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Logistics MANAGEMENT

May 2013

2013 Technology Roundtable

Real-time visibility within reach

Page 24

+ SPECIAL WEBCAST
May 30, 2:00 p.m. ET
logisticsmgmt.com/2013Tech

LM management UPDATE

AN EXECUTIVE SUMMARY OF INDUSTRY NEWS

◆ **Diesel keeps heading down.** For the eight-week period ending the week of April 21, the average price per gallon of diesel had fallen for eight consecutive weeks, according to data from the Department of Energy's Energy Information Administration (EIA). During this span, diesel prices had tumbled a cumulative 27.2 cents. Prior to these declines, diesel prices rose a cumulative 26.5 cents over a six-week span. Despite this trend of declining prices, shippers are fully ready for the tides to turn. A recent *Logistics Management* reader study showed that nearly 40 percent of its respondents expect to pay higher fuel surcharges in the coming months. And should fuel prices rise during that time, 67 percent said they would raise or adjust their freight budgets to cover higher than budgeted costs, and 33 percent said they would take no action.

◆ **USPS plan to eliminate Saturday delivery comes to a halt…** The United States Postal Service (USPS) said last month that its plan to eliminate Saturday delivery—as part of an effort to become financially solvent—is not likely to come to fruition. Citing the recently passed Continuing Resolution by Congress to fund government operations through the end of the fiscal year, the USPS Board of Governors said last month that "restrictive language" in the Continuing Resolution has effectively prohibited the USPS to implement the new national delivery schedule for mail and packages that was scheduled to go into effect the week of August 5. When it first unveiled its plan to nix Saturday delivery in February, the USPS said that this effort would result in roughly $2 billion in annual savings.

◆**…but it's sticking with FedEx for domestic air services.** Last month, the USPS said that it's keeping its domestic air services in the hands of FedEx and inked a seven-year contract for Priority and Express Mail services. The current contract between the USPS and FedEx expires in September, with the new one beginning in October. The USPS added that based on estimated volumes, the new agreement is valued at approximately $10.5 billion over the seven-year term and also allows the USPS to continue a successful business relationship with FedEx. Services FedEx provides for the USPS are for various USPS offerings, including First-Class, Priority, and Express Mail. The current agreement between the USPS and FedEx dates back to 2001.

◆ **UPS reports Q1 earnings gains.** In its first quarter earnings announcement last month, UPS reported that first quarter revenue rose 2.2 percent year-over-year to $13.43 billion, with operating profit up 0.7 percent at $1.58 billion. Company officials explained that the revenue gain was largely driven by a better than expected post-holiday season in January, with e-commerce offerings faring well and a strong performance in its U.S. domestic package segment. "UPS delivered another quarter of growth, reflecting the discipline and earnings consistency we have come to expect," said Scott Davis, UPS chairman and CEO, on an earnings call. "The UPS domestic business continues to expand margins and speaks to the ability of our integrated network and operations technology that serve the fast growing business-to-consumer network profitably."

◆ **FedEx expands.** With what it describes as "an organic expansion," FedEx Trade Networks has announced it will ramp up its operations in Brazil and other parts of Latin America. The freight forwarding arm of global shipping FedEx Corp. has enlarged its presence and service capabilities in the region through a series of strategic operational developments, noted Fred Schardt, president and CEO of FedEx Trade Networks. "Trade volumes continue to increase in Latin America, and our expansion efforts provide customers with greater access to superior freight forwarding in these emerging markets," he said. Meanwhile, organic growth in the region has been a key part of FedEx Trade Network's aggressive global expansion. It has also established strategic alliances with regional service providers to enhance its coverage and extend its capabilities to reach 19 countries throughout Latin America.

◆ **Got 3PL jobs?** Another indication of resurgence in the third-party logistics (3PL) marketplace surfaced last month, as a leading industry consultancy entered the executive recruiting sector. Armstrong & Associates, Inc., long known for its expertise in rating the performance of lead logistics providers

Continued, page 2

LM management UPDATE

AN EXECUTIVE SUMMARY OF INDUSTRY NEWS

globally, announced the formation 3PLRecruiters, LLC. "Helping 3PLs to hire new people to build capabilities, manage operations, and drive market expansion is often a natural outcome of A&A's core 3PL strategic consulting engagements," said Evan Armstrong, the consultancy's president. Kurt Baumann, an executive vice president with Armstrong, will be in charge of the new offering. While there are several trusted recruiting companies already active in the 3PL arena, Armstrong stressed that his firm has an extensive network of contacts to leverage in finding qualified candidates.

◆ **HP gets on cloud.** In a move to consolidate its global procurement process, HP has announced that it will use a cloud-based platform provided by E2open. "The E2open platform will allow us to achieve greater centralized procurement process efficiencies and help our suppliers reduce lead times and inventory, thus enabling a lower cost to serve," said Tony Prophet, senior vice president of operations for HP. Prophet said that the cloud-based platform will be used across all major HP product lines, adding that a specific example of near real-time collaborative execution would be the "pull-based" messages generated for their vendor managed inventory (VMI) processes between HP and its trading partners.

◆ **Go Trojans**. The USC Marshall School of Business announced a new Master of Science in Global Supply Chain Management. The 16-month online program, which will admit applicants for Fall 2013, will cultivate leaders and specialists in a multitrillion dollar industry that is expected to grow at an annual rate of 8 percent globally. Designed for professionals who live and work in North America, the Asia-Pacific region, Greater China, and South Korea, the Global Supply Chain Management degree program will be available to the students both synchronously and asynchronously via the Internet. The program focuses on both academics and practical applications, and includes two experiential trips to global logistics hubs in Los Angeles and Singapore. Online courses will offer the flexibility to access lectures anywhere, anytime, while integration of webinars and other online resources will be used to further enhance the program.

◆ **Procuring more with less.** Procurement leaders face new pressures in 2013 as companies focus on profitable growth and balance local agility with global scale in their value chains, according to new *Procurement Key Issues Research* from The Hackett Group, Inc. While company revenue continues to grow, procurement leaders along with other business functions continue to be asked to do more with less. In addition, it's no longer enough to just provide cost savings. Procurement leaders are now focusing on a much broader list of procurement strategy priorities designed to improve their alignment with business objectives. The Hackett Group's Chris Sawchuk said that the "talent pool" is problematic. "Finding the right young professionals for procurement functions is a challenge, but retaining them can be an even bigger problem…especially if they are not being used strategically," he said.

◆ **Undermining value.** According to a new survey by Consero Group, an international consultancy based in Bethesda, Md, over 50 percent of Chief Procurement Officers said their company pursues short-term savings from suppliers that undermine long-term value. The results were reported as part of the *2013 Procurement & Strategic Sourcing Data Survey*, compiled by Consero Group in partnership with Vantage Partners. In addition, 65 percent of participants said that their company's procurement strategies are more focused on using competitive pressure to get maximum value from suppliers, while only 35 percent said their company's strategies are more focused on using collaboration to get maximum value from suppliers. "Chief procurement officers are challenged with the task of driving savings and delivering critical resources with maximum value," said Paul Mandell, Founder & CEO of Consero.

◆ ***Logistics Management*'s Twitter feed keeps growing…and growing.** It is true: *LM* remains "all-a-Twitter" at its @LogisticsMgmt handle, which recently cracked the 11,000 followers mark. Be sure to follow us on Twitter to get all things *LM* all the time, including daily online news items, print features, Webcast information, and more! □

May 2013 logisticsmgmt.com

LM Logistics Management

VOL. 52, NO.5

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Cover illustration: Glenn Mitsui

Logistics Management® (ISSN 1540-3890) is published monthly by Peerless Media, LLC, a Division of EH Publishing, Inc., 111 Speen St, Suite 200, Framingham, MA 01701. Annual subscription rates for non-qualified subscribers: USA $119, Canada $159, Other International $249. Single copies are available for $20.00. Send all subscription inquiries to *Logistics Management*, 111 Speen Street, Suite 200, Framingham, MA 01701 USA. Periodicals postage paid at Framingham, MA and additional mailing offices. **POSTMASTER: Send address changes to: Logistics Management, PO Box 1496 Framingham MA 01701-1496**.

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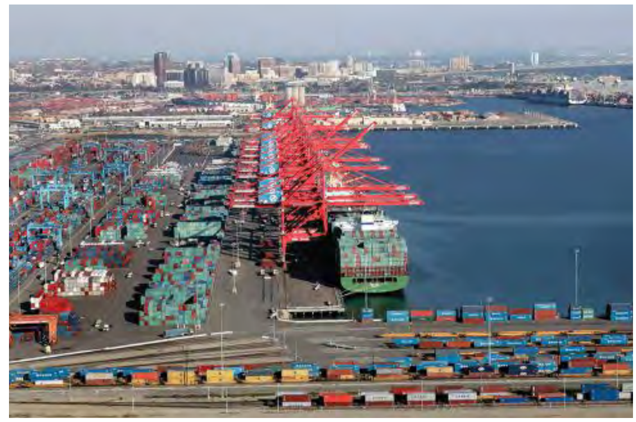
Exclusive Webcast
2013 Technology Roundtable

Thursday, May 30 @ 2:00 p.m. ET
www.logisticsmgmt.com/2013tech

Real-time visibility within reach

Join Peerless Media's Group Editorial Director Michael Levans as he gathers five top supply chain management software and technology analysts to share insight into some of hottest technologies and trends that are driving logistics transformation.

- **Dwight Klappich**, Gartner Research
- **John Hill**, St. Onge
- **David Krebs**, VDC Resarch Group
- **Tom Wrobleski**, CapGemini Consulting
- **Ian Hobkirk**, Commonwealth Supply Chain Advisors



Top 30 U.S. Ports: Economies of scale in play

While ranking ports on size and container throughput is both valid and traditional, analysts contend that domestic ocean cargo gateways might also be compared by volume and value of trade as well as value-added services. **64S**

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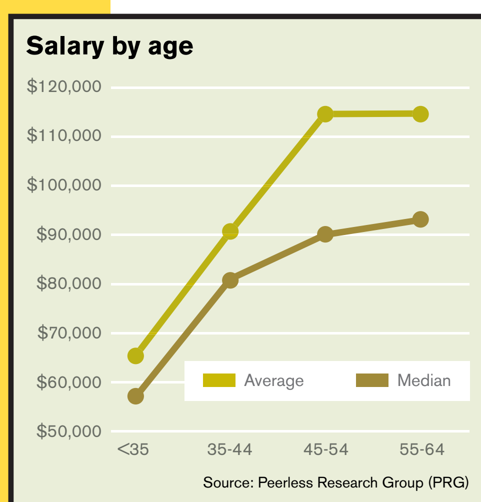
Logistics Management: On Demand

2013 annual salary survey webcast

Go to: logisticsmgmt.com/2013salary

Experience pays!

Our 2013 survey finds that the highest salaries in logistics and supply chain management will be earned by those sticking to time-honored values: education, hard work, and company loyalty. Join Logistics Management Executive Editor Patrick Burnson and a panel of prominent supply chain career management experts as they put context around the results of our 29th Annual Salary Survey and offer their insight into how logistics professionals can take that next, critical step in building their careers.



Defining visibility

In research conducted by Peerless Research Group (PRG) over the past few years, we've found that end-to-end, global supply chain visibility and event management capabilities are considered "must haves." However, those same respondents struggle to tell you exactly what they need to do in order to achieve this.

We've set out this month to corral the elements of supply chain visibility, a utopian idea that has been highly conceptualized by analysts and consultants as we've become awash in data. Once realized and put to work, many contend that it will help logistics and supply chain operations create true competitive differentiation in a time when the cost of logistics errors and the subsequent impact on your brand could be devastating.

The idea seems simple enough from a pure transportation management perspective: It's the ability to track and trace a shipment from pick up to delivery. But when you add in the critical data points from the other nodes of the supply chain, the concept remains elusive.

"Visibility is no longer restricted to track and trace on the transportation leg," says CapGemini's Tom Wrobleski in this year's Technology Roundtable. "It means following a shipment from order through final delivery, with all the itinerant compliance and finance milestones in between, and then being able to act on that information when roadblocks occur."

Our panelists on this year's Technology Roundtable understand if you're still scratching your head. Who wouldn't want that capability?

But when you step back and examine the uniqueness and complexity of your operations, you may see thousands of data points, all being tracked—or not—by disparate systems, ill-trained warehouse/DC personnel, dozens of carriers, and well-meaning 3PL partners ready to serve up a tidal wave of information on your shipments.

To help tighten up operations and pull this data together, our four panelists each explore an important piece of the visibility puzzle that may already be hard at work in your operation—mobile computing and ADC technology, TMS, WMS, and GTM. Each believes that the technology solutions currently available have put real-time visibility, as defined by Wrobleski, into reach for those who are determined to make the case for investment—or ready to fully optimize what they already have.

And while our panel does a terrific of exploring the role these technology elements play in operations improvement and visibility, our consulting team from Accenture takes us a step deeper by defining the cloud-enabled, transportation "control tower" concept that's been inexorability linked to the visibility discussion (page 36).

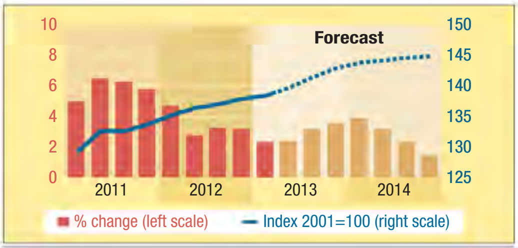
The team contends that through a version of cloud-enabled "social networking," logistics professionals can create, manage, and monitor a fully optimized transportation service network, putting real-time event management at your fingertips.

"Companies that only gave a passing nod to managing supply chain performance in the past have had epiphanies," says Accenture's Brooks Bentz. "Now they realize that it's a critical strategic weapon in top-line growth, cost containment, and customer satisfaction—and the transportation control tower concept is now a critical link in measuring that supply chain success."

Michael A. Levans, Group Editorial Director
Comments? E-mail me at
mlevans@peerlessmedia.com

price**TRENDS**

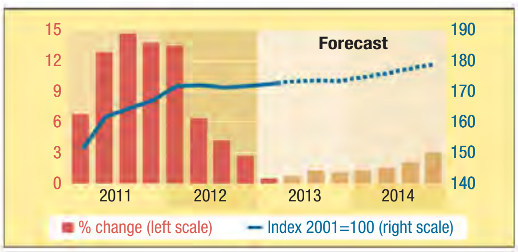
Pricing across the transportation modes



TRUCK	1M	6M	12M
General freight - local	0.0	3.2	2.9
TL	0.8	0.3	1.0
LTL	0.4	0.5	4.0
Tanker & other specialized freight	0.2	0.4	1.0

TRUCKING

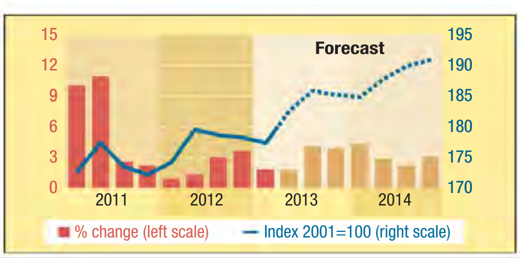
The price outlook for trucking currently calls for relative calm. Our updated forecast shows prices in the entire trucking industry up 2.9% in 2013 and 2.7% in 2014. The last time such modest, predictable inflation trends ruled was back in 1997-1998. That's when average trucking prices increased 3% for two years in a row. Shippers and truckers will find their budget forecasts to be more dependable ahead. In the first quarter of 2012, LTL and TL prices increased only 0.04% and 0.2%, respectively, from the previous quarter. Now, LTL prices are forecast to increase 3.6% in 2013 and 2.1% in 2014. At the same time, inflation in TL service will slow to 1.7% and 2.6%.



AIR	1M	6M	12M
Air freight on scheduled flights	0.2	0.6	0.4
Air freight on chartered flights	-0.5	-4.0	-2.8
Domestic air courier	0.9	5.5	4.6
International air courier	0.8	4.2	1.6

AIR

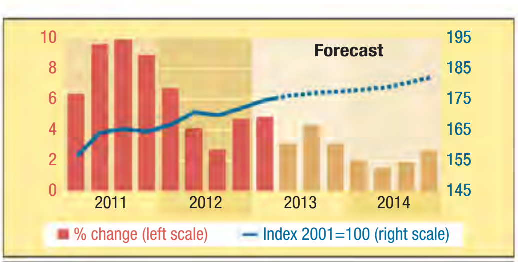
Average transaction prices for flying freight on scheduled flights of U.S.-owned airliners saw a one-month 0.2% hike in March. All told, in the first quarter of 2012, prices increased merely 0.5% from year-ago levels. That's a sleepy inflation rate compared to the first quarter of 2011 when U.S. airliners extracted a 13.5% year-ago price hike from shippers. Prices for cargo on nonscheduled flights in the first quarter of 2012, meanwhile, declined 4.5% from same-quarter-year-ago. After rising 6.5% in 2011, prices for flying cargo on scheduled U.S.-owned flights are still on target to inch up 0.9% in 2013 followed by another 2% gain in 2014.



WATER	1M	6M	12M
Deep sea freight	0.0	-1.6	-1.6
Coastal & intercoastal freight	0.0	-1.0	0.1
Great Lakes - St. Lawrence Seaway	-1.0	2.8	-0.4
Inland water freight	0.0	-2.4	1.7

WATER

In the first quarter of 2012, vessels plying inland waterways reported average transaction prices up 1.8% from year-ago levels. That was a significant slowdown from 2011 when those prices soared 7.2% in the first quarter. Average prices charged by U.S.-owned ships in the deep sea category also increased in 2012:Q1, up 1.1% from year-ago. And that happened to represent a huge price hike compared to 2011:Q1 when deep sea shipping prices fell 5.2%. Adding together price changes in all segments of the water transportation, we see a market that is treading water on the inflation front. Our forecast calls for prices to increase 2.9% in 2013 and 3.1% in 2014.



RAIL	1M	6M	12M
Rail	0.1	3.1	4.5
Intermodal	1.0	2.0	2.9
Carload	-0.1	3.3	4.8

RAIL

Transaction prices reported by rail operators split in March with a 1% hike in intermodal rail prices and a 0.1% decline in carload tags. The intermodal rail price trend clearly has been driven by underlying demand. Indeed, intermodal loadings have experienced year-over-year gains for 40 straight months. In the carload segment, freight traffic declined 0.5% in March 2013 from same-month-year-ago. That explains carload rail price weakness. Our forecast for all rail transportation service shows prices up 3.8% in 2013 followed by another 2% annual price hike in 2014.

NEWS analysis

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• Proposed FY 2014 White House budget calls for 5.5 percent increase in DOT funding, Page 14
• YRC Freight change of operations plan is formally approved, Page 15

Labor peace arrives for East and Gulf Coast ports

ILA membership signs off on six-year Master Contract with USMX

By Jeff Berman, Group News Editor

NORTH BERGEN, N.J.—After more than a year of contentious negotiations, the United States Maritime Alliance (USMX), an alliance of container carriers, direct employers, and port associations serving U.S.-based East and Gulf Coasts, and the International Longshoremen's Association (ILA), the largest union of maritime workers in North America, have finally arrived at a state of labor peace.

The ILA announced last month that its membership has officially signed off on a six-year Master Contract, which covers roughly 14,500 members, in a ratification vote held at East and Gulf Coast member ports.

This agreement follows a March announcement when the USMX and the ILA approved an agreement for a successor Master Contract that came one month after the parties came to terms on a new tentative labor contract agreement. The original deadline for the contract was September 30, 2012, but it was extended through a series of continuing extensions to keep ILA and USMX negotiations intact and to keep cargo moving into and out of East and Gulf Coast ports. The Federal Mediation and Conciliation Services aided both parties in negotiations.

Terms of the new contract, according to the ILA, include: wage increases totaling $3 per hour spread out over the life of the agreement that will bring the hourly pay rate to $35 by the final year of the contract; contract language that protects ILA workers that have been displaced due to new technology and automation, coupled with a joint management-ILA committee that will continually examine the impact of automation on ILA's workforce; and terms that will restrict the outsourcing or subcontracting of ILA jobs to non-ILA employers, with the ILA preserving its chassis maintenance and repair jurisdiction and expand major damage criteria to protect jobs.

Other terms of the contract, which were disclosed by ILA President Harold Daggett in a March 19 letter to all ILA members covered by the Master Contract, include guaranteed payments of $211 million in container royalties each year for the life of the contract, and a continuation of the national healthcare

program for ILA members with no change in deductibles, coverage, or co-pays.

"On behalf of ILA members and officers at all ports, we're thrilled this Master Contract was ratified by an overwhelming margin," said Daggett. "We all worked very hard, achieved landmark improvements, and protected our members and our union for many years."

These negotiations were very significant in that they affect 14 East and Gulf Coast ports that cumulatively represent 95 percent of all containerized shipments—and 110 million tons of import and export cargo—to the Eastern seaboard.

ILA officials have noted that since 1977, ILA and USMX have successfully negotiated nine new Master Contracts without any disruption in operations, with the current contract in effect since 2004 and then subsequently extended for two years in 2010.

However, concerns over the deal coming to fruition remained heightened due to the 10-day 2002 longshore contract dispute on the West Coast—which some estimates indicate cost the U.S. economy several billion dollars per day and negatively affected various key sectors within the economy.

Jon Gold, the National Retail Federation's vice president for supply chain and customs policy, told *Logistics Management* that this news is positive for both supply chains and the U.S. economy. "This provides the stability that retailers, importers, exporters, and transportation and logistics providers really rely on through the ports," he said.

Prior to the completion of this deal, many shippers were vetting contingency plans in the event that a deal might not happen. Some of those plans, said Gold, included diverting cargo to the West Coast, looking at options through Canada and Mexico, and shipping well ahead of time to ensure there was sufficient inventory in place.

"That uncertainty really weighed heavily on a lot of shippers in terms of what they needed to do," explained Gold. □

LABOR

UPS and Teamsters come to terms on two new tentative five-year deals

ATLANTA and WASHINGTON—When it comes to labor negotiations, situations can change quickly for better or worse. In the case of the negotiations between transportation and parcel bellwether UPS and the International Brotherhood of Teamsters, it's the former.

UPS said late last month that it has reached a tentative agreement with the Teamsters on two new five-year contracts for UPS's small package and freight business units. These contracts cover roughly 250,000 UPS and UPS Freight employees, according to Teamsters for a Democratic Union (TDU).

UPS added that the tentative contracts were hammered out well ahead of their July 31, 2013, expiration date and need to be presented to the UPS Teamsters-represented employees for ratification. When the contracts are officially ratified, UPS said the new agreements would take effect on August 1.

"These agreements are a 'win-win-win' for our people, customers, and shareholders," said Scott Davis, UPS chairman and CEO. "The fact that we have reached agreements well before our current contracts expire is a testament to the skills and determination of all those involved in these negotiations."

Another positive development, which was highlighted by Davis on the company's first quarter earnings call, was that labor negotiations with the Teamsters—prior to the announcement regarding the tentative agreements—made significant progress and resolved the most important issues in their labor contract.

On its Web site, TDU outlined key aspects of the tentative contracts, which include: all UPS Teamsters in company health plans being moved to union health plans; $1 per-hour increases in contributions to pension and healthcare benefits each year, which matches the previous contract; and wage increases under the five-year deal reportedly at 70 cents in each of the first three years, followed by raises of 90 cents and $1 in the last two years.

Teamsters officials said that the tentative agreement for UPS package employees moves 140,000 employees into the Teamsters-controlled health plans to maintain current benefits for all UPS Teamsters and also grow funds for Teamsters for all industries into the future.

The Teamsters also said that for UPS Freight the tentative agreement resolves subcontracting issues by putting all laid-off road drivers back to work, with UPS Freight employees receiving substantial wage increases and lower co-pays for health insurance, coupled with providing the ability for more part-time workers to become full-time employees.

The possibility of this deal coming to fruition was in jeopardy as recent as a few weeks ago, with the Teamsters Union having drawn a line in the sand over health care in labor negotiations when UPS floated the idea that the 260,000 Teamsters for the first time make a small co-pay contribution toward their health care premiums.

During a negotiation

session in March, Teamsters union President James "Jim" Hoffa said a group of Teamsters began chanting "we won't pay" in a display of their opposition to the proposal, adding that it was a non-starter for the union.

Prior to the late April announcement, UPS officials repeatedly declined to negotiate publicly and refused to discuss any details of their negotiating strategy.

Ken Hall, the Teamsters' general secretary treasurer and the union's point man for the Teamsters negotiations with UPS, said in March that the talks were tough but that was not a surprise. UPS, though, had expressed a desire for an early settlement to avoid any freight diversion to non-union carriers.

"The ball is in the UPS court," Hall said in March. "If they don't want shippers to walk away, it's in their best interest to agree to a fair deal."

Wolfe Trahan analyst Ed Wolfe wrote in a research note that his firm's initial sense is that the economic impact to UPS seems more favorable than past contracts, adding that the relatively early agreement also seems like a near-term positive for UPS and a negative for FedEx.

—Jeff Berman, Group News Editor, and John D. Schulz, Contributing Editor

TRANSPORTATION POLICY

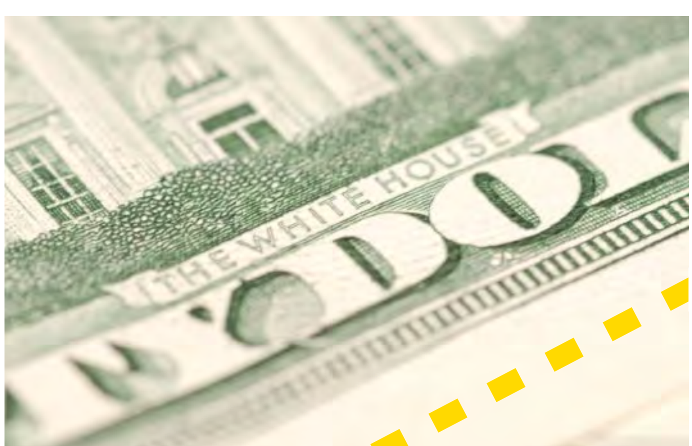
Proposed FY 2014 White House budget calls for 5.5 percent increase in DOT funding

WASHINGTON, D.C.—While specific funding mechanisms for transportation infrastructure-related efforts remain murky, proposed funding for the Department of Transportation (DOT) in the White House's proposed fiscal year 2014 budget is heading up.

The budget, which was released in April, is calling for a total of $76.6 billion in discretionary and mandatory budget resources for the DOT, representing a 5.5 percent increase—or $4 billion—above the 2012 enacted level, according to the White House.

Key DOT-related components of the proposed budget include:

- An additional $50 million in immediate investments in 2014 to support critical infrastructure projects, improving America's roads, bridges, transit systems, border crossings, railways, and runways, including $40 billion in "Fix-it-First" investments.
- A five-year, $40 billion rail reauthorization program to improve existing intercity passenger rail services, develop new high speed rail corridors, and strengthen the economic competitiveness of our new freight rail system.



- The promise to fully fund the authorized funding levels provided in the Moving Ahead for Progress in the 21st Century Act (MAP-21) for surface transportation programs.
- Reserve funding after MAP-21's expiration in 2015 for long-term reauthorization of surface transportation programs, including a 25 percent increase from current funding levels, among others.

The budget said that this spending level pays for the rail and surface transportation proposals with "savings from ramping down overseas military operations." Statements added that because rebuilding the nation's infrastructure is an immediate need, the budget uses near-term savings from reduced overseas operations to fully offset the long-term reauthorization proposals.

While this proposed DOT budget is ambitious on various fronts, funding still remains an issue. According to Mort Downey, chairman fo the Coalitions for America's Gateways and Trade Corridors, the White House is laying out a plan for a national transportation program in the context that funding increases for surface transportation do not increase the deficit.

"Republicans in Congress want to know where the transportation-related taxes to pay for it are coming from," said Downey. "It would be good if they commit to spend the money committed to transportation if it was raised, but it cannot be guaranteed. There is still the question of will this go anywhere or will it fall through the cracks due to the heavy partisanship that exists? At least there are some good arguments out there."

Regardless of the potential outcome, Downey said that overall transportation policy in the last two years has taken better shape from an improving public works perspective than it previously has.

The proposed DOT budget was blasted by the American Trucking Associations (ATA), who said that it fails to provide adequate detail and direction for how the country should pay for its infrastructure needs.

"The backbone of our economy is the asphalt, steel, and concrete of our roads and bridges," said ATA President and CEO Bill Graves. "Proposals to fund those roads should be equally concrete. For five years, we've waited for President Obama to clearly state how we should pay for these critical needs; and I'm sad to say that we continue to get lip service about the importance of roads and bridges with no real roadmap to real funding solutions."

—Jeff Berman, Group News Editor

LTL

YRC Freight change of operations plan is formally approved

OVERLAND PARK, Kan.—Less-than-truckload (LTL) transportation services provider YRC Worldwide (YRCW) said last month that the network optimization—or change of operations—plan, which was submitted in March to the company's union leadership, has been formally approved.

YRCW said that the network optimization is a key component of YRC Freight's strategy to continuously improve customer service by reducing the handling of shipments and excess time in transit. The carrier added that the transportation team and network engineers at YRC Freight would implement the enhancements over the next several weeks.

"Our network team identified opportunities for us to further align customer service and operating efficiencies," said Jeff Rogers, president of YRC Freight. "New network densities, load factors, and direct routing of shipments will make this network optimization the foundation of our continued performance improvement initiatives in 2013."

YRCW said that these changes, once implemented, will serve as another step in YRC Freight's efforts to continuously improve customer service, optimize linehaul density and load average, reduce empty miles, and reduce shipment handling.

According to a copy of the proposed change of operations released by Teamsters for a Democratic Union (TDU), the proposals include: consolidating 29 end-of-line terminals into existing terminal locations; reducing end of line road domiciles; reducing distribution center locations by three, utilizing existing capacity to create density for more network direct loading; reversing specified road primaries; establishing a new relay operation in Staunton, Va. to reduce system miles; and adding additional sleeper runs to the Jackson, Miss. road domicile.

In an interview with *LM* during last month's National Shippers Strategic Council (NASSTRAC) Annual Conference in Orlando, YRCW CEO James Welch said that when he took the reins as CEO in late 2011, YRC Freight had a network that was too large for the amount of business .

"When they put Yellow and Roadway together, in my mind, they did a very poor job of sizing the network for its business levels," said Welch. "We had a network that was more expensive than it needed to be, one in which we handled our customer's freight too much. It was as efficient as it needed to be from a linehaul standpoint, but this change does not reduce any of our coverage from a service standpoint. It merely puts us in a better position to improve our density and allows us to load more direct trailers, as an example, and that gives us the opportunity not to transfer as much of our customer's freight as we had been doing," he said.

—Jeff Berman, Group News Editor

Newsroom Notes
by Jeff Berman

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

Solving the economic puzzle takes more than a few pieces

THERE CONTINUES TO BE MANY mixed signals regarding the state of the economy. For example, fuel prices are declining, which is good, but so are retail sales, which is bad.

The most recent edition of the *Cass Freight Index* report showed gains in volumes and freight expenditures, which were up compared to previous months. And while manufacturing is doing OK, new orders, which are commonly referred to as the engine that drives manufacturing, have declined a cumulative 5.5 percent in the last two months as of press time.

If that last trend were to continue, the situation would not be good for the overall economy or the freight economy. "Slower growth in manufacturing equals less freight in various stages of the supply chain," noted Rosalyn Wilson, senior business analyst with Delcan Corporation and author of the annual CSCMP *State of Logistics Report*, in her analysis of the recent Cass report.

We hear, and see, that things are moving along in the freight world as they typically would in terms of seasonality. However, we've heard this song before if I'm not mistaken.

That tune goes along the lines of "things are shaping up pretty well so far here in the first half of the year when you consider volumes and inventory levels." Then, as has been the case in recent years, the situation is no longer as rosy, with drop-offs in demand and a flat-lining of subsequent economic activity during the second half of the year.

When I first started covering this industry, I was told "how the freight transportation market goes so goes the overall economy." In some instances, this sentiment still holds weight, but in others it's not nearly as prescient.

While it's too soon to say if the tune will be the same in 2013, the case could have already been made given the relatively sluggish pace of retail sales and the uneven employment outlook—which changes quickly by a few tenths of a percentage point every month.

When I first started covering this industry, I was told "how the freight transportation market goes so goes the overall economy." In some instances, this sentiment still holds weight, but in others it's not nearly as prescient.

Looking at it through this lens can lead—in equal parts—to both confusion and clarity, depending on what you're examining and how the story behind the data is being told. For example, in its most recent earnings announcement, FedEx said that it is reducing air capacity into and out of Asia due to reduced demand in that region, coupled with shippers trading down in modes for more affordable freight rates.

And looking at rail and intermodal data, one can tell that modal trade down is alive and well given the annual increases we're seeing year-to-date on the rails. Of course, we need to remember that part of the intermodal growth story is due to increased movements via containers and less in trailers.

However, it appears that the recovery's prospects will depend on consumer-based activity. Wilson added that in the Cass report consumer demand for goods is still not strong, and disposable income isn't enough to increase consumption of services, lending credence to her point that 2013 will continue to be stronger than 2012, but not robust. □

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Air Cargo Rates: Going up or coming down?

THE AIR CARGO EXPERTS AT BOEING provide a bi-annual report on the Air Cargo industry entitled The *World Air Cargo Forecast*, and I recommend it to shippers preparing for discussions with their carriers and forwarders. *Logistics Management* also provides monthly trend data that is worth checking regularly.

Both sources suggest air freight pricing will continue to track at or below inflation despite high fuel costs and continued upward pressure on equipment, labor, and operational costs. This sounds like good news for shippers approaching the market, but it will take some detailed market analysis and planning to get the most productivity out of your air cargo dollars. Armed with knowledge, shippers can have a meaningful dialog with providers about cost and service. And in these candid discussions shippers may learn of a provider's expectations for the future—and they may surprise you.

The first trend Boeing looked at in its most recent report was the long-term decline of margins in the air cargo business. According to their findings, freight yield has declined 4.2 percent per year when averaged over the past two decades. The last 10 years saw a slight yield increase of 0.9 percent per year, compared to the 9.0 percent average annual decline recorded in the preceding decade. The carriers have flattened the trend by controlling labor, increasing productivity, and combining fuel hedging with fuel efficiency. But slowing margin reductions is not the same as margin improvement.

Service providers are making strong business decisions in an effort to improve their business conditions. Boeing points to improvements in margin recently, but notes that there's more capacity coming on in new, larger, more fuel-efficient aircraft. Boeing estimates that the air freight fleet will increase 80 percent over the next 20 years, while freight traffic is estimated to double in this time—but that growth is not uniform across the business.

The second trend that will affect the business, according to Boeing, is the growth of regional markets. Not surprisingly, Asia continues to grow relatively fast, perhaps 6 percent to 8 percent. Latin America is expected to grow at modest rates, and North America and Europe will be flat, according to Boeing's report. Shippers should look at their freight lanes and the providers—carriers and forwarders—in those lanes. The carriers will continue to be under pressure, as will the forwarders that bring them freight.

With this information, shippers need to pay attention to the business health of their providers. For shippers who use forwarders with multiple carrier contracts, it's important to understand their mix and how trends will affect their contractors. Make sure your discussions also cover trends in the ground portion of their business—as noted in previous columns, changes are coming to that aspect of the business as well.

> **Shippers need to pay attention to the business health of their providers. For shippers who use forwarders with multiple carrier contracts, it's important to understand their mix and how trends will affect their contractors.**

Your discussions need to be candid and two-way, and it's important to understand how trends are affecting their business. You will need to understand their plans over the next few years including how your freight fits into their service lane strategy. What does that mean for pricing in your business lanes? Also be open to sharing your future market trends. Can your provider support your plans for your business?

Air Cargo is typically just one piece of our supply chain operations. And as we re-evaluate our businesses in light of insourcing and outsourcing and the ways we will serve our customers in the future, we need to give special attention to how changes to the provider's business can make an impact on our ability to compete in a global market. ☐

Pearson on **Excellence**

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Agile Execution: The engine of dynamic operations

THIS IS THE FINAL COLUMN in our series about dynamic operations, or global supply chains imbued with the ability to alter the function and focus of key processes (manufacturing, transportation, distribution) in response to changing events. In recent months we've profiled three of dynamic operations' core capabilities:

• *Insight to action:* sensing, capturing, and analyzing external and internal data and turning it into usable business intelligence.

• *Adaptable structure:* creating products, processes and systems that are easily modified in response to changing conditions.

• *Flexible innovation:* making design and development processes less rigid by reducing changeover times, increasing interchangeability, and designing products that embrace multi-channel networks and technology.

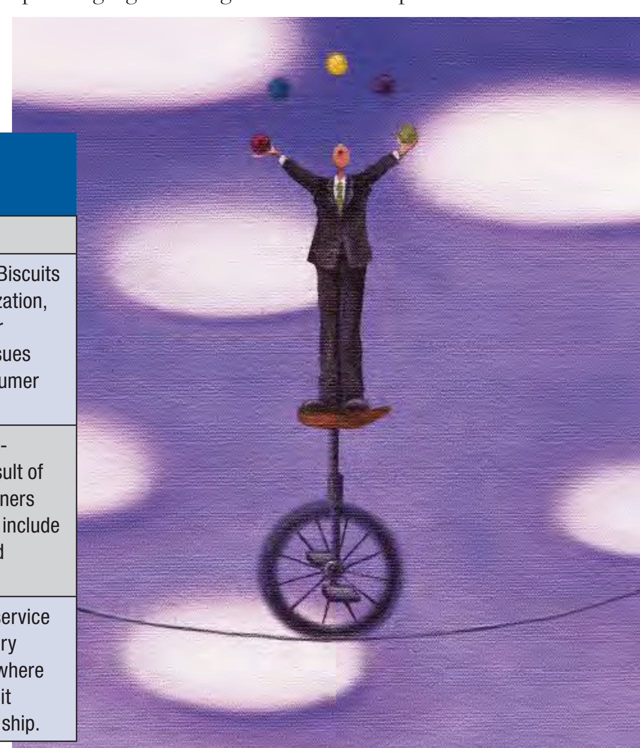
The fourth capability—*agile execution*—is concerned with adjusting supply chain actions by rethinking supply chain functions, partnering more effectively, improving collaboration, and implementing new strategies and advanced technology.

For example, agile execution emphasizes collaboration with internal and external partners to maximize information sharing, reduce order cycle times, and create processes that are streamlined yet adaptable. Postponement also has a place, since end products can be customized closer to the sale, thus helping to ensure that supply closely matches shifting demand.

An innovative network strategy is also associated with agile execution. The mantra here is "flexible resource allocation" made possible by centralized operations, low-touch (highly automated) processes, cross-trained personnel, solid supplier contingency plans, and an elastic infrastructure that emphasizes outsourcing, vendor-managed inventories, and rent-rather-than-buy philosophies.

A flexible system architecture rounds out the list of top-tier agile execution features. Standardization and automation are the linchpins here. For example, processes and technologies need to be broadly standardized to effectively handle and disseminate ideas, designs, plans, and products. Systems also must be able to operate seamlessly and adjust to changes without human intervention.

Agile execution's core components—horizontal partnering (collaboration), innovative network strategy, and flexible system architecture—are profiled in the corresponding figure along with brief examples of how lead-



Noteworthy components and practitioners of Agile Execution

Key Components	Practitioners
Horizontal partnering	A strategic collaboration with United Biscuits allowed Nestlé to increase asset utilization, reduce its carbon footprint, and lower transportation costs. Nestlé also pursues horizontal partnering with other consumer goods companies.
Agile network strategy	Procter & Gamble's exceptional cross-docking capabilities are partly the result of flexible linkages between supply planners and logistics teams. Frequent results include lower inventories, handling costs, and delivery times
Flexible system architecture	Nordstrom's leadership in customer service is enhanced by its prowess in inventory visibility. If a product is available anywhere in the network, Nordstrom can make it available via in-store pickup or direct ship.

ing companies are putting them to use. To help set the stage for agile execution, businesses can also:

- Enhance their use of system alerts and triggers to make faster, better adjustments and manage priorities.
- Establish an open architecture network that fosters competitive knowledge sharing.
- Automate (low-touch) value-driven business processes and technologies with rules-based logic.
- Create "pop-up" or "pop-down" capabilities that can be deployed at the product or geographic levels.
- Enhance multi-directional information sharing with trading partners.
- Build a more flexible, cross-trained workforce to help affect quick shifts in function or location.
- Utilize assets that are multi-functional and can be repurposed quickly.

A great example of agile execution comes from a large consumer goods manufacturer. Consider, for example, that it is not uncommon for companies to dedicate a single plant to one or just a few products or product families. This is generally considered the most economical approach, despite the fact that it limits an organization's ability to respond quickly to internal disruptions or external changes.

At the other end of the spectrum are manufacturing networks that allow every plant to produce all of a company's products. These can be highly expensive to enact and manage, although they may sometimes be cost-effective, profitable, and competitively advantageous because of their ability to keep pace with change.

The best scenario is usually somewhere in the middle: balancing economy and flexibility based on whatever criteria an organization deems most salient. This is what the above-mentioned manufacturer did. Responding to rapidly changing consumer preferences, it created not the highest level of agility, but rather the right amount of agility across its network of plants. The company thus is able to produce almost everything that full flexibility could achieve but without the giant cost increases associated with maximum elasticity.

Why so important?

Why do we believe that dynamic operations and its four core capabilities warrant so much editorial attention? One reason is simply because it is a truly powerful and largely new concept: No company has thus far implemented every dynamic operations capability, nor is there a high likelihood that many will do so in the near future.

In the long run, however, dynamic operations seems certain to become a key characteristic of world-class supply chains. In other words, "designed-in adaptability" will become a base-level response to the permanent volatility that typifies today's and tomorrow's business environments. ☐

Andreoli on **OIL+FUEL**

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Going Broke: Oilfield lessons from the playing field

Seventy-eight percent of former NFL players learn the hard way that bills remain long after incomes have dried up and are broke within five years of retirement. A similar force is at play among the world's oil exporting nations.

The Arab Revolution began as a protest against high food prices, and across the Middle East/North Africa (MENA) region, discord has been quieted in part through petrodollar funded social spending programs. In addition to direct social spending, the minimum wage has been increased, and food and fuel subsidies have increased.

> **While another uprising is not a foregone conclusion, a sudden drop in oil prices will increase the risk as oil exporters will suffer from the same financial ailment that has plagued so many professional athletes.**

Oil commentators frequently assert that the cost to produce a barrel of oil in Saudi Arabia is just $20 per barrel, and while this may be technically true of old fields, simple production cost estimates ignore the federal expenditures that they support.

The fiscal break-even oil price at current export levels in Saudi Arabia, Libya, the UAE, and Oman is over $80 per barrel, and the break-even price in Iraq, Bahrain, Algeria, Venezuela, and Russia are all above $110 per barrel. If oil exports decline, the break-even price will be proportionally higher.

Since 2008, the break-even price has increased by more than 35 percent in five of the 10 MENA countries, and since 2010, oil prices have remained high, so there hasn't been much cause for concern that federal expenditures are unsustainable. Looking to the horizon, however, a perfect storm is brewing as forces align to bring down oil prices.

Oil production in the U.S. and Canada continues to surge. Meanwhile, consumption among advanced economies is declining and a slowdown in emerging markets means that oil consumption there will be lower than had been previously anticipated. In all, production capacity is likely to rise faster than demand through the remainder of the year, and prices are likely to soften—perhaps significantly.

Meanwhile, higher wages and subsidized fuel prices will continue to drive up rates of oil consumption in oil exporting countries. In many cases domestic consumption is rising faster than production, and oil exports are declining. If prices soften and exports contract, some of the highest volume oil exporters in the world will find themselves with underfunded federal budgets.

We need look no further than Greece to see how austerity might be greeted, or to Egypt in 2011 to see how the public might react to a scaling back of food subsidies, or to the violent nationwide protests that occurred when Nigeria decided to cut back on fuel subsidies.

In the short term, the easing of oil prices may lead you to breathe a sigh of relief, but in the medium term, low prices have the potential to fan the flames of social unrest. While another uprising is not a foregone conclusion, a sudden drop in oil prices will increase the risk as oil exporters will suffer from the same financial ailment that has plagued so many professional athletes.

If you're lucky, low oil prices will be passed along to consumers of refined products. And if this happens, enjoy low prices while they last, but don't get tricked into believing that low prices are anything but temporary. ☐


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MEXICAN MASK MANUFACTURER PUTS ON A HAPPY FACE WITH UPS IN CONTROL

Diego Esponda was in a scary situation.

As general manager of Grupo Rev, a Cuernavaca, Mexico-based maker of costume masks, Esponda was losing U.S. customers because of uncertain deliveries by an unmanageable network of trucking and logistics companies.

"The customer didn't know the days they were going to get the merchandise," says Esponda, who runs the 58-year-old company founded by his grandfather outside of Mexico City. "We used to have many complaints."

Multiple Logistics Companies

One reason it was so difficult to quote accurate shipping times to U.S. customers was that Grupo Rev was working with many logistics companies and each one had their own set schedule. "Every client had their own logistics company they preferred to use," he explained. "We had to manage too many different logistics companies. It was a mess."

Grupo Rev, which manufactures high-quality howling masks and other high-end costumes for Halloween and other holidays, has been exporting to the U.S. since 1988. It now has 160 employees and revenues of about $4-5 million.

As the company grew, it found that its Achilles heel was shipping and logistics.

Esponda says that dealing with many carriers and logistics companies had become so cumbersome and time-consuming that it was affecting business. He recalls the process: "We had to get a quote, send that quote to the client, and then wait for him to accept the quote. It took so much time to close an order. Some people canceled orders because it was too much trouble."

About six years ago, Grupo Rev discovered the logistics prowess of UPS. It was already using UPS for occasional expedited shipments. "Our UPS agent saw the potential with us," Esponda says. "One time we had a very late order and the customer wanted it ASAP. The UPS agent gave us a good discount on that shipment. After that he came to our office to see how he could help us further."

That was in 2007. Now six years later, Grupo Rev has tripled its revenue. It sends approximately 700 shipments annually with UPS—and that figure is rising."The prices are very competitive," Esponda says. "Plus, the reliability of the shipments is what makes all the difference. The American customers like the idea of getting all the orders through UPS."

A Well-Oiled Machine

Unlike some transborder shipments, Esponda says delays at the U.S.-Mexico border were not the main problem. "The problem was shipping—how and when to ship. There were too many problems and miscommunication." The shipment visibility offered by UPS has greatly alleviated these day-to-day shipping problems.

June to August is the busy season for Grupo Rev, as it gears up for Halloween and Day of the Dead celebrations. "That is my tough time," Esponda says. "Now there is no problem. I can call them with a shipment of just one box or a full truck."

"It's a well-oiled machine," Esponda says of UPS. "Everything works like a clock. Everything works on time. Everything works very well."

In the six years Grupo Rev has been working with UPS, it has tripled the amount of exports to the U.S. And there is nothing scary about that.

To find out more, please visit: ups.com/gruporev

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2013 Technology Roundtable

Real-time visibility within reach

BY **MICHAEL LEVANS,** GROUP EDITORIAL DIRECTOR

Logistics and supply chain professionals have never faced a more challenging period than what they're up against at this moment.

In some cases, their companies are anxiously pushing to expand their global reach deeper into new and uncharted markets to capitalize on a burgeoning consumer boom; others are figuring out how to optimize their sourcing and manufacturing networks in light of rising transportation costs and more complex trade regulations; and still others are trying to figure out the best way to meet a multi-channel distribution challenge driven by an ever-fickle domestic consumer base that needs the order today.

Our esteemed panel taking part in *Logistics Management's 2013 Technology Roundtable* firmly believes that there are technology solutions available that will help today's logistics professionals win any of the aforementioned battles—it just depends on how brave and determined they are to make the case for investment and put them to use.

This year David Krebs, mobile and wireless vice president at VDC Research Group, will bring us up date on the current mobile computing and automatic data capture (ADC) market and it's vital role in achieving visiblity; Dwight Klappich, vice president of research at Gartner, puts transportation management systems (TMS) functionality into context in light of today's challenges; John Hill, director at St. Onge and supply chain technology sage, shares his insight into how warehouse management systems (WMS) are evolving; and Tom Wrobleski, vice president at CapGemini Consulting, offers shippers the current state of global transportation management (GTM) systems.

Here's what this year's panel had to say.

Mobile computing/ADC: Gateways to visibility

Logistics Management (LM): *From your unique view of the highly diversified ADC market, is there a way to neatly summarize where the overall market stands?*

David Krebs: The overall ADC market continues to mature as adoption and penetration scales. With increasing needs for not only visibility, but also status, the use of a wide array of data collection, sensing, wireless communications, and mobile computing solutions is certainly expanding. Critical innovations in robotics, voice technology, and image capture, among others, are making this an exciting time for the ADC market.

LM: *Is it possible to put your finger on signature trends that are driving the adoption of ADC technology at this time?*

Krebs: One trend that continues is the shift to camera-based solutions in logistics environments. This is happening in a number of different ways. First for handheld scanning—primarily the domain of laser scanners because of their long-range scanning capabilities—we're seeing the emergence of more functional long-range imagers. In addition, we're seeing an expansion of applications supported by imagers. Along with bar code scanners, imagers are supporting other value-add services such as damage documentation and dimensioning for load planning.

Another meta trend is the need for greater business analytics. ADC systems today collect a tremendous amount of data, much of which is underutilized or not leveraged at all. However, at the same time, today's supply chains are becoming increasingly complex and represent growing cost components of today's organizations. Leveraging the added functionality of today's image-based ADC solutions is enhancing key applications from vendor compliance and revenue recovery to load optimization, pallet dimensioning, and order automation.

LM: *Multi-channel order fulfillment is pushing retailers to basically revolutionize their supply chains. What role do you see mobile computing playing in streamlining these new, highly complex operations?*

Krebs: With the shift to multi-channel we're seeing a greater emphasis being placed on perfect order accuracy. The penalty of errors and poor performance is heightened and can have a lasting impact on brand perception. In addition, multi-channel is driving the need for more efficient returns processing capabilities to support the increase in returns, the need to manage split case and full case picking in the same facility, and the overall shift from batch or wave processes to more dynamic on demand systems. These requirements are, in turn, placing greater emphasis

GLENN MATSUI

on efficiency and inventory accuracy while creating greater demand for ADC solutions.

LM: *Yard management is one area that logistics professionals are realizing they can easily improve through the adoption of intuitive technology. Where does yard management stand today?*

Krebs: The yard has often been overlooked when it comes to supply chain optimization investments creating a black hole. The use of wireless communication, location, and RF identification technologies is driving improvements in the yard. In addition, the integration of TMS, yard, and WMS is driving streamlined operations. One area we are seeing those benefits is around load planning and optimization, which in turn can drive significant benefits in terms of fuel cost reduction.

LM: *We're reporting how quickly smart phones and tablets are making their way into logistics mangement. While the "ruggedness" of these devices has come into question, how far do you see smart phones and tablets penetrating this market?*

Krebs: The use of smartphones and tablets in the enterprise across a variety of environments—including line of business operations—is evident. It's also evident that the lower cost and ease of use of many of these consumer devices is appealing to enterprises. However, for many supply chain and logistics operations, especially those with heavy data collection requirements, consumer devices cannot hold up. Recent research we've just conducted reaffirms the value of rugged devices in these environments, especially in the context of cost of ownership and the impact of failure on operational disruption. However, at the same time, it's not business as usual for rugged mobile vendors, as they will need to address a growing perception that their devices are falling behind major industry trends.

LM: *With that in mind, where will logistics professionals see mobile computing and ADC technologies head in five years?*

Krebs: In our minds it's about integration, processes, and global supply chains—not just the technology. Trends we're witnessing now include shifting demographics, more educated and empowered consumers, the integration of true multi-channel distribution and retailing, shortening product lifecycles, the shift from mass market to greater levels of personalization and customization are all having profound impacts on how businesses operate.

As a result, the need for systems that better gather, store, manage data and provide intelligence to drive real-time decision making is today, more so than ever before, being linked to competitive opportunities. Put another way, the cost of errors and subsequent impact on brand is at an all time high. This, in turn, spells massive opportunity for a new breed of ADC solutions.

TMS: Capacity crunch pushing adoption

LM: *The overall TMS market enjoyed double-digit growth in 2012. What business elements do you see coming together to push this growth?*

Dwight Klappich: First, cost containment remains a very high priority as costs are generally trending upwards and remain a burden for shippers of all sizes. However, increasing capacity constraints are anticipated, and we already see signs of this in some modes like refrigerated. So another key motivator is having technology that will help ensure a company can secure capacity.

LM: *Do you have any early indicators of how the oncoming capacity crunch will affect shipper/carrier engagement?*

Klappich: We did a study last year and were surprised to find that shippers were already engaging with more carriers than we expected. We thought shippers might engage with 10 to 25 carriers, or maybe as many as 50 to 100 for very large shippers. However, our study found smaller shippers were using upwards of 50 carriers, and very large shippers were in the 250 to 500 range. Clearly, these shippers don't use this many carriers every day, but this indicates that they have at least periodic capacity constraints that force them to have a large number available to them when needed. Managing 10 carriers manually, while suboptimal, is doable, but managing 500 demands technology—and this too is driving increased demand for TMS.

LM: *As part of this growth, what role are cloud and SaaS solutions playing in pushing further adoption of TMS?*

Klappich: TMS has largely been used at the high end of the market, in the area of greater than $100 million per year in annual freight spend. But now we're finding significantly greater interest in mid-sized shippers ($20 million to $100 million in annual freight spend), especially for cloud TMS offerings. We see some interest in cloud at the high end, but that is largely private cloud (dedicated instance for a single client) where in the mid-market the demand is for multi-tenant SaaS.

Two things are driving this. First, the economics of SaaS are favorable in that a company can pay an annual subscription that in the near term is far less than equivalent on-premise. The second advantage is that companies are being forced to engage with more carriers and the carrier network that is part of many SaaS TMS is advantageous.

LM: *The perception of how cloud computing functions has been a deterrent to skeptical adopters. Are those fears still in play?*

Klappich: While some concerns remain, I don't find that this is a real barrier to SaaS TMS adoption. If anything there's a barrier we find that customers are now getting better at modeling the cost differentials between on-premise and SaaS based applications. And while SaaS pricing is very favorable in the near term, it can appear more expensive long term. I now find buyers more diligent in conducting this analysis that has had a deflationary price effect. The other issues we see coming up more often now are integration concerns. This is not as much as say an ERP to TMS integration issue, but how one SaaS solution will fit in the overall supply chain management application landscape.

LM: *Any tips for new TMS adopters?*

Klappich: Even though the economics are very good, a 10 percent or more reduction in annual freight spend, only about 25 percent of the addressable market has adopted a holistic TMS. At the high end we estimate over 50 percent penetration, and that says that in the mid-sized shipper market adoption remains modest. These companies should start looking at TMS given the number of options, particularly SaaS TMS. Compared to many other applications, TMS implements quickly and fairly easily and companies can take a phased approach that allows them to get some pieces up and running initially to gain the benefits that can then fund the remainder of the project.

WMS: Muli-channel drives need for integration

LM: *The greater WMS market continues its steady climb, last year growing by about 6 percent. What business elements are coming together to push this?*

John Hill: First, if you've looked at your 401K lately, it's likely that it has finally begun to outperform your money market account. And I suspect that this is also true for many small- to medium-sized businesses (SMBs) that, although they've understood the potential value of supply chain systems as a differentiator, have been unable or unwilling to risk investment in new technology or systems over the past few years.

Larger firms are also making WMS investments to address the challenges of multi- or omni-channel fulfillment and more tightly integrate their WMS systems with demand planning, order management, and transportation management. Other drivers include traceability concerns and mandates, system-wide visibility demands, workforce performance improvement, and the maturation of ERP, SaaS, and cloud-based alternatives.

LM: *How do you see WMS evolving as a result of the multi-channel challenge?*

Hill: The buzz about multi- or omni-channel distribution is real. We're seeing a significant increase in interest from our current and prospective clients in finding solutions for single-site DC fulfillment of on-line and store orders—as well as fulfillment from retail outlets to on-line customers.

Setting aside the complexities associated with DC design for omni-channel fulfillment, the phenomenon raises the bar for WMS, for which inventory slotting and task and labor scheduling and management become even more critically important. Another key is inventory accuracy at every stocking location, including retail stores, as well as visibility into inventory in transit to those locations, which may be provided by TMS.


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LM: *Any advice for retailers?*

Hill: Well-defined work flows and procedures have always been important to laying the proper foundation for successful WMS configuration and deployment, but never more important than here.

LM: *Much like its TMS cousin, WMS has moved into the cloud. While still in its infancy, do you see cloud-based WMS gaining momentum?*

Hill: Hosted TMS entered the picture in the mid-1990's with Gillette's deployment of a system that managed transportation operations throughout North America—and the system performed well. At the time, bandwidth and security were the major concerns. As it turned out, security was not an issue even though the application sat along with a number of others in its own partition on a third-party server.

On the WMS front, SaaS or cloud-based systems enable SMBs as well as larger companies with small satellite warehouse operations to stick their toes in the WMS water rapidly and with lower cost and risk—provided that they do not require the features of a top-tier, on-site WMS package.

LM: *Mobility was infused into the warehouse/DC years ago with ruggedized handhelds. Those tools have given way to more advanced tablets and smartphones. What can we expect to see in terms of WMS and mobile apps on the floor?*

Hill: Hard to believe, but it has been 38 years since Logisticon installed an RF-based WMS with handheld bar code readers and lift truck-mounted printers for JC Penney in southern California. Yes, there have been some very interesting deployments of WMS using iPads, tablets, and smartphones for data collection and communications by early adopters, and I believe this trend will continue. It's a natural and particularly important for attracting the post-millennials to the workforce.

Additionally, the ability for manag-

Research: Overcoming WMS upgrade fears

We recently caught up with Ian Hobkirk, managing director of Commonwealth Supply Chain Advisors, following the presentation of his latest research project on WMS adoption for the attendees at the Materials Handling Industry (MHI) Spring Meeting.

Logistics Management: *What are the key drivers pushing WMS upgrades today?*

Ian Hobkirk: Functionality still seems to be the main driver, although the specific needs vary depending on how far a company has already come along the WMS path. Companies that have little or no WMS capabilities right now are trying to just get the basics: real-time transaction confirmation and more sophisticated pick processes.

Companies that already have some form of WMS are often seeking to upgrade or replace that system so as to achieve functionality like slotting, labor management, wave planning, and task interleaving.

The one common thread across both groups though is this need for more complex pick processes—cluster picking, batch picking, zone picking—processes that drastically reduce labor costs. Even a lot of legacy WMS systems don't enable the flexibility that companies are looking for in their pick processes.

LM: *What continues to hold them back?*

Hobkirk: Cost is always a concern, but the biggest factor holding companies back is their fear of a "bad implementation." The companies we talked to repeatedly mentioned horror stories that they have heard about cost overruns, delays, and even service level disruptions. The fact is that there are lots of things that can go wrong if the business needs aren't adequately defined up front, and if good, solid project management practices aren't followed.

LM: *From your findings, are users fully optimizing their current WMS?*

Hobkirk: In many cases, no. If an implementation is behind schedule, often the focus shifts from optimizing processes to simply completing the project and getting the software installed. As a result, good processes may get cast aside in favor of whatever processes are easiest to implement quickly. There is an important step of "optimization" that needs to happen three months to six months after a WMS go-live, but not all companies follow through and do this.

LM: *Can you share a short example of a type of company that's taking on an upgrade?*

Hobkirk: If the project involves an upgrade, then companies usually start by exploring the costs of just getting on the latest version of their current vendor's WMS. There's almost always a moment of sticker shock when they understand the costs of upgrading, especially if the current system was heavily customized.

This usually prompts a general feeling, especially in the IT group, that this time around, they want to avoid custom code and change their business processes to conform with the software's "standard" functionality. If they do the project right, then they will identify those areas where customization is required and have a dialogue with all of the stakeholders to determine when it makes sense to change processes vs. customize software.

LM: *Any advice for companies about to head into the upgrade process?*

Hobkirk: Adequately defining the business requirements up front is still the single most important thing that a company can do to ensure success. Document all of the process needs, and most importantly, all of the exceptions to the rules. If the upgrade is going to be a major event with a hefty price tag, then companies should do their homework and investigate other potential provider that can meet their needs. Then it comes down to execution.

—Michael Levans,
Group Editorial Director

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ers to keep tabs on warehouse operations through smartphone links to their WMS is exciting. Lest we forget, however, there have also been significant developments in bar coding, RFID, and voice that prospective users should not ignore.

GTM: Window to global visibility

***LM:** Where does the GTM market stand?*

Tom Wrobleski: As a result of expansion of global operations, increasing global competitiveness, and complex trade regulations, companies are giving more importance to global trade management. In fact, according to Capgemini's *2013 Third Party Logistics Study*, 43 percent of shippers said they feel that 3PL providers should focus on developing their global trade management IT capabilities.

And according to the recent *Aberdeen Annual GTM* study, the top investment focus for over 75 percent of discrete manufacturing companies is the move to GTM platforms or solutions that integrate data sharing and workflows with internal users and a myriad of countries, suppliers, carriers, and trading partners. And while this bodes well for the market, we see fragmentation in the GTM software delivery model. While there is clear movement towards web-based or cloud-based solutions, the traditional standalone model has not become obsolete.

***LM:** What functionalities are the most desirable for shippers adopting GTM?*

Wrobleski: The first and most obvious is improved risk management. Countries in South America, Middle East, and Africa are now part of global supply chains and GTM practitioners are less familiar with these regions. There is certainly now more reason to automate GTM to account for the unknowns of doing business in these far corners of the world. Shippers are also looking to better manage changing regulations, a puzzle with pieces constantly shifting. Besides the introduction of new sets of regulations due to the advent of new players into the global supply chain, regulations in mature markets can also change.

Improved visibility is also paramount today. Visibility in a GTM context is no longer restricted to track and trace on the transportation leg. It means following a shipment from order through final delivery, with all the itinerant compliance and finance milestones in between, and then being able to act on that information when roadblocks occur. A GTM solution that integrates seamlessly with existing supply chain systems increases the level of automation and visibility.

Visibility in a GTM context is no longer restricted to track and trace on the transportation leg. It means following a shipment from order through final delivery, with all the itinerant compliance and finance milestones in between.

— Tom Wrobleski, vice president at CapGemini Consulting

***LM:** What advice do you have to get over the GTM acceptance challenges?*

Wrobleski: GTM solutions gain acceptance when shippers target the importance of enhanced visibility to end-to-end trade activities and team productivity; the improved integration of workflows between import and export processes where trade data flows seamlessly between different GTM system modules; the advantages of a paperless process; and the more flexible and scalable processes you'll establish.

***LM:**Any tips to facilitate adoption?*

Wrobleski: Shippers need to train GTM staff. The role of the GTM practitioner is growing harder day by day. Besides stiffer compliance issues, they also face the task of understanding the financial and operational components of their supply chains and how those pillars are integrated. And most come to their roles without any advanced degrees in compliance, much less the other facets of GTM with which they might not be familiar.

And, you need to map technology to process. In the GTM context, adoption is about change management: converting from a data management philosophy to a process management philosophy.

***LM:** How will GTM solutions need to evolve to keep up with the complex demands of the global trade environment?*

Wrobleski: In general, GTM solutions certainly meet the demands of today's global trade environment. However, as global trade itself evolves, GTM solutions need to evolve as well to help companies deal with the unfolding challenges in trade compliance, such as understanding which Free Trade Agreements (FTA) they're eligible for based upon the origin of different purchased parts; maintaining visibility of all purchase part information; coordinating with suppliers to obtain all required FTA information to establish compliance with a trade program; and collecting duty savings by qualifying bills of material of saleable goods for different trade programs.

***LM:** Where is GTM in five to 10 years?*

Wrobleski: We'll continue too see Saas as the dominant deployment model for GTM. Some vendors offer access to their GTM solutions over the web, thereby bypassing the headaches of buying and installing the solution. Accessing GTM solutions on an as-needed basis reduces cost of usage and ensures that the latest technologies being developed by the software vendor are available to the end user.

We will also see a more efficient use of "big data." As more and more global trade management processes get automated an increasing amount of data will be collected. Merely collecting data will not be sufficient, but the data will have to be converted into a form that can be used in decision making.

There will also be a shift in the control of data. Instead of allowing an outside vendor to control all of their data and then just draw on that passive data, more logistics firms are realizing that they have to be in control of this data to manage and dictate how it is used.

—Michael Levans is Group Editorial Director of Peerless Media

Air Cargo Relationships: Contracting with purpose and trust

It's easy for shippers to fall in love with an air carrier or forwarder when short-term goals are met, but these vital relationships require a long-term commitment. These two short case studies demonstrate how to succeed.

BY **PATRICK BURNSON,** EXECUTIVE EDITOR

While the recent marriages between air cargo carriers has captured headlines, the real story for shippers is still one of "staying the course." The fragile nature of business relationships in the logistics arena is made evident when major disruptions occur, so it's edifying to see just how players are working together to avoid them. Pairing two narrative accounts from shippers and forwarders makes this point loud and clear.

SOS Global Express: Zero margin for error

Having done business with Southwest before it acquired AirTran in 2011 may have given SOS Global Express a reason to look elsewhere for priority service. But the forwarder soon found that the carrier's culture had not been compromised following the deal.

The first real test, said SOS CEO Stephen O'Connell, was getting his shippers—some of the leading video and broadcasting companies in the world—on board for approval.

"We fill a niche for companies that prefer one contact point, instant access 24 hours a day, 365 days a year, with true operational control," says O'Connell. "Problems may arise with afterhours shipments, the need for damage control, or absolute minute-by-minute control over a very sensitive shipment."

The most recent example of this logistical challenge came with the 2013 Super Bowl in New Orleans. During the four-week period that includes setup and break down for this game, SOS Global was responsible for hundreds of shipments, and thousands of individual pieces comprising more than a million pounds of cargo. Each individual shipment had a specific need, not duplicated.

"One of 50 or 60 of our media customers needed his shipments delivered on January 30th to only Gate D of the Mercedes-Benz Superdome at exactly 9 a.m.—any earlier and the crew would not be in yet, any later and a crew of 40 people would be left standing around without gear to work," recalls O'Connell. "Meanwhile the other shippers are demanding entirely different services on the same day."

During the four-week period that includes setup and break down for this game, SOS Global was responsible for hundreds of shipments, from pieces as small as a computer hard drive to twenty-foot long television set pieces and staging. Each individual shipment had its unique place in shaping the overall look and feel of the game for the audiences at home and in the stadium.

Given this complexity, more than one cargo airline must be engaged, admits O'Connell. But the carrier with the most aggregated set of trade lanes gets most of the business.

"Like all of our vendor partners, we look for an air carrier willing to sign on for the project and commit the resources necessary to ensure its success," says O'Connell. "Once our team is in place, we begin to lay out a plan that identifies everyone's part and how they are to play it. Our air cargo partners are included in the fine details of the plan and we count on their input to make the plan better."

In this case, O'Connell found that Southwest Airlines' operating hours, lift capacity, and key people could be incorporated into the master blueprint for the overall project. "The planning and execution is similar to rehearsing a fine orchestra and then performing flawlessly night after night," he says. "There's a very narrow margin for error."

Dan Vasconcellos

Given that SOS has 25 years of experience certainly doesn't hurt. But every game and city has a different setup and needs, including new security rules every year. SOS Global starts planning as early as November and sets up its onsite team, typically anchored by some of its most seasoned people. This team is backed up by an operations and customer service team at headquarters that operates around the clock.

"SOS Global then teams up every year with vendor partners that we've come to know and trust with such an important project," says O'Connell. "Some are local to the game city but most are national partners such as airlines and trucking companies."

He adds that SOS expects these companies to "sign on" for the project and commit the resources necessary to ensure its success. The sports metaphors don't end there, however. "Once our team is in place, we begin to lay out a plan that identifies everyone's part and how they are to play it," concludes O'Connell. "Our partners are included in the fine details of the plan and we count on their input to make the plan better."

INDEX Group: Delivering on promise

Our second case study demonstrates why "speed dating" is a poor way to build air cargo relationships. With the merger in 2010 of United Airlines and Continental, shippers had to choose between staying with their proven provider—whether it be with United or its newly-acquired partner—or seek alternatives elsewhere.

For the Esslingen, Germany-based INDEX Group, the main issue was transparency—not a big surprise when one considers that INDEX is a leading manufacturer of precision-made turning machines for global engineering and electronics companies.

"Mergers and acquisitions aside, we work with any airline that can deliver on promises," says Jean-Claude E. Toussing, export purchasing manager for INDEX in Noblesville, Ind. "Velocity is the goal, but transparency is key. Shipper, forwarder, and carrier must all have access to the same tracking and tracing data," he adds.

According to Toussing, an urgent shipment of custom machined auto parts destined for factories in Stuttgart was feared to be lost or missing when INDEX was first evaluating carriers. Fortunately, they had been working with a freight forwarder who could deliver the most reliable information available, irrespective of carrier.

Freight-Base, a U.S. Customs broker and international freight forwarder based in Bensenville, Ill., had proven to be the right fit for the German manufacturer several years ago. "Because Freight-Base and the airlines use variations of the same TMS software, we have backup when we absolutely must find the shipping status of our parts," Toussing says. "This provides a second layer of security, too."

With its own certified cargo screening facilities and in-house X-Ray and explosive trace detection equipment, the forwarder is also able to expedite shipment.

Jack Groat, president of Freight-Base, recalls when a test shipment for INDEX was temporarily placed in limbo because the airline lost track of its status. But because the forwarder uses photos and backup commercial invoices on its web page, the matter was cleared up fairly quickly.

"The cargo was inadvertently placed in a remote corner of a warehouse," recalls Groat. "Without our GPS and other enhancements, we would have to wait for the airline to find it with just their own resources. But that's how a partnership works. We stay on the same page and work things out for the shipper."

Strengthening the bond

Now that a federal bankruptcy judge has approved AMR's Corporation's plans to merge with US Airways, shippers will be looking for innovative ways to work with the new mega-carrier.

Indeed, this merger will create the single biggest airline company in the world. Operating under the American Airlines name, it will join United Continental, Delta Airlines, and Southwest Airlines as carrier leaders capturing more than 80 percent of U.S. reservations and cargo bookings. And beginning this month, American Airlines Cargo will provide shippers with GPS tracking and sensor monitoring devices as part of its partnership with OnAsset Intelligence, Inc.

"These devices can be added to domestic and international shipments to monitor temperature, pressure, and humidity, as well as to detect motion and vibration," says Matt Maynard, American's cargo media representative. "It is designed for shippers who are booking time-critical, high-value and temperature-sensitive cargo."

Keeping shipper, forwarder, and carrier on the same page is OnAsset, an Irving, Texas-based provider of tracking solutions. The advanced technology directly maps into the immediate requirements of intricate supply chains involving multiple modes of transportation, and is the cornerstone of in-house models used by forwarders like Freight-Base.

According to the consulting firm Frost & Sullivan, OnAsset's partnerships with mobile network operators ensure that information is transferred efficiently, even in cases of multi-mode transportation. "Targeting this space and succeeding in it has allowed OnAsset to safeguard against any current competition," says Rahul Vijayaraghavan, a research analyst at Frost & Sullivan. "The compelling benefits of its solution have enabled it to get more approvals for commercial aircrafts than any other company."

The company's domestic mobile network partners have helped to establish international rate plans with the necessary connectivity, thereby easing global adoption of this technology.

"Connectivity brings people to business, and delivers products to markets," observes Tony Tyler, director general and CEO of the Geneva-based International Air Transport Association. "Within a few miles of the tarmac the most remote region can be connected to the global community," says Tyler. "And that could mean access to vital sources of health care and emergency assistance; jobs selling products in global markets; or opportunities for education, exploring the world or creating business."

Tyler says that air cargo carrier consolidation should not be regarded as a threat to shippers, or does it represent a reduction of choice. Indeed, he contends that with meaningful air cargo partnerships, every flight brings with it enormous possibilities to make our world a better place and generate wealth—"both material and of the human spirit."

—*Patrick Burnson is Executive Editor of* Logistics Management

Air cargo associations partner, too

Nurturing relationships is not limited to shippers, forwarders, and carriers these days. They are also crucial to air cargo associations. The International Civil Aviation Organization (ICAO) and The International Air Cargo Association (TIACA) recently signed a Declaration of Intent to strengthen cooperation on technical matters.

The declaration was officially signed in Dallas at TIACA's 2013 Executive Summit by the association's Chairman Michael Steen and the ICAO's Secretary General Raymond Benjamin. Under the terms of the new agreement, ICAO and TIACA will work more closely on air cargo and mail security and facilitation, accelerating the evolution from paper-based to electronic processes, environmental stewardship, the liberalization of market access for air cargo services, and air cargo safety.

"This is another highly significant breakthrough in the new era of collaboration between our industry and leading regulatory bodies," says Steen. "ICAO is taking a lead in critical areas of aviation, such as security and the environment, and the Secretary General and his team have made a clear point of meeting with us, listening to our views and participating in our events to learn more about the requirements and concerns of the air cargo industry."

Benjamin says that ICAO has been grateful for the input and advice received by TIACA as they have begun to develop closer ties with the air cargo sector. "With this agreement now supporting our future cooperation across a wide range of shared priorities, ICAO will be focusing its near-term efforts on evolving our regulatory frameworks with states and industry stakeholders, including TIACA, toward the greater liberalization of air cargo services," he says.

This new commitment by ICAO and TIACA follows a joint communiqué for "Enhanced Cooperation in the Field of Air Cargo Transportation" issued at TIACA's 26th International Air Cargo Forum & Exposition in Atlanta.

—Patrick Burnson, Executive Editor


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Social networking transportation

Cloud-enabled transportation "control towers" are transforming logistics and supply chain performance. Our consulting team explains how shippers can realize benefits from true end-to-end supply chain integration that can be operated through an optimized transportation service network.

BY **BROOKS BENTZ**, **RODDY MARTIN**, **BILL KAMMERER**, AND **TUSHAR NARSANA**

There's increasingly more noise and dust around the strategic virtue of the "transportation control tower" concept. It's not all that new; in fact, back in the last century we talked about similar capabilities, calling them by a different name: load control center, command center, and the network service center.

The one thing these various monikers shared in common was an aspiration to provide an element of discipline, as well as common and standardized business processes across the enterprise (or big chunks of it, such as divisions, regions, or continents), driven by leading industry practices and enabled by technology. And one of the key functions that has been consistently hungered for over most of the last decade and been simultaneously elusive is the capability for true end-to-end supply chain visibility.

Why is there such a growing groundswell of interest around the control tower concept and visibility now? A few key things come into play:

- Companies that only gave a passing nod to managing supply chain performance in the past have had epiphanies and now recognize that supply chain management is a critical strategic weapon in top-line revenue growth, cost containment customer satisfaction, and repeat business.
- Cloud-based enabling technology has radically changed the game for those bold enough to "go where no man has gone before."
- Globalization and coping with what many perceive to be a state of permanent volatility are forcing companies to "never settle" and continually innovate within their supply chain operations.

The notion of a command center or transportation control tower, while of great interest to many organizations, was hamstrung by technological limitations. For those who remember the early 1990s, it was then that a product was launched that sought to provide end-to-end visibility across the supply chain. It was leading-edge at the time, even contemplating parallel supply chain functions (e.g., physical movement of product along with simultaneous movement of the related documents).

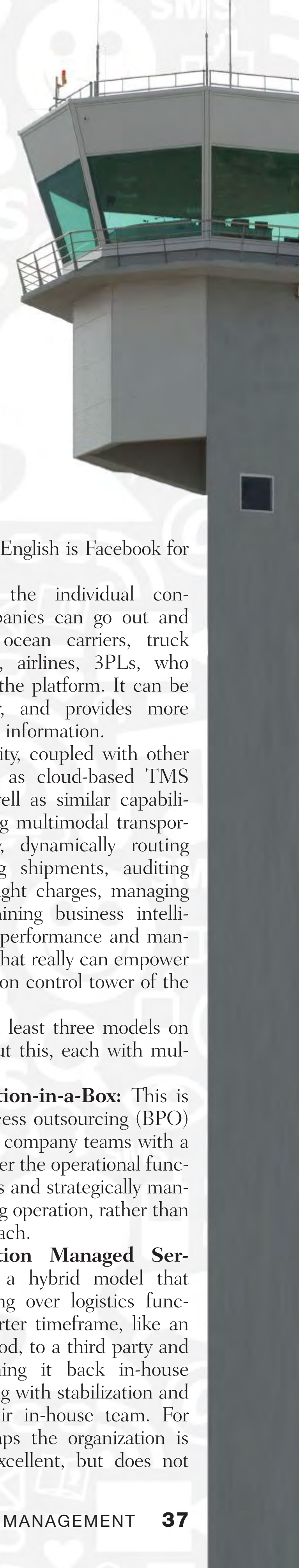
The problem many shippers encountered with this product, and other similar ones, was the difficulty in creating a comprehensive network of connected trading partners. In many instances, it was a one-to-many relationship where the "many" sometimes numbered in the thousands. In the days before the Internet, quite a bit of time and expense was involved in connecting with existing and new trading partners.

The rise of the Internet eased the burden of simultaneous global communications for many. But in many instances, the trading partners were small, unsophisticated providers who had trouble adopting the Internet as a business tool.

The predictable end result was incomplete data, which left holes in the supply chain visibility pipeline. The equally predictable result was that people didn't trust incomplete and inaccurate data, so usage dropped away and visibility projects were declared a failure. While this is a generalization, it largely holds true for many networks.

The net effect was that command center operations focused on what they could do, which was largely domestic and often a niche play, rather than enterprise-wide, end-to-end supply chain management where this sort of capability is needed most. Examples are centers that managed rolling assets, such as rail

comes to management



car and private truck fleets, or load control centers that managed domestic truckload business.

Building the tower

True, end-to-end, global supply chain visibility remained elusive, although if you read through back issues of *LM* you will see that for most of the last decade supply chain visibility and event management has topped the list of "must haves" for logistics professionals.

So what's the answer? We put forth several possibilities: Our view is that the transportation control tower concept can provide tangible strategic benefit. But how do we operationalize it? There isn't a silver bullet just yet where you can go to an app store and download a plug-and-play app—but we are getting close.

A possible starting point for shippers, large and small, is to assess the current state of their supply chain management capabilities objectively and with a clear eye. This is sometimes done through the aegis of a neutral third party, but it needn't be.

The trick is mapping out what the supply chain looks like now, the capabilities that exist to manage it, and how it performs. You can then put that up against what the "should case" is for supply chain performance and what it will take to get there. The gaps will always leap out and become visible.

A next step is to examine what it takes to close those gaps. The age of making everything yourself may have passed. A smart play is to sort out what makes sense to do in-house and what makes sense to find an alternative, more efficient path to follow, employing the best enabling decision-support technology and the most skilled resources.

What's so different about this? Let's take a brief look back. Perhaps the seminal game-changer was Steve Jobs. He envisioned a new world where the applications and data were device-independent. It didn't matter whether you had a PC, an iPhone, an iPad, or any of a number of other devices. The apps and data didn't live on the device, they lived in "the cloud."

Next in line of seminal game-changers was Mark Zuckerberg who, with the advent of social networking, helped chnage the way communications between people worked. Facebook made connecting with others the work of a click.

So what's any of this got to do with logistics management and transportation control tower concepts? First, transportation control towers function when they are fed timely, accurate information across the entire supply chain. Second, true supply chain visibility and event management works most efficiently and effectively in a many-to-many ecosystem.

It can be terribly difficult, time consuming, and expensive for every shipper to individually go out and connect with hundreds or thousands of many of the exact same service providers and vendors that everyone else is connecting to. What does make empirical good sense, however, is employing what we refer to as the "multi-tenant cloud-based solution," which in English is Facebook for logistics.

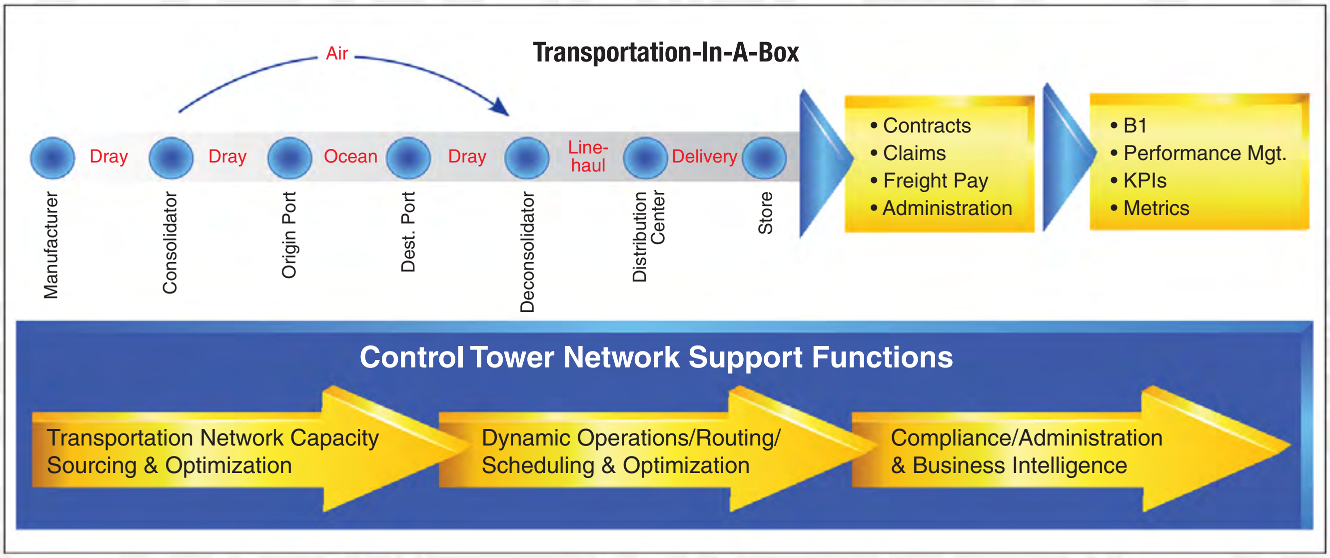
Instead of the individual connections, companies can go out and "friend" their ocean carriers, truck lines, railroads, airlines, 3PLs, who are already on the platform. It can be faster, cheaper, and provides more timely, accurate information.

This capability, coupled with other enablers, such as cloud-based TMS solutions, as well as similar capabilities for sourcing multimodal transportation capacity, dynamically routing and scheduling shipments, auditing and paying freight charges, managing claims, and mining business intelligence to track performance and manage trends, is what really can empower the transportation control tower of the future.

There are at least three models on how to go about this, each with multiple flavors:

Transportation-in-a-Box: This is a business process outsourcing (BPO) play, where the company teams with a 3PL to hand over the operational functions of logistics and strategically manage the on-going operation, rather than a tactical approach.

Transportation Managed Service: This is a hybrid model that involves handing over logistics functions for a shorter timeframe, like an incubation period, to a third party and then transitioning it back in-house post hiring along with stabilization and training of their in-house team. For example, perhaps the organization is operationally excellent, but does not



manage its sourcing functions as well as it could—or, it does that well, but is less successful at claims management and freight payment.

Advisory/Self-Service: This is where the shipper intends to keep all of the logistics functions in-house, but wants or needs third-party advisory services to help stand up the capabilities they aspire to achieve. Here are the pros and cons of each:

Transportation-in-a-Box /BPO

Pros: There is a lengthy list of positive attributes, but a compelling one is the ability to comparatively, rapidly, and economically move to cloud-based, leading-edge technology solutions, without incurring large expenditures of scarce capital dollars and enduring the sustained pain of conventional implementation. It can also be a means to add experienced capabilities to augment the existing professional staff and hold a third party, who does this for a living, accountable for the business outcomes, possibility through a gain-share agreement.

Cons: It's often a significant cultural shift. A common reaction is "you're calling my baby ugly" when, in fact, the goal is to give the "baby" a different set of tools to do the job better.

Transportation Managed Service

Pros: It can be less of a culture war; it can serve as a proof of concept—it's more like entering the pool from the shallow end and wading, at your own pace, to the deep end, rather than leaping off the high-dive.

Cons: It often sub-optimizes results and takes substantially longer to get to the end-game.

Advisory/Self-Service

Pros: For those who want to control everything internally, it can be a much more secure environment and perceived to be less risky. It can also be much less disruptive to the status quo, which isn't always a bad thing if the operation is substantially on track. Unbiased third parties provide two core valuable services: First, they can objectively look at the current state and bring to bear industry-leading practices from others; and second, they can often be relied on to push the envelope a bit further in transforming the business and challenging prevailing wisdom.

Cons: Third-party advisors are not inexpensive; frequently being viewed as causing interference or assumed to be demonstrating a lack of trust in the current organization to do its job. As a result, some very powerful recommendations and advice have gathered dust due to a lack of commitment to change.

Putting it in context

The pace of change is accelerating, driven by rapid advances in technology. Finding new and better ways to leverage these increasingly facile tools and capabilities is essential.

Think about the trading of securities between Europe and North America and how it was revolutionized when the laying of the transatlantic cable was completed in 1858. The 10 days it used to take for communicating trades was reduced to minutes. We are again on the cusp of transformational change: those who can look ahead and take advantage of it will lead the pack.

The fact is that implementing the core elements of the transportation control tower, using any of the models outlined here, can deliver two major elements that rebound to the credit and vision of the activist who makes them happen.

First, supply chain performance can be significantly and demonstrably enhanced, which can also make the life of the logistics professional easier and better. And second, taking full advantage of the concepts, approach, methodology, and tools we discussed may deliver significant value in terms of benefits and cost reduction, which can affect shareholder value and help fund other initiatives.

The value of true end-to-end supply chain integration, enabled by visibility and event management that can be operationalized and operated by an optimized transportation service network, is of a magnitude that cannot be overlooked or ignored.

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U.S./Mexico Trade: 7 steps to close the gap

U.S. importers and exporters are now looking to draw the most value possible from the fertile Mexican market while remaining acutely aware of the risks involved. Our trade compliance expert offers steps to improve your cross-border activity both today and in the future.

BY **SUZANNE RICHER,** CONTRIBUTING EDITOR

The U.S. is only two years away from a five-year goal to double exports, hoping to revive the economy and create two million jobs along the way. And if you're keeping score, last year cross-border activity with Mexico accounted for over $216 billion dollars in U.S. exports and over $277 billion in imports.

With a shared border of just over 1,950 miles and representing our second largest export market, Mexico is a critical part of the U.S. job creation plan attributed to export shipping. But at the same time, the U.S. struggles with enforcing immigration policies through increased border protectionism, with new horse patrols, fencing, and around-the-clock surveillance by drones.

For U.S. importers and exporters, the challenge is how to draw value from this incredible market, one that continues to grow 5 percent annually and offers exceptional opportunities through the North American Free Trade Agreement (NAFTA), while remaining aware of areas of risk that may impede trading capabilities both here in the U.S. and Mexico. Strategically, there are several steps a company needs to take in order to improve their cross-border activity.

1) Recognize trends in customs transactions

The past 10 years have seen major changes in the way U.S. Customs and Border Protection (CBP) both views and manages U.S.-based importers and exporters. Through voluntary cargo security and trade compliance programs, CBP labels companies as Trusted Accounts if they agree to join the Customs-Trade Partnership against Terrorism (C-TPAT) cargo security program, which opens the door to participation in the Importer Self-Assessment (ISA) compliance program.

These programs have influenced similar initiatives in both Canada and Mexico. The C-TPAT equivalent program in Canada is Partners in Protection (PIP), while in Mexico an eligible firm may join C-TPAT or the newly developed *Nuevo Esquema de Empresas Certificadas* (NEEC). For trade compliance, the ISA equivalent in Canada is the Canadian Self Assessment (CSA) program, while Mexico is busy developing their *Ventanilla Unica*, or Single Window for the collection and analysis of trade data.

The U.S. continues to lead the change that affects a company's shipping process with the creation of 10 Centers of Excellence and Expertise (CEE). These industry-specific centers will oversee the clearance of entries into the U.S. through a single, specialized import team dedicated to

Participating in C-TPAT on both sides of the Mexican border will improve clearance times, while changing trends within CBP will support multiple site applications and review processes through a single site.

improving transparency within industries and increasing enforcement for non-compliance.

Most importantly, with limited resources under the sequestration, CBP has confirmed that priority will be given first to companies who partner in both C-TPAT and ISA, followed by those only in C-TPAT, and then finally all other firms that choose not to partner with CBP.

2) Leverage these programs for cross-border transactions

In light of these changes and their impact on border-crossing capabilities, strategically leveraging participation in these programs would greatly affect a company's North American supply chain operations.

U.S. companies that participate in C-TPAT and also have Mexican plants may leverage centralized procedures to support their Mexican plants' C-TPAT applications and secure fast lane clearance opportunities in the process.

In mid-to-late 2013, CBP will introduce an updated C-TPAT web portal that will allow a U.S. C-TPAT participant to create a single company profile, pulling in all of their related C-TPAT accounts. In doing so, the number of C-TPAT validations will be limited to a single site, thus reducing the amount of work as compared to preparing multiple sites for the validation process.

3) Master the *Ventanilla Unica*

Similar to CBP's Center of Excellence and Expertise (CEE) functionality, Mexican Customs has developed a modernized approach to clearance capabilities through the single window concept, or *Ventanilla Unica* (VUCE). Data collected from Mexican importers/exporters will be captured in this single repository with information shared across 30 stakeholders including government agencies and carriers.

Mexican importers are required to update their electronic processing capabilities and file their invoices, abbreviated as COVE via the VUCE system. This electronic sharing of shipment data is intended to reduce costs and paperwork, though not eliminate it, and allow for greater efficiency in the clearing process.

The unique number assigned to each transmission will then be used by the customs broker to release the final release, which is known as the *pedimento*. While Phase I of the implementation process was initiated in mid-June 2012, companies are still working to perfect their data sharing efforts and ensure a smooth process at the border.

4) Identify and report savings through NAFTA

While the *Ventanilla Unica* offers cost savings advantages in processing, additional savings are still obtainable through the qualification of products eligible for NAFTA. The most difficult aspect of trading with Mexico, however, is acknowledging that all products made or purchased in the U.S. do not necessarily qualify for NAFTA.

Qualifying product for this trade agreement requires a very strategic and detailed program to classify the product being exported and then confirm through NAFTA rules of origin that the product qualifies for conditionally duty-free treatment. While NAFTA remains the key trade agreement upon which most other free-trade agreements are based, it remains challenging for companies to undertake the necessary steps to confirm that their products actually qualify.

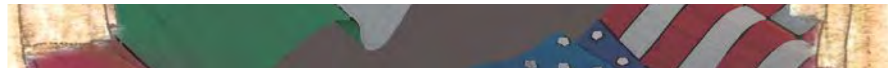
What's stopping companies from taking these strategic steps? Most often, it's the lack of knowledge of potential savings attributed to the free-trade agreement initiative followed by improperly trained personnel. In order to evaluate products for NAFTA qualification, companies must have a strong knowledge of classification rules as well as NAFTA origin rules. Hiring or developing these skill sets requires strong management support and dedicated training.

Despite the hurdles for developing NAFTA and Free Trade Agreement (FTA) expertise, the programs bring strong benefits to companies. For exporters, signing a NAFTA certificate allows their customers to legally declare a lower, preferential duty rate in the receiving country—making the exporter's product more competitive on pricing than exporters not qualifying their product for NAFTA.

For an importer, cost savings associated with NAFTA-qualifying products can be significant, resulting in a major impact on the company's bottom line. Working closely with their suppliers, importers are generally seeking NAFTA certificates for qualifying product at the start of each New Year, seeking to take advantage of reduced duty benefits all year long.

Over 20 percent of all of the survey participants from a 2010 white paper by Customs and Trade Solutions, Inc. recognized savings of $50,000 to $500,000 annually due to NAFTA or other FTA qualifications—a strong indicator for the company to continue to pursue FTA programs.

As a best practice, companies should build expertise on trade agreements that use similar rules of origin programs such as tariff-shift concepts. Knowledge used to qualify product for NAFTA may be transferable to other trade agreements using similar rules including the Dominican Republic-Central America-U.S. Free Trade Agreement (CAFTA-DR), and the U.S.-Singapore, U.S.-Korea, and U.S.-Australia Free Trade Agreements.



Mastering Mexico's advance trade data single window approach, under the *Ventanilla Unica,* will expedite U.S. exports and provide greater visibility of supply chain metrics as part of the process.

5) Verify eligibility, reduce risk

In light of these potentially high-duty savings, it's important to confirm that your customs compliance team has verified the necessary documentation to support your NAFTA claim.

All free trade agreements are *conditionally* duty free. However, NAFTA has a unique audit aspect; that is, any exporter or producer may be audited for their NAFTA program by any one of the three governments—Canada, Mexico, or the U.S. Equally as important is the need to document and maintain your verification for five years from the date of import or export.

In the past two years, Mexico has aggressively audited U.S. exporters for their NAFTA verification process. Many of these reviews have been initiated with a request for documents from 2008 or 2009 and are required to be translated into Spanish before submission to the Mexican authorities.

These reviews are lengthy, lasting up to a year before closing or settling any open issues. Companies lacking proper supporting documents may see a reversal from their original duty-free status to a dutiable value. This requires not only payment of past duties due, but also interest on those duties as well as any potential penalties that may be assigned as part of the process.

6) Tighten training programs, recognize savings

Despite these warning signs, U.S. firms continue to export without adequate documentation to support their NAFTA claims. Qualifying product for any trade agreement first requires a strong understanding of classification rules.

With the NAFTA trade agreement soon to celebrate its 20th anniversary since implementation, many companies have yet to master its rules and requirements. Companies with best practices place strong emphasis on continuing education focused on both classification and qualification of product lines as part of their efforts to legally reduce duty fees and avoid unnecessary penalties from future audits.

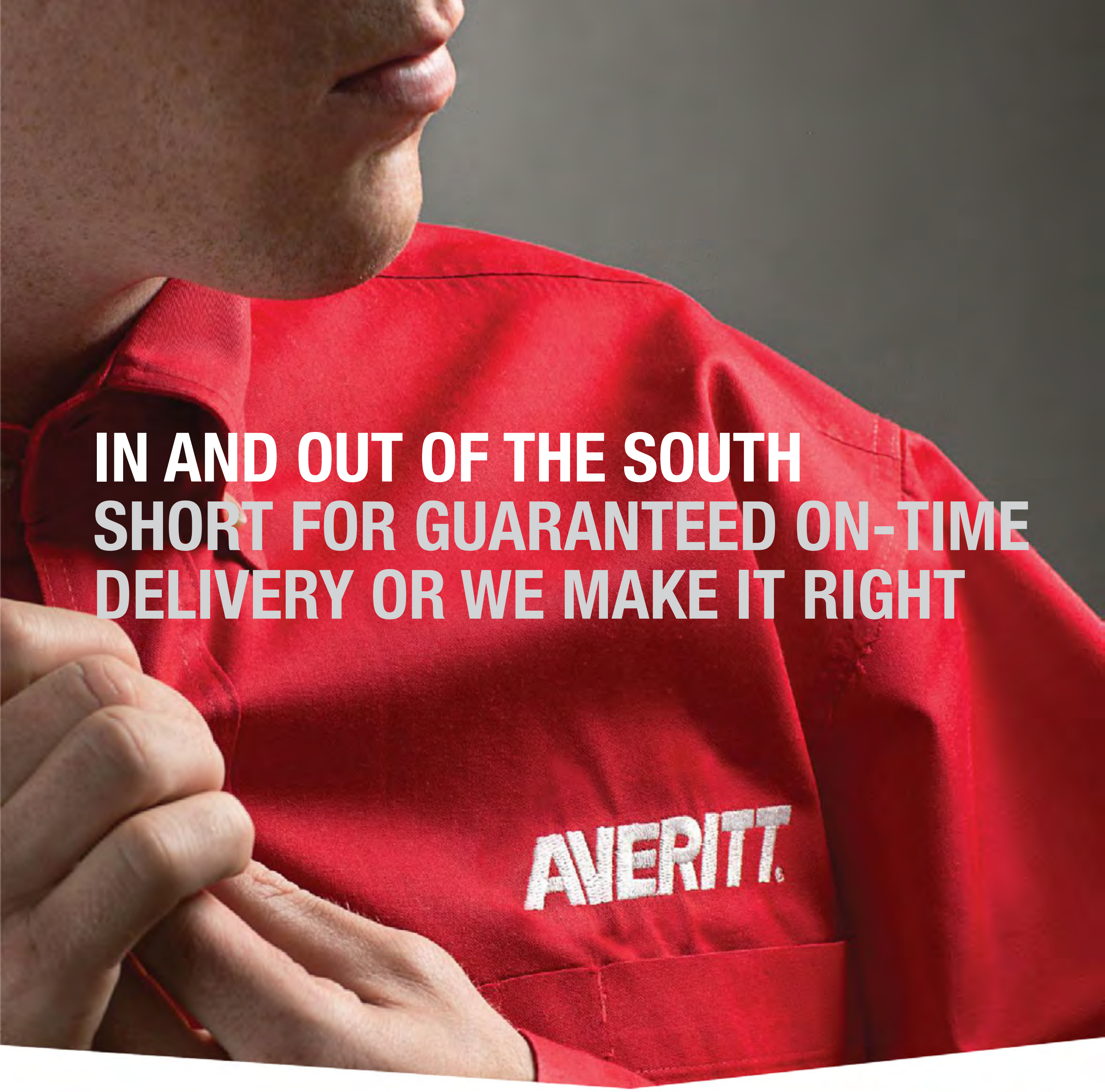
7) Take a fresh approach

It's said that the longer you know a customer the more likely it is that you don't know anything about them at all. While this initially may seem unlikely, it demonstrates that in order to keep all relationships fresh and updated, one must constantly communicate, question assumptions, and research the changing landscape. Customs practices in both the U.S. and Mexico offer U.S. companies an opportunity to reassess their land border activities and reconsider how bottom line savings can be achieved through updated programs and a renewed stance towards initiating best-in-class programs.

Participation in C-TPAT and ISA will provide U.S.-based companies the highest level of partnership with CBP and expedited clearance processing capabilities. Mastering Mexico's advance trade data single window approach, under the *Ventanilla Unica,* will expedite U.S. exports and provide greater visibility of supply chain metrics as part of the process.

Benchmarking your company's trade initiatives against these practices with a continued focus on education and verification of your trade lane priorities will ensure that your firm is successfully managing this market for the greatest savings and efficiency in your cross-border supply chain.

Suzanne Richer is President, Customs & Trade Solutions, Inc. and a Contributing Editor to Logistics Management.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Lift Truck Fleet Maintenance: Slow and steady cuts the cost

Recognizing the potential for long terms savings, many fleet owners are keen to jump into a fleet maintenance program. However, they soon learn that there are no substitutes for goal setting, clear communication, and patience.

BY **JOSH BOND,** EDITOR AT LARGE

A carpenter can only do so much with a broken hammer. Then again, if he has an endless supply of hammers, or a dedicated hammer repairman nearby, he might not be too bothered to care for them.

Lift trucks, as critical to a distribution center (DC) as a hammer to a woodworker, were for a long time treated with similar disregard, expected only to swing hard, drive production, and be close at hand when needed. Today, few operations are content to pour money into equipment and its maintenance just for the sake of keeping it around. And unfortunately, few operations have any real sense of what it actually costs to do just that.

Technology and data, whether grafted onto a fleet or built-in, have proven to be valuable tools for helping lift truck fleet owners identify and curb a fleet's costs. Some users have collected mounds of data only to end up with piles of questions. Lift truck manufacturers and third-party service providers have responded by developing creative options for outsourcing maintenance piecemeal or entirely, often for a flat rate, providing customers with predictability and comfort. Meanwhile, other users have entered into such agreements only to find interruptions in productivity while wondering whether they are paying too much.

Logistics Management has learned that the true secret to achieving an optimal lift truck fleet maintenance program is to take things slowly. According to our experts, the process of driving cost out of a fleet in motion is not a matter of flipping a switch.

"Lots of people want to go from zero to 100 miles per hour, rolling out technology and making big changes," says Brian Markison, senior manager of national accounts at UniCarriers Americas Corp. [Nissan Forklift, North America recently merged with TCM America to form UniCarriers Americas]. "But depending on what you learn along the way, it can take years. When a doctor takes care of a patient, they don't go in and change all the medications at once."

Establishing a foundation

The first step is to articulate goals. The number of things that can impact fleet costs—from uneven floors to process improvements—can result in an endless scavenger hunt in the absence of a clear end game.

Next, simply start measuring parts and labor maintenance costs per lift truck, both for routine and unplanned maintenance. This requires nothing more complicated than an Excel spreadsheet. The data should then be overlaid with the lift truck's utilization. "Once you know the operating cost and utilization, then you can start looking at trends," says Mike McKean, fleet management sales and marketing manager for Toyota Material Handling USA. "If a lift truck is low-cost and low-utilization, do you really need it? If it is high, is it time to replace it?"

Replacement cycles are critical to controlling maintenance costs, but these two elements have been historically controlled by disconnected silos in an organization. Many companies have done a very good job of defining the acquisition cost component of an asset's total cost of ownership, says Nick Adams, business development manager for the Mitsubishi Caterpillar Forklift America fleet services group. "That is good old fashioned purchasing methodologies. But once they've purchased, maintenance becomes secondary," he says. "At the corporate level, the thinking is that the individual plant can worry about that."

The cost per hour of ownership and the cost per hour for maintenance are therefore rarely evaluated side by side. The combination produces the true per-asset cost per hour, says Markison. "The more hours you put on a lift truck, the lower your cost of ownership per hour," he says. "But there is a point where the per-hour maintenance costs of aging equipment will meet the other curve, and it's no longer wise to retain that piece of equipment."

It's often wise to designate a person, either in-house or from a third party, to be responsible for coordinating operations and purchasing while working to break down the imaginary boundaries between each silo. Among other things, a holistic approach can prevent well-meaning cuts to capital expense budgets that result in skyrocketing maintenance costs.

Pros and cons of service agreements

Companies increasingly prefer to outsource fleet service, but making the transition away from decades of in-house fleet maintenance can be challenging. The cultural legacy of addressing issues "on our own terms" can lead to all sorts of problems. A technician scheduled to perform a planned maintenance (PM) might be turned away by a user too busy to spare the lift truck, or a fleet manager might feel compelled to review the details of each service invoice even though he's paying his service provider to do the same thing.

"Those with successful in-house maintenance

operations know the best way to drive down costs is to control each service event," says Patrick DeSutter, director of fleet management for Yale. "If you buy guaranteed maintenance up front you've got comfort in the budget, but also the element of risk that you might have spent more than necessary."

"They can have all the comfort in the world with a great service provider, the right technician and the right parts," says McKean, "but unless the customer understands that spend and the utilization, they'll never understand their cost per hour."

C.D. Watson, product support manager for Combilift USA, says that the move to full maintenance contracts with a fixed rate often seems to help customers perpetuate their bad habits. "They're leasing equipment and rotating, trying to keep equipment new and control maintenance costs," says Watson. "But that's where operators who don't take ownership of the lift trucks end up beating them up, comfortable in the knowledge that new equipment is on its way."

The ideal place for a flat-rate arrangement is toward the end of a fleet maintenance and fleet management overhaul, which, again, can be a multi-year process. With comprehensive and predictable data in hand, the disciplined customer can enter into the right agreement for the operation.

Similarly, the service provider will be assured by the consistency of the fleet's performance, according to Scott Craver, product manager, business and information solutions for The Raymond Corp. "They'll know actual utilization before PMs, and they can monitor abuse while boosting accountability," he says. "Since it reduces the

If fleet maintenance costs are brought under control, they can be tied to cost per unit produced or shipped.

Warehouse experiment delivers peak performance

3PL merges LMS and fleet management for unprecedented visibility into fleet costs

GENCO, A THIRD-PARTY LOGISTICS (3PL) PROVIDER, manages 38 million square feet of warehouse space across 130 operations for customers including many *Fortune 500* companies. After partnering with a labor management system (LMS) provider and a provider of lift trucks and fleet management systems, the company was able to merge the two systems to reduce costs, increase efficiencies, and improve productivity.

The team chose a world-leading business process and document management company as its focus facility for the project. The 410,000 square-foot facility loads and unloads as many as 25 tractor-trailers each day and had been experiencing many challenges with visibility from both a labor management and operational standpoint.

It was unclear where labor dollars were being spent and how employees were measuring up against labor standards. Equipment usage, time traveled, number of impacts, and utilization rates were not being accurately tracked, adding to the lack of accountability for lift truck operators.

The test facility deployed a fleet of lift trucks (The Raymond Corp.) in 2009, including 26 counterbalance, reach, rider, and orderpicker units. The supplier's fleet management system was merged with a cloud-based LMS (Easy Metrics) to provide a comprehensive view of operations.

Among other functions, the fleet management system verifies that only appropriate personnel are authorized to operate each lift truck and that OSHA-mandated checklists are completed prior to operation. This complements the LMS database system, which supplies comprehensive data on individual and group performance. All of this information is combined in one streamlined report.

Labor accounts for 70 percent of warehouse cost, says Bob Simon, director of process solutions at GENCO. "We attacked the biggest elephant in the room and decreased a few percentage points in labor costs," he says. "The total turned out to be a significant dollar savings for us and our customer." Over the course of the trial period, the company reduced labor costs by nearly 10 cents per unit, decreased impacts, resulting in savings on time and equipment repair, and reduced pick labor by 12 percent.

"This whole process was a kind of testing ground for all three companies," Simon says. "I think everybody was confident that it would work. It was just a matter of how well. We are happy with the outcomes, we are happy with the benefits that we've seen and we're excited about taking this to our other facilities."

—Josh Bond, Editor at Large


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dealer's costs, they are then in a position to pass those savings back to the customer."

Right tools for the job

There is no shortage of tools and technologies that can help measure maintenance costs. But none of them are any good unless action is taken after the collection of data.

UniCarriers' Markison offered the example of a customer who ha d a problem with impacts and was replacing two overhead guards each mo nth as a result. After installing imp act monitors, they were able to reduce the number of collisions to virtually ze ro. A different customer deployed imp act monitors that locked out the trucks on impact—they ultimately gave the re set access code to each operator to av oid the hassle of addressing it on the flo

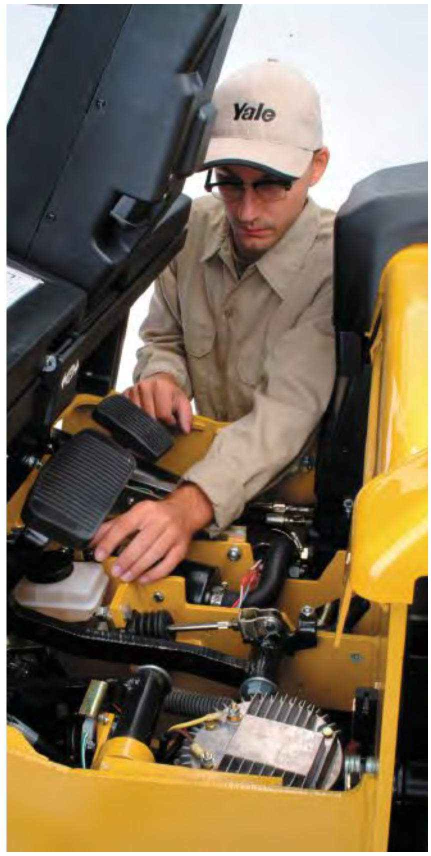
or. "The success of a technology is not because you put the device on the l ift truck, it's because you managed w hat came out of the device," Markison sa

ys. Before and after deploying any technology, Jim Shephard, foun der and president of Shephard's Industr ial Training Systems, encourages customers to perform a root cause analysis of observed maintenance costs. "I see people chasing those costs, but t hey don't have an avenue to go out and see what's broken," Shephard says. "Otherwise, they're just logging problem

s." Generally, in an unchecked environment, there's a lot of low-hanging fr uit before any investment is needed in additional technology like telemati cs, impact monitors, or electronic checklists, says Yale's DeSutter "You've got to take those things on almost surgica lly based on where you know your co sts are," he ad

s. The operator and the cult

ure Fleet maintenance is not just ab out the equipment, but those who sp end their workday using it. "If you're optimizing your fleet," says Adams, "t hen you're optimizing your labor force. " A truly optimized workforce should be part of a facility culture that pla ces an emphasis on training, feedba ck, and housekeeping—all of which can impact on maintenance costs as w ell as productivi



ty. "One of the most common rep air codes we see is shrink wrap caught in a radiator," says McKean. "You'd th ink it would be low-hanging fruit to look at housekeeping, but we see it over and over again. Avoidable damage co mes right off the bottom line and is direc tly proportional to operator trainin

g." Housekeeping can be a signific ant source of damage, DeSutter agre es, but it's not just about picking up shr ink wrap and pieces of pallets. It can a lso have to do with the condition of the floor in the facility as well as g aps between dock plates. "It's amazing what an ounce of prevention can do in those cases," says DeSutt

er. As with uneven floors and ot her environmental factors, the operat ors are more often not to blame for avoidable damage to equipment. "About 95 percent of the time I'm brought in to train operators there's a process is sue that is the source of the problem t hat they think training alone will addres s," says Shephard. "Too many think t hat the operators are the problem, as opposed to what's really going o

n." The impact of labor morale on fl

With comprehensive and predictable maintenance data, a facility can pay by the hour for lift truck utilization.

eet costs cannot be underestimated, a dds Shephard. If operators are involved in the evaluation of equipment before-purchasing, it can generate pride and a se nse of ownership, in addition to boosting productivity. "If an operator feels valued then they will use a keen eye to insp ect and report," says Shephard. "Otherwi se, they'll only focus on the things that are absolutely critical to safety, if tha

." What the future ho

lds With thght maintenance program, the right technology, and an engaged workforce, fleet owners might find themselves, for the first time, with a truly accurate picture of a fleet's cost.

McKean says that a good way to justify fleet maintenance programs is to draw a correlation between the cost of the lift truck fleet and the activity of the facility. "Instead of being viewed through the lens of capital expense, the fleet spend begins to speak to bottom line profits," he says. "That's kind of a far-fetched thought. Over the years, it just hasn't been looked at that way."

With precise data, customers and service providers will be able to tailor equally precise service arrangements. "'Pay by the hour' has never really taken off, because when you start invoicing based on usage, you need to be sure you can cost-effectively collect very accurate data," says Adams. "Built-in telemetry is making that much more affordable. We're on the cusp of hourly plans being a real mainstay instead of a nifty concept."

Already, says Craver, the tendency is toward a convergence of information systems, with integrated systems directing an entire warehouse operation. "With maintenance, vehicle monitoring systems, labor management systems, and warehouse management systems, the industry has the ability now to build bridges between all these islands, bringing all that data to the manager's desktop or smartphone," he adds. "You don't have to wait 90 days for a report that is a snapshot of a time that's already passed."

—Josh Bond, Editor at Large

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Taking control of reverse logistics

Companies can no longer afford to treat reverse logistics as an afterthought. Our team of experts offers these practical insights to help logistics and supply chain managers build an effective reverse logistics program inside their organizations.

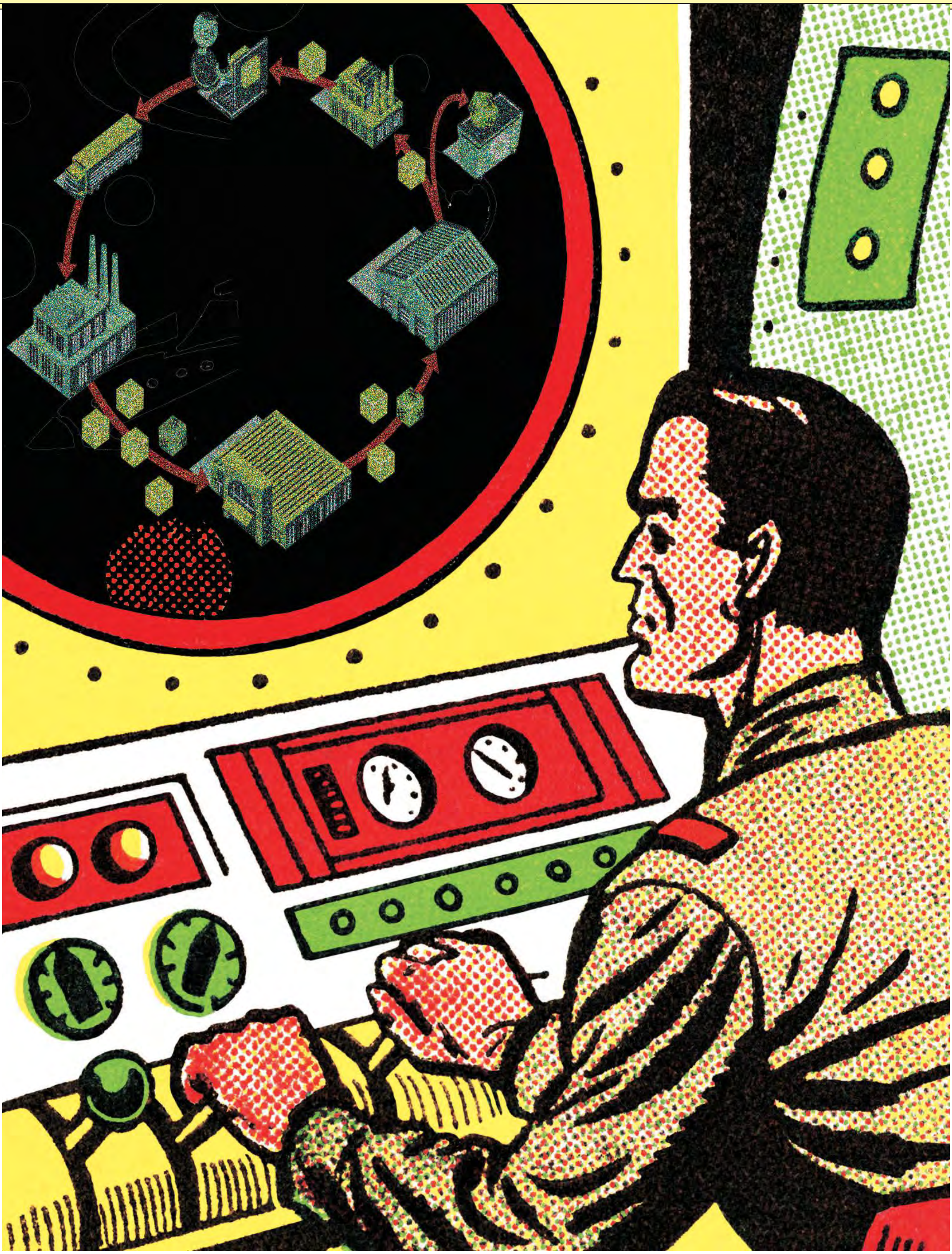
BY **DALE S. ROGERS, RON LAMBKE,** AND **JOHN BENARDINO**

That does not sell, is entering the end of its life, or has been returned due to buyer's remorse is now generally understood to be a critical part of product life cycle management. Yet this has not always been the case.

Historically, most of the attention paid to product management has focused on the introductory phase or on the volume-shipping portion of the product life cycle. The leaders have greatly broadened this perspective. They know that the difference between a product's success (and profitability) and failure often depends on how the end of life is managed.

The leaders understand, too, that the business importance of taking good care of consumers. They know that customer satisfaction holds the key to long-term success and that enabling them to return products without penalty is a big part of the equation. The practice of customer returns isn't really new (see accompanying sidebar "Sears and JC Penney—Pioneers of Customer Returns,"on page 54), but it has become much more cost-efficient in the top-performing companies.

Over the next few pages we aim to make the case for building an effective reverse logistics program in your organization. It describes the importance of this key component of supply chain management and outlines how reverse logistics differs from forward logistics. We then describe some of the key considerations in advancing a building a reverse logistics competency and then list key metrics that need to be put in place. Finally, the article



offers some practical steps that readers can take to build momentum for a successful reverse logistics program in their organization.

REVERSE LOGISTICS: IMPORTANT AND DIFFERENT

Companies can no longer afford to treat reverse logistics as an afterthought. It needs to be a core capability within the supply chain organization. For years, most firms paid little attention to returns. That has changed as companies increasingly realize that understanding and properly managing their reverse logistics cannot only reduce costs, but also increase revenues. It can also make a huge difference in retaining consumer loyalty and protecting the brand, as we explain more fully below.

Just how big is the opportunity? According to the Reverse Logistics Association, the volume of returns annually is estimated at between $150 billion and $200 billion at cost. This represents approximately 0.7 percent of GNP and 6 percent of the Census Bureau's figure of $3.5 trillion total U.S. annual retail sales. It has been estimated that supply chain costs associated with reverse logistics average between 7 percent to 10 percent of cost of goods.

Capturing the potential benefits begins by clearly understanding the nature of reverse logistics. First off, it is very different from forward logistics. Retailers and manufacturers design supply chains to quickly and efficiently send a continuous flow of product from production facilities to retailers' shelves. All of the boxes on a pallet are typically identical and stacked in neat rows, and they arrive at the distribution center or retail outlet like clockwork.

The reverse flow is different in a number of ways. First, product arrives whenever customers decide to return an unwanted item, or a retailer decides to pull slow-moving product, or a manufacturer institutes a packaging change, or any number of other possible causes. Second, the product is not all in new condition. Third, much of the packaging is damaged or shelf-worn. The end result: the company must look at each individual item and make a decision as to its disposition.

As every good supply chain manager knows, the fewer times you touch an item—and the shorter and cleaner the process—the better the result.

DRIVERS OF REVERSE LOGISTICS

The drivers of reverse logistics policies and practices will differ among organizations, in large part depending on the perceived importance of this activity to the business. In many companies, reverse logistics still is not considered very important—though as we said this is changing. In some organizations, in fact, it is actually viewed as an embarrassment.

This could be the case, for example, where merchandisers responsible for buying product that did not sell well to the consumer are in charge of managing those returns. Often, they resist taking the hit of unsold and obsolete merchandise.

Because writing down the book value of the slow-moving inventory and moving it to the secondary market is an admission that the purchase was unsuccessful, firms tend to postpone the decision. The products in question

Sears and JCPenney—Pioneers of Customer Returns

The late 19th century saw two of the nation's most historic retailers emerge, Sears and JCPenney. Both evolved from very simple roots to become retail powerhouses. Sears started in a small train station in Minnesota, while JCPenney began as a tiny general store in Kemmerer, Wyoming. Both of these retailers operated on a then-innovative business philosophy: an open, liberal return policies where consumers could bring products back with no penalty.

This innovation, which was designed to increase customer satisfaction, did more than that. It actually reduced consumer risk of shopping at Sears or JCPenney. This meant that their stores were likely to attract a long-term consumer because the risk associated with shopping there was reduced. It was safe to buy something from Sears or JCPenney because the consumer knew that if it didn't function well, or it was the wrong size, or it just didn't work, they could return the product and get their money back.

For these two pioneering retailers, taking back product from consumers was a smart marketing move that over the years consistently translated to business success.

end up losing much more of their value than if the decision to liquidate the inventory was made more quickly.

In addition to corporate perceptions, product attributes are a major driver of reverse logistics. The first, and often most important attribute, is the quality of the product being returned. Items that appear to be first quality are more likely to be worth saving that those that are not. Product size is another attribute that typically determines how return product is handled. It doesn't make sense to pay high-cost transportation to return a damaged item that is cumbersome to handle. It's not a good idea to transport a large item 1,000 miles and then throw it away—whatever the prevailing diesel costs may be.

Differences Between Forward and Reverse Logistics

Forward	Reverse
• Product Quality Uniform	• Product Quality Not Uniform
• Disposition Options Clear	• Disposition Not Clear
• Routing of Product Unambiguous	• Routing of Product Ambiguous
• Forward Distribution Costs More Easily Understandable	• Reverse Costs Less Understandable
• Pricing of Product Uniform	• Pricing of Product Not Uniform
• Inventory Management Consistent	• Inventory Management Not Consistent
• Product Life Cycle Manageable	• Product Lifecycle Less Manageable
• Financial Management Issues Clearer	• Financial Management Issues Unclear
• Negotiation Between Parties More Straightforward	• Negotiation Less Straightforward
• Type of Customer Easy to Identify and Market to	• Type of Customer Difficult to Identify and Market to
• Visibility Of Process More Transparent	• Visibility of Process Less Transparent

Adapted from: Tibben-Lembke, R. S., & Rogers, D. S. (2002). "Differences between forward and reverse logistics in a retail environment," Supply Chain Management: An International Journal.

The position in the product lifecycle is another attribute that drives returns management strategy and tactics. Disposition of a mature product that is nearing the end of its lifecycle will likely differ from that of successful new product introduction. Another important attribute is price point. If the product is low cost, then a lengthy decision process around its disposition is counterproductive.

A fifth driver of reverse logistics is the company's "go-to-market" strategy. This usually relates to the channels the company uses to connect with its customers. It also incorporates supply chain and marketing processes that guide how the company interacts with customers. Some go-to-market strategies will dictate how the firm should handle product returns. For example, it could be that market cannibalization is a major concern. In such cases, the final product disposition would have to be routed to a distant secondary market offshore, thereby alleviating that concern.

Finally, there are the financial drivers that come into play. A major one is inventory turns. Companies make an investment in inventory and once that inventory is sold, it moves into the cost of goods sold (COGS) category. When items are returned, they enter back into inventory—and the transaction is reversed. This reduces the value of the inventory turns metric, which is typically used by management as a measure of the health of inventory management within the firm.

The seller needs to find an appropriate secondary market that will speed up the time in which some value can be gained from the inventory they had hoped to sell. As is the case with forward logistics, financial flows typically determine the structure of the reverse logistics flow. One recurring problem is that managers are often measured on metrics that suboptimize the structure of the reverse logistics flow.

MANAGEMENT MANTRA: SIMPLIFY

With an understanding of the nature and drivers of reverse logistics, you can begin to more effectively manage this activity. The guiding principle here is simplification. As every good supply chain manager knows, the fewer times you touch an item—and the shorter and cleaner the process—the better the result.

This certainly holds true in reverse logistics. Because much of this product is low value, it's especially important to simplify the process, shorten the time and distance to ultimate disposition, and eliminate unnecessary touches.

Reverse logistics product has likely spent a great deal of time moving through the forward and reverse systems. The longer it continues to stay in the system, the more its value is likely to decline. (As one executive told us: "This is not like fine wine. It does not get better with age.") Already damaged products or packaging are likely to become further damaged the longer they are in the system.

Products with any kind of technology component to them are losing market value with every passing month. As a result, companies must minimize the time product stays in the reverse logistics system. The more quickly an item gets dispositioned and moved through the system, the more value it is likely can be recaptured.

One of the biggest management challenges in this context centers on the issue of "one of many" vs. "many of one." In other words, the return flow often consists of low volumes of a multitude of items; by contrast, the forward flow is typically comprised of one, or just a few, items moving in high-volume.

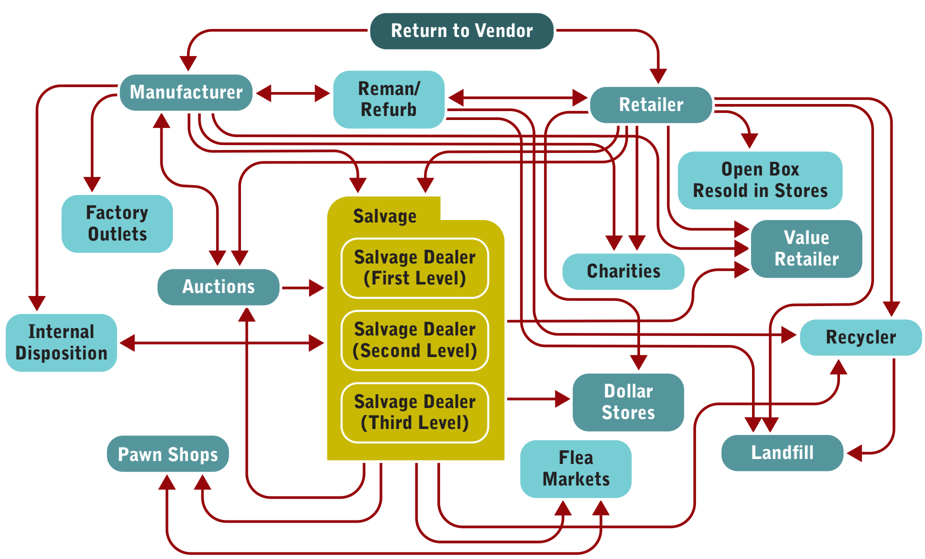
Handling product on an individual basis, particularly product of varying quality, is much more difficult and costly than working with new, perfect-quality product that moves in high volumes. Because of the greater complexity and level of decision-making involved, reverse logistics requires closer attention at the senior management level than does forward operations.

Regardless of whether a product is intended to be sold and then recycled or disposed of in a landfill, systems must be in place to ensure proper handling. Some companies may be willing to pay additional costs for proof of secure disposal. One popular approach to assure brand equity protection is for the company or its 3PL to video the actual product disposition, which often entails destruction of the product.

Managers need to be aware of the regulatory trend requiring firms to develop reverse logistics processes that ensure proper of end-of-life management. Electronics waste, or e-waste, is a good example. Currently, 25 states have e-waste regulations. Twenty-four of those states have Extended Producer Responsibility regulations, and California has an Advanced Disposal Fee program.

These regulations require that certified recycling partners confirm that electronics waste is disposed of properly. One reason for this is to guard against the products being exported to developing countries, which is against the law in most of those countries. In an October 2011 Dateline segment on Australian television, an investigative journalist in Ghana displayed a collection of computers and monitors that bore stickers from multinational corporations and U.S. state and federal agencies. No company wants that kind of publicity.

Product Flow to Secondary Markets (Retail Example)



Adapted from: Dale S. Rogers, Zachary S. Rogers, Ronald Lembke, "Creating Value Through Product Stewardship and Take-Back," Sustainability Accounting, Management and Policy Journal, Vol.1, No. 2, , 2010.

Managers also need to be cognizant of new regulations requiring that companies be able to offer proof that their products are what they claim to be. In the pharmaceutical industry, for example, the California Board of Pharmacy's (CBoP) has set deadlines for all manufacturers to be able to show an electronic pedigree and a defined serial number down to the pill bottle level. Managing the authenticity of forward-moving product is costly. Managing authenticity backwards in the supply chain can be even more costly—and more difficult.

We mentioned earlier that time-to-cash is a key driver of reverse logistics. How effectively you minimize time-to-cash depends greatly on the processes developed around credit reconciliation. Because returns are not always a standard transaction, credit reconciliation processes that are routed through the CFOs office can be slow.

These processes need to be established in advance so that credit reconciliation can happen quickly. Similarly, firms need to make disposition decisions fast. In fact, a sub-optimal disposition made quickly often results in a better cash position than a perfect decision made slowly. Returned items need to be managed for speed as well as for highest recovery values.

For firms forward in the channel such as retailers, wholesalers, or manufacturers receiving finished product, vendor agreements need to be strategically negotiated—not just accepted blindly. Supplier agreements must specifically address what should happen with returned products, who is going to pay for each element of the reverse logistics process, and how the credit reconciliation process will function. Large credit write-offs and aging receivables that should have been written down a long time ago can eventually get a company in deep trouble.

Another important issue in many industries is zero returns. This is called by a number of different names such as swell allowance or adjustable-rate policy. What all of these terms basically mean is that the customer does not physically return the item. Instead, it takes a credit allowance from its supplier.

This is common practice in the consumer packaged goods industry. Typically, manufacturers allow retailers a small percentage credit for items that are "unsaleable." These unsaleables will then be disposed of by the retailer and not shipped back to the manufacturer. Procter & Gamble pioneered adjustable-rate policies in the 1990s. In the food industry these are now the rule (often leading to some

difficult feelings with the manufacturers who may not view such policies in the same light).

Finally, regardless of your particular industry segment, one of the core reverse logistics competencies is the ability to track the movement of products and components—both in the forward and reverse channels.

PRODUCT RECALLS

Product recalls are part of the reverse logistics process that merit special attention. Recalls can be voluntary or mandatory. But in all cases, they need to be managed carefully in a way that first and foremost protects the brand and is efficiently executed.

Recalls in general are becoming more common. Consider that between Feb. 14 and March 11, 2013 (less than one month), the Food and Drug Administration (FDA) mandated more than 40 recalls. Recalls require more upfront planning than most other return types. For industries that are susceptible to recalls, like automotive or pharmaceutical, part of designing an effective returns management process is developing procedures for quickly informing customers transparently about a recall and then efficiently handling the return.

Even the best-run companies can run into difficulties with recalls, as evidenced by Johnson & Johnson's (J&J) experience in 2009 with its Motrin product. J&J found contaminants in the product that reduced its potency. J&J asked its recalls management company, Inmar, to buy back the drug.

Inmar sent contractors into stores to purchase Motrin without explaining the situation to the retailers. A memo signed by J&J's McNeil Consumer Healthcare unit told Inmar employees to "not communicate to store personnel any information about this product. Simply visit each store, locate the product and, if any is found, purchase all of the product."

Regardless of your particular industry, one of the core reverse logistics competencies is the ability to track the movement of products and components—both in the forward and reverse channels.

Mishandling a recall can be extremely damaging to a manufacturer's reputation and is a poor example of risk management. In the Johnson & Johnson case, congressional investigators became involved, forcing the company to turn over more than 22,000 pages of documentation. It would have been much easier—and less costly—to have performed the recall differently.

It was probably naïve to believe that the FDA and retailers would not notice that all units of a specific SKU were being purchased in every retail outlet carrying those items. What makes this case all the more surprising is that J&J was the architect of one of the most successful recalls campaign in history—the cyanide-tainted Tylenol incident in 1982, which the company handled transparently and skillfully in protecting the brand.

SECONDARY MARKETS AS DRAINS

Developing a cost-effective reverse logistics program demands a solid understanding of secondary markets and the related concept of "drains." A consumer who purchases a refurbished laptop, or a college student who buys a used textbook are good examples of selling on the secondary market and getting additional value out of an asset.

In addition to the revenue aspect, secondary markets provide other important benefits. Notably, they effectively divert a large number of products from landfills and create numerous jobs, thereby resulting in substantial environmental and economic benefit.

In short, secondary markets have become a significant portion of domestic economic activity in the United States. Although not reflected in current government metrics, a conservative estimate is that the secondary market represents 2.28 percent of the U.S. Gross Domestic Product. Several of the secondary markets consist of many small players, so there are no trade associations or other authorities to estimate their size.

To get a better sense of the second-

ary market dynamics, let's examine the retail sector. It helps to gain a realistic view all of the destinations that product may flow to from a retailer. When a company receives returned product, much of it will be sold off to companies in the secondary market. The secondary market is not a single marketplace, but the name for the network of companies that buy and sell product that cannot be sold as first quality in the primary channel.

Usually, a retailer's first choice of disposition is to return the items for full credit back to the supplier. Unfortunately, that option is often precluded by a supplier agreement or by a product customization such as a store-branded item.

One of the most common approaches to product disposition is through salvage brokers. The first level of salvage broker will typically buy in bulk such as a trailer load, and offer a small fraction of the product's original cost. The offer might be as low as 10 percent of the wholesale price. When a company sells product to a salvage broker, that broker will turn around and sell that product to another broker or other secondary market, who then may sell it to the public. Or the product may be sold to a series of brokers before it ultimately gets sold to a consumer.

Some of the product may enter the secondary market through other paths. Auctions, international dispositions where the product is shipped offshore, factory outlets, value retailers such as firms like T.J. Maxx or Marshall's, or dollar stores are places to move product that is not selling well through the intended primary market.

These secondary markets effectively act like drains. Every system needs to have a means to rid itself of excess or unwanted materials. In the human body, for example, the circulatory system's arteries handle the forward logistics of bringing oxygen and nutrition to the cells while the veins carry the carbon dioxide and waste products to the lungs and kidneys for removal. Without the veins to carry away waste products, cells would cease to function, literally drowning in their own waste. And no one wants to think about a building that did not have both inbound and outbound plumbing. Having "drains" of one type or another is crucial to the operation of all systems.

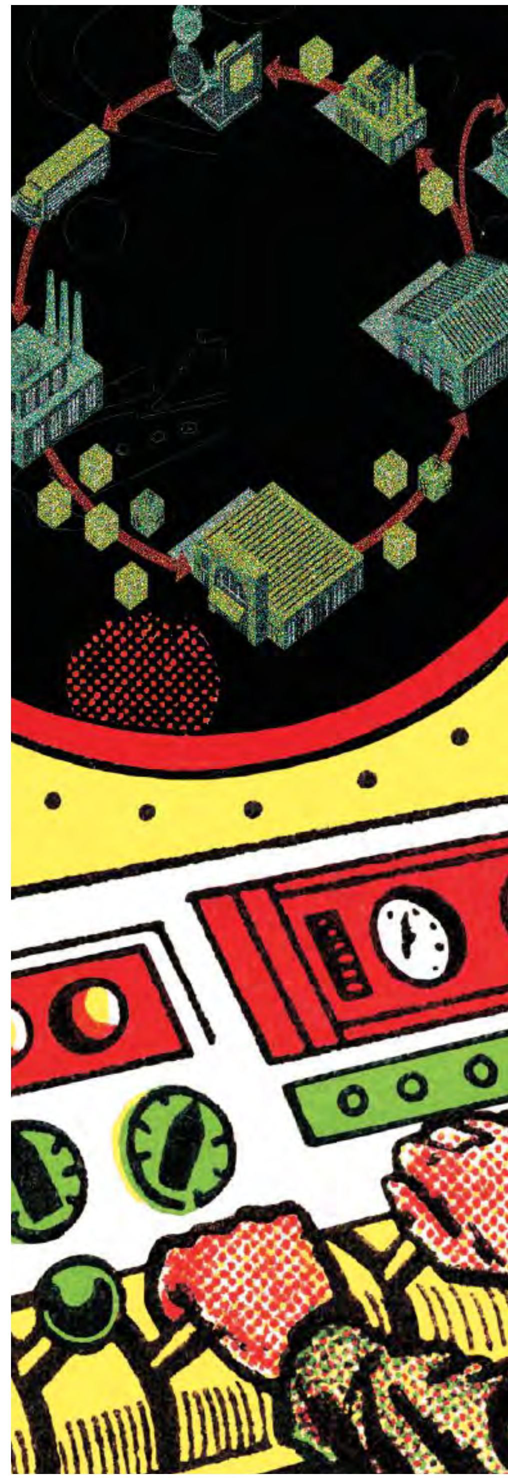
To monitor progress against its reverse logistics plan, a company needs metrics that measure the financial impact of returns on the firm and on other members of the supply chain.

Drains are similarly critical to a product supply chain. Items are taken to retail destinations for sale, but not all of it will be sold. Some will be returned, and the system has to have a way to deal with those products. If there were no drains built into the system, no way to deal with the items, the system would drown in this unwanted material. Imagine what a retail store would look like if all returned and unsold items had to stay at the shop until they were sold. The sleek and chic stores of an upscale mall would quickly look like thrift outlets.

No matter how well the system's unwanted materials disposal system is designed, there will likely be times when the drains cannot keep up with the load placed upon them. The reverse logistics system is charged with cleaning the unwanted product out of the network, and contributing as much as possible to profitability.

The products sold to the secondary market are generally being sold for far below their original cost, so it might seem strange to speak about reverse logistics systems contributing to profits. However, every additional dollar recovered is one less dollar of loss—the higher the percentage of cost that can be recovered, the better.

A company needs to have a well thought-out plan, complete with a network of secondary market partners, that will accomplish all of the following: (1) dispose of product in a timely manner,



(2) recover as much value as possible, and (3) protect brand equity.

IMPORTANCE OF METRICS

To monitor progress against its reverse logistics plan, a company needs metrics that measure the financial impact of returns on the firm and on other members of the supply chain. As part of this process, the company should develop procedures for analyzing return rates and tracing the returns back to the root causes. Measures such as amount of product to be reclaimed and resold as is, or percentage of material recycled, are examples of such metrics.

In analyzing your company's reverse logistics performance, consider tracking these metrics:

• *Disposition cycle time:* Cycle times can be an important measure of reverse logistics. The more standardized and streamlined the processes are, the shorter the cycle time should be.

• *Amount of product reclaimed and resold:* What percentage of product that moves to the reverse statistics system is reclaimed and resold? How much value is recaptured?

• *Percentage of material recycled:* This metric tracks the percentage of product in the reverse logistics stream that is recycled in an appropriate manner.

• *Waste:* How much product and other materials are moved to landfills, incinerated, or disposed of as waste? The objective is to minimize product in the waste streams.

• *Percentage of cost recovered:* Is the firm maximizing the profitability of product that did not sell well or has been returned by consumers?

• *Per item handling cost:* A cost-per-touch type of metric can be readily computed by dividing total facility costs per month by the number of items processed. This is also a valuable way to compare the efficiencies of different facilities.

• *Distance traveled:* Tracking average distance traveled per item is not nearly as simple as determining per-item-handling cost. Generally speaking, the fewer miles that can be put on an item in the reverse logistics network, the better.

• *Energy used in handling returns:* This metric is used in sustainability programs. It measure how much energy (diesel fuel, electricity, etc.) is used in the reverse logistics process.

The reverse logistics system is charged with cleaning the unwanted product out of the network while contributing as much as possible to profitability.

• *Total Cost of Ownership:* What is the total cost of ownership related to originally acquiring the product, reselling it, bringing it back as a return, and moving it through a secondary market or placing it in a landfill?

PATH FORWARD

Firms need to care deeply about how they manage product that did not sell in the primary channels. Reverse logistics is not an easy task, and many practitioners underestimate its difficulty. Good reverse logistics and returns management programs are unlikely to appear out of nowhere. Companies have to work closely with their suppliers and customers to make these processes work well.

At first glance, handling the reverse flow may seem roughly equivalent to managing the forward movement of new product moving through primary channels. However, the process is often much more difficult and the final objective is not as clear.

It is obvious that the goal of manufacturing and shipping new product forward is to get it all the way to the retailer and ultimately the consumer. On the reverse side, quality, distance traveled and the other variables mentioned earlier can determine the path backward and ultimate disposition.

The lack of uniformity in the products' physical condition makes reverse logistics all the more difficult. It entails the sorting and evaluation of product, which is typically not necessary for new product in the forward channel. Negotiations to sell the product further contribute to the complexity of reverse logistics.

The end result of all this: the reverse movement of products offers many challenges and opportunities not present with forward logistics. Companies need to spend quality management time carefully examining and constructing their reverse logistics processes. They need to work hard to manage these processes or they will experience a constant leak of profit.

A successful reverse logistics program begins with a clear objective: What do we want to accomplish through our reverse logistics efforts? Setting that objective will help the company better determine how to handle consumer returns and unsuccessful product.

As part of this process disposition options for returned product need to be identified and analyzed for cost minimization and profit maximization. Consideration also must be given to the impact or policies and procedures on the brand and potential cannibalization of sales in the primary market.

Going back to the Sears and JCPenney examples, a company can turn returns into a strength that improves its relationship with consumers. To manage the complexity that accompanies a good reverse logistics program, companies need to view it as a critical management activity. In particular, they need to apply management time and expertise required to turn a problem into a strength. Or put another way, to turn trash into cash.

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A SPECIAL SUPPLEMENT TO:

Logistics MANAGEMENT

Special Report

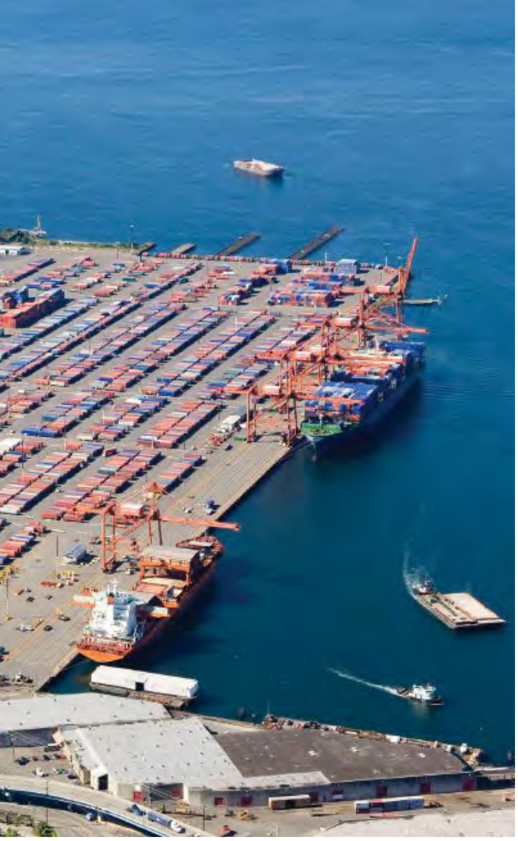
Top 30 U.S. Ports: Economies of scale in play

While ranking ports on size and container throughput is both valid and traditional, analysts contend that domestic ocean cargo gateways might also be compared by volume and value of trade as well as value-added services.

By Patrick Burnson, Executive Editor

The simple meaning of "economies of scale" is doing things more efficiently with increasing size of operation. Industry analysts agree that size of a port, in terms of traffic flow, says nothing about productivity, efficiency, or responsiveness to beneficial cargo owners. An overview of some of the U.S. ports participating at this month's International Association of Ports and Harbors in Los Angeles illustrates this point.

The Virginia Port Authority (VPA), which owns ports in Norfolk, Portsmouth, and Newport News, represents a regional hub for East Coast shippers seeking a wide range of container vessel choices. With more than 30 international lines serving the gateway today, it's well positioned to take advantage of the Panama Canal expansion in 2015.



The Port of Seattle is No. 5 on Zepol's list of Top 30 U.S. Ports by Imports of TEUs.

Top 30 U.S. Ports
(by Imports of TEUs)

	U.S. Port	2010	2011	2012
1	Los Angeles, CA	4,158,150	4,252,636	4,163,410
2	Long Beach, CA	3,181,809	3,121,986	3,032,892
3	New York, NY/Newark, NJ	2,718,176	2,783,511	2,807,932
4	Savannah, GA	1,193,812	1,209,033	1,214,391
5	Seattle, WA	1,052,523	974,038	909,603
6	Houston, TX	857,665	871,513	884,319
7	Oakland, CA	850,181	872,353	853,534
8	Norfolk, VA	765,097	769,549	840,070
9	Tacoma, WA	502,783	525,415	689,535
10	Charleston, SC	621,281	642,660	687,314
11	Miami, FL	491,156	529,483	521,665
12	Port Everglades, FL	401,201	445,791	450,133
13	Baltimore, MD	286,113	307,265	305,341
14	New Orleans, LA	186,627	224,813	212,469
15	Jacksonville, FL	159,600	184,672	190,521
16	San Juan, PR	175,026	180,553	177,355
17	Philadelphia, PA	157,645	166,774	168,011
18	Wilmington, DE	141,769	147,717	157,734
19	West Palm Beach, FL	112,533	108,777	115,617
20	Wilmington, NC	120,869	123,744	113,680
21	Gulfport, MS	110,668	113,593	104,846
22	Mobile, AL	47,021	75,787	99,102
23	Boston, MA	84,780	99,710	94,267
24	Portland, OR	79,137	90,915	71,535
25	Chester, PA	50,183	54,127	53,885
26	San Diego, CA	50,102	49,070	49,809
27	Port Hueneme, CA	18,568	18,093	46,788
28	Freeport, TX	33,724	30,149	35,959
29	Honolulu, HI	20,902	23,392	21,515
30	Panama City, FL	20,218	21,224	20,560
	All Others	106,191	96,996	87,057
	TOTAL	**18,755,511**	**19,115,337**	**19,180,848**

Source: Zepol Corporation

"We've seen growth in January, February, and March, and our year-to-date twenty-foot equivalent unit (TEU) volume is up 6.2 percent, a difference of nearly 30,000 TEUs," says Rodney Oliver, the port's interim executive director. "Given what we've seen thus far in 2013, we're optimistic about the coming months and focusing all of our energy on leveraging this port's assets to build volumes."

One notable physical asset is the VPA's 50-foot channels—the deepest on the East Coast, and capable of accommodating the largest "mega vessels" now being launched in the trade. Shippers wishing to reach inland markets in the Midwest, Ohio Valley, and the Southeast are also being attracted to the port, says Oliver. "Both Norfolk Southern and CSX offer on-dock, double-stack intermodal service," Oliver observes.

Kurt Nagle, president and chief executive officer of the American Association of Port Authorities (AAPA), notes that "keeping a balanced portfolio" helps ports of any scale stay in the game. "By providing a wide variety of shippers with customized services like those offered at VPA, our members can compete in an honest and transparent manner," he says. "Diversity wins in this marketplace."

Perishables equal profit

As the second busiest export facility in the U.S., the Port of Savannah contributes significantly to promoting U.S. businesses in the global marketplace. Last year alone, the Georgia Ports Authority (GPA) saw a 3.9 percent increase in refrigerated cargo exports, totaling nearly 108,000 TEUs.

In a recent move designed to expand the cold chain advantage, Nordic Cold Storage opened the first phase of its modern storage and blast facility, located just minutes from the port's docks. "Nordic's announcement extends our power to support Georgia's vital agricultural industry, in particular, our poultry producers," says Curtis Foltz, GPA's executive director. "The Port of Savannah handles nearly 40 percent of the nation's containerized poultry exports, supplied largely by Georgia's farms."

Meanwhile, Georgia has allocated $231.1 million toward the state's portion of the Savannah Harbor Expansion Project (SHEP). A U.S. Army Corps of Engineers study has shown that SHEP will reduce shipping costs for private companies by at least $213 million a year. "Additional studies by the Army Corps of Engineers show a 5.5-to-1 benefit to cost ratio, meaning that for every dollar spent on the deepening, the nation will reap $5.50 in benefits," says Foltz.

The channel deepening project and re-introduction of on-dock rail at the Port of Miami is also bringing in new shippers, particularly those who are targeting Latin America.

"Ongoing investment in our infrastructure will ensure that we remain competitive in a highly competitive global marketplace," says the port's director Bill Johnson.

The port's recently-released "2035 Master Plan" has earned a National Recognition Award from the American Council of Engineering Companies as part of the organization's Engineering Excellence Awards competition honor-

Top U.S. port authorities watching pending legislation with great interest

Expanding upon freight policy milestones established by "Moving Ahead for Progress in the 21st Century" (MAP-21), Rep. Albio Sires (D-NJ), introduced the "Multimodal Opportunities via Enhanced Freight Act of 2013" (MOVE Freight Act) earlier this spring.

Because it's a bill designed to ensure all transportation modes and system connections necessary to moving freight receive proper deference in freight planning, port spokespeople are applauding the effort.

Furthermore, the bill establishes a competitive grant program critical to ensuring that projects essential to moving freight receive proper investment. Co-sponsoring the bill are long-time freight advocates Representatives Earl Blumenauer (D-OR), Adam Smith (R-WA), Corrine Brown (D-FL), Janice Hahn (D-CA), and Grace Napolitano (D-CA).

"MAP-21 put freight planning on the map, but there is still work to be done," says Coalition for America's Gateways and Trade Corridors (CAGTC) Chairman Mortimer Downey. "The MOVE Freight Act would ensure all modes carrying our nation's freight receive full attention in the development of a national plan, and it would also establish a competitive grant program to assist in financing worthy goods movement projects."

The legislation ensures the various and essential modes of our freight network are accounted for and emphasize four key tenets, including:

• **Identification of freight as a national priority:** According to U.S. DOT, U.S. freight shipments will more than double between 2013 and 2040 to roughly $39.5 trillion annually, with an estimated $10.3 trillion worth of goods using multiple modes of transportation each year.

• **Inclusion of multimodal transportation infrastructure in the national freight network:** The National Freight Network established by MAP-21 calls for the designation of 27,000 centerline miles of roadways essential to freight movement serves as a target for state investment. The MOVE Freight Act calls for 27,000 miles of critical freight corridors, to include roadways, freight rail, navigable waterways, inland ports, seaports, freight intermodal connectors, airports, and aerotropolis transportation systems.

• **Requirement that states create state freight plans:** The MOVE Freight Act requires states to develop state freight plans, which are critical to the development of a well informed and effective national freight policy. These plans stretch the effectiveness of network investment by assisting in the identification of high-return investments.

• **National freight infrastructure investment grants:** Establishes a competitive grant program to provide financial assistance for capital investments in freight transportation infrastructure to States, political subdivision of States, government-sponsored authorities and corporations, and the District of Columbia. U.S. port authorities maintain that the nation's freight network has many needs that continue to go unaddressed. Without the ability to move goods expeditiously, U.S. global economic competitiveness will suffer.

"Objectives outlined in this bill fit squarely with the multimodal strategy that CAGTC has been promoting since 2001," says Paul Hubler, director of community and government relations for Southern California's Alameda Corridor-East Construction Authority and member of the CAGTC Board of Directors.

Hubler adds that freight congestion and delay continue to afflict communities and stymie American businesses, causing losses our economy cannot afford in its "fragile" state. "It's time to get our freight moving while protecting communities, and I believe that the MOVE Freight Act is the next logical step to improving our multimodal network."

—Patrick Burnson is Executive Editor of *Logistics Management*

ing projects that demonstrate exceptional achievement in engineering.

Geography also seems to favor Miami. The "Cargo Gateway to the Americas" is the closest East Coast port to producers of winter fruits and vegetables in Central and South America. "Miami truly is a natural entry point for perishables, and it is our goal to become shippers' preferred entry point," says Johnson.

"By providing a wide variety of shippers with customized services like those offered at VPA, our members can compete in an honest and transparent manner. Diversity wins in this marketplace."

—Kurt Nagle, president and CEO of the American Association of Port Authorities (AAPA)

Nice niche

Florida's Port Canaveral is becoming recognized as a modest "niche" gateway for importers of perishables as well. Citrus concentrate from Brazil and deciduous concentrates from Argentina and Chile are major commodities here.

Cargo tonnage has new record high of 4.55 million, and Canaveral has recently begun regularly scheduled cargo service to the Caribbean. "Recent funding for new cargo facilities will accelerate our current growth and potential," says John Walsh, Port Canaveral's interim CEO.

Growing pains are part of the happy problems being dealt with at a similar small port on the West Coast. Instead of trying to compete with huge container operations on the scale of neighboring Port of Oakland, Stockton is expanding its niche role as a bulk cargo specialist serving the agriculture and construction industries of California's Central Valley and beyond.

Efforts have had a considerable boost by the introduction of Swire Shipping's new IndoTrans Asia liner service, which provides a multipurpose breakbulk and containerized service linking Southeast Asia and Papua New Guinea to the Pacific Islands as well as key ports on the West Coast of Canada and the U.S.

The service operates a fleet of three sister vessels—*Pacific Adventurer*, *Pacific Explorer*, and *Pacific Voyage*—on a 30-day frequency. The vessels are designed to carry dry containers, reefers, conventional breakbulk, heavy-lift and project cargo. "That regular monthly scheduled service will open a lot of doors for the Port of Stockton," says port director Richard Aschieris. "It will also enable freight forwarders in the region to become more fully acquainted with markets in East Asia and the South Pacific.

Paul Rasmussen, CEO of Zepol Corporation, a leading trade intelligence resource, says Stockton and Canaveral have the economies of scale to compete with even the biggest gateways. "Both ports bring in a good mix of commodities as well as specialty goods that larger ports might not be able to handle as well," he says. "Chemicals and oils are just a few examples."

Regional collaboration grows

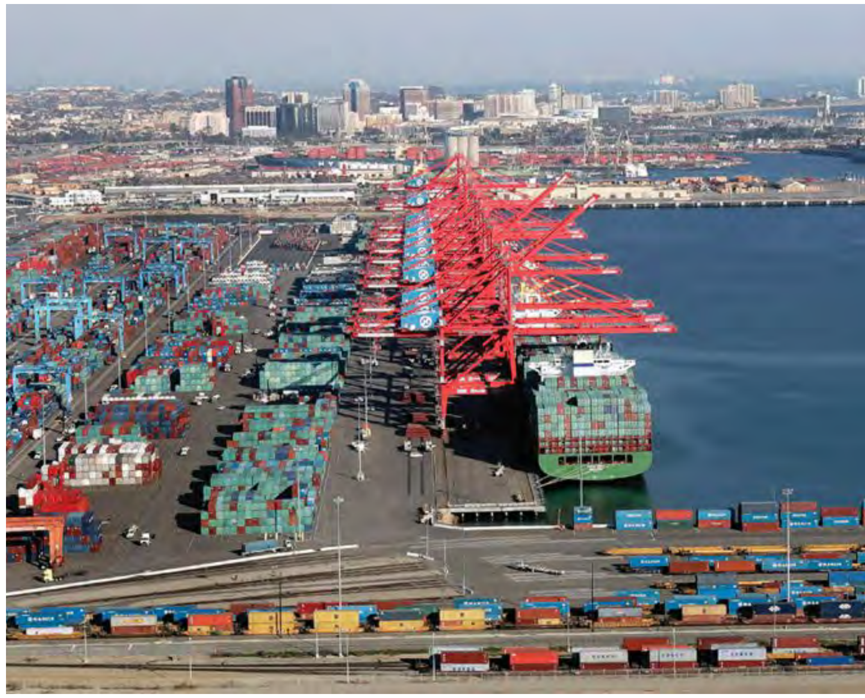
Regional rivals can also be friends—especially when competing against a foreign nation for freight and market share. The Ports of Seattle and Tacoma have made peace as they engage in a joint marketing campaign to compete against Canada's Port Prince Rupert and Vancouver.

Tay Yoshitani, the Port of Seattle's CEO, recently joined port commissioners in a series of discussions with Central and Eastern Washington agricultural producers. Their mission: to update shippers on the shifting patterns of global trade. "The port is also seeking to learn where it can assist in removing logistical and policy barriers that inhibit commerce," he says.

The series of export roundtables provided the port with an opportunity to share its "Century Agenda" vision for growth and discuss the need for statewide transportation investments for freight mobility that will facilitate the flow of exports. "Our Century Agenda strategy charts significant growth for the port over the next 25 years, and we need to know what more we can do to support global trade," says Port of Seattle Commission President Tom Albro.

Seattle was the outbound port for more than 75,000 containers TEUs of hay last year. Meanwhile, the state's agricultural businesses exported $8.6 billion in farm products in that year. The other major export category (timber, lumber, paper, and other forest products) accounted for another 135,000 containers exported through the port.

Educating shippers and enlisting their support for federal legislation reform is also high on the agenda for Washington's ports. Joining Seattle in its resistance to the Harbor Maintenance Tax on imports is the Port of Tacoma, which is also seeking to "level the playing field" with Canadian ports that do not have to pay for dredging.



The Port of Tacoma is No. 9 on Zepol's list of Top 30 U.S. Ports by Imports of TEUs.

"While the Panama Canal expansion should have us concerned about East Coast ports in the future, we have to keep on eye on the competitive forces here in the Pacific Northwest," says John Wolfe, CEO of the Port of Tacoma.

Double-digit growth in both imports and exports propelled a 16 percent gain in the Port of Tacoma's 2012 container volumes. Breakbulk cargo volumes ended 68 percent higher for the year, while the port handled 1.7 million TEUs, marking its best year since 2008.

"Our intermodal lifts grew 30 percent, reflecting the port's growing container volumes," says Wolfe, who also notes that the tonnage improved almost 4 percent to nearly 18 million tons last year."

In the meantime, full-containerized imports improved more than 27 percent for the year to 611,085 TEUs, bolstered by strong demand for auto parts, furniture, toys, and sporting goods. Agricultural products and bulk commodities like scrap paper helped push full export container volumes up almost 22 percent for the year to 457,078 TEUs.

Tacoma's 2012 container volumes reflect the addition of the Grand Alliance deployment with its associated carriers, as well as significantly stronger volumes from established customers. The carrier consortium—comprising Hapag-Lloyd AG, Nippon Yusen Kaisha, and Orient Overseas Container Lines—helped increase container vessel calls by 10 percent.

The trends signaled in this feature—while U.S.-centric—are surfacing in data gathered by both the AAPA and IAPH, say analysts.

"It's interesting to note that the volume and value quotient for ports worldwide is becoming a competitive factor," says Rasmussen of Zepol. "Our ongoing search for data reveals that ports worldwide are looking for any and all special services to gain an edge. The performance of the top U.S. ports clearly reflects this."

—Patrick Burnson is Executive Editor of *Logistics Management*

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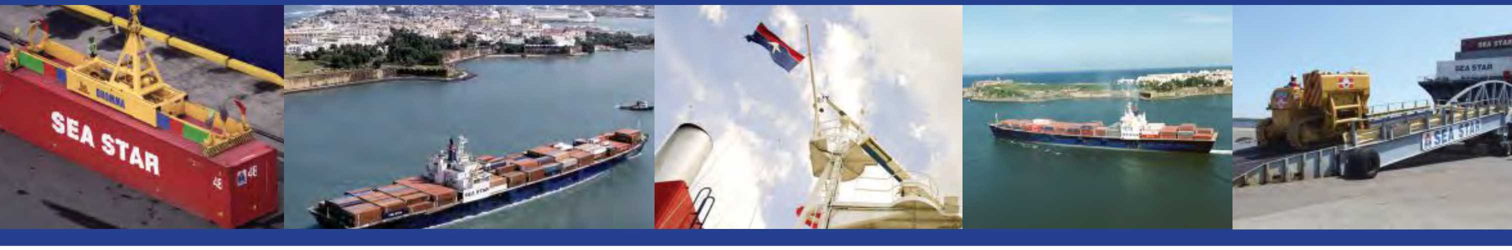

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Pacific Rim Report

By Patrick Burnson

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

Ports of LA/Long Beach address air quality

WITH THE GLOBAL SHIPPING INDUSTRY showing increased interest in the use of liquefied natural gas (LNG) as a fuel for vessels, members of the International Association of Ports and Harbors (IAPH) are laying the groundwork for how ports worldwide can accommodate this emerging trend.

LNG will be the focus of technical committee and panel discussions at IAPH's 28th World Ports Conference this month in downtown Los Angeles. It's generally expected that by 2015 a number of progressive shipping lines will have LNG-powered vessels in their fleet, presenting a challenge for ports and shipping lines worldwide.

Some vessels today are already LNG-powered and more are on order. According to a recent study from the Danish Maritime Authority, the current use of natural gas on the high seas is expected to increase by 140 percent by 2020. Analysts add that using LNG instead of conventional fuels offers substantial environmental benefits in comparison to conventional fuels. Sulfur and particle emissions would be reduced to almost zero, nitrogen oxide emissions by 85 percent to 90 percent, and net greenhouse gases by 15 percent to 20 percent.

Overall, LNG is a cleaner, more cost-competitive fuel, and it meets the upcoming 2015 International Marine Organization emissions regulations. And recognizing it as the ship's fuel of the future, ports are preparing to offer safe storage and bunkering of LNG for shipping lines in or near their port areas.

Focusing on the use of LNG as a marine fuel, an "LNG Fuelled Vessels Working Group" has been established under the auspices of IAPH's World Ports Climate Initiative (WPCI). This working group is tasked to develop guidelines on safe procedures for LNG bunkering operations, providing ports around the world with an implementation guideline if they wish to pursue this technology.

Among the active participants in the group are representatives from the Ports of Los Angeles and Long Beach. Southern California ports are leading the way on the "clean trucks" front, too, as the IAPH seeks to establish new global standards for drayage. And in a precedent setting move made last month, the South Coast Air Quality Management District approved contracts for a zero emissions truck demonstration project along a one-mile stretch of Alameda Street leading out of the Port of Long Beach.

While this project will take about three years to complete and cost approximately $16 million, it may demonstrate the viability of transporting goods using zero emissions trucks and provide a starting point for a future zero emissions transportation corridor out of the port.

The project will also use hybrid catenary trucks—vehicles that run along an overhead system of electrical wires, but are also able to run on either diesel, compressed natural gas, or a battery system. These types of vehicles, say experts, can eliminate diesel emissions while connected to the electrical system, but can also travel outside the system to haul freight.

The payoff for shippers? Existing voluntary emission reduction commitments for nitrogen oxides, sulfur oxides, and PM2.5 in the Clean Air Action Plans in Southern California will serve as a model for other ocean cargo gateways worldwide as the overall business of moving freight actually does become more sustainable. □

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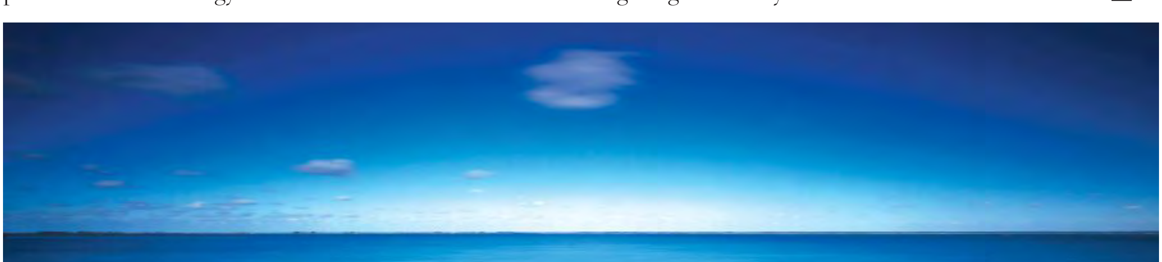


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