 percent, it is still reasonable to assume that India's oil consumption will grow by at least 100,000 bpd, and thus the buffer is reduced to only 50,000 bpd.

Similarly, consumption in Latin America, which is home to some of the fastest growing economies, was up more than 160,000 bpd in 2011, and in Asia Pacific (excluding China and India) demand was up another 100,000 bpd. All else being equal, rising demand alone would push surplus capacity into the red zone.

Of course when oil prices are high, the incomes of the world's oil exporters are given a significant boost, and this translates to rising domestic oil consumption, which eats into export capacity. When we look across the globe, seven of the 10 countries with the fastest growing rates of oil consumption are oil exporters—Saudi Arabia ranks third. The only three that are net importers are China, India, and Singapore.

Across the Middle East, oil consumption was up nearly 200,000 barrels per day last year, and with higher prices we should expect consumption in the Middle East to be up even more this year. Of course OECD demand was down, but on balance, global demand in 2011 was up nearly 600,000 bpd over 2010 levels. Looking forward, we may expect global growth in 2012 to come in around 500,000 bpd.

Where is the oil going to come from? On the supply side, in the first 8 months of 2012, OPEC production was up a scant 180,000 bpd. By comparison, in the final four months of 2011, OPEC production was up 800,000 bpd. This slowdown in growth is due to sanctions against Iran that have driven that country's oil production down by 700,000 bpd since January.

Unfortunately, although these sanctions have been effective at compressing Iranian oil exports and national income, they have not effectively addressed the intended goal, which is to stall Iran's nuclear build out. The International Atomic Energy Agency released a report in September indicating that Iran had doubled the number of centrifuges bringing it three-quarters of the way to the number it needs to produce nuclear fuel. With this recent discovery, the West has ramped up its rhetoric, leaving little reason to think that sanctions won't be further intensified.

Today's prices are a far cry from $100, and over the last year, oil prices have dipped below this level only once during a six-week period between June and July.

Iran's declines over this eight-month period have been checked by gains on the order of 400,000 bpd in Libya and nearly 500,000 bpd in Iraq. But the gain in Libya was due to the resumption of oil production from fields that were taken offline during the civil war. Future gains will require exploration and new development, thus recent gains will not be easily reproduced. And with fresh violence in Benghazi, investors will be giving second thoughts to development projects there.

Iraq is another story altogether. Under Saddam Hussein's 24-year reign, underinvestment in exploration and production was the rule. In the last couple of years, exploration and production have both picked up, with Iran hitting yet another 30-year export high in August on the back of strong southern loadings.

The country, however, has yet to establish a modern hydrocarbon law, and this fact has stymied production in the northern region of Kurdistan where exports stalled in June. To state that sectarian tensions are high in this country, where nearly 60 percent of the population is Shia and 40 percent is Sunni, would be an understatement. To underscore this point, in September, the Iraqi Vice President Tariq al-Hashimi, a Sunni, was convicted of murder and sentenced to death following a series of bombings and insurgent attacks that left scores, if not hundreds dead. It is widely believed that this move was a politically motivated attempt to concentrate power into the hands of the Shiites and Shia President Nouri-al-Maliki.

It is impossible to know how MENA geopolitics will evolve over the coming days, months, and quarters. What is certain is that the global oil market is tight, and as a consequence any disruptions to supply will have a disproportionate impact on prices. It is equally certain that even under a slow global growth scenario, growth in demand will likely continue to outstrip capacity. □

2012 NASSTRAC Shipper of the Year: Best Buy meets the CHALLENGE

The big-box retailer's flexible transportation program has enabled an innovative store remodel strategy—and helped cut price per shipment by just over 30 percent in its first year running.

BY **JOHN D. SCHULZ,** CONTRIBUTING EDITOR

As logistics professionals know, there's more to the supply chain than simply moving product. An innovative supply chain not only connects retailers to manufacturers and customers, but it can offer ancillary benefits including improved inventory control, lower costs, and even cleaner stores.

A leading example of that is Best Buy, the Richfield, Minn.-based "big box" retailer of electronic goods. Faced with rising transportation costs two years ago, Best Buy set out to change its logistics strategy while remodeling some of its 1,059 U.S. retail locations to offer smaller, more intimate shopping environments with a "cleaner" look.

Two years later, Best Buy has reduced transportation expenses by 30 percent per shipment in the stores that were remodeled. Its new transportation network also provided logistics flexibility and created a template that can be plugged in as more of its locations are converted to the new, multichannel format.

"By reducing transportation expense and providing flexibility, we're able to remodel Best Buy stores to our new format more efficiently and effectively," says Peter Zedler, Best Buy's senior manager for transportation planning and support. "Over the long term, this transportation plan will enable Best Buy to remodel more stores to a format we feel better services the customer."

For this innovative thinking, Zedler and Best Buy have been named NASSTRAC's 2012 Shipper of the Year—the second time the company has received the award in the past eight years. According to NASSTRAC Executive Director Brian Everett, this is the first time that a company has received the coveted award multiple times. "They truly do some innovative things," says Everett. "Best Buy's program demonstrates that a retailer, or any shipper for that matter, now has to think about more than just product movement throughout the supply chain."

Everett calls Best Buy's innovation "a classic model of inventory postponement," leveraged in

“Over the long term, this transportation plan will enable Best Buy to remodel more stores to a format we feel better services the customer.”

—Peter Zedler, senior manager for transportation planning and support, Best Buy

Steve Neidorf/Getty Images

a unique way. "It's a great supply chain story," he says. "By having the fixtures and supplies for the upgrade projects closer to the installer, the last-minute changes done during the store remodeling process are more easily accommodated."

Zedler and Best Buy's logistics team has also realized huge savings in expedited shipping costs by deploying retail items to the local warehouse in advance of sale date. "By having goods a few miles away from its stores, versus hundreds of miles in the past, changes are handled nimbly and at a far less cost," Everett says.

Best Buy's customers are also winners in this. "Our new store format is really about finding a solution for the customer and not shoving as much product in their face as possible," says Zedler.

Meeting the remodel challenge

In previous cycles of remodeling its stores, Best Buy had shipped via truckload (TL), less-than-truckload (LTL), and expedited carriers direct to the stores that were in the process. Over time, Zedler and the logistics teams started to notice that with conversion into the new format, more stores were downsizing in square footage.

The team quickly realized that it needed a new logistics model in order to reduce the transportation expense of remodeling. With that savings in mind, it was decided to roll out the new stores one market at a time. The transportation team then designed a plan to implement an in-market warehouse model in each market for the duration of the remodel cycle.

After gathering business requirements and proceeding through an RFP, Koch (pronounced Cook) Logistics, a longtime Best Buy partner, was hired to handle the warehousing, TL inbound into the warehouses, and the outbound and returns to and from the various stores in each market. "Koch's strength is being able to flex to our needs," Zedler says. "They're able to ebb and flow."

Warehouses were set up in Minneapolis, San Antonio, Houston, Corpus Christi, and Baltimore. Beginning last year, it rolled out these new format

stores a market at a time, with Koch acting as the primary logistics services provider on the program.

Best Buy's team of Jennell Johnson and Suzanne Miller, senior analysts, and Jake Kasper, a specialist in the retailer's global business services department, ran the numbers and came up with three options for product shipments to the remodeled stores:

- First, all shipments would go direct to store, but everything had to be five-day transit time or TL. This showed a potential savings of 8 percent;
- run all items through the warehouse, but this would require substantial work on the front end;
- or form a hybrid model and have a combination of direct-to-store and warehoused items within the market being done.

After collaboration and analysis, Best Buy proceeded with the third option. This allowed for TL quantity shipping into the warehouse for overall load reductions and trailer utilization, flexibility for the field crews in the stores to pull the fixtures and parts as they need them, and allowed Best Buy to keep stores clean of extra parts and fixtures. Extra common parts are now stored at the warehouse in case of urgent needs.

"Extra parts at the end of cycle can be shipped directly to the next market for usage and eliminates waste," Zedler explains. "This program reduces mileage and disposal of extra parts, which help Best Buy meet its sustainability initiatives."

But the program met with a few initial glitches, Zedler admits. At first, there were limitations on the system's ability to insert two dates—one for pick-up and the second for delivery. Stores tend to change implementation, for various reasons, and teams had to keep track of these date changes because they're weren't able to change all of the orders in a quick and efficient manner.

But soon some "soft wins" began to materialize. A quick solution was discovered for stores that required schedule dates changes. They decided to route shipments first to the local warehouse, giving Best Buy the ability to pull parts as needed, with the carrier being informed. "We've been able to pull parts from one store to another, again offering flexibility into the overall program," adds Zedler.

Specific pieces were brought in as "safety stock"—retail lingo to ensure that sufficient inventory is on hand for popular items that go on sale. For these items, a system was devised to create a quick turn-around from warehouse to store. When stores have too many fixtures on location, they can pull the extra fixtures pallets, store them in the warehouse, and have them return on the new date that they're needed—giving the store more space and freedom to do the remodel.

According to Jeff Faust of Koch Logistics, the mapping of the specific needs and processes for each project upfront was essential to the success of the program.

"So is establishment of clear lines of communication along with authority levels for decision making needs," says Faust. "Accurate measurement tools were needed to benchmark each piece of the project and are a mandatory requirement, as is collaboration of teams from Best Buy and Koch to ensure execution of the goals established."

Internally, it's been a win for Best Buy was well. Jon Knez, a lead deployment manager in Best Buy's properties department, says that it's been "awesome" to have a facility to store and stage shipments as they arrive. "The ability to do this allows the teams in the store to focus on the remodel and not have to constantly move pallets

"We're really going down the path of fulfilling from multiple channels. If we don't have it, we'll transfer it from a store or get it from a warehouse, or we'll have an employee directly order it online and send it to your house."

—Peter Zedler, senior manager for transportation planning and support, Best Buy

around," Knez says. "It also helps the on-site storage of parts and keeps the store less cluttered."

Hard savings

As one can imagine, Best Buy's annual transportation spend is substantial. Even though Best Buy's current projects are larger than those it did in the test environment, it was able to reduce the average price per shipment by just over 30 percent in its first full fiscal year in service. This was done through loading TL out from the vendor with multiple stores, bringing those into the local warehouses, and then adding the items onto the shipments already designated for delivery on a specific date.

Approximately 37 percent of shipments are going via full TL from vendors to warehouse. Another 38 percent of full TL moves are going directly to stores, posting another savings over LTL shipments. Meanwhile, 25 percent of full TL moves are now going from warehouse to stores.

Of the 1,798 total shipments this year, from the start of project through late August, 870 shipments moved via TL. Roughly 22 percent of the 870 shipments were multi-store loads, while another 928 were sent via expedited carrier. Of the 870 full TL moves, 325 were vendor to warehouse, 216 went warehouse to store, and 329 went direct to store.

Besides efficiencies and hard savings, there are ancillary benefits to Best Buy's new program. Carriers produced a spreadsheet that lists all of the shipments that are scheduled to deliver to the store. "This gives the field and corporate folks a quick snapshot of what the stores are receiving on any day or for the entire week," Zedler says. Carriers also perform visual inspections as the fixtures are unloaded at the warehouses. "If there's any damage this gives us the ability to reorder before the shipment actually delivers to the store," he says.

The program has also expanded Best Buy's visibility of shipments to field installation teams. The retailer can now pull out some shipments early from the vendor, giving them more dock space to work with over the long run. "A bottleneck is no longer created at the vendors' docks waiting to pick-up the freight," Zedler says.

And as Best Buy rolls out more store remodels next year, Zedler says he anticipates this same distribution model will be utilized. By the end of the year, the company anticipates 61 of its stores will be under the new plan.

"We're really going down the path of fulfilling from multiple channels," Zedler says. "If we don't have it, we'll transfer it from a store or get it from a warehouse, or we have employees directly order it online and send it to your house."

Zedler says that the biggest key to success was the "very collaborative" manner in which these changes were enacted. "Our properties team came to our transportation team with a need. Our global procurement group was involved, and we really collaborated on scoping out what was needed—and what was needed to fulfill retail's need. There was a lot of team effort."

And for that collaboration, the Best Buy team walks away with yet another Shipper of the Year Award.

—John Schulz is a Contributing Editor to Logistics Management

Transportation: Driving change in the global supply chain

PART I: Industry thought-leaders discuss the mounting challenges facing today's global transportation managers.

BY **PATRICK BURNSON,** EXECUTIVE EDITOR

The vernacular of international trade has been enhanced by terms like near-shoring, off-shoring, outsourcing, and insourcing, but none come close to explaining the complexity of today's global transportation network. To that end, we have convened a roundtable of thought-leaders who will share their views and insights on transportation factors driving change in the global supply chain.

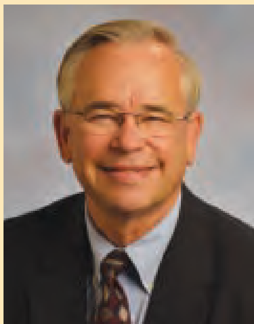
Our panel includes J. Paul Dittmann, Ph.D. and executive director of the Global Supply Chain Institute at the University of Tennessee, Knoxville; IDC Manufacturing Insights Practice Director Kimberly Knickle; and on the practitioner side, we welcome Steve Harmon, vice president of transportation for Kimberly Clark. Harmon is responsible for all transportation services within the company's supply chain and has been with Kimberly Clark for over 30 years.

Logistics Management (LM): ***What are the biggest challenges faced by transportation professionals today?***

Steve Harmon: From a practitioner's perspective, the most urgent concern is with constrained truckload supply during peak demand periods. With less buffer inventory, we really must have higher on-time delivery performance. Another challenge we're confronting is with ever-changing export regulations and compliance. Finally, there's the tactical problem of saving money while selling internal supply chain partners on transportation capability as a value-added service.

Paul Dittmann: Shippers like Steve face a perfect storm driving up cost, yet are expected to find ways to hold the line. The perfect storm is brought on by the well-known factors of fuel volatility, driver shortages, government regulations, and environmental challenges. In addition, shippers find themselves at the tip of the spear in the fight to reduce their carbon footprint.

Kimberly Knickle: Paul is right. Our research indicates



J. Paul Dittmann, Ph.D. Executive Director, Global Supply Chain Institute, University of Tennessee, Knoxville

Steve Harmon, Vice-President, Transportation for Kimberly Clark

Kimberly Knickle, IDC Manufacturing Insights Practice Director

Patrick Burnson, Executive Editor of Logistics Management

that manufacturers may be trying to do too much at once, and transportation managers are left with vague directives to cut cost while increasing efficiency. At the same time, we are hearing that customer service is key.

LM: ***Those are the current challenges, but how about new and emerging challenges?***

Knickle: We see a trend toward mostly managing procurement costs. Manufacturers evaluate carriers for what they give them for their money. The scope of carrier operations is important to some shippers, but this does not necessarily mean shippers are more comfortable with asset-based carriers, however. It means there's more of a focus on efficiency.

Dittmann: Transportation professionals are constantly finding creative ways to offset the cost pressures. They are redesigning the network flows, maximizing cube (or weight) utilization, optimizing routes, and applying Lean and Six Sigma principles. They are also making sure that the organization understands the total landed cost of all moves in the network, not just the out-of-pocket freight cost. For example, a faster, more responsive transportation operation helps firms reduce inventory (working capital), and that must be considered in evaluating any changes in flow.

Harmon: I agree. First, you want to educate and engage internal supply chain players in problem solving. At the same time, you are giving them preferred shipper status by offering stability and leveraging scale. This sustains a network for prioritization and transparency for the on-time delivery performance management process.

LM: ***What are some of the major trends you're seeing in global transportation?***

Dittmann: The economics of global outsourcing is changing due to labor cost increases, fuel volatility, and currency changes. Companies will have to reevaluate their outsourcing models in this environment, and the transportation professional will be central to this discussion. For those global moves being made today, supply chain professionals must find ways to speed the flows to reduce inventory requirements and improve customer service. They must also be world class in import/export excellence, constantly finding ways to avoid cost increases.

Knickle: Paul is absolutely right. Across the board, manufacturers are increasing their global and low-cost country sourcing. At the same time, we see trade with Canada, Mexico, the Caribbean, and South America ramping up. Paul makes another good point here: cost arbitrage. Shippers have to leverage their expenses related to taxes and energy. This might more easily be managed in cross-border moves.

Harmon: I agree with Kimberly, but until we address the problems related to the inflationary domestic trucking market, other "global" trends become less urgent. We are also very concerned about the regulatory compliance spend. It's becoming increasingly expensive to navigate through new regulations.

LM: ***As emerging nations play a larger role in global trade, how will they attract shippers and transportation providers?***

Harmon: By investing in transportation infrastructure, emerging nations in any given part of the world will benefit. Efficient and sustainable movement of goods is critical, irrespective of mode.

Knickle: And shippers soon discover which regions are capable of reliably serving their needs. As Steve points out, mode selection is reliant on how good the roads are. Can the seaports handle dense delivery? Can the airport accommodate five flights a day? What is the labor situation? Security will always be key. It's all about infrastructure.

LM: ***Steve, as a large, international shipper, what modal strategies are best when it comes to responding to sudden shifts in the global demand cycle?***

Harmon: Shippers will want to leverage the global scale on ocean carriage, taking advantage of underutilized capacity, for example. Shippers can also counter U.S. trucking supply constraints with by using more intermodal alternatives.

"By investing in transportation infrastructure, emerging nations in any given part of the world will benefit. Efficient and sustainable movement of goods is critical, irrespective of mode."

—Steve Harmon, vice-president, transportation for Kimberly Clark

LM: ***Risk management has been an ongoing concern for supply chain leaders. How is this issue being addressed, and can supply chain managers mitigate risk with a deeper mix of modal providers?***

Dittmann: Firms are increasingly coming to grips with the risk associated with global transportation moves. In the early days of outsourcing, many firms ignored these risks. But, with enough experience, the risk associated with global moves has become increasingly apparent. Unexpected delays, catastrophic events, lost or damaged containers, even pirate attacks make it essential that transportation professionals identify, prioritize, and find ways to mitigate the risks that their supply chain faces. It is not acceptable to engage in global commerce today without a formal, documented risk mitigation plan.

Knickle: Having a formal mitigation plan is certainly ideal, but shippers still seem to have a problem spending for it. Part of the solution is having a more segmented supply chain. This is especially crucial for products that simply must be delivered on time. I always use the example of surgical gloves. Here's a really inexpensive item that hospitals can't do without, and if a shipment of surgical globes is late or interrupted, all things come to an immediate halt.

Harmon: Having a plan is essential, but shippers will have to be creative when it comes to putting one together with a manageable budget. A good plan should address risk and become part of the company's culture.

LM:***What are your thoughts on the economics of global freight transportation as a percentage of total product cost, and how can transportation be leveraged as a competitive advantage?***

Harmon: Shippers must identify business service requirements and the transportation costs required to achieve their objectives. Having done that, they can meet the challenges that may come to the surface anywhere in the supply chain.

Dittmann: Transportation professionals need to take a clean sheet and evaluate the redesign of all of the flow in their networks. They need to find creative ways to consolidate shipments and maximize cube utilization of their equipment, as well as maximize the utilization of their equipment in general. They need to work with their 3PLs in a collaborative win/win environment, sharing benefits to achieve breakthrough improvements together, and they need to work with the product design people on dimensions and packaging to optimize trailer loading. They need to fully utilize the optimization capabilities of modern TMS systems, a move that will require new skills sets in transportation well beyond those found traditionally.

Knickle: I think what we are all saying is that process innovation is just as important as product innovation. Creativity is simply undervalued today, and transportation professionals want to drive change with more strategic planning and efficiency. We see a greater emphasis placed on creativity in the future—especially when addressing the global supply chain.

Patrick Burnson is Executive Editor of Logistics Management

PART II: Intermodal network agility makes a play to improve supply chain resiliency

BY **BROOKS BENTZ,** ACCENTURE; **THEODORE PRINCE**, T. PRINCE & ASSOCIATES, LLC.

Due to various disruptions over the past two years, global supply chain operations now function in a state of "permanent volatility."

Although supply chains have been constantly changing for years in response to pervasive global economic forces, risk and resilience have often been minimized in determining landed costs. And, while near-sourcing is a timely subject, the predominance of Asia as a sourcing locus for high-value goods remains.

A recent report prepared for the World Economic Forum (WEF) by the Wharton Risk Management and Decision Process Center underscored why this approach must change. Previously, risks were assessed in individual silos, and the magnifying impact one problem might have inflicted on others was not fully understood.

The destruction of the energy grid in Japan—and the resulting, layered disruptions incurred by Japanese manufacturers and suppliers—is illustrative. The impact of interruptions at Tier 2 and Tier 3 suppliers was disproportionate to their relative size.

As industry-specific manufacturing clusters developed in Asia, it was not uncommon for a single provider to provide highly-specialized components to a number of customers "up the supply chain." While this improved the efficiency of Asia as a global sourcing hub, the proliferation of these single-source providers resulted in significantly increased supply chain risk.

However, network resiliency can be threatened by more than just natural disasters. Political risk—ranging from outright conflict to changes in local governance—must also be considered. With this in mind, we recently analyzed

the capabilities of the domestic intermodal network to determine its resiliency as it applies to both domestic shipments as well as international. To do this, we assembled a diverse panel representing transportation capacity consumers and providers who deal with resiliency challenges every day to catalogue their best practices and lessons learned.

When mother nature strikes

During the major Midwest flooding that occurred last year, one of the primary transcontinental service arteries was severed, and cargo moving over West Coast ports was adversely affected.

BNSF, one of only two U.S. intermodal providers in the western U.S., was forced to significantly revise their operating plan as key network segments went in and out of service. According to Greg Fox, executive vice president of operations for BNSF, the carrier dealt with catastrophic disruptions by rerouting traffic over alternative routes or detouring over other railroads. "All the time we were investing millions of dollars in shoring up affected infrastructure, such as bridges and culverts and raising track to enable continued operations," says Fox.

> **"The 'radius of performance acceptability' has grown from moves over 700 miles—mainly coast to coast—to shorter haul moves of 50 percent that distance."**
>
> *—Wilson Lester, senior vice president of supply chain, Rite Aid*

When catastrophic climate events occur, they often affect more than one mode. Flooding that affects rail operations can also impact the National Highway Network, of which the Interstate Highway System is a major component. The challenge for railroads in this case was not only to restore capacity that existed prior to the disruption, but also to support year-on-year growth.

Wilson Lester, senior vice president of supply chain at drugstore chain Rite Aid, understands this dichotomy. Not only does intermodal transportation support Rite Aid's sustainability objectives, but it also offers a portfolio of other transportation alternatives.

"We are impressed with the significant improvement in the reliability of intermodal services," says Lester. "The 'radius of performance acceptability' has grown from moves over 700 miles—mainly coast to coast—to shorter haul moves of 50 percent that distance." Lester adds that Rite Aid is currently looking to expand it intermodal options to over 500 domestic lanes. "Additionally, our import deconsolidation centers are playing an increasingly responsible role in our domestic freight program," he says.

Seeking safe sourcing

As we mention at the outset, supply chain disruptions quickly highlighted the problem of single-source suppliers. Lack of uniform transparency methods exacerbated the problems.

In Asia, for example, sourcing decisions are frequently established based on "traditional relationships," complicated inter-company holdings, and favorable economics without considering whether production was in different countries or had alternative sourcing and/or transportation routings available.

With some items, the hazardous nature of goods moving between North America and Asia only complicated the challenge. While this description generally involves bulk transport, or goods in 55-gallon drums, it can now encompass items such as safety air bags (which contain an explosive component) or raw cotton (which is a vessel fire hazard.)

Bill Rogers, vice president for operational effectiveness at chemical distribution leader Univar, says that safety and reliability transcend all other criteria in carrier selection in his operation. However, as intermodal becomes more robust and reliable, he sees his firm utilizing more intermodal solutions.

"As our culture evolves and our planning system capabilities increase, we should be able to convert more traffic lanes to intermodal service," says Rogers. He further notes that as the company's more than 100 U.S. facilities are consolidated, intermodal conversion is an important part of its future strategy in optimizing transportation performance.

Providing seamless supply chains

Intermodal transportation systems have a heightened challenge because disparate providers are assembled to produce door-to-door transportation. This challenge is magnified in transportation between Asia and North America that has a single "carrier" integrating numerous service and transport providers to provide a seamless intercontinental movement.

These activities require closer coordination between procurement and risk management groups. The potential costs of supply chain disruption need to be factored into transportation purchasing decisions, and this requires enhanced transparency in underlying assumptions.

Paul Bergant, president of J.B. Hunt Intermodal, has seen intermodal growth accelerating with the upward spiral in fuel prices, trucking capacity shortages, and insufficient highway infrastructure. While intermodal is the company's largest division, most customers utilize other products in their portfolio (e.g., truck and dedicated) to more closely match demand and supply

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"Intermodal growth continues to accelerate with the tremendous investments the railroads, especially in the East, continue to make in intermodal infrastructure providing continuous service and reliability improvements," says Bergant. "In fact, more than 80 percent of freight once diverted from the highway remains on the rails even when fuel prices decline. This is a positive sign that intermodal growth will continue and is sustainable over time."

Tradeoffs

But the tradeoffs are complex. A recent Accenture study highlighted significant global supply challenges such as insufficient cost information to support financial planning activities and inadequate staffing for global supply chain and trade compliance activities.

In the trans-Pacific, the study reveled that air cargo is starting to be replaced by ocean movement. The economic tradeoffs may not be apparent for some—even without considering the ancillary challenges. However, the risks extend beyond the supply chain silo. Geo-political factors such as economic disparity, climate change, and global governance were also identified in the WEF study.

For example, execution risk is increased by rapid urbanization. With over 50 percent of the world's population living in cities, suppliers, carriers and consumers need to develop transportation and distribution strategies that address that challenge. While urbanization is a major issue in all the BRICS—not to mention most parts of Asia—it poses challenges in North America too.

Richard Larrabee, director of port commerce at the Port of New York & New Jersey says that while rail market share is growing, 80 percent of the 5.4 million TEUs moving through the port continue to move by truck. Non-traditional initiatives—such as barging containers from Newark to Brooklyn—were undertaken to deal with critical bottlenecks such as the George Washington Bridge.

One could determine that North American intermodal has improved its resiliency through experience gathered from dealing with severe challenges and disruptions. Rapidly advancing capabilities in information technology enable rapid evaluation of alternatives and their execution much faster than ever before.

Brooks Bentz, Accenture, and Theodore Prince, T. Prince & Associates, LLC., are frequent contributors to Logistics Management

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Will WMS take over the world?

Buoyed by emerging market growth, demand for add-on functionalities, and its certain move to the cloud, the warehouse management systems market is posting double-digit growth. But is this just a post-recession bounce?

BY **BRIDGET McCREA,** CONTRIBUTING EDITOR

The warehouse management systems (WMS) market is on a tear. In 2011 it grew by 10 percent over 2010 to nearly $1.3 billion, according to ARC Advisory Group, a leading supply chain management software analyst firm.

That double-digit growth aligns with *Logistics Management's 2012 Software Survey*, which identified WMS as the top software choice for 35 percent—the highest percentage across all supply chain software sectors—of the logistics professionals that were in the market for supply chain solutions over the past year.

Clint Reiser, ARC research analyst, credits several forces with driving the impressive WMS market growth. "A demand bottleneck created by the economic recession—and then let loose in 2011 when companies slowly began spending again—was one of the key drivers," says Reiser.

Also buoying the sector's impressive increase, according to Reiser, were growth spikes in emerging markets like Latin America and Asia, the introduction of add-on functionalities, as well as the strong growth within the discrete manufacturing sector.

Over the next few pages we're going to take a deeper look at these key drivers within the WMS market, explore its "cloud" potential, check in on what the big ERPs are up to in the sector, and then examine the market's potential growth for 2012.

Expanding WMS options

The "warehouse" concept is simple in theory. After all, how difficult can it really be to manage a cavernous space filled with racks, boxes, pallets, and forklifts?

In reality, the task is huge and requires the right mix of people, systems, and solutions to run smoothly. For many logistics professionals, the latter need is filled by a WMS, which is tasked with controlling the movement and storage of materials within an operation and then processing the associated transactions.

As WMS evolved over the years, the number of functionalities that these systems can handle has increased exponentially. Wave and batch picking, task interleaving (mixing dissimilar tasks like putaway and picking), automated data collection (ADC), advanced shipment notifications (ASN), cross docking, and slotting are just a few of the vital warehouse functions that today's WMS can tackle.

According to Reiser's research at ARC, the WMS add-on market was one of the sector's key drivers in 2011. Add-on functionalities like analytics, labor management, and optimization are in high demand as shippers strive to work smarter, better, and faster in today's competitive business environment.

Joe Vernon, manager of North America supply chain technologies for Capgemini, certainly agrees with Reiser's assessment. "We've seen increased breadth and height within the base of standard WMS products," says Vernon. "There are so many features that come standard and many more that shippers can pick out and use as they need them. That's helped more end customers make 'buy' decisions."

Availability of turnkey, ready-to-use systems is also driving demand, says Vernon, who points to RedPrairie's WMS as a good example of a solution that allows shippers to "purchase a license and go live with a minimal amount of work," he explains. "Just three or four years ago that would not have been possible due to the need for changes and modifications."

Going international

Business activity in certain geographic markets and across specific industry verticals also stoked WMS sales in 2011, according to ARC.

Reiser says that suppliers noted high levels of growth in the emerging markets of Latin America and Asia, particularly among Tier 2 (companies with revenues ranging from $250 million to $1 billion) and Tier 3 (less than $250 million) customers. Purchase activity also picked up in North American markets, ARC reports, particularly among Tier 1 customers (over $1 billion in revenues).

Dwight Klappich, vice president at Gartner Inc., says that his firm has identified international growth as a key factor in the expansion of the WMS market. According to Klappich, early signs of a spike in international sales originally surfaced in 2007, but were quickly squashed by the economic recession that followed.

"A lot of companies wound up delaying initiatives," says Klappich. "Now we're starting to see that interest return—to the point where 25 percent to 35 percent of WMS growth is international in nature."

On the North American front, several industry verticals played critical roles in WMS growth last year, according to Reiser. Cyclical industries like automotive and electronics—both hit hard by the recession—showed more interest in buying new or upgrading existing warehouse management systems. "Because these cyclical industries themselves are bouncing back," says Reiser, "there

appears to be a correlation to WMS spending by some of these industries."

Moving into the cloud

When Software-as-a-Service (SaaS) options reared their heads within the transportation management systems (TMS) space a few years ago, little thought was given to whether WMS could be delivered in a similar fashion.

Now more commonly known as "cloud computing" (despite the fact

> **"Just a year ago many shippers would run for the hills if I mentioned a cloud-based WMS to them…Now they're considering it."**
>
> *—Dwight Klappich, Gartner*

that SaaS and cloud aren't technically synonymous), any type of web-based delivery has become ubiquitous across most software sectors—WMS included. In fact, of the $2.3 billion that Gartner forecasts will be spent on supply chain execution software in 2013, a full 18 percent of that spending will be on cloud-type solutions.

"SaaS started gaining traction last year and is now becoming more viable and popular within the WMS space," says Klappich, who points to the TMS sector—where SaaS is currently more of a preference than an option—as a role model for WMS and other supply chain solutions.

And while we're not quite at the point where the first words out of a logistics professional's mouth are, "We're looking for a SaaS-based WMS," Klappich says that could become a reality within the next 12 months based on the overall growth of cloud computing.

"Just a year ago many shippers would run for the hills if I mentioned a cloud-based WMS to them," says Klappich. "Now they're considering it."

As WMS vendors expand their cloud-based offerings, smaller companies also win. In fact, Vernon says cloud-based WMS offerings have also put computing power into the hands of companies that may not have invested in a full-blown software package.

"The cloud allows smaller businesses to get into the space and basically 'rent' the software from month to month for a cheaper cost versus owning the software," Vernon explains. "This is a very good argument in favor of hosted software and a win for small businesses."

ERPs keep pushing

With vendors like Oracle and SAP integrating heartier warehouse solutions into their enterprise resource planning (ERP) offerings, Klappich says WMS adoption could continue to expand in 2012, both in established markets like North America and Western Europe as well as in emerging markets.

Add best-of-breed players like Red Prairie and Manhattan—both of which are continually expanding their solutions' functionalities—and the likelihood that the market will post positive growth for 2012 becomes even more realistic.

Those best-of-breed companies may have to step up their games over the next few years in order to compete with the ERPs. "We're seeing that for some companies the WMS offered by their ERP vendor is more than good enough…it satisfies the majority of the shipper's requirements," says Klappich.

In fact, Klappich takes it one step further and predicts that ERP vendors will "take over dominance within the WMS market place" within the next five to 10 years. "This won't happen at the highest, most sophisticated warehouse management level, but for the typical shipper an ERP-based WMS will do the trick," he says.

Looking head

All of our analysts agree that we should expect to see more growth and innovation within the WMS space in 2013. With shippers demanding more functionality and optimization, and with vendors answering the call with a steady stream of new options, the space is sure to experience more innovation.

Vernon says more Java programming language (to allow for quick and efficient computer code changes) and expanded mobile options (more iPads in the warehouse, for example) are both in store for WMS over the next few months.

As the WMS continues to mature, Klappich says that the age-old challenge of trying to justify the investment—particularly for full-blown purchase-and-install options—continues to confound shippers. Where it's easy to identify the $8 million savings per year (on $100 million in transportation spend) that a new TMS provides, the results produced by a WMS aren't as clear-cut.

"Companies tend to struggle with the business case for WMS," says Klappich. "I just worked with a firm that got through the software contract negotiations and then had the initiative derailed when the final capital appropriation was presented and killed."

The fact that many shippers don't use their WMS to their fullest capacities contributes to the ROI challenge. "They get the systems up and running and say, 'now what?' Then, they feel like they didn't get what they hoped to reap from their investments," says Klappich. "In some cases vendors are visiting the companies and helping them exploit their WMS to their fullest potential."

As WMS vendors work to resolve those issues, and as shippers increasingly turn to technology to create efficiencies within their operations, the warehouse management market will hold its ground as one of the darlings of the supply chain software sector.

But don't expect another year of double-digit growth in 2012, cautions Reiser, who doesn't see the sector posting a repeat performance this year.

"Going forward, we expect strong growth in food and beverage due to traceability requirements and retail due to adaptation to the ecommerce fulfillment requirement," says Reiser. "But we don't expect growth to remain as strong as we experienced last year. We believe that growth was enhanced by the post-recession rebound."

—Bridget McCrea is a Contributing Editor of Logistics Management

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Freight Forwarders: Maintaining their speed

As the nation's export manufacturing sector becomes more viable, U.S. shippers are quickly finding themselves more reliant on freight intermediaries as they aim to take advantage of new global opportunities.

BY **PATRICK BURNSON,** EXECUTIVE EDITOR

Manufactured exports—a bright spot of the U.S. economy in recent years—are set to surge. According to Harold Sirkin, a senior partner with Boston Consulting Group (BCG), this will place new pressures on today's freight forwarders to sustain velocity, avoid disruption, and mitigate risk.

"The export manufacturing sector has been the unsung hero of the U.S. economy for the past few years," says Sirkin. "But this is only the beginning. The U.S. is becoming one of the lowest-cost producers in the developed world, and companies in Europe and Japan are taking notice."

BCG projects that by 2015, the U.S. will have an export cost advantage of 5 percent to 25 percent over Germany, Italy, France, the U.K., and Japan in a range of industries. Among the biggest drivers of this advantage will be the costs of labor, natural gas, and electricity.

As a result, the U.S. could capture 2 percent to 4 percent of exports from the four European countries and 3 percent to 7 percent from Japan by the end of the current decade. This would translate into as much as $90 billion in additional U.S. exports per year.

When the increase in U.S. exports to the rest of the world is included, annual gains could reach $130 billion. BCG forecasts that the biggest U.S. export gains will be in machinery, transportation equipment, electrical equipment and appliances, and chemicals.

So it goes without saying that U.S. shippers who seek to take advantage of these oncoming opportunities abroad will be vetting freight forwarders on a continuing basis. And they'll be doing so, say analysts, by comparing notes with their peers and staying close to trade organizations for transactional intelligence in order to make these critical partnering decision.

Holiday gifting

For Barnes & Noble, the U.S. manufacturer of the "Nook," selecting the right freight forwarder for its launch into the U.K. has been key. Without naming the chosen provider, Dan Gilbert, Barnes & Noble's executive vice president of operations, says the EU-based intermediary has a global reach and proven track record.

"We fully intend to take the 'Nook' into the international marketplace," he says. "But we wanted to start with Great Britain to begin with. We work with a variety of logistics partners within the U.S., but we needed a highly specialized player for this major move."

Sophisticated shippers know that high-end consumer goods and high-tech gadgetry—like the Nook—requires flexible and resilient supply chains best served by leading international forwarders. But the detailed and underlying implications of that fact may not be so obvious. The latest report from the London-based research company Transport Intelligence (Ti) maintains that shippers should remain ever vigilant when evaluating forwarders.

"As companies compete on the thinnest of margins, those that are the quickest to adapt and innovate are the ones that not only survive in this highly competitive industry but are among the leaders within it," says Ti analyst Cathy Roberson.

While the overseas launch of the Nook is significant, Roberson points to Apple's introduction of the iPhone and iPad as being truly transformational.

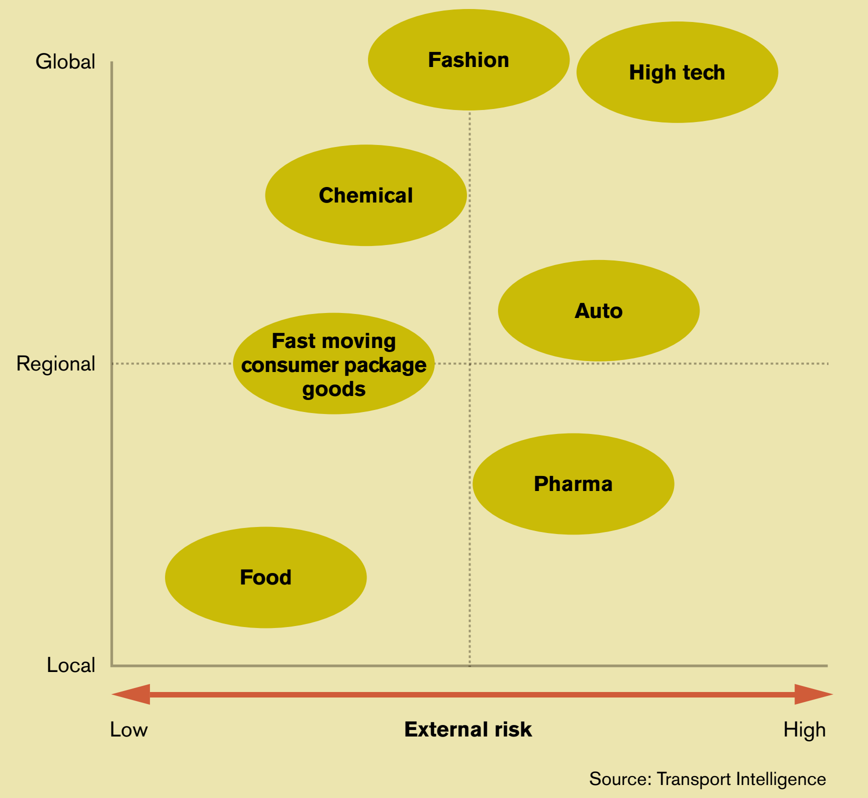
"The entire supply chain has undergone great changes—from the original equipment manufacturer (OEM) to the contract manufacturer, distributor, retailer and finally to the end customer," she says.

These changes have resulted in shifts in manufacturing locations and transportation modes as well as shifts in business strategies. For many OEMs, there has been greater

emphasis towards software as opposed to hardware. Freight forwarders have responded to these changes by introducing specialized solutions to meet the industry needs. Niche forwarders have also emerged, especially those providers that work mostly with high tech companies.

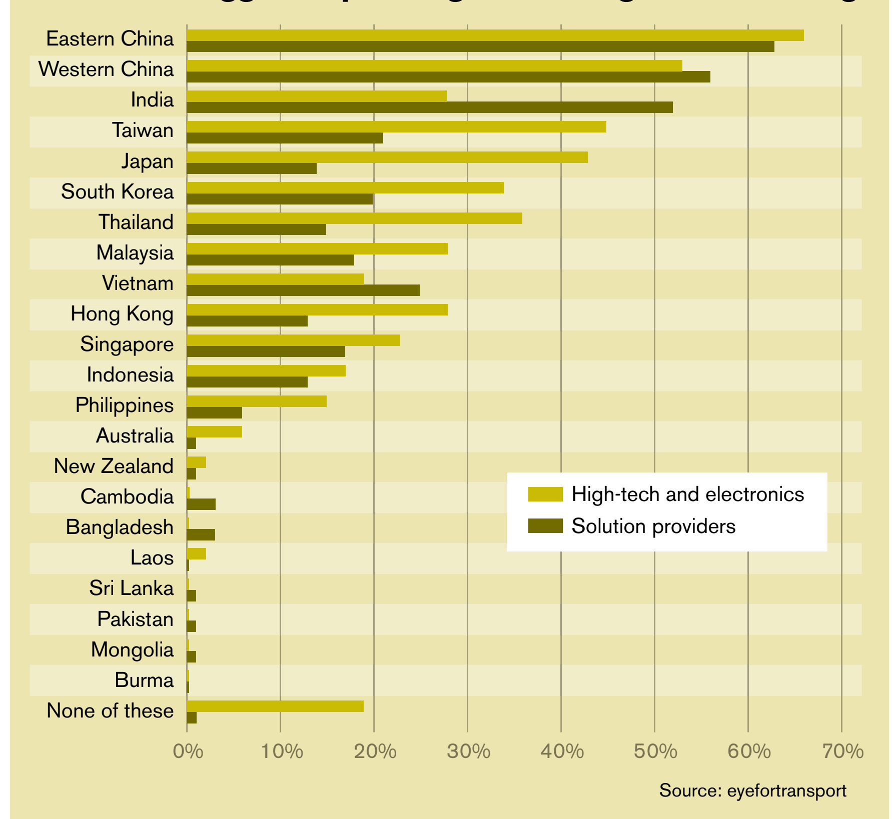
"The high tech logistics market is a large and diverse one. Although it has grown at a healthy clip since the 2009 economic downturn, it's in danger of slowing once again thanks to yet another weakening of the global economy," says Roberson. "As mature markets such as the U.S. and Europe remain important to the consumption of these goods, it's the emerging markets of Asia, South America, and the Middle East that are spurring future demand for the latest devices."

Roberson says shippers are asking forwarders to provide a variety of modal choices as they reconfigure supply chains to cut cost. Some shippers opt for less expensive means of



transportation such as ocean and, in some cases, even rail service.

"Still, for many air cargo providers—particularly those that operate along the Asia Pacific trade lane—there has been an overdependence on high-tech product launches over the years," she says. "And due to the rise of oil prices, the shift towards ocean freight and slowing demand, over capacity issues have occurred."



Forwarders and food

Shippers of manufactured, high-tech goods are not the only ones looking for forwarders to help better penetrate foreign markets. Walter Kemmsies, chief economist at Moffatt & Nichol, says there will be added demand placed on intermediaries as U.S. agricultural shippers ramp up their production in the coming years.

"The United States is the world's largest producer of agricultural products," says Kemmsies. "Corn, wheat, soybeans, and grains grown largely in the Midwest and Great Plains states are exported worldwide."

Agricultural shippers currently work with a variety of the global forwarding leaders to meet the surging demand for food in India, China, and Indonesia. According to Peter Friedmann, executive director of the Agriculture Transportation Coalition, his constituents are looking for forwarders who know and understand recent new trade agreements and federal policies to increase U.S. exports.

"The Korea-U.S. trade agreement that has the greatest potential for increasing cargo volumes for us in the short-term," says Friedmann. "American meat exports, particularly pork and beef, have increased dramatically. Prior to the agreement, the average Korean tariff was approximately 18 percent, and removal of that tariff opens a huge market for U.S. agriculture exports."

At the same time, shippers and forwarders should not overlook the trade expansion that the U.S.-Colombia Free Trade Agreement is generating, says Friedmann.

"The Trans-Pacific Partnership is a current trade negotiation involving the U.S., Canada, Mexico, Vietnam, Malaysia, Australia, and New Zealand. It has the potential to significantly increase transpacific trade volumes, but is still a year or so away from reaching any conclusion. But the promise is extremely interesting to U.S. exporters and freight forwarders," Friedmann says.

Risk mitigation

Shippers seeking export guidance are increasingly mindful of the downside, as well. Protecting shippers from fraud and misinformation is one of the guiding principles of organizations like the American Association of Exporters and Importers, which concentrates on cross-border trade.

The National Customs Brokers & Forwarders Association of America, Inc. (NCBFAA) also routinely conducts meetings, roundtables, and seminars coordinated through various affiliated associations to keep shippers informed about risk mitigation. "It's all part of our outreach and educational initiatives that goes beyond our charter," says association NCBFAA Board Chairman, Jeffrey Coppersmith. "But it's necessary for freight forwarders to help shippers avoid the pitfalls."

According to Linda Conrad, director of strategic business risk management for Zurich Services, shippers can learn a great deal by working with trade associations, but they should be demanding that forwarders provide them with enough protection to advance their agendas.

"Many shippers believe that having a 'marine policy' is enough to cover them on the waterborne move," she says. "But the chain of custody has many more complications. The best forwarders know and understand these details, and should be certain all of the bases are covered."

Conrad adds that most leading global freight forwarders demonstrate a significant contribution to U.S. export expansion that is measurable, innovative, sustainable, and has a broad impact.

"With the right forwarding partner, U.S. shippers are in a sweet spot," adds Conrad.

—Patrick Burnson is Executive Editor of Logistics Management

Moving toward SMARTER lift trucks

Fleet management software is evolving from a tool to track truck maintenance to a platform to drive deeper process improvements.

BY **BOB TREBILCOCK,** EDITOR AT LARGE

High technology, automatic data collection, sensors, and software are probably not the first words you associate with lift trucks. However, today's lift trucks are highly sophisticated pieces of machinery.

"Over the last 10 or 20 years, the technology within the lift truck has evolved immensely," says Mike McKean, sales and marketing manager for Toyota Material Handling USA. "The brains of the lift truck have grown. The dashboards display so much more information than in the past."

That technology is moving beyond the dash. Thanks to sensors, microprocessors, and CAN bus technology, today's lift trucks have the capability to collect and communicate lift truck data in real time.

In turn, fleet management software systems can use that data to manage the maintenance of the truck or monitor how a driver is operating the vehicle. It can perform that management for an individual truck or driver, a fleet of trucks, or team of drivers—in one location or across multiple locations. It's possible to feed that information to other management software systems, such as labor management (LMS), warehouse management (WMS), or enterprise resource planning (ERP) systems, to drive process improvements.

"We're not there yet, but we are moving toward a smart truck platform," says Phil Van Wormer, executive vice president of sales, marketing, and business development for Total Trax, a third-party provider of fleet management software for lift trucks.

Tracking maintenance

The earliest iterations of fleet management software were used to keep track of maintenance. Indeed, that is still the most common use of the technology, aiding equipment manufacturers to improve their products as much as end users.

"Using fleet management software, we know what repairs were made on what trucks and at what intervals of usage," says Joe LaFergola, marketing manager of business and information solutions for Raymond. "If we see a trend developing around the failure of parts, we can do a root cause analysis on the affected parts and implement programs to reduce the cost there."

For end users, maintenance systems are used to schedule planned maintenance events and to track unplanned and exception repairs. Those repairs can also be compared against the hours of use to see if a truck is getting more or less hours between repairs than is expected or if the truck is getting more maintenance than is necessary for the hours of operation. Together, they provide a snapshot of how the truck is performing and how it is being maintained.

Using sensors to track when a lift truck is in motion, when it is at rest, or when the forks are engaged in lifting and lowering, allows fleet managers to optimize the size of their fleets.

Taken to the next step, the systems can be used to automate the components of a maintenance transaction. With intelligent dispatching, for instance, either the system itself or the end user can provide information that allows some problems to be solved without ever sending a technician. In the alternative, the system may ensure that a technician has the right tools and parts to address an issue on the first call.

"This allows us to obtain as much information as possible before a service call even gets to the dealer," says Pat DeSutter, who is with Yale's fleet management program. "We can then make sure we're dispatching a technician based on the skill required and the availability of parts."

Right sizing the fleet

With sensors tracking when a lift truck is in motion, when it is at rest, or when the forks are engaged in lifting and lowering, information is now available to track the utilization of a fleet.

"If you measure how a truck is being used and how much of the time it's idle, you might find that instead of 10 trucks in the shipping department, you only need eight," says Toyota's McKean.

In many facilities, managers assume their fleet is being fully utilized throughout a shift because of the activity that typically takes place within a plant or distribution center. Facilities may also have a mix of equipment based on how work was once performed in the facility, even if products, processes and lines have changed. They might even have more trucks than they realize. Fleet management software provides hard data to back up or refute those assumptions.

"One of our customers told us that he needed more trucks," recalls Jim Gaskell, director of global Insite products for Crown Equipment. "When we installed the software, he discovered he had two more trucks than he thought he had. They weren't being used at all." In fact, it's not uncommon for a facility to learn that the fleet is only being utilized at 50 percent or so of capacity.

"For instance, we can learn how many operational hours are being used for lift and travel or how many trucks are being used simultaneously," Gaskell says. "There may be peak periods when they are using all of their equipment, but if that peak only lasts 10 or 20 minutes a shift, you can ask whether they really need those trucks or if they should change their processes."

Operational information can also provide a real-time view of where in a facility trucks are being used. That allows a supervisor to shift idle drivers in one area to a busy area during peak periods.

Managing operators

The same tracking systems that monitor the performance of the trucks can also be tied to the performance of the operator. "The wireless tracking devices that monitor the usage of a truck also allow us to put operator check lists online, to manage operator licenses, or to monitor the hours required by a particular operator to perform a task," says Raymond's LaFergola.

If an operator is picking an order, for instance, the system can track how much travel there was between pick stations or how much time was required to lift or drop off a load. "If a task should take 30 seconds and it's taking longer, we can take steps to increase productivity," LaFergola says. "Among the customers that have implemented the system, we've seen 3 percent to 5 percent increases in productivity."

In addition to managing labor, the system can be used to ensure that only qualified operators are on a particular piece of equipment or working in authorized areas. If an operator's license is past its renewal date, for instance, the system can lock that operator out of a truck. Similarly, if an operator travels into an area where he isn't authorized to work or impacts something with enough force to damage the truck, the product or a structure, the system can shut down the truck and send an alert to a supervisor to address the situation.

Similarly, the system can be used to control the performance of an operator. "If you have a new operator who is learning to drive, you can limit the travel and lift speeds," says Gaskell. "No matter what truck he gets on, he'll be at that reduced performance level until he gets experience."

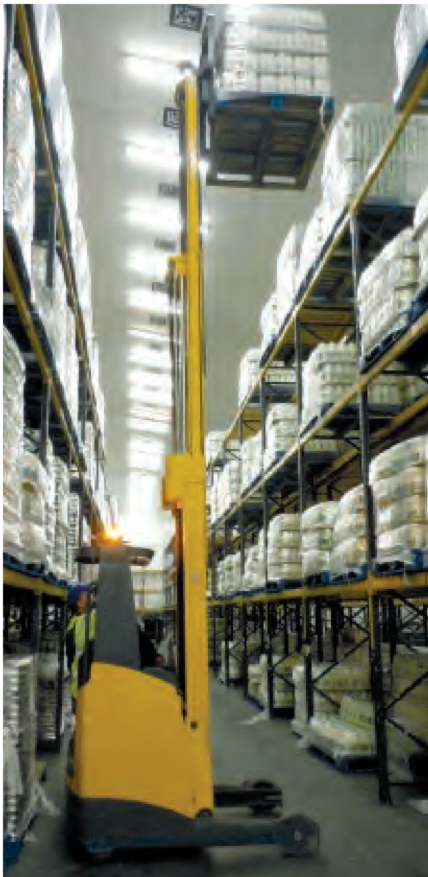
Here today, used tomorrow

Despite those capabilities, fleet management software is not yet widely used beyond a tool for managing maintenance.

The problem, say the experts, is that the available data being collected by the trucks is like drinking from a fire hose. "End users are overwhelmed," says Raymond's LaFergola. "They don't know where to start."

Yale's DeSutter concurs. "We expected that telemetry and sensors would equip the customers to act on driver accountability and training and to use the data to avoid costs," he says. "So far, we haven't seen that."

LaFergola sees an opportunity for the lift truck industry to provide consultative services: Suppliers and distributors can sift through and analyze the data to show their customers how they can alter their processes to make their operations more efficient. "Our heart and soul is in making lift trucks," he says. "But we recognize that there is this need. We are working with dealers to move into this solution."



New software applications can automate the data collection process and eliminate the need to hand scan bar codes.

"We are seeing productivity gains of up to 25% in narrow-aisle systems based on pallet moves per hour."

— Michael Wiesenegg, product line manager of warehouse systems for MCFA

One example of how this might be done is using data from a customer's labor or warehouse management systems in combination with the data collected from the fleet management system to improve labor standards.

Toward a smarter lift truck

While few end users are ready to use lift truck data to drive process improvements, lift truck software is already evolving toward a platform for smarter operations.

A combination of software and hardware, for instance, can automate the data collection process and eliminate hand scanning. Available systems use optical scanning technology to automatically scan and read pallet labels when they're picked up by the truck, associating that specific pallet with that specific truck in the fleet management software.

Since the system is tracking the location of the truck as it moves through the facility, the system can record a putaway or drop location to within the inch without the driver scanning the bar code. That information can then feed the inventory management module in a WMS.

Fleet management software may also be used to improve task interleaving within the warehouse. "Since we know the real-time location of every truck and pallet, we believe we can feed higher quality data to a WMS for better decision making," says Total Trax's Van Wormer.

Meanwhile, Jungheinrich has developed several types of warehouse navigation technology for its lift trucks. "We're integrating the truck with the WMS to help drivers find the most direct routes to get their work done," explains Michael Wiesenegg, product line manager of warehouse systems for MCFA, which markets Jungheinrich trucks in North America.

In these applications, the layout of the warehouse is programmed into the fleet management software. When the WMS sends a task to an operator, it also sends a file to the truck, telling it where it needs to go. Using the layout drawing, the truck provides turn-by-turn directions to the driver, similar to the GPS system in an automobile.

For narrow-aisle guided truck applications, trucks are outfitted with RFID readers that read transponders installed in the floor in the aisles. When a truck passes a transponder, it knows exactly where it is and calculates the fastest combination of driving and lift speeds to safely and productively get to the right pallet position for the pick. The system is accurate to within 0.4 inches to 1.2 inches.

"We are seeing productivity gains of up to 25% in narrow-aisle systems based on pallet moves per hour," says Wiesenegg. More importantly, he says, these types of advancements ensure that lift trucks remain an integral part of operations, even as automation makes strides further. "We are always looking at how we can improve product flow in a warehouse," he says. "As software and lift truck technology advances, we will incorporate more solutions into our trucks."

—Bob Trebilcock is an Editor at Large for the Supply Chain Group

Top 30 Ocean Carriers: Sailing into the black?

SPECIAL REPORT

A SPECIAL SUPPLEMENT TO
Logistics MANAGEMENT

Renewed market discipline has helped the world's leading ocean carriers to restore rates while delivering on enhanced service. Could this be the "turnaround year" on the high seas?

By Patrick Burnson, Executive Editor

Ocean shippers may be paying a bit more this fall, but carriers say they're delivering on their schedule integrity. And despite a restrained capacity increase, most leading container vessel operators are still confronting a formidable oversupply challenge.

According to analysts at the Paris-based consultancy Alphaliner, the carriers' failure to collectively curb effective growth in 2010 and 2011 was the primary reason for the collapse in freight rates last year. Freight rates have also come under pressure again since July as demand weakened across all routes. Average freight rates from China, for example, have fallen by 8 percent since the 2012 peak, with further weakness likely for the remainder of this year.

"There remains significant new capacity coming in the next 16 months, with 19 out of the top 21 carriers still waiting to receive 1.8 million twenty-foot equivalent units (TEUs) of new space between September 2012 and December 2013," says Stephen Fletcher, Alphaliner's commercial director. The consultancy notes that among the main carriers, four of them—APL, MSC, Maersk, and

Evergreen—account for 43 percent of the total new capacity due over this period.

But there's also reason to believe that carriers will make this a "turnaround year," as their fleets have absorbed nearly 6 percent of their capacity by lengthening service rotations. "Maersk, which has promoted slow steaming since 2008, is estimated to have absorbed over 220,000 TEU, or 8.5 percent of its current fleet, through 'super' slow steaming," observes Fletcher.

Leading ocean carriers will be employing a variety of imaginative tactics and strategies to keep themselves ahead of the competition, say analysts. Here's what all of this creative tension will mean for shippers over the next six months.

Asset utilization

Industry analysts for Drewry Maritime Research in London agree that the Top 30 ocean carriers have been working their assets harder, which, considering the increasing container dwell times resulting from slow steaming, is something of an achievement.

Andrew Foxcroft, author of *Drewry's Container Census* report, forecasts annual container fleet growth will be in the order of 7 percent from 2012 to 2015 as shipping companies continue to adopt a tight container/slot operating ratio, while also increasing replacement purchase in comparison to 2010-2011.

At the same time, fleet growth since 2009 has continued to be dominated by leasing companies that have posted TEU growth of 10.6 percent in 2011 and 9 percent in 2010—compared to shipping lines only registering 7 percent and 5.7 percent, states the report.

"Investment by shipping lines in particular was curtailed when their profits slumped and debts rose," says Foxcroft. "However, some carriers have tentatively resumed equipment investment, but they're still very much testing the waters."

Indeed, most leading carriers are spending almost as much time demolishing aging or outdated vessels. According to Peter Sand, chief shipping analyst for The Baltic and International Maritime Council in Copenhagen (BIMCO), demolition activity has remained strong. "In the light of the slowly developing demand side, it's very positive that the industry deals with the supply side issues to improve the fundamentals," he says.

Sand notes that regardless of the slow development of demand, freight rates have travelled from a "very poor state" at

Alphaliner - 2012 Top 30

(Operated fleets as per September 5, 2012)

Rank	Operator	Teu	Share
1	APM-Maersk	2,616,413	15.7%
2	Mediterranean Shg Co	2,185,806	13.1%
3	CMA CGM Group	1,350,785	8.1%
4	COSCO Container L.	716,331	4.3%
5	Evergreen Line	699,333	4.2%
6	Hapag-Lloyd	635,233	3.8%
7	APL	596,224	3.6%
8	CSCL	573,077	3.4%
9	Hanjin Shipping	562,223	3.4%
10	MOL	511,018	3.1%
11	OOCL	430,079	2.6%
12	Hamburg Süd Group	421,786	2.5%
13	NYK Line	410,221	2.5%
14	Hyundai M.M.	366,797	2.2%
15	K Line	351,405	2.1%
16	Yang Ming Marine Transport Corp.	343,022	2.1%
17	Zim	328,865	2.0%
18	PIL (Pacific Int. Line)	296,803	1.8%
19	UASC	270,746	1.6%
20	CSAV Group	260,805	1.6%
21	Wan Hai Lines	190,401	1.1%
22	X-Press Feeders Group	89,097	0.5%
23	TS Lines	86,552	0.5%
24	HDS Lines	86,320	0.5%
25	SITC	56,951	0.3%
26	NileDutch	55,530	0.3%
27	RCL (Regional Container L.)	52,949	0.3%
28	KMTC	51,826	0.3%
29	Grimaldi (Napoli)	42,435	0.3%
30	CCNI	41,105	0.2%

SOURCE: ALPHALINER

the end of 2011 to a "comfortable" level on several significant trading lanes. "Bearing that in mind, BIMCO expects the peak season to become a positive surprise," says Sand, "with rates holding up somewhat, but potentially with a sliding tendency if deployed capacity reveals itself as abundant."

BIMCO continues to expect that the short-term focus for the Top 30 ocean carriers will be on balancing the demand for new tonnage with deployed capacity.

Service enhancements

Analysts also agree that service enhancements and a new emphasis on schedule integrity will help the top carriers with their bottom lines. David Jacoby, president of supply chain consulting firm Boston Strategies International, says carriers have been initiating their own metrics of late, and that shippers will inevitably attempt to work them into their contracts—just as they have worked in rate indexing.

"Shippers are very pleased to see these metrics, and they have been surprisingly widely accepted in a very short time, compared to other changes that the ocean shipping industry has tried to make," says Jacoby, adding that It doesn't hurt that Maersk—the largest player on the block—is focusing intensely on the customer and has its APM network of terminals to influence the metrics in a positive direction. "This is all good news for shippers."

Drewry Maritime Research's quarterly report *Carrier Performance Insight* revealed that industry-wide vessel schedule reliability improved to a new record high of 75.7 percent in the second quarter of 2012. The latest score represents a 3.4 percent improvement from the reliability level seen in the first quarter of 2012. Ship arrival reliability improved particularly well in May and June, something that Drewry attributes to a settling down of schedules following network changes in April caused by new carrier alliances

"The latest data for the second quarter shows that freight rates have increased—from a low level—but so has ship on-time performance," says

2011

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Simon Heaney, research manager at Drewry. "We believe that this is probably a fair deal for many shippers…a more expensive but more predictable service."

Maersk and Hanjin not only maintained their positions as the two most reliable major carriers, but also improved on their performances of the first quarter. Based on Drewry's regular surveys, Maersk had its best-ever all-trades on-time score of 91.4 percent in the second quarter, up from 89.8 percent in the previous quarter.

Seventeen of the 27 major container lines obtained a reliability score above the carrier industry's 75.7 percent on-time average in the second quarter, and only seven of the sample failed to improve on their score from the previous quarter.

Drewry also ranks reliability by ship operator. The results show that the most reliable operators in the second quarter were Hanjin, Maersk, Hamburg Süd, and CSAV. Meanwhile, Drewry continues to

Matson: The little carrier that could

While the U.S. carrier Matson may never grow to be numbered among the world's top 30, it remains the "Big Kahuna" in the U.S. Hawaii/Guam trade. Since separating from its parent Alexander & Baldwin (A&B) to go off on its own in June, Matson is ready to share its strategy with *Logistics Management* readers. David Hoppes, Matson's senior vice president of ocean services, answers a few questions in this exclusive interview.

Logistics Management (LM): **How has Matson benefited from the "separation" from A&B?**

David Hoppes: It's important that people understand that Alexander & Baldwin always ran Matson as an independent business, such that we, the Matson group, had its own finance, legal, information technology, accounting, insurance. They operated us much like a portfolio company, and so the separation, while momentous from a historic point of view, from an operational perspective was a fairly straightforward matter. For example, we have only had to hire five or six people at the Matson level in order to operate as an independent company, which is very small relative to our overall headcount.

LM: **What does this mean for shippers?**

Hoppes: The separation was a seamless process that didn't result in any changes to Matson's existing services. What we can say is that we will now be more focused than ever on building the Matson brand. Our strategic direction will be guided solely by leveraging our strengths as a transportation company. We do not plan on making any notable departures from our historical service offerings, but we do see this as an important new chapter in our distinguished history that will further sharpen on focus as a leading carrier in ocean transportation and logistics.

LM: **Are you planning any new service enhancements to existing schedules?**

Hoppes: At this time, we plan to continue to do what we do best: provide just-in-time service for the island economies of Hawaii and Guam, and premium, expedited service from China to southern California. We have been serving Hawaii continuously since 1882, and it remains our core market. We have been able to maintain our role as the state's leading carrier by consistently delivering on-time arrivals that are measured by hours, not days, and exceptional customer service that is experienced in working with shippers transporting the wide range of goods needed to support island economies.

LM: **Can you expand on your operations in the Asia Pacific?**

Hoppes: Our weekly China service, which serves Xiamen, Ningbo, and Shanghai, has a unique place in the Asia trade in that we are relatively small, but can offer significant value to shippers because of our size. Because our ships are smaller than the large international carriers, we are able to make Shanghai our last port of call and sail directly to Long Beach.

In addition, we're not slow steaming our vessels to save on fuel, which is a common practice among international ocean carriers, and we have our own dedicated facility in Long Beach that allows our ships to be unloaded quickly. What that does is allow us to have between a three- and seven-day transit advantage over the rest of this very competitive Asia to U.S. West Coast market. Some shippers are using Matson's China service as an alternative to air freight—clearly an option that delivers significant value for their supply chains.

—Patrick Burnson, Executive Editor

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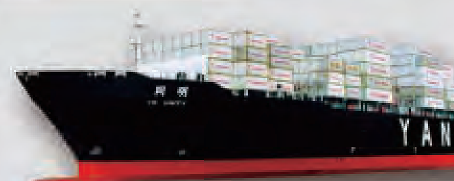

SEVENTEEN of the 27 major container lines obtained a reliability score above the carrier industry's 75.7 percent on-time average in the second quarter, and only seven of the sample failed to improve on their score from the previous quarter.

monitor carrier key performance indicators at the box level, having introduced this new approach in April as an industry first.

Sustainable growth

Carriers will be increasingly pressured by shippers to stay "green" while they attempt to remain in the black. But according to Jacoby and other analysts, the top carriers will not be able to absorb even half of these costs without passing some of them on.

"The new regulations and frameworks are individually and collectively very expensive to implement, and somebody has to pay the bill," says Jacoby.

Major green regulatory frameworks implemented by the Environmental Protection Agency will add cost related to limits on the use of anti-fouling paint, for example. Jacoby adds that mandated reduction of air pollution (Clean Air Act), ship recycling, energy efficiency, and carbon reduction will also have to be addressed.

"There are other stringent regulations such as the International Convention for the Prevention of Pollution from Ships (MARPOL) by international bodies like International Maritime Organization," says Jacoby.

So in addition to General Rate Increases (GRIs) and fuel surcharges, shippers are likely to face new challenges in the future. "Some of these regulations or acts have existed for a few years," says Jacoby, "but there is increased focus on compliance today."

—Patrick Burnson is the Executive Editor for Logistics Management

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Total Circulation	71,729	79,433

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A SPECIAL SUPPLEMENT TO:

Logistics MANAGEMENT

Special Report

Creating competitive advantage

We examine how warehouse and distribution center design and operations have evolved to play a critical role in meeting overall business objectives in today's multi-channel world.

By Bob Trebilcock, Editor at Large

For years, warehousing, distribution and manufacturing were largely invisible to the corporate enterprise. Of course senior-level executives knew they had plants, warehouses, and distribution centers, but they didn't necessarily know what purpose they served. How else do we explain the trend toward outsourcing manufacturing to contract manufacturers and distribution to third-party logistics (3PL) providers? The attitude was: Let them own all those assets and figure out how to make a profit.

Today, supply chain processes have come out of the business shadows. Increasingly, the C-suite recognizes the contribution that warehousing and distribution makes to the bottom line. More importantly, there is the recognition that, when done right, warehousing, distribution, and manufacturing can create a competitive advantage.

As a result, logistics and supply chain professionals are more connected to the business than ever before and are now playing a critical role in furthering business objectives. What then are the biggest business issues affecting the design of materials handling systems as well as the warehouse and distribution best practices that run today's game-changing operations? We put that question to seven system integrators and consultants to find out what is top of mind with their customers and potential customers.

Optimizing in a multi-channel world

Multi-channel selling is transforming the retail industry. The challenges are big enough for retailers that once sold through stores and now are selling online. It's more pronounced for those companies that once sold wholesale and now have their own stores, their own e-commerce shopping carts, or both.

The hurdles range from adapting facilities that were designed to handle cases and pallets to piece picking to grappling with SKU proliferation. "We do a lot of retrofit projects for retailers," says Jeff Ross, vice president of consulting for Forte. "We see semi-automated or automated solutions that worked great when direct-to-consumer was 5 percent of the business, but now it's 30 percent of the volume. We have also seen direct-to-consumer retailers that have opened their own brick-and-mortar stores. Either way, we have to think differently for the client."

How does that translate to the shop floor? In many cases, it means applying familiar technologies and equipment in different ways to create to new processes. "For one retailer, we waited until the packing station to differentiate between e-commerce and retail orders," says Ross. "We pick in batch regardless of the type of order, but once items hit the sorter, single line orders are sent to one section of the building for packing while multi-line orders are sent to another area for packing."

In another application, multi-line orders use a sort-to-light, or put-to-light, process that features a light-enabled cubby wall with spots for a group of totes for outbound orders. Items are picked to a tote that is transported into the put wall area.

There, an associate scans the license plate bar code label on the tote to launch the sort-to-light process. As the associate removes and scans pieces in the picking tote, the lights identify the outbound

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> "Our retail customers are asking how can they invest the right level of capital to maximize throughput during average days and still meet peak demand."
>
> —*Mike Dunn, Fortna*

tote that has been designated for that order. Once all the items for an order have been put to the tote, it's transported to a packing station.

"The technology is not new," says Ross, "but we're applying it to a new process."

From multi-channel to omni-channel

When the Internet burst onto the scene a decade ago, many retailers segmented their customers by sales channels. They had brick-and-mortar customers and they had online customers. They also had two channels of distribution, one for retail store replenishment and another for online order fulfillment, which was often managed by a 3PL.

That thinking is changing, says Mike Dunn, group vice president for Fortna. "Retailers with some degree of sophistication understand that all these channels play together to create a single face to the customer," says Dunn. "As retailers and e-tailers put together their plans and trajectories, they expect to gain new customers and grow their businesses, but they don't know which channel that growth will come from."

Bringing those channels together is affecting the design of distribution centers in several ways, says Dunn. One is in systems that can handle the pallets and cartons that historically went to retail stores along with individual item picking associated with direct-to-consumer order fulfillment. The second is in the ability to scale. "Our retail customers are asking how can they invest the right level of capital to maximize throughput during average days and still meet peak demand," says Dunn.

On the one hand, that is leading to technological solutions, like putting in a dual-speed sortation system. "The majority of the year, we run the sorter at a slow speed and get a high utilization of the chutes," says Dunn. "At peak periods, we run the sorter at a higher speed with lower utilization of the chutes, but the ability to handle the throughput."

On the other hand, retailers are also recognizing that in an omni-channel world, the experience should be the same regardless of how a customer engages with a retailer.

"Retailers that are running their retail and e-commerce channels through the same distribution center are trying to drive consistency in how a product is packaged," Dunn says. "We're designing packaging processes that ensure that the presentation to the e-commerce customer and the wholesaler are consistent."

Information is the coin of the realm

Businesses thrive on information. Marketing and sales organizations are striving to learn as much about their

Network optimization—deciding where to locate facilities and how they operate—is driving many of today's distribution projects.

customers' habits, likes, and dislikes as they can so they can turn that information into sales. That is the promise of social media sites like Facebook and the genius of iTunes and Amazon.

Information has been the coin of the realm in the supply chain as long as there have been supply chains. But, just as sales organizations are turning to the information collected by social media sites, cookies, and other Web-based systems to learn more about their customers, operations managers are trying to get more information out of their systems, says Ken Fry, business segment manager for Rockwell Automation.

"The large customers and machine builders we work with want to know what information can they pull off of a sorter to get more out of the system, or how they can use a conveyor that may not have been part of the original design of the system," says Fry. "That information has always been out there. But it has not always been easy to get."

Certainly it wasn't easy to distribute once you got past the maintenance technician who understood the system. "Today, with the proliferation of control systems and Ethernet as a standard, all of the different information networks within a system are converging," Fry says. "The plant scheduler now has equal access to that information, and we can filter that information so you get what you need in order to make decisions."

Similarly, the rate of product change today is staggering. Flat screen televisions are getting bigger than ever while other products, like iPods and cell phones, are getting smaller than ever.

"You need flexibility because the products change so often," Fry says. "That is calling for control systems that are easy to install and can change from one type of product to the next."

The importance of cycle time

For years, distributors have focused on productivity and accuracy in order fulfillment processes. The goal was to reduce the cost per case of filling an order. Typically, that was the result of doing more work with less labor. No one is saying that controlling costs is no longer important, but as the need for order fulfillment speed heats up, there is increased focus on cycle time, says Bryan Jensen, senior principal at St. Onge.

"More and more, the focus is shifting from accuracy and productivity to cycle time diminution," Jensen says. "Clients want to know what it will cost to take an order by 5 p.m. or later and still get it out in time for overnight delivery."

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While the need for speed has mostly been a direct-to-consumer phenomenon, thanks in part to Amazon, the question is now being asked by businesses selling to other businesses. "Whether they are pursuing these strategies for a competitive advantage or because that's what they have to do to compete, there is a belief that faster is always seen as more valuable by the consumer," Jensen adds.

The attention to cycle time is impacting DC design in several ways. For one, some sellers are developing systems that help them recognize just what level of speed a consumer really wants and is willing to pay for. Some customers may be more than happy to wait a week for an order. Some truly want the product next day.

"We're developing systems to batch orders in waves by order priority for those customers who will pay for speed," Jensen says. "We might also put more money into high-speed sortation systems or goods-to-person picking solutions to cover peak periods than in the past."

More importantly, companies are looking beyond the cost of labor. "Leading retailers and e-tailers are no longer just looking at how many people they can remove from the process to justify a system," Jensen says. "Instead, they're putting more value on the ability to respond to peak demand in a very short window of time."

Automated material handling systems are increasingly becoming the answer to a chronic labor shortage in warehouses and DCs.

Optimizing the network

Mergers, acquisitions, and consolidation are facts of life for any company intent on growing market share. But, what happens the morning after the acquisition is complete? Then, it's a little like getting married: After the honeymoon, you have to figure out what to do with two sets of everything. In the supply chain, you have to figure out what to do with two manufacturing and distribution networks that often serve the same geographies.

"Network optimization is a factor we're seeing across all industries," says Kelly Reed, a partner with Tompkins International. "Companies are asking us how they can make their network most efficient from a transportation cost and a labor cost."

In some instances, Reed adds, a company may just have two DCs that it wants to combine into one. For larger organizations, however, the questions are more strategic and complex. "In some instances, we have companies focused on the cost of operating a facility or the cost of labor in a location," Reed says. "In other areas, the network strategy is driven by customer service requirements." Tompkins recently worked with a client that located a new facility in Fresno so that it could serve both Los Angeles and San Francisco with next-day ground deliveries.

Those types of distribution strategies are also resulting in networks with facilities designed for a specific purpose. Tompkins, for instance, has worked with companies to consolidate all of their slow-moving items into one central facility with regional DCs for faster-moving products. Another strategy is to create one or two large centralized DCs with smaller "forward-located" DCs that can turn around orders very quickly for Internet fulfillment, flash sales, or store replenishment of fast-moving items.

"I read recently that Macy's is using their store rooms as Internet fulfillment centers and picking from store inventory," Reed says. "As the way we engage with customers changes, many companies are making up the rules as they go along. We're all learning what works and what doesn't. It's going to have implications for distribution networks and how orders are filled."

Managing SKU proliferation

Like mergers and acquisitions and the growth of multi-channel retailing, SKU proliferation is another fact of business life for retailers and wholesale distributors. "Everyone is trying to find the magic bullet to increase sales," says Norm Saenz, senior vice president for the supply chain group at TranSystems. "The perception is that more product offerings, more styles, and more colors give a competitive advantage."

In the distribution center, that translates as too little storage space and too few pick positions to get the product out the

door. "We had one client that was storing 8,000 SKUs in 500 pallet positions," says Saenz. "They were reduced to putting as many as 20 different SKUs in one pallet position in their picking area. Instead of picking just from the lower levels, they were picking from all of the levels in the storage area."

The solution was not complicated. Pallet rack was converted to static wide span shelving with three openings instead of one 6-foot pallet opening. In addition, the storage area was converted from 10-foot aisles to 4-foot wide narrow aisles. "We went from a conventional lift truck to a worker-assist vehicle that will work in a 3-foot aisle," Saenz says.

"They have 8,000 pick locations today," Saenz says. "They are much more efficient and there are far fewer errors."

Designing the workforce of the future

Despite the recession, labor availability remains one of the most persistent issues confronting warehouse and distribution center managers. Training and retaining experienced personnel is almost impossible when many facilities experience a 50 percent turnover in the workforce every year.

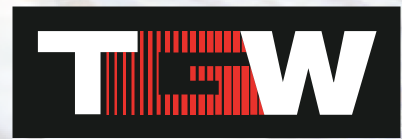
"We began hearing about this five or six years ago from Canadian clients as warehouse workers moved out west to work in the oil fields," says Chris DeLisle, a senior engineer with Witron. "Today, it's a universal issue, across all industries and regions, especially as the economy begins to improve."

It's not just the availability of labor. As the workforce ages, distribution centers are being forced to rethink labor intensive processes, such as manual palletizing or case picking.

As a result, DeLisle says, clients with sufficient scale and volume are taking a harder look at automation. "First and foremost, automation can reduce the number of people required to operate a facility," DeLisle says. "But we also have an opportunity to make the manual processes as ergonomic as possible."

The result, he adds, is that the employee retention rate in automated sites is generally higher than in conventional facilities. "One of the challenges to our industry is how do we enrich the job so that the associate isn't bored after 10 minutes," DeLisle says. "That's why I think that automation is more attractive to younger kids. If we can offer them a solution that exposes them to technology and provides a path to grow in their careers, that is attractive to them."

—Bob Trebilcock is Editor at Large for the Supply Chain Group



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SAGE ADVICE

Don't let "back office" mediocrity hijack your transportation programs

By John A. Gentle, DLP

A SENIOR VICE PRESIDENT OF A MAJOR national carrier recently asked me if I thought that tomorrow's shippers have the commitment to maintain the depth of talent necessary to manage one of the value-added programs that I allude to in my columns. I have always maintained that committed process and performance excellence bring exceptional benefits to both the company and its carrier partners, but they require a combination of developmental and seasoned talent.

Five years ago I would have answered his question with an unequivocal "yes." But the economic events of the past three years, along with a recent "back office" experience that I had with a premier insurance company, have given me second thoughts on how bottom-line pressures have affected the "commitment to excellence" maintained by many best-in-class companies.

I have outlined some indicators and have made some suggestions on how to shore up your logistics team if the following story resonates with you.

My request to my insurance company was simple: Please send me a copy of the supplemental health care premiums that I have paid for as of a certain date. After a very reasonable period of time elapsed, my mailbox was still empty. A call to the insurance company confirmed that I had made the request, and it had been referred to the "back office" to send the letter.

Then, unbelievably, the representative explained that they had no control over what happened "back there." She added that things in the "back office" were handled on a first come first serve basis, and the letter would be sent as soon as possible, but she could not tell me when. Here was a premiere company allowing their bottom line policy to dictate and present their clients with an inferior level of service.

Is your company losing its interest in funding the right human resources to support your programs? Here are some telltale signs that your overall program is in trouble:

- No one knows your name or the names of the members of your team. It's much easier to eliminate people when they're just numbers.
- Reasonable funding for your department has become a major problem. Management has seemingly lost their desire to fund both the manpower and programs that would dramatically improve productivity and customer service.
- Team lacks the initiative and talent to recognize what actions should be taken and awaits direction from you. This problem is recognized not only by the carriers, but also by your company's management.
- Team is performance and technology poor—both customers and carriers complain.
- Approach to carriers and 3PLs is cost centric, adversarial, dismissive, and turnover is high.
- No defined processes and or quality programs.

Develop a comprehensive picture that redeploys your team's expertise to critical tasks that carriers and management value. Then seek management buy in.

So, what do you do? First, talk with your boss about your plan and identify and assess the strength and weakness of the processes you own. If you're not sure about objectivity or want verification, engage a consultant; but do it before you start so both parties agree on what's to be evaluated. It's critical for you to take and show the initiative and get buy in.

Second, review your company's values and its goals. Rate the ability of your people and technology and process performance to satisfy the company's needs.

Third, determine which processes contribute the least value or have the steepest uphill climb to be successful. Evaluate the harvesting of strong performers for other potential roles.

Fourth, test the waters to see if a 3PL can bring sustainable replacement cost and performance effectiveness.

Fifth, develop a comprehensive picture that redeploys your team's expertise to critical tasks that carriers and management value. Then seek management buy in.

Don't let back office mediocrity hijack your program, career, and industry reputation. If you can't get internal support to improve it, look outside for qualified help. ☐

John A. Gentle is president of John A. Gentle & Associates, LLC, a Supply Chain consulting firm assisting shippers, carriers, 3PLs, and distribution centers in the management of their Logistical disciplines. A recipient of several industry awards, he has more than 40 years of experience in transportation, warehousing, and materials management. He can be reached at jag@RelaTranShips.

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