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Management UPDATE

AN EXECUTIVE SUMMARY OF INDUSTRY NEWS

IATA erupts. The International Air Transport Association (IATA) called on European governments and air navigation service providers to urgently develop more precise procedures to identify ash contaminated air space and allow more flights. The call came in the wake of 1,000 flight cancellations on May 17 as a result of the continued volcanic eruptions in Iceland. "This problem is not going away any time soon," said Giovanni Bisignani, IATA's director general and CEO. "The current European-wide system to decide on airspace closures is not working," he added. "We welcome the operational refinements made by the Volcanic Ash Advisory Centre in their theoretical model, but we are still basically relying on one-dimensional information to make decisions on a four-dimensional problem. The result is the unnecessary closure of airspace…We must make decisions based on facts, not on uncorroborated theoretical models."

IANA reports solid Q1 growth. Spurred by increased consumer demand and inventory replenishment, intermodal volume for the first quarter trended positive due in large part to growth on the domestic side, according to the most recent Market Trends report from the Intermodal Association of North America (IANA). IANA reported that first quarter total intermodal loadings at 3,019,310 were up 8.4 percent year-over-year, topping the fourth and third quarters of 2009, which were down 6.4 percent and 16.4 percent, respectively, year-over-year. And three of the four major intermodal categories tracked by IANA all saw positive year-over-year growth in the first quarter. Domestic containers were up 15.7 percent, and all domestic equipment was up 9 percent. IANA noted that all U.S. regions recorded increases in domestic container shipments greater than 10 percent annually.

Surface trade with NAFTA partners hits record high. Trade using surface transportation between the United States and its North American Free Trade Agreement (NAFTA) partners Canada and Mexico was up 37 percent in March 2010 compared to March 2009, increasing to $69.9 billion, according to data released by the United States Department of Transportation's Bureau of Transportation Statistics (BTS). This output, said the BTS, is the single largest year-over-year increase on record, although freight value in March was down 1.2 percent less than it was in March 2008.

Obama selects Pistole to lead TSA. President Barack Obama said he intends to nominate John Pistole, the deputy director at the FBI, as assistant secretary for the Department of Homeland Security's Transportation Security Administration (TSA). The selection of Pistole follows two previous nominations for this position, according to media reports: Errol Southers, a former FBI agent and counterterrorism supervisor for the Los Angeles Airport police; and Robert Harding, a retired Army intelligence officer. Both former candidates withdrew their bids for the job before the vetting process was complete.

Port Tracker points to an improving economy. The May edition of the Port Tracker report by the National Retail Federation and Hackett Associates calls for double-digit increases in retail container volumes in the coming months bolstered by an improving U.S. economy. Retail container volumes saw declining volumes for 28 months through November 2009. Improving volumes are reflective of the continuing demand for import container space, which is causing carriers to bring back services as well as increase the size of ships. According to Ben Hackett, founder of Hackett Associates, these trends should improve supply chain management operations over the coming months.

MHIA says industry on right path. The Material Handling Industry of America is forecasting 6 percent to 8.5 percent growth in material handling equipment new orders in 2010, according to the latest Material Handling Equipment Manufacturing Forecast (MHEM). The growth in new orders is accompanied by a

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Management UPDATE

continued

1 percent to 2 percent growth in material handling shipments this year. The MHEM defines new orders as orders placed during the year for new materials handling equipment. Shipments are based on when that equipment is manufactured and shipped to the customer. This projection follows a dismal 2009, which saw orders and shipments contract 37.4 percent and 34.4 percent, respectively.

First step toward Customs reauthorization bill. Leaders of the House Ways and Means trade subcommittee were upbeat last month about redirecting Customs and Border Protection's focus to facilitating trade and collecting revenue after a hearing in which government officials and members of the trade community presented a range of ideas to match the movement of commerce to security needs. Acting Subcommittee Chairman John Tanner, D-Tenn., and ranking member Kevn Brady, R-Texas, told trade witnesses that the hearing was a good first step toward a Customs reauthorization bill that they expect to introduce before the end of the year. Tanner and Brady said Customs' efforts in supply chain security since the September 2001 terrorist attacks had moved resources away from the agency's revenue functions that are part of Ways and Means oversight activities.

Financial woes still plaguing USPS. The ongoing troubles plaguing the United States Postal Service (USPS) show few signs of abating any time soon. The USPS said last month it will post a net loss of $1.9 billion on declining volumes of 88.1 billion pieces of mail for the six months ended March 31, 2010. For the three months ending March 31, USPS volume was down 3.3 percent year-over-year and total revenue, at $16.7 billion, was down 1.4 percent. A large amount of these losses are due to declines in First Class Mail revenue and subsequent volume declines. But its shipping services, mainly Express Mail and Priority Mail, which are considered competitive products and represent 12 percent of total revenues, grew 5.7 percent.

GPA boasts monthly throughput increase. Georgia Ports Authority's (GPA) Executive Director Curtis Foltz announced last month that the GPA experienced 25.6 percent container growth in April and has recorded five consecutive months of double-digit growth through its ports. Overall tonnage for April 2010 saw gains of 16.4 percent, which brings the GPA's fiscal year-to-date (July 2009 through April 2010) volume to a 6-percent increase compared with the same time period last year. Export containers continued to lead the recovery, posting a 30.4-percent increase. "A relatively weak U.S. currency and strong foreign demand for our commodity groups are expected to continue," said Foltz. "Trade projections remain optimistic with growing economic demand replacing the recent increase caused by inventory replenishment."

More vessels calling West Coast. Hyundai Merchant Marine Co. Ltd. (HMM) brought back its weekly container shipping service, the Pacific Southwest (PSW) last month. The return of this U.S. West Coast service is in line with the expected growth of 2010 trade volume for Northeast Asia. The PSW directly connects Korea, Taiwan, Hong Kong and South China to the ports of Oakland and Long Beach, Calif. Asian imports are carried on the PSW with competitive transit times, such as 10 days from Busan, Korea, to Long Beach. The PSW currently offers the industry's fastest transit times from Long Beach to Xiamen at only 17 days. This HMM service also provides the current quickest times from Oakland to the ports of Busan, Kaohsiung and Xiamen at 11, 14 and 15 days, respectively. "Last year was a challenge to the shipping industry," said Y.I. Song, HMM chairman and CEO. "Nevertheless, we are looking forward into 2010 with optimistic planning and forecast in growth."

Good news for outbound. U.S. exports of goods and services increased by 16.7 percent during the first quarter of 2010, putting the country on track to meet President Obama's goal of doubling exports and supporting 2 million Ameri-

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Con-way
Con-way FREIGHT
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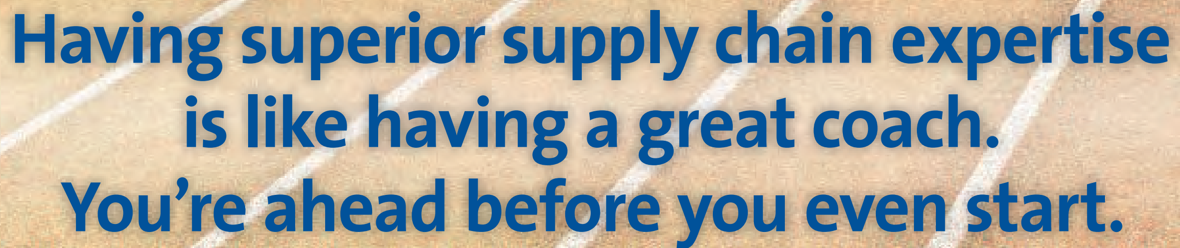
Con-way TRUCKLOAD



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Management UPDATE

continued

can jobs over the next five years. "This is a great progress report," said Fred Hochberg, chairman and president of the Export-Import Bank of the United States (Ex-Im Bank). "What it really says is that there are significant opportunities globally for both large and small U.S. businesses; and our goal is to create more opportunities in more countries so U.S. businesses can reach more customers, and in doing so create more jobs." Ex-Im Bank's loan authorizations more than doubled to $13.2 billion during the first half of the current fiscal year (beginning Oct. 1, 2009), a 125 percent increase over the record $5.9 billion authorized during the same period in fiscal year 2009.

■ **Eye of the TIGER Part II.** Roughly four months after the Department of Transportation awarded grants to various U.S. governments, cities, and transit agencies as part of the $1.5 billion Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant Program, DOT Secretary Ray LaHood has announced there is $600 million in TIGER II grants available for surface transportation projects. DOT officials said that these "grants will be awarded on a competitive basis to projects that have a significant impact on the nation, a region, or metropolitan area that can create jobs." As was the case with the first round of TIGER funding, the objective of TIGER II grants is to ensure that economic funding is rapidly made available for transportation infrastructure projects and that project spending is monitored and transparent.

■ **FMC remains vigilant.** As the Federal Maritime Commission (FMC) ramps up its investigation of ocean carrier price-fixing it's also remaining on watch for capacity and equipment shortages. In a speech given before the Virginia Maritime Association last month, FMC Commissioner Michael Khouri noted that U.S. exporters of agricultural products are particularly concerned about the impact capacity limitation, equipment unavailability, and rate increases will have on their ability to compete internationally. "Last March, the Commissioners voted to initiate a Non-Adjudicatory Fact Finding Investigation into the current conditions concerning vessel and equipment availability in the U.S. export and import liner trades," said Khouri.

■ **OECD's good-news/bad-news report.** According to a new report from the Organization of Economic Cooperation and Development (OECD), trade flows are ramping up. Economic activity in the 31 OECD (oecd.org) countries is picking up faster than expected but volatile sovereign debt markets and overheating in emerging-market economies are presenting increasing risks to the recovery, according to the OECD's latest Economic Outlook. Gross domestic product (GDP) across OECD countries is projected to rise by 2.7 percent this year and by 2.8 percent in 2011. These are upward revisions from the previous November 2009 forecasts of OECD-wide GDP growth of 1.9 percent in 2010 and 2.5 percent in 2011. In the U.S., activity is projected to rise by 3.2 percent this year and by a further 3.2 percent in 2011. Euro area growth is forecast at 1.2 percent this year and 1.8 percent in 2011.

■ **Cleaner trade for U.S. and China?** U.S. Commerce Secretary Gary Locke delivered remarks late last month at a luncheon hosted by the American Chamber of Commerce and the Trade Development Council in Hong Kong, noting that collaboration on clean energy will be key in the future. Accompanied by 24 U.S. businesses representing a broad cross-section of industries, Locke stressed President Obama's National Export Initiative that aims to double American exports by 2015. Locke observed that China has adopted the most aggressive energy efficiency program in the world, and the country is on track to exceed many of its ambitious renewable energy adoption goals. "The U.S. and China have committed $15 million each to develop a joint research center where teams of scientists and engineers will work together on energy solutions," Locke declared. "We also have joint action plans on important issues like electric vehicles and energy efficiency."

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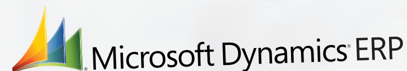

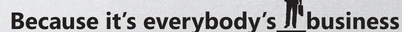

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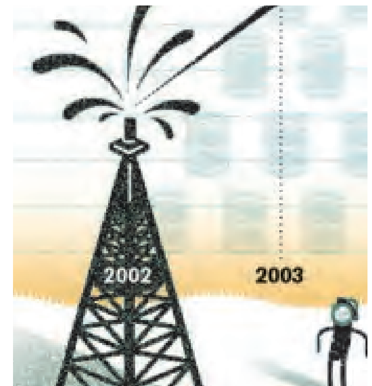

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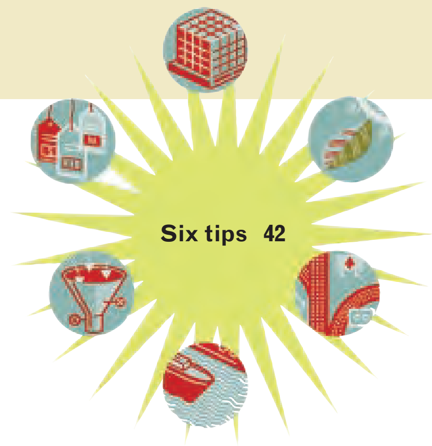

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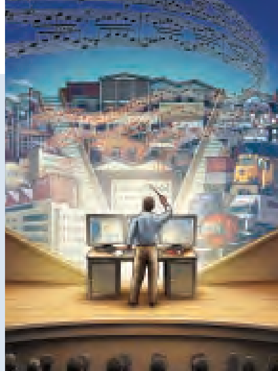

LIVE WEBCAST

2010 TECHNOLOGY ROUNDTABLE:

Achieving perfect pitch

Five top supply chain technology analysts join Group Editorial Director Michael Levans to discuss the technologies and concepts that they feel can better orchestrate logistics and supply chain operations.

- Adrian Gonzalez, analyst and director of Logistics Viewpoints at ARC Advisory Group
- Greg Aimi, research director at AMR Research
- Dwight Klappich, analyst and research vice president at Gartner
- Jim Morton, senior manager of the supply chain practice at Capgemini
- Bob Heaney, senior supply chain research analyst, AberdeenGroup

June 17, 2:00 p.m. ET

Go to **logisticsmgmt.com** for registration details.

ALSO:

SPECIAL REPORT

Top 50 Global 3PLs: Modest gains ahead

Having hit bottom in 2009, the 3PL sector is headed for a rebound. Analysts say that some providers will continue to expand globally even if their corporate identities remain fixed to sovereign states. However, research also indicates that near-shoring is a growing trend, giving "domestic" players more of an advantage. **46S**

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Flipped on its head

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Consensus: Rates will go up

DESPITE THE WILD FLUCTUATIONS in the stock market over the past month, there is every indication that the embattled U.S. economy is making its way toward better health. And while the ongoing analysis is trending in the right direction, we can't loose sight of what the potential market recovery will mean for anyone who's in charge of a transportation budget.

In fact, there is a very simple theme that runs throughout this entire issue: The leverage that shippers have been enjoying in terms of rate negotiation with carriers over the past few years is slowly beginning to erode. As our Sage Advice columnist Wayne Bourne might put it, the pendulum is now clearly beginning its journey back to the carriers—a group that has scratched and clawed to keep themselves up and running over the past three years.

According to the analysts, the factors should be painfully obvious. "As capacity decreases and becomes more valuable to serve the released consumer demand, carriers will become more aggressive in seeking rate increases," Global Insight's Chuck Clowdis tells Group News Editor Jeff Berman this month, adding that the trucking market has already signaled increases in the 7 percent to 10 percent range over the next year.

"We're in a state of flux right now," John Larkin, longtime trucking analyst tells Contributing Editor John Schulz in this month's Truckload (TL) Special Report. Larkin adds that contract TL rates are still being negotiated down another 5 percent to 6 percent on top of the major rate decreases negotiated over the past several years, and these rates will be in place until contracts come due next year or until shippers start to run out of capacity.

But shrinking capacity is only one of the freight-hike drivers. On top of $3-a-gallon diesel, Clowdis says that truckers also need to service the debt they've taken on to sustain their business during the tough times—which may lead to carriers making fewer investments in necessary equipment, enhancing the capacity crunch.

One more catalyst that may be overlooked due to the current unemployment rate is the potential for another driver shortage. As Schulz reports, a new government initiative called CSA 2010 (Comprehensive Safety Analysis) is expected to weed out as many as 2 percent to 7 percent of the nation's 3 million long-haul truck drivers as their safety records get increased scrutiny and visibility.

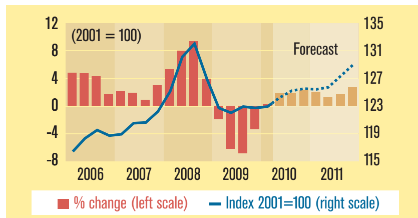
"We're having a great deal of difficulty in attracting people back to start driving a truck. That's not what we were expecting," Steve Williams, chairman and CEO of Maverick Transportation tells Schulz. "Unfortunately, it's safe to say we're going to have to raise driver wages." And costs for carriers will keep mounting.

Here's the bottom line: The days of carriers slashing rates merely to stay in business are coming to a close. "Carrier executives are telling me that it's time to refocus on profitability," says Schulz. "So shippers better get to the table with their carrier base as soon as possible."

Michael A. Levans, Group Editorial Director

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

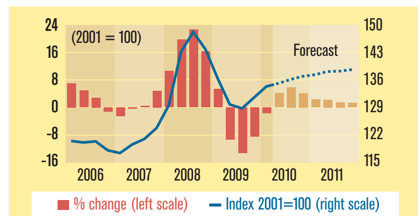
Across the Transportation Modes



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
General freight - local	0.1	-0.6	3.1
Truckload	1.6	1.1	2.7
Less-than-truckload	1.1	0.0	-0.3
Tanker & other specialized freight	0.4	1.9	2.0

TRUCKING

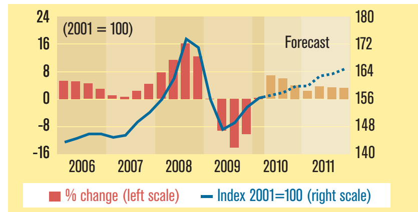
Up 1.6% and 1.1% respectively, the long-distance truckload and LTL segments of the market were the main drivers of trucking prices from March to April. Yet truckers remain under extreme cost pressures, so every opportunity for new surcharges will be seized. According to the ALERTdata cost model, the U.S. trucking industry saw fuel costs surge 64% in the first quarter of 2010 compared to year ago. Worker wages jumped 3.3% at the same time, although management salaries increased at a slower 1.8% rate. With the fuel cost burden likely to remain heavy, even a projected 3.3% annual price increase for LTL tags in 2011 will not satisfy. Indeed, our model shows the industry's pre-tax operating surplus fell to $8.71 (per $100 of sales) in March 2010, down from $17.90 in December 2008.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
Scheduled air freight	0.1	1.4	3.6
Chartered air freight & passenger	-4.6	-5.1	7.7
Domestic air courier	-0.5	8.0	14.5
International air courier	-1.8	7.5	10.2

AIR

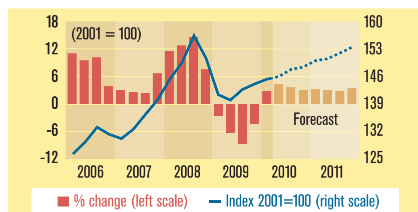
The U.S. airline industry eked out a 1.6% monthly price hike in April on the heels of a 2.9% gain in March. Shippers who use U.S.-owned airline companies for shipping freight clearly have been playing hard ball. In April, prices for moving freight on chartered flights dropped 4.6%, while average prices for moving freight on scheduled passenger flights increased only 0.1%. Low prices have taken a toll on margins. The ALERTdata cost model estimates the airline industry overall lost roughly $2.54 for every $100 worth of services sold in March. Margins are trending upward now, but have a long way to reach the $7.56 surplus (per $100 of sales) enjoyed in December 2008. Under profit pressure, air cargo prices (on scheduled flights) are forecast to increase 4.1% in the final quarter of 2010 over the previous year's fourth-quarter price level.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
Deep sea freight	4.1	9.1	5.3
Coastal & intercoastal freight	-4.5	0.4	9.1
Great Lakes - St. Lawrence Seaway	-4.8	2.6	6.8
Inland water freight	6.5	-4.5	3.6

WATER

U.S.-owned barges and cargo vessels on inland waterways, excluding towboats, boosted their average transaction prices by a sharp 7.7% in April. Domestic deep sea freight carriers also pumped up prices 4.1%. Nonetheless, during the entire 12-month period ending April 2010 compared to the prior 12 months, prices for both inland waterway and deep sea services are still anchored down 8% and 14.2%, respectively. Unlike the trucking and airline industries, however, this industry has avoided the economic tidal waves sinking margin performance in trucking and airlines. We estimate water transportation providers have seen a pre-tax operating surplus equal to about $23.89 (per $100 worth of sales) this past March, compared to the $19.18 low set in May 2009.



% CHANGE VS.:	1 month ago	6 mos. ago	1 yr. ago
All rail transportation	0.0	1.1	4.5
Intermodal rail freight	0.8	1.6	7.4
Carload rail freight	-0.1	1.0	4.2

RAIL

Looks like railroad operators have their average transaction prices back on a comfortable upward trajectory again. In April, intermodal rail freight tags increased 0.8% from a month ago and 7.4% from same month a year ago. Carload prices, meanwhile, jumped 4.2% from April 2009 to April 2010. Our now more conservative rail forecast calls for average prices to increase 3.4% in 2010 and 3.1% in 2011. Volatile fuel costs continue to bedevil the rail industry. But despite fuel costs, the U.S. rail industry outperforms even the water transportation industry for best managed profit performance. The ALERTdata cost model estimates the U.S. railroad industry operating surplus stood around $33 (for every $100 of sales) in March 2010, about on par with margin levels seen in July 2008, although down from the $37.81 peak set in December 2008.

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

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Kerry, Lieberman roll out new energy legislation

American Power Act hones in on GHG reductions, curbing domestic oil usage, and increasing infrastructure investment to improve transportation efficiency. ATA opposes, others applaud.

By Jeff Berman, Group News Editor

WASHINGTON—Senators John Kerry (D-Mass.) and Joseph Lieberman (I-Conn.) introduced their long-awaited legislation at the end of May that they claim will transform the nation's energy policy from a national weakness to a national strength.

Entitled "The American Power Act," the bill vows to reduce greenhouse gas emissions (GHG) by 17 percent—compared to 2005 levels—by 2020 and 83 percent by 2050, matching an objective put forth by the White House last year.

Looking at the bill's action items from a supply chain and freight transportation perspective, one of the bill's most notable takeaways is a goal to decrease U.S. dependence on foreign oil. The Senators want to do this through myriad steps, including investing more than $6 billion per year in transportation infrastructure to increase efficiency and decrease oil consumption; investing nearly $2 billion for state and local projects that reduce oil consumption and GHG; and nearly $2 billion for the Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant Program.

Another transportation-specific measure includes a $6 billion annual subsidy allocated for increased efficiency and lowering oil consumption in the transportation sector. Regarding domestic oil production, the legislation would allow coastal states to opt out of drilling up to 75 miles from their shores. While previous versions of this legislation included language that was viewed as "cap and trade," this bill has a somewhat similar offering but is not described as cap and trade by its authors.

In the American Power Act, there are provisions for emissions trading that would take effect in 2013. Emissions trading would start at $12 and $25 a ton and be geared towards utility companies, with the $12 per ton increasing at 3 percent over inflation annually and the $15 per ton increasing 5 percent over inflation annually.

Senators John Kerry (D-Mass. above) and Joseph Lieberman (I-Conn.) introduced their long-awaited legislation at the end of May that they claim will transform the nation's energy policy from a national weakness to a national strength.

"Rather than allowing a patchwork of conflicting state and federal regulations, it lays out one clear set of rules for reducing GHG," according to the language in the bill. Kerry and Lieberman added that states that already have cap and trade programs in place will be compensated for lost revenues due to termination of their programs.

The Senators also noted that industrial sources would not enter the emissions trading program until 2016, at which point they will receive allowances to offset direct and indirect compliance costs.

But, as *LM* has previously reported, cap and trade—or any type of exchanging or trading emissions allowances or permits—has been widely met with heavy opposition in freight transportation and logistics circles. And that sentiment appears to be the same this time around as well.

Officials from the American Trucking Associations (ATA) said that this legislation will require refiners to purchase billions of dollars worth of carbon allowances that correspond to the car-

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Energy legislation continued

bon footprint of the fuels they sell, with refiners passing on costs to consumers in the form of higher fuel prices—or a hidden multi-billion dollar tax.

"[This] climate bill clearly imposes a tax on transportation fuels and reallocates revenue from that tax for non-transportation purposes," said Bill Graves, ATA president and CEO. "Only a small portion would go to the Highway Trust Fund for much-needed improvements and repairs to our nation's highway infrastructure."

"[This] climate bill clearly imposes a tax on transportation fuels and reallocates revenue from that tax for non-transportation purposes."

—Bill Graves, President and CEO, ATA

Despite the ATA's opposition, there are others that view this bill as a step in the right direction. A noted green logistics expert told *LM* that rather than taking a one-size-fits-all approach to wean the U.S. off foreign oil, this bill acknowledges the need for a change in strategy.

"What I appreciate about this bill is their acknowledgement of the needs for different strategies and innovations by various industries, including power plants, heavy industry, and transportation," said Brittain Ladd, a supply chain consultant and lecturer on green supply chain strategies for a consulting firm. "I also like the fact that the bill recognizes that America can't wean itself from foreign oil without first creating alternative methods to powering our plants and vehicles.

While legislation is now on the table, the chances of it being signed into law are far from certain due to sharp divides among partisan lines. A *Bloomberg* report quoted Senate Majority Leader Harry Reid as saying he may set this bill aside for a smaller energy bill that would increase production from renewable energy sources, set new energy efficiency standards, and limit offshore drilling expansion to the eastern Gulf of Mexico.

FUEL

President Obama, trucking industry agree on new fuel standards in 2014

WASHINGTON—A fully loaded 80,000-pound tractor-trailer gets about five miles per gallon of diesel fuel—if that truck is properly maintained and it's going downhill with a tailwind.

President Barack Obama wants to change that. And, somewhat surprisingly, the American trucking industry largely agrees.

In a Rose Garden ceremony held on May 21 with a handful of top U.S. trucking industry and heavy truck manufacturers on hand, President Obama signed a presidential memorandum that for the first time would set mileage and pollution limits for big trucks. The rules are set to take effect with the 2014 model year.

Although heavy trucks comprise just 4 percent of vehicles, they account for perhaps as much as 21 percent of air pollution from mobile sources. Heavy trucks consume 16 percent to 22 per-

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Fuel Standards continued

cent of this nation's fuel, or about 54 billion gallons of fuel annually. When diesel reached its peak in 2008, the U.S. trucking industry had a fuel tab that exceeded $150 billion. Although this year's figure cannot be determined precisely, the tab will approach that number again.

After labor and equipment, fuel is the third-highest cost for a motor carrier. The average truckload carrier spends about 12 percent to 14 percent of its revenue on fuel, with the average LTL carrier spending perhaps 6 percent. This difference is due to longer lengths of haul of a TL carrier, typically over 1,000 miles.

With the White House under pressure from environmentalists after the catastrophic BP oil spill in the Gulf of Mexico, the president chose to go the executive order route on truck mileage standards. That was an end-run around Congress, which could have been expected to dither for years on the issue.

Instead, the presidential memorandum directs the U.S. Department of Transportation and the Environmental Protection Agency to develop national standards for fuel economy and greenhouse gas emissions for heavy- and medium-duty trucks.

"The nation that leads in the clean energy economy will lead the global economy," Obama declared on May 18. "I want America to be that nation."

Although a Class 8 truck is cleaner now that it has ever been, the nation's 7 million commercial trucks are hardly pristine. According to the EPA, commercial trucks account for 21 percent of all greenhouse gas emissions in the transport sector even though they are roughly 4 percent of all vehicles.

"This is a small but commendable step," Michael Levi, an energy and climate change expert with the Council of Foreign Relations, told the *New York Times*. "The oil spill can help focus people's attention, but it will take something else to close the deal."

That "something else" could be the surprising support of the organized trucking lobby. For an industry that fought deregulation, anti-lock brakes and other initiatives when they were first proposed, the trucking industry seems unusually sanguine and even supportive of the president's proposal.

Hours after the president's announcement where he was flanked by top executives of the trucking industry and its suppliers, the American Trucking Associations (ATA) issued a press release trumpeting the announcement that the President "effectively endorses the ATA Sustainability Task Force recommendation" of 2008 that called for national fuel economy standards for trucks to reduce greenhouse gas emissions.

ATA Chairman Tommy Hodges, who is also chairman of truckload carrier Titan Transfer, attended the Rose Garden ceremony along with the heads of Daimler Trucks North America, Volvo North American Trucks, Cummins and Navistar International.

The trucking industry is determined "to be at the front of the fuel economy issue," Hodges said. He said ATA would have "significant input" on the final rule to develop what the industry hopes will be beneficial and affordable fuel efficiency standards. That input will be part of an effort in Washington to issue a final rule by July 30, 2011.

—John D. Schulz, Contributing Editor

FREIGHT RATES

Higher rates are coming, say analysts

BOSTON—Before volumes for motor carriers began their gradual recovery earlier this year, it was certainly no secret that shippers were getting significant leverage when it came to rate negotiations with carriers for nearly the past three years.

With a surplus of capacity, high operating costs, contentious relationship with their credit arms, and slim margins, carriers knew they could not be choosy—especially when it came to getting business and keeping trucks on the road.

Langenfeld

But the way things are shaping up now it appears that carriers may be getting some welcome relief in the form of higher rates—and shippers might as well bank on that.

In a research brief, Charles "Chuck" Clowdis, managing director of transportation advisory services at IHS Global Insight, has neatly explained the numerous reasons higher rates are en route.

"Since 2006, the rate levels in the transportation marketplace have favored the buyer of transport service," wrote Clowdis. "More capacity pursued less available freight as the economy retracted. As capacity decreases and becomes more valuable to serve the released consumer demand, carriers will become more aggressive in seeking rate increases." He adds that increases in the 7 percent to 10 percent range have already been signaled by the industry.

Other factors pointing to higher rates, according to Clowdis, include the need to service debt incurred by many of the carriers that resorted to borrowing—at high interest rates–to sustain themselves during the downturn. He added that carrier shareholders have been patient during the downturn and will expect improvement in share prices and dividends driven by better earnings.

Additional catalysts for rate increases include owner-operators offering less capacity as the economy gains steam; a possible reoccurrence of a driver shortage; and carriers making fewer investments to upgrade fleet assets.

Robert W. Baird Inc. analyst Jon Langenfeld echoed this sentiment, explaining that with carriers not buying trucks as frequently and capacity tightening over 2010 and 2011, the trucking industry is at a stage where it has not been in about five or six years.

"For shippers and carriers, this

means higher rates are coming," said Langenfeld. "The economy is stronger than people give it credit for and higher rates are coming, but it's hard to say how long it will last. It could be anywhere from two-to-six quarters.

And with higher rates on the horizon, Langenfeld said now is a good time for shippers to meet with carriers to lock in rates for the next 12 months.

Shippers, meanwhile, are less than thrilled at what is ahead of them. "I see a lot of trouble explaining to our management why we need rate increases," said Candace Holowicki, logistics manager for Masco Corp. "I'm trying to be an advocate for both sides of this, but I can't give everyone a 20 percent increase, so don't ask…the money is not there."

—Jeff Berman, Group News Editor

LOGISTICS AND SUPPLY CHAIN TECHNOLOGY

IBM to acquire Sterling Commerce for $1.4 billion

ARMONK, N.Y.—IBM announced last month that it plans to acquire AT&T subsidiary Sterling Commerce, a provider of business-to-business integration and cross-channel solutions, for $1.4 billion. The transaction is expected to close later this year.

With more than 18,000 customers established over the course of 30 years, Sterling is engaged in more than 1 billion business interactions per year for clients in various industries, including retail, manufacturing, and distribution, among others.

Its software and related services focus on B2B integration, order management, logistics, and cross-channel selling and fulfillment services.

"This acquisition will give IBM business partners access to a rich and vibrant trading partner ecosystem," said Craig Heyman, general manager of application and integration middleware for IBM Software Group. "Building on the customer relationships and proven implementation record of Sterling Commerce, IBM and its partners can create exciting opportunities to serve new and existing clients worldwide."

Heyman also noted that both clients and business partners will have access to extensive B2B integration and multichannel selling, order management, and logistics capabilities, as well as IBM's SOA and business process management solutions.

Sterling spokesman Joe Horine told *LM* that this deal stands to benefit both companies in several ways.

"IBM has an integration product line that complements ours well," said Horine. "Our products will appear as part of their Websphere and e-commerce side, and we believe our order management suite will complement their products on that side."

ARC Advisory Group analyst Adrian Gonzalez commented in his *Logistics Viewpoint* blog that IBM views this deal as a way of growing its Websphere business, which focuses on on-demand business, business integration, application, and transaction infrastructure.

"A subplot of this acquisition is IBM's further expansion into supply chain software," wrote Gonzalez. "IBM acquired ILOG back in 2008, a provider of supply chain network design and inventory and transportation optimization solutions. Now it will add Sterling Commerce's portfolio of warehouse management, transportation management, and distributed order management solutions. This will put IBM in direct competition with key partners like SAP, Oracle, and some best-of-breed vendors."

—Jeff Berman, Group News Editor

LABOR

Trucking largely exempt from NMB ruling on union organizing

WASHINGTON—After decades of playing defense, "big labor" is going on the offense following a recent ruling by the National Mediation Board (NMB) that might make it easier to organize workers in the airline and railroad industries.

By a 2-1 vote, the NMB said it would recognize a union if a majority of workers who cast ballots voted for union representation. In the past, the rule required a majority of all workers—in effect, counting all those who did not cast ballots as "no" votes.

Richard Trumka, president of the AFL-CIO, a federation of 56 of the largest unions in the country, called the NMB ruling an "important and essential step" toward ensuring a more democratic process for workers seeking union representation.

"For far too long the NMB rules have provided an upper hand to corporations encouraging voter suppression, while undermining those participating in the union representation election process," said Trumka. "The new rule issued by the NMB allows for a more fair and consistent democratic process in which a majority of workers participating can have a free and clear choice to join together in a union and gain a voice at work."

But transportation attorneys and other labor experts told *LM* that the NMB ruling would have little or no impact on the largely non-unionized trucking industry, which is covered by a different set of federal labor laws.

"This ruling will not affect employers who are covered by the National Labor Relations Act (NLRA) which uses a simple majority of ballots who are actually rule," said James Hanson, a partner with Scopelitis, Garvin, Light & Hanson, a law firm specializing in transport labor. "It should have no impact on the trucking industry."

The difference is that NLRA-covered industries, such as trucking, can be organized terminal by terminal. Under the NMB ruling, a union must organize under a nationwide classification of workers. "Trucking is under a whole different set of rules," Hanson explained.

The more important question for shippers is whether this ruling will have much effect on the trucking industry, which is about 95 percent nonunion—compared to the 90-percent unionized trucking industry in the era prior to deregulation in 1980.

—John D. Schulz, Contributing Editor

INTERMODAL

FTR says intermodal making its presence felt

WASHINGTON—Recent trends on the sustained emergence regarding an upswing in intermodal transportation continue to be confirmed. The latest sign is a report from freight transportation consultancy FTR Associates.

In its recently published *Intermodal Update*, FTR stated that intermodal transportation's share of U.S. long-haul truck traffic hit record highs during the first quarter of this year. According to FTR, both total intermodal movements and movements of domestic intermodal equipment reached record levels in terms of market share.

> **"There was a lot of baggage that came with intermodal, and shippers accepted it in order to gain the cost savings associated with it."**
>
> —Larry Gross, FTR

And intermodal's share of U.S. long-haul—550 miles or more—movements of international and domestic containerized freight was estimated to be 13.5 percent by FTR for the first quarter.

"There are really two pieces to the puzzle here—one is driving the domestic piece and one is driving the international piece," said Larry Gross, senior consultant for FTR and principal author of the firm's Intermodal Update. "When we look at intermodal, we are dividing intermodal movements into two sort of broad buckets; one is the movement of international containers and the other is domestic equipment, containers, and trailers. And those two segments are blueprints for two different items that are responding to different pressures. Right now, intermodal is clicking on all cylinders, and both of those pieces are going in the right direction for different reasons."

On the international side, Gross explained that international volume overall is bouncing back faster than domestic volume. And with intermodal being prevalent on the international side with international coming back quicker than domestic, Gross said it is helping overall intermodal movements.

But that should not be misinterpreted as intermodal gaining a full share of international volumes. Instead, it means that because international has such a high percentage of international volume, it helps intermodal overall when that piece of the market moves faster.

Another driver for increased international gains, according to FTR, is that intermodal is no longer losing volume to the all water diversion from the Panama Canal, which was a factor in depressing international share, as well as a drag on the intermodal market share from 2006-2009. Gross said that this trend is now reversed and moving upward.

On the domestic side, Gross said it is a different story as domestic intermodal has seen a steady increase in total intermodal market share since 2007, which, he said unprecedented.

"[The momentum] continued right through the downturn, which says the intermodal value proposition is really gaining traction," said Gross. "If you think of where intermodal used to be, it was a secondary mode of last resort.

Shippers used it when they needed to save money or were not particular about when a shipment arrived or got damaged. There was a lot of baggage that came with intermodal, and shippers accepted it in order to gain the cost savings associated with it."

Today, things are different, though, as intermodal is not viewed in the same negative light that it once was. Intermodal has begun to successfully convince shippers that it offers a value proposition without any negative compromises, said Gross.

And while it is always going to be slower than truck, Gross said intermodal still offers shippers with needed reliability that can help them to plan accordingly and allocate the proper freight mix for intermodal and truck, as well as remove uncertainty from the supply chain.

An intermodal executive recently noted that mode conversion—to intermodal—is garnering a lot of attention as a way to reduce costs and be more environmentally-conscious, among other drivers.

"Clearly mode conversion is a big opportunity for shippers out there, and there continues to be a big opportunity for shippers to look over the highway to consider rail and intermodal," said Chad Thomas, director of intermodal at J.B. Hunt. "Price stability is an option when converting to rails and there may be some savings in lanes when converting."

Thomas cited fuel costs and pending energy legislation as things that could have a future impact on sustainability, intermodalism, and containerization, which will be factors in the domestic transportation environment.

"For mode conversion, the service piece always lingers in people's minds about making sacrifice on service. Maybe that was the case ten years ago but not anymore. All the Class I railroads have done a great job of building infrastructure, running trains smoothly, as well as doing an amazing job of bringing highway standards to the railroad system. Intermodal is more consumable today even than it was five years ago."

—Jeff Berman, Group News Editor

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Pearson on

What can supply chain executives learn from the Iceland volcano?

ON APRIL 14, 2010, Iceland's Eyjafjallajokull volcano erupted, sending a stream of ash into the sky. Within 24 hours, British airspace was shut down. Within 48 hours, a major part of European airspace was closed.

Stories of stranded vacationers grabbed most of the headlines. However, the magnitude of business disruption was similarly dramatic. With more than 60,000 flights grounded in the first week, companies found themselves unable to ship goods by air. The impact was (and continues to be) felt far from Europe—from rose farms in Kenya to auto assembly plants in the United States.

The worst hit businesses are those with extended supply chains, short-life-cycle products, or high-cost, lightweight goods such as electronics and pharmaceuticals. By volume, only 2 percent of freight is shipped via air. But that 2 percent of volume equals 35 percent when measured by value.

In the short term, many companies scrambled to find ways to move goods as cargo flights were grounded. Road, rail, and ocean freight carriers saw a surge in activity.

For some, however, it was too late. Produce and fresh flowers are already being destroyed by the ton. Countries are only beginning to gauge the extent of the economic impact, which will certainly reach into the billions of dollars for many.

LESSONS FOR THE LONGER TERM

In the future, scientists may be able to foresee natural disasters with greater regularity. But perhaps businesses should consider the volcano a clarion call for more dynamic supply chains. Dynamic supply chains are shaped by examining an organization's potential exposure to all risks, identifying vulnerabilities, and then building in the flexibility to adapt to sudden changes in the environment without disrupting the enterprise or impacting market value.

New capabilities in several areas can help to create a more dynamic supply chain:

Sourcing: Sole-sourcing and using low-cost country suppliers are great strategies for reducing costs, but better balance is needed to ensure flexibility. A more-streamlined process for bringing new suppliers on board could allow companies to quickly find and use new sources of commodity goods in an emergency. And for critical materials, a diversified supplier strategy may offer the flexibility needed to better mitigate risk.

Manufacturing: Offshore production has brought tremendous cost reductions for companies, but it may also subject them to more disruptions. A flexible manufacturing strategy involves options for building critical products in multiple locations, with fast changeover capabilities in place to allow production to react to sudden shifts in supply and demand.

Product design: The best strategies for a more flexible supply chain start at the design stage. Products designed with manufacturing flexibility in mind reduce complexity and leverage common platforms and parts. This can reduce exposure to supply outages.

Logistics: A global transportation network—one that is optimized for cost and risk—considers multiple routes to market as well as contingency shipping plans. A good example is the Dutch mail and express group TNT. When its national air space was closed, TNT smoothly switched intercontinental shipments from its air hub in Liege, Belgium, to an air gateway in Madrid. Shipments that would ordinarily be air freighted across Europe were diverted onto TNT's existing European road network. Centralized management of the network and a common systems platform enabled TNT to re-route freight relatively easily. Using a proactive approach, the company kept customers informed via the media, its website, and its customer account teams.

When the next traumatic weather event occurs, the ability to respond with a dynamic, flexible supply chain could distinguish high-performance businesses from the rest. Those companies with resilience built into their supply chains will likely have the ability to reduce exposure to transportation cataclysms. They may also be able to reduce exposure to a wide range of other supply disruptions that—like bad weather—are more or less inevitable. ☐

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

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2010 State of Materials Handling: Spending gets a lift

While more companies report plans to increase investment this year, the future looks even rosier for 2011 and 2012. Our warehouse/DC engineer presents the highlights of the 2010 survey and explores how the upturn is influencing current materials handling trends and future spending plans.

BY MAIDA NAPOLITANO, CONTRIBUTING EDITOR

Encouraging, strengthening, and growing: Over the past few months that's the way market specialists and economists have been describing what had been an embattled U. S. economy. A recent report released by the Federal Reserve shows factory production slowly but surely climbing as sales and inventories continue to grow.

It looks like the tide is turning, and there's a sense of optimism permeating the air.

This same positive outlook is reflected in the results of the 2010 State of Materials Handling Survey conducted for *Logistics Management* and sister publication *Modern Materials Handling* by our internal research team. However, some of that upbeat news does come with a few cautionary notes.

While there may be more companies—31 percent, up from 28 percent in the previous survey in 2008—planning to pull the trigger on material handling solution plans this year, a large majority—69 percent—are still either holding off on investing or taking a "wait and see" approach, saying that they need to move slowly with their decisions during the course of 2010.

However, when asked about spending plans two to three years from now, companies are clearly seeing a rosier future, with 58 percent of survey respondents reporting that they plan to increase their material handling investments—up from a low of 47 percent in the 2008 results.

This turn-for-the-better is certainly what everyone is seeing right now, according to Scott Pribula, principal and market sector leader with TranSystems, a consulting firm specializing in transportation and supply chain services. "People are a lot more optimistic, and we've seen a lot more activity at the beginning of this year than we did the whole of last year."

Conducted in February 2010, our survey aims to better understand the current state, trends, and practices in manufacturing, warehousing, and distribution environments while tracking changes in the material handling market over the

The economy and its impact on material handling equipment and technology spending

We are taking a "wait and see" approach/moving slowly with our decisions

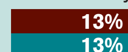
Sixty-nine percent (69%) are holding off and taking a "wait-and-see" approach.

We are holding off on investing

We are proceeding with our investments

Roughly one out of three companies (31%) are moving forward with their spending on material handling solutions. This represents a slight improvement since 2008 (28%).

The economy is having no/little impact on our materials handling spending



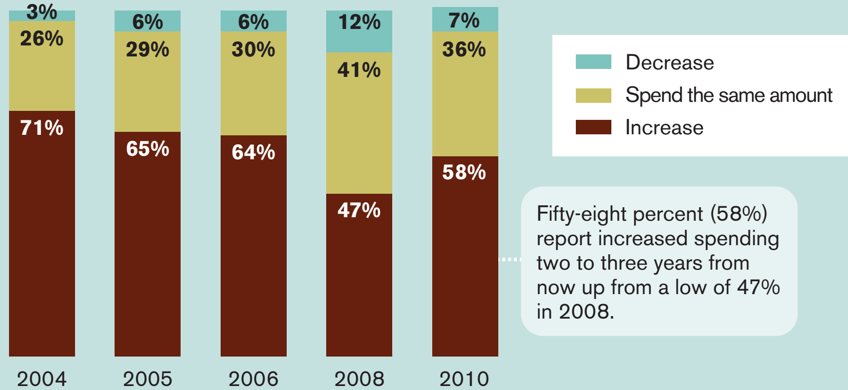
2010 2008

Source: *Modern Materials Handling/Logistics Management* survey

JOHN PIRMAN

past year. Questionnaires were emailed to *Logistics Management* and *Modern Material Handling* readers in February yielding 353 total respondents mostly from manufacturing and warehousing/distribution companies with revenues both large (41 percent have sales of $100 million or more) and small (18 percent are under $5 million). Only those responses from management and personnel directly involved in the purchase decision process of material handling solutions were considered.

Over the next few pages we'll present the highlights of the 2010 survey results and explore how the economy has influenced material handling trends and capacities. Then we'll take a look internally and examine the areas in which warehouse and distribution managers are planning to invest, what issues are gaining importance, what green initiatives they're considering, and how they're currently making material handling purchase decisions. This is a great opportunity to see how your plans match up with those of your peers.



Source: *Modern Materials Handling/Logistics Management* survey

MORE MONEY, BUT NOT NEARLY ENOUGH

After sealing their wallets tight in late 2008, many were starting to pry them open again at the beginning of this year. A higher percentage of respondents (46 percent, up from 42 percent in 2008) have pre-approved annual capital expenditures budgeted specifically for material handling solutions

Of those with money to spend, over 50 percent are looking to spend $100,000 or more, with the largest percentage of respondents spending from $100,000 to $249,999. There are even more signs of optimism for 2011, as 37 percent of respondents claim that their companies are planning increases in spending next year—a jump up from the 16 percent that say they're increasing this year.

Pribula, however, remains perplexed. "It's just amazing to me that the pre-approved capital expenditure is so low—$100K to $250K for an entire year. With so many respondents grossing $100 million or more, that's just one to two percent of their gross."

Don Derewicki, assistant vice president with TranSystems, agrees. "It's pretty easy to blow through a quarter of a million dollars, especially if there's an investment made in software and automation."

MORE AUTOMATION, FEWER JOBS

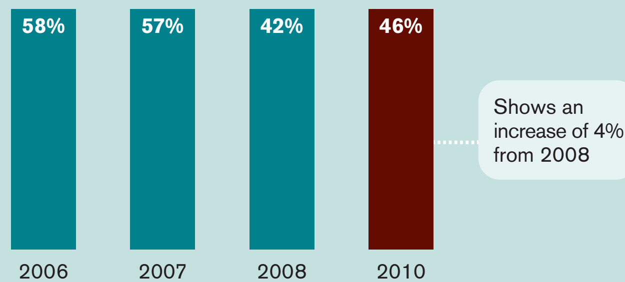
So, just what are companies buying with the available capital? According to this year's results, sixty-nine percent plan on investing in new equipment or equipment upgrades over the next 18 months. Information technology follows at 37 percent.

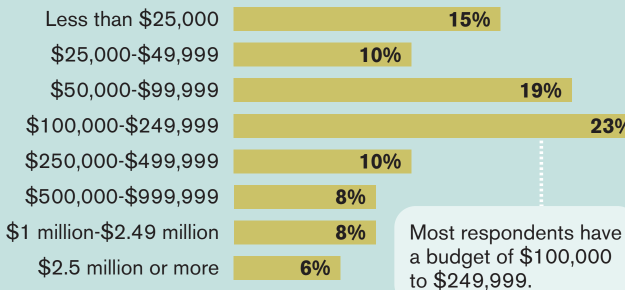
Topping the list of specific material handling equipment and systems investments is radio frequency identification (RFID) at 43 percent. Derewicki speculates that this renewed interest in RFID could be driven by customer requirements. "With a majority of the respondents coming from manufacturing companies, many are in a reactive mode where customers, like Wal-Mart, may be mandating that they have to have RFID. If they want to do business with Wal-Mart, then they have to invest in RFID."

While the push for technology, specifically (1) RFID, (2) automated storage, and (3) bar code scanners, may lead the charge of material handling investments in the next 18 months, it's spelling more bad news for the labor market, according to Pribula. "Those jobs that were lost in this economic downturn may not be coming back. Instead, they're going to get replaced by automation and by being that much more efficient than they are now," he says.

For example, a global apparel retailer and manufacturer saw a reduction of about a third of its pickers when the company decided to install a state-of-the-art unit sorter that automatically sorts individual units of apparel to the company's fleet of stores. In another company, checking stations were cut from 10 to three when radio frequency (RF) scanning devices were used at picking to verify orders, reducing the need for manual checks.

And with this continued drive for automation, it's then logical for companies to put the most emphasis on warehouse control systems (WCS) among all information technology investments. "Once you get into the automated end of material handling equipment, you start





Source: *Modern Materials Handling/Logistics Management* survey

to require more from the WCS which runs it," explains Derewecki.

UNDER CAPACITY IN A STRUGGLING ECONOMY

With low demand and reduced inventories, the recession caused a major impact on plant and warehouse capacity utilization. This year's survey confirms how most plants and warehouses will be operating well under capacity through 2010. Manufacturing plants report 65 percent average capacity utilization, while warehouses that support manufacturing and stand-alone warehouse and DCs have 59 percent and 67 percent average capacity utilization, respectively.

Derewecki feels that this state of "under-capacity" is tempering the surge to improve operations. "Warehouse and DC managers are not likely to be doing anything much until the economy picks up to the point where they're starting to feel the strain and the pain on their systems again."

WHAT CONTINUES TO BE IMPORTANT?

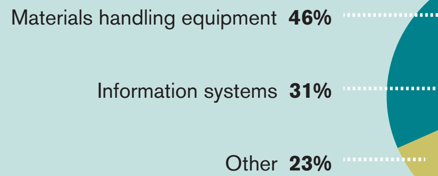
It's no surprise that survey respondents rank "continuous improvement," "labor productivity, measurement, management," and "lean" as the top three best practices that they consider very important—and will continue to consider as very important in the next two years—in both manufacturing and distribution sectors.

Derewecki does find it a little surprising that less than half of respondents consider value-added services as very important. "For warehousing and distribution that's how you differentiate yourself from the guys down the block. It should be more important to respondents," he says.

Trading partner collaboration, which in turn enables cross docking, are the top two practices that in two years have undergone significant jumps in importance. Companies are clearly recognizing that by working with trading partners they can facilitate the movement of product to market and create more cross-docking opportunities.

In the 2008 survey, "safety," "cost containment," and "company growth" were the top concerns to respon-

Breakdown of overall spending



Source: *Modern Materials Handling/Logistics Management* survey

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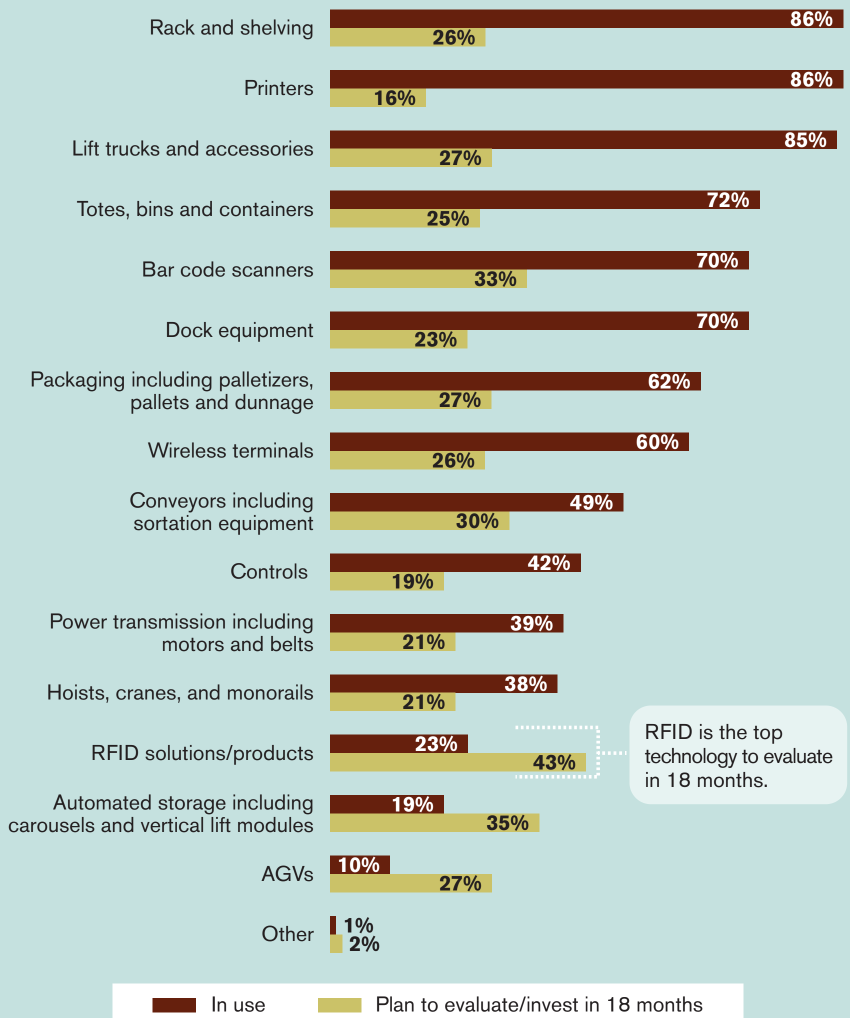
dents. In 2010, "safety" and "cost containment" remain the top two concerns while "company growth" has dropped down to number five, replaced by "throughput." As the economy recovers, the survey reveals that companies are typically more concerned about increasing throughput capacity with resources that they already have—much of which may have been scaled-down by the economic downturn.

Security or privacy issues, particularly the release of customer information and financial information, have also become more sensitive issues for 51 percent of respondents. Pribula notes that four years ago, security concerns would have revolved around company-owned assets. "Now we're talking about securing data because it's more electronic, with more connectedness between systems and more information being shared among manufacturers, distributors, retailers and customers."



A LOOK AT GREEN EFFORTS

Predictably, recycling continues to dominate as the most popular environmentally sustainable initiative currently in use (76 percent). But other up-and-coming "green" ideas have certainly piqued the interests of many respondents.

Most notably, there seems to be major buzz around the installation of "solar panels" on top of distribution facilities. Despite a current use rate of only 9 percent, over half of the respondents (53 percent) are planning to evaluate the use of solar panels for their DCs over the next 12 months. Derewecki believes that this is probably driven by new incentives, good corporate citizenship, and regulations and evolving federal policies. "Warehouses are certainly a natural application for solar panels, because they have so much roof space."

Our panel is also surprised by the significant interest (over 40%) in the use of metal and plastic pallets. Derewecki notes that there have been recent problems with contamination that one of the pharmaceutical manufacturers attributed to wooden pallets. "That has since been denied by the wood pallet association," he adds. "But this incident may have re-ignited interests, since one of the biggest advantages with plastic and metal pallets is that they could be put through sterilization processes."

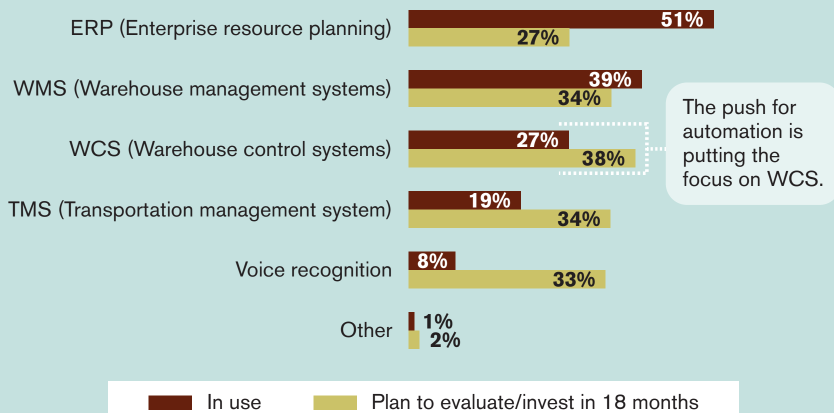
As big retailers like Wal-Mart and Target push their suppliers into adopting more green initiatives, our panel predicts interest in these environmentally sustainable ideas will increase significantly as the economy recovers.

WHO'S BUYING WHAT?

Curious as to what titles are involved in the various decisions inside the four walls? While material handling and DC managers are most involved in determining the need for material handling systems, evaluating solutions, and establishing specifications for bids, purchasing and corporate management are typically principally involved in evaluating vendors and approving or authorizing purchases.

Material handling, DC, and plant management are predominantly involved in buying materials handling equipment such as storage solutions, lift trucks, dock equipment, packaging and pallets, conveyors and carou-

Information management systems: Solutions and systems in use and likely to evaluate in the next 18 months



Source: *Modern Materials Handling/Logistics Management* survey

sels as well as bar coding and scanning systems. Plant engineers are more involved in the purchase of conveyors and sortation equipment, automated systems, hoists, AGVs, controls, and power transmission equipment and accessories. Corporate management is commonly involved in the decision process for applications that affect the enterprise such as supply chain software and systems solutions.

While most companies (70 percent to 80 percent) are likely to re-use existing suppliers, the rest are agreeable to evaluate new ones for systems equipment, IT solutions, and third party logistics.

And while some ground has been gained, there's still much to cover before the materials handling industry gets back to pre-recession levels. The focus going forward continues to be towards more software and automation to replace manual material handling methods. "Once companies get to a point where they see more optimism and more upticks in the marketplace, I'm going to guess that they're going to jumpstart those projects requiring automation," says Pribula.

"However," Derewecki counters, "you're going to have to spend some money to get there." □

—Maida Napolitano is a Contributing Editor of Logistics Management

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Sharpening LTL Management:

As the economy recovers, shippers should expect fuel prices and LTL rates to rise due to global oil market supply constriction. Two experts take a closer look at where oil exports stand and how shippers need to prepare for pricing instability.

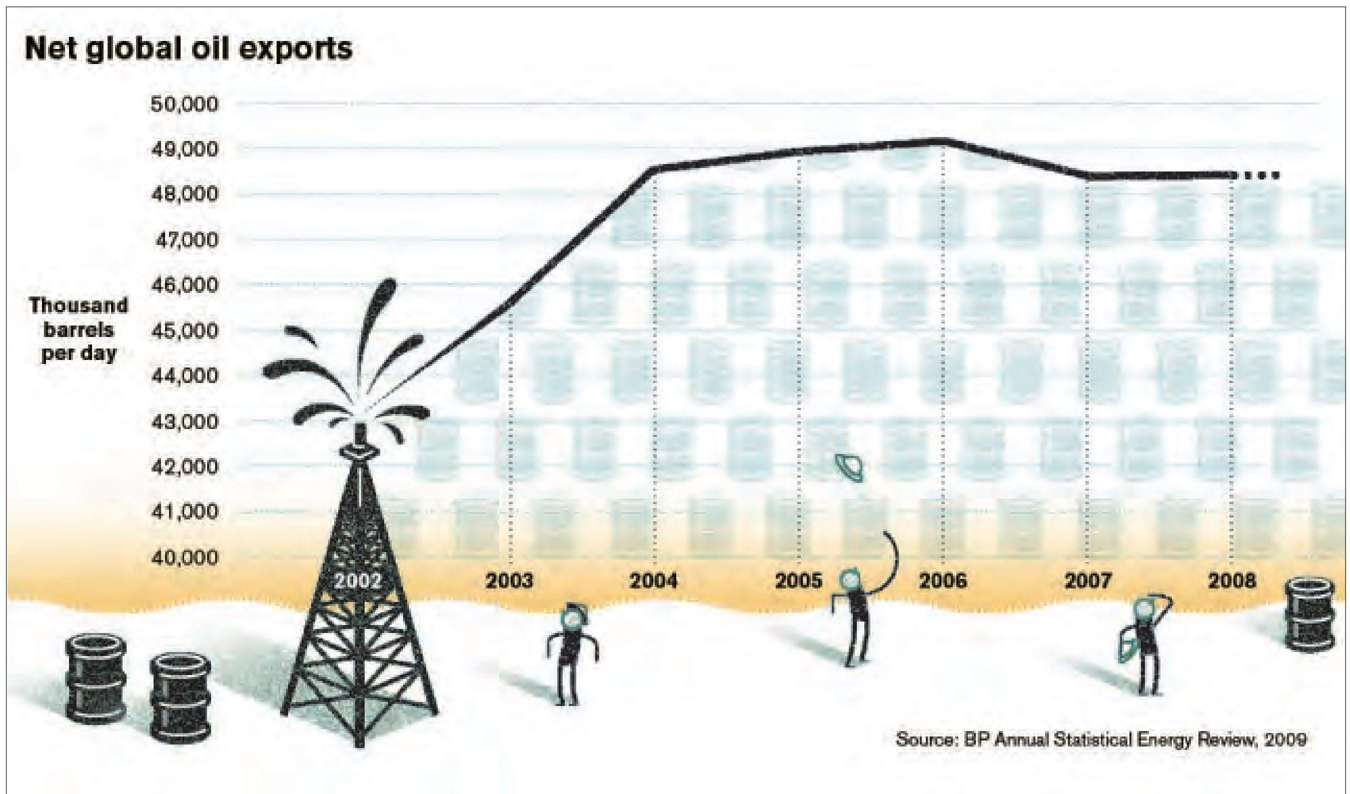
BY DERIK ANDREOLI

By this time, most logistics and supply chain professionals have heard about "peak oil" and have been warned that oil production will certainly peak in the future. Typically, oil supply is evaluated using production data, but production data alone paint only a partial picture of the supply constraints that contributed to the oil price spike in the summer of 2008

While production certainly matters, only a portion of the oil that is produced worldwide is sold on the global market. Hence, net oil exports—the total amount of oil exported from surplus producer countries—offer a far more important measure of supply than production data alone.

The problem, however, is that global oil exports peaked in 2006; and despite a tripling in the price of oil, global exports were in fact lower in 2008 than they were in 2004. But why did exports peak while production continued to grow?

Over the last four decades the structure of the oil industry changed dramatically. In 1970, investor-owned oil companies (IOCs) like British Petroleum and Exxon Mobil controlled 85 percent



Daniel Guidera

Global oil exports peaked in 2006, and despite a tripling in the price of oil, global exports were in fact lower in 2008 than they were in 2004.

What to do about peak oil

of global oil reserves, and national oil companies (NOCs) controlled only one percent.

Today the tables have turned. IOCs control only six percent of the world's proven reserves, and NOCs, like production giants Saudi Arabian Oil Company and National Iranian Oil Company, control 88 percent.

As the price of oil rises, net oil exporters experience a significant boost to export incomes. NOCs generate petrodollars that support a variety of domestic investments that create jobs and increase domestic demand for energy and fuel. But here's the rub: Most net exporting nations subsidize their domestic consumption.

This market imperfection means that the real price of fuel in many of the exporting countries declines as the world price of oil rises. In 2005, the spot price for a barrel of oil was roughly $50. By 2008, the price had doubled to $100 per barrel. This doubling in price increased Saudi Arabia's export earnings by nearly $400 million per day, and domestic oil consumption grew by 27 percent.

Oil exports peak when the rate of growth of domestic consumption begins to outpace the growth of production. As a consequence of rising incomes and growing populations, domestic oil consumption is rising rapidly in many net oil-exporting nations. Indonesia provides a good example of the peak oil export phenomenon.

Indonesia reached an oil production plateau in 1977 at just over 1.5 million barrels per day (mbpd). By 2000, production had declined slightly, but domestic consumption climbed steadily. Despite the elongated production plateau, oil exports clearly peaked in 1977, and in 2004 Indonesia transitioned from being a net oil exporter to a net importer despite the fact that the country was still producing at nearly 70 percent of peak volume.

A similar process is playing out in Mexico today. In 2004, Mexico was the number two supplier to the U.S. Between 2007 and 2008, net exports fell by 22 percent; and at the current rate of decline, Mexico will transition from being a U.S. supplier to a competitor by 2014.

A similar process has played out in China—the most important non-oil trading partner the U.S. has. In 1993, China was a net oil exporter; but by 2008, China was importing more than 4.2 million barrels per day (mbpd).

An even more unsettling trend emerges from an evaluation of exports by nation. While the total number of net exporting nations has remained relatively stable since 1996, the number of net oil exporters that have not yet reached peak exports declined from 39 to 12. Important producers like Saudi Arabia, Mexico, Nigeria, Norway, and the U.K. are not on this list, but the Democratic Republic of the Congo, Iraq, Sudan, and Angola are. These are the nations on which the U.S. will become increasingly more dependent—a fact that does not impart warm and fuzzy feelings.

So what does this mean for shippers and carriers? Transportation practitioners should expect fuel prices to rise and become even more unstable. Smart practitioners should already be working on ways to reduce their consumption. This means focusing on optimizing transportation planning and utilization—not just trying to figure out ways to get better rates from carriers.

Addressing the pending fuel shortage: Optimize, don't just negotiate

BY HANK MULLEN

When it comes to building better LTL/shipper relationships these days, the old method of "I win you lose" just won't cut it when you take the looming oil crisis into consideration.

Americans should remember that when in crisis mode we have adopted the famous "Join, or Die" mantra that Ben Franklin used to unite the country before the Revolutionary War. I say why not unite the nation's carriers and shippers when it comes to fuel? I've been reading about "greening" for a few years now and I think the time has come to use our best and brightest to solve this pending crisis.

It's actually nice to see the government's enthusiasm to get involved. One approach that has been offered by the Department of Transportation is their recently developed plan called "Transportation for a New Generation" that's aimed at developing solutions for "livability."

And while my gut reaction would be to tell the government that it should let shippers and the greater transportation industry figure out how to get greener, it's just not that simple.

Unfortunately, shippers and carriers are focusing too much time negotiating fuel surcharges and not enough

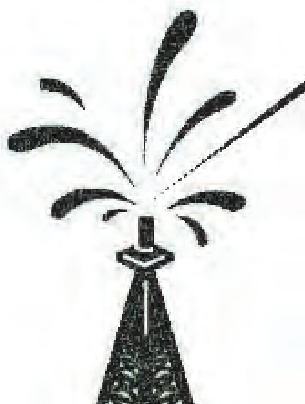
time addressing the real problem—how to optimize overall transportation and reduce fuel consumption. I propose that shippers and carriers stop the bickering and join forces to work collaboratively.

Fuel surcharges first became a hot topic in the transportation industry in the mid-1970s, when the U.S. Department of Energy (DOE) created the National Retail Average to compensate carriers for the volatile fuel prices of the OPEC oil crisis era. It operates the same way today as it did back then: Each Monday, a representative group of approximately 350 retail diesel outlets, including truck stops and service stations, report their retail diesel prices. The DOE then uses that data to issue the national average diesel price for that week.

This process became, by default, the baseline for the weekly fuel surcharge rates billed by the carrier. Today, fuel charges change on a weekly basis with most LTL carriers, and can vary as much as 25 percent from carrier to carrier. Under this scenario, if fuel prices increase during the week, the shipper wins and the carrier loses. If fuel prices fall during the week, the carrier wins and the shipper is the loser.

Fuel surcharges are calculated as a percentage of the shipment charges expressed as a percentage of the total shipment cost. As I write this article it just so happens to be in the 22 percent range. The less your shipment charge, the less the fuel cost portion. The higher your freight class, the higher the cost per shipment and the more you pay for fuel as determined as a percentage of the shipment cost.

Couple this with using conventional rate classification approaches and pricing freight gets even more polluted. Today there are 18 rate classifications ranging from a low of class 50 with a cost per hundred pounds of $63.71 to a high of class 500 with a cost per hundred pounds of $525.66 with no discounts. Your class of freight and your freight all kinds (FAK) range can reduce you total spend.



Let's look at an example of how this works. If you have multiple freights classes, say class 50, 70, and Class 100, some carriers will give you a FAK Class 50. If you have a Class 100 shipment the cost would be $239.88 with a fuel cost of $52.77 for a total of $292.65.

Using the same carrier with a FAK 50, the shipment would cost $138.57 with a fuel cost of $30.49 and a total cost $169.06. You could also see a 25 percent reduction of the fuel that some carriers offer. To make matter worse, carriers toss in discounts of up to 90 percent.

This is a great example that shows that conventional approaches to pricing freight is analogous to a playing a shell game; sometimes things appear and sometimes they don't. Depending on how shippers and carriers play the game, there is a winner and a loser. This approach is myopic and inefficient and encourages discontent, finger pointing, and distrust between shippers and carriers.

OPTIMIZE TRANSPORTATION, REDUCE FUEL

The transportation community should instead work together to figure out how to optimize transportation and reduce the amount of fuel used. Perhaps it's time that all organizations involved in the LTL mix explored a better way of working together and tied it to a national goal to reduce fuel consumption.

I love the concept of "vested outsourcing" that Kate Vitasek and her colleagues at the University of Tennessee are teaching. Using vested principles, shippers and carriers work together to find better ways to decrease fuel consumption.

The concept espouses transparency and fairness, and the transportation community should rise to the occasion to work together to optimize transportation and quit playing a shell game and bickering over fuel service charges and rate discounts where the company with the most muscle or political clout wins.

For example, Wal-Mart and UPS have started programs to reduce carbon footprints. These programs track the credits you can use and help provide visibility that should help reduce carbon and use less fuel. I particularly like the lead that Wal-Mart has taken in this area to focus on packaging.

Wal-Mart wants its 60,000 suppliers to cut the amount of product packaging they use throughout the supply chain by 5 percent starting in 2008, saving the world's largest retailer $3.4 billion in the process. Wal-Mart's five-year plan will monitor suppliers and recognize those who use less packaging, better materials and more efficient sourcing for the packaging they use. The company estimates its move will cut nearly $11 billion in supply chain costs and prevent more than 660,000 tons of carbon dioxide being released into the atmosphere.

The example above tells how reducing packaging 5 percent saved the money due to better load averages and more freight per trailer, allowing the carrier to use the equipment more efficiently.

If shippers realize that LTL pricing is based on density and value, then each pound per cubic foot reduction saved will allow for better carrier pricing and greater load factor—and they can use this better efficiency to help obtain better rates.

It all adds up: Same trailer, more shipments per trailer, better fuel cost per SKU. Now, what if Wal-Mart would take some of those savings and share it back with the suppliers and carriers who helped them optimize their transportation? □

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MANAGING RISK
An Interview with Gary Lynch

BY **FRANCIS J. QUINN,** EDITORIAL ADVISOR

Gary Lynch is the managing director of the supply chain risk management practice at Marsh Inc. and the author of *Single Point of Failure: The Ten Essential Laws of Supply Chain Risk Management*. He recently sat down with us to discuss what logistics and supply chain managers need to know about risk in the current economy.

Q: *Why is supply chain risk management so important today?*

A: Along the supply chain, threats are more pervasive, impacts more extreme and vulnerabilities are more relevant to organizations that operate globally and are interdependent on others to create and deliver value to the markets they serve. Many of these vulnerabilities exist outside the scope of control of the organization, many layers removed (beyond wholesalers, distributors, 1st tier suppliers) up or downstream in the supply chain.

Supply chain risk and supply chains mirror what role supply chain has taken on in business—and in many cases, in the role of commerce in a country and the success of the country. You look at the way supply chain has morphed from that of an operational issue of things that we had to do in order to bring value to our customers, to now being a strategic issue, and a political issue in many cases. Now introduce this whole concept of global interdependency as well. The reality is that threats are more pervasive, and they seem to be more impactful these days—whether it's larger hurricanes or typhoons or earthquakes as we've seen.

Q: *How is risk management different for a company that runs a mostly domestic operation, as opposed to a company that has many partners around the globe?*

A: The first question I would have is, are you really domestic? You believe that you're contained, even if you're a local coffee shop, and then you start to dissect your so-called business chain, your supply chain. And you realize, okay, well the coffee lids are coming from here, the cups are coming from there. Even the utilities I rely on. Look at energy as an

example, which is necessary to keep my business going. It is something that no longer exists in my so-called "small, domestic environment." It's something I've contracted and is being sourced from elsewhere, and I need to understand what are my key external dependencies.

And if you are domestic, the way that it's different goes back to that definition of how to look at risk, or measure risk, and that is, can you identify uncertainty? If you're domestic and truly very, very local, you probably better understand what drives uncertainty and you can probably better measure your exposure to uncertainty.

Q: *We had an article recently which very bluntly said that companies that don't change, like Digital Equipment Corporation or Circuit City or Chrysler, become companies that are unfortunately famous for another reason. Is change a key part of risk management?*

A: Change is probably the number one or two most important issue in risk management. And that puts such a burden on the organization to ensure that they develop the systems and the standards from a risk management standpoint to deal with change. So embracing change, building the systems and standards, are even more important and more relevant today. And change happens at so many levels, all too often I hear that an organization has acquired other organizations and that years later the systems that support the flow of information and goods have not been integrated. Information is rekeyed, intermediary systems are put in place to handle the transition of information between two disparate ERP systems. And at a macro level, the change and risk associated with the strategic footprint of the placement of suppliers, manufacturing, and distribution centers must be considered.

Q: *If, in fact, change management is the way to survive economic problems like the recession, and smart companies have accepted that idea, does that make the concept of risk management easier or harder for them?*

A: I think it makes it harder. When we look at the reality of today's situation, everyone is so tuned into their own function, their own incentives, their own boundaries. Quite frankly, that's not the way clients or customers look at the products they get. They don't care whether the transportation failed or the warehousing was a problem. They just want the products when they want them and where they want them. The big challenge now, from a risk management perspective, is how do you get people to look beyond their functions and at what's needed to create, deliver and service value? You're asking for a cultural change, a behavioral change. How do you get them to look beyond their functional roles at a time when, quite frankly, many of them are worried about either their jobs or their company surviving through the economic crisis.

Q: *In your book, you talk about the concept of supply chain management touching everything and everybody in the company. Yet siloing can be a problem in some companies. What's your key to getting through the silos so that people can understand that everybody is at risk?*

A: Well, depending on whether your audience is internal or external partners, obviously you want to put the pressure on in different ways. I think those who have succeeded have really done a good job of putting a system in place to measure the risk, both from an impact standpoint, and also from an investment standpoint. Where they had the greatest success is trying to measure the impact to a particular revenue stream, cash flow, product, set of SKUs. In building their impact and investment argument, they started to look at something that was a lot more tangible than the so-called organization. Just as I said in the book, everybody is part of the chain. You have to articulate that through getting the product managers on board first, and getting them to acknowledge that their revenue is potentially being threatened.

Q: *It seems that any major initiative like this should come from the top down, but what happens when you run into an obstinate CEO who just doesn't want to embrace risk management?*

A: I'm going to give you two thoughts on this. The reality is, I think in some cases, it's a hopeless cause, meaning that you will just have some individuals who will just be totally unconscious, or ignorant, to risk and ultimately lead organizations into destruction. And actually, when I was working at one organization, my boss, a senior executive, decided to categorize our executive managers as it relates to risk into three categories: They were either considered risk-takers, which was the majority; the enlightened, which were the ones that considered risk early in their business decisions; or the ignorant or brain-dead. The reality is you can do a lot to try to change those that are brain-dead. But at the end of the day, if those are the people that are leading your organization, you might want to think about working for another organization.

Now, that's said in extreme. The other option is to really understand the motivations for why they are ignoring the risk. And if it truly is pressures around margins or survivability at the company, or because they haven't felt the pain, I think that's where and when you're managing supply chain risk.

Q: *Your book describes ten different laws of risk management. Which are the most important?*

A: Two stand out. One we've already talked about, which is the change law: if you don't manage and lead change, you're going to have to surrender to it. The other one was the "laws of the law," which we talk about in the book's preface, when you look at the precepts about everyone being part of the supply chain. No risk strategy is a substitute for bad decisions. It's all in the details, and people operate from their self-interest. That really represents the behavioral and the management aspects of the problem. If we don't tackle those things, or we don't understand and acknowledge and address those issues, then it doesn't really matter what we do from a mechanical standpoint in any of the other laws.

Q: *Talk about the technology that is leading the way these days when it comes to risk management.*

A: One significant trend is an expansion of the tracking systems that are in place, whether they're specific technologies, whether it's GPS or RFID, which is used to obviously track the efficiency. It's also taking things that are used in the logistics industry, expanding that to incorporate some of those risk factors beyond what is perceived as the daily tolerance for problems. Predictive analysis tools are then used to better forecast risk, such as security and shrinkage. So those types of systems and the expanded use of those systems or other applications to track and to be part of a trade-recovery or a commerce-recovery process if you have failure.

Q: *So it is possible to take an existing system and maybe add modules to it rather than having to rip everything out and start from scratch?*

A: Absolutely. And some of the architecture really has to be challenged. So if you've got an ERP system that's looking at things in a modular fashion, then instead of designing the risk elements into each of the modules, you need the capability to look across multiple modules. You need to be able to look at the flow of the product, the information, and the cash to see again where you are going to have the greatest risk.

Q: *You also believe demand should trump supply when it comes to risk management. Your book talks about healthcare and vaccinations for H1N1. But demand is so volatile, especially with something like that. You can go for months without needing anything and then all of a sudden you need millions of doses right now. How do you handle that kind of volatility without building up massive inventory?*

A: I think it starts with the fundamentals. As we've seen before, we need systems. The tendency when looking at the demand side, especially through a risk lens, is to look at the threats to the demand. In other words, threats as they relate to the buyers, threats as they relate to the market itself. Now, that's OK, but there are just too many variables there. So from the demand side, that means understanding the impact of demand significantly changing or being volatile, and translating that into looking at failure of demand or looking at a huge uptick in demand, and then starting to understand what each inflection point translates into from a risk standpoint. What is your threshold or tolerance before the risk becomes a real concern? Doing all that requires you to understand all the variables in the supply chain that supports that product.

So for, say, a bottle of water. If the demand at a particular threshold is going to tax your ability to get a hold of certain resins, it really starts to change the decision about how you manage risk, how you manage the supply chain for that particular bottle of water. But when you do the analysis and you start to say, well, I've now been able to look at these thresholds, plot all these different impacts that you have at different levels. As you plot these things on a chart, you can see what parts of the product are going to cause you more pain or less pain. It could be products that are used in the production process, such as certain gases, or it could be availability of materials that are actually part of the product.

Q: *Is it possible to go overboard with risk management and, if so, where do you draw that line?*

A: It's absolutely possible to go over the top from a risk-management standpoint where you find out that the risk management has slowed your speed or slowed your service or impacted your ability to innovate. That's why I think it certainly needs to be layered in and integrated, and most importantly measured. The challenge is doing that, trying to get to the point of the balance.

But in answer to your question, yes, I think we can over-control the risk. That happens when the measures and the metrics aren't in place where you're not measuring impacts, where you're trying to chase different threads and you believe a particular thread is more important than another thread. When you take the shortcuts on the measurement side from an impact and investment standpoint, I think that's where you really start to get in trouble and you get out of whack with the ultimate decision process. And when you do that and you measure it, the person that's conducting the analysis is not the decision-maker, and they have to bring that data forward so that the real decision-makers can do what they do every day in business.

Q: *So talking about the leaders in supply chain and risk management, who's leading the pack? What industries?*

A: The ones that really jump out are some of the larger high-tech manufacturing companies, especially those that

The 10 Laws of Supply Chain Risk Management

1. If you don't manage and lead change, you have to surrender to it.
2. The paradigm should destroy the parasite; begin by defining the paradigm, not fighting the parasite.
3. Manage your business DNA in a Petri dish of evolving risk.
4. In supply chain risk management, demand trumps supply.
5. Never set up your suppliers for failure.
6. Managing protection risk is a dirty job; focus on managing the endless risk of manufactured weakest links.
7. The logistics risk management rule—Managing the parts does not equal managing the whole.
8. Mitigation—If supply chain risk management isn't part of the solution, it will become the problem.
9. Financing—The best policy is knowing what's in your policy.
10. Manage the risk as you manage your own; your supply chains are all interdependent but unique.

are in the hardware manufacturing business. Certainly, some of the global energy and mining companies who have been almost perfectionists at trying to measure and manage the financial risks are now spending a lot more time on managing the product risks, and certainly the cash risks as well. So I'd say the energy industry, oil and gas in particular. However, on the refinery side, it doesn't seem to be as strong as those companies, so I want to be careful there.

A few of the larger mining companies that I've worked with certainly have a good system for managing the broad set of risks—labor, environmental, all part of their supply chain. There are some companies that are very good in managing the innovation risk, their innovation chain. Those are some of the more visible consumer-based electronics companies, high-tech companies. And then believe it or not, there's one or two automakers. They do a really good job in managing the third parties, not just from a quality standpoint, but a broader set of risk criteria, and there are so many companies that are trying to do a better job at managing third-party or supplier risk, depending on how you want to define it, they are just struggling. That, to me, is the number one issue that these companies are really trying to address: figuring out better ways to manage the supply area risk.

Q: *For companies seeking to get on the path to sound risk management, what are the initial steps they should take?*

A: Well, with supply chain risk management more than anything else, you need a hook and/or a success story. My suggestion would be to, as your target, use what is significantly going to change in the next few months—whether it's a major platform change on the technology side, whether it's a new product offering, a new product line, whether it's an acquisition, an integration of that company.

If you start with that as your target, something that's already changing, then you start to defuse that first bomb that's going to hit you, which is the corporate political bomb of "We're doing everything right, why are you challenging us?" Use change as your hook and then, as you look to manage the risk, you look to the fundamental elements of prevention and response. In order to do prevention, you need to identify it, you need to assess it, you need to assess the impacts to it, you need to measure it.

Then you could look at solutions, whether they're solutions to mitigate the risk, insure or finance the risk, or monitor the risk, realizing there's not much you can do. But you can respond quickly if something goes wrong. Or if it's a systemic failure at a particular port, shipping lane, cargo facility, make sure you have already thought through that scenario and can move quickly on it. I think those are the places to start to build that capability on the reaction and response side as well. □

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ERP SOFTWARE

BY **BRIDGET MCCREA**, CONTRIBUTING EDITOR

The big players continue their aggressive push into the supply chain management software space, using acquisitions and internal technology development to beef up their WMS and TMS offerings, build out planning and optimization, and even add event management to their menus.

There was a time when an enterprise resource planning (ERP) system was thought of as the jack-of-all-trades and master of none. Born from the manufacturing resources planning (MRP) systems that gained popularity in the 1980s, ERPs span numerous areas of an organization, including manufacturing, engineering, finance, customer service, project management, human resources, and accounting.

ERP also reaches outside of the traditional corporate boundaries to include supplier and customer systems. When this occurs, ERPs get pushed out into the supply chain—a place where companies like Oracle and SAP have been moving toward over the last few years.

With the goal of folding transportation management systems (TMS), warehouse management systems (WMS), and even business intelligence functions under a single umbrella, the ERP software developers have become one-stop-shops for many shippers looking to simplify their supply chain software.

"An increasing number of manufacturers, retailers, and 3PLs are looking to their ERP vendors for supply chain management capabilities," says Jim Shepherd, senior vice president at AMR Research in Boston. "Where there once was a distinctive line between the ERPs and best-of-breed supply chain software vendors, that line has since blurred."

Driving that "blur," according to Shepherd, is a reduction in the number supply chain software vendors that cater specifically to the 3PL market and a "very aggressive push" by ERP vendors looking to get into the supply chain space. To get there, the ERPs are using both acquisitions and internal technology development, he says, and beefing up their WMS and TMS offerings, building out their supply chain planning and optimization functions, and even adding event management and other logistics capabilities to their menus.

"The ERPs now have much more to offer in terms of supply chain capabilities," says Shepherd. Shippers are responding to the uptick in offerings, he notes, and like being able to tie their traditional ERP applications with their supply chain and/or

BLURS THE LINE

logistics applications in a seamless manner.

"Customers are looking for tightly-integrated systems," says Shepherd, who sees order management-to-fulfillment; warehousing-to-financials; distribution planning-to-manufacturing; and procurement-to-warehousing as the most critical ties that shippers are looking to make with their ERP systems.

The economy is also driving more shippers to turn to their ERPs for supply chain software. "Logistics departments use to be able to pick whichever products they wanted to address their needs," says Shepherd. "Now, the corporate IT department is more likely to be in charge of that selection process, and that group is more likely to select an ERP vendor to fulfill the need."

TRENDS COMING INTO FOCUS

The fact that ERPs are making significant inroads in the supply chain space is no surprise to the analysts interviewed for this story. In fact, all four saw the trend taking hold more than five years ago and further cemented in 2005 when Oracle purchased G-Log, a privately-held firm that developed GC3 (Global Command and Control Center), a transport management and freight optimization system that's since been replaced by Oracle Transportation Management (OTM).

"Here's an ERP player that acquired a TMS provider, and that continues to win deals as a best-of-breed TMS provider," says Adrian Gonzalez, director of Dedham, Mass.-based ARC Advisory's Logistics Executive Council. "Oracle can also win deals by folding the otherwise standalone TMS as part of its own ERP system."

Oracle's gutsy move into the best-of-breed supply chain software space was soon followed by other such acquisitions, and later by the internal development of WMS and TMS software by leading ERP providers. But even as the line between ERPs and supply chain software continues to blur, there are some key issues that shippers need to consider before deciding which route to take.

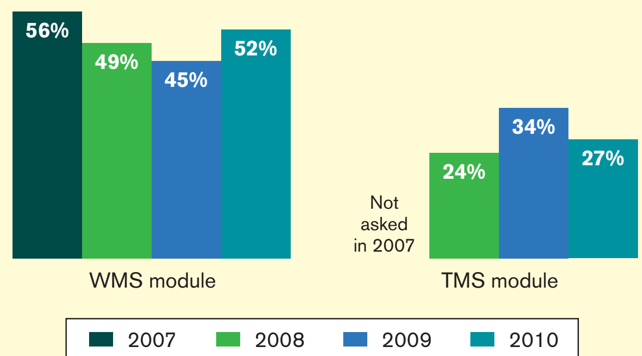
"It really doesn't matter where the solution is coming from; there are still integration challenges to deal with, business processes to understand and solutions to configure," Gonzalez points out. "It doesn't matter whether you're using an ERP or a best-of-breed system, those challenges will still be there."

Gonzalez says shippers should also be aware that the age-old arguments regarding standardization and concerns about a single technology platform being easier to install and integrate are no longer valid. Thanks to open standards and service-oriented architecture (SOA), nearly all software solutions can be more readily "hooked into" existing systems.

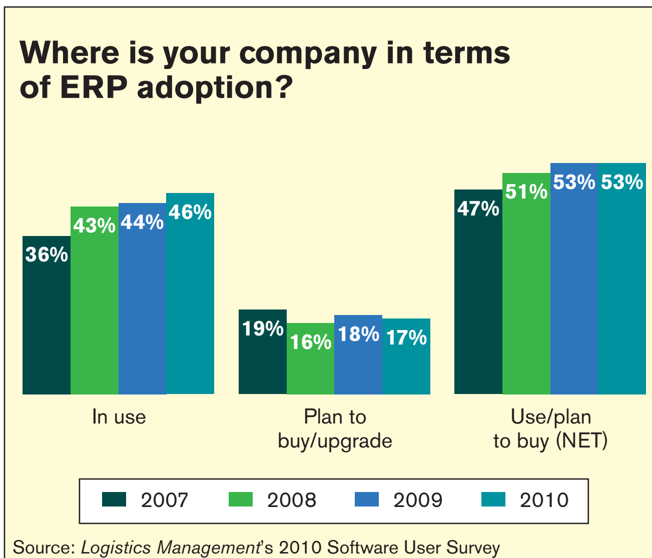
"There's definitely some parity now in terms of integration, whether you're taking the ERP or best-of-breed route," says Gonzalez. "At this point, neither choice is easier or more difficult than the other."

What shippers should be thinking about is whether or not an all-encompassing ERP provider can offer up the depth of

If purchasing/upgrading ERP software during the next 12 months, will your ERP application contain a...



Source: *Logistics Management*'s 2010 Software User Survey



Source: *Logistics Management*'s 2010 Software User Survey

functionality and expertise that a dedicated TMS or WMS vendor can. "The enhanced software versions being built and offered by the [ERPs] still need to be proven," says Bob Heaney, the senior research analyst for supply chain management for Aberdeen Group in Boston. "In some cases, it's easier to adapt a best-of-breed solution already deployed at a company, and have the ERP interface with it."

Dave Williams, principal at Capgemini in Boston, says that even though today's ERP systems include shipping and transportation capabilities, most lack robust planning or handling, the ability to manage complicated shipments and cross-docking, and any capabilities beyond handling shipments from Point A to Point B. "That's where true TMS comes into play," says Williams, "by providing transportation optimization and planning, and not just the ERP shipping modules."

Vendor consolidation has also contributed to the growing popularity of ERP-developed supply chain solutions. Comparing the supply chain space to human resources, financial and procurement—all of which have contracted over the last few years—Shepherd says having fewer standalone software vendors is a natural progression in an environment where shippers demand integrated systems and larger, global vendors.

"We've seen the same phenomena in other software categories," says Shepherd. "There's no reason to think that this isn't going to happen in the supply chain space, where specialist vendors aren't going to go away. We're just going to see fewer of them as more market share goes to the large ERP vendors."

CHANGING WITH THE TIMES

Analysts and shippers alike may be skeptical of ERP's ability to take on the massive task of managing the supply chain, but that doesn't mean these big software players aren't working to break down those barriers. Where Oracle took the acquisition route, for example, SAP has opted for a more "organic" approach, according to Gonzalez, and developed its own WMS and TMS solutions.

Those efforts have largely been driven by end user demand and a desire to standardize as many software processes with a single vendor, says Gonzalez. Simplification is the name of the game, he adds, particularly in today's challenging economy where both IT and human resources have come under constant fire. "If a company has an ERP as its backbone, and if that backbone can provide more functionality," says Gonzalez, "then it just makes sense to use those expanded capabilities."

The ERP vendors themselves have also been affected by the economy and are looking to branch out into other growth areas. Setting their sights on the supply chain space just makes sense, according to Gonzalez, who sees TMS, WMS, business intelligence, and other options as yet another way for ERPs to logically "expand their footprints."

Heaney says that SAP is modeling its WMS system after some of the best-of-breed packages that are out there right now, and testing its efforts at companies like Caterpillar, which is currently in the beta phase of a rollout. "The jury is still out," says Heaney, "but this WMS system is supposed to address many of the capabilities that shippers have with SAP's existing warehousing capabilities."

LINE TO GET BLURRIER

As more companies look to their largest technology providers to offer up expanded capabilities, expect to see fewer lines in the sand between supply chain software and ERPs. Add in the fact that an increasing number of shippers are doing business globally, says Shepherd, and it just makes sense that ERPs would continue their push into the supply chain space.

"Companies operating on a global basis need applications that can handle multiple languages, currencies, and regulatory requirements," Shepherd explains. "All of these [requirements] favor the large ERP vendors at the expense of the specialist supply chain software providers."

Gonzalez also sees the gap closing between the best-of-breed supply chain solutions and those being offered up by ERP providers, particularly as the latter continue to enhance their solutions and make acquisitions that expand their footprints in the logistics arena. As more shippers take the on-demand or "software as a service" (SaaS) route, expect to see more ERPs trying to figure out how to create those solutions in conjunction with their current offerings.

"Moving to on-demand is less of a technical function and more of a business model change, which is an arguably tougher transition for the large ERPs to make," says Gonzalez. "I think they'll eventually move in that direction, but right now it's still a question mark."

Look for the best-of-breed supply chain providers to beef up their offerings in the near future, says Gonzalez, who sees the bundling of technology with managed services and overall service enhancement as major opportunities for smaller players in the space. "Some of the best-of-breeds are already coming up with ways to compete not only by offering TMS, WMS, or other solutions," says Gonzalez, "but by providing the services that help shippers realize the value of those solutions."

–Bridget McCrea is a Contributing Editor to Logistics Management

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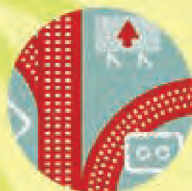
6 NETWORK



Successful network design will always come down to the specific needs of your business, the needs of your customers, and the types of products moving through its veins. Our panel concludes that while there are a lot of options, there's no silver bullet.

BY MAIDA NAPOLITANO, CONTRIBUTING EDITOR

Over the past 18 months or so, the economic challenges of the recession found many companies scrambling to overhaul their distribution networks, closing or even consolidating warehouses—some a little too aggressively—in an effort to cut costs and conserve cash. Recent market upticks, however, suggest it's time to regroup and re-assess what you currently have and gear up for an economic recovery that's likely waiting just around the corner.

Jeff Metersky has been seeing some of the effects of the upturn firsthand as vice president of the supply chain strategy practice for Chainalytics, an Atlanta-based consulting firm specializing in distribution network design. "The emphasis has moved away from the more strategic exercise of closing and opening facilities to finding ways to better use existing networks with a heavy emphasis on cost reduction for immediate short-term tactical gains," says Metersky.

C. Thompson Brockmann, principal for the Raleigh-based supply chain consultancy Tompkins & Associates, agrees with Metersky's observation. "The successful organization is one that's leveraging the resources that they have right now and reconstructing how they're distributing products to their customers," he says.

Indeed, network studies have been known to reduce distribution costs by as much as 25 percent. But cutting too much can compromise your ability to provide the highest levels of service that your customers have been expecting. A lot of effort and energy needs to go into understanding how your network is performing today before you can start picking away at where the opportunities are.

To accomplish this, you start by asking the right questions that are related to your business goals. Are you servic-

REDESIGN TIPS

ing your customers correctly out of the network you currently have? Do you need to shuffle SKUs, inventory, or shipping points around? These are best answered by modeling and analyzing your network.

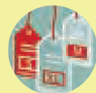
And, of course, there's no time to lose. As the country slowly emerges from the depths of this recession, Troy West, Nashville-based assistant vice president for supply chain consultancy TranSystems, explains why companies should seize the day: "With so much capacity available right now, it's easier to negotiate rates with real estate brokers and carriers."

In the next few pages, and with the help of these three experts who have spent a combined 50 years studying supply chain networks, we'll explore how to make the most out of your existing distribution network. They all agree on one single axiom: There is no silver bullet.

The right distribution network will always come down to the specific needs of your business, the needs of your customers, and the types of products you're moving through that network. It's critical to accurately model your business and apply only those relevant tips that will help you reach that light at the end of what has been a pretty dismal economic tunnel.

Tip # 1: One size does not fit all

The high-performing network is usually one that responds to the specific needs of each customer. This may



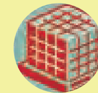
involve designing and engineering a unique path flow for a specific customer or customer segment.

"One size does not fit all," says Metersky. "You have to know what it is that you're trying to provide from a cost and service perspective." He cites a clear example in major retailers that have primarily been invested in brick-and-mortar stores, but have now gained strongholds in e-commerce.

"There's a fundamentally different need from a customer service perspective of what it means to deliver goods to retail brick-and-mortar stores, as opposed to delivering goods to a person at their home because they've ordered off the Internet," says Metersky. "E-commerce deals a lot more with faster-paced parcel shipments, while the brick-and-mortar stores typically replenish themselves with truckloads—but occasionally it can be slower multi-stop truckloads."

Tip #2: Get down to the nitty-gritty SKU level

Managers need to determine, at the SKU level, which products should go direct to store and which should go



through DCs. You can figure this out once you know which product should be stocked and at which DC, including how much and where, and which product should be cross-docked.

"For example, if you have a fast-moving, high margin item, the level of service and stock-outs that you would be willing to tolerate are going to be a lot lower than something that's a low-margin, slow-moving item," says Metersky. The goal is to maximize your product's profitability by reducing the costs associated with the movement of product through DCs and trading partners. Commercial software packages are now available, allowing network analysts to process tens of thousands of SKUs in just a short amount of time.

Tompkins' Brockmann relates the story of a retail client who adopted a product-line focused network by

consolidating large, bulky, difficult to handle product lines—such as furniture—into one facility. "Most of the day-to-day items still ship out of their traditional network, but now they've got a large-goods focused facility," says Brockmann. "It lowered the inbound cost, decreased handling cost, and kept specialized material handling and transportation in one place, while freeing up much-needed storage capacity in the other DCs."

Tip # 3: Being green can bring more green

The whole movement towards environmentally-friendly or green networks has certainly helped companies enhance their level of social responsibility—but it's also saving them money.

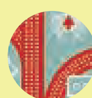
One of the best ways to get started, says TranSystems' West, is by reducing your carbon footprint and cutting back on transportation costs by winnowing down the miles driven or the number of trucks and shipments. More transportation managers are also looking into intermodal opportunities versus truckload. "It's not only to reduce costs, but also to be more green-friendly, because rail is more energy efficient with less emissions," he adds.

West predicts even more emphasis will be put on "going green" as future regulations on emissions will likely increase and a potential cap and trade market will evolve. "We anticipate a substantial growth in carbon footprint analysis as companies will not only conduct studies to identify their carbon footprint, but also make supply chain network design decisions regarding the number of their facilities, size of their transportation fleets, and their potential carbon penalties, tax credits, or trade value," he adds.

In any network study, it's essential to not only reduce costs as products flow from one facility to the next, but it also makes sound economic and environmental sense to reduce operating costs within each facility in the supply chain. For example, at each DC, use fans for air circulation; replace high-intensity discharge lights with energy-efficient fluorescent lighting; and consider installing solar panels on rooftops. These are just some of the more popular environmentally sustainable initiatives that are not only part of good corporate citizenship, but also reduces operating costs of DCs across the network.

Tip #4: Get creative with transportation

The biggest cost drain on distribution networks has typically been transportation costs; thus, finding creative low-cost ways to reduce these costs can certainly go a long way. Much of it involves collaborating and negotiating with trading partners and other carriers to create more efficient loads, eliminating "empty miles," and achieving lower transportation costs overall.



West suggests taking advantage of online freight exchanges to look for backhaul opportunities. Consolidate not only on the outbound but also in the opposite direction.

How does it work? Shippers typically sign up for online freight exchanges and post key lanes that they plan to share with other companies in order to reduce costs. Load-matching services have been offered for many years, but have only recently been tapped for long-term, continuous arrangements between what can be two completely unrelated companies. We showed a terrific example of this in *LM*'s March feature "Macy's maneuver to fill empty miles." For a subscription fee of less than $2,000 a year, Macy's is seeing an average annual savings of $25,000.

In another transportation cost-saving maneuver, Metersky describes how large retail companies are now taking more control over inbound freight. "Loads once transported by truckers hired by suppliers are now being transported by the retailer's own dedicated carriers and private fleets," he explains. Retailers save money because they can now dictate what carrier and mode can be used for their inbound merchandise and have better control of inbound shipments.

Tip #5: It's time to consider inland ports for your network

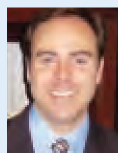
For a few years now, congestion issues along with sustainability and clean air mandates in West Coast seaports have companies looking into inland ports in cities such as Kansas City, Chicago, Memphis, Dallas, Columbus, and Atlanta.

The Center for Transportation Research at the University of Texas

A few more network redesign nuggets from our panel

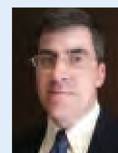
"Studying your distribution network should absolutely be part of you continuous improvement initiatives. You should always be looking at how your network is performing against how you plan. It shouldn't be these big studies that happen every three to five years."

— Jeff Metersky, vice president of the supply chain strategy practice at Chainalytics



"Look for opportunities to reduce miles driven in your network. This will only to save costs but also reduce emissions that would benefit sustainability programs within your organization. Establish a baseline to determine what your carbon footprint looks like and then look for ways to improve on that."

—Troy West, assistant vice president at TranSystems



"Don't assume that your post-recession business is going to mirror your pre-recession business. Everybody's been affected by the recession and has re-evaluated how they do business. Your customers and what they want are going to change."

— C. Thompson Brockmann, principal at Tompkins & Associates

Kansas City SmartPort is an example of an inland port alternative. It's located at the intersection of three of the nation's major interstate highways (I-35, I-70, I-29) and offers a wide range of intermodal opportunities.

defines an inland port as: "A physical site located away from traditional land, air, and coastal borders with the vision to facilitate and process international trade through strategic investment in multi-modal transportation assets and by promoting value-added services as goods move through the supply chain."

"They're trying to get containers away from the seaports themselves where the real estate is more costly, there's more congestion, and where the labor rates are higher," says West. Inland ports are typically more centrally located leading to shorter trucking distances to DCs in the network while offering more intermodal opportunities, thus reducing transportation costs.

TIP #6: Create an off-shore, on-shore, near-shore blend for flexibility

TranSystems' West cites rising labor costs, lack of quality control, and political instability in off-shore manufacturing sites—coupled with an anticipation of rising fuel prices—as some of the major reasons why many operations are coming back to North America (on-shore) or to Latin America (near-shore).

Managers need to look at the total landed costs by customer segment and the appropriate service level required by that segment to determine which approach for locating production is best in a post-recession economy. It may very well be a combination of all three.

First, the bad news: Chainalytic's Metersky believes that over the next few years there's actually not going to be enough capacity—especially in the truckload market. "With more demand and less supply, transportation rates are going to go back up again," he adds.

Now, the good news: According to West, seems to be more of a collaborative effort among trading partners "to share information to reduce costs as seen in the case of freight exchanges."

The temptation to wait and see how the economy progresses can be great; however, according to our experts, the companies that will thrive are those now taking advantage of the recession's low real estate rates. □

—Maida Napolitano is a Contributing Editor to Logistics Management

A SPECIAL SUPPLEMENT TO

Logistics MANAGEMENT

Special Report: Top 50 Global 3PLs

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TOP 50 GLOBAL 3PLs: Modest gains ahead

Having hit bottom in 2009, the 3PL sector is headed for a rebound. Analysts say that some providers will continue to expand globally even if their corporate identities remain fixed to sovereign states. However, research also indicates that near-shoring is a growing trend, giving "domestic" players more of an advantage.

By Patrick Burnson, Executive Editor

In lock step with the global economic nosedive, domestic revenues for the third-party logistics (3PL) market sank last year.

"It wasn't pretty," says Evan Armstrong, president of Stoughton, Wisc.-based Armstrong & Associates. He says that the only thing the top players—both global and domestic—had in common was that "none of them made much money."

According to Armstrong's *2010 U.S. and Global Third-Party Logistics Analysis*, the international transportation management (ITM) segment of the 3PL services market took the biggest hit. Its gross revenue (turnover) fell 23.7 percent as total U.S. import and export ocean twenty-foot equivalent units (TEUs) dropped 12.3 percent. Airfreight metric tons dropped similarly with reductions at JFK and the Chicago airports exceeding 20 percent. As prices dove in the face of soft demand, net revenues (gross margins) for airfreight shrank by 18.9 percent. Expeditors International, the largest U.S. freight forwarder, saw gross revenues decrease 27 percent and net revenue decrease 14 percent.

The good news is that first quarter 2010 results have included double digit improvements in

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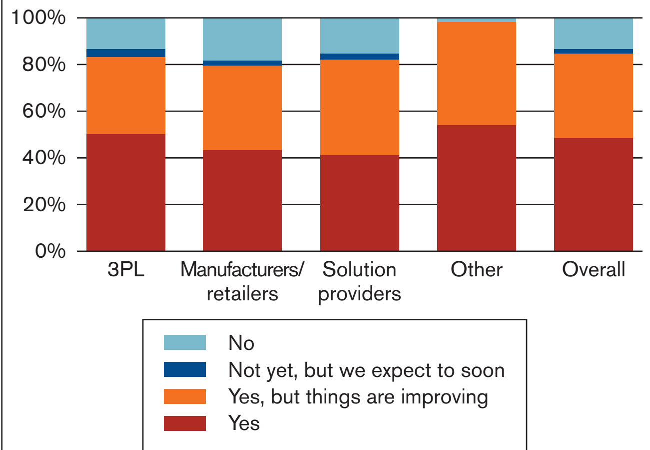
ITM and other 3PL market segments as the economy steadily recovers.

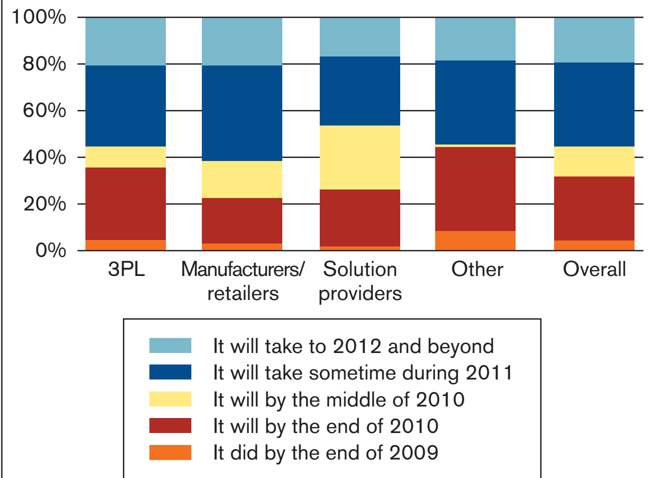
Overall, U.S. 3PL market gross revenues decreased 16 percent in 2009 dropping to $107.1 billion. The dedicated contract carriage (DCC) segment fell 16 percent, while domestic transportation management (DTM) was down 15.1 percent in gross revenue and 11.4 percent in net revenue. Value-added warehousing and distribution (VAWD) suffered with only single digit reductions.

The VAWD segment's gross and net revenues were both down 5.3 percent and 6.9 percent, respectively, compared to 2008. Net income margins dropped in all categories. Net income in the ITM segment had a 6.3 percent drop. VAWD took the deepest plunge with a 25 percent drop. Overall, the 3PL net income margin dropped from 5.3 percent in 2008 to 4.7 percent in 2009.

"We anticipate a significant recovery for 3PLs in 2010," says Richard Armstrong, co-author of the report. "Many first quarter results suggest a recovery that will restore the third-party logistics market to 2007 levels, and we predict 13.4 percent growth in gross revenue and 8.3 percent growth in net revenue in third-party logistics for 2010."

Shippers may now be left wondering whether service metrics will be tightened along with this slight surge.





Flags of convenience

Richard Armstrong did not have an immediate answer; however, he did note that the line between domestic and global players continues to blur, saying that the 3PL industry mirrors what has occurred in the ocean carrier sector over the years.

"Does it really matter if you book cargo on a vessel that is based in Denmark?" he asks. "It's carrying containers from Korean and Japanese shippers, and may even be sailing under a flag of convenience. The national identity is gone, and the idea of doing business in a single national market is nonsense."

He also noted that the U.S.-based multinational shipper McDonalds makes more money in foreign markets overseas. "So that's what's happening to the paradigm," he says. "Most of the really big 3PLs are following the same model. To be purely domestic is to remain stuck in one place, and no one is going to sacrifice potential revenues to do that."

At the same time, however, Armstrong maintains that some 3PLs are stronger in one region than another—and, by that measure, the "domestic" category is still valid. "But since the greatest growth is going to take place in India and China in the coming years, we are concerned about 3PL service in the U.S.," he says. "If it's all outsourced, this country will be a fading power…like Great Britain in the 20th Century."

London-based Eyefortransport (EFT) may take issue with the historical allusion of this statement, but certainly not with the insight. Research done by the analysts for its *North American 3PL Market Report* suggest that a modest rebound must take place this year to keep the U.S. and its hemispheric neighbors in the game.

The report focuses on the opinions of logistics service providers (3PLs/4PLs), manufacturers, retailers, as well as supply chain technology providers to offer a comparative view between these groups of respondents. The report also pays particular attention to the state of the global economy along with other shipper concerns.

"The end of 2009 going into 2010 has been a time of challenges and opportunities in the supply chain and logistics industry," says Katharine O'Reilly, EFT's senior vice president of research. "On the one hand, the fallout from the recession continues to rock all industries. Yet on the other hand, the

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Armstrong & Associates Top 50 Global 3PLs - May 2010

Rank	Provider	2009 Gross Revenue (USD Millions)*
1	DHL Supply Chain & Global Forwarding	32,494
2	Kuehne + Nagel	16,014
3	DB Schenker Logistics	15,696
4	Nippon Express Co. Ltd.	15,390
5	CEVA Logistics	7,637
6	C.H. Robinson Worldwide, Inc.	7,577
7	UPS Supply Chain Solutions	7,516
8	DSV Solutions Holding A/S	6,856
9	SDV International Logistics	5,604
10	Agility	5,594
11	Panalpina World Transport (Holding) Ltd.	5,481
12	Toll Holdings Limited	5,129
13	DACHSER GmbH & Co. KG	4,504
14	Geodis	4,209
15	Sinotrans Ltd.	4,196
16	Expeditors International of Washington, Inc.	4,092
17	GEFCO	4,014
18	Norbert Dentressangle Group	3,779
19	Wincanton Logistics	3,707
20	UTi Worldwide Inc.	3,568
21	Hellmann Worldwide Logistics GmbH & Co. KG	3,433
22	NYK Logistics Co., Ltd./Yusen Air & Sea Service Co., Ltd.	3,417
23	Caterpillar Logistics Services, Inc.	3,119
24	Penske Logistics	2,387
25	GENCO Supply Chain Solutions	2,310
26	Pantos Logistics Co., Ltd.	2,285
27	Kintetsu World Express, Inc. (KWE)	2,118
28	Fiege Logistics AG	2,085
29	Damco	2,012
30	Sankyu Inc.	1,743
31	GLOVIS	1,672
32	Nissin Corporation/Nissin Group	1,644
33	Ryder System, Inc.	1,611
34	Logwin AG	1,547
35	Hub Group, Inc.	1,511
36	FedEx Supply Chain Services/FedEx Trade Networks	1,503
37	Menlo Worldwide Logistics	1,326
38	BDP International	1,220
39	Arvato Logistics Services	1,207
40	VersaCold Logistics Services	1,180
41	BLG Logistics Group AG & Co. KG	1,138
42	Kerry Logistics Network Ltd	997
43	OHL	991
44	Transplace	990
45	APL Logistics	976
46	Werner Enterprises Dedicated & Logistics	878
47	Landstar Global Logistics, Inc.	824
48	NFI	810
49	Greatwide Logistics Services, LLC	781
50	Americold Logistics, Inc.	761

*Revenues are company reported or Armstrong & Associates, Inc. estimates and have been converted to USD using the average 2009 exchange rate in order to make non-currency related growth comparisons.

green shoots of recovery and the opportunity to gain new market share and develop new innovative strategies and relationships has opened up sections that were previously closed due to the relative stability."

Brighter picture

Respondents to EFT's North American 3PL Market Report were asked in early 2010 whether their companies were experiencing the economic slump within their business operations. The

"We anticipate a significant recovery for 3PLs in 2010. Many first quarter results suggest a recovery that will restore the third-party logistics market to 2007 levels."

–Richard Armstrong, Armstrong & Assocaites

research team found that 51 percent of 3PLs reported that they were experiencing a slowdown, compared to 44 percent of manufacturers/retailers and 42 percent of solution providers.

In response to a related question, 34 percent of 3PLs reported that they were hurting as well, but said that things are improving as compared to 37 percent of manufacturers/retailers and 42 percent of solution providers.

Only 3 percent of responding 3PLs reported that they were not affected by the downturn, as compared to 2 percent of manufacturers/retailers and two percent of solution providers. Twelve percent of 3PLs reported that they were not experiencing the economic slowdown and were not expecting to soon, as compared to 17 percent of manufacturers/retailers and 14 percent of solution providers.

"These results paint a far brighter picture than those of last year," says

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Armstrong & Associates Top 30 Domestic 3PLs - May 2010

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3	DHL Supply Chain/Exel	5,187
4	Expeditors International of Washington, Inc.	4,092
5	UTi Worldwide Inc.	3,568
6	DB Schenker Americas	3,170
7	Caterpillar Logistics Services, Inc.	3,119
8	Kuehne + Nagel, Inc. (The Americas)	2,921
9	Penske Logistics	2,387
10	GENCO Supply Chain Solutions	2,310
11	CEVA Logistics (The Americas)	2,235
12	Ryder System, Inc.	1,611
13	Hub Group, Inc.	1,511
14	FedEx Supply Chain Services/FedEx Trade Networks	1,503
15	Menlo Worldwide Logistics	1,326
16	BDP International	1,220
17	VersaCold Logistics Services	1,180
18	OHL	991
19	Transplace	990
20	APL Logistics	976
21	Werner Enterprises Dedicated & Logistics	878
22	Landstar Global Logistics, Inc.	824
23	NFI	810
24	Greatwide Logistics Services, LLC	781
25	Americold Logistics, Inc.	761
26	J.B. Hunt Dedicated Contract Services®	757
27	syncreon	750
28	Phoenix International Freight Services, Ltd.	733
29	Ruan Transport Corporation	680
30	Jacobson Companies	628

*Revenues are company reported or Armstrong & Associates, Inc. estimates and have been converted to USD using the average 2009 exchange rate in order to make non-currency related growth comparisons.

O'Reilly, "when 93 percent of 3PLs and 90 percent of manufacturers/retailers reported that they were experiencing the economic slowdown."

Although this year's results were more positive than last year's, they remain markedly more negative than the results from 2008 when only 43 percent of 3PLs and 41 percent of manufacturers/retailers were affected by the recession.

3PL respondents were also asked if they are seeing an increase in "near sourcing" by their customers. In the last three years, the most common response has been that respondents have seen a slight increase (43 percent in 2010; 55 percent in 2009; and 69 percent in 2008). The second most common response has been that respondents have seen no increase (33 percent in 2010; 30 percent in 2009; and 17 percent in 2008), while the least popular response has been that respondents have seen a significant increase (23 percent in 2010; 15 percent in 2009; and 14 percent in 2008).

While the levels of responses have been broadly similar over the last three years, there has been a notable polarization each year, with fewer people seeing a slight increase, and a larger number seeing either no increase or a significant increase. According to O'Reilly, this trend was more apparent in the 2010 results compared with those of 2009.

But it's worth noting that a certain contradiction is contained in the section of the report where 3PL respondents were also asked to identify the regions in which they see the greatest revenue growth opportunities for their companies. The result: North America, the say, is absolutely critical.

> **"On the one hand, the fallout from the recession continues to rock all industries. Yet on the other hand, the green shoots of recovery and the opportunity to gain new market share…has opened up sections that were previously closed due to the relative stability."**
>
> *–Katharine O'Reilly, Eyefortransport*

"While results from the 2008 and 2009 surveys were markedly similar in this area of questioning, the results from this year's survey were dramatically different," says O'Reilly.

Indeed, the majority of 3PL respondents (72 percent) saw their greatest opportunities being in North America, whereas only 8 percent and 6 percent selected this region in 2009 and 2008 respectively. A similar number in 2010 (47 percent) saw China as the most promising region, as compared to 2009 (51 percent) and 2008 (61 percent). The Asia-Pacific region (not China or India) also showed similarity in results between 2010 (36 percent), 2009 (31 percent), and 2008 (32 percent).

Be reasonable

Other pressures may drive strategic change too, says Richard Armstrong, who believes that the supply chain may

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be shortened if the currency imbalance continues to be an issue with China. Near-shoring, he says, makes a lot more sense if long-term and sustainable profits can be realized.

"It's going to be very interesting to see if 3PLs will begin to concentrate on businesses with production facilities in North America," says Armstrong. "From a foreign currency exchange perspective, it seems to make sense."

Meanwhile, change in the 3PL sector remains glacial, according to Armstrong. With the exception of DB Schenker, bold moves into new markets have not been evident. "Schenker is somewhat visionary," says Armstrong, "in that it's growing its contract logistics at a very rapid pace. Shippers should not assume that this is being done across the board with 3PLs."

In fact, the biggest word of advice Armstrong has for shippers this year is this: Be reasonable.

"Don't expect a lot of change in service levels this year," he says, "and don't rely on new providers coming into the marketplace. Unless a multinational manufacturer like Caterpillar comes into the 3PL sector, it's going to be the same group of guys. The threshold for entry is very high, and requires a big commitment to operate on a grand scale."

–Patrick Burnson is Executive Editor of Logistics Management

The three dimensions of distribution excellence

To achieve the potential of distribution excellence, companies need to think outside of the box and optimize their 3PL partnership.

By Joachim Ebert, Kumar Venkataraman, Michael Hu

What allows certain companies to deliver best-in-class distribution performance while others turn in only average performance or fail altogether?

From our work in this area, we've observed that the leaders in distribution—those that deliver on a defined set of quality and service levels at the best possible cost—consistently think outside the box. They push their competitiveness to an efficiency frontier, achieving a 15 percent to 30 percent distribution cost advantage over competitors while delivering equal or better service levels.

Some of these leaders go a step further and leverage successes in distribution optimization as a catalyst to improve performance across the entire value chain—from demand planning to logistics—both to improve the top-line and unlock additional savings.

We characterize the approach as "3D" outside-the-box thinking because it requires the following three dimensions: Benchmarking beyond industry boundaries, challenging preconceived views, and triggering a chain reaction in supply chain optimization.

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1) Benchmarking beyond industry boundaries

Solid distribution requires first establishing an accurate picture of your distribution competitiveness vis-à-vis true peers. The leaders establish a competitive gap assessment whereby they neither underestimate their distribution capabilities (devoting valuable resources without an adequate return on investment) nor overestimate their performance and thus get lulled into a false sense of complacency.

The leaders understand their true peer group and compare their distribution performance against these peers. Determining which companies are your true peers, however, can be difficult. It is not unusual to find after years of benchmarking that you've been comparing performance against the wrong peer group.

For example, a firm in the motor-vehicle sector we studied historically benchmarked its after-market distribution against the automotive industry and ranked its cost-to-serve in the top 90th percentile. But was this motor vehicle firm really performing in the 90th percentile? We didn't think so.

Solid distribution requires first establishing an accurate picture of your distribution competitiveness vis-à-vis true peers.

This company, like many others, was mistakenly defining its peer group largely by its overall business profile rather than by its after-market business requirements. When benchmarked against firms in other industries with similar distribution requirements—mid-scale apparel retailers and after-market parts firms—the company discovered that its distribution performance lagged well behind others.

Rather than rely on proxies for selecting a peer group for benchmarking such as "what industry do I play in?" or "who are my direct competitors?" distribution leaders use segmentation metrics to identify the correct benchmark peer group. The segmentation variables should have sufficient detail to (1) capture the key operational dimensions that characterize the underlying distribution requirements and (2) align with the

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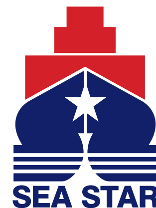

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company's overall business strategy as well as customers' needs.

2) Challenging preconceived views

In order to achieve breakthrough distribution performance, companies need to overcome entrenched biases. Often, organizational biases lead to sub-optimal decision making across two critical components of a distribution solution: determining the right level of technology and deciding on keeping distribution in-house vs. outsourcing (make vs. buy).

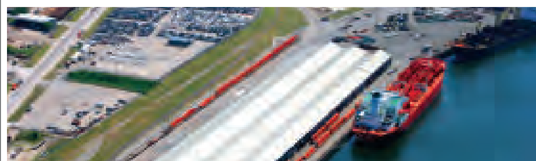
The right distribution solution thus requires an objective and systematic assessment of both components: technology and a make-vs.-buy assessment. Let's discuss each:

Matching technology to requirements: Distribution technology includes a holistic suite of warehouse automation, material handling systems and warehouse management system (WMS) software that collectively enables distribution, from product receiving to shipping. Determining the appropriate level of distribution technology—or whether or not you need it at all—requires considering several trade-offs, including capital investments, productivity, and longer term flexibility.

Third-party logistics providers (3PLs), for example, can help reduce costs and allow companies to offer differentiated services.

Performing the make-vs.-buy assessment: Distribution gaps can be closed by tapping into the external market for key capabilities. Third-party logistics providers (3PLs), for example, can help reduce costs and allow companies to offer differentiated services. Finding the optimal make-vs.-buy balance and then executing an outsourcing initiative requires adopting a strategic view. Before either dismissing outsourcing as too risky or embracing it as a silver bullet to achieve best-in-class competitiveness, systematically weigh the risks and the benefits. The three main questions to answer: Is product distribution a core competency? Is there a cost advantage to outsourcing? Is there a 3PL that could handle the job?

Understand the 3PL market



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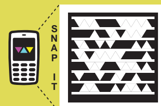

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trends and capacity early: Third-party logistics provider capacity must be understood at both the industry and individual levels. Performing a capacity assessment early on—before launching an official supplier bid process and due diligence—can save significant time and resources and better inform downstream bargaining power, which is crucial to capturing cost advantages from outsourcing.

Recognize technology differentiation in the 3PL market: Although all large integrated third-party logistics providers possess broad capabilities and can arguably play across the entire technology spectrum, many tend to have a technology "sweet spot." Rather than go with the low-cost or the most high-tech provider, look for 3PLs that have solutions and technology aligned with your distribution requirements.

Look for 3PLs that have solutions and technology aligned with your distribution requirements.

When considering a strategic fit in the due-diligence process, some questions to ask in this regard include: Are my distribution requirements and capabilities a focus area for the 3PL? How will my business affect the provider's overall revenue base? Is my industry vertical a key sector for the 3PL? Answers to such questions will not only provide a stronger bargaining position but also ensure that the 3PL continues to be responsive and flexible after the contract is signed.

3) Triggering chain reaction in supply chain optimization

Early successes in distribution can be a catalyst for change across the broader supply chain. Transformational change usually requires first getting past organizational impediments such as silos where key decision makers sit in different functions and there is very little collaboration among departments.

Focusing on a particular activity such as distribution can create a "wedge" to break down organizational and functional silos and drive broader transformation across the entire supply chain—from demand forecasting to inventory and freight management.

–Joachim Ebert is a partner in the operations practice of A.T. Kearney and head of the firm's complexity management practice. He can be reached at joachim.ebert@atkearney.com. Kumar Venkataraman is a principal in the firm's operations practice and Michael Hu is a consultant in the firm.

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FLIPPED on its head

There are solid indications that the days of excess supply are over. According to analysts and leading TL executives, all signs point to a revival of TL rates due to rising costs, tighter capacity, increased regulation, and the overall economic recovery in the industrial and retail sectors.

By John D. Schulz, Contributing Editor

Truckload (TL) is the engine that drives the trucking industry in this country. With more than $300 billion in revenue, it's the largest sector in the $645 billion trucking market. It's also historically been the most innovative and responsive to shipper demands over the years.

Because of TL's inherent efficiencies—where freight is moved non-stop from Point A to Point B without the cost of terminals and dockworkers—truckload is where the action is in trucking. And for the last three years or so, it's where the bargain rates have been as carriers slashed rates merely to stay in business at a time when volumes were off as much as 30 percent in some cases.

But those days appear to be over, as carrier executives say it's time to refocus on profitability.

For shippers, that most likely will mean reaching into the corporate pocketbook a little deeper in order to assure adequate capacity for the remainder of the year.

"It's going to be a challenging sell, but it's going to be a necessity to stay in business, says Pat Quinn, president and co-chairman of U.S. Xpress, the nation's fourth largest TL carrier with $1.33 billion in revenue last year. "Those (shippers) who give us the money will get the space in the trucks. Those who don't will have to find somebody else. It's the basic law of economics—supply and demand."

There are solid indications that the days of excess supply are over. According to an analysis of rates and interviews with analysts and leading TL executives, all signs point to a revival of truckload rates due to rising costs, tighter capacity, increased regulation, and the overall economic recovery in the industrial and retail sectors.

"We're in a state of flux right now," says John G. Larkin, longtime trucking analyst with financial analyst firm Stifel Nicolaus. "Most contract TL rates are presently being negotiated down another 5 percent to 6 percent on top of the major rate decreases negotiated over the past several years," he says. These rates will be in place until contracts come due next year or until shippers start to run out of capacity.

"Our sense is that shippers will not run out of capacity over the remainder of 2010 as the recovery will be tepid at best," Larkin adds, noting that U.S. unemployment remains stubbornly high and American businesses are reticent to add more workers or make large capital expenditures not knowing whether incremental anti-business legislation will be enacted by Congress.

"But assuming a moderate recovery from here, pricing power should start to return to the carriers in a bigger way come 2011, especially if incremental capacity exits the industry between now and then," Larkin predicts.

"We saw capacity come back in February and March that we're really not used to seeing. In the last three weeks of April, we saw rate increases coming."

— James Bozeman, president and CEO of J.M. Bozeman Enterprises

Unfortunately for carriers, incremental costs may offset much of those 2011 rate increases. Those cost increases are likely to include higher driver pay, higher fuel costs, and higher equipment ownership costs. While contract rates look like a bargain for shippers now, with the exception of some expedited carriers and flatbed carriers, spot pricing has consistently been improving over the past several quarters.

Spot TL rates were "often below variable cost a year ago, but that is no longer the case," Larkin says. Contract rates usually follow any rise in spot market rates, he adds.

William Greene, trucking analyst with Morgan Stanley, says that while overall TL fundamentals are improving, trucking rates may not rise substantially until 2011. He's predicting "low- to mid-single digit TL pricing increases" by year-end.

The big carriers' view

Truckload is the most fragmented sector of the trucking industry with even the largest carriers such as Swift Transportation and Schneider National barely holding 1 percent market share. While the mega-carriers have some economies of scale, thousands of smaller niche TL players can at times offer identical services at bargain rates because of lower overhead costs and other innovations.

TL has also historically been trucking's most responsive sector. Because nearly all the top players are non-union, they can take capacity out quickly in any economic downturn—and most did. Larkin estimated as much as 15 percent of over-the-road TL capacity left the industry during the 2006-2009 trucking recession and has not fully returned yet.

Quinn of U.S. Xpress adds that he's definitely seen an increase in economic activity, but that it's "difficult to tell how sustainable it will be." That's because it's unclear whether the recent rise in industrial demand—the U.S. manufacturing index rose 0.9 percent in March, the latest in a string of monthly increases—is a sure sign of a solid economic recovery or merely a restocking of inventory from a very depressed basis.

"But it's better than it was a year ago at this time," Quinn says. "Definitely, from the economic indicators, there is a pickup in economic activity."

Most years, trucking activity starts building in March through the second and third quarters to a peak period from August through November. Though nobody is certain, many analysts are suggesting that 2010 could be one of those "classic" years that follows that pattern. Already, some TL carriers are reporting impressive rate increases in the spot market, if not in their contract rates just yet.

"We have seen some spot market opportunities," Quinn reports. "Our volumes were decent in April. That's going to lend itself to some pricing power if it continues. As we get into peak shipping months, there could be some shortages of equipment."

That's because of what Quinn describes as a "substantial erosion" of truckload capacity during the recession. That

caused a three-year decline in real rates, perhaps as much as 10 percent from 2006 through last year. "It would be nice to recover some of that this year," he says.

The bad news for TL carriers is that their costs are also rising. Besides $3-a-gallon diesel, there is expected to be some shortages of equipment and drivers. A new government initiative called Comprehensive Safety Analysis 2010 (CSA 2010) is expected to weed out as many as 2 percent to 7 percent of the nation's 3 million long-haul truck drivers as their safety records get increased scrutiny and visibility.

Besides fuel and wages, carriers are seeing financial affects from the rise in their health care costs, hours-of-service regulations, and new equipment costs. A new 2010 model Class 8 truck costs about $135,000 (before volume discounts for large fleets), about $35,000 more than five years ago.

"There is some sticker shock compared to what you paid the last time," Quinn said. That increase translates to 5 cents to 8 cents a mile just to break even. "We're going to have some unprecedented cost pressures…and it's going to be a real sticker shock to some shippers."

Steve Williams, chairman and CEO of Maverick Transportation, the largest privately held trucking company in Arkansas, says he downsized his fleet by 20 percent (or 300 trucks) during the recession. But he adds that Maverick is currently rehiring drivers and other staff, but he is forced to raise wages to find experienced personnel.

"We're having a great deal of difficulty in attracting people back to start driving a truck. That's not what we were expecting," Williams says. "Unfortunately, it's safe to say we're going to have to raise driver wages. At the same time the cost of fuel has raised its ugly head again and we're forced to spend money to ramp that back up. It's not going to be easy rolling."

Truckload had its best pricing power from 2004 through 2006. "But even in that time, the best years, the returns were pitiful," says Williams. "If you start in a fairly poorly capitalized state in best of times, and you go to hell for three years, how optimistic should you really be?"

Williams is predicting "a sea change" in rates and costs during 2010 and 2011, driven by regulatory changes and demand levels.

"It's appropriate and necessary to build this new (pricing) model," he adds. "The old random over the road TL model of last 30 years is really not sustainable in the future. Relationships with shippers are going to have to be more mature, and everything is more complex. A lot of us are really getting tired of just scraping by."

"We're having a great deal of difficulty in attracting people back to start driving a truck. That's not what we were expecting."

— Steve Williams, chairman and CEO of Maverick Transportation

The little guy's view

James Bozeman is president and CEO of J.M. Bozeman Enterprises in Malvern, Ark., a dry van carrier with $9 million in revenue annually. He operates 57 company-owned trucks and is representative of literally thousands of small, non-union TL carriers who get their business in niche areas, often when the likes of giants J.B. Hunt and Schneider National eschew an account or shipper.

According to Bozeman, judging from his trucks, the economic recovery is real. "It's been weird," says Bozeman. "Our deal didn't fall off in November and December as usual. January and February were decent and March was like…wow. We saw capacity come back in February and March that we're really not used to seeing. In the last three weeks of April we saw rate increases coming."

Bozeman adds that his company is now getting business "on lanes that we don't normally get." He says shippers are calling with an air of desperation in their voice. That's opened the way for higher rates in some cases, he says, which customers are paying.

Like his bigger competitors, Bozeman also reports that he's sensing some optimism out there regarding higher rates. While he's concerned about the effect of $80-a-barrel oil and 10 percent unemployment rates, demand levels and pricing appear strong. "We're getting some people willing to do whatever they need to do to lock in rates," he adds.

A few predictions

While predicting the economic future is always murky, TL executives say they're "guardedly optimistic" about rates, especially in 2011. Increasingly, they're ranking their customers as far as their ability to take rate increases. Those in the bottom 10 percent or so can expect to receive overtures about possibly increasing rates.

"Many of our customers have been very cooperative during the recession and we'll continue to work with them," says U.S. Xpress' Quinn. "Others were not. There's got to be some ranking if there's going to be a shortage of equipment."

For a change, Quinn says, carriers "have a hammer instead of being hammered." That supply-demand equation is being driven by hopes of a robust economic recovery and lack of adequate capacity. "Barriers to entry and price of new equipment are so high that nobody is rushing out to buy new equipment until there is some return for that risk and investment," he says. "It isn't there today."

Larkin adds that TL pricing power is "clearly not" where it was during 2004 and 2006 when many TL carriers enjoyed

real rate increases in the 4 percent to 8 percent range. "I would think that it would be 2012 before contract pricing has a chance to be as frothy as it was back in 2004 and 2005," he says. "Remember that product, packaging, and supply chain redesign has permanently reduced the amount of freight requiring transportation. We still have a long way to go."

While TL volumes are above anemic 2009 levels, few large carriers are reporting much incremental volume growth this year. Some TL executives fear that some of this economic activity may be unsustainable, due to one-time-only effects from inventory replenishment, cash for clunkers, and the $8,000 first time home buyer's tax credit, among others.

"It gives you an idea of how bad things have been that it doesn't take much of an uptick to make people think things are better," Maverick's Williams says. He's predicting a sea change in 2010 and 2011 for the TL market, driven by regulatory changes and fundamental shifts in carrier capacity.

"Shippers have to understand what's driving this. It's not just price anymore," says Williams. "Everything is either going to reduce productivity or add cost, or both. Everything. That's the reality. The cost of transportation is going to go up. How you spend those dollars wisely is the name of the game. To suggest we're going to have continued decline in rates per mile…those days are over."

> "Those who give us the money will get the space in the trucks. Those who don't will have to find somebody else. It's the basic law of economics—supply and demand."
>
> — Pat Quinn, president and co-chairman of U.S. Xpress

Williams adds that privately held Maverick "lost a lot of money last year and we intend not to lose money this year." He is optimistic to turn a small profit this year and believes that "2011 will be a year we'll enjoy remembering."

Already, J.B. Hunt, the nation's fifth-largest TL carrier, reported a 23 percent year-over-gain in net profit in the first quarter. Others are similarly optimistic. "We're getting some people who are willing to do whatever they need to do to lock in rates," Bozeman reports. "I don't know what's behind this uptick. We're doing business with the same people, and that business is rising. Now we're trying to guard these accounts from everybody else."

— John D. Schulz is a Contributing Editor to Logistics Management

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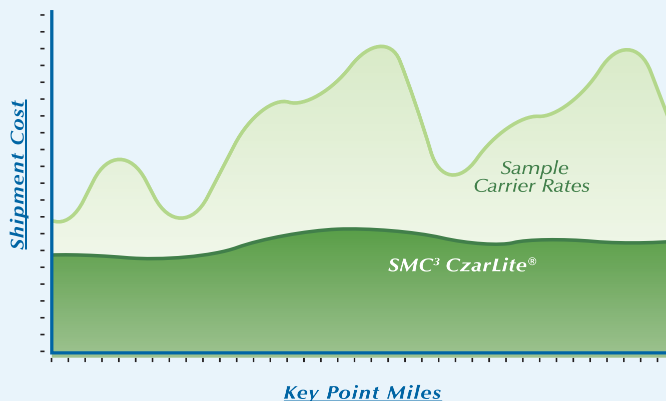

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3PLs: A welcome guest to the party

By Wayne Bourne

A FEW WEEKS AGO as I was attempting to adjust my travel calendar to accommodate my attendance at the SMC3 conference that's taking place at the end of this month. I noticed in the brochure that my editor, Michael Levans, is heading a panel of logistics leaders in a discussion on the use, value, and future of third-party logistics providers (3PLs).

By definition, a 3PL is simply "someone who will do the work you can't do or prefer not to do." The 3PL type that most commonly comes to my mind is the "carrier" 3PL, also known by us older guys as the "freight broker." Well, that's where they started, and that is precisely what they did then and what many continue to do now.

Today, there are a multitude of 3PLs serving the market that do not specialize just in freight brokerage. For instance, many handle freight payment and auditing companies, routing technology companies, cross-docking and distribution, while many others handle in-house transportation management and the duties that come along with moving freight.

But for the sake of this column, I want to focus on the carrier management aspect of the business, or the freight brokers.

Years ago, the need for someone to broker a load was pretty much event driven. If you were a larger shipper you most likely had your own core carrier stable for both long and short hauls that would accommodate your pickup and delivery needs. There were always examples where even the largest shippers called upon the brokers for assistance, such as one-way shipments into highly consumptive areas like Denver, Miami, Boise, and Great Falls. Their service was a perfect match in those cases and provided decent service at affordable rates.

Smaller shippers working without large experienced transportation departments also tended to pass shipments along to brokers as a sort of path of least resistance. So, what has this group done to reinvent themselves in such a way to be flourishing in 2010?

A short look back would reveal the inherent risks of brokered freight. The cargo and liability insurance was difficult or impossible to identify; condition and dependability of the equipment was suspect; accountability of the driver-owner-operator was unknown; and double payment issues were rampant.

Today, we see well-funded, professional, market-savvy entrepreneurial companies specializing in product movement through a network of hundreds, if not thousands, of carrier contracts. Their contracted carrier fleets are generally well positioned all over the lower 48 and are ready to go at your request.

The 3PL has conducted a thorough background check on the carrier's operations, the standards of acceptance have been raised, and, for the most part, the 3PLs have contracted the very carriers that are in your core group. The rates they charge are often very competitive due to the significant discounts they earn by combining the load volumes of the vast number of customers.

The good ones offer significant peace of mind by also carrying their own insurance protection and are first in line should there be a claim—no more wondering if the owner-operator is adequately covered. The ones that I am familiar with have best-in-class technology systems that rival those developed for the asset-based mega fleets.

They can electronically verify your pick ups and your subsequent deliveries. They can track and trace your current shipments as well as your historical movements. In fact, some have the ability to manage your freight department remotely and subsequently review your operation's performance through individually tailored month-end management reports.

That capability is certainly a decent enough reason to include 3PLs in your mix of partners. But as I speak with my colleagues functioning in logistics management today on the subject, they mention that they're working to pare down their carrier base to a few core players.

They have found it too cumbersome to manage the contracts, rates, and relationships with a larger base of carriers, and they can get by with fewer now because their 3PL partners can keep up with overflow through their vast network of carriers.

Today, savvy shippers who are putting 3PLs to work can now divvy up the loads to fewer entities and become more significant customers—while saving time and money. Through the development of technology and by practicing a high level of professional entrepreneurship, 3PLs have become a very a welcome guest at any logistics and transportation party. ☐

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

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