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Logistics MANAGEMENT®

July 2013

2013 STATE OF LOGISTICS

New order, new opportunities on the rise

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SPECIAL REPORT:


›› IT'S 10 O'CLOCK. ‹‹
DO YOU KNOW WHAT
YOUR LIFT TRUCK IS DOING?

LM management UPDATE

AN EXECUTIVE SUMMARY OF INDUSTRY NEWS

◆ **USPS remains committed to reducing financial burden.** In a Webcast last month, United States Postal Service (USPS) Chief Financial Officer and Executive Vice President Joseph Corbett explained that the service's financial outlook has "created a crisis of confidence" in the eyes of the marketplace. He added that the USPS "needs to, as quickly as possible, resolve the issues underlying these losses and move forward from a position of financial strength and continue to deliver mail in a quality way and gain the confidence of our customers and employees." He explained that the USPS' five-year plan, which was rolled out in 2012 and whose chief objective is to reduce annual costs by at least $20 billion by 2015, is not stagnant by any stretch and that USPS' efforts to become more efficient and customer-focused are accelerating.

◆ **FedEx set to retire selected aircraft.** In a move geared to modernize its aircraft fleet and improve the global network of its FedEx Express segment, global transportation and parcel bellwether FedEx said it has permanently retired or will accelerate the retirement of 86 aircraft and 308 related engines. FedEx said that the aircraft and related engines being permanently retired include: two A310-200 aircraft and four related engines; three A310-300 aircraft and two related engines; and five MD10-10 aircraft and 15 related engines. The company also said it will accelerate by several years the retirement of: 47 MD10-10 aircraft and 172 related engines; 13 MD10-30 aircraft and 55 related engines; and16 A310-200 aircraft and 60 related engines. "We are modernizing our aircraft fleet by retiring older, less efficient, and less reliable aircraft and replacing them with modern aircraft to build a fleet with higher reliability and better cost efficiency," said David Bronczek, president and chief executive officer of FedEx Express.

◆ **Mixed signals lead way for Cass report.** The most recent edition of the Cass Information Systems Freight Index showed that freight shipments and expenditures were mixed. May shipments, at 1.132, were down 0.3 annually and up 2.9 sequentially compared to April. May represents the 34th consecutive month shipments topped the 1.0 mark since May 2010, when shipments moved above the 1.0 mark for the first time since November 2008. And freight expenditures at 2.383 were down 2.6 percent annually and up 0.04 percent compared to April. The Cass Freight Index report observed how these mixed results are an accurate reflection of the ongoing stop and start nature of the economy, citing declining employment and weak job creation, a higher GDP than this time a year ago, a slowing manufacturing sector, eroding inventories, coupled with increasing inventory-to-sales ratios and increased container traffic at ports that's in line with increased domestic shipments and up and down import and export activity.

◆ **Ag shipper's survey.** The results of the Agriculture Transportation Coalition's (AgTC) *2013 Ocean Carrier Performance Survey* were announced last month at the 25th Annual Meeting of the AgTC in San Francisco, with APL winning top ranking. All annual survey responses were aggregated, and the individual responses discarded, to ensure confidentiality of each shipper's response. This year's survey was expanded to gain more insight into agriculture and forest products shippers who completed it, said Peter Friedmann, executive director of the AgTC, adding that carriers were expected to be less tactical and more strategic in 2013. "Instead of looking just to the next quarter, ocean carriers would do well to follow the railroads' model of looking five years out to the future," said Friedmann. "Ocean carriers need to better understand the agriculture exporters' business, the global demand for their products, global competition for their exports, and thus, have a better idea of the long term demand for capacity."

◆ **Panjiva reports strong global trade numbers.** Data released by Panjiva, an online search engine with detailed information on global suppliers and manufacturers, indicated that signs of economic growth were prevalent. The firm reported that U.S.-bound waterborne shipments were up 8 percent annually in May and up 5 percent compared to April. On a year-to-date basis,

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LM management UPDATE

AN EXECUTIVE SUMMARY OF INDUSTRY NEWS

Panjiva said shipments are up 4 percent. The number of global manufacturers shipping to the U.S in May was up 16 percent compared to May 2012 and up 5 percent compared to April. "I think these numbers are pretty good overall," said Panjiva CEO Josh Green. "We have seen some significant fluctuation in these numbers from month to month, but the year-to-date shipment number is encouraging. Trade feels relatively healthy, and the next interesting moment will be in the next month or two as corporate buyers start placing their bets for the holiday season."

◆ **TIGER grant funding remains in demand.** The Department of Transportation (DOT) said in June that applications for 2013 TIGER grants total more than $9 billion, which crushes the $474 million DOT has allocated for it. TIGER is short for the DOT's Transportation Investment Generating Economic Recovery (TIGER) program that has the objective to ensure that economic funding is rapidly made available for transportation infrastructure projects and that project spending is monitored and transparent. This round of TIGER nearly triples the $3.1 billion in funding doled out in the previous four rounds, which went towards 218 projects. DOT said that during the previous four rounds, DOT received more than 4,500 applications for TIGER, which cumulatively requested north of $105.2 billion for national transportation projects.

◆ **Ports hope for reform.** For the second year in a row, the U.S. House Energy & Water Subcommittee, chaired by Rep. Rodney Frelinghuysen (R-NJ), has approved a $1 billion draw from the Harbor Maintenance Trust Fund. The money is for maintaining America's deep-draft navigation channels and harbors and is a part of the U.S. Army Corps of Engineers' fiscal 2014 funding bill. If passed by the Senate and enacted into law, this would be the largest regular annual appropriation for navigation maintenance. The bill by the House Appropriations Committee stated that, in prioritizing funding, the subcommittee chose to "invest in critical infrastructure projects to protect lives and property and support economic growth." The American Association of Port Authorities (AAPA) stated that this funding amount in a tightly constrained budget is a "positive step forward."

◆ **Clean cargo imperative.** As we've reported, sustainability strategies for leading ocean cargo shippers include targets to dramatically reduce carbon dioxide emissions from their global logistics networks and to prioritize working with like-minded supply chain partners. BSR, a global consultancy with hundreds of international shippers in its network, is advancing this mission with its "Clean Cargo Working Group" (CCWG), an international business-to-business initiative made up of leading cargo carriers and their customers dedicated to environmental performance improvement in marine container transport. Registration is now open for the BSR Conference 2013 "The Power of Networks" that will take place November 5-8 at the Hyatt Regency Embarcadero in San Francisco. "We live in a networked world in which connections among businesses, industries, and sectors are more powerful than ever," said BSR President and CEO Aron Cramer.

◆ **Procurement pays.** IBM recently reported that companies with high-performing procurement organizations are driving better bottom line results. According to the study, these organizations report profit margins of 7.12 percent as compared to just 5.83 percent for companies with low-performing procurement organizations. Also, companies with top performing procurement organizations report profit margins 15 percent higher than the average company—and 22 percent higher margins than companies with low performing procurement organizations. The *2013 Chief Procurement Officer Study* was conducted by the IBM Institute of Business Value (IBV) and highlights the business impact that Chief Procurement Officers (CPOs) can have on a company's competitive advantage and profitability. It explores how top-performing CPOs can increase their influence over strategic business imperatives by driving efficiency and performance, introducing innovative new processes and uncovering new insight into supplier networks that have a real, measurable effect on the bottom line. □

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SPECIAL REPORT

Panama Canal Expansion Update: When the "tipping point" becomes reality

Once completed in late 2014 or early 2015, the expansion project will accommodate vessels more than twice the size of current Panamax ship. However, the projected overall impact on shippers, carriers, ports, and service providers appears to be up in the air. **68S**

SPECIAL SUPPLY CHAIN REPORT

Top 10 trends in the next 10 years

What trends will affect the next generation of supply chains? That's a question more and more supply chain professionals are asking themselves. The 10 trends offered here are validated with executive input from senior executives across different industries. By understanding, anticipating, and acting upon these trends, the author believes companies can greatly enhance the value of their supply chain operations. **58S**

WEB EXCLUSIVE

State of Cargo Security: Higher stakes in the risk vs. reward scenario

Global logistics professionals are increasingly encouraged to undergo a systematic analysis of their exposure to risk and total landed cost related to a variety of procurement strategies. Often overlooked, however, is the financial health of their sub-tier suppliers.
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Peerless MEDIA, LLC

New order, new opportunities

LOOKING FOR A GREAT WAY TO KICK OFF your summer reading? Well, look no further than page 28. Once again, we've devoted a sizable portion of our July issue to putting the *Annual State of Logistics Report* into context for shippers.

As many are aware, the *Annual State of Logistics Report* represents the clearest snapshot available of the economy over the previous year and offers shippers a summary of the key trends that will be driving the transportation and logistics industry.

The release of the report—which took place on June 19th at the National Press Club in Washington, D.C.—sparks our annual investigation into the details of the findings and sends our beat reporters in search of where each transportation mode currently stands in terms of service, capacity, and rates. In short, this issue pulls together just about all of our staff in the creation of a definitive market snapshot.

This marks the 24th year the report has been released, and the 10th year that it's been authored by Rosalyn Wilson, a 30-year industry veteran who's now a senior business analyst with Delcan Consulting where she focuses on the progress of the overall supply chain industry. Wilson has been working on the report since 1994 and assumed full responsibility in 2004 following the passing of the report's creator, Robert Delaney.

Upon a first glance at this year's report, which neatly summarizes total business logistics costs over the course of 2012, you may feel that Wilson's work has no new tale to tell. In fact, many of the same trends dominating the environment in 2012 are the same trends the market has been managing through since 2010—lack of sustained economic growth; high unemployment with fairly weak job growth; and inconsistent freight volumes, capacity, and rates that have forced shippers to become mode agnostic.

However, it's this lack of any true market differentiation over that period of time that's at the heart of a rather upbeat story, one that many savvy logistics managers should be proud to hear. It's come to the point, says Wilson, where these reoccurring themes have become so engrained that they've become our "new normal" and have ushered in "a new way of life for our economy and the logistics and supply chain sectors."

This "new order," as Wilson refers to it, is characterized by the fact that logistics professionals have seized new opportunities to drive costs out of the overall system. She says they're doing an excellent job of getting the most out of extremely lean full-time staffs; they've excelled at managing less predictable freight service as volumes rose but capacity stayed flat; and they're doing extremely well at planning around longer shipping times when moving freight by sea and rail.

The new order has amplified the challenges facing logistics practitioners, and according to our John Schulz, the author of this month's cover story "New order, new opportunities on the rise," the numbers clearly prove that they've been up to the task.

"In 2012, business logistics costs stayed steady at 8.5 percent of GDP, the same level as they were in 2011," says Schulz. "But more importantly, the cost of U.S. business logistics system in 2012 only rose 3.4 percent, less than half the increase from 2011. So, any way you slice it, today's savviest logistics practitioners continue to drive costs out the transportation system and add value to their company's bottom lines—and they're being treated with the respect they deserve."

Michael A. Levans, Group Editorial Director
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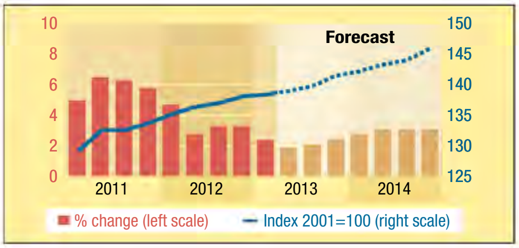
price TRENDS

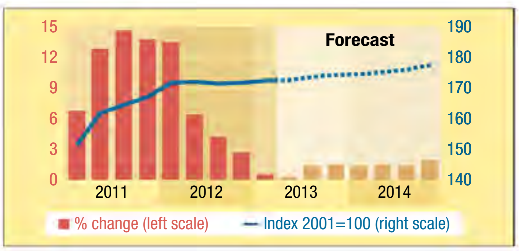
Pricing across the transportation modes



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
General freight - local	-0.5	-0.5	2.5
TL	-0.2	-0.1	-0.8
LTL	-1.1	-0.8	3.0
Tanker & other specialized freight	-0.1	0.2	0.4

TRUCKING

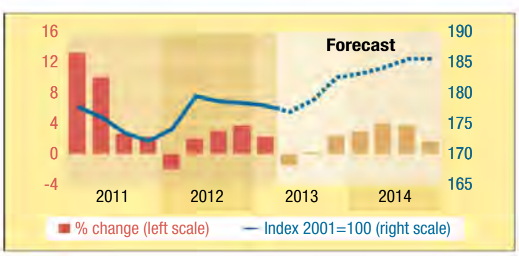
LTL truckers of general freight report the largest monthly price cuts, down 1.1% in the most recent survey and down 0.4% in the previous month. At the same time, truckload prices fell 0.2% and 0.8%. With transaction prices falling from month-ago in all trucking categories, including tankers and other specialized freight, our inflation forecasts have been revised downward in 2013, but adjusted upward in 2014. We forecast average prices in 2013 to increase 2.8% and 1.2%, respectively, for LTL and TL service. Somewhat steeper price hikes will follow this in 2014, with LTL tags up 3% and TL up 2.3%. We forecast average annual prices in the entire trucking industry to accelerate 2.2% this year and 3% in 2014.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
General freight - local	0.1	0.3	0.1
Air freight on chartered flights	-4.5	-7.0	-5.2
Domestic air courier	-1.4	2.5	2.5
International air courier	-1.3	1.3	0.8

AIR

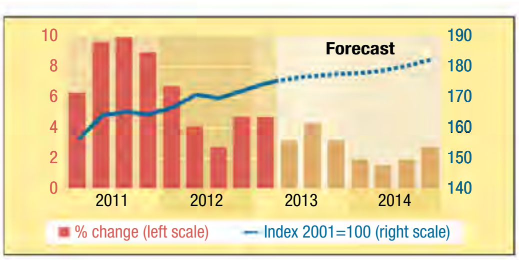
U.S. airlines flying cargo in the belly of their scheduled planes report prices at a virtual standstill in April and May. Looking at year-over-year data, we see their prices slowed to a 2.2% growth rate. Decreases in airfreight traffic have contributed to a course correction. In the 12-month period ending May 2011, the inflation rate for this category rocketed 10.4%. One year ago, prices were flying at a still higher altitude, up 12.9%. Meanwhile, turbulence beset airliners moving freight on nonscheduled charter flights. Here, after climbing 6.3% in April, prices declined 4.5% in the latest survey. The inflation flight plan for scheduled airfreight service calls for prices to rise 0.9% in 2013 and 1.5% in 2014.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
Deep sea freight	-2.3	-1.5	-3.1
Coastal & intercoastal freight	0.5	0.4	-1.9
Great Lakes/St. Lawrence Seaway	-0.3	5.4	6.5
Inland water freight	-0.5	-4.8	-2.9

WATER

Waterborne freight prices descended 2.1% from year-ago and drifted down 1% from month-ago, according to recent surveys of U.S.-owned barges and coastal tank vessels. Barge accidents and floods interfered with river operations in April and May. As a result, vessel operators' negotiation leverage for enforcing price hikes likely suffered. Indeed, inland waterways freight companies report their prices sank 2.9% from same-month-year-ago and dipped 0.5% from month-ago levels. Our forecast for this industry calls for prices to decline 0.6% in 2013 before increasing 4.6% in 2014. In the waterborne freight business overall, the inflation forecast has been revised downward to 0.8% this year and remains 3.1% next year.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
Rail freight	-0.2	1.9	2.2
Intermodal	-0.7	0.9	1.1
Carload	-0.1	2.1	2.3

RAIL

With rail freight traffic increasing about 3% from April to May, it's no surprise that, at the same time, the latest surveys indicate carload rail prices increased 2.3% and intermodal tags chugged up 1.1%. Looking at the first five months of the year, we saw carload and intermodal prices increase 4.4% and 2.7%, respectively, from same-period-year-ago. An oil boom in North Dakota means significant new business for railroads hauling product to West Coast refineries and to marine vessels for export markets. As a result, the forecast for rail transaction prices may have to be revised upward in coming months. In the meantime, however, the price forecast is unchanged: up 3.8% in 2013 and up 2% in 2014.


LET THERE BE WORK.
LET THERE BE BLUE COLLARS AND STEEL TOES. LET SWEAT-SOAKED BROWS AND BACKBREAKING FORTITUDE BE THE FUEL THAT PUTS FOOD ON OUR TABLES, ROOFS OVER OUR HEADS, AND FRESHMEN IN COLLEGE. MAY OUR WORKING DAYS FOREVER END DRAINED, BUT ACCOMPLISHED. AND MAY WE GREET EACH DAY WORTHY FOR THE WORK AHEAD.
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Also:

LTLs take mid-year rate hikes as carriers fight skyrocketing costs

Despite the recent series of general rate increases (GRIs), analysts question the relevant impact this "anachronism from a bygone era" will have on shippers.

By John D. Schulz, Contributing Editor

WASHINGTON, D.C.—'Tis the season for general rate increases (GRIs) in the less-than-truckload (LTL) industry—those annual hikes for non-contract shipments that hardly any shipper in the nation pays.

"It's a nonsensical pricing structure that has no relevance to cost efficiency," said Satish Jindel, principal of SJ Consulting, a firm that closely tracks the LTL industry.

About the only thing that's changed over the years has been the timing. A couple of decades ago, GRIs used to occur during the first week of January. Now, they seem to mostly occur mid-year. But in an industry where big shippers routinely win volume contract discounts of between 60 and 70 percent, increasingly GRIs are looked upon as an anachronism from a bygone era.

Jindel estimates that between 75 percent and 80 percent of LTL freight moves under contracts, which are immune from GRIs. Ironically, Jindel says that some of the biggest beneficiaries of these GRIs are the LTL's main rivals and biggest users of LTL capacity, brokers and third-party logistics providers (3PLs).

"Third party providers and brokers try to create value by saying to unsophisticated shippers: 'Here's what's going on the market place, and here's how we can create value.' These shippers are not as successful in whittling down accessorial and other charges," said Jindel. "The brokers make money not just on spread in LTL rates, but by getting accessorial fees that carriers are not that good at collecting."

Here are the latest LTL rate hikes, mostly effective July 1: YRC Freight, UPS Freight, Con-way Freight, and ABF Freight System all took 5.9 percent rate increases. ABF did report that the effect of its GRI would vary on specific lanes and shipment, a hint that larger discounting might be evident. FedEx Freight announced a mid-year rate hike of 4.5 percent also set to take effect July 1.

About the only difference was the timing of those increases. UPS Freight said that they were effective May 28; YRC Freight's took effect June 3; ABF said its hike went into effect June 10. UPS added its increase applies to minimum charge LTL, truckload rates, and accessorial charges.

Others, including Estes Express and A. Duie Pyle, said that they were strongly leaning toward mid-year rate hikes as well.

"While the bulk of our business is unaffected by the GRI, it's still a relevant event," said Steve O'Kane, president of A. Duie Pyle. "We have thousands of smaller customers moving shipments on tariff rates, and the GRI is the most efficient way for us to update

these rates to reflect the increased costs of doing business."

While the GRI will make an impact on less than one third of the shipments Pyle handles, O'Kane said that the change will touch about 60 percent of its active customers it hauls for on a somewhat regular basis.

What may be most of interest to shippers is the list of companies that no longer take GRIs. Pitt Ohio stopped asking its shippers to take a blanket across-the-board rate hike about a dozen years ago.

Officials at privately held Pitt Ohio, which is one of the country's most innovative and profitable trucking companies, said that instead of a blanket rate increase, it prefers to concentrate on increasing its lowest-yielding and most unprofitable freight.

So, the bottom-yielding 15 percent of Pitt Ohio customers could likely see a heavier rate increase while its best customers are likely to see no increases—or even a slight reduction, depending on how those customers' individual freight fits into Pitt Ohio's overall network.

Increasingly, analysts and even some LTL executives are looking at GRIs as a fairly useless remnant of the industry's regulated days. John Larkin, trucking analyst for Stifel Nicolaus, recently said that truck pricing had become more "technical/surgical" as use of transportation management systems has become more widespread.

"The days of shippers living year after year with rates significantly in excess of market rates appear to be numbered," Larkin said.

REGULATION

CBP set to roll out additional carrier requirements of 10+2 in July

WASHINGTON—In early July, the U.S. Customs and Border Protection (CBP) will commence implementation of the liquidated damages phase of the Import Security Filing (ISF), which is commonly known as the 10+2 program.

The program requires importers and carriers to electronically submit additional information on cargo at least 24 hours before ocean freight is loaded onto a vessel bound for the U.S. This additional information requires importers to provide 10 data elements and vessel carriers to provide 2 data elements on containers and their cargo to CBP. This adds to the information available to CBP and improves its ability to identify containers that may pose a risk for terrorism.

"The ISF and Additional Carrier Requirements are part of CBP's layered enforcement strategy," said Acting Commissioner Thomas Winkowski. "CBP works collaboratively and collectively with the other agencies and the trade to maintain the highest level of security and safety for our nation while facilitating legitimate trade."

CBP added that, effective July 9, it may issue liquidated damages—a penalty secured by a bond—of $5,000 per violation for the submission of an inaccurate, incomplete, or untimely filing. And it said that if goods for which an ISF has not been filed arrive in the U.S., CBP may withhold the release or transfer of the cargo.

What's more, for carrier violations of the vessel stow plan requirement, CBP said it may refuse to grant a permit to unlade for the merchandise, with non-compliant cargo potentially being subject to further inspection on arrival.

A cargo security trade expert recently told *Logistics Management* that this mandate has been long overdue. "For many shippers, it may be a rude awakening," said Albert Saphir, president of ABS Consulting. "I have seen many slack off with ISF compliance, including brokers and forwarders who became less and less accurate with managing the ISF process as CBP was really not enforcing it yet."

Saphir said that those responsible importers that spent a lot of time and effort on creating a compliant ISF program "will receive the benefit they deserve when those importers not compliant will finally need to get with the program or face significant monetary penalties. Fair is fair."

Saphir added that he's convinced that the CBP will take a careful and measured approach to penalties. And while he doesn't expect an avalanche of penalties, he does warn of a steady flow of "well qualified" and "deserving" penalties on importers that simply fail to play by the rules.

Earlier this year, the

National Industrial Transportation League cited customs and international trade law firm Sandler Travis: "CBP is expected to issue by the end of May a proposed rule that would make various changes to increase the accuracy and reliability of the advance information submitted under the importer security filing, or 10 + 2 rule."

It added that while fines for non-compliance were set at $5,000 per incident, Sandler Travis said that "CBP has not strongly required full compliance and that the proposed rule could set forth the agency's intention to do so and establish standards under which full compliance could take place."

ISF went live in January 2010, following a January 2009 interim final rule, which included a delayed enforcement date 12 months after the interim final rule took effect. During this one-year period, CBP said it would "show restraint in enforcing the rule…and take into account difficulties that importers may face in complying with the rule as long as importers are making a good faith effort and satisfactory progress toward compliance."

—Jeff Berman, Group News Editor

EXPRESS

DHL officially inaugurates Americas hub at CVG

ERLANGER, Ky.—Express delivery and logistics services provider DHL recently announced that it has officially inaugurated its expanded $105 million Americas hub at the Cincinnati/Northern Kentucky (CVG) Airport.

This inauguration represents the culmination of a four-year plan for DHL to augment its CVG facility in an effort to meet the growing international shipping demand of its large multinational corporations as well as its small business customers.

"The completion of the CVG hub is a further milestone in the continuous expansion of our international express network," said Frank Appel, CEO Deutsche Post DHL. "We are growing, building for the future, and providing U.S. companies with the logistics support they need to succeed globally."

DHL officials said that the new enhancements to its Americas hub include a new 180,000 square-foot sorting facility specifically designed to accommodate larger express shipments; an expanded south ramp for additional wide-body aircraft; an employee and pilot building; and a facility-wide information technology upgrade.

A DHL spokesman told *Logistics Management* that this expansion was driven by the successful realignment of its business to focus exclusively on international services and growth in its import and export business, leading to "a need to continue to adjust its operation to meet the growing demands of international shipping customers."

The spokesperson added that the CVG expansion positions DHL's largest facility in North America for continued growth in package volume. But even with this expansion growth the company has no plans to return to serving the U.S. domestic market.

DHL moved its U.S. hub operations to CVG in July 2009. DHL's U.S. business focuses on international import and export offerings in major metropolitan areas. It ceased U.S. domestic-only air and ground services at the end of January 2009, due largely to the ongoing uphill battle it faced competing with industry giants UPS and FedEx for market share.

And since DHL reopened operations at CVG in 2009, DHL said that is has seen its international business grow dramatically, benefitting not only DHL but the local community with job growth and additional flights.

DHL said that this hub resides "at the heart" of the DHL U.S. network with flights connecting customers from more than 220 countries and territories worldwide to the entire U.S., adding that the CVG hub completes the backbone of the DHL intercontinental network along with its Hong Kong and Germany hubs.

—Jeff Berman, Group News Editor

DHL recently inaugurated its expanded $105 million Americas hub at the Cincinnati/Northern Kentucky (CVG) Airport.

ENERGY

Are LNG tax incentives enough to wean trucking industry off diesel fuel?

WASHINGTON, D.C.—Washington is pushing a tax break that might make liquefied natural gas (LNG) economically competitive with diesel, although a skeptical trucking industry is still taking a wait-and-see approach on the clean, domestically produced fuel.

Two Congressmen—Reps. Mac Thornberry (R-Texas) and John Larson (D-Conn.)—recently introduced a bill that would equalize disparity between the tax the federal government levies on diesel fuel and on LNG. Called the LNG Excise Tax Equalization Act of 2013, it provides what Thornberry called "a fair, market-centered solution" to fix the tax disparity between diesel and LNG.

"I think this change will encourage more private-sector investment in LNG infrastructure and production, and that will be a real positive effect on our economy," Thornberry said.

A gallon of LNG is taxed at the same rate as diesel—24.3 cents a gallon at the federal level. But because it takes 1.7 gallons of LNG to produce the same amount of energy as a gallon of diesel, the effective tax on LNG is much higher than on diesel.

The American Trucking Associations estimates that in order to buy a quantity of LNG with the same energy equivalent as diesel, LNG buyers pay a levy of about 41 cents—or nearly 70 percent more in tax. The bipartisan House bill would effectively reduce the LNG tax to 24.3 cents—same as diesel.

Compressed natural gas (CNG) is already taxed that way but at the energy equivalent for gasoline. Because of that equality, CNG already is in widespread use by municipal vehicles, such as buses and trash trucks, but not by long-haul truckers.

A lack of a reliable national distribution infrastructure and limited number of engines currently in production that can use LNG are often cited by trucking fleets for their reluctance to convert away from diesel, even with current fuel prices stuck stubbornly near $4 a gallon.

Truckers say that while they're studying LNG for possible use in long-haul vehicles, there are significant hurdles before the industry converts away from diesel.

"Incentives will bring the days of LNG closer for us, but they are not here yet," said Steve O'Kane, president of LTL carrier A. Duie Pyle. "We're sitting on the sidelines due to the initial investment in the equipment, the difficulty in establishing our own fueling locations, and some of the requirements for maintenance facilities."

Trucking fleets are already coping with rapid cost increases in the typical Class 8 truck, which has risen to about $125,000 from $80,000 just five or six years ago. A truck equipped to run on LNG costs even more initially—and faces some higher maintenance costs over its lifetime, according to preliminary reports on their use.

"We prefer to perform our own maintenance and fueling, and right now both are prohibitive for us to accomplish," O'Kane said.

CNG proponents, like billionaire T. Boone Pickens, do have some arguments. They claim it's cheaper and more reliable than diesel, burns cleaner, and offers slightly better mileage. But mostly they are selling it on cost.

As Pickens said recently: "We have so much natural gas, we're going to see $5 diesel before we'll see $3 natural gas.

Today, the typical Class 8 truck burns approximately 25,000 gallons of fuel annually, getting 5.9 miles per gallon. Switching to compressed natural gas could save up to $20,000 per truck per year. CNG currently costs about $1.90 per gallon, about half the cost of diesel. This year the trucking industry is on pace to spend about $155 billion on diesel and gasoline.

LNG must be cooled to about minus 260 degrees Fahrenheit and carried in insulated tanks aboard trucks. Con-Way Inc. President and CEO Doug Stotlar has compared it to "hauling around a giant Thermos bottle on top of your trucks" to avoid loss through evaporation. However, LNG allows carriers to carry much more fuel in less space.

—John D. Schulz, Contributing Editor

POLICY

DOT announces members of National Freight Advisory Committee

WASHINGTON, D.C.—U.S. Department of Transportation (DOT) Secretary Ray LaHood announced the 47 members of the National Freight Advisory Committee last month.

The objective of the National Freight Advisory Committee, established in February, is to provide recommendations to the Secretary of Transportation on how DOT can improve its freight transportation policies and programs, which, it said, is critical to the nation's economy and key to helping the White House meet its goal of doubling exports by 2015.

"The strength of our economy and the strength of our national freight system go hand in hand," said LaHood in a statement. "The members of this committee understand firsthand the critical importance of freight movement, and their valuable insight will help ensure that our system is more secure and better connected."

The 47 members of the National Freight Advisory Committee are from outside the DOT, and the Deputy Secretary and Under Secretary of Transportation for Policy, as well as representatives from other Federal agencies with freight-related obligations, will serve as ex-officio members, the DOT said.

It added that the members come with various perspectives on freight transportation and represent various modes, geographic regions, and policy areas, saying that shippers and transportation and logistics services providers, labor representatives, safety experts, and government entities are all represented as well.

The members will serve two-year terms and meet at least three times per year. The first meeting took place on June 25 at the Department of Transportation and included an overview of MAP-21 Freight provisions and preliminary identification of NFAC activities.

The National Freight Advisory Committee was endorsed by various freight transportation experts when it was initially announced.

"This is a big deal and something we have asked DOT to do for some time," said Mort Downey, chairman of the Coalitions for America's Gateways and Trade Corridors (CAGTC) and former deputy Transportation Secretary under President Clinton. "As they proceed with their strategized freight plan, and with the long-term steps to carry out an effective freight program, such an advisory group can play a very critical role."

CAGTC Executive Director Leslie Blakey also applauded the effort. "Creation of this committee shows great leadership by the administration and serves as further evidence of their commitment to improving U.S. freight mobility," said Blakey in a statement. "This Committee will contribute practical experience to the process of implementing MAP-21 freight provisions, while helping to lay a path with creative concepts for freight in the next authorization."

—Jeff Berman, Group News Editor

OCEAN

Panama Canal expansion "lot of hype"

PANAMA CITY, PANAMA—The projected 2015 completion of the expansion and widening of the Panama Canal is causing a "lot of hype," but will not drive a major change in maritime shipping options, a top intermodal executive is predicting.

When the project to widen the canal is completed in 2015, longer and wider ships will be able to pass through its locks, allowing big manufacturers shorter access to ports on the Gulf of Mexico and the East Coast. However, Paul Svindland, chief operating officer at Pacer International and a former Maersk executive, says that "at end of the day expanding the Canal does not affect demand patterns on the East Coast."

Right now, Port of Baltimore is one of only two ports on the East Coast—the other is the Port of Virginia in Norfolk—that can handle the large, post-Panamax

cargo ships. Baltimore recently completed a major expansion, which included building a 50-foot berth and dredging the channel.

However, Svindland is predicting that the effect of the Panama Canal expansion will be more focused on giving maritime carriers greater options in the way they utilize their vessels, rather than changing domestic shipping patterns. "What I think you may see is a change in the carriers and the type of vessels they put in the market place," Svindland says.

The biggest impact on shippers may be on rates, Svindland adds. "Rates may soften because there will be (more) capacity."

Stevan Bobb, executive vice president and chief marketing officer at the BNSF Railway, aggress. "Whatever should shift to the East Coast already has shifted there," says Bobb. "We don't anticipate any substantial change, and it's up to us to provide the service from the West Coast ports to make sure it doesn't change."

Svindland and Bobb made their comments during a question and answer session following release of the 24th Annual State of Logistics Report.

—by John D. Schulz, Contributing Editor

Newsroom Notes
by Jeff Berman

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

China's economy is a mixed bag

AS THE GLOBAL ECONOMIC PICTURE REMAINS MURKY at best, a recent report in the *Wall Street Journal* (*WSJ*) observed that declining manufacturing output in China, the world's second largest economy after the U.S., is certainly cause for concern.

The *WSJ* reported that the preliminary HSBC China Manufacturing Purchasing Manager's Index dropped to 49.6 in May, down from 50.4 in April. Like the Institute for Supply Management's monthly Manufacturing Report on Business, a reading below 50 represents contraction, whereas a reading of 50 or higher represents growth.

China's manufacturing decline is the latest wrinkle in a year that has not matched up with expectations. The article explained that at the outset of 2013, economists expected 2013 to show stronger growth compared to 2012, noting that hopes are now fading due to a "global economic environment still struggling with Europe's lingering debt crisis and austerity measures and sluggish growth in the U.S."

What's more, it said that the Chinese economy is struggling under the combined weight of weak global demand and decelerating consumption at home, with a massive spending spree in lending at the beginning of the year adding to ongoing concerns.

Clarifying this element, the *WSJ* said that Q1 economic growth in China fell to 7.7 percent from 7.9 percent in Q4. Even though that figure is trending down, it is well above the current pace here in the U.S., which has been heavily affected by federal budget cuts and sequestration.

Even with the warning signs coming out of China, one spot of growth that still exists there is export growth, which the *WSJ* said was up 14.7 percent annually in April. Export growth has been reflected to a degree in West Coast port import data, but it's fair to say we'll get a truer picture in the next few months with Peak Season—if there is one—now on the horizon.

While it seems that China has finally joined the party of economic issues and concerns, it's not to suggest that things are going completely south on the economic front anytime soon. Josh Green, CEO of Panjiva, an online search engine with detailed information on global suppliers and manufacturers, said that China's economy—at a time when the global economic outlook is muted—is still a bit of a mixed bag.

"This has to do with the indicators we're seeing," says

"China's manufacturing decline is the latest wrinkle in a year that has not matched up with expectations.

Green. "It doesn't feel like we're facing imminent collapse or anything like that, and we don't see significant downside risks in the market. But we don't think global trade is taking off any time soon either, and modest growth is the trajectory we seem to be on."

Green adds that China currently seems to have its hands full in terms of managing an economy that's changing so rapidly. "More specifically to trade, there was talk of China losing its dominance in manufacturing, and our customers have talked of a desire of moving beyond China due to rising wages. Some say that the cost advantage is not as strong as it used to be."

However, Green adds that over the last decade or so, the Chinese manufacturing base developed a capabilities advantage that is proving to be durable; and as a result, companies are finding it harder than they thought to go elsewhere. "The capabilities that many companies have come to rely on in China's manufacturing base are simply not there in other emerging countries," adds Green. "So Chinese manufacturing appears to be going strong and is expected to continue for the foreseeable future." ☐

Moore on **Pricing**

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Ocean rates: Check the numbers

IN LAST MONTH'S COLUMN I FOCUSED ON THE volatility of domestic intermodal rail. I cautioned that shippers should expect pressure in major routes associated with import and export because ocean rates are in turmoil as world markets adjust to new capacity and an uneven economic recovery.

Ocean and rail are two different modes with different market characteristics. At least in rail you can expect 98 percent plus accuracy in invoicing once you make a deal with a carrier. But even with today's technological advances, ocean carriers continue to make errors on 10 percent or more of invoices according to Steve Ferreira, CEO of Ocean Audit, a leading ocean freight auditor.

I recently caught up with the globetrotting Ferreira and asked him what he sees happening right now in the intermodal portion of the ocean market: "While it seems likely that carriers will get some increases, the forecast that we're predicting is that carrier revenue gains will again be inconsistent. It seems that there's no authoritative consensus on how strong the market demand may be. That said, it's a guessing game on capacity holdbacks."

Ferreira's comments are consistent with what we've been reporting in *Logistics Management* and right on with what shipper contacts are telling me. The impact will continue to ripple through all modes in international moves as shippers look at total landed cost.

The consequence of selective rate hikes and changing capacity is that shippers need to be on their game in monitoring all the players in their major and minor shipping lanes. If you're a small volume shipper this can be really tough; so, heading advice from fellow shippers in shipper associations and third parties can be helpful.

On the invoice front, I recently worked with a mid-size shipper who, like many manufacturers, had a logistics and purchasing function negotiating freight and a separate finance function in another physical location processing payment. We quickly learned that complex ocean invoices were being paid with only a review of the math and with little oversight on accessorials and surcharges.

Ferreira recommends that shippers look to invoice accuracy first to capture freight savings. "One aspect to combat potential rate increases for beneficial cargo owners should be a focus on the accuracy of new invoicing associated with rate increases taken in new contracts," he says. "One major ocean carrier recently disclosed their invoice accuracy rate at 88 percent; and in most cases, the business team negotiating ocean freight pricing are not the same associates paying the invoices."

The consequence of selective rate hikes and changing capacity is that shippers need to be on their game in monitoring all the players in their major and minor shipping lanes.

He advises that if you're taking increases on your ocean freight pricing, it's best to mitigate them as best possible by ensuring your teams are using enhanced auditing rather than rubber-stamping invoices for payment.

The progress on including multi-component ocean, rail, and truck rates in transportation management systems has been slow. Many ERP-based systems are simply looking for one total landed cost to enter into a single price field. Accounts payable may be simply checking for a value within a range.

Shippers have historically relied upon third parties to review, adjust, or approve complex invoices. But it's important that you incorporate an integrated, team approach consisting of those with knowledge of the intent of the contract working along side of those with technical expertise and know the market well.

In this case, I'll quote a certain presidential candidate: "It takes a village." Shippers need to have resources that can negotiate a fair rate, monitor service levels, and, most importantly, pay only the correct charges. □

When something in your supply chain has you puzzled, get answers from the people who know.

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Innovation and Risk Management: Surprisingly symbiotic

Some large companies believe that their commitments to risk management stifle innovation. Many are also convinced that blue sky innovation involves too much risk, too much capital, and too little structure—that it's not possible to mimic small or startup businesses, whose efforts are buoyed by highly flexible operations.

The net effect is that when it comes to innovation, big companies often settle for conservative approaches such as those enabled by stage-gates. Unfortunately, stage-gate processes are classic innovation killers. Designed to reduce uncertainty as exposure to risk grows, stage-gate processes mostly ensure that only weak, incremental ideas emerge from the funnel.

Stage gating aside, the real issue is that innovation and risk sensitivity really aren't incompatible. Accenture recently studied the 60 U.S. publicly traded businesses that are included on the Forbes list of most innovative companies. The key benchmark was a company's beta value: the measure of its share price volatility relative to the market's overall volatility. A beta of 1 indicates that a company's share price moves in line with market fluctuations.

Accenture found that the beta of Forbes' most innovative companies averaged only 1.1—hardly riskier than their less innovative peers. We also found no correlation between a company's beta and its position on the list. In other words, a higher innovation ranking doesn't translate into higher risk.

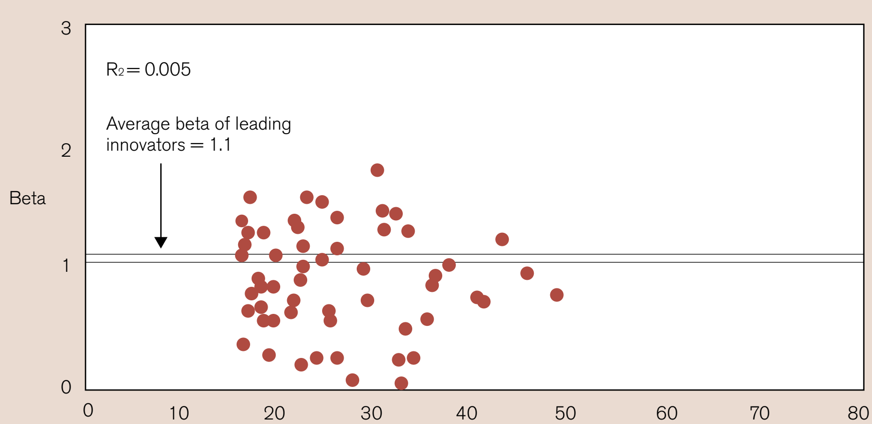
The study's clear implication is that innovation is less risky than many companies believe. So why are so many businesses unwilling to "risk" developing truly new products and services? Several clues can be gleaned from the venture capital business—arguably the sector that is most adept at driving innovation and managing risk.

Imagine a VC firm that uses proposals and meetings to winnow down 20 ideas to only one or two, and then places all its bets on the two survivors—highly unlikely. Instead, most venture capital firms create a portfolio of investments and manage them through the insights gleaned from the results of each. They know that a lot of those experiments will fail, but they leverage the knowledge gained from successes and failures to make the overall business profitable.

The point here is that failures can be essential building blocks and that fault tolerant cultures often drive innovation. Unfortunately, most companies only celebrate success. Rarely do people in large enterprises rise in the ranks with a failed experiment on their résumés—even if the failures provided insights about future opportunities or kept an organization from moving in a dangerous direction.

Grey Group, recently named one of the "50 Most Innovative Companies" by *Fast Company* magazine, thinks differently. The 10,000-employee agency offers a "Heroic Failure" award, which it grants to clever ideas that nonetheless didn't work. Surepayroll.com, the number one online payroll company, takes a similar tack. It offers a "Best New Mistake" award to smart, well-intended employees who are trying to do a good job, but nonetheless made a mistake and learned from it.

Comparing the equity beta to the innovation premium of leading U.S. innovation leaders



Source: Accenture

In addition to fault tolerant cultures, a second innovation cornerstone is flexibility—the willingness to become something different. In the 1970s, Monsanto (#16 on the Forbes innovation list) realized that genetic modifications could become very important to its seed business. However, these modifications carried a range of risks, which Monsanto helped mitigate by creating a portfolio of experiments beginning with careful investments in biotechnology companies.

With the traction, knowledge and experience gained from those experiences, Monsanto then opened its Life Science Research Center. By the 1990s, Monsanto was busily acquiring biotech delivery vehicles and enabling technologies. Today, biotech anchors the company's highly successful seed business.

Speed is the third cornerstone. Companies that excel at rapid experimentation and agile development increase their chances of building innovation portfolios without increasing risk. The idea is to shorten learning cycles, recognize failures early and make timely course corrections.

When Salesforce.com (#1 on the *Forbes* innovation list) was launched in 1999, it had only a few people in its R&D department, but was issuing four major software releases each year. Five years later, the R&D staff had grown to 200, but the number of releases had slowed to one per year.

"Smart risk management isn't the innovation inhibitor most companies believe it to be. More often than not, the barriers to innovation are inflexible, over-conservative processes and cultures.

In 2006 Salesforce.com replaced its stage-gate process with a faster, more agile approach: using cross-functional teams that work iteratively with the market through frequent tests. The company's innovation prowess quickly returned to the high-octane levels of its early years.

Smart risk management isn't the innovation inhibitor most companies believe it to be. More often than not, the barriers to innovation are inflexible, over-conservative processes and cultures. ☐

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

The Panama Canal and natural gas markets

THIS YEAR MARKS the centennial anniversary of the opening of the Panama Canal. And as I write, laborers are expanding the canal so that it can accommodate vessels that are 25 percent longer, 53 percent wider, and whose draft is 23 percent deeper. By accommodating these larger vessels, the expansion of the Panama Canal, scheduled to be complete in 2015, could have a significant impact on natural gas markets in the U.S. A bit of history explains why.

Shortly after being sworn in as the successor to President McKinley, who was shot and killed in September 1901, Theodore Roosevelt delivered a speech to Congress in which he emphasized the need for a canal that would allow the Navy's Pacific and Atlantic fleets to become one.

At the time, the Isthmus of Panama was part of Colombia. But under U.S. direction and support, a coup was staged in November 1903, and Panama was born. Shortly thereafter, an agreement was signed that granted the U.S. rights to the Panama Canal Zone, and the U.S. embarked on an ambitious project to dam the Chagres River, dig a cut from one side of the country to the other, and build what would be the largest set of canal locks ever constructed.

Ten years later, steam shovels digging from the Atlantic and Pacific sides met, and the Panama Canal officially opened to commercial traffic on January 7th, 1914. Freight volumes were initially suppressed by the outbreak of World War I as well as technical issues that caused frequent closures, but by the summer of 1920, the canal opened to free passage of civilian ships.

Impacts were felt immediately by transcontinental railroads because the cost to ship oil and lumber from the West Coast to East Coast markets was significantly reduced.

At the time, there was a relative glut of oil and fuel in California, and prices were significantly lower in California than they were elsewhere in the country. According to the research of Noel Mauer and Carlos Yu, authors of "The Big Ditch," California oil prices averaged 61 pecent of the East Coast price before the canal opened, and 85 percent after it opened. This shift is attributed to the physical arbitrage made possible by the opening of the Panama Canal.

Fast forward a century or so, and we see that the widening of the Panama Canal is serendipitously timed with a surge in U.S. production of natural gas, much of which is being produced in Texas.

In 2007, when the canal expansion was proposed, the shale gas revolution was in a nascent state. At the time, the U.S. was preparing its infrastructure to accommodate long-term imports of liquefied natural gas (LNG). Between 2007 and 2012, however, domestic natural gas production grew by roughly 25 percent, and the glut brought natural gas prices to historical lows. Meanwhile, oil prices have remained high (averaging more than $100 per barrel), and carriers across the spectrum of modes are now considering supplementing their fleets of oil-powered trucks, trains, and boats with those powered by natural gas.

The price differential that has emerged between oil and natural gas is unique to the U.S. market, and declines in U.S. natural gas prices have not been mirrored by natural gas markets outside of North America. The geographic price differential that has emerged as a consequence of the shale gas revolution persists to this day, and it continues to inspire investors who are eager to take advantage of the opportunities offered by physical arbitrage.

Certainly the lure of purchasing inexpensive U.S. natural gas and transporting and selling it to Asia, where natural gas is three to four times more expensive, is great. But doing so requires the construction of liquefaction plants that supercool natural gas and cause a phase shift from a gaseous to a liquid state.

In 2007, the only LNG terminal projects being reviewed by U.S. federal authorities were proposals for regasification plants that would receive imported LNG from Qatar, Australia, Indonesia, or some other LNG exporting country. Today, the vast majority of proposals are to build export facilities.

Of the 20 proposed LNG liquefaction plants under review today, 80 percent are planned for the Gulf Coast. Currently, there is no established LNG trade through the Panama Canal due to the size constraints. The wider locks, however, will be capable of accommodating more than 80 percent of the world LNG fleet. If the Panama Canal were not expanded, Gulf-based LNG liquefaction plants, operations that are eager to sell LNG to Japan where LNG prices are indexed to crude oil, would need to route tankers through the Suez Canal. By routing through the Panama Canal, the journey from the Gulf Coast to Japan would be shorter by nearly 5,400 nautical miles, which at 19.5 knots, pencils out to a transit time savings of 11.4 days.

In short, the transit savings associated with a bigger, better Panama Canal make the already attractive investment in a Gulf of Mexico LNG export facility significantly more attractive, and if approved and built, LNG exports will exert upward pressure on domestic natural gas prices, just as they did in California in the 1920s. It is difficult to say whether the oil to natural gas price differential will be so affected as to negate the financial benefits of converting all or part of a fleet to natural gas power plants, but the lesson from a century ago suggests the impact could be significant. □

New order, new opportunities on the rise

New state of logistics translates into new opportunities for shrewd managers who can leverage their solid transportation relationships into value for their companies.

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

There's a "new order" evolving in the logistics and transportation arena, one that's amplifying the challenge of securing capacity, yet one that will highlight the value of having a shrewd logistician at the helm of a company's shipping decisions.

Today's savviest logistics practitioners are driving out costs from the transportation system and creating new "omni-channel" distribution networks designed to take advantage of customers' changing buying habits. And to accommodate the ever-finicky consumer, they're no longer making decisions based on modal "silos." Instead, shippers are becoming "modal agnostic," seeking capacity when and where it makes the most economic sense for their operations.

In fact, the results of the Council of Supply Chain Management Professionals' *24th Annual State of Logistics Report*, co-sponsored by Penske Logistics, shows that the sharpest logistics management professionals are saving their companies millions in transport, warehouse, and shipping costs.

According to the report, logisticians and supply chain professionals have once again driven inefficiencies out of the business transportation system. Last year, business logistics costs stayed steady at 8.5 percent of gross domestic product (GDP), the same level as they were in 2011, the report says. That compares to about 17 percent of GDP back in 1979, the year before trucking was economically deregulation, allowing innovation to flourish.

According to the report, the cost of the U.S. business logistics system rose 3.4 percent in 2012, that's less than half the increase from 2011 and still short of the peak 2007 level. Total business logistics costs were $1.33 trillion, up $43 billion from 2011.

Inventory carrying costs and transportation costs rose "quite modestly" in 2012, according to Rosalyn Wilson, author of the *24th Annual State of Logistics Report*. Inventory carrying costs rose 4 percent while transportation costs were up only 3 percent, thanks to weak and inconsistent shipping volumes and strong blowback by shippers for carriers to hold rates.

"Logistics costs as a percentage of GDP in the U.S. compares quite favorably to that of our trading partners," says Wilson. "Slow economic growth has kept the percentage low, but the supply chain sector has made great strides in productivity, asset utilization, and inventory management in the past three years." These supply chain management improvements will continue even as higher volumes return to the market place, Wilson predicts.

New normal, new options

Logisticians and supply chain experts have been coping with a new economic paradigm since the Great Recession ended in 2009. This has caused changes in supply chain options as well as other economic realities. Wilson noted that slow growth and lackluster job creation caused the global economy to wallow in mixed levels of recovery.

"You're probably thinking that there's not been much to celebrate," says Wilson. "Perhaps it's time to ask: Is this the new normal?"

In her presentation, Wilson said that she believes we're experiencing a "new order" of elements that are translating into a economic paradigm that's strongly affecting the logistics and

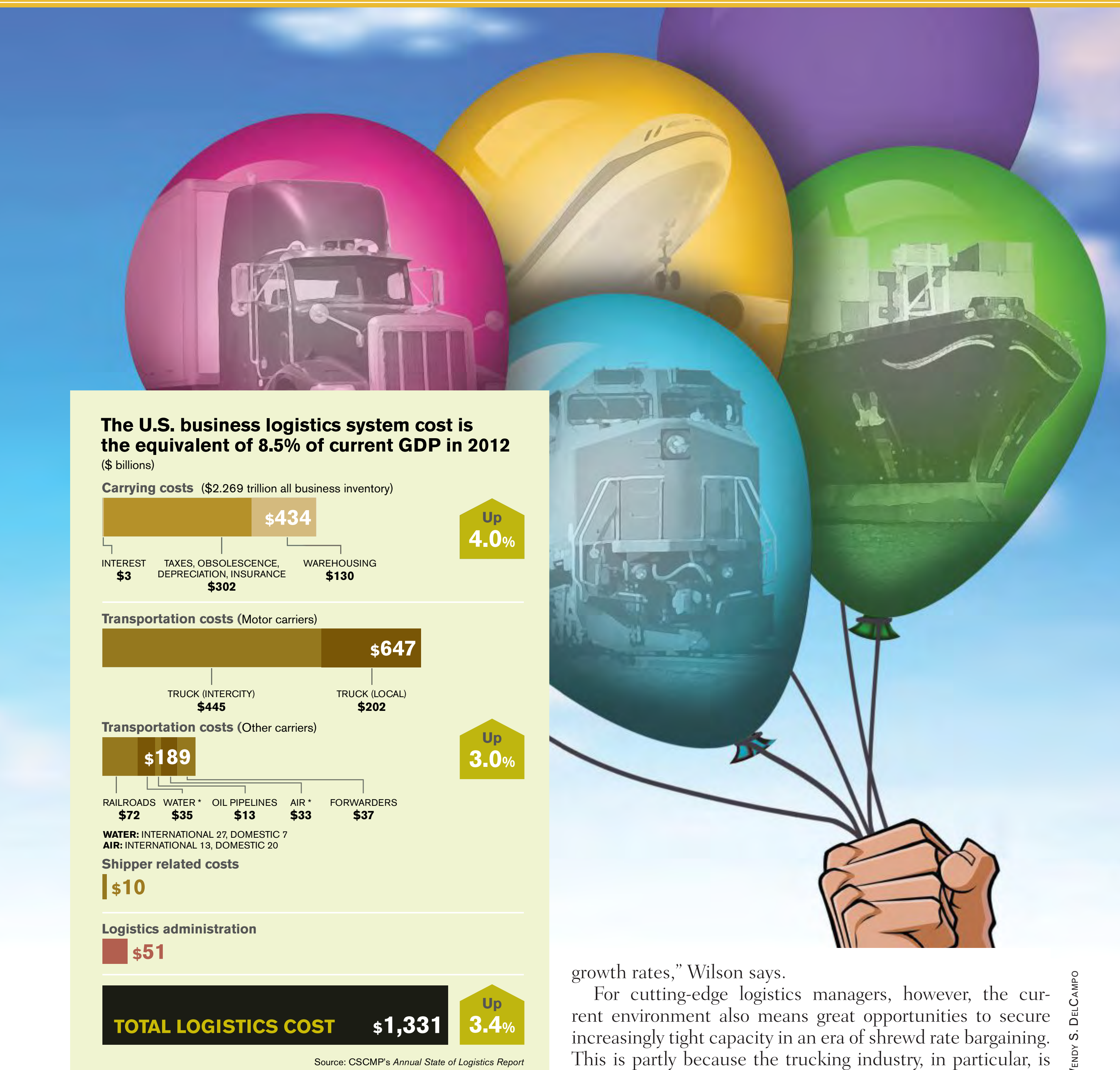


Image design by Wendy S. DelCampo

supply chain sectors. This "new order" is characterized by slow growth (GDP growth of between 2.5 percent and 4 percent), higher unemployment levels (7.5 percent in the U.S.), and higher reliance on part-time workers during slower job creation.

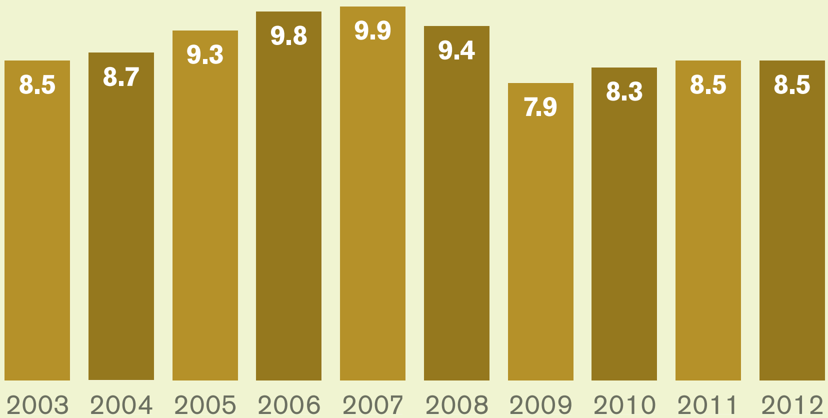
For logistics managers, this means less predictable and less reliable freight services as volumes rise but capacity does not. In areas such as ocean transport, says Wilson, this can mean slower transit times. "I do believe that the economy and logistics sector will slowly regain sustainable momentum, but we will still experience unevenness in growth rates," Wilson says.

For cutting-edge logistics managers, however, the current environment also means great opportunities to secure increasingly tight capacity in an era of shrewd rate bargaining. This is partly because the trucking industry, in particular, is facing a lid on capacity due to higher qualification standards for drivers at the same time top carriers are becoming increasingly selective in their choice of customers.

"Truck capacity is still walking a fine line—few shortages, but industry-high utilization rates," says Wilson. "Qualified truck drivers have become a valuable commodity in very short supply."

Wilson predicts that driver shortage will exacerbate as the economy improves even further. She's predicting the current driver shortage of 30,000 will hit 115,000 by 2016. In the ocean and air freight sectors, meanwhile, overcapacity is

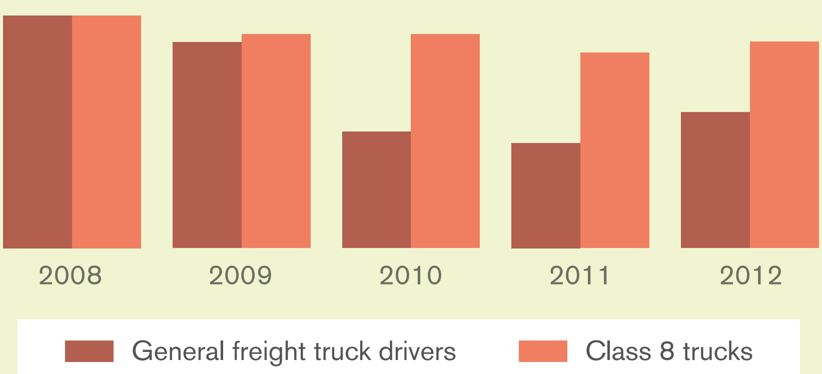
Logistics cost as a percent of GDP



Source: CSCMP's *Annual State of Logistics Report*

2012 recap for trucking

Change in employment and number of Class 8 trucks in operation



Source: Bureau of Labor Statistics and R.L. Polk

the issue while the railroads report that they have more than 20 percent of their freight cars in storage.

The following summarizes the performance of individual freight modes according to the *24th Annual State of Logistics Report:*

• Trucking rose 2.9 percent. The sector is "just on the breach" of experiencing capacity problems due to higher regulations and lack of fleet growth.

• Rail costs rose 4.9 percent, well below its 16 percent increase in 2011. Class 1 revenue per ton-mile rose 5.3 percent even as ton-miles actually decreased 1 percent in 2012.

• Maritime costs fell 0.9 percent in another disappointing year for ocean carriers. Capacity is expected to rise 10 percent this year, but these new vessels "will be difficult to deploy" without further damaging the industry's dynamic, the report says.

• Air freight revenue gained 3.1 percent while domestic air cargo ton-miles rose 2 percent, but international fell 3.9 percent. The all-cargo air industry is facing "chronic over-capacity and deteriorating yield," according to the report.

• Oil pipeline ton-miles were virtually flat last year. But that was "more than offset" by rate increases as pipeline revenue rose 8.3 percent in this heavily economically regulated sector.

Trucking in a "delicate balance"

Trucking, in particular, faces tough challenges in merely getting an adequate supply of drivers. "The trucking sector has been in a delicate balance for several years, just on the breach of experiencing capacity problems," says Wilson.

The U.S. Department of Labor estimates that truck drivers will account for 43 percent of the growth in logistics jobs in coming years, but Wilson asks: "Where will these drivers come from?"

She says that truck drivers represent a labor category with the fewest potential workers to fill those jobs. Only about 17 percent of the current driver population is under 35, with a larger portion close to retirement age. In the meantime, the government crackdown on unsafe drivers, the industry's inability to attract younger or minority workers, the high cost of driver training programs, and a revival of the construction industry are all serving to squeeze the available pool of drivers.

According to the report, private fleet owners also have an aging population, and they've been attracting some of the most desirable jobs with better pay and working conditions. In comparison, railroads are in "very good shape" regarding infrastructure, equipment, and personnel. Rail infrastructure spending rose 16.1 percent last year, topping $13 billion, yet efficiency rose. Class 1 rails consumed 2.1 percent less fuel last year despite hauling more tonnage in 2012 compared to year-earlier levels.

Shippers are increasingly turning to third-party logistics providers (3PLs) to help with their capacity issues. Revenue in the 3PL sector rose by a healthy 5.9 percent last year, the report said, citing figures from Armstrong and Associates, a leading logistics research and consulting firm.

"The domestic transportation management segment of the 3PL market was the fastest growing, with gross revenue up 9.2 percent," says Wilson. The service providers' cost of purchasing transportation has risen "modestly," she adds, noting that competition in the marketplace is helping hold down rates.

So far this year, freight results are "mixed," Wilson says. Rail carloads were down 1.7 percent year-over-year, but year-to-date intermodal units rose 4.1 percent for the first five months, compared with the same period last year. The American Trucking Associations' monthly truck index has risen for three of the first five months, an indication of the up-and-down nature of the freight recovery.

"Slow growth will be with us for the next several years," Wilson predicts. "Logistics will still be a bumpy road." However, the forecast of stable or decreasing energy prices is "welcome news" for shippers, Wilson says, adding that fuel has become a "pretty manageable piece" of the logistics puzzle.

Industry reaction to report

Shippers and logisticians reacted to the *24th Annual State of Logistics Report* with confidence knowing that there's adequate capacity for those knowledgeable practitioners willing to do their homework and create long-term relationships with carriers to secure sufficient capacity.

Marc Althen, president of Penske Logistics, a sponsor of the report, said that he's seeing higher inquiries from shippers looking for 3PLs, especially for transportation management solutions to help manage their freight.

One area that concerns shippers is sufficient availability of truck drivers. Althen says that driver pay must rise to attract and retain drivers. Penske's annual driver turnover is 17 percent, he says, compared to close to 100 percent for most large truckload carriers.

Brent Beabout, senior vice president of supply chain for Office Depot and former vice president of engineering for DHL Express, says that his current company has increased its use of intermodal and is also using more dedicated trucking options to combat the driver shortage.

"That dedicated fleet has been a good answer for us," says Beabout. He added that Office Depot co-mingles freight from all three of its distribution channels—in-store retail, business, and online sales—in creating an omni-channel distribution network. He adds that the retailer has started redesigning its freight network to take more advantage of intermodal options.

"All retailers are looking into redesigning their store size and location due to the growth in online business," says Beabout.

Steven Bobb, executive vice president and chief marketing officer for BNSF Railway, says that there are some segments of economic growth, such as intermodal and energy exploration, but there's "no sustainable" growth in most of the overall economic sectors.

BNSF is spending $14 billion on capital investment this year, Bobb says. But he adds that the biggest issue is making sure that shippers have adequate capacity in the correct geographic regions to handle the uneven nature of freight today.

Paul Svindland, COO of Pacer International, a major intermodal company that offers truck brokerage and other services, says that cross border intermodal traffic is growing well. "I am cautiously optimistic about the rest of 2013 going into 2014," he adds. "There is still growth, but probably not as much as we saw at the start of 2012."

However, the July 1 hours-of-service changes will affect regional and long-haul carriers, causing an increase in costs between 5 percent and 9 percent on productivity, says Svindland. Penske's Althen says that he estimates 3 percent in higher costs, largely because Penske's average length of haul is much shorter.

Beth Ford, vice president and chief supply chain operations officer for Land O'Lakes, says her company has doubled revenue in the past five years, largely due to exports of agricultural products. "We continue to see optimism in our business going forward," she says.

So the consensus from shippers in the know is expect higher freight rates as capacity tightens, be prepared to be flexible in modal selection and be aware that carriers are being increasingly choosy with whom they do business in this tighter capacity environment.

In summary, 2012 was "certainly not a great year from an economic perspective," Wilson adds. While the freight sector continues to improve, prospects for high growth are limited. Wilson simply concludes: "Slow growth will be with us for many years."

John D. Schulz is a Contributing Editor to Logistics Management

Less-than-truckload: Rich get richer, others looking for options

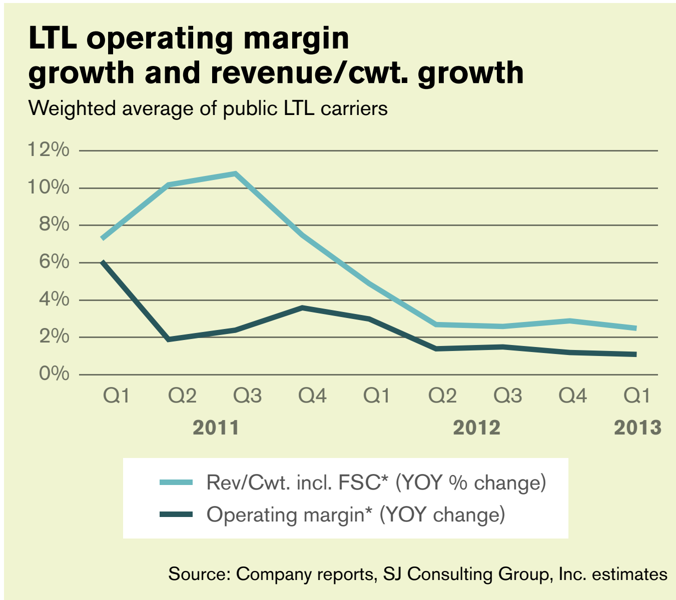
The $32 billion less-than-truckload (LTL) sector of the trucking industry can best be characterized as schizophrenic. It offers some of the best-performing companies in the entire trucking industry as well as a few underachievers that are saddled with challenging union contracts and desperately trying to compete with the best of the best.

First, the positives: Old Dominion Freight Line (ODFL), the nation's fifth-largest LTL carrier, will exceed $2 billion in revenue for the first time in its history this year. Not only that, ODFL is extremely profitable. During the first quarter this year, traditionally the softest period for truckers, ODFL posted a 22 percent rise in operating income while performing at an industry-best 87.6 operating ratio.

David Congdon, ODFL's president and CEO, chalks up his company's profitability to a diversification strategy enacted 15 years ago. Recognizing that his once-sleepy Southeast regional LTL carrier had to offer more services to shippers, ODFL has transformed itself to a "multi-platform" carrier, now offering interregional, truckload, logistics services, and even ocean operations.

Another current success story is Saia Motor Freight Line, a carrier that exceeded $1 billion in revenue for the first time in company history last year. But it's not just the top line that is growing with Saia. It posted the largest yield increase of any publicly held LTL carrier, and last year the carrier nearly tripled its net income to $32 million with a 94.7 operating ratio.

FedEx Freight, the LTL revenue leader with more than $5 billion last year, has revamped its network and posted the largest operating margin growth of any public carrier last year. Privately held gems such as New England Motor Freight (NEMF) succeed partially because of its high service levels as one of the few remaining family-owned carriers in the sector under the leadership of founder Myron "Mike" Shevell, chairman of the Shevell Group.



LTL yield growth (revenue per hundredweight, excluding fuel surcharges) and operating margin growth for the public LTL carriers has slowed. Yield growth rose just 2.5 percent in this year's first quarter, causing year-over-year operating margin growth to grow by a scant 1.1 percent.

As an industry, the LTL sector is relatively flat. The $32 billion total revenue is roughly what the industry posted seven years ago, but that's because some LTL freight is being siphoned off by truckload carriers at the heavy end and by parcel carriers being increasingly aggressive in the 70-pound to 500-pound range.

"The LTL industry as a whole hasn't made progress," said Satish Jindel, principal of SJ Consulting, which closely tracks the sector. "Despite the recovery that they've had, they haven't retained large amounts of LTL shipments handled by TL and parcel guys and fringe players."

YRC Freight finally posted a tiny operating profit following six years of losses that exceeded $2.6 billion. ABF Freight System lost $13.4 million in the first quarter of this year.

Oddly enough, even though part of YRC Freight's financial problems stemmed from two billion-dollar acquisitions of Roadway Express and USF Corp. back in the 1990s, the company recently disclosed that it has made overtures to ABF parent Arkansas Best Corp. on a merger possibility.

James P. "Jim" Hoffa, whose Teamsters union represents both carriers, is annoyed at the prospect of another difficult trucking merger. "We thought they had finally learned the lessons of past management catastrophes," says Hoffa. "Unfortunately it appears they have not."

Toronto-based Vitran Corp., which operates a sizeable network of regional LTL carriers in the U.S., is another troubled carrier. It recently replaced longtime CEO Richard Gaetz with interim CEO William Deluce, who recently admitted he was "very disappointed" in Vitran's 102.7 operating ratio in the first quarter.

Vitran is not alone. David Ross, LTL analyst for Stifel Nicolaus, says overall operating conditions are just fair. Sluggish economic growth has translated into still-tepid LTL freight volumes, he says, and because volumes are only rising "modestly," few carriers are adding capacity. With that, says Ross, LTL pricing remains "fairly rational."

According to Ross and carrier executives interviewed, overall top line growth will be flat in the LTL sector for some time, and rate increases will be in the 2-percent to 4-percent range. "Anything above 4 percent gets significant pushback from large national accounts who have options," adds Ross.

—John D. Schulz, Contributing Editor

Truckload: So-so demand but capacity shortage looming

The $280 billion truckload (TL) sector is expecting the remainder of 2013 to be much like the past three years: moderate demand with no increases in fleet capacity and rate increases in the 2-percent to 4-percent range.

"It's been spotty," says Saul Gonzalez, president of Con-way Truckload, a $559 million unit of Con-way, who adds that most large TL carriers are reporting so-so domestic dry freight demand but increases in cross-border and intermodal traffic. "Our Canada and Mexico business continues to grow, and we're seeing dedicated business providing lots of opportunity and growth potential."

The numbers bear out that sentiment. Loads have been up slightly (between 1 percent and 2 percent) in five of the last six quarters. But TL margin growth has been minimal, less than 1 percent. The average operating margin for the public TL carriers was 5.7 percent in the first quarter, compared with a scant 1.8 percent for publicly held LTL carriers.

John Larkin, trucking analyst for Stifel Nicolaus, says a confluence of factors could cause the TL sector "to be right on the cusp" of a capacity shortfall. Larkin says that any of a number of factors could push up demand including pent up demand from the delayed arrival of spring, acceleration of the rate of new home construction, as well as the Hurricane Sandy

rebuilding effort.

At the same time a number of factors could simultaneously push down supply, including lower productivity from new federally mandated safety rules, the driver recruiting and retention battle, and failure or downsizing of smaller, less financially stable carriers.

Even if GDP grows in the 1.5 percent to 2 percent range, these other factors have the potential to cause sharply higher rate increases in the TL sector. "In this case, we think that rate increases will then, once again, outstrip the rate of cost increases, especially for large, purchasing-advantaged TL carriers," adds Larkin.

Richard Mikes, managing general partner of Transport Capital Partners, which closely tracks the TL sector, says that long-term, once the economy kicks in, he's very optimistic for the TL industry. "It all depends on GDP growth, but it's very difficult to forecast the year ahead," Mikes said. "We're absolutely very tight on capacity, and we've hardly added to the Class 8 fleet in five years. It's not going to take much of a bump in GDP for rates to bump up."

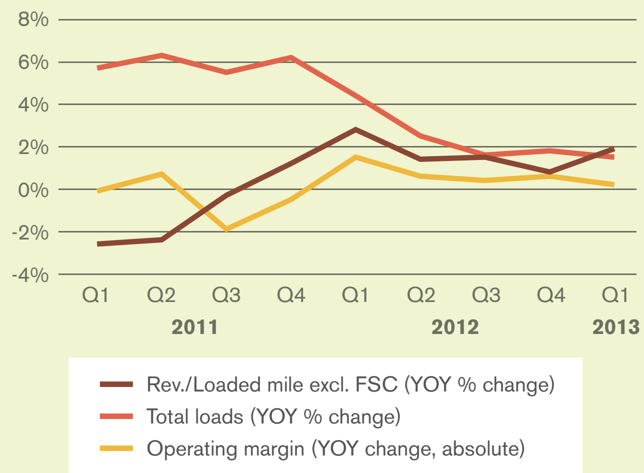
Among the factors is the government's Compliance, Safety, Accountability (CSA) initiative that's forecast to winnow as many as 150,000 of the nation's three million long-haul drivers. In addition, pending changes to driver hours of service will reduce capacity and productivity between 1.5 percent to 4 percent decline, according to American Trucking Associations forecasts.

John White, executive vice president of sales and marketing for U.S. Xpress, the nation's fifth-largest TL carrier, says "time will tell" exactly how much those regulatory changes will cost shippers. "We're going to have to see," White says. "There are some things we can do to offset the impact, but there's going to be impact and some of it will be customer specific."

Those shippers who give carriers operational flexibility and don't demand specific time pickups and deliveries will see mitigated rate hikes. More challenging to TL carriers, adds White, will be those customers that demand pickup and devivery at specific hours.

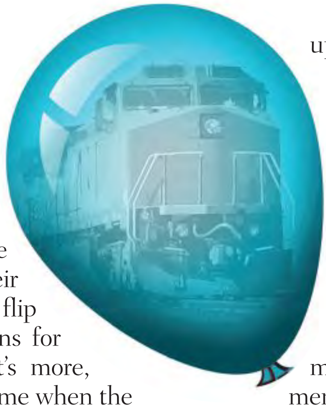
—John D. Schulz, Contributing Editor

Public TL carrier results



Source: Company reports, SJ Consulting Group, Inc. estimates

Rail: Staying steady during uneven times



Even with signs of apparent economic improvement at the midyear mark of 2013, it's fair to say that the freight transportation market is currently generating more questions than answers. But one constant amid the economic uncertainly over the past few years has been the staying power of the freight railroad industry.

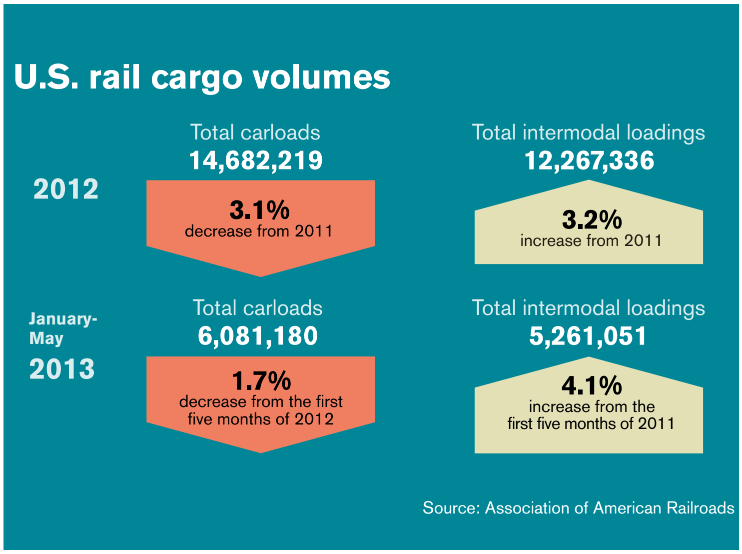
Much like a top athlete perfecting his craft, the railroad sector has stayed ahead of its competitors by focusing on the fundamentals. On the rails, it's been strong service and reliability, two basics that never go out of style. And because of this hyper-focus, the sector has seen domestic intermodal volumes return to pre-recession levels and carloads trending in the right direction, down only 2 percent on a year-to-date basis.

And as they have for years, the railroads are continuing to take their service capabilities and flip them into strong returns for Class I carriers. What's more, this is happening at a time when the economy is still finding its groove, and coal, which represents about 40 percent of total rail carloadings, continues to see its volumes decline.

Helping to ease the loss of coal volumes is the emergence of crude oil by rail. Consider this: The AAR recently reported that U.S. Class I railroads originated a record 97,135 carloads of crude oil in the first quarter of 2013, up 20 percent from the 81,122 carloads in fourth quarter of 2012 and 166 percent higher than the 36,544 carloads originated in the first quarter of 2012.

And while the Class I rails have remained focused on service and reliability, they also continue make massive capital investments into their own networks and infrastructure to expand, upgrade, and enhance the U.S. freight rail network in the form of new equipment, safety, rolling stock, terminal expansion, and asset utilization. The AAR recently reported that the seven North American-based Class I railroads plan to invest an estimated $24.5 billion in 2013, with $13 billion of that allocated towards upgrading or enhancing rail capacity.

AAR President and CEO Ed Hamberger said that it’s not entirely surprising that the cumulative capital expenditure figure of the Class I railroads continues to be so high on an annual basis. “Our industry’s leaders and investors know that ‘deferred maintenance’ is not a winning strategy, so these vital capital expenditures and maintenance investments will continue, particularly given railroads are growing market share to move even more freight in the future.”



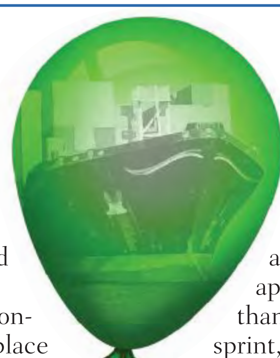
But in order to be able to make these investments, railroads need to maintain their current pricing leverage, which has been firmly intact for the last 10 years. This is where things get prickly with rail shippers—many of whom maintain that they’re not getting what they pay for in terms of service and value as annual rates rise about 5 percent year over year.

While there has been much made by shipper groups about re-regulating the industry, addressing the lack of railroad antitrust, fuel surcharges applied by the rails, and reciprocal switching, these efforts have largely stalled out in Washington.

“The mysterious thing is that you hear how rail prices have risen, yet the railroads that are earning their cost of capital are barely earning it,” says Stifel Nicolaus Analyst John Larkin. “People forget that it is such a major capital intensive industry, with new locomotives $200 million each or more. Ties are not cheap, nor is keeping right-of-ways in safe condition to allow for the passage of trains at a reasonable velocity. It is a very expensive proposition.”

—Jeff Berman, Group News Editor

Ocean: It’s a sprint, not a marathon



Lars Jensen, CEO and Partner with SeaIntel Maritime Analysis in Copenhagen, notes that one of the most important developments in the past month has been the rapid decline in spot rates—particularly on the Asia-Europe trade lanes

“The situation is slightly more benign in the trans-Pacific trade, at least when the magnitude of the rate decline is considered,” says Jensen. However, in reality we see that the partially successful general rate increase [GRI] on the trans-Pacific was entirely eliminated in just three weeks this past spring.”

According to Jensen, it’s clear that both carriers and shippers are facing “troubled times.” Despite rates having fallen by 41 percent since the beginning of 2013, carriers are poised to increase capacity from Asia to East Coast South America by more than 20 percent—seemingly a recipe for continued rate declines.

“Additionally, we continue to see carriers place new orders for ultra-large container vessels,” says Jensen. “It’s in this troubled minefield of overcapacity, combined with new fuel efficient vessels that carriers need to make profits in the coming years. Cumulatively the carriers have lost almost $7 billion in the past 4 years, and clearly such a trend cannot continue indefinitely.”

Who will then stand to be the winners of what appears to be a protracted war of attrition? Based on developments in the past decade, the winners will need a solid combination of three factors, say SeaIntel analysts:

1) Access to additional capital.

2) Access to a fleet predominantly made up of new fuel-efficient vessels.

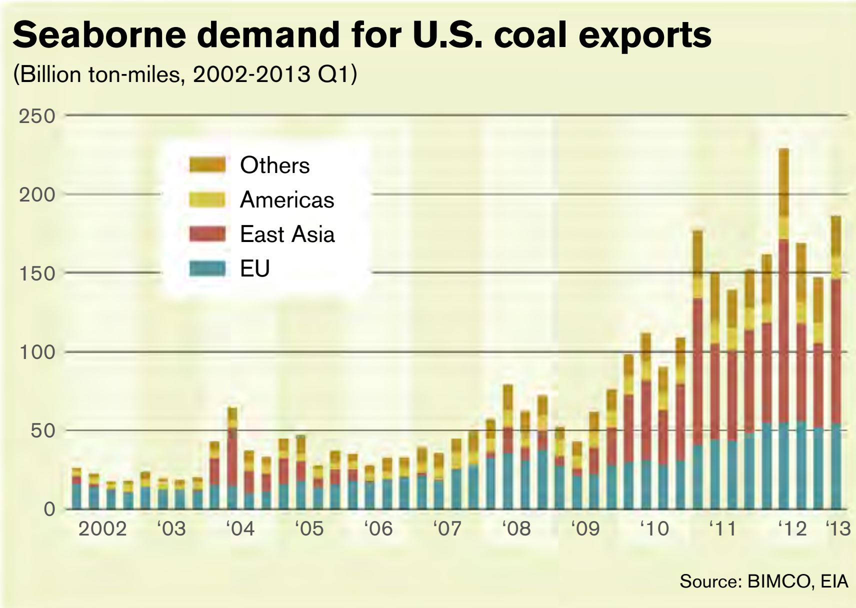
3) And an operational and organizational setup resulting in the lowest unit costs in the market.

“Looking at 2012 annual accounts, clearly some carriers appear to be off to a better start than others; however this is not a sprint, it’s a marathon, and the winners may not yet have emerged from the pack,” says Jenson.

Meanwhile, business for more bulk and breakbulk carriers may be heating up as China’s demand for coal continues to accelerate.

The influence of U.S. coal exports on seaborne transportation has grown significantly over the past decade. In 2002, the U.S. exported 20.1 million tons by sea, but in 2012 that number had increased to 106.7 million tons.

The effect on shipping has multiplied due to the fact that much of the demand growth has come from East Asian countries. With a large part of the U.S. coal destined for East Asia being shipping out of the U.S. East



Coast ports, this will increase the demand for tonnage.

As a consequence, the transportation demand stemming from U.S. coal exports has surged from 84.7 billion ton-miles in 2002 to an estimated 707.3 billion ton-miles in 2012—representing 835% growth over the period.

"In comparison, the Chinese coal imports in 2012 accounted for an estimated 697.6 billion ton-miles of demand for seaborne transportation, says Peter Sand, chief shipping analyst at the Copenhagen-based consultancy BIMCO. "This means the U.S. coal exports were more important to the dry bulk shipping market than the Chinese coal imports in 2012."

—Patrick Burnson, Executive Editor

Air: Marginal growth, freight volumes stagnant

In the air sector, the numbers tell the story. The International Air Transport Association (IATA) recently upgraded its global outlook for the airline industry to a $12.7 billion profit in 2013 on $711 billion in revenues. That rings in $2.1 billion better than the $10.6 billion profit projected in March of this year and an improvement on the $7.6 billion profit generated in 2012.

However, margins remain weak. On revenues that are expected to total $711 billion this year, the net profit margin is expected to be 1.8%. Indicative of the characteristically razor thin profits of the airline industry, even this small margin will make 2013 the third strongest year for airlines since the events of 2001. In 2007, the industry earned 2.9 percent net profit margin ($14.7 billion), and in 2010 airlines generated a 3.3 percent net profit margin ($19.2 billion).

"This is a very tough business," says Tony Tyler, IATA's director general and CEO. "The day-to-day challenges of keeping revenues ahead of costs remain monumental, and it's not surprising many airlines are struggling."

Profitability is thin, but there's a solid performance improvement story over the last seven to eight years, with a more efficient use of assets as the main contributor. In fact, the industry load factor is expected to average a record high of 80.3 percent in 2013—6.0 percentage points above 2006 levels. Additionally, airlines have found new sources of value that have increased the contribution of ancillary revenues from 0.5 percent in 2007 to over 5 percent in 2013.

Macro-economic factors have also contributed. Oil prices are expected to average $108 per barrel (Brent), a little below the $111.8 average for 2012 in part due to increasing supply from North America. Meanwhile, the outlook for global economic growth has deteriorated slightly since March as the recession in Europe proves to be deeper than expected. The beneficial impact of lower fuel prices is expected to offset the adverse effect of weaker economic growth, providing a moderate boost to industry profitability.

"Generating even small profits with oil prices at $108 per barrel and a weak economic outlook is a major achievement," says Tyler. "Improved performance is what's keeping airlines in the black."

The $12.7 billion profit that the IATA projects represents a return on invested capital of 4.8 percent. This will enable the industry to pay for its debts and pay equity investors a small dividend.

"However, returns of 4.8 percent are still materially lower than the 7 percent to 8 percent average cost of capital required for the industry," adds Tyler. "If airlines are to find the $4 trillion to $5 trillion needed to finance the projected fleet development over the next 20 years, even more improvements are needed."

The air cargo business continues to suffer the brunt of the impact of the weak outlook in developed economies. Freight volumes are expected to be basically stagnant at 52.1 million tons, and there has been no significant growth since 2010 when freight volumes were 50.7 million tons.

"After a 6.3 percent fall in yields in 2012, we expect a further contraction of 2.0 percent in 2013 as capacity conditions remain much more challenging than in passenger markets," Tyler concludes.

—Patrick Burnson, Executive Editor

3PLs: Continued pressure to function globally

According to the leading analysts in third party logistics (3PL) space, the concept of "mega cities" in developing countries with above average per capita income rates of growth such as Shanghai, Bangkok, Mumbai, Hanoi, Jakarta, and Sao Paulo will drive consumer demand for finished goods globally.

Today, forward-looking U.S. based 3PLs such as Jacobson, Menlo Worldwide, UPS, and OHL have invested heavily in expanding international operations to meet the new challenges.

"Today, China has about 90 cities with more than 250,000 middle class consumers," observes Alan Amling, global director for contract logistics marketing at UPS. "By 2020, China will have more than 400 cities with a quarter million middle class residents—and 50 will have more than a million."

Amling notes that as companies position to capitalize on this demand, their 3PL partners will need to ensure that they have the right infrastructure and expertise in place to facilitate these business strategies.

"A key value that 3PLs can provide shippers as we move forward is market knowledge across multiple regions and industries," says Amling. "Another value is to help companies take advantage of the growth opportunities they decide to pursue."

Not only do some global 3PLs have existing infrastructure in global markets, but they also have the in-country expertise to help companies navigate trade regulations, get products to end customers, and provide post-sales services. Should that keep domestic 3PLs from going global? Amling doesn't think so.

"If the 3PL strategy is to provide an end-to-end experience for shippers, they have to enter this arena," says Amling. "As supply chains become more global and more complex, we're seeing a trend toward companies reducing the number of 3PLs they use, but expecting these 3PLs to do more."

That said, there's a lot of opportunity in the market, and putting up a global network may not be the right move for all 3PLs. He notes that there will continue to be opportunity for local and regional providers to be integral components of company supply chains. Amling asks: "The real question is with 95 percent of the world's consumers now outside the U.S., can domestic shippers afford to avoid going global?"

—Patrick Burnson, Executive Editor

2013 Ocean Cargo Roundtable: Business in the balance

Our panel of market insiders put the new business dynamics of ocean shipping into perspective and help shippers better understand how to manage their cargo on now roiling seas.

BY **PATRICK BURNSON,** EXECUTIVE EDITOR

As carriers continue to introduce new capacity into major global trade lanes, shippers have been able to leverage rates to their advantage. But analysts contend that trend may soon be reversed if vessel owners show a willingness to sacrifice volumes to protect further pricing erosion. The arrival of a Peak Season—if there actually is one—will certainly tell the tale.

In an effort to put these new dynamics into perspective and capture a mid-year rate forecast for *Logistics Management* readers, we've asked three prominent industry experts to share their insight and market intelligence.

Joining in our *2013 Ocean Cargo Roundtable* discussion are Martin Dixon, research manager at Drewry Supply Chain Advisors in London; Paul Bingham, economics practice leader at consulting firm CDM Smith; and Don Pisano, ocean cargo chairman for the National Industrial Transportation League and vice president in charge of imports for the American Coffee Corporation. Here's what they had to say.

***Logistics Management* (*LM*): Given the uncertainty in the current marketplace, are shippers making their Peak Season preparations earlier this year?**

Martin Dixon: The bigger question remains whether there will be a Peak Season at all this year, particularly on the main eastbound trans-Pacific. Peak Season in the past two years has proven particularly disappointing to ocean carriers and forwarders, and many providers fear another repetition this year. In fact, we're forecasting that demand on the eastbound trans-Pacific will grow at a similar rate to last year, at a little under 3 percent. With abundant capacity there's little reason, from a shipping perspective, for shippers to need to start planning Peak Season sooner.

Paul Bingham: Martin makes a good point. The trend has been towards an earlier Peak Season planning period for most of the last several years. Not all shippers act uniformly, however, and even just within retail there are subsectors that see their own peaks at different times and planning to match.

Supply chain practices continue to evolve, and because the ocean shipping leg is only one component of international logistics sourcing, Peak Season services and rates don't independently determine Peak Season planning by shippers. One other factor is the reduction in threat of port labor disruption compared with last year, so that may affect some timing of shipments this year.

***LM:* How will carriers position themselves in anticipation of demand?**

Don Pisano: I expect that individual liner carriers will do as much as possible to manage capacity deployed to meet their forecasted demand. They've demonstrated much greater control and will avoid carrying freight with negative net returns.

Bingham: During this time, carriers have tried to influence perceptions of effective deployed capacity and consequential rate expectations, including announcements of new rounds of general rate Increases (GRIs) in the hopes that they can keep or even boost rates for Peak Season.

Dixon: Many carriers have already launched new services with bigger ships in the hope of strong Peak Season demand, which could equate more capacity than necessary to meet likely cargo needs. For example, Evergreen and Cosco started a new service between Southern China and the U.S. West Coast in the middle of May.

***LM:* Will slow steaming continue to play a role in carrier strategies?**

Bingham: Absolutely. Carriers have strong incentive to save fuel, reduce emissions, and reduce effective deployed capacity through slow steaming. Despite the lengthened shipping times, the market overall hasn't shown enough willingness to pay for faster services for carriers to revert to higher-fuel-cost service offerings. Until a future year when vessel capacity could be less in surplus globally, there isn't the growth in demand sufficient enough to have carriers reduce their use of slow steaming.

Dixon: The freight rate war currently taking place between Asia and Europe, as well as between Asia and the U.S., along with the addition of new ships, will force carriers to resort to more slow steaming. Slowing down ship speed enables carriers to soak up more excess capacity. In fact, Drewry expects acceleration in the deployment of slow steaming across multiple trades as ocean carriers grapple with the challenge of how to prevent freight rate erosion with too many big ships chasing too little cargo.

Pisano: I agree. Slow steaming is here to stay and will be managed to maximum fuel efficiency. I believe most shippers have already made adjustments in their supply chains and adapted to this reality.

***LM:* What progress is being made by carriers to establish international standards for business process and data exchange?**

Pisano: Actually, the carriers have taken significant steps, but this is an evolutionary process. Shippers still need to upgrade their own systems to maximize the benefits.

Dixon: We're seeing that standardization of business processes and data exchange are being driven by the e-commerce portals such as INTTRA, GT Nexus, and Cargo Smart. These enable shippers to use a common portal through which to book and manage their shipments across multiple carriers. The rise of these organizations has necessitated the establishment of international standards.

Bingham: The carriers continue to work with intermediaries and some international efforts in this direction for sure, but we see change being incremental. The market isn't providing enough financial incentive or pressure from big shippers or governments to make it clear to the carriers that they can justify the investment to accelerate the process.

***LM:* Is data transfer something shippers regard as "value-added"?**

Bingham: For some larger shippers, this data transfer would certainly be value-added and help reduce transaction costs; however, shippers are reluctant to step forward into the lead at their own expense if they think the carriers will eventually shoulder the cost. The shippers also don't want to be caught paying for this and then watch their competitors capture the benefit from the investment.

Dixon: Most shippers expect this kind of capability as a condition of doing business. The key differentiators between ocean carriers in this regard has more to do with the speed and accuracy of milestone updates and confirmations.

***LM:* Are so-called "talking agreements" an effective tool for carriers?**

Pisano: Cleary, they are viewed as an effective mechanism by the carriers. But frankly, I don't know one shipper who believes that carrier agreements are necessary or that carriers need the antitrust immunity that these agreements include. In today's world of international business, every other industry operates on the basis of setting prices and services based on market conditions, their individual costs, plus a reasonable return on investment. This extraordinary privilege simply has no place or relevance in today's marketplace.

Dixon: Regulated rate setting agreements between carriers are a key feature on U.S. trades, but have been banned on other trades, such as Europe. Carriers believe that they are an effective tool at bringing some stability to the trade, both in terms of price and available capacity. However, many shippers harbor suspicions that they provide carriers with too much collective power to unduly influence the market.

But the evidence of both is mixed. Pricing on U.S. trades has tended to be less volatile than on the less regulated European trades, but there are many other factors, such as the greater dominance of forwarders. Meanwhile, despite the best attempts of carriers, rate levels on the eastbound trans-Pacific, have remained below carrier break-even levels for the past two years.

The freight rate war currently taking place between Asia and Europe, as well as between Asia and the U.S., along with the addition of new ships, will force carriers to resort to more slow steaming.

—Martin Dixon

Bingham: I think there is value in exploring talking agreements as long as expectations aren't too high from what really can be achieved. Expectations have been raised at times that likely exceed what can be done on a sustained basis given the temptations and competitive pressures on the companies.

***LM*: What about shipper coalitions? Are they gaining traction as negotiating entities?**

Bingham: For shippers who can make the effort to coordinate with others in a coalition, the benefits can be real. There are limitations in how much

Vessel charter company thrives amid marketplace disruption

Box Ships Inc., the Athens, Greece-based container vessel charter company led by chairman and CEO Michael Bodouroglou, has been doing something remarkable over the past three years—making money.

Bodouroglou has pursued a policy of purchasing new vessels even though the industry's main dilemma is generally judged to be an excess of tonnage on the seas. By acquiring and operating modern ships and employing them in "period time charter," the company appears to have found a formula for sustainable success.

In this exclusive interview, we investigate what makes Box Ships run.

***Logistics Management* (*LM*): Your success suggests that there's still room in the container liner industry for new players. Is that true? If so, why?**

Michael Bodouroglou: I would say that there is selectively room for new players in the container industry, as long as you have strong operations and a proven track record of managing vessels. This is due to the decline of the German KG model, which used to provide roughly 50 percent of the independent tonnage to the liner operators. That source of funds has dried up, for now, and created an opportunity for other ship owners to enter the containership market to fill that void.

***LM*: It would seem that you are able to pursue profit, while larger institutional carriers are pursuing market share. Is this true?**

Bodouroglou: Well, I believe everyone is out for profit at the end of the day, but market share does mean a lot to them. However, they have shown some restraint now that the market is challenging and carriers are now focusing on profitability instead of market share. In the end, what's the use of market share if it means you are losing a lot of money? It's better to be profitable and have a solid business model.

***LM*: Will the Panama Canal expansion have an impact on your business?**

Bodouroglou: Eventually, the expansion will cause trade patterns to change, but no one knows how they will change or to what extent yet. So, we feel that as long as we're flexible, we'll be able to adapt to the new changes, so there should be no real impact to our business.

***LM*: Are emerging markets served by your business?**

Bodouroglou: Very much so. We operate containerships that are in the mid-size segment, panamax size, and post-panamax, which are flexible enough to operate in emerging markets. In today's market, all the incremental growth is coming from emerging markets, and we believe that we're positioned to take advantage of that. That being said, the developed world, particularly Europe and the U.S., are still the largest drivers of the industry. So, even a modest slowdown in those economies has a much larger impact on the industry than the growth coming out of emerging markets at this stage.

***LM*: What can other carriers learn by your example?**

Bodouroglou: I think it would not be wise of us to think that we can constitute an example for others. After all, we have not been in this market that long. What I can say, however, is that in this business the vessels must be maintained and operated at the highest level. As an owner/operator of vessels, you have to understand that the containership business, more than any other shipping sector, is a logistics business, and if our ships encounter delays it may mean that Walmart may not get enough TVs or Xbox units for the Christmas season, so you must be tuned into that and build a reputation of a reliable partner for the liner companies.

—Patrick Burnson, Executive Editor

of a cost savings can really be achieved in today's market conditions, and alternatives such as use of third-party freight forwarders may provide some savings under certain conditions as well. In any negotiating situation with the carriers, having greater volumes to commit can result in lower costs.

Pisano: Shipping associations have been around for a long time and will continue to serve a valuable role for specific industries or groups of shippers. In the U.S, they operate under guidelines issued by the U.S. Department of Justice to ensure that they are in compliance with U.S. anti-trust laws.

Dixon: These coalitions continue to thrive in the U.S. as cargo owners seek protection in scale to get better rates and access to more reliable sources of capacity. We're also seeing more conglomerate organizations taking advantage of their combined buying power across their operating subsidiaries to leverage lower transportation costs.

***LM*: Finally, do you see index-linked contracting as a meaningful step forward?**

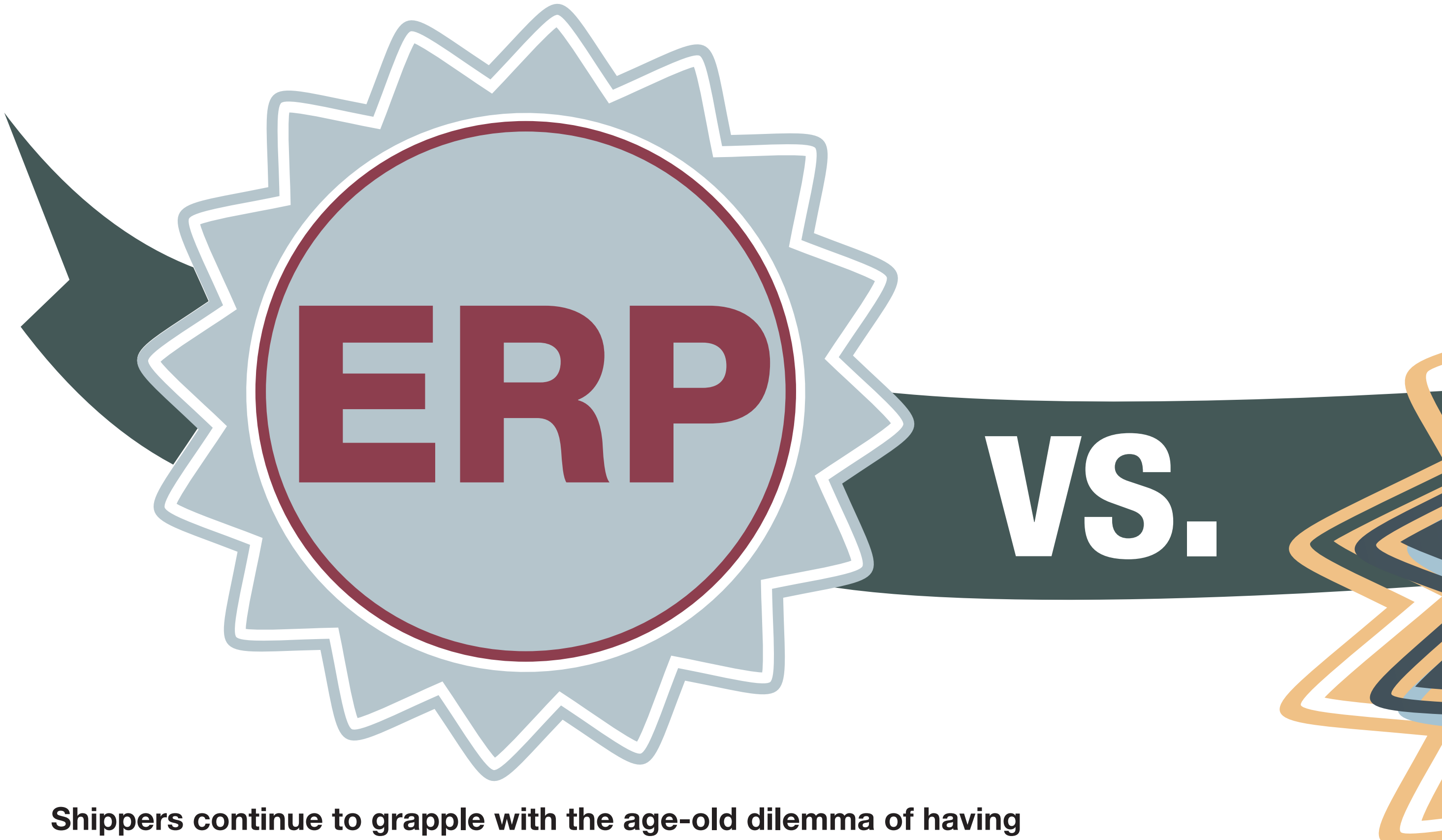
Dixon: Yes, Drewry believes that index-linked contracts are the right way for both carriers and shippers to manage their contractual relationships at a time of continuing freight rate volatility. Current annual fixed rate contracting is struggling in this era of volatility leading to high levels of contract default—when either party breaks the contract or demands a renegotiation of terms when the spot market diverges significantly from the agreed contract rate. Contract default can have serious consequences for the parties, as it can leave the carrier without cargo to fill ships or cargo owners without space on ships to move their freight.

Pisano: I agree with Martin. I believe index-linked contracts will find greater market penetration once the industry gets more familiar with the products, process, and financial implications for the carriers and shippers alike.

Bingham: We all seem to agree on this issue, but I have a few concerns—and a few caveats. The initial development of index-linked contracting is useful, though limited in its application. The utility of indexes for linked contracts is constrained by the availability and applicability of indexes to use.

The reliability and composition of indexes over time is important as well, as financial incentives to influence index values creates a need for independent validation that the indexes actually track what they are described as tracking. The number of observations available from which to construct an index also matters, so the underlying velocity and quantity of transactions matters as well.

Patrick Burnson is Executive Editor of Logistics Management



Shippers continue to grapple with the age-old dilemma of having to choose between ERP-developed supply chain software and those targeted solutions produced by best-of-breed providers. Here are a few tips that could make the choice a little easier.

BY **BRIDGET MCCREA**, CONTRIBUTING EDITOR

Deciding between best-of-breed supply chain software solutions and applications that are already built into larger, enterprise software options is an age-old issue for logistics managers. Knowing this, the world's enterprise resource planning (ERP) solutions are incorporating more warehouse management systems (WMS), transportation management systems (TMS), and other supply chain applications into their offerings in an attempt to make the choice a little easier.

Yet, the ultimate decision usually comes down to this: If a shipper has an ERP in place that's already chockfull of company data and ready to be leveraged across the supply chain, then it makes economical sense to stick with the larger system and hope that the supply chain functionality is both broad and complete.

If, on the other hand, the shipper needs deep functionality across different supply chain software options, then buying a best-of-breed may be the top choice. In most cases, these "bolt on" systems provide a solid foundation that shippers can use to run their supply chains.

In this ERP update, we'll look at the inroads that the big ERPs are making on the supply chain front, highlight new trends associated with these solutions, help you come up with the best possible selection criteria, and see how one shipper is benefitting from its own ERP investment.

ERP vs. best-of-breed

Used by a wide range of companies that want to tie all of their business functions under a single umbrella, ERPs are known for their ability to collect, organize, and store critical data for individual companies. ERPs are used across numerous departments, including financial, human resources, customer relations, manufacturing, warehouse, and distribution.

Historically, two different schools of thought have existed in the ERP vs. best-of-breed debate when it comes to automating supply chain management. Companies with an ERP in place often turn first to those vendors to help them gain visibility of orders and shipments. After all, if all the data and information is already stored in an ERP, why look elsewhere for the supply chain component?

The answer to that question isn't always immediately clear—namely because add-on systems have over time proven themselves as viable options for those companies seeking specialized systems that include a high number of functionalities.

Ben Pivar, vice president and North American supply chain lead for Capgemini, singles out the retail, manufacturing, and life sciences fields as

three sectors where ERPs are used regularly, both in terms of enterprise software and supply chain solutions. But when those solutions are unable to effectively streamline and increase visibility of orders and shipments, a best-of-breed can help fill in the gaps.

"We see a pretty heavy emphasis on getting a standard ERP package in those markets, and then using various bolt-on supply chain components to make up where the ERP falls short," says Pivar.

At IDC Manufacturing Insights (IDC), Simon Ellis, practice director, says one way to overcome that shortfall is by tying best-of-breed TMS, WMS, yard management (YMS), and related applications directly into a new or existing ERP. This approach requires compatible solutions—a TMS that integrates with Microsoft Dynamics AX or Oracle applications, for example—that will play well together when installed and implemented.

"It's really about being able to seamlessly manage a business with the help of technology," says Ellis. "Exactly where the solutions themselves come from is less important than the fact that they have to work across the enterprise all the way out through the extended supply chain."

The good news for shippers wanting to get more out of their ERPs is that they can take advantage of their own vendors' efforts to step up their supply chain games. "It's still a mix out there in terms of who is using what," says Ellis, "but it's clear that ERP vendors are now more competitive in the supply chain space than they were 10 years ago."

Fill in the blanks

When helping shippers assess enterprise-wide software options, Ellis usually points out that supply chain management software and ERPs are not synonymous.

And while the large ERP vendors like Oracle and SAP have already started embedding a broader array of supply chain tools into their offerings, in many cases best-of-breed options from companies like Manhattan Associates and Amber Road are generally more sophisticated and able to handle more complex supply chain tasks.

In many situations, Software as a Service (SaaS) has made it easier for shippers to decide between full-blown ERP implementations and the specific functionalities that they need from their supply chain software. "We're definitely seeing more interest in SaaS solutions that are used in the cloud," says Ellis. "Both software providers and integrators alike are leveraging SaaS in order to sell more systems to those companies that don't want to go through an enterprise-wide rollout or upgrade."

In digging down a little deeper to figure out which ERPs are offering new and improved software packages, Kimberly Knickle, IDC's practice director, says vendors are also developing systems that are user-friendly. This trend is largely being driven by the customers themselves in an effort to put more IT power into more hands—both in the warehouse and outside of the four walls.

"No one wants to have to go through eight different screens on a monitor to get to the information that they need," says Knickle. "Vendors are aware of this, and are coming out with more focused applications that create a better user experience."

Knickle says that shippers who are making the selection between dedicated software providers and all-encompassing ERPs should consider whether they want to be tied to a single vendor…or not. With SaaS and mobile computing both coming of age in the supply chain space, she points out that, "cloud-based options provide a more flexible way for shippers to beef up their supply chain software coffers without having to give up their ERPs."

Driving the ship

According to Pivar, the ERP of the future will largely be shaped by the customers that are using it. "The software vendors are very dependent on customers pushing them to drive solutions," he says.

Vendor response to those demands will include ERPs developing fuller, richer supply chain capabilities, and more specialized, customized options on the part of the best-of-breed providers. Either way, says Pivar, shippers will be the ultimate recipients of those technology innovations.

"For ERP vendors, it will be about balancing and prioritizing their investments in software development against all of the industries they serve and against all of the different modules they build out," Pivar explains, noting that specialized vendors tend to focus on narrower industry niches and footprints.

That leaves the door wide open for ERPs that want to bolt-on more robust TMS, WMS, YMS, and other offerings. "In some cases, innovation comes from smaller, niche firms versus bigger industry players," says Pivar. "We expect that trend to continue in the future."

Bridget McCrea is a Contributing Editor to Logistics Management

ERP in action in the supply chain

Managing 10 shipments a month doesn't typically necessitate a full-blown ERP implementation. But when those orders start to multiply, the need for enterprise-wide oversight and reporting becomes more prevalent, as asset tracking solutions provider SimplyRFiD of Warrenton, Va., found out six years ago.

At that time, Carl Brown, the company's president, says that the company relied on UPS WorldShip to send RFID tags to its customers, who in turn use the tags with SimplyRFiD's software package.

According to Brown, SimplyRFiD's operations just didn't justify the installation of either an ERP-based supply chain suite or one offered up by a best-of-breed player. Brown says that the company used a combination of Excel spreadsheets for shipping and Salesforce.com for customer relationship management. "We took the orders, shipped them out manually, and then put the information on a spreadsheet," recalls Brown.

Split shipments that had to take place over multiple days and customer locations were especially burdensome, according to Brown. "Managing those tasks, collecting tracking numbers, and then managing the bill was crazy," says Brown. "While WorldShip is a nice package, without the rest of the applications in place it was very difficult to manage, track, and respond to."

Combining spreadsheets with a CRM added another level of complexity to the situation. Double entries were fairly common, for example, and not all staff members could be on the same page at the same time. "We were using Salesforce for content and QuickBooks for billing until it got to the point where we just couldn't keep track of everything," recalls Brown. The tipping point came in 2007, when SimplyRFiD watched its order numbers expand to 100 per month.

After exploring several options, Brown and his team selected an SaaS-based ERP from NetSuite. The system, which integrates with UPS, helps users see which orders were placed, which of them shipped, how long it took to reach their destinations, and exactly when they arrived at the customer's door.

Spreadsheets, manual processes, and disparate technology tools have now given way to a solution that handles estimates, sales orders, approvals, and fulfillment in a real-time manner online. Today, the company's logistics team can quickly pull up a 4-page checklist for every order submitted.

"Once we ship out of NetSuite, the ERP produces the packaging label and the customer receives a shipping notice with tracking numbers embedded," says Brown.

The company has seen various benefits from its ERP. The accounting department, for example, no longer wastes 20 hours to 30 hours a week addressing double entries in its books. Order and shipment errors have also been reduced, expedited shipments are easier to orchestrate, and customer satisfaction with orders and delivery times is high.

"We send out a customer survey with every order," Brown explains, "and right now our Net Promoter Score is between 95 and 100—compare that to Apple's score of 70."

SimplyRFiD, which also uses its ERP for inventory management, fulfillment, customer tracking, and other functions, has been able to up its accuracy levels and ensure that double shipments no longer happen. "We're on top of making sure every order is right," says Brown, "and our ERP helps us do that in a pretty seamless manner."

—Bridget McCrea, Contributing Editor

Staying Local or Going Global: Challenges for expansion into emerging markets

The extraordinary variations among emerging market countries suggest the need for multiple supply chains, each tailored to the needs of specific regions and supported by locally developed capabilities and talent. Our consulting team offers some suggestions for dealing with the real, rather than the ideal.

BY **BYUNG SOO KIM** AND **JONATHAN WRIGHT**

In developing countries, where shifting politics, unstable economies, lack of basic infrastructure, and limited application of enterprise management technologies are the norm, companies face a crucial decision.

What alternative strategies should be adopted to balance the extent of localization versus integrated globalization in order to succeed in these unpredictable and individually unique markets? Should they stay more local, relying more on local partners and supply chain relationships, or should they be integrated into global operations and scale? What options will be available?

As is so often the case in running a global business, there is no one right answer. Given the emphasis on growth and the pressure on organizations to meet financial targets, expansion into BRIC (Brazil, Russia, India, and China) and emerging markets may be inevitable. Companies taking a "one size fits all" approach to expansion, however, are setting themselves up for disappointment.

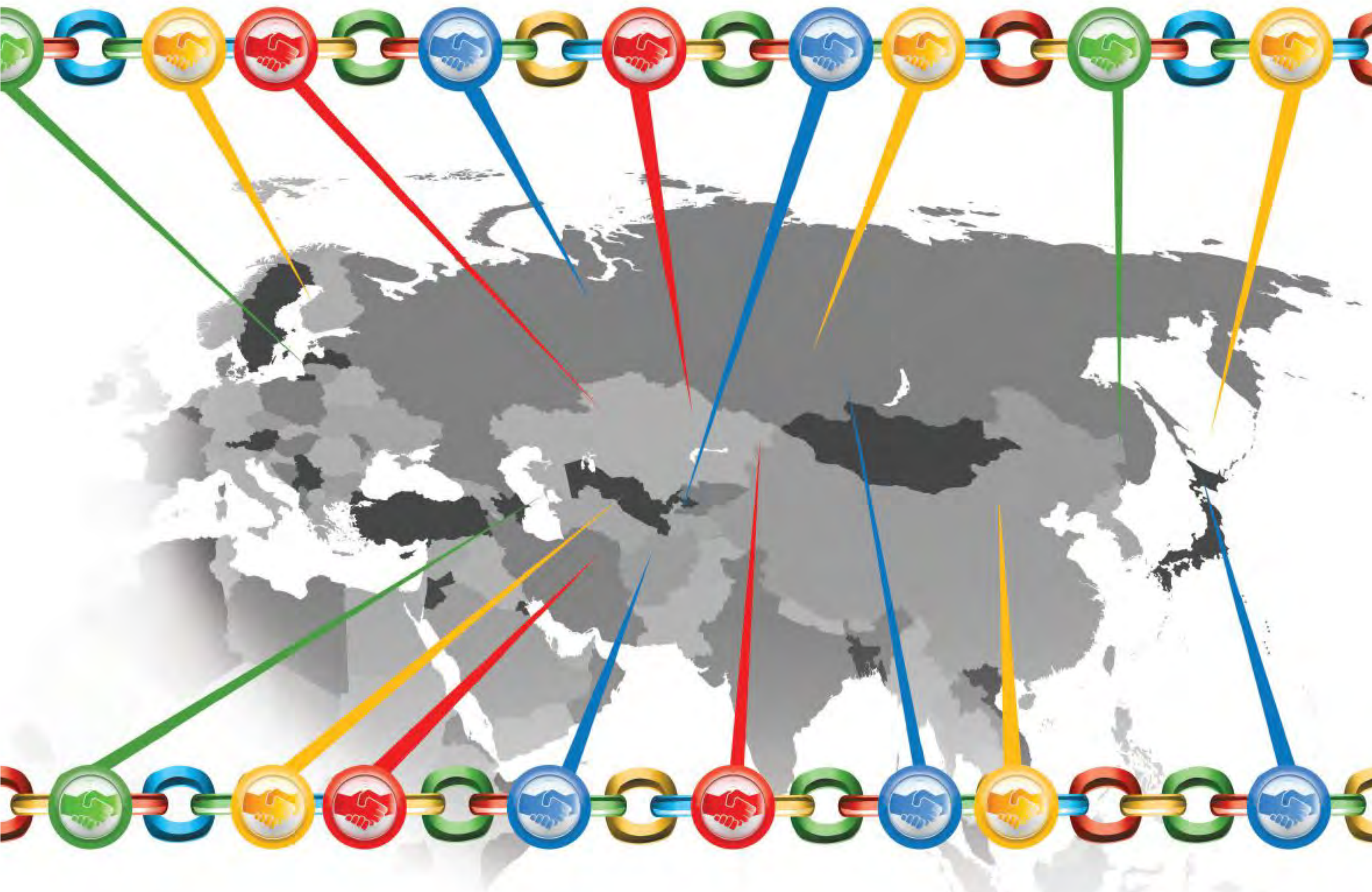
In interviews with more than 250 senior executives of Asian companies, we found that only 28 percent said their revenues and profits from international markets had fully developed in line with expectations over the past three years.

While 90 percent of expanding Asian companies who responded to the study remain strongly committed to international expansion, only 31 percent said they have the right operational capabilities to support international operations. Executives also indicated that a major concern was the "human side" of international business: securing talent, building a global mindset, and managing cross-cultural communications.

Ideally, companies operating in BRIC and emerging markets will rely upon decentralized operations, running at critical mass and tailored to the local market. They will employ global best practices when possible, with emphasis on flexibility and responsiveness over global standardization and scaled efficiency.

It's also worth remembering that, when companies such as Panasonic, Samsung, and Toyota started their international expansions, they based their competitive advantage in large part on lower production costs. Over time, they shrugged off these low-cost origins and became known for innovation and premium products.

The same scenario is playing out today with other Asian companies as they globalize, but at a much faster pace. In our study, a majority of executives said low-cost operations were a primary driver of competitive advantage today, but only a small minority thought it would still be an advantage in three years' time.



The extraordinary variations among emerging market countries suggest the need for multiple supply chains, each tailored to the specific needs of regions and communities and supported by locally developed capabilities and talent. Each supply chain should be flexible enough to accommodate rapid change.

Most organizations place a high value on integrated operations, but in BRIC and emerging markets the emphasis may shift from "integrated" to "dynamic." This means creating fluid, responsive ecosystems of processes, people, and technologies. Decentralized operations can allow companies to deal more effectively with a range of issues including cross-border challenges, differences in taxation, geographic obstacles, technological variations, and discrepancies in the labor market.

Every company, and every market, is different, so organizations must deal with the real, rather than the ideal. They need to think about each developing country as an independent ecosphere, a micro-supply chain with its own variations.

Stages of localization maturity

Depending upon company ambitions, the current level of investment and involvement, and the economic conditions within each particular country, organizations seeking to enter new emerging markets may find themselves at one of four stages of global localization maturity:

Stage 1: Entry level/authorized reseller. In this stage, the organization relies exclusively upon local partners. It has no local employees, and no in-country management. Instead, regional management oversees operations in a cluster of emerging market countries. The organization at this stage has made no investment in local infrastructure.

Stage 2: Direct sales. Stage two organizations have established a sales force of the company's own employees. However, there is a continued reliance upon local partners for most operational aspects of doing business, including providing the necessary infrastructure.

Stage 3: Operational footprint. In this stage, companies begin direct investment or at a minimum long-term agreements with partners for local operational infrastructure, including manufacturing and logistics and transportation.

Stage 4: Decentralized operations. Companies in stage four have reached critical mass, with fully decentralized local sales and operations.

To support successful global expansion, companies need to create the right platform for each market. This means designing and implementing effective regional and global operating models.

The operating model should articulate how the company will organize itself to execute its international strategy. It can also lay the framework for coordinating operations between the company's corporate center and its overseas business units.

First, organizations define the capabilities and identify the gaps they want to fill across operations. The operating model can also reflect the business models chosen for each of the overseas operations. Key questions for each market include:

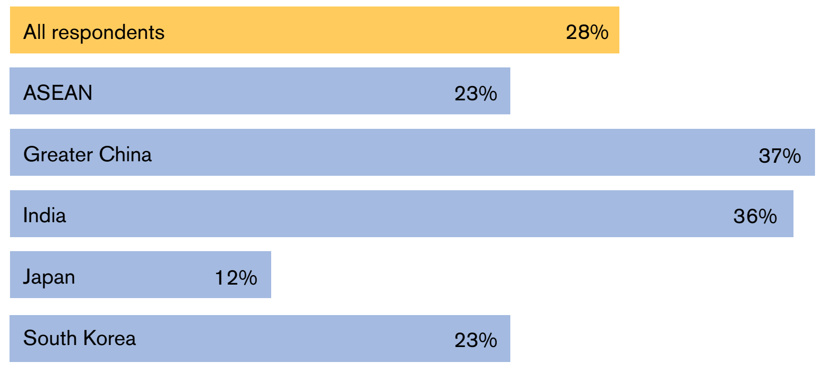
• What unique market characteristics drive customer demand for which we need to adapt?

• What capabilities are critical to delivering our customer value proposition and achieving differentiation in target markets?

• How can we leverage our existing or shared capabilities to serve new markets?

• Where can we improve to become more competitive, with the ultimate goal of becoming a market leader?

Percentage of respondents whose organizations' revenue and profits in international markets have fully met expectations.



Source: Accenture

Talent and other key concerns

Once a structural design has been created, companies need to determine how to implement each required capability. A key consideration in emerging markets is how to source and develop the right talent across geographies.

Companies can no longer rely on sourcing key talent from their home countries to drive success in foreign markets. Rather, they must have comprehensive strategies in place to build and retain talent, both at home and overseas. These strategies often rely upon global best practices, mixed in with home country traditions.

Other concerns include the degree of process standardization or customization needed, and the governance structure required to manage operations in emerging markets. In working with companies planning expansion into BRIC or emerging markets, we use a seven-point checklist to review strategy and the company's own plans for dealing with key issues.

1. Governance. In a mature operation with critical mass, the company generally relies upon local decision-making authority.

2. Reliance on local talent. The company entering a new market should consider planning upon increased reliance on local hiring and local leadership.

3. Local partnerships. Partners with local knowledge and experience can be critical to increasing the likelihood of success, especially in the early stages of expansion. As mentioned, the characteristics of each country will determine whether reliance on local partnerships will increase or decrease over time.

4. Multipurpose infrastructure. Demand and environment in each country can be highly unpredictable. A multipurpose infrastructure including a distribution network, warehousing operations, multi-mode transportation, which supports "tap on tap off" capability, enabling flexibility and responsiveness, are among the key attributes of a successful emerging market operation.

5. Low visibility and low touch. Companies entering emerging markets may have to accept a lower level of visibility. The risks accompanying lower visibility, however, can be actively managed through manual checkpoints and interventions.

6. Reliance on manual processes and frequent touch-points. Manual processes will likely be prevalent in emerging markets from the time of entry all along the maturity curve, although generally there is the potential to leverage systems and automation in the late stages. We believe that the emphasis from the beginning should be upon the integration of people and partners rather than the integration of systems.

7. Reduction of complexity without sacrificing localization. Scaled efficiency may not be attainable, but reduction of complexity across products and services is essential at every stage from entry to critical mass.

In the end: Decentralize

Global markets are becoming crowded and complex, with many companies converging on a common strategy of trying to sell higher-value, innovative products. Organizations need fresh, effective roadmaps that reflect changing markets, customer preferences, and technological developments.

Our research indicates that companies can increase their chances for success by putting in place strategies that enable differentiation in crowded markets while providing sound platforms for growth.

No matter how clear and detailed the blueprint for expansion into emerging markets, however, the most important element of success may be a company's ability to build an adaptable and responsive ecosystem of processes, people, and technologies. The extraordinary variations among emerging markets suggest the need for country specific operations, supported by locally developed capabilities and talent.

In the end, this will likely require decentralized operations running at critical mass, to deal more effectively with a diverse range of challenges. Most organizations place a high value on integrated operations, but in BRIC and emerging markets the emphasis may shift from "integrated" to "dynamic."

Byung Soo Kim and Jonathan Wright are executives in the Operations consulting group at Accenture, a global management consulting, technology services, and outsourcing company.

LIFT TRUCKS: Financing for flexibility

With the economy warming, fleet owners are navigating a new array of customized financing options as their fleets return to normal utilization.

BY **JOSH BOND,** EDITOR AT LARGE

In recent years, leasing has grown in popularity and is now the preferred method for acquiring new equipment. However, many of the features that make leasing a cost-effective way to procure lift trucks and optimize operations can, if poorly managed, create even more problems.

For example, the end of the lease term presents a great opportunity to reevaluate a fleet and upgrade to the latest equipment. On the other hand, it can also signal the beginning of unnecessary monthly renewals and penalties for overages.

The key challenge when designing the right lease agreement is "uncertainty." When signing on the dotted line, how can a fleet owner possibly know what utilization will look like in five years? Thankfully, the uncertainty is now centered around how much more the lift trucks will be used, not how long they'll stay idle. "Customers feel as if they're getting back to normal utilization, and they're hoping it stays that way," says Bob Piot, national sales and marketing manager for Toyota Financial Services. "Once the economy warmed up, the hours started going on those lift trucks pretty fast; however, they're really not sure whether what happened in 2012 will happen again."

Leasing on the rise

What happened in 2012 was a continued growth in forklift sales—and a continued growth in the number of those sales that were structured as leases.

Approximately 65 percent of all new purchases are acquired through a lease versus cash, according to Jim Kelly, senior managing director of equipment finance for GE Capital. Currently, 75 percent of those are fair market value leases, says Kelly, as distinct from lease-to-own arrangements.

The popularity of leases is not an accident. Following the economic downturn, finance companies and equipment manufacturers sought to stimulate sales with a growing array of new, more flexible lease structures. Although customers are more able than ever to tailor an agreement to provide the best possible value, Piot believes that the proliferation of options has become a problem.

"A lot of these programs are complicated and have confused customers who are not savvy," says Piot. "Some who were looking for low payments have ended up paying more, and spending more overhead in their accounts payable department."

After having been burned by leasing in the past, some customers have again transitioned from paying cash up front to leasing equipment, says Tina Goodwin, director of financial services for NACCO Material Handling Group. "Some were larger national accounts that had leased long ago and had no interest in doing it again," she says. "We took them through an analysis of just the pure financing savings, not including any maintenance, and the savings were substantial. At a minimum, you will save 5 percent and probably closer to 10 percent on equipment costs."

Capturing and predicting utilization data

The best leases match the term to the economic life of the truck, which is generally 10,000 hours of use. Assuming the lift truck will be used five days a week for eight hours a day, that's 2,000 hours per year for a lease term of five years.

However, as too many have learned the hard way, that assumption is a problem. Over-utilization leads to increased maintenance costs, increased downtime, and end-of-term penalties. Under-utilization equals money unnecessarily spent.

"In the past, lessees would have typically entered into a lease for 2,000 hours per year—the traditional annual usage—whether they thought that they would utilize it or not," says Kelly. "Today, lessees are looking to past utilization, coupled with their expected future needs, to derive their annual usage hours tied to the lease."

Nick Adams, business development manager for the Mitsubishi Caterpillar Forklift America fleet services group, agrees. "I have seen companies where procurement folks structure leases with a term and annual usage that is not in sync with the maintenance program term and annual usage as designed by operations," he says. "When they're out of sync, it usually results in additional costs to the company that could have been avoided."

Adams says that he's seeing more and more companies form cross-functional "decision committees" that are made up of both procurement and operational management people. The perception is that this approach complicates or extends the procurement process, says Adams, but it also reduces costs and significantly helps reduce downstream issues.

Detailed usage data is an essential foundation for procurement and maintenance to stay on the same page. Many customers are seeing the benefit of adding wireless forklift fleet and operator management systems to their equipment, says Jeff Bailey, director of Crown Credit Company. "These types of systems collect valuable data that can be analyzed to help reduce maintenance cost," he says. "This information also helps the procurement department determine when to replace equipment and the quantity needed."

Although new technology and telemetry units can enhance the quality and variety of utilization data captured, Bob Chambers, regional account manager for Hyundai Forklift, says that the discovery process does not need to be complicated. "If you're not looking to a third party to help, just get a spreadsheet and start looking."

Accurate data can allow a customer to dial in a 3,000-hour lease or a 700-hour lease as appropriate to each lift truck. Brian Markison, senior manager of national accounts for UniCarriers Americas (formerly Nissan Forklift) offers an additional best practice, suggesting the term should consume only 80 percent of the economic life of the lift truck.

"A five-year term at 2,000 hours per year will sap 10,000 hours, or substantially all of the unit's usable life," says Markison. "This can leave users at a wall at the end of the term, with few affordable options for extensions. A four-year term at 2,000 hours might make better sense, with plans to evaluate options when the time comes."

Preventing end-of-term dilemmas

Not having a plan for the end of the lease term is where even a perfectly tailored agreement can go wrong. "A lease should force you to look at things at the end of the term," says Chambers. "That can be a great tool for evaluating the state of the equipment and the fleet, but is too often a missed opportunity."

"One thing that many large lessees have issues with is lease expiration tracking," says Bailey. "Many times the leases go past maturity, which ends up costing additional maintenance money. Mom and Pop businesses can benefit from the same thinking."

Markison recommends that large fleet owners begin planning at least six months to nine months before the end of the term. "Check the lead time for your own internal approval processes and work backward from there," he says. "Whether leasing or buying, the challenge is getting through the capital approval process fast enough or deciding ahead of time what their triggers will be for action."

For many, delays around lease renewals have to do with the relative difficulty in securing capital expense dollars, even as maintenance dollars are easily found and spent. "I've seen customers who had short-term rentals for 18 months to 24 months," says Markison. "Getting capital expense money was hard, and the short-term view prevailed. There was personnel turnover and they took the path of least resistance. They were paying 30 percent or 40 percent more than they would have been paying if they were in the right lease."

It may be that the equipment has been under-utilized, and it doesn't make sense to replace it at the end of the term. In this case, default month-to-month lease extensions are rarely the best option. It's often possible to negotiate a new lease term and potentially end up with an even lower monthly payment, according to Goodwin.

"We saw a lot of customers over the last few years who extended their leases month to month," says Goodwin, who notes that a lot of customers were in a wait-and-see mode from 2010 through last year. "They had a lot of under-utilized equipment as a result

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of the downturn, but we're to the point now where we're seeing equipment come back that has been extended for a couple of years, and they're finally confident and financially comfortable enough to return it. That's a new trend."

The new agreement

Those finally getting around to replacing equipment will enjoy a variety of options that were not available to them five years ago, such as non-traditional lease terms, early termination option leases, flex leases and lease-by-the-hour leases.

"Many customers are asking for some degree of flexibility in the lease that either allows them to adjust the fleet to the right specifications on the fly or return equipment early—at a reduced cost—should their business needs decline," says Bailey.

As opposed to "ballparking" a 36-, 48-, or 60-month lease assuming a certain number of hours per year, customers can expect dealers and finance partners to present a much more nuanced approach, especially when accurate utilization data has been collected. Traditionally, leases were ideal for customers with utilization in the 1,000-hour to 3,000-hour range. Now, those running 700 hours who might have had to rely on rentals to meet their needs can enter into lease agreements, according to Toyota's Piot.

The problem with renting is that, with intermittent periods of heavy usage and idle time, it's hard to nail down costs over the long term. Leases offer the benefit of predictable costs, and often contribute to significant overall savings. The move from renting too much to leasing just right could potentially halve your fleet costs, Piot says.

With detailed data in hand, a customer might also find benefits beyond structuring the right lease term for the utilization. Markison offered the example of customers who have worked with their finance partners and equipment manufacturers to guarantee the residuals at the end of the lease.

In other words, they know utilization and working conditions with such certainty that they also know the value of the truck at the end of the term. This eliminates the need to finance credit risk, which can create as much as a 2 percent reduction in the interest rate. For a $20,000 lift truck, that adds up to a savings of nearly $1,300, or 7 percent, in lease costs over five years.

"This does not even require advanced fleet management technology or practices on the part of the customer," says Markison. "It just takes a customer savvy enough to know it's an option."

Advanced telemetry, on the other hand, might facilitate "power by the hour" options that allow a lessee to only pay over a lease term for the hours that they utilize the lift truck. If a lift truck is used for 20 hours one month, the customer will be billed for 20 hours. Goodwin says that such programs enable true matching of the lease term to the economic life of the truck, as well as true matching of a customer's expense to their revenue.

"Recently, lease-by-the-hour programs are on the cusp of being more mainstream as the key to its success for both the lessor and the lessee is the accurate and cost effective capture of usage data," says Adams.

The key to fleet savings with regard to financing, says Markison, is to ask questions and be ready to answer them when a dealer or sales representative inquires. "Don't assume you only have one option," he says. "It's a matter of investing some time to explore."

Josh Bond is Editor-at-Large for Logistics Management

10 Trends

What trends will affect the next generation of supply chains? That's a question more and more supply chain professionals are asking themselves. The 10 trends offered here are validated with executive input from senior executives across different industries. By understanding, anticipating, and acting upon these trends, the author believes companies can greatly enhance the value of their supply chain operations.

BY **SUMANTRA SENGUPTA**, EVM PARTNERS LLC.

Recently, I happened to be perusing the aisle of a bookstore (there are still a few of them left) and found a book by Pavan Sukhdev titled Corporation 2020. The title was intriguing and the contents were illuminating. Basically, the author argued for a new formula for business success going forward—one that looked at all aspects of doing business and emphasized the corporation's responsibility to society and to sustainability.

The forward-looking nature of Sukhdev's book set the wheels in motion for this article. Quite a bit has been written over the years about the future of supply chains. MIT's SCM 2020 project, for example, brought together leading thinkers and practitioners to address the subject. However, this research and most articles I have read on the topic have focused on supply chain operations and not on the points of "intersection"—that is, the related activities that are outside of the supply chain's direct control such as R&D, information technology, and post-sales service. In my list of the top trends, I have incorporated a number of these intersection points.

for the Next 10 years

As we think about the major trends that will affect the next generation of supply chains, we need to consider certain macroeconomic factors. Prominent among these is the changing global economic demographics. Walk into any multinational consumer goods or manufacturing company today and you're sure to hear a lot of discussion about the BRIC (Brazil, Russia, India, and China) markets. The GDP growth in those countries far exceeds the growth in more fully developed economies.

Further, the sheer number of consumers in these countries already accounts for about 40 percent of the world's population. And by 2050, their combined economies are expected to eclipse that of the world's richest countries—including the U.S. and European Union.

Another macro-economic reality to consider is the shortage of knowledge workers to satisfy the needs of the expanding markets. Studies show that these shortages are beginning to be felt in the immediate term. Some of this shortage will be offset by the Baby Boomers wanting (or needing) to work longer to overcome lingering effects of the latest recession. In any case, the shortage of skilled workers overall underpins several of the specific trends we present below.

In other articles, I have discussed the "Top 10 Supply Chain Mistakes" and "10 New Ideas for Generating Value." With that same "top 10" approach in mind, I embarked on this article. The 10 trends identified are listed and discussed in turn below. The list was based on my research and on consulting engagements with companies in a range of industries. Importantly, the trends were reviewed by a group of senior executives, both in supply chain and in other corporate functions, representing a cross section of industry. The intent was to capture empirical data around the relevance and ability to execute against each of the trends for their particular company and industry.

The 10 Trends

1. Service chains will become more important than product chains.
2. Companies will need to fully report corporate externalities.
3. Supply chains must be designed to serve the "base of the pyramid."
4. Knowledge work and workers will become global in nature.
5. SCM will have a standard certification process similar to that for CPAs.
6. Product clockspeeds will determine the number and nature of the supply chains.
7. Micro segmentation will be key to success.
8. Technology to support SCM will primarily be "on tap."
9. Leaders will leverage social media in a closed loop feedback process.
10. Artificial intelligence will be embedded in mainstream supply chain activities.

The 10 Trends

1. Service chains will become more important than product chains. In many if not most business sectors today, great product is considered to be the table stakes just to play the game. Increasingly, discerning consumers are demanding more from pre- and post-sales service for the goods they buy. Accordingly, companies that effectively couple the pre- and post-sales service supply chain activities (including product knowledge, in-store service, warranties, responsive consumer services, and the like) will emerge as the winners over their solely product-centric competitors. That message was underscored by Apple CEO Tim Cook in his recent apology to consumers in China for the company's perceived failure to listen to feedback about post-sales service. This was a great example of a company with one of the most innovative products in the marketplace forgetting that the consumer is still largely in charge and that service plus product (in this case, repair and warranty practices) trumps product only.

Increasingly, discerning consumers are demanding more from pre-and post-sales service for the goods they buy.

2. Companies will need to fully report supply chain externalities. In *Corporation 2020*, Sukhdev writes in depth about corporate externalities—defined as the impacts of an organization's manufacturing and business processes on other segments of society—and the need to disclose those externalities. While some work has been done around supply chain sustainability and the need to reduce carbon footprint, companies will need to do a much better job of disclosing the end-to-end impacts of their supply chains. This means measuring and reporting on the effect of major supply chain transactions on jobs created, carbon footprint reduction, sustainable procurement processes, types of labor used, and modes of transportation among others. The customer or consumer will begin to demand the transparency into these impacts much as these have now on the labeling of food and beverage products.

3. Supply chains must be designed to serve the "base of the pyramid." The late Professor C.K. Prahlad authored a compelling book entitled *The Fortune at the Bottom of the Pyramid*, which later was modified and widely referred to as the "base" of the pyramid. The book pointed to the market potential of the five billion-plus people in the world whose incomes are less than $2,000 a year. We contend that companies in the consumable and durable sectors, in particular, will need to create products and associated supply chains to support the products that will cater to this market segment. To tap into this enormous potential, our supply chains must go through a total utilitarian design philosophy in order to deliver sustainable bottom-line performance. Current supply chain thinking, which is largely based on a cost plus model, will need to shift to a "not to exceed" cost model.

4. Knowledge work and workers will become global in nature. Knowledge work in supply chains today accounts for approximately 40 percent of the total labor hours spent. Much of this work deals with complex analytics, planning, procurement processing, and provision of services. This nature of the work, the need for multi-language support, and the associated local complexities of the different geographies being served will necessitate the seamless globalization of supply chain knowledge work. As an example, you could see a U.S.-centric company performing supply chain planning in the Philippines, operating procurement centers of excellence in Singapore, and conducting global business analytics in Brazil.

5. SCM will have a standard certification process similar to that for CPAs. Many universities offer undergraduate and graduate degrees in supply chain management. In addition, professional associations such as APICS, CSCMP, and ISM offer a range of certification programs. However, in most cases these programs either focus on the basics of SCM or on a specific activity such as import/export or financial analysis. We believe that a fundamental shift will occur in the normalized delivery, content served, and certifications of supply chain professionals. Many other professions like accounting (Certified Public Accountant) and engineering (Professional Engineers) require national board examinations as well as continuing professional education (measured by a specified number of hours per year). We contend that a similar professional credentials program will be required for supply chain professionals to normalize the knowledge base of the incoming resources.

6. Product clockspeeds will determine the number and nature of the supply chains. I recently worked with a global consumer durables company where over 70 percent of the products had a life span of less than 18 months. Another 20 percent had a life span of three to four years, with the remaining 10 percent exceeding five years. This "fast clockspeed" lifecycle is becoming more the norm than the exception. The days of the steady and static product catalog is past; thinking otherwise, in fact, is a recipe for disaster. However, we continue to find companies using a single supply chain approach to service all segments irrespective of the time constraints. The winners of the future will have the same number of distinct supply chains as there are product clockspeeds. In addition, supply chain organizations will need to be aligned by product segments as well as functional segments in a matrix fashion to serve the distinct supply chain needs.

7. Micro segmentation will be key to success. Do you have a detailed knowledge of your individual consumer or customer segments—your micro segments? The honest answer for most companies would be "no." A micro segment is defined as that exact part of the general buying category that triggers the purchasing decision—not the category itself. To illustrate, in recent work with a provider of smart phone accessories, we discovered that the company had several underserved micro segments—specifically, the design your own/assemble your own accessory segment. However, the ability to identify and service those segments was far beyond the reach of this company's supply chain. Going forward, organizations will need to know their micro segments, and their supply chains must be able to effectively service them based on the business strategy. I always encourage clients to think of their business in terms of the individual consumer or groups of consumers as opposed to a broad brush view of categories. Put another way, adopt a B2C (business to consumer) mindset even if your operation is predominantly B2B (business to business).

8. Technology to support SCM will primarily be "on tap." SaaS (software as a service) is gaining mainstream attention. We contend that most if not all supply chain technologies by 2020 will be delivered and consumed via this method—or "on tap." The user will pay for the ability to use the capability and will not have to incur the large fixed costs of ongoing maintenance, upgrades, and infrastructure expenditures that can amount to almost 25 to 30 percent of the cost of ownership. The widespread adoption of SaaS constructs will likely be accelerated by the rise of cloud computing and diminishing concerns about the security aspects of SaaS.

9. Leaders will leverage social media in a closed loop feedback process. Social media data is everywhere today. In recent work we did with a durable goods company, we found that they had 2,000 websites/blogs that were discussing their products and service needs on a fairly regular basis. However, this company—like most—did not have a systematic method to study the data and disseminate the information to the various supply chain constituencies (design, planning, procurement, service, manufacturing, and so forth). This is necessary to provide closed loop feedback processes that allow the company to proactively respond to the feedback. The winning companies will be able to receive, process and act on the data that is being provided to them by their constituents via social media.

10. Artificial intelligence will be embedded in mainstream supply chain activities. Humans learn by doing and processes improve as they get "leaned out." Yet somehow, every time we build a supply chain system we begin the process from the ground up. Planners go through the same calculation steps every time they start; procurement folks repeat approximately 35 percent to 40 percent of the activities they did in the past. The same holds true for people involved in building logistics and execution systems. The problem is that when embarking on a supply chain program or initiative we do not have access to algorithms that learn and retain the knowledge and experience of the past. We contend that supply chain artificial intelligence will need to be embedded in more effectively automating mainstream supply chain activities.

Executive validation of the trends

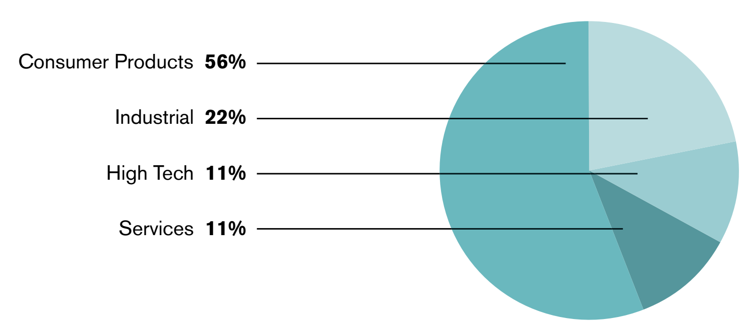
To validate our 10 trends in the "real world," we conducted a short but impactful field survey with a group of senior executives from various industries. Their responsibilities ranged from chief executive officer, chief financial officer, chief operating officer, and chief information officer to heads of supply chain.

The industry mix was comprised of 55 percent consumer products, 22 percent industrial manufacturing, and 11.5 percent each in high-tech and services. The responses from each segment were weighted equally. Several members of the executive group surveyed also had significant prior experience in pharmaceutical/heath care and were able to bring additional perspective from that experience.

We discussed the trends in person with each of the executives in our validation group. (For a full listing of the companies and participants, see Author's Note at end.) We asked these executives to respond to the 10 trends identified based on four criteria: relevance to the industry; relevance to corporate business performance; ability to execute on the trend; and complexity of execution. Each of the four criterion was graded on a three-point scale with a low being scored as 1, medium a 2, and high a 3.

Relevance to industry was defined as the relevance to the particular executive's industry overall (as opposed to

Industry Breakdown of Validation Group



just his specific company). Relevance to business performance focused on the ability to move the needle of balance sheet or P&L performance in a positive direction. Ability to execute was interpreted as the corporation's ability to act on the trend in the immediate near term. The final criterion addresses the overall complexity of the implementation.

While survey result tabulation and computation can often lead to a lot of analysis (just ask a statistician), our objective in field testing the trends was to gauge the level of relevance in the current business setting. This as opposed to predicting trends from a pundit perspective—and my apologies to all the pundits. The executives' points of view are presented without any internal bias or analysis added. In the accompanying sidebar on industry applicability, we provide our perspective on the impact of the trends on individual business sectors based on the many client engagements that we have completed in the past few years.

Industry relevance

The executive group ranked Trends 1, 6, and 7 as the highest in the relevance category. To recap, these trends are:

- Trend 1: Service chains will become more important than product chains.
- Trend 6: Product clockspeeds will determine the number and nature of the supply chains.
- Trend 7: Micro segmentation will be key to success.

All three of these trends received relevance scores higher than 80 percent. The percentage was determined by the sum of all 10 rankings divided by the maximum total score of 30 (that is, the amount if all 10 executives had given the trend a high [3] relevance rating). In essence, the increased importance of pre- and post-sales service, the ability to segment product clockspeeds with a supportive supply chain footprint, and the ability to hone in on the customer/consumer targets were deemed most relevant across the largely manufacturing-centric executive group. The next highest set of rankings were the trends of "on tap" technology and social data closed loop chains.

Business performance

In terms of impact on business performance, Trends 1 (service vs. product chains), 4 (globalization of knowledge workers), 6 (clockspeeds), and 10 (imbedded artificial intelligence) received the highest rankings from the executive group. The average scores for the three were higher than 75 percent. The next highest-ranked trend, with a score of close to 70 percent, was Trend 7 ("Micro Segmentation will be key to success").

Combining the results of the first two criteria (which essentially is a gauge of the trend's ability to affect financial performance) reveals that Trends 1, 6, and 7 have the greatest potential to advance the supply chain performance curve. All three had combined relevance and performance scores in excess of 75 percent. Trends 4 (globalization of knowledge workers) and 10 (artificial intelligence) were the fast followers with scores that were higher than 70 percent.

Surprisingly, Trends 2 and 3—disclosing SCM externalities and designing supply chains and products for base of pyramid—were ranked as having only low to medium relevance. The low relevance of the pyramid trend was a likely function of the market positioning of majority of the surveyed companies (high end brands or U.S.-centric brands).

Examining the externality ranking, most of the executives agreed that it was highly relevant and many already had programs in place. However, the general sense was that the ability to positively monetize on the additional expense associated with this trend was still in the distant future. On both of these trends, however, many of the executives suggested a wait-and-see attitude. In terms of business performance in particular, they pointed to the cost of compliance associated with Trend 2 and the company's ability to flourish in the emerging geographies associated with Trend 3.

Applicability of trends across industry segments

Certain of the trends identified have greater relevance to some industries than others. The table below gives our view of the comparative relevance (high, medium, or low) on six sectors represented by, or relevant to, our executive group. We highlight the high important ones across the sectors to show the cross industry applicability of the trends.

	Trend 1	2	3	4	5	6	7	8	9	10
CPG	H	M	H	M	H	H	H	H	H	H
High Tech	H	H	M	H	H	H	H	H	H	M
Retail	H	H	NA	M	M	L	H	M	H	H
Industrial/ Manufacturing	H	M	M	M	M	M	M	M	M	M
Pharmaceuticals	H	H	H	H	H	L	L	H	M	L
Food and Beverage	M	M	H	H	H	M	H	H	H	H

H High · M Medium · L Low

Ability to execute

Trends 2, 6, and 8 received the highest ability to execute rankings. These trends are:

- Trend 2: Disclosing supply chain externalities will be crucial.
- Trend 6: Product clockspeeds will determine the number and nature of the supply chains.
- Trend 8: Technology to support SCM will primarily be "on tap."

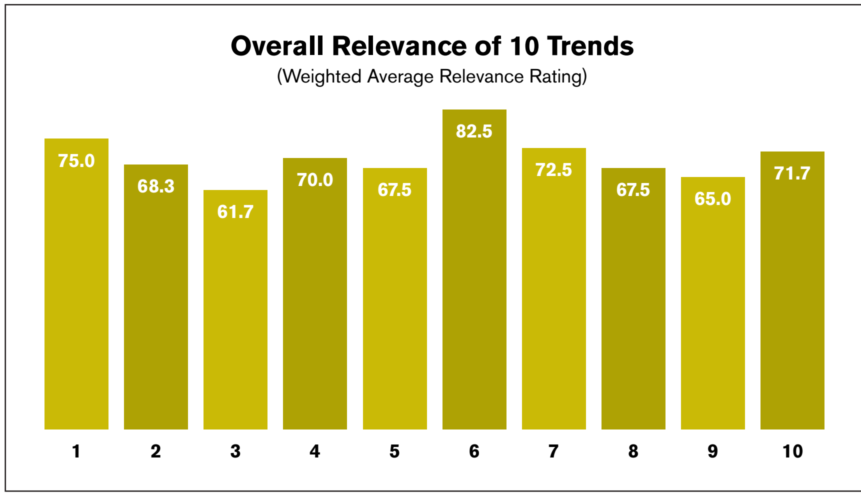
In general, the executive rankings on ability to execute came in lower (average scores were closer to 55 percent) than the other three criteria measured. Interestingly, the lowest ranked trends (i.e., least ability to implement) with scores of less than 50 percent, related to adopting artificial intelligence learning systems and incorporating social data into the supply chains. Specifically, some executives raised concerns about the data linkage that would be needed for best-of-breed learning system to be effective.

Complexity of execution

Trends 1, 6, and 10—service chains, product clockspeed, and artificial intelligence—received the highest complexity rankings (average of 86 percent), meaning that the executive group perceived them to be the most difficult to implement. Part of this may be due to the highly cross functional nature of the trends. Standardization of education processes was ranked just below these top three in terms of execution complexity.

Summarizing the results

When weighted equally across the four dimensions and normalized, the overall relevance rankings by our executive group show a distribution that ranges from 61 percent to 82 percent Trends 6, 1, and 7 have the largest relevance, reflecting the issues that are top of mind for the executives. Notably, their ability to execute against these trends is relatively high as well. The middle cluster—comprised of Trends 2, 4, and 8—show an overall relevance ranking greater than 68 percent, suggesting that these are only slightly less relevant and tougher to implement than the top-tier trends.



Finally, the trends with the lowest overall ranking are perceived to be of lesser relevance and slightly more difficult to implement than the others. The bottom two in the overall rankings were Trend 3 (serving the "Base of the Pyramid") and Trend 9 (leveraging social media in closed loop process). The ranking of the social media trend, in particular, came as a bit of a surprise—given all the recent hype surrounding Big Data. Yet the result proves the point that while Big Data is a useful tool, the ability to transfer the data to supply chains and the related ability to execute remains a big challenge.

As we step back and decipher the implications for supply chain practitioners, it is abundantly clear that the ability to create differentiated and multiple supply chains and to embrace a service-based culture is of paramount importance. These capabilities, coupled with the need to service smaller, unique segments in a profitable manner, continue to be high on industry and executive agendas. Importantly, all of these highly ranked competencies have the ability to move the economic performance needle.

Finally, we would be remiss if we did not mention some of the ideas that the executives themselves brought up during our discussions. Their insights ranged from the ability to foster open collaboration (across Buy, Make and Move portions of supply chain) with trading partners; to improving enterprise supply chain risk management processes and education; to incorporating in real time local regulatory measures and product postponement for local preferences.

Staying still is not an option for supply chain practitioners. Having the ability to create incremental value is fine, but real progress comes from anticipating and capitalizing on the kinds of mega trends we have discussed here. We believe that these trends we have put forth will be powerful drivers for change going forward, and it is encouraging to see that the senior executive group agreed in large measure. Equally encouraging and enlightening was the deeper understanding gained of the implementation challenges that lie ahead. One has to start somewhere: Enjoy the journey.

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Author's Note: The author would like to thank the following companies and senior executives for their personal participation and opinions (in alphabetical order for both). Companies: Ainsworth Pet Nutrition; Clorox; Designer Whey; Filtec; Godiva; Incase; JustFood ERP; Moark; Niagara Bottling; and Pelican Products.

Senior Executives: Ashley Dorna, Kevin Deighton, Marc DiGiorgio, Jeff Fowler, Mark Hersh, Linzell Harris, Jamie Hornstein, Grace Jeon, Chad Keuhn, and Nick Newman.

Manufacturing and retail supply chains in flux

Wholesale, rapid changes in both of these sectors are requiring supply chain managers to respond with speed and smart decision-making.

By Patrick Burnson, Executive Editor

When Gartner's 2013 Supply Chain Top 25 came out last May, it signaled a shift in "demand-driven leadership" with a handful of new multinationals moving up in the rankings. Further evidence that significant changes are taking place in our industry surfaced with two new reports demonstrating disruption in global linkage in the manufacturing and retail sectors.

The first comes from IDC Manufacturing Insights, which recently released "Business Strategy: The Journey Toward the People-Intensive Factory of the Future." This report notes that over the last 15 years, the manufacturing industry was essentially neglected with respect to other industries and was not considered a good industry for local investors as well as investors from the world's most advanced economies. However, the situation is rapidly changing, analysts maintain.

IDC says that governments worldwide now better understand that an economy based on service alone cannot survive in the long run. Manufacturers themselves are going back to basics and putting a renewed premium on production knowledge driven by the need to protect and enhance their technology. They realize that the direct involvement in production operations fosters innovation and improves customer service.

All of these factors have combined with the rise in transportation costs as a consequence of oil price developments and the need to produce closer to clients for better flexibility and service. The net result: In several developed countries, including the U.S. and U.K., some manufacturers are favoring "insourcing" initiatives.

"The manufacturing industry is back onstage in developed countries worldwide. Governments, media, manufacturers themselves, and their people are all changing their mindset with a stronger focus on production," says Pierfrancesco Manenti, Head of IDC Manufacturing Insights, EMEA, and Practice Director, Operations Technology Strategies.

Avoiding future shock

This trend is confirmed by IDC survey results, where more than 43 percent of global manufacturers declared that they have a formal process in place to look at how factories and plants will be organized in the near term. This highlights how manufacturers are starting to design their factory of the future now to get ready for a massive change that will last for the next generation.

It's important to note that for more than 56 percent of respondents, the factory of the future will be measured according to its production capability and flexibility, not merely efficiency and production capacity. Furthermore, the survey indicates that over the next five years about 10 percent of Western enterprises will move away from make-to-stock (MTS) to adopt make-to-individual (MTI).

Another key takeaway, say IDC analysts, is that in five years, 47 percent of manufacturers will produce modular platforms centrally while using local small factories, suppliers, and distributors to tailor final products for local demand. This means that manufacturers will have to build a "global plant floor," harmonizing, supervising, and coordinating execution activities across the company's and suppliers' network of manufacturing operations.

Despite growing plant automation, people—and the flexibility and decision-making capabilities they provide—will be at the center of the factory of the future. Finding skilled workers will prove to be a key issue in the industry, analysts conclude. They point to the fact that 64 percent of respondents expect their production processes to be largely or completely digitized in the next five years.

Finally, more than one fourth of manufacturers will invest over 25 percent of their total ICT (information and communications technology) budget for plant-floor IT.

"We are about to witness a new generation of manufacturing enterprises where operational processes on the plant floor—at the very heart of the enterprise—are considered the centerpiece of this transformation," Manenti concludes.

Retail shake up

And while the global manufacturing industry is passing through probably one of the most complex market contexts ever, a similar supply chain story is unfolding in the retail sector.

According to Jones Lang LaSalle, omni-channel selling and consumer demands are raising the bar, as retailers must compete on service to stay in the game. Demands, such as same-day delivery or ship-from-store, require retailers to adapt their supply chain network and store formats sooner rather than later. This transformation means that in five years, the retail supply chain may be unrecognizable from the infrastructure that exists today.

In five years, global retail supply chains may be unrecognizable from the infrastructure that exists today.

"Brick-and-mortar stores are becoming more than just a point of sale—they're an essential component of the supply chain as pick-up/drop-off locations for e-commerce orders," said Kris Bjorson, International Director and leader of Jones Lang LaSalle's Retail/e-commerce Distribution group. "This additional role offers the retail store another sales opportunity to entice customers to add to their order, or to try new products."

Analysts have identified five key retail supply chain movers:

1. "Omni-channel" distribution strategy has become a reality for retailers, and it means seamlessly serving customers via all available channels such as web, mobile, in-store, catalogue and so on, typically fulfilling same-day and next-day delivery promises. These individual shipments to customers are vastly different from replenishing the inventory in a store on a weekly basis. In short, online and mobile delivery has turned every customer into a point of sale, and every distribution center into an individual customer service location.

2. Leveling the playing field between brick-and-mortar stores and internet-based retailers is the goal of the Marketplace Fairness Act, the proposed federal legislation that expands the collection of sales tax by online retailers and is overwhelmingly popular in the Senate. Even though it means new taxes for online retailers, it actually focuses on tax collection, not the new taxes themselves. While the industry knows the changes that result from the final legislation will be profound, the jury is out on how the specific implications will play out—and who the winners and losers will be.

3. 3D printing is beginning to have a real impact on manufacturing, the supply chain, retail, and ecommerce. The breadth of creative possibilities are staggering, as new products become cheaper to bring to market, me-tail-driven consumers get to design more of their own uber-customized products. At the same time, some brick-and-mortar stores now offer walk-in customers tools to create precisely the product they want.

4. The convenience of digital devices and advancement of internet speeds enable books, music, computer games, and other entertainment to be download-only purchases. This transforms the retail supply chain in a unique way.

5. The rise in pop-up temporary stores where large brand retailers may showcase a new product or a guest designer to create buzz and drive sales. We see former retail space being used by schools, churches, clinics, fitness centers, and dental offices. As the sector changes, retailers and retail landlords must be creative.

"Never has change come so fast, and so furious, in the history of retail," says Greg Maloney, Americas CEO and President of Jones Lang LaSalle Retail. "The good news is that both retailers and their supply chain partners are responding, evolving to rise to the challenges and opportunities posed by the omni-channel paradigm, the advent of 3D manufacturing, changes to tax law, and being creative with remaining retail space." ☐

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Panama Canal Expansion Update:

When the "tipping point" becomes reality

Once completed in late 2014 or early 2015, the expansion project will accommodate vessels more than twice the size of current Panamax ships. However, the projected overall impact on shippers, carriers, ports, and service providers appears to be up in the air.

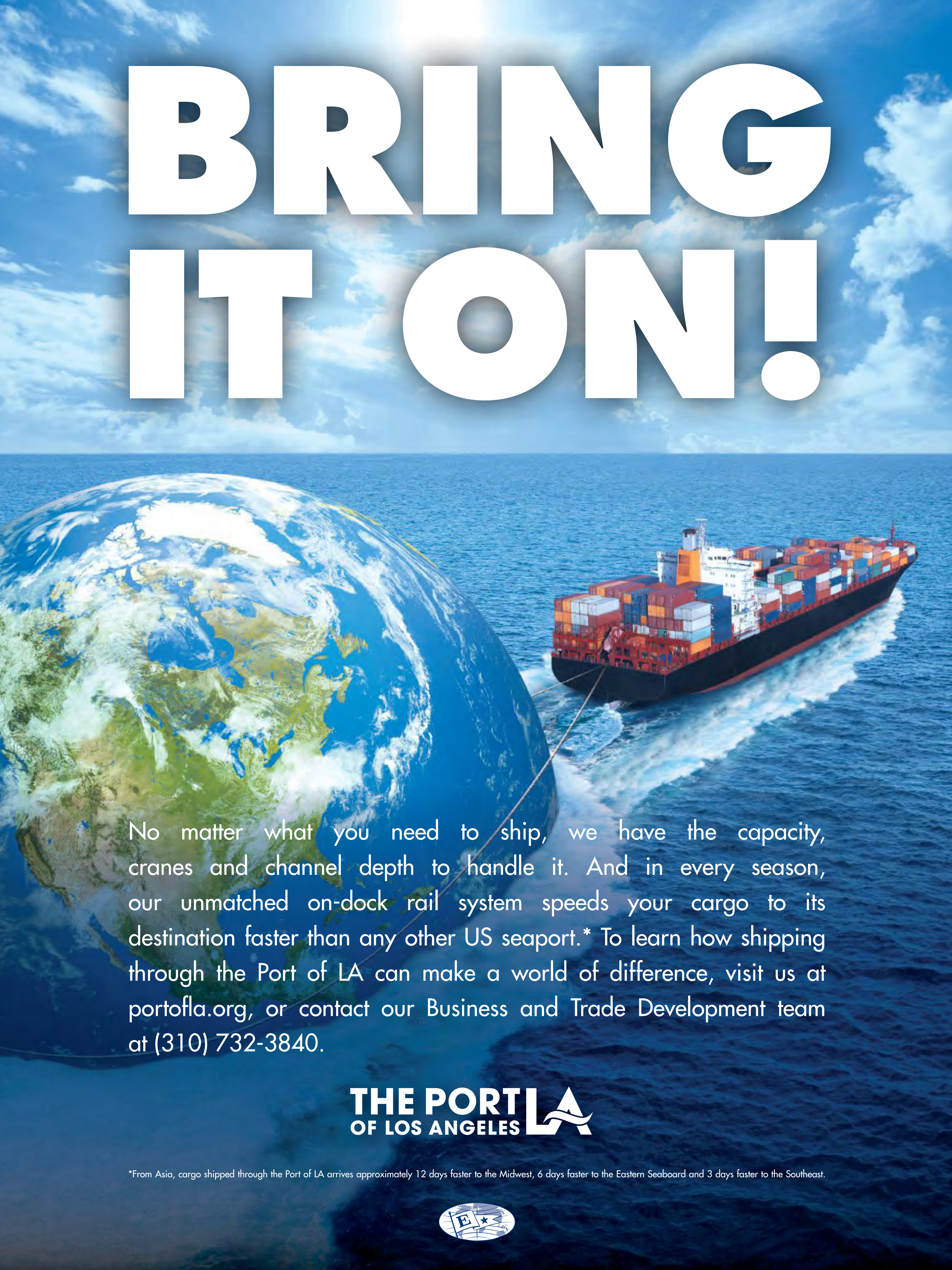
By Patrick Burnson, Executive Editor

Virtually every major global container port, ocean carrier, and lead logistics provider will feel some level of impact from the Panama Canal expansion. And according to many global freight transportation analysts, shippers should begin planning now to take advantage of this widely anticipated "tipping point."

According to Peter Sand, chief shipping analyst for The Baltic and International Maritime Council in Copenhagen (BIMCO), the carriers with the newest "post-Panamax" vessels will rush them into new deployments due to the expansion. "The dimensions of the 'ultra large' container vessels are relevant in light of the carriers' high focus on network optimization, especially for routes going to the U.S. East Coast," he says. "The large inflow of post-Panamax ships exclusively into a low growth trading lane like Far East-to-Europe, has created an urgent need to deploy such tonnage onto other trades."

And a number of prominent ports on the U.S. East Coast are getting ready for that anticipated new business.

In Savannah, Ga., the river is being deepened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*From Asia, cargo shipped through the Port of LA arrives approximately 12 days faster to the Midwest, 6 days faster to the Eastern Seaboard and 3 days faster to the Southeast.

Dredging of the navigational channels has been completed. This included both canal entrances, on the Pacific and Atlantic sides, as well as Gaillard Cut. The remaining dredging work to be done in Gatun Lake is expected to be complete this year.

while the port of Charleston in neighboring South Carolina is also expanding. Further south, and as the port closest to the Panama Canal, the Port of Miami expects to be the most desired destination for the new generation of Panamax ships. The port's Deep Dredge project aims to deepen Biscayne Bay to 50 feet from 42 feet.

Additionally, the Port of Miami's Tunnel Project will offer trucks a more direct route to and from the port with a bypass of downtown Miami. The port is also considering a 4.4 mile rail link to the Hialeah intermodal rail yard. Furthermore, Miami has forged a deal with mega-carrier Maersk to handle more vessels in the coming years.

To date, the ports in Norfolk, Baltimore, and New York have channels with sufficient post-Panamax depth. The Port Authority of New York and New Jersey, however, must complete their $1 billion project to raise the Bayonne Bridge by 65 feet before ultra large ships can pass underneath.

The largest ocean cargo gateway on the U.S. West Coast is hardly standing still, however. In an aggressive move to counter the efforts of East Coast rivals, it's making major investments in its infrastructure.

"Adoption of a new budget allows the Port of Los Angeles to remain competitive, financially strong, and self-sustaining, especially as we face increasing and intense competition from ports around the globe," says the port's executive director, Geraldine Knatz, Ph.D.

The Port of Los Angeles' capital spending budget earmarks more than $380 million for container terminal and transportation upgrades, including more than $99 million at the TraPac container terminal for backland improvements to support future automation as well as construction of a facility to provide on-dock rail capabilities.

BNSF intermodal executive Fred Malesa maintains that since the ports of Los Angeles and Long Beach already regularly handle vessels of 8,000-TEU to 10,000-TEU capacity, carriers beginning to deploy 15,000-TEU to 18,000-TEU ships in their Asia-Europe services will continue to make direct calls there.

"Following the expansion, West Coast ports will continue to have a significant transit time advantage when serving the nation's interior by rail and intermodal," says Malesa.

Latin America angle

Other industry analysts say that any cargo lost by West Coast ports as a consequence of direct East Coast vessel calls will be offset by the burgeoning

business forecasted for the north-south trade with Latin America.

Dr. Walter Kemmsies, chief economist at coastal and civil engineering firm Moffatt and Nichols, says that new opportunities will open between the U.S. West Coast and the East Coast of South America.

"Brazil remains a vital emerging nation," says Kemmsies, "and demand for U.S. raw materials and finished goods will only increase. In the meantime, West Coast and Midwest shippers can gain a whole new way to access this marketplace after the expansion using ports on our own Pacific Rim."

A recent study commissioned by Lilly & Associates International, a global freight forwarder based in Miami, shows that Panama's Colon Free Trade Zone (CFZ) will soon become a major logistical hub for the region due to the expansion.

Researchers point out that CFZ imports and exports grew by 56 percent between 2008 and 2011, an astonishing figure amid a world-wide recession and continued lagging growth in the world's largest economy. This growth will likely be accelerated when the expansion is complete and the CFZ upgrades are finalized, including an international airport.

"The emerging middle class in Latin America and globalized trade markets place Panama and the CFZ at a strategic crossroads," says Nelson Cabrera,

Panama Canal expansion not likely to make shipping "greener"

On paper, it would seem that a shorter ocean transit route would have a positive impact on the environment. But several scientists contend that the shift of some freight from the U.S. West Coast to the East Coast will represent no more than "a push" when it comes to cleaning the air and addressing climate change.

Indeed, studying the relationship between climate change and the ocean cargo shipping sector immediately uncovers a series of apparent contradictions, says Elena Craft, a prominent health scientist with the Environmental Defense Fund.

"Of all the modes of transport, containerized shipping uses the most unrefined fossil fuels, yet is the least CO2 intensive way to move goods around the planet," says Craft.

In a recent interview, Craft notes that containerized shipping has a successful legacy of propulsion using renewable sources, yet remains wedded to fossil fuels in the modern age. It contributes around 3 percent of global CO2 emissions, while its contribution to climate change has been a cooling effect. And, despite a strong association with "national pride and identity," it remains omitted from national efforts to tackle greenhouse gas emissions in nations where mitigation is high on the agenda.

It's against this backdrop that Craft has contributed her insights to a special issue of *Carbon Management Journal* in a story titled "Panama Canal Expansion: Emission Changes from Possible U.S. West Coast Modal Shift."

In the story, Craft says that the expansion of the Panama Canal presents many opportunities for the intermodal container shipping industry. Larger vessels will be able to transit the canal and take advantage of economies of scale in part to reduce CO2 and criteria pollutant emissions associated with goods movement.

But quantifying emissions changes associated with Panama Canal expansion depends on routing, size of ships, integration of short-sea shipping, equipment profile, and port-of-entry decisions (East Coast, Gulf Coast, or West Coast).

So while substitution of larger ships can reduce the CO2 footprint of cargo carried by a container ship through an expanded canal, diversion of current cargo from modes known to be higher emitting per TEU-mile may not provide emissions benefits where waterborne route distances offset modal efficiencies.

The conclusion posited by *Carbon Management Journal*: "Using our assumption of future cargo volumes and a 10 percent diversion from the West Coast to the East Coast, the effects of Panama Canal expansion on CO2 emissions are negligible due to longer distances travelled."

Researchers add that diversion distance offsets vessel size efficiency gains and reductions in inland transportation miles. Changes in emissions of air quality pollutants could be regionally significant in air-quality terms due to the localized nature of their environmental and health impacts.

However, there's an alternative that has yet to be properly explored say Environmental Defense Fund experts—short-sea shipping.

"Short-sea shipping is one way to possibly mitigate some emissions increases in regions with higher container traffic volumes, revealing the importance of system-wide and intermodal consideration to improve freight transport from origin to destination, not just from port to port," adds Craft.

—Patrick Burnson, Executive Editor

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manager of business development at Lilly. He adds that with relative political and economic stability, Panama is an appealing way station for multinational companies looking to access emerging markets at low risk. And while political and economic challenges are cause for concern, they're not overriding ones says Cabrera, as Panama outperforms its regional peers in both stability and growth.

"Panama's infrastructure improvements and adherence to international norms under trade agreements position the CFZ as a dynamic center for Latin American and Caribbean trade in the coming decades," adds Cabrera.

Meanwhile, a long talked about alternative to the Panama Canal moved one step closer last month, report analysts for IHS Global Insights. The Nicaraguan government proposed legislation that will give a 50-year concession for the construction and operation of a new canal connecting the Atlantic and Pacific oceans to a Chinese operator.

Should the Chinese operator succeed in raising sufficient finance to develop the project, it will profoundly alter operational conditions in Nicaragua, reshape global trade patterns, and shift regional relations. Of several proposed alternatives to the Panama Canal, this proposal seems the most likely yet to get off the ground, say analysts, partly because of the Nicaraguan government's dominance of the domestic scenario and partly because of the clear long-term commercial benefits for a host of different actors.

Steady progress

Lending more urgency to the issue is the fact that the expansion is right on schedule, says Alberto Aleman Zubieta, CEO of the Panama Canal Authority (ACP).

"The new locks, which are currently under construction, will expand the Canal's ability to handle ships nearly three times the size of current ships—an estimated 14,000 containers versus 5,000 container capacity today—and double

The excavations of the Pacific lock access channel are 70 percent complete. This project calls for the excavation of more than 50 million cubic meters of materials along a six-mile span and is executed in four phases.

the throughput capacity of the Canal," says Zubieta.

Most importantly, dredging of the navigational channels has been completed. This included both canal entrances, on the Pacific and Atlantic sides, as well as Gaillard Cut. The remaining dredging work to be done in Gatun Lake is expected to be complete this year.

The excavations of the Pacific lock access channel are 70 percent complete. This project calls for the excavation of more than 50 million cubic meters of materials along a six-mile span and is executed in four phases. Three of the four phases have been completed, and the fourth phase is 69 percent complete.

In another meaningful development, the ACP recently implemented the just-in-time service (JIT) that will allow vessels to have a more efficient transit. Panama Canal Administrator Jorge Quijano says that the new service will allow the vessels to arrive at the canal much closer to their scheduled transit time.

"This value-added service will allow vessels to maintain more efficient fuel usage by having to remain at anchor for less time before actually beginning transit," adds Quijano.

Patrick Burnson is Executive Editor of Logistics Management

View from the Top

Dear *Logistics Management* Reader:

Once again, it's my pleasure to introduce the following section, **View From The Top**. Now in its 12th year, these pages offer terrific insight from top-level executives in leading logistics companies as to the current state of the industry, and how their companies are meeting today's challenges.

The results of the *24th Annual State of Logistics Report* show that the rebound for the supply chain and logistics industry continued to move forward over the past year, albeit at a slower pace than many in the industry had hoped. While railroads and intermodal services providers continued to gain market share and improve service levels, the trucking sector grew at a modest pace, air cargo margins were squeezed, and ocean carriers continue to manage through overcapacity and operational losses.

As stated in this year's report, we have certainly entered a "new normal," a period characterized by slow GDP growth, higher unemployment levels, and less predictable freight volumes—a time that's putting more and more operational pressure on every carrier and logistics services provider.

The companies in this section recognize the uncertainty of today's business climate and are taking steps to help managers navigate through the logistics and transportation pitfalls to help you keep costs down and improve the overall efficiency of your supply chain. Read through these pages and see all of the new opportunities that are being offered to help improve your company's logistics network and keep costs in check.

Please take some time to enjoy this year's **View From The Top**.

Brian Ceraolo
President/Group Publisher

View from the Top

Dear Reader,

At Alliance Shippers Inc., we're playing an expanding role in the modern food chain. We know that delivering food and beverage products from the farm to the family table demands fine-tuned efficiency, an excellent producer-shipper partnership and great equipment.

That's why we've invested in our refrigerated carrier division like never before. And we made those investment decisions with what has become an Alliance Shippers' trademark: comprehensive customer input.

When it comes to our recent expansion in refrigerated services, that commitment stands clear. Our customers told us a primary priority was to maximize payload. Customers did not want to reduce the amount of product they can load in a unit.

Alliance Shippers' refrigerated trailers weigh approximately 16,000 pounds while refrigerated containers with chassis weigh more than 21,000 pounds. When compared to containers, trailers offer 14.5% greater capacity, eliminating the need to reduce payload to meet legal weight limits. Greater shipment capacity and lighter trailers means maximized payloads, fewer total shipments and reduced fuel costs. That's why our entire refrigerated fleet consists of trailers. There are no containers.

Today, the Alliance Shippers Refrigerated Carrier Division:

- is the largest mover of refrigerated intermodal shipments
- operates a transcontinental network that includes eastern Canada
- utilizes more than 1,700 technologically advanced CARB-compliant refrigerated trailers
- offers two-way satellite technology—24/7 visibility and control of every trailer

When your payload demands temperature control, the Alliance Shippers' refrigerated division is equipped to deliver. And when you need an intermodal partner who listens and designs shipping solutions around your exact needs, we're ready.

Sincerely,

Ron Lefcourt
President, Alliance Shippers Inc.

SmartWay℠ Transport Partner
Getting There With Cleaner Air

View from the Top

Arnold Huelsmann
President and CEO,
The Arnold Company

Meeting and exceeding the safety concerns and the dependability requirements of our customers is of paramount importance to The Arnold Company.

With the rising costs workman's compensation claims due to employee injuries, The Arnold Company continues to lead the market by providing freight car and hopper gate door openers that meet or exceed OSHA standards for opening all types of rail cars.

The Arnold Company, with its Door Demon® line of rail car openers, keeps your bottom line in mind by keeping your rail yard moving quickly and efficiently thereby maximizing your profits and keeping down-time costs to a minimum.

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View from the Top

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STAND OUT IN AN EXTREMELY COMPETITIVE MARKET

John Wiehoff
CEO & Chairman of the Board

How Your Supply Chain Can Win Over Customers

What makes your company different from all the rest? Every day, you do everything you can to please the people who buy your products. You try to stand out from the competition. It's not easy.

What you may not realize is, you can turn your supply chain into a competitive weapon and win over buyers, gaining sales.

Set Objectives—and Meet Them

What roadblocks stand between you and your supply chain goals? With knowledgeable logistics experts on your side, you can create a customized solution to fit your business strategies. You'll obtain the tools, resources, and guidance that can help you maximize supply chain efficiency.

The result: your products can get to market faster and more cost effectively than your competitors'.

Show Why You're the Best

Why should customers work with your company? You have the products they want. Now, make it even easier for them to do business with you.

Inject powerful people, processes, and technology into your supply chain, and watch what happens as your shipments are optimized. Using a single global technology platform called Navisphere®, you can see your products flow to market faster. Your customers can also see their order and delivery statuses on Navisphere, giving you smoother communications with them than ever before.

Use consistent processes to deliver inbound freight, gather business data, and analyze it to make more strategic decisions. That's how you can leverage your supply chain muscles and leave competitors behind.

Explore how you can accelerate your advantage in the supply chain. Contact us at solutions@chrobinson.com.

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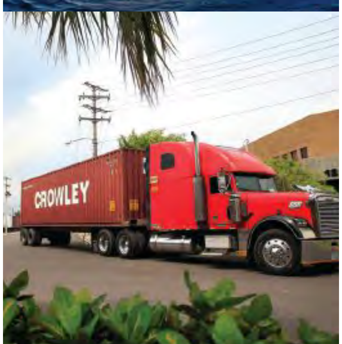
C.H. ROBINSON

View from the Top



Total Cargo and Supply Chain Solutions

Founded in 1892, Crowley is a U.S.-owned and operated company, providing marine solutions, transportation and logistics services in both domestic and international markets. We are customer centric and solutions oriented. Personnel and assets across the entire organization are regularly brought together to solve throughput challenges for many of the world's most dynamic corporations.

A Crowley hallmark is our longstanding, regularly scheduled container and break-bulk liner services between the U.S., Caribbean and Central America. In 2012, we took that experience global with the institution of a formal project logistics and global freight management team. With a fundamental understanding that supply chains continue to operate within an increasingly complex and dynamic set of variables, Crowley is now truly positioned as a worldwide partner, offering flexible, scalable and agile logistics solutions to customers who have expanded their businesses into Europe, Asia, the Middle East and the like. Customers can now rely on Crowley with effective operational representation in more than 130 countries for all of their logistics needs.

While our footprint is expanding geographically, we remain loyal to longtime customers as well, by continuing to provide best in class container shipping services with nearly 30 oceangoing Ro/Ro and Lo/Lo vessels and more than 46,000 containers, trailers, chassis and other types of specialty equipment to serve shippers importing and exporting between the U.S., Puerto Rico, Bahamas, Caribbean, Puerto Rico, Dominican Republic, Haiti, Cuba and Central America.

As a third-party logistics provider, we provide supply chain and transportation management services including: freight forwarding; ocean, inland, and air transportation; customs house brokerage; cargo insurance and warehousing. Crowley's inland transportation team along with a healthy network of distribution centers, provide a framework for clients to combine and tailor cargo transportation services as needed while achieving visibility through sophisticated shipment tracking.

Total customer satisfaction is a key performance driver for Crowley. Open, two-way communication and a commitment to continuous process improvement is a must. And with ISO-certification in freight services and solutions development, Crowley meets and exceeds the highest standards for quality and service.

Crowley has a reputation of designing efficient cargo transportation solutions personalized and scaled to fit each customer's needs. Whether you need compliance consulting, SKU-level inventory management, physical transportation services or anything and everything in between, the best business decision you can make is to rely on Crowley.

If your company has a supply chain in need of a solution and you haven't yet met Crowley, you should.

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View from the Top

Henry Gerkens
Landstar Chairman,
President &
Chief Executive Officer

INTEGRATED TRANSPORTATION MANAGEMENT SOLUTIONS

Landstar is celebrating 25 years of excellence in transportation logistics solutions, providing the safest, most reliable transportation services in the market.

Capacity: Our customers have access to Landstar's expansive array of capacity with 8,200 power units owned and operated by Landstar business capacity owners, and 14,000 pieces of trailing equipment including 1,700 stepdecks and 1,400 flatbed trailers, along with an extensive selection of specialized equipment. In addition, Landstar customers have access to more than 25,000 other approved third-party capacity providers.

Transportation Management: Landstar's capacity sourcing tools provide coordination of bidding, freight optimization, scheduling, shipping, tracking, invoicing and reporting.

Multiple Modes: Sometimes a truck is not enough, even when you have the options that Landstar offers – truckload vans, less-than-truckload, heavy haul and specialized trailing equipment and reefers as well as cargo vans, straight trucks and tractor-trailers for expedited ground. That's why Landstar also offers domestic and global air services; rail intermodal service throughout the U.S. and into Canada and Mexico; and ocean freight forwarding services.

One Contact: Let our network of independent sales agents find the right mix of transportation logistics services for you. Just one call connects you with multiple integrated transportation management solutions.

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LANDSTAR

PROVIDING INTEGRATED TRANSPORTATION MANAGEMENT SOLUTIONS

View from the Top

LYNDEN

Jim Jansen
Chairman

Lynden
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information@lynden.com
www.lynden.com

Lynden began with a clear mission: put the customer first, deliver quality, and be the best at what you do. Today, Lynden's service area has grown to include Alaska, Washington, Western Canada, with additional service extending throughout the United States and internationally, via land, sea and air. Our mission remains the same. Complex transportation problems can be solved in the hands of the right people, with the right tools and the right experience. Over land, on the water, in the air - or in any combination - Lynden has been helping customers solve transportation problems for over a century. Operating in such challenging areas as Alaska, Western Canada and Russia, as well as other areas around the globe, Lynden has built a reputation of superior service to diverse industries including oil and gas, mining, construction, retail and manufacturing.

The combined capabilities of the Lynden companies includes truckload and less-than-truckload transportation, scheduled and charter barges, rail barges, intermodal bulk chemical hauls, scheduled and chartered air freighters, domestic and international air forwarding, international ocean forwarding, customs brokerage, trade show shipping, remote site construction, sanitary bulk commodities hauling, and multi-modal logistics.

The Lynden family of companies delivers a completely integrated freight transportation package. Our people have the knowledge to quickly respond and solve your multi-modal transportation problems. Lynden offers customers sophisticated technologies, including a suite of e-commerce services; to capture data and translate it into information that helps you with every aspect of your freight and logistics. From origin to destination, over any terrain, managing freight movement, as well as the flow of information, Lynden provides innovative solutions to meet your unique needs, keeping you in control while providing you with services no other company can match.

www.lynden.com **The Lynden Family of Companies**

1-888-596-3361 **Innovative Transportation Solutions**

View from the Top

George W. Prest, CEO
MHI

MHI
www.MHI.org

The Industry That Makes Supply Chains Work®

The increasingly integrated and globalized economy has redefined the dynamics of success for modern organizations. The complexity of managing supply chains that span continents and dominate markets demands agile and adaptable strategies, equipment and systems.

Success depends on effective material handling, logistics and supply chain solutions that deliver the right product to the right market at the right time in the most efficient and cost-effective way.

MHI is the trade association leading this vital industry. MHI members are material handling, logistics and supply chain equipment and systems manufacturers, integrators, third party logistics providers, consultants and publishers.

Their membership in MHI reflects an ongoing commitment to the increased safety, productivity and profitability of manufacturing and supply chain operations. Visit MHI.org to learn more about our members and the solutions they offer.

In March 2014, MHI will hold its premier supply chain expo - MODEX. Over 800 of the leading providers will be at Atlanta's Georgia World Congress Center to showcase the best solutions and innovations in the industry. At MODEX, you can see and learn about the latest innovations and network with your peers. The MODEX Supply Chain Conference will include keynotes, collocated partner education and show floor seminars.

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View from the Top

Drive Measurable Improvements in the Enterprise Supply Chain

FIND NEW OPPORTUNITIES TO STREAMLINE AND SAVE

Finding new ways to reduce costs and to streamline the process of getting products to market requires an innovative end-to-end supply chain partner that can integrate within your existing operations and deliver the flexibility that your business needs.

Your customers expect innovation that makes their life and their business easier, more productive and more profitable. Similarly, you need a true business partner that understands where to look for incremental savings opportunities.

From streamlining the inbound supply of materials into multiple manufacturing locations, to executing postponement strategies close to the customer, to the efficient management of spare parts and return programs, ModusLink has proven capabilities. We work on behalf of the world's leading companies in consumer electronics, communications, computing, medical devices, software, and retail to deliver agility and efficiency.

Our value-added warehousing and distribution services speed time-to-market. And our reverse logistics programs that cover returns, repair, refurbishment and recycling can turn after-the-sale costs into a structured revenue stream.

By integrating ModusLink's services into their operations, our clients have:

- Reduced distribution costs by as much as 30%
- Reduced inventories by 40%
- Reduced materials expense by an average of 10-15%
- Reduced shipping costs by up to 45%

ModusLink has more than 30 years of experience helping category-leading enterprises reduce operational costs and streamline some of the world's most complex supply chains. Let's talk about how we can help improve your metrics.

John Boucher
President and CEO

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View from the Top

DAVID CONGDON: VIEW FROM THE TOP

There is so much to worry about these days when it comes to running a business, but whether a shipment arrives on time – and undamaged – shouldn't even make the list.

Frankly, no one needs another freight and logistics company. What companies need is a partner, someone who understands the intricacies of the problems they are facing and who can offer the customized solutions to fit the situation.

People constantly ask us: How do you do it? What makes Old Dominion successful? Well, the answer is quite simple: We've not only set out to maintain pricing discipline and invest in our infrastructure so as to position ourselves for long-term growth, we're constantly investing in our employees and focusing on our service.

Let's focus on that last point for a moment. At Old Dominion, rather than saying we're in the less than truckload (LTL) business, we say that we're really in the business of keeping promises and whatever business you're in, we're in. Our consistent market share gains reflect the value of our high-quality, integrated and comprehensive services.

Every shipment we deliver represents a promise each of our customers has made. With that in mind, we focus on the task at hand, and utilizing technology, up-to-date infrastructure and the best people possible, we've made it our goal – really, our commitment – to deliver every shipment on time and damage-free. When we fall short, we stand strong, take responsibility and learn from our mistakes.

By focusing our attention on our service, we've been able to achieve one of the best on-time records and one of the lowest claims ratios in the industry. But our work is never done, and we pledge to our customers that we will continue to strive for perfection, because we recognize we are only as good as our last shipment.

By offering best-in-class service at a fair and equitable price, we believe we have created a value proposition for shippers that should allow us to gain additional market share and create additional value for our shareholders.

Our people and our four product groups – OD-Domestic, OD-Expedited, OD-Global and OD-Technology – provide our customers with the complete range of products and services they need to deliver on our promise of simplified transportation solutions. We provide direct service to more than 48,000 points through more than 215 service centers and expedited, drayage, and assembly and distribution services as well as container delivery services to and from North America, Central America, South America and the Far East.

Our hard work has paid dividends. Last year, Old Dominion was honored by Mastio & Company as the No. 1 national LTL carrier in the company's 2011 Value and Loyalty Benchmarking Study for its outstanding use of technology. We were also selected as one of Forbes Top 100 Most Trustworthy Companies for 2012, an annual recognition awarded to publicly traded corporations that have consistently demonstrated transparent, conservative accounting practices and solid corporate governance and management.

Anyone can have all of the plans and strategies in the world. But, in the end, it's about making our customers' businesses our own and working to achieve a common vision: "Helping the World Keep Promises."

David Congdon is president and CEO of Old Dominion Freight Line, Inc. With more than 35 years of experience in the transportation industry, Congdon has spent the majority of his career continuing the legacy of his grandparents, Old Dominion founders, Earl and Lillian Congdon.

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View from the Top

Purolator
We deliver Canada

View From The Top

Dear Logistics Management Readers:

U.S. consumers are expected to spend $262 billion on online transactions this year, and by 2017, eCommerce could account for 10 percent of all retail sales in the United States. Online shopping has also taken hold in Canada, where sales increased by almost 10 percent during 2011.

This surge in eCommerce presents an exciting opportunity for U.S. retailers, but with that added volume has come a new paradigm within the logistics industry. We've had to change our mind-set. The relationship is now B2C, which is much more personal and hands-on. The expectations are different and logistics providers must adapt by offering flexibility and innovation.

For e-tailers, this means enlisting the services of a logistics provider that offers fast, accurate order fulfillment, followed by guaranteed on-time delivery to customers' residences or businesses. It means service options that fit with customers' needs and offer flexibility to meet the cyclical nature of their business. It means 24/7 tracking and visibility so that a customer is never left in the dark, and it means a returns policy that can be customized to meet a business's precise needs.

And for businesses with customers in Canada, it means compliance with all customs and border clearance procedures, along with assurances that Canadian consumers will not be hit with an unexpected invoice for additional fees at time of arrival.

Why is the logistics and delivery component of an eCommerce transaction so important?

Here's why: A 2012 survey of consumers found that 29 percent said they would "abandon shopping with a retailer altogether" if they received an incorrect delivery just once; and 62 percent considered themselves "much less or less likely" to shop with a retailer online or by phone if a previous purchase was not delivered within two days of the date promised.

Clearly there is a lot at stake, which is why e-tailers need to choose wisely when selecting a logistics provider. Take the time to ask a few questions when selecting not just your logistics provider but your logistics partner. You need a partner who understands the potential of the eCommerce market and is prepared to help your business reach its highest potential – a partner who understands the importance of honoring your commitment to your customers with cost-efficient delivery options that reach all end-consumer addresses with on-time service.

Sincerely,
Jonathan Routledge
Vice President, Sales & Marketing

Jonathan Routledge
Vice President,
Sales & Marketing

Purolator International

Purolator International is a leading provider of logistics services for shipments traveling between the United States and Canada. Purolator is a participant in all U.S. and Canadian government "trusted shipper" programs, which ensure that Purolator shipments cross the border hassle free and with minimal delay. For more information about Purolator and about the Canadian border clearance process, call or visit us online.

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View from the Top

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We look at your entire operation and make recommendations based on your unique needs, evaluating performance across the whole cycle, across the whole shift. Choosing Raymond means working with sales and service professionals who represent the leading provider of material handling solutions.

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Vice President of Marketing
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View from the Top

View from the Top

View from the Top

Saia LTL Freight

Richard D. O'Dell
President and CEO

Revisit Your Vision, Everyday

Companies measure themselves in terms of operating revenues, key performance indicators and service metrics. They focus on things like CapEx and OpEx. While these are important gauges of performance, they should never overshadow the reason a company is in business.

At Saia, prior to any business decision we ask ourselves: "how will this help our customer, co-workers, or business partners move forward?" If we can't answer it, chances are, it's not worth pursuing. The following are examples of the initiatives that we felt were worth pursuing in the last year.

- **Service Diversification**: In 2012, Saia acquired Robart Transportation Inc., a national provider of non-asset truckload services and third-party logistics. The acquisition moves Saia from a pure-play LTL carrier to a true full-service provider. More importantly, it provides our customers with expanded distribution services. That's moving forward.

- **Quality Matters**: In late 2011, we embarked on a major initiative to drive quality and service to record levels. As a result, our customers have benefited from six straight quarters of 98% on-time delivery or better. That's moving forward.

- **Employee Empowerment**: We created a dock-to-driver program, enabling Saia dockworkers to train for their commercial driving license while working their current job. It provides them a different career path and allows us to retain some of our most dedicated employees. That's moving forward.

- **Equipment Investment**: We invested $80 million in our fleet and technology, including advanced braking technology, tractor telematics and electronic on-board recorders. The result has been significant on-road savings, higher safety, better delivery times and increased fuel economy. These benefits are nice but what they do for our customers, our drivers and our environment are even better. That's moving forward.

It doesn't matter what business you're in, the landscape is growing more complex. Still, we owe it to our customers, employees and stakeholders to remind ourselves daily of the simple, clear vision that they embraced by selecting us. At Saia, that means "moving you forward."

View from the Top

UniGroup Logistics℠

Logistics customers are looking for efficiency and quality performance. UniGroup Logistics is delivering with significant investments in new customer-facing technology, which will create enhanced supply chain solutions, provide customers improved access to their information and create full transparency into our processes. Transparency is important to both UniGroup Logistics and our customers. By giving customers the ability to track, trace and view shipments they can accurately measure the services delivered against the individualized key performance indicators set by each customer.

In addition to the development of our technology solutions, we leverage our large global footprint to provide quality service. For more than 70 years, the UniGroup companies have provided unparalleled transportation, warehousing and logistics services around the world. When customers work with UniGroup Logistics, UniGroup's experienced personnel and its network of 1,400 warehouse locations, 56 million square feet of warehouse space worldwide and 14,000 trucks are ready to execute services ranging from supply chain management to custom warehouse solutions. UniGroup Logistics applies its expertise and resources to support customers' unique requirements, utilizing two trusted names in the transportation industry – United Van Lines and Mayflower Transit.

As a UniGroup company, UniGroup Logistics is well-suited to deliver customized logistics solutions with the high-quality service our customers expect including:

- Truckload/LTL
- Flatbed Transportation
- Specialty Transportation
- Freight Forwarding
- International Services
- Project Management
- Distribution Services
- IT Solutions
- Warehouse Solutions

When planning your next project, call us. As President of UniGroup Logistics, I am proud of the logistics solutions we provide and I am confident our people, experience and resources are ready to successfully manage your logistics projects.

Sincerely,

Jim Powers
President
UniGroup Logistics

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View from the Top

Dear *Logistics Management* readers:

All of us who make our living in logistics know how challenging this business has been in the years since the global financial crisis. Global growth has slowed from its previous heady pace, as consumers and governments have struggled under the weight of the debt they took on during the prior decade. And after a long period during which trade drove the global economy, trade growth fell to 2% in 2012 and is expected to remain sluggish this year as well.

That's the environment in which each of us operates today.

All that said, I have never been more optimistic about the opportunities that lie ahead. As a Chinese philosopher once wrote, "When the wind rises, some people build walls. Others build windmills." That's the choice each of us faces today. At UPS, I challenge our nearly 400,000 employees every day to harness the transformative global forces we face for the benefit of our customers.

One of the biggest opportunities lies in the emerging economies. Roughly a billion people from developing countries are now entering the market for the goods and services they see on display in the developed world. And the world gives birth each day to another 200,000 people, mostly in emerging economies.

Over time, every one of those people will need the services we provide. Between now and 2025, global trade is expected to increase by another 73% and top $50 trillion. If anything, forecasts like this may understate the future opportunities for global commerce. Today, less than 1% of the 30 million U.S. businesses export – and of those, nearly 60 percent ship to just one country.

As the world shrinks and becomes more interconnected, global e-commerce will become more feasible. I can foresee the day when consumers in Seattle can purchase a single scarf from a boutique in Prague and have it shipped to their door just as easily as if it came from New York.

To be sure, this will require innovation, further reductions in tariffs and customs regulations, plus changes in the laws that prevent many postal monopolies from partnering with commercial carriers. The movement towards dynamic trade agreements such as the Trans-Pacific Partnership and the Transatlantic Trade and Investment Partnership could be game changers – moving beyond simple tariffs to encompass a wide range of regulatory barriers that restrict trade. But for these trade pacts to move forward, political leaders need to make tough decisions. And that means our industry needs to demonstrate the economic benefits that will flow from these deals.

Another challenge is how our industry responds to global warming. Governments, citizens and even our customers are looking to see whether our industry is going to be part of the problem – or the solution. This will require each of us in logistics to embrace alternative fuel technologies. At UPS, we've already started. In the last five years alone, we've invested more than $300 million in alternative fuel and alternative-technology vehicles around the world. We now have more than 2,700 alternative vehicles, and plan to purchase another 700 trucks fueled by liquid natural gas by the end of 2017.

Investments like these have helped us reduce our carbon footprint. At our current pace, we now expect to cross the 1 billion mark for the number of miles we've driven with alternative vehicles by the end of 2017. But alternative fuels are only half of the story. By using telematics and route optimization software, we've reduced the number of miles needed to make our rounds by 364 million – saving 39 million gallons of fuel and eliminating 369,000 metric tons of CO_2. Many of you have achieved similar savings, but none of us can stand still in our efforts to cut our carbon output.

These are big challenges. But companies that have been around as long as UPS have weathered two world wars and a Great Depression. By comparison, the tests we face today are much more surmountable – and the solutions are as close as the limitless creativity and drive of the human spirit.

Scott Davis
Chairman and Chief Executive Officer, UPS

View from the Top

Supply chain solutions that deliver.

UTi is one of the industry's leading non-asset based, global third party logistics providers. We deliver competitive advantage to each of our client's supply chains through innovative, integrated solutions. We are committed to delivering value that will help clients succeed in today's uncertain economic environment. This means maintaining an external focus on the global marketplace, being alert to potential obstacles as well as opportunities, and having solutions ready that can eliminate complexity.

Our primary services include:

- Air and Ocean Freight Forwarding
- Contract Logistics
- Customs Brokerage
- Distribution
- Managed Transportation Services
- Supply Chain Consulting

UTi FREIGHT FORWARDING

With 313 freight forwarding locations, in 59 countries, UTi believes freight transportation is about reducing costs while delivering goods when and where they are needed. Value is provided through inter-modal shipping at competitive rates, utilizing air, ocean, surface and specialty transportation services.

UTi CONTRACT LOGISTICS & DISTRIBUTION

Operating a global footprint of 245 logistics centers with more than 26 million square feet of warehousing worldwide, UTi can store, configure and deliver your products while maintaining the visibility and inventory management you need to effectively manage your business. Whether delivering goods to a global client base or managing complex inbound supply chains, our transportation and inventory optimization tools reduce network costs and improve product availability.

UTi SUPPLY CHAIN DESIGN AND INNOVATION

UTi leverages our global network, IT systems, relationships with transportation providers, and expertise in outsourcing to improve visibility and reduce costs. Our team can help you build a business case for change, innovation and cost reduction in your organization.

COMPETITIVE ADVANTAGE

At UTi, our people are the most important resource in keeping our commitments to clients. We nurture talent, providing an atmosphere conducive to performance excellence by each and every person. This is why we can say, at UTi, there's not a weak link in the chain.

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View from the Top

VF Imagewear, Inc.

Dear Reader,

At VF Imagewear, we understand the importance of a uniform for every organization and its wearer. With over 80 years of expertise, we are extremely proud of our contribution to the uniform and workwear industries through our Red Kap and Bulwark brands. Red Kap was established in 1923 and is proudly worn by the majority of individuals in the industrial segment. Bulwark, our flame-resistant apparel brand, continues to help workers in the oil and gas, electric utility and petrochemical industries. Our objective is to understand what a uniform means and how we can assist in making it the best that it can be.

Today, a uniform is more than a garment–it is a badge of pride as well as a source of safety and creates an image for the wearer. We want uniform wearers to feel comfortable in garments they wear so they can perform their jobs to the best of their ability. Comfort is being created in a new way for uniform wearers with the introduction of a new product from VF Imagewear, Wrangler Workwear.

Made of durable, comfortable canvas material and designed specifically for the range of motion needs of the country's workforce, Wrangler Workwear is our newest premium uniform workwear brand. Wrangler Workwear's backside pleats and underarm gusset features in shirts allow for greater reaching and stretching, while inseam gussets in pants allow for unparalleled comfort in bending, squatting, lifting and climbing motions. To complete the line, Wrangler Workwear includes work jackets. The work jackets, like the work shirts, feature underarm gussets as well as action elbows. Now workers can perform their duties without a sense of restriction, regardless of their activity-their garments now move with them. Wrangler Workwear is a truly unique product line in workwear apparel. It's built with the worker's mobility in mind. Wrangler Workwear's goal is to help them feel comfortable and perform at their highest level every day.

Sincerely,
Chris Holcombe
Vice President, General Manager, VF Imagewear

Wrangler WORKWEAR™
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Pacific Rim Report

By Patrick Burnson

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

Pac Rim shippers may soon opt for air

IF THE MORIBUND AIR CARGO INDUSTRY is to finally stage a turnaround, the Pacific Rim will play a major role.

Preliminary financial performance figures released in June by the Association of Asia Pacific Airlines (AAPA) showed that Asia Pacific airlines achieved $5.2 billion in combined net profits in 2012, 6.7 percent above the $4.8 billion reported for the year 2011. Nonetheless, carriers still face a challenging operating environment marked by prolonged weakness in air cargo markets and persistently high jet fuel prices.

Operating expenses totaled $166.5 billion, 7.0 percent more than the $155.7 billion recorded in the previous year. The main cause of the increase was a 12.2 percent jump in fuel expenditure to $58.8 billion, with jet fuel prices averaging $128 per barrel in 2012. The share of fuel expenditure as a percentage of total operating costs rose to 35.3 percent in 2012, from 33.7 percent the previous year. Non-fuel expenditures grew by 4.3 percent to $107.7 billion.

"Prudent capacity management maintained relatively high load factors, helping to offset the impact of persistently high fuel prices and an extended period of weak demand in the global air cargo market," says Andrew Herdman, AAPA Director General, in response to the reports findings. "Asian airlines are expected to remain at the forefront in promoting further development of the global airline industry, with continued investments in fleet expansion and customer service innovation," he adds.

Analysts at the International Association of Air Transport, concur, noting that Asia Pacific airlines are expected to post a combined profit of $4.6 billion in

2013—up from the previous projection of $4.2 billion. It will lead all regions both in terms of absolute profits and earnings before interest and taxes (5.0 percent).

The main driver is strong growth in China and long haul markets, supported by buoyant trade flows and other business activities. Stronger growth is also expected from Japan, as market stimulating measures take effect in the region's second largest economy. Japan's influence is also helping to overcome weakness in cargo markets in which Asia Pacific airlines are the major players with a 38 percent market share.

The chances that U.S. shippers will put their cargo—even high-end perishables and pharmaceuticals—on

> **"The main driver is strong growth in China and long haul markets, supported by buoyant trade flows and other business activities.**

Asia Pacific aircraft rather than container vessels seems ever more remote in the coming months, say other industry insiders.

However, Brandon Fried, executive director of the Airforwarders Association (AfA), provides a longer-term perspective on the issue. "Most heavy shipments of any significant weight and volume use ocean carriers despite slower transit times and varying environmental factors," he says. "However, for those consignments with time constraints, higher value, and a need for tight inventory or temperature control, airfreight brings more value."

Indeed, as global economic challenges persist, AfA has seen some additional cargo move from the maritime leg of the transit to air carrier to cut transit time and reduce cost.

Finally, there's this: Boeing projects a demand for more than 35,000 new airplanes over the next 20 years, valued at $4.8 trillion. The company released its annual *Current Market Outlook* last month at the Paris Air Show, forecasting the world fleet to double over the next two decades—with the Asia Pacific carriers leading the way. □


Magaya
Warehouse Management System
HWC Cargo Company - Magaya Explorer
File Edit Sales Operations Maintenance Shipment
Back Forward Air Ocean Ground
Magaya Network
Tasks
Quotations
Jobs
Bookings
Warehousing
Pickup Orders
Pickup Order List
Warehouse Receipts
Magaya WMS
Big benefits for a small budget