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February 2008 • Vol. 28 • No. 2

INBRIEF

6 10 TIPS Clearing customs qui

Clearing customs quickly and efficiently.

10 TRENDS

ProLogis and Wal-Mart take green lead...The best and worst U.S. roads

14 GLOBAL LOGISTICS

DPWN launches green fleet... Dubai e-freight program takes off... CEE express and parcels industry primed for growth

- **74 WHITEPAPER DIGEST**
- **76 TECH UPDATE**
- **78 NEW SERVICES**
- 88 LAST MILE: AMERICAN CHEESE



INFO

- **68 WEB_CITE CITY**
- **80 CALENDAR**
- **82 CLASSIFIED**
- **84 RESOURCE CENTER**

INPRACTICE

8 READER PROFILE Kathy McCurry's Wild New Ride

As president and founder of Classy Rider Apparel, Kathy McCurry makes motorcycle jackets with mainstream appeal.

60 LIT TOOLKIT Solving the Cube

Faced with rising diesel costs and capacity utilization concerns, tissue manufacturer SCA Tissue North America wipes up excess costs with Ortec's load optimization software.

Bonus Coverage: Load Optimization Buyer's Guide

65 DC SOLUTIONS

Quenching the Thirst for Enhanced DC Design

Matching DC network design with sophisticated materials handling technology helps product flow for Southern Wine and Spirits of America.

INDEPTH











26 Most Likely to Succeed

From distance-learning programs to logistics certification short courses, undergraduate survey classes to doctoral research, supply chain students are building their skill sets in the classroom and on the job.

33 SPECIAL ADVERTISING SECTION Career Solutions
Resources to help further your logistics education and career.



February 2008 • Vol. 28 • No. 2

INSIGHT

4 CHECKING IN

The importance of logistics and supply chain training, in the classroom and on the job, isn't a matter of pride—it's sound business practice.

16 VIEWPOINT

Returns management represents a significant source of untapped profitability.

18 3PL LINE

U.S. consumer demand patterns make the need for qualified logistics professionals capable of providing and coordinating stateside distribution as significant as ever.

20 RISKS & REWARDS

Targeted security measures can help minimize truck theft and secure insurance coverage.

22 IT MATTERS

Adopting a Software as a Service (SaaS) technology approach creates better rules for supply chain engagement.

24 ECODEV

Intermodal terminals are critical entry points into global supply chains.

Tuned Up: Priming Automotive Logistics For Peak Performance

Swelling fuel prices, snowballing government regulations, and mounting labor and component costs are challenging automakers to an extent unparalleled within the past three decades. To account for these factors, manufacturers are focusing more attention on driving visibility and collaboration among component suppliers.



53 SNAPSHOT Electronics: Anticipating High-Tech Demand

When new electronics hit the consumer market, fickle demand and unpredictable lifecycles place a premium on fine-tuning supply chain responsiveness. By necessity, consumer electronics manufacturers are forging new paths for sourcing, production, distribution, and logistics best practices.















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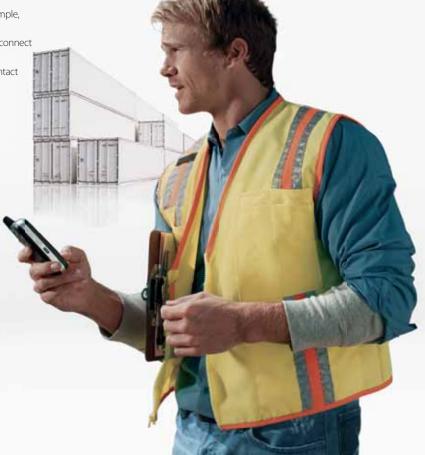


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CHECKINGIN





Training Daze

he importance of logistics education is often overlooked and underrated, not only here in the United States, but abroad as well. A reader alerted me to a *Financial Times* article skewering the state of logistics training in the United Kingdom: "Poor productivity and high staff turnover in the UK's logistics industry are undermining the competitiveness of business," says the article. If you extend these failings to the global world we all compete in, Britain's global competitiveness is at stake as well.

Mick Jackson, the director of Skills for Logistics, a UK-based training firm, puts it this way: "The logistics industry is at the heart of the economy. Yet almost half the workforce falls below level two in qualifications. For the fifth largest sector of the fifth largest economy in the world, this is not something to be proud of."

Jackson notes that improved training helped DHL Aviation recoup \$787,798 in savings by reducing turnover (66 percent) and boosting productivity (12 percent). Winfield Transport, a regional carrier, reduced accidents, fuel expenditures, and insurance premiums with a similar approach. Aggregating these individual company wins across a country's economy can provide a crucial competitive differentiator.

The situation is better across the pond in the United States, as the importance of logistics and supply chain training and education – in the classroom and on the job, abroad and at home – is magnified as technology, strategy, and rules of engagement rapidly evolve. It's why *Inbound Logistics* has produced an annual education issue for nearly two decades. As business trends fluctuate, our two-fold approach remains fixed: focusing on the strategic benefits of demand-driven logistics practices; and stressing the tactical importance of hands-on logistics training from high school to on-the-job edification.

This issue's cover story, *Most Likely To Succeed (p. 26)*, presents five vignettes of logisticians who are tapping distance-learning programs, certification courses, and undergraduate and post-graduate curricula to engage, and in some cases, re-engage new frontiers in learning.

I remember the days when logistics learning opportunities were scarce. Today, many schools and companies specialize in supply chain training and education. You'll find our Career Solutions section (*p. 33*) a great resource for researching education and career opportunities.

Finally, individual empowerment is exponentially increased when you have a good team. An emerging pool of experienced and disciplined talent from the U.S. military can make your team better. That's why we are sponsoring a few reminders in this issue to hire a Gulf War veteran if you can.

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Clearing Customs Quickly and Efficiently

requires technical knowledge and respect for procedure, as well as an ability to understand the game, speak the language, and build good relationships throughout the supply chain. Mike McCarron, managing partner, MSM Transportation, offers 10 tips for fast, reliable customs clearance.

When you ship globally, you can't control every link in the chain. So designate one person in-house to create your company's customs compliance procedures. Write them down and communicate them well. It's a big job, but failing to account for even small details can lead to delays and extra costs.

Make someone accessible 24/7. Crossing borders may mean crossing time zones, and problems don't always occur during office hours. Who at your company is ready 24/7 to deal with problems as they happen? A fast response can save you days.

you almost need a PhD from MIT to understand government agency programs. Being patient and learning which programs suit your company

and industry can go a long way toward speeding shipments and communicating clearly with transport providers.

Cross-training is crucial. What happens when your "customs expert" comes down with the flu? Crosstrain your staff so someone who knows your system and speaks the language is always available.

Use IT. You can clear customs by filling out a form, but it's not suggested. Technology provides measurable competitive advantages, not to mention lower costs.

Don't cheat the system. Never try to save time or money by pulling a fast one on any customs or government agency. The penalties and scrutiny can punish your company for years. It's not worth it.

Pay on time. Nothing slows down an expedited shipment at the border like a past due notice from your customs broker. Customs brokers make a living managing your money, and have your freight as collateral. They can bring that shipment to an instant stop at the border. It's like running into a goal post with your head down.

Work with the best. Thickening global borders drive transportation companies to constantly monitor changes in customs policies and procedures. How do they demonstrate that knowledge and commitment? Are they able to help you understand how to clear freight efficiently? Do they use third parties to manage the clearance process? Do they respond to your questions with a blank stare or informed reply? It's your freight, reputation, and compliance record on the line. Don't get caught in the middle.

Savings begin after the deal is done. The more closely you work with your transportation company or customs brokers, the more cost you can drive out of the system.

Customs compliance may require personnel, training, and IT investments. Be ready to explain the ROI to your managers. Companies invest in manufacturing techniques and equipment to reduce costs, only to have those gains wiped out by customs penalties and delays. Cash flow can be crimped and production lines slowed because shipments are held up. These are the real costs of poorly managed customs procedures.



No scheduling problems here. All logistics are planned, routes are plotted and trucks are readied long before your shipments hit the road. And while en route, your fleet operation is always visible and your drivers are well-informed, thanks to the most complete supply chain technology solutions around, featuring versatile mobile computers and wireless networks. It's just another way Motorola puts Enterprise Mobility in the palm of your hand. HELLOMOTOTM

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by Merrill Douglas

READER PROFILE



NAME: Kathy McCurry

TITLE: President and founder

COMPANY: Classy Rider Apparel

PREVIOUS EXPERIENCE:

Print traffic coordinator, BBDO; project manager, Kennedy Research: associate research director, NW Ayer; director of research and strategic planning, J. Walter Thompson; brand research manager, MCI Business Markets Corp.; independent market research consultant. The Sounding Board.

EDUCATION:

BS in business administration, marketing, University of Denver, 1981; American Association of Advertising Advanced Studies, Northwestern University, Chicago, 1988; Mu Kappa Tau, Honorary Marketing Fraternity.

Kathy McCurry's Wild New Ride

ore people would swap their cars for motorcycles if only they knew what to wear. That's the premise behind Classy Rider Apparel, a business that makes motorcycle jackets with mainstream appeal.

In the five years she has been running Classy Rider as a one-woman operation, Kathy McCurry has learned to manage suppliers in China, coordinate the flow of components for final assembly, transport finished goods to the United States, and market her product to customers at motorcycle rallies and through her Web site. Now she's embarking on a new supply chain challenge: distributing to numerous small retail shops.

The idea for Classy Rider occurred to McCurry when she bought a motorcycle to add some zip to her life as a market research consultant. Riding to client visits, she soon found that biking and business didn't mix.

"I could not find many apparel options for the motorcycling crowd that fit well with the office lifestyle," she savs.

Further research revealed that many executives, professionals, and small business owners ride motorcycles for fun, but not for general transportation. Changing from black leather or other riding gear into office clothes and back again is too inconvenient.

So McCurry launched her business, working with designers in New York, suppliers in Hong Kong, and factory operators in several Chinese provinces.

Communication has posed a major challenge. For example, the woman in Hong Kong who supplies reflective tabs and arm bands to McCurry speaks English, but the supplier who provides the jacket linings does not. "I have to ask the English-speaking supplier to walk to his office and tell him what I want," McCurry says.

The Bia Questions

What do you do when you're not at work?

I read a lot. I also ride motorcycles with my husband. We head out into the countryside, eat at a nice restaurant, then head back. I often participate in charity rides. I don't think of myself as a biker chick, but I enjoy rides for a good cause.

Ideal dinner companion?

Leonardo da Vinci or Thomas Jefferson.

What's in your saddlebag?

Some tools; a few magazines to read while eating lunch; sunglasses; and gloves.

First Web site you look at in the morning?

I go to Inc.com for inspiration and ideas, and CEOExpress.com for helpful resources. Then I check my horoscope.

If you didn't work in supply chain management, what would be your dream job?

Glass-blower.

Despite her best efforts to stay in touch with supply chain partners, a communications snafu nearly leveled the business in fall 2006. That's when the plant that assembled the jackets stopped shipping product and did not respond to McCurry's calls and emails.

It was peak season, customer demand was on the rise, and McCurry had only 17 jackets in stock. "I had to fly to China, find a new factory, and figure out what happened to the nonresponsive factory," she says.

"As it turns out, my order was too small for the factory floor, but too big for the sample room. So the supplier did nothing," McCurry says. "That's why communication is so critical."

If factory officials had only asked her to increase her order, she'd have done so gladly. "But I had no idea," she says.

Having recovered from that crisis, McCurry is developing a new role as wholesale supplier to bike shops and motorcycle apparel stores. Unlike large retailers, these businesses don't order months in advance, and many don't know how to anticipate demand.

"Bike shops place an order when they need a product, then want it delivered the next week. I have to try to anticipate demand, produce the jackets, then sell them," McCurry

Besides building up the enterprise, McCurry has her eye on a wider business mission: getting motorcycle owners to ride every day. Biking to work would save them money on gas and help the environment.

"Through the apparel, I would like to help people see the motorcycle as a transportation option," she says.



TRENDS

NEWS & EVENTS | SHAPING THE FUTURE OF LOGISTICS

by Joseph O'Reilly



Greening the World One Facility at a Time

he push for green compliance is slowly permeating the logistics sector as businesses find greater incentives for designing and constructing distribution and retail facilities with sustainability guidelines in mind.

As an example of this emerging trend, ProLogis, the world's largest owner and developer of distribution facilities, recently introduced a directive mandating that all new developments in the United States comply with environmental standards established by the U.S. Green Building Council (USGBC), a nonprofit building industry group that promotes sustainable development.

The initiative, which began in January 2008, includes all new projects currently in the design or planning stage, as well as future expansions. As part of the program, the developer registers each building with the USGBC to be considered for LEED (Leadership in Energy and Environmental Design) certification-the U.S. standard for environmentally responsible construction.

"We have made significant strides with sustainable warehouse design and construction, and are utilizing best practices at our projects around the globe," says Walt Rakowich, president and COO of ProLogis.

"By incorporating design elements for LEED certification in all our new distribution spaces in the United States, we help to extend the lifetime of our buildings, ensure they perform to the highest standards of environmental

Following a precedent already used at UK DCs such as Sainsbury's, ProLogis has mandated that all of its new U.S. facilities comply with environmental standards.



TRENDS

《 CONTINUED FROM PAGE 10

construction, and provide our customers with distribution facility options that further their own sustainability agendas," he adds.

Currently, ProLogis has 3.5 million square feet under design or construction in the United States for which it is pursuing LEED certification. The company anticipates similar development activity in 2008 compared with last year, when it began new projects totaling more than 11 million square feet and 39 buildings.

"We see a growing preference among customers to lease space in buildings that have been developed with environmental efficiency in mind," observes Jack Rizzo, managing director of global construction for ProLogis. "Through good design standards, ProLogis' facilities already receive more than half of the credits required for basic LEED certification and we are confident our new sustainable warehouse construction guidelines will help secure the additional credits needed."

"We anticipate this initiative will not only prove to be a successful experience for the company and our customers, but will drive further change throughout the real estate industry," he adds.

Meanwhile, leading retailers such as



Building on the success of its High-Efficiency store prototype, Wal-Mart's new second generation series increases energy efficiency by five percent with a streamlined water-source heating, cooling, and refrigeration system design.

Romeoville is designed to reduce greenhouse gas emissions and use 25 percent less energy than a typical Supercenter. The Romeoville store is the first of four to open this year.

The HE.2 design features many of the energy improvements from the sustainable future for our company and our customers."

The five-percent improvement in energy efficiency over the HE.1 stores comes from a streamlined design of water-source heating, cooling, and refrigeration systems, coupled with a new secondary refrigeration loop. This is the first time this technology has been paired with a water-source system. The HE.2 store components include:

- 100 percent integrated watersource format heating, cooling, and refrigeration system, where water is used to heat and cool the building.
- A secondary refrigeration loop that reduces refrigerant by 90 percent.
- Motion-activated, light-emitting diodes (LEDs) in refrigerated and freezer cases, plus additional glass doors on deli and dairy cases.
- A pump package that is 50 percent smaller than in the HE.1 store.
 - Daylight harvesting technology.
 - A reflective white membrane roof.
- Recycled construction materials such as fly-ash and slag.

Wal-Mart's second-generation High-Efficiency prototype store is designed to **reduce greenhouse gas emissions** and use 25 percent less energy than a typical Supercenter.

Wal-Mart are making efforts to build footprints that are equally attuned to emerging environmental compliance standards. The Bentonville, Ark.-headquartered company recently opened an eco-friendly store in Romeoville, Ill., to kick-start a long-term effort at building "greener" stores.

Wal-Mart's second generation High-Efficiency prototype (HE.2) store in first generation High-Efficiency (HE.1) series as well as new technologies.

"We've taken the most efficient prototype in the retail industry and made it even better by incorporating some of the most innovative products in building today," says Eric Zorn, president, Wal-Mart Realty. "We hope to continue making our stores even more efficient and share our learning with the world, as we work toward a more

Grading U.S. Roads

reight shippers hugging the centerline prefer towing in the Lone Star State more than the bayou. Texas, Florida, Tennessee, Virginia, and Ohio are among the top states for road quality, according to *Overdrive Magazine's* 17th-annual Highway Report Card. On the other end of the divide, Louisiana, Pennsylvania, Oklahoma, California, and Arkansas are sorely lacking in quality infrastructure. The survey polls more than 375 owner-operators with an average of more than 20 years in the industry on several different criteria.

Louisiana, named the state with the nation's worst roads for the second consecutive year, continues to recover from hurricanes Katrina and Rita. Meanwhile, all-time worst offender Pennsylvania, which has topped the Worst Roads category for 12 of the survey's 17 years, ranks second in terms of both worst and most-improved roads.

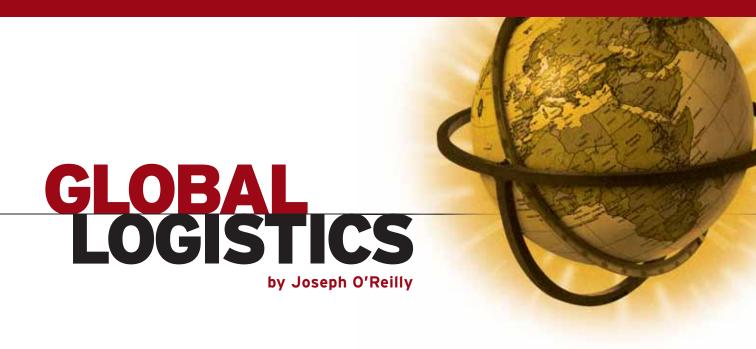
Texas tops more lists than any other state, ranking first in best roads, most available overnight truck parking, best truck stops, and best four-wheelers. Tennessee's 450-mile segment of I-40 ranks as the best segment of road for the second year running.

ADDITIONAL SURVEY HIGHLIGHTS:

- Most respondents report road rage increased during the past year, with 31 percent saying it increased significantly.
- New York beat out California for the honor of having the worst automobile drivers; Texas again had the best drivers.
- Alabama continues to have the weakest truck inspections and law enforcement; California has the toughest.



WORST SEGMENT 1. I-10 Louisiana 2&3. I-40 Oklahoma tied with I-80 Pennsylvania 4. I-40 Arkansas 5. I-5 California **BEST SEGMENT 1.** I-40 Tennessee 2. I-75 Florida 3. I-10 Texas 4. I-81 Virginia 5. I-80 Ohio **MOST IMPROVED SEGMENT 1.** I-40 Arkansas 2. I-80 Pennsylvania 3&4. I-30 Arkansas tied with I-10 Louisiana 5&6. I-75 Georgia tied with I-44 Missouri **WORST FOUR-WHEELERS 1.** New York 2. California 3. Illinois 4. Florida 5. Texas **BEST FOUR-WHEELERS 1.** Texas 2. California 3&4. Wyoming tied with Tennessee 5. Minnesota



CEE On Express Track

hile many eyes remain fixed on Far East sourcing and offshoring activities, Central and Eastern European (CEE) countries are stealing glances as steady growth in logistics investment and development continues. The logistics industry in CEE and Russia is expected to grow rapidly over the next five years, according to recent Datamonitor research, with nominal logistics and warehousing spend to reach \$369 billion by 2012. This growth will primarily be driven by fast growing domestic markets as well as increasing commercial exports.

One area where funding and development remains rampant is the express

and parcels business, reports the London-based think tank's *Central* and Eastern European Express Outlook report.

The CEE's \$3-billion express and parcels market has grown rapidly as further consolidation increases competitiveness. The industry is expanding at a faster pace than Europe at large thanks to rapid investment in transportation and IT infrastructure.

Despite overwhelming promise, this transport niche still has some obstacles to overcome. Notably, CEE and Russia's express/parcels market is characterized by considerable differences between countries in terms of industry verticals,

levels of e-commerce and home deliveries, preferred service options, and degrees of development.

One market segment yet to reach full potential is the business-to-consumer (B2C) sector, which is one of the least developed in Europe. Cashon-Delivery (COD) is still the norm, as the development of online and mobile payment solutions remains tenuous. This is a problem in most CEE countries that also impacts cross-border B2C deliveries. Despite these problems, the popularity of e-commerce and rising domestic consumption is expected to make the B2C market sector a long-term growth driver.



Increasing investment in and development of transportation infrastructure across modes will also likely complicate the international side of the express market that is still dominated by integrators such as DHL, TNT, UPS, and FedEx. Smaller providers with niche service and industry expertise are strengthening their positions and competing for more market share.

"The domestic markets are still

predominantly controlled by the incumbent post offices and local players offering relatively cheap services," observes Erik van Baaren, Datamonitor express analyst and author of the study. "However, as the CEE region's economies develop, and service quality and value-added services become more important selection criteria, this segment could become a more heavily contested marketplace."

DPWN Introduces Green Fleet

Following in the carbon-less wake of U.S. "green movers" such as UPS and FedEx, Bonn, Germany-based Deutsche Post World Net (DPWN) recently announced plans to pilot hybrid trucks in its European operations.

At the World Mobility Forum in Stuttgart last month, Andreas Renschler, member of the board of management of Daimler AG and head of Daimler Trucks, delivered the first two vehicles, a Mercedes-Benz Atego BlueTec Hybrid and a

Mitsubishi Fuso Canter Eco Hybrid, to DPWN. The go-ahead for the largest fleet test in the company's history initially includes DHL Express activities in the United Kingdom as well as mail transport in Germany.

"With this initiative we are underlining our technological leadership in the sector and showing that we are serious about our environmental responsibilities," says Christian Stiefelhagen, member of the board responsible for transport and mail centers within the mail division of DPWN. Daimler and Deutsche



Andreas Renschler hands over the key for the hybrid truck from Mercedes-Benz to Christian Stiefelhagen.

Post anticipate that the two 7.5-ton vehicles, which run on hybrid diesel-electric engines, will use up to 20 percent less fuel than conventional gasoline or diesel vehicles while also reducing CO2 vehicle emissions.

DPWN is currently working on a comprehensive climate protection program for its entire group. One point of focus is the use of alternative drives, such as electric, gas, and hybrid engines. With its DHL Innovation Center, opened in March 2007, the company hopes to further develop ecologically sound logistics solutions. The center provides a site and forum where researchers and developers from all over the world can exchange knowledge and design practical innovations for global use.

Dubai E-freight Initiative Takes Off

mirates SkyCargo has signed a memorandum of understanding (MoU) with Dubai customs as part of a global initiative to reduce paperwork and expedite the movement of goods in the air cargo supply chain.

The agreement supports greater use of electronic correspondence in transactions between the carrier, Dubai customs, and several other supply chain partners, which allows clearances to be electronically transmitted.

Additionally, the program allows importers and exporters to perform 51 customs transactions electronically without having to physically visit customs centers.

The new electronic environment provides shipment monitoring and tracking from country of origin through all destinations en route to Dubai.

"Such an initiative, when fully implemented, will allow a more fluid flow of legitimate goods through air and sea borders, thus eliminating potential bottlenecks. Given the current and projected year-on-year growth in Dubai, we are sure to realize the benefits quickly," observes Ram Menen, Emirates divisional senior vice president cargo, who signed the MoU on behalf of the airline.

In addition to the environmental benefits of reducing paperwork, and the fees historically involved in air cargo movement, the use of e-freight processes also reduces costs, thereby improving modal competitiveness.

Warren Sumner is vice president of marketing and products for ClearOrbit. 800-324-5143 • www.clearorbit.com

VIEWPOINT

by Warren Sumner



Reverse Logistics: It Pays to Do It Right

eturns management and reverse logistics represent a significant source of untapped profitability for many organizations. Specifically, reverse logistics is rapidly emerging as a core driver of competitive advantage and financial performance among leading manufacturers, according to a recent Aberdeen Group report, Revisiting Reverse Logistics in the Customer-Centric Service Chain.

Optimizing reverse logistics operations also can increase customer loyalty and retention, boost revenue, and improve product uptime and quality, states the report, which estimates overall reverse logistics costs at \$100 billion annually in the United States.

UNWANTED PRODUCTS

The true volume of reverse logistics lies in industrial-grade returns that add up to more than \$50 billion a year. Most of these goods have never been used, are not in need of repair, and are available for immediate resale. The products tend to be grossly overstocked for various reasons and returned because the distributor doesn't want to keep them in inventory.

Many companies are wholly unprepared to take such items back, and forward-focused workers are often uncertain about what to do with perfectly good items, often in mixed lots, that are returned by the truckload.

If a company's operations and systems are unprepared to accept these items, they are often stored within the depths of a warehouse, only to be discovered at a later date during physical inventory counts. For items with expiration dates, this is avoidable waste.

The goal of any organization is to recover inventory for forward sales as soon as possible. Managing products through reverse logistics, however, is a data management challenge. It takes 12 steps to process inventory through reverse logistics management for every one step required in forward logistics, says AMR Research. Further, improperly handled returns reduce net profits by 35 percent, note Gartner Research analysts. So it pays to get reverse logistics right.

A new category of returns management software is emerging that can provide the visibility, automation, and reconciliation required to effectively drive costs out of the returns stream.

Automating reverse logistics with a Web interface that demands a Return Material Authorization (RMA) and compliant label before any return, for example, can save 50 to 70 percent over a live call center, Gartner Research reports. In turn, setting up an entirely Web-based RMA system that links directly to a company's ERP can save 50 to 80 percent over pre-printed return labels.

HIDDEN COSTS

Recovering returned good-as-new products can have a dramatic impact on a company's bottom line. This opportunity is even greater when you consider that many other reverse logistics costs—claims processing, write-offs, freight charges, and credit reconciliation—are hidden throughout the organization, and not the responsibility of any one department or executive.

Therein lies the crux of the problem. Because no single department or executive owns the entire cost of poor reverse logistics, no one is held accountable for assembling the resources necessary to solve the problem. These costs typically merge at the CFO's desk, but because they hit so many different line item accounts, the CFO doesn't recognize the root cause.

To address this problem, some companies are giving reverse logistics a

name and a title. Two years ago, few supply chain executives were dedicated specifically to reverse logistics and returns management. But now, the number of reverse logistics executives is growing exponentially.

"Just a few years ago, only a handful of executives in our association had the words 'reverse logistics' in their titles," notes Gailen Vick, president and CEO of the Reverse Logistics Association. "Today, hundreds of such executives are responsible solely for returns and reverse logistics operations." Many companies interviewed for the Aberdeen report attribute a large part of their reverse logistics success to having a separate and dedicated division within their operations to handle returns, exchanges, repairs, and refurbishments—under the direction of a senior director or higher.

GOING FORWARD WITH REVERSE

By separating reverse logistics functions from overall forward distribution processes, a company can give these activities the attention they deserve without drawing from supply chain resources to operate returns processing and repair/refurbishment activities.

What supply chain executives traditionally viewed as an annoyance is today not only a potential profit center, but also a critical organizational structure issue. Once senior management becomes accountable for recognizing and managing reverse logistics costs, and responsible for automating the process, companies can transform returns management into a profitable, streamlined entity.



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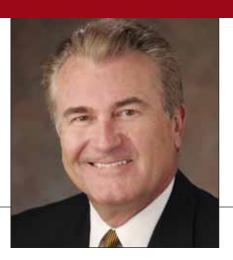
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3PLLINE

by Rick Underwood



Logistics Managers Earn Job Security

s recently as a decade ago, most U.S.-based companies' supply chains were predominantly domestic, and providing manufacturing support to U.S. factories was a booming business. Today, however, global supply chains dominate and the number of U.S. plants to support is dwindling. As a result, many North American supply chain professionals are concerned about how their roles are changing.

Job security shouldn't be a worry, though – especially for professionals involved in warehousing and freight management. Although much of the country's sourcing is shifting, its domestic demand patterns—who consumes products—are still essentially the same.

As a result, the need for qualified logistics professionals to provide and coordinate outbound distribution in North America is as significant as ever. And with supply chains becoming increasingly complex, savvy logistics professionals with a firm command of how to move goods across the world and oversee their safe passage through numerous hand-offs and border crossings should have plenty of opportunity for success.

Also consider how goods enter North America—and what happens to them once they get here. Import/export gateways are becoming busier logistics venues. As a result, the transportation lanes between U.S. ports of entry and other key markets are growing increasingly popular—and congested. The competition for reliable transportation services and drivers is increasingly intense.

Logistics professionals who can either improve service within these lanes, or help their companies cope with challenges such as the driver shortage, will be hot commodities for a long time to come.

ON THE MOVE

Professionals who understand the importance of freight management should also fare well. Companies face a formidable challenge trying to move their goods off docks and into the U.S. supply chain quickly and efficiently. Freight management services help them consolidate and convert LTL shipments to truckload, find and negotiate with reliable carriers, and determine when it makes sense to upgrade to more expensive modes to save a sale or business relationship.

As for North American warehousing professionals – DC managers, operations managers, and the people who work for them–it has been a long time since they garnered as much respect as they do now.

During the 1990s, as systems became more advanced and widespread, warehouses faced huge pressure to remove stored product from the supply chain and keep inventory on the constant move—with some degree of success. But now that global supply chains have entered the equation, warehouses have gained respect as an excellent way to get goods into the country ahead of time and offset supply chain volatility.

John Donne once said, "no man is an island." These days, that's especially true of individuals working in logistics. Whether we're located on the Pacific Coast or deep in the heartland, business activities going on across the globe will have an impact on how we operate—not only today but well into the future.

Sure, we face a lot of change, but that creates new opportunities because U.S. companies need more help than ever to keep their supply chains running smoothly. We're just the people to help them do it.

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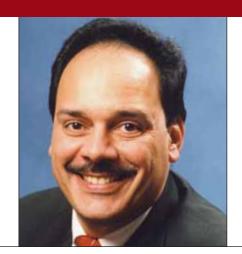




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LIABILITY MANAGEMENT

by C. Daniel Negron

The Perils of Trucking: It Takes a Thief

I am expanding into Central and South America and need trucking insurance to cover my cargo. Can you help me?

This is a common question from shippers who cannot obtain cargo insurance, from forwarders who are unable to get liability insurance, and even from truckers who are required to secure cover before any cargo is entrusted to them.

The unfortunate reality is that trucking is a perilous form of transport in any part of the world. In the United States alone, insurers face a multitude of claims each year resulting from theft of goods in transit. In countries outside the United States, including South and Central America, the situation is not much better.

At times, thefts are brazen. Several years ago, armed robberies became so common in northern Mexico that some truckers began moving cargo in convoys.

At other times, the creativity thieves use to pull off heists is limited only by their imagination. In an incident in Panama, for example, thieves cleverly removed the pins from a container's hinges and carefully removed the doors without causing any damage to the security seal. They then removed several cartons of electronics products, returned the doors to the container, and sent it on its way. The electronics were later seen being sold by local street vendors.

In Ecuador, thieves were able to partially open the doors of several containers carrying sacks of coffee beans. They tore through the sacks with hollow tubes and siphoned off significant amounts of coffee beans.

Cargo theft is a crime of opportunity. While it is not uncommon for thieves to lie in wait for an opportunity to present itself, it is more common for people having inside knowledge to give the opportunity to fellow conspirators.

In Cartagena, Colombia, a trucker delivered what appeared to be complete documentation to the port, and obtained the release for a shipment of auto parts. It was later discovered that the documents had been falsified, and the shipment was nowhere to be found. An investigation revealed that an employee at the port had used his inside knowledge to facilitate the theft.

It's no wonder that insurers are reluctant to offer a cover.

PREVENTING THEFT

Even in the best of circumstances, it is prudent to employ targeted security measures to minimize potential losses. Here are some suggestions:

Choose a reputable local partner who knows the region well.

- Verify that this partner uses its own employees to operate company-owned vehicles.
- Employ only the services of trusted third-party truckers when outsourcing is required.
- Ensure that your third-party truckers have appropriate insurance and verify all insurance certificates.
- Check that your partner's documentation system employs internal security procedures.
- Establish that only trusted employees can access areas containing sensitive information.
- Ensure that drivers stay in constant communication with their dispatcher.
- Have your local partner install checkpoints along established routes whenever possible.
- Establish a notification and security procedure for when vehicles must be left unattended.

Remember, aside from being comforted by your security measures, the insurer also needs an adequate spread of risk. This limits the impact any claims may have on its bottom line.

It is far more difficult to insure a one-off shipment than it is to insure your entire operation. For this reason, it might be worthwhile to offer your insurer a substantial volume of your business, not just the risky part.

10 strategic benefits arise when your supply chain works in...

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ITMATTERS

by David Fox



With SaaS, You Make the Rules

ost companies spend 40 to 80 percent of their annual transportation budget on moving inbound shipments from suppliers.

Despite these whopping costs, businesses boast relatively little control over their selection of inbound carriers or their service levels. Instead, most depend on suppliers to correctly assign carriers, then provide tracking information to the buying organization. This creates a lack of cohesive visibility to goods in transit.

The main problem is that most shipping management approaches are outbound-facing and don't work for inbound. Too many companies remain tied to outdated manual systems and lack standard ways for their suppliers to do business with them. Others have outsourced to a third-party logistics provider, but in doing so have sacrificed competitive flexibility to control transportation costs.

But the industry is changing. Increasingly, companies are leaving both approaches behind for the emerging Software as a Service (SaaS) model, where a company pays a vendor to host a Web-based application and manage it over the Internet.

SaaS, first defined by pioneering

companies that offered Web-based applications to replace complicated software installations, has moved beyond the four walls of the office to embrace outside partners and supplier networks. Using the SaaS model, you can create a practical and easy-to-use global network that is accessible around the clock. Even for complex international billing scenarios, you can create policies your suppliers must follow.

Here are a few benefits of SaaS:

- More control over cost management. You may have made deals with carriers that hinged on spending a certain amount annually. But you have no recourse if suppliers don't use your preferred carrier. Using the SaaS approach, suppliers log into your system using a secure ID and password. You decide what they will be allowed to view on the network, and their transactions are based on what the supplier is shipping.
- automated business rules. The system you build with your vendor automatically identifies the correct carrier and service level for a specific shipment from a supplier. Then the carrier is notified. The system automatically generates an email to the supplier with a copy of the carrier's bill, a track-

ing number, and the service level.

- any time, you have access to worldwide carriers in any transportation mode. If rogue shipments are a problem, this approach helps your company identify the problem immediately. It also provides new ways to cut direct freight costs by reducing the cost of invoice processing, decreasing the use of nonnegotiated freight rates and surcharges, and stifling maverick spending, which often accounts for 15 to 30 percent of a company's annual shipping costs.
- Creation of a central shipment database. This data repository allows you to search historical data and view shipping records, print real-time reports, distribute shipping documents by email or fax, and access reports in multiple computing formats. You can also use these reports to more accurately analyze shipping records, detect trends, and manage loss prevention more thoroughly.

Adopting a SaaS approach creates standards throughout your network, which saves money. And with attention turned from the daily headaches of tracking inbound shipping, your company can focus its efforts on improving other parts of the supply chain.



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ISSUES AFFECTING ECONOMIC DEVELOPMENT

by Ed Bee

Community Developers: Take the Intermodal Initiative

y Sears vacuum cleaner, made by Panasonic in Japan a decade ago, quit working recently. Replacing the original relay with a part now made in Indonesia fixed the problem. Clearly, it's not just America that is outsourcing. Manufacturing worldwide has morphed into production sharing, where companies assemble and sell products made from subassemblies sourced around the world. Your community's intermodal terminals are the critical entry points into these global supply chains.

The number of terminals and services is shrinking just when intermodal connections are becoming crucial site selection factors. Railroads have been closing intermodal yards at a rapid pace. To enter the global market, states that lack intermodal service must truck their shipments to yards in other states or to port cities.

Maersk, the world's largest container line, stopped accepting inland freight in 2007 except at a handful of intermodal hubs. Manufacturers located outside these hubs must now arrange their own transportation to cities where Maersk will accept their cargo. Inland cities have become remote outposts in the global supply chain.

Railroads and big box retailers are driving these changes. Railroads start-

ed hauling containers inland from West Coast ports in the 1980s at half the cost of truck movements. At about the same time, big box retailers began sourcing from Asia, stimulating demand. West Coast railroads now move dedicated, scheduled intermodal trains directly from container ports on the West Coast to inland freight yards. To keep these services on schedule, the railroads refuse to accept container freight in route.

During the past five years, railroads have reached their capacity to haul containers from Southern California ports. For the first time in history, rail shippers are coming to the railroads, rather than the railroads running trains to shippers. End result: a global supply chain that is morphing into a clone of the hub-and-spoke system used by airlines-minus the spokes.

WHAT DEVELOPERS CAN DO

If your development strategy targets manufacturing or distribution, intermodal service is a critical element in your competitiveness. You can't do much once railroads decide to close your intermodal yards, but your chances of success are better if you are aware of the danger in time to implement a strategy to counteract it.

While incentives or co-invest-

ments might influence railroad behavior prior to a closure, it's usually too little and too late to reverse it. Transportation departments typically look at intermodal facilities as part of their statewide plans but don't recognize all the economic impacts that accrue from having intermodal service. If it's important to your community, your development organization needs to have a strategy in place to enhance it.

Intermodal logistics is changing rapidly as West Coast ports reach saturation for inland movements. Cargo has already started to shift to East Coast ports. Los Angeles imports were down seven percent in October 2007 from the prior year, while Asian container volumes at Charleston, Savannah, and New York were growing. East Coast ports, served by different railroads, might well offer new services to inland shippers than those on the West Coast. The widening of the Panama Canal will have huge impacts on the geographic routing of commerce between U.S. cities and Asia. Expect a big shift to Atlantic and Gulf ports.

You might find that your intermodal service is much improved a decade from now - but that's not likely if you ignore your community's intermodal service and infrastructure today.





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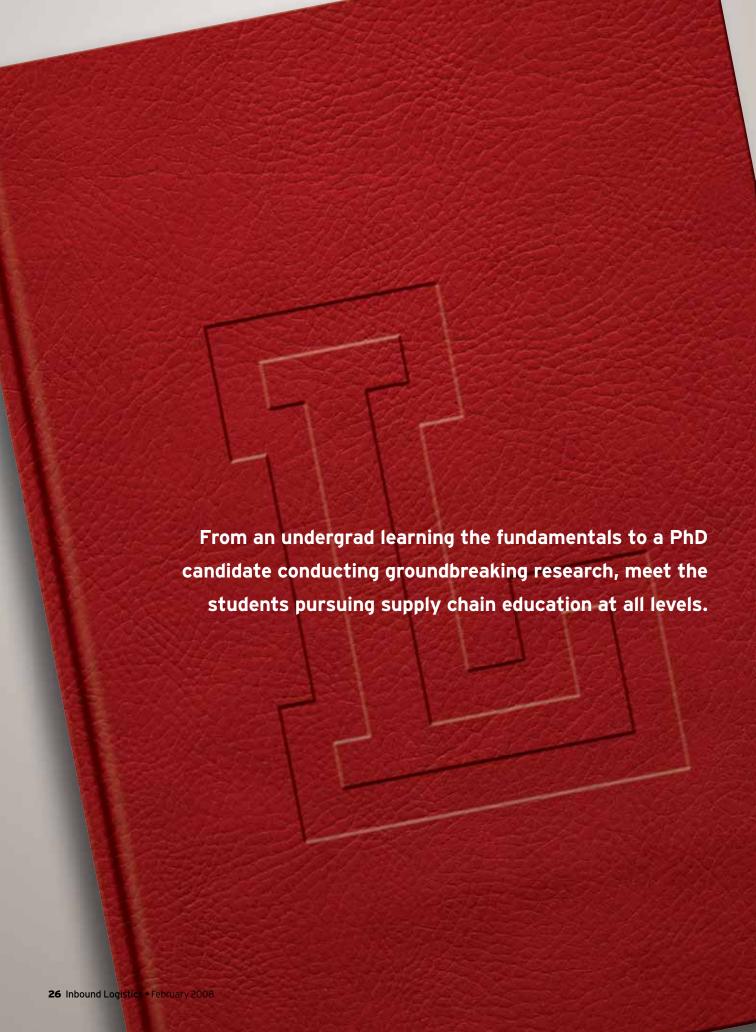














Eric Wadsworth "The Undergrad"



Silvia Moreno "The Certificate Earner"



Graham Whittemore "The Career Changer"



Marco Gutierrez "The PhD Candidate"



Steve Edelman "The Distance Learner"

SMost Likely to 1 SUCCEE

A career in supply chain management draws professionals attracted to its broad scope and potential to significantly impact corporate growth. Today's supply chain students bring diverse backgrounds, experiences, and motivations to their pursuit of logistics degrees—from professionals taking short-term certificate courses to full-fledged residential post-graduates tackling complex supply chain conundrums. *Inbound Logistics* talked to five students to learn the motivation behind their career paths and how supply chain education is developing to meet marketplace demands.

by Lisa Terry

The Undergrad

W

hen Eric Wadsworth entered the Martin J. Whitman School of Management at Syracuse University four years ago, his sights were set on a finance career. But one sophomore-

level supply chain course changed his focus.

"Before taking the course, I had no idea what a supply chain was," says Wadsworth. "This class explained how finance, marketing, and the supply chain exist as one big triangle connecting the different areas of a company. It was interesting to learn how they interact."

The increasing role supply chain management plays in business also piqued his interest. At a supply chain career fair held at Syracuse last fall, for example, attendees overflowed the room, reflecting both the growth of the field as well as the rising popularity of the subject at Whitman. Wadsworth is one of 122 students enrolled in the undergraduate supply chain program; two years ago, only 80 students participated.

Wadsworth's sophomore-year coursework in supply chain, finance, and marketing culminated in a

"This class explained how finance, marketing, and the supply chain exist as one big triangle connecting the different areas of a company."

simulation game where teams compete to run an imaginary company. "The game was a good way to introduce undergrads to the supply chain," he says.

Enrolling in subsequent courses in supplier relationships, materials management, inventory control, supply chain management, transportation, and other related interdisciplinary topics has boosted Wadsworth's enthusiasm for his new major. The opportunity to study issues facing real-world companies, test his team's recommendations against actual outcomes, and consider the perspectives of professors and guest lecturers from industry has helped bring theory to life.

"I find the emerging role of 3PLs, and how they can help companies expand and grow, extremely interesting," Wadsworth says. "But the most profound realization is learning how competitive a company can become with a properly managed supply chain."

In 2006, Wadsworth completed a summer internship in the global supply chain department of a medical device company, where he handled international order inquiries and managed the daily shipping report. He has also passed an exam toward fulfilling professional certification in production and inventory management.

Wadsworth's interest in the supply chain extends outside the classroom. After a semester conducting additional supply chain coursework in London, he returned to Syracuse and revived the Franklin Student Group, a dormant supply chain club. He also worked with the Association for Operations Management to bring speakers and tours to the Whitman School.

As a "numbers guy" who also minors in math, Wadsworth hopes to bring his financial acumen to his future supply chain career. But he feels the degree itself opens doors. "What I've learned here will allow me to work in supply chain management in any industry," he says.



The Certificate Earner

ometimes education is useful not just for finding ways to change a supply chain, but also to confirm that best practices are already in place. Silvia Moreno, sector procurement manager for Tyco Electronics' aerospace and defense division, enrolled in an executive-level supply chain certificate program across the country from her office in San Jose, Calif., to gain such assurance.

Moreno is well-versed in materials purchasing and procurement. Tyco's government contracts are planned out years in advance and often call for procuring highly specialized components that might be available from just one supplier.

A departmental repositioning, however, threw those practices into question. "We aligned all business units into one purchasing and procurement group to gain more leverage," she explains. This move allowed the units to combine purchasing power to negotiate better rates and terms from suppliers. "But it also made us question whether Tyco's supply chain was properly aligned and performing at optimal levels," she adds.



managing change and a third on lean processes.

The diversity of executives attending the program provides students with new supply chain insights and perspectives. In her most recent class, about half the students were from the U.S. Army, and they shared their unique approach to a highly complex and multifaceted supply chain operation.

Together with the coursework, the program has shone new light on the diversity of

supply chains across industries.

"I learned how critical the supply chain is to consumer goods," says Moreno. "We studied a retailer that uses creative distribution and warehousing systems. Unfortunately we can't copy them."

Unlike commercial supply chains, aerospace and defense companies are stymied by limitations. "We're locked into certain contracts, and can't negotiate terms," Moreno says.

So far, Moreno's supply chain executive education has impacted her job in two ways. First, while many ideas are not applicable in a heavily regulated industry, she has picked up some best practices that might be useful within Tyco's operation.

Second, Moreno has confirmed that her operation's supply chain is correctly aligned. "Now I understand when people bring ideas in from the commercial supply chain world," she says.

Moreno advises those pursuing executive-level supply chain operations to "keep an open mind and embrace the knowledge you can acquire by interacting with people from different backgrounds," she says.

To gain more insight into supply chain theory and other industry best practices that might apply to Tyco, Moreno, who holds a bachelor's degree in business administration from the College of Notre Dame, investigated executive-level education programs.

Several colleagues recommended the Supply Chain Education program at The Smeal College of Business at Pennsylvania State University, located near Tyco Electronics' corporate office in Berwyn, Pa. Moreno enrolled in the Supply Chain Leadership Certificate program, one of several executive curricula offered. The program requires several four- to seven-day visits to the Penn State campus, each preceded by in-depth analysis of case studies. Because students attend the sessions on their own schedules, classmates differ from one session to the next.

"It's intense," Moreno says of the program, in which students meet for a full day, followed by dinner with professors, then a group homework project.

Moreno's initial class covered supply chain management basics, followed by a second program on

The Career Changer

raham Whittemore didn't give a thought to supply chain management when he pursued a bachelor's degree in biological engineering. But as he learned more about the field during his tenure at two semiconductor companies, he decided to quit his statistics job and devote 60 hours a week to studying all things supply chain.

Statistics skills led Whittemore to a job at Axcelis, then to Fairchild Semiconductor as a process engineer-all the while completing master's of engineering coursework remotely at the Rochester Institute of Technology, New York. As satisfied as he was with his statistics work, he wanted more.

> "I enjoyed what I was doing, but I wanted the opportunity to advance my career and learn about the supply chain," says Whittemore.

Whittemore decided a full-immersion residential program would be the best route to meet his

MIT's MLOG is closely aligned with a sister program, the MIT-Zaragoza Master's of Engineering in Logistics and Supply Chain Management at the University of Zaragoza in Spain, dubbed ZLOG. ZLOG students spend three weeks at MIT studying alongside MLOG students, then Whittemore and his 35 colleagues travel to Spain for lectures and tours of European supply chain facilities, enriching their international perspective.

"The real-world exposure is invaluable," Whittemore says. "Because it's MIT, there is a lot of math and quantitative work, but the school also recruits speakers from industry."

Such real-world orientation has also given Whittemore perspective on supply chains far different than that of the semiconductor industry, demonstrating that velocity and cycle times are unique to each industry. The diversity and varied experiences of fellow students is also eye-opening. "In this



"I enjoyed what I was doing, but I wanted the opportunity to advance my career and learn about the supply chain."

goals, so he researched leading supply chain master's degree programs, ultimately choosing the

Masters of Logistics (MLOG) course at the Massachusetts Institute of Technology. The choice came at a price-in addition to paying tuition, Whittemore had to surrender his job and salary to undertake the nine-month program.

The MLOG program demands a lot from students. Most exceed the minimal 90-credit requirement per semester and spend hours hanging out in the supply chain lab, a meeting place to work on group projects and mingle with fellow MLOG-ers. The core curriculum starts with basic analytical skills, adds fundamental theory, applies theory to practice, and caps it off with a strategic perspective. MIT's programs focus on producing professionals who are equally familiar with sophisticated data analysis and complex management issues. It also builds in flexibility for students to focus on specific interests.

"I didn't realize all the opportunities and the ability to forge your own path," Whittemore says. "This program is what you make it. If you have an interest in supply chain and the program is not satisfying, it's your own fault."

program, the average age of students is 30, so we can take advantage of individual experiences," he says.

Unlike many programs, the MLOG supply chain thesis consists of research projects sponsored by companies. Whittemore's research for Cardinal Health has sent him to Iowa and Chicago to study hospital operations.

He is also considering positions with consulting or high-tech firms, but hasn't ruled out returning to the semiconductor industry-albeit in a different area.

Supply chain management is widely considered to be a new route to the corner office, a fact not lost on MLOG-ers.

"That is an inspiration to everyone in the program," Whittemore adds.

Georgia Institute of Technology Stewart School of Industrial Gutierrez and Systems Engineering

The PhD Candidate

arco Gutierrez's pursuit of higher education took him from his hometown of Hermosillo, Mexico, to Arizona for a bachelor's degree, then to Atlanta for a master's degree at the Georgia Institute of Technology. But that's nothing compared to the traveling he has done for his PhD work-to Africa, Central America, and soon, the Sudan, Indonesia, and Sri Lanka.

Gutierrez knew he wanted to continue studying supply chain management after obtaining his master's degree. Because of his interest in disaster relief, he got involved in a new focus area at Georgia Tech: humanitarian logistics.

Because the field is so new, much of Gutierrez's research requires analyzing real-world conditions in the field. Two years ago, he began an internship with the relief organization CARE.

"Logistics is a big challenge in emergency response," says Gutierrez. "After a tsunami, earthquake, or other disaster, a lack of coordination among different operating units creates bottlenecks in delivering supplies."



with other organizations," Gutierrez explains.

Developing a PhD dissertation in such a wide-open discipline is both a blessing and a curse for Gutierrez. A lack of literature provides little foundation to build upon, but the untapped potential and rewards of conducting research that directly impacts the human condition makes challenges such as this worthwhile. That's why Gutierrez says his PhD work, now in its

"Logistics is a big challenge in emergency response. After a tsunami, earthquake, or other disaster, a lack of coordination among operating units creates bottlenecks in delivering supplies."

Gutierrez is trying to help CARE address the issue by assessing its overall supply chain—the strategic plan, operations, and enabling elements. In another study, Gutierrez worked with Georgia Tech peers on a warehouse pre-positioning network, determining how best to stage relief stockpiles around the world.

Gutierrez's research helps assess logistics practices within countries so relief logistics match local requirements and practices. His work is also helping build a knowledge base in humanitarian logistics-an area that currently lacks substantive research.

"People involved in emergency response don't necessarily have time to document best practices, and are not paid to establish systems and share their expertise third year, has been a much different experience than the more traditional research required for his prior degrees.

Gutierrez plans to complete his PhD degree work by the summer of 2009. Then he hopes to explore opportunities in a relief organization such as CARE, academia, or consulting. He is drawn to the challenge of tackling complex problems.

"I started in manufacturing, which is a narrow function," he says. "I like supply chain management because it requires a holistic systems approach. You have to consider so many different factors when working to improve supply chain performance."

The Distance Learner

hen he made a sales call on the Port of Long Beach, Calif., in his role as a consultative sales executive for Hewlett-Packard (HP), Steve Edelman met someone who changed his life.

During the meeting, Marianne Venieris, executive director of the Center for

International Trade and Transportation (CITT) at California State University at Long Beach, mentioned the Global Logistics Specialist (GLS) designation. A former engineer for the U.S. space program,

Edelman had an extensive background in enterprise system design, but had just embarked on a selfguided supply chain education after learning about HP's pioneering works.

With a master's degree already under his belt, Edelman was intrigued by Venieris' description of Cal State's supply chain-specific post-graduate program. "Cal State Long Beach had two things going for it," Edelman says. "It is affiliated with the Port of Long Beach, and its rich curriculum satisfied my educational goals."

> That the GLS program is based in California and Edelman lives in Maryland was, surprisingly, not an issue. In fact, some of Edelman's fellow students are participating in the distancelearning course from as far away as India, the Philippines, and Pakistan.

Students participate remotely in a series of five modules. They share in discussions, complete exercises with fellow students, and learn from a virtual faculty. The work culminates in a capstone project in which students work together to develop a cost-reduction solution for a fictional company's supply chain challenges.

"Earning a certificate requires a rigorous process, including an oral presentation and a

written report," says Edelman, who has dedicated many evenings and weekends to the effort since starting the program in July 2007.

The distance-learning process itself presents some challenges. Students rely heavily on their Internet service providers to stay connected; but even more vexing is finding a time for students to "meet" when they're spread across time zones from the U.S. West Coast to the Philippines. "We miss the personal touch–looking into someone's eyes when speaking to them, for example," Edelman says.

The real key to succeeding in a distance-learning program lies in possessing an insatiable appetite for information. While students participate in mandatory discussions, they're also strongly encouraged to post their thoughts on what they've learned and respond to others' posts.

Edelman's current learning experience is quite different than when he earned his undergraduate and master's degrees at traditional universities.

"I got my on-campus education when I was in my 20s," he says. "Most students in the distance-learning program are in their 30s, 40s, or 50s. As students grow older, I find they have greater curiosity and insight."

"Most students in the distance-learning program are in their 30s, 40s, or 50s. As students grow older, I find they have greater curiosity and insight."

> Edelman hopes the experience will trigger a new career direction as he seeks to apply what he has learned.

"I entered into this program believing that most companies implement innovative supply chain methods, but I have since learned that many are only in the early stages," he says. "Some hesitate to cross departmental boundaries, form multi-disciplinary teams, and encourage more intimate sharing of information with trading partners. Changing that mentality is a challenge."

Edelman wants to help companies address these issues by combining his new education with the skills he acquired pursuing a professional certification in executive leadership coaching from Georgetown University.

"It isn't who I'm working for, it's what I'm doing that matters," Edelman adds. "I want to focus on the interaction between people, process, and technology in the supply chain to produce cost savings. That's the real magic for me."





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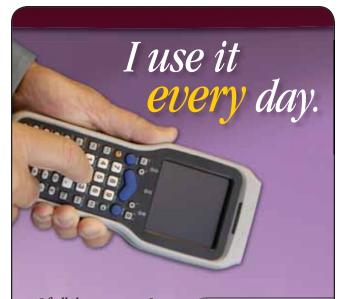
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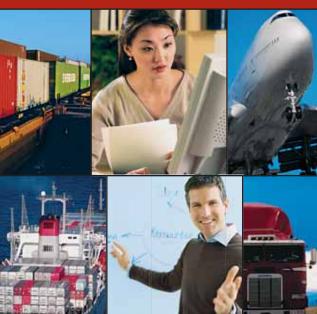
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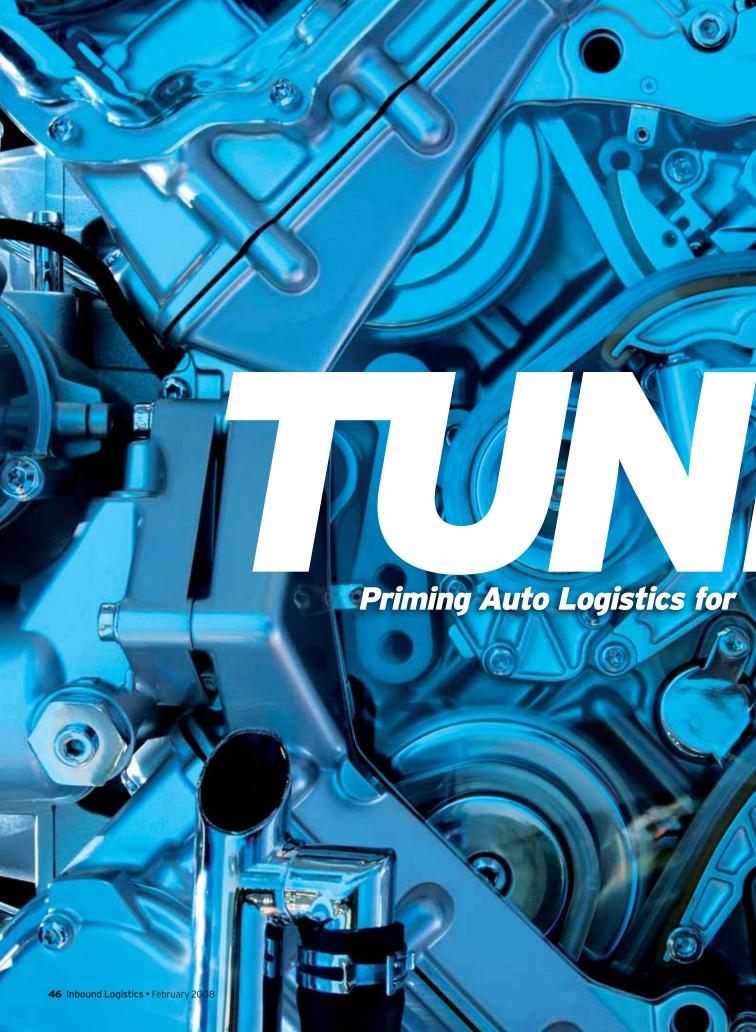
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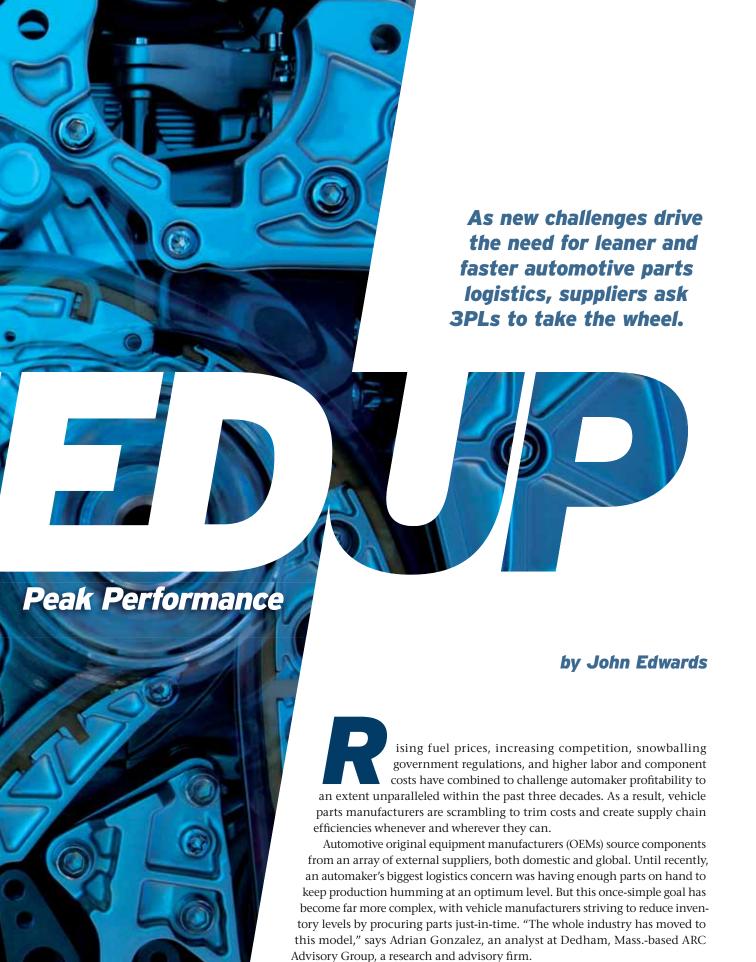
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Just-in-time shipments reduce the number of parts that sit idly in inventory, tie up cash, and consume expensive warehouse space. "Today, automakers might have, at the most, two hours of inventory at the production line," Gonzalez says. "Then trucks deliver replenishment parts every hour or two."

As automakers speed and streamline the logistics process, they're also broadening their supply base, bringing in more vendors to achieve the lowest price and fastest delivery times. "Automakers deal with thousands of parts and components suppli-

ers," Gonzalez says. "Managing all that, and keeping track of information, can be extremely complex."

It isn't only automakers that are under pressure to speed the supply chain. Suppliers that deal with vehicle manufacturers' complex and demanding logistics requirements face their own challenges. "Our delivery windows are shrinking," notes John Begg, global logistics director for Key Safety Systems (KSS), an automotive safety equipment supplier based in Sterling Heights, Mich.

3PLs SOFTEN THE BLOW

Positioned between struggling automakers and their frenzied suppliers, third-party logistics providers (3PLs) can help cushion the impact of just-in-time scheduling and deliveries. With extensive transportation resources, scheduling and management capabilities, and logistics expertise, 3PLs can take the pressure off suppliers while ensuring automotive OEMs source a reliable flow of parts.

"It makes sense to let automakers design and manufacture the cars, and let logistics companies handle the freight," Gonzalez says.

Key Safety Systems supplies automakers with many of the safety components they need to satisfy government regulatory agencies. The company produces air bags, seat belts, and the electronic components that control automotive safety systems. From its headquarters, KSS oversees operations in 32 locations



Sanden provides components such as air conditioning compressors to major automotive OEMs and aftermarket distributors. A 3PL partnership keeps things cool.

around the world, including 17 manufacturing sites. The firm supplies all the major auto manufacturers, including the North American "Big Three"—Ford, Chrysler, and General Motors. It also serves the automotive aftermarket.

Just-in-time deliveries have taken automotive supply chain efficiencies to new heights. "There have been continuous improvements in cycle time and cutting waste from the system. Companies are running extremely lean," Begg says.

But a system that's designed to operate like clockwork can leave both the customer and supplier in a panic when the logistics gears suddenly freeze. "The system allows little give for unplanned situations—such as a storm that strands a container on the high seas. The system doesn't have enough elasticity to absorb unforeseen bumps," Begg notes.

To help supply chain partners handle and overcome these "bumps," Begg believes it is important to run a tight supply chain with plenty of built-in visibility. "Automakers have to know where their components are at all times. They have to be as proactive as possible," he says.

A just-in-time supply chain disruption can cost an automaker as much as \$10,000 per minute if its production lines run out of components and grind to a halt. "Suppliers simply can't shut them down," says Begg.

3PLs play a pivotal role in helping suppliers keep the parts pipeline

flowing at full capacity and providing immediate status reports on supply chain stress points and bottlenecks. KSS relies on Miami-based Ryder System to help navigate just-in-time demands.

"Ryder manages all supply chain functions for our entire network in North America and Europe," Begg says.

Ryder began working with KSS in March 2006, notes Tom Kretschmer, Ryder's director of customer logistics. The 3PL plays a hands-on role in the company's daily logistics operations—managing pickups and

deliveries, verifying critical events during transit, and communicating exceptions so KSS can initiate contingency plans if necessary.

Besides providing visibility and making sure that parts arrive on schedule, 3PLs can also help suppliers ship items that pose a special safety challenge. One concern for KSS is the "inflator"—the explosive component that fires an airbag during an accident. Most transportation regulators classify inflators as a hazardous material. "Many companies and carriers simply won't deal with inflators, but Ryder has access to a large carrier base that can handle it," Begg says.

3PLs can also help component suppliers shave costs. For example, Ryder helped KSS slash spend by 10 percent during the first nine months of their relationship. "The savings came from procurement, logistics engineering, and exports conversion," Kretschmer says.

Ryder has also introduced supply chain visibility, which helps everyone in KSS's supply chain breathe easier. "We had no visibility tools before partnering with Ryder," Begg says. "Now we know where material is at all times, so we can cut fluff out of the business."

CHILLING OUT

For automotive air conditioning components supplier Sanden International USA, running a fast and nimble logistics operation has proven

continues on page 50

3PLS IN THE AFTERMARKET

OEMs aren't the only companies shaking up the automotive supply chain. Top aftermarket industry players, including repair chains, collision shops, and parts retailers demand that suppliers deliver parts quickly, as needed.

Consumers are partially responsible for forcing aftermarket players to speed up shipments. "Consumers have become so reliant on their vehicles that they expect same-day repairs," notes Mary-Beth Kellenberger, senior automotive analyst at Frost & Sullivan, a technology research firm located in Palo Alto. Calif.

As they do in the primary automotive market, 3PLs help aftermarket suppliers meet the demands created by tight delivery schedules. Aftermarket suppliers primarily count on 3PLs to provide relief from scheduling burdens as well as other factors that might slow down, or even halt, deliveries. "3PLs help suppliers guarantee that a product will hit the store on a particular date at a particular time," Kellenberger says.

After scheduling support, crossdocking is the most requested value-added service 3PLs provide to automotive aftermarket suppliers. Crossdocking enables companies to rapidly consolidate shipments, create economies of scale in outbound transportation, and reduce shipping costs without sacrificing just-in-time service.

Besides accommodating customer demands for fast and accurate shipments, aftermarket suppliers must also pay close attention to shipping costs. "It's a very competitive business," says Paul Schlanger, president of Dial-A-Clutch, a wholesale transmission parts distributor located in Delray Beach, Fla.

Dial-A-Clutch carries kits and components from all the major clutch manufacturers that serve vehicle OEMs. "Our main business is selling to professional installers, transmission shops, and automotive repair stores," Schlanger says. "They want quality products, not parts you can pick up at low-end retailers."

Since its inception, Dial-A-Clutch has been a regional distributor because geographic scope limits its range of next-business-day shipments. "Our customers need overnight delivery because consumers want their vehicles back as soon as possible," Schlanger notes. "Expedited deliveries aren't an option because they are cost-prohibitive."

To expand its coverage range without raising shipping costs, Schlanger decided that he needed 3PL support. Although the company already operates a local warehouse, Schlanger did not want to sink capital into building a chain of regional facilities.

One 3PL Dial-A-Clutch contracted with was St. Louis-based TAGG Logistics. The provider focuses on meeting the supply chain needs of small to medium-sized businesses. "We serve a national customer base of manufacturers, wholesalers, and retailers," says Gary Patterson, TAGG's president. "Working with us allows Dial-A-Clutch to expand geographically without making a capital investment."

TAGG provides the storage and transportation resources Dial-A-Clutch needs, handling next-day deliveries at cost levels well below expedited carriers. "We sell quick and flexible service," Patterson says. TAGG gives Dial-A-Clutch the ability to serve customers in the Midwest. The parts distributor also has a partnership with an Atlanta-based 3PL that extends its reach into the Southeast.

An important value-added service that TAGG provides to Dial-A-Clutch is part stamping. The process is designed to give valuable components accurate identification, which facilitates tracking and helps prevent shipment shrinkage. If Dial-A-Clutch needs an identifier on a part, and it isn't done where it's manufactured, TAGG arranges to have the component stamped or etched with identification data. "Part stamping is more durable than simply putting on a label," Patterson says.

TAGG also assembles orders, performs inventory counts, and provides quality checks on outgoing products. "If a certain item presents a quality problem, we

can do a random sampling of all relevant outgoing components to check quality levels," he adds.

Schlanger has no complaints about his relationship with TAGG. "It's a better alternative than a traditional

native than a traditional expansion strategy - opening new facilities and hiring labor," he says.

GOOD IN A CLUTCH. 3PLs can help automotive aftermarket suppliers meet demands created by tight delivery schedules. continued from page 48

to be both a business necessity and a way to stay one step ahead of the competition. "It's hard to imagine operating at our current level of efficiency without the help of a 3PL," says Terry Wolfe, logistics supervisor for the Wylie, Texasbased subsidiary of Sanden, one of the world's largest automotive heating and cooling component suppliers.

Sanden's U.S. unit supports all segments of the automotive air conditioning industry, with clients including major automotive OEMs such as Honda, GM, Chrysler, and Ford. It also supplies air conditioning components to various aftermarket businesses and parts distributors. "Our current sales are global, and include pass-through items from our other production locations in France and Singapore, and our parent company in Japan," Wolfe notes.

Like other automotive industry suppliers, Sanden works with OEM customers that demand short, frequent delivery windows. "It is critical for us to meet these customers' required shipping dates to guard against line stoppages," Wolfe says.

Sanden's lead time is typically 90 days for items manufactured and shipped from its Wylie facility. "With our efforts to maintain a niche in the marketplace, however, we have been known to ship same day, offering customers next-day delivery in many cases," he adds.

SEAMLESS INTEGRATION

Wolfe believes that working with a 3PL is vital for meeting customer delivery directives. Sanden didn't use a 3PL until about one year ago, when mounting customer demands made outside logistics support imperative. As it began looking for a suitable partner, the company realized it needed a service provider that could not only supply necessary services, but also share a similar business philosophy.

"A 3PL must be an extension of your organization. We approached this endeavor with a goal toward creating seamless integration," Wolfe says.

After investigating several logistics service providers, Sanden selected Evans

Distribution Systems, Malvindale, Mich., based on its extensive experience serving automotive industry customers and suppliers, as well as its ability to integrate operations with Sanden's existing logistics infrastructure.

Evans has served the automotive industry since 1929, and now owns a pair of warehousing and distribution companies, three truckload carriers, a temporary staffing agency, and a transportation management company, Evans Logistics.

becomes exceedingly complex, and potentially confusing, whenever a shipment transfer is handled on anything other than a one-to-one basis.

"For example, we might need to take 420 air compressors out of a corrugated box and repack them into pallets of 120 each," Wolfe explains. "Doing this creates multiple lot numbers and serial numbers."

All this information then has to be transferred from the original packing to the new labels that are applied to the



3PLs are proving their mettle by helping automotive parts suppliers aggregate detailed tracking information and manage labor-intensive repacking processes.

"Evans helps Sanden across a variety of different areas," says Leslie Ajlouny, vice president of business development for Evans Logistics.

Evans helps Sanden cope with customer demands for increasingly detailed tracking information, which is used to coordinate production across different product lines and provide a paper trail in the event of a manufacturing failure or recall.

"A supplier often has to track serial numbers, production dates, and engineering release levels, among other information," Wolfe says. Tracking returnable packaging. "It takes a high level of information management technology to make sure all the important data is recorded," he adds.

Evans also helps Sanden manage labor-intensive repacking jobs—which often arise when parts arrive from overseas—by doing the work itself. "We repack parts into returnable dunnage, which the automotive industry requires to cut costs," says Ajlouny.

During the repacking process, Evans conducts a visual inspection of parts and tests or gauges components if necessary. "Sometimes a quality issue arises,

for example," Aljouny says. "We conduct different levels of inspection, depending on the supplier and the situation."

Traceability is another critical support

service Evans provides to Sanden. "If a quality issue with a part arises, suppliers need to be able to trace exactly where it was delivered," Aljouny explains. If an issue crops up for Sanden, Evans can send a team to the OEM's plant to help sort and contain the problem. "Otherwise the plant would have to close while they wait for replacement parts," she adds.

GOING GLOBAL

While international vehicle manufacturers aggressively compete with Detroit's Big Three automakers, the domestic automotive industry is taking advantage of global manufacturing resources.

"Companies are turning to offshoring to control their costs," notes Steve Roche, director of automotive operations for Menlo Worldwide Logistics, San Mateo, Calif. "Most parts suppliers are playing in China, India, and South America. It's common to outsource manufacturing to these countries."

Menlo operates 90 locations in 17 countries across five continents: North America, Asia, Europe,

South America, and Australia. This coverage allows it to track shipments from source to delivery.

"Our systems are set up to interface

with customs, providing complete endto-end visibility," Roche says. "When a shipment is coming from China, we'll first see if it traveled from Shanghai to the OEM suddenly moves production to a new country. Without third-party support, a supplier might face the expense of acquiring and organizing new

warehouses and transportation connections. It's important for suppliers to be flexible, especially as offshoring activity migrates to emerging locations such as Mexico. "Nonasset companies can leave a region to move with their clients," Roche says.





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boat. Then, when it arrives in the United States, we'll see when it clears customs."

3PLs with global resources can also serve as insurance if, for example, an

A PARTNER, NOT A PROVIDER

Given the crucial role 3PLs play at all levels of the automotive supply chain, it's vital for suppliers to connect with a partner that can meet their needs. "Look for a partner, not a provider," recommends KSS's Begg.

When searching for outside help, KSS wanted a 3PL that could use its knowledge and insight to reshape KSS' logistics operations, then stand behind the new program.

"Someone who works for their dinner works harder than someone who receives a constant flow of income with no performance checks and balances," Begg notes.

All other considerations aside, it's crucial for a supplier to hook up with a 3PL that understands its organizational soul, advises

Wolfe: "Find a service provider that not only recognizes your commitment, but shares your goal to be the best in the marketplace."

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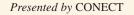
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Coalition of New England Companies for Trade







SNAPSHOT

Last December, parents nationwide queued outside stores in the early morning hours and hovered white-knuckled over their laptops in eBay bidding frenzies, all in hopes of securing rare Nintendo Wii game systems. The public experienced firsthand one of the chief challenges of the consumer electronics supply chain: accurately anticipating demand.

Among the many categories of electronics merchandise, high-velocity and high-value consumer goods present the most vexing and dynamic supply chains. Some aspects of consumer electronics are more fashionable than fashion; their volatility can be even more severe, their lifecycles shorter, and their margins thinner than that of designer apparel.

Yet from these challenges emerges real innovation. Out of necessity, consumer electronics supply chains have been pushed to the bleeding edge and are forging new paths for sourcing, production, distribution, logistics, and even financing strategies.

Every supply chain is unique, but some pressures across the consumer electronics supply chain are common. These include:

[+] Strong retail price pressure—mobile phone prices, for example, decline as much as eight percent per quarter, according to AMR Research.

[OVERVIEW] Anticipating High-Tech Demand

Is the latest gadget a hit or just hype? Will that newfangled gizmo be cuttingedge for a year or obsolete in a month? Fickle buyers and unpredictable lifecycles can short-circuit the consumer electronics supply chain. BY LISA TERRY

- [+] Products where shelf life can be far shorter than production cycles.
- [+] Rapidly changing customer demands.
- [+] Relatively fixed production and logistics constraints.
- [+] The need to balance product innovation with feature rationalization.
- [+] The need to become more global.
- [+] Distribution to multiple sales channels, each with their own logistics needs.

Consumer electronics companies are addressing these challenges by enhancing their ability to understand, analyze, and respond to the market.

"Manufacturers are aggressively driving cost out of the supply chain and improving service to customers," says William Conley, Jr., president of ATC Logistics & Electronics (ATCLE), a 3PL based in Fort Worth, Texas.

Supply chain investment is focused on "understanding what's happening and why," Conley says. "Manufacturers are determining how they can mine information to make new products."



Third-party logistics providers such as ATCLE offer supply chain solutions for high-value, highvolume consumer electronics.



RFID's Slow But Steady Rise

RFID is well along the product lifecycle pattern known as Gartner's Hype Cycle, and the technology's "hype" is less striking than in years past. But don't let this relative silence fool you. Electronics companies continue to explore RFID's potential to capture much-needed visibility and respond quickly to changing customer demands.

"RFID is definitely taking hold," says Chica Wang, director of global accounts for APL Logistics, an Oakland, Califbased 3PL. "Electronics companies are quickly extending its application."

Still, many of these projects are in the pilot stage, according to AMR Research's report, *What We Have Learned from Three Years of Retail RFID Pilots*.

In an ongoing Best Buy pilot, for example, Monster Cable is applying pallet-level RFID tags and generating advance ship notices. Best Buy uses the RFID tags to track product through its DC, into the store, and all the way to the shelf, according to Walt Cabe, senior account executive for RedPrairie, an IT services provider based in Waukesha, Wisc. He points to Monster's willingness to volunteer for the first pilot as a sign of the collaboration necessary to enhance RFID use for all players.

One major obstacle facing consumer products companies, including electronics makers, has been the tendency to view RFID compliance as a cost, and failing to accurately evaluate its effect on out-of-stocks. "The impact of the manufacturer on preventing out-of-stocks is greater than most companies originally thought. Based on eight pilots, the data supports that 25 to 27 percent of the out-of-stock problem can be fixed by improving the consumer product company's supply chain response," according to AMR's report.

While the cost of RFID tagging is still high, lessons from industry pilots suggest it can be a good fit for high-value, low-volume consumer electronics goods where visibility is a make-or-break proposition. Wal-Mart's finding that RFID pilots yielded a 16-percent reduction in product out-of-stocks at the shelf level has considerable implications for consumer goods—where high cost and lack of brand loyalty mean in-stock SKUs win the sale.

This "RFID pilot phase" is expected to continue for some time as manufacturers and retailers work out the metrics and collaborative requirements necessary to fully realize the technology's full potential.

SNAPSHOT

[HOT TOPICS] Top-of-Mind Issues In Consumer Electronics



Rebalancing Global

Sourcing Electronics companies are moving from a focus on low labor cost to total landed cost, and that can mean shifting production closer to the target market. India, Russia, and Vietnam are drawing attention, joining Mexico, Brazil, and Canada as attractive alternatives for production—particularly for companies employing postponement strategies or customizing product for specific markets.

The total cost of ownership approach "considers managerial resources, organizational structuring, manufacturing competencies, intellectual property, and of course, logistics," says Adam Pick, principal analyst for EMS/ODM market intelligence services at iSuppli Corp., an El Segundo, Calif., consulting firm specializing in electronics supply chains.

Companies are also using flexible network designs to manage the variability of electronics goods. "They're looking for a blend, with some dedicated, static points and other smaller operations that can be

leveraged when demand is high," says Lonny Warner, vice president, High-Tech Industry Group for Menlo Worldwide Logistics, headquartered in San Mateo, Calif.



Increased Collaboration

Effective forecasting is the best defense against under- or overproduction. Electronics leaders are enhancing their ability to collaborate by sharing forecasts. But there is still plenty of room for improvement. "Forecasting to actual demand is the greatest challenge electronics companies face," says Steve Sensing, vice president of high-tech/electronics at Ryder System, Miami, Fla. "The challenge is driven by long manufacturing-to-retail outlet lead times."

At the core of most electronic products is a chip, and the way semiconductor manufacturers approach forecasting – with uncertain yields and a reverse bill of materials – is very different than for finished products, according to Dean Strausl, executive director of the Electronics Supply Chain Association

(ESCA), based in Los Gatos, Calif. Semiconductor makers "take optimistic forecasts from OEMs and merchandisers and build what they think they need to build," he says.

Therefore, electronics companies across the supply chain must work together to find a comfortable middle ground. "In the increasingly volatile game of high-tech, collaboration may be the only offensive move left in the playbook," states Collaboration in High-Tech: In Search of the Elusive Win-Win, an October 2007 paper by AMR Research.



Product Lifecycle

Management Fickle consumer tastes and brand loyalty mean new products often fail. And those that do succeed may soon be rendered obsolete as newer products hit the market. To increase a product's chance of survival, electronics retailers are tapping product lifecycle management solutions to reduce production cycle times, balance the relative costs of transport modes against product size and weight, market

demand, and margin opportunity. Planning for end-of-life issues is also becoming part of the design stage.

"A company might launch a cell phone with a projected life of six months, and it could last six days, or it could stay on the market for two to three years," says Ryder's Sensing.



New Financing Schemes

Supply chain operators are turning to finance companies to stretch out their Days Payables Outstanding, reduce Days Sales Outstanding, and create a lower supply chain-wide cost of capital. Nearly 70 percent of firms across industries are investigating this best-in-class strategy, according to a March 2007 Aberdeen Group research brief.

"The electronics industry is a supply chain with financially weaker tiers – contract manufacturers, for example – undergoing a significant power shift toward the large big-box retailers and mass merchants," says the report. "Companies in industries with these types of dynamics have the opportunity to drive a significant improvement in working capital and earnings, even on low-margin business."



Going Green Regulatory and retailer pressure is driving electronics manufacturers toward green practices – from reducing use of hazardous materials to lowering emissions to recycling packaging. Some businesses are also required to take back product when it reaches end of life, spurring development of reverse logistics and recycling programs.

"Almost all manufacturers are good at getting product out," says ATCLE's Conley. "If there is opportunity to be had in the electronics supply chain, it is in how to handle returns, reverse logistics, and asset disposal."



Renewed Logistics

Focus At one point in time logistics gave way to forecasting and outsourcing as a major focus for electronics companies, according to ESCA's Strausl. Now that logistics costs have grown to 13 percent of the cost of an item, "we're back

to tightening our belts, squeezing more cost out of logistics," Strausl says. New transport options, such as sea-air combos, are helping meet short sales cycles while controlling costs. Electronics companies are also using dynamic routing to reallocate shipments based on the latest point-of-sale data.

"Many destinations are decided when the purchase order is cut, but much of that is based on assumption," says APL's Wang. Dynamic routing is a powerful way to shift that inventory to places where it's in demand.

Expectedly, the "last mile" is becoming an issue for high-end electronics retailers. Merge-in-transit processes and diverse distribution center operations help retailers bundle disparate products into a complete solution, such as a home theater. Then dispatch systems can coordinate delivery and installation.

Bundling "has a number of effects in terms of how the supply chain is organized, such as sourcing of goods and staging in an order-specific fashion," adds RedPrairie's Cabe.





SNAPSHOT

Containing Costs

Electronics companies are under considerable pressure to cut supply chain costs, with 68 percent of high-tech companies, which includes consumer electronics, citing this as a top concern, according to a December 2007 Aberdeen Report, *High-Tech Industries: The Supply Chain Executive's Strategic Agenda*. The good news: 51 percent of domestic and 49 percent of international electronics firms have already redesigned their supply chains, compared with 39 percent and 32 percent of supply chains across other industries (*see chart below*).

It's doubtful that consumer electronics companies will ever be able to perfectly align supply with demand because they'll never know for sure whether the next Wii will take off or tank. But anxious parents seeking to delight their kids with the next must-have will appreciate the savvy production and supply chain planning that consumer electronics companies use to feel and respond to their demands more accurately.

Some 3PLs Tuned in To Consumer Electronics:

APL Logistics

www.apllogistics.com

ATC Logistics and Electronics

www.atcle.com

DSC Logistics

www.dsclogistics.com

Maersk Logistics

www.maersklogistics.com

Mallory Alexander

www.mallorygroup.com

New Breed

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Nexus Distribution

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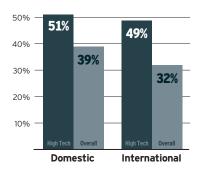
www.ptgt.net

ServiceCraft Logistics

www.servicecraft.com

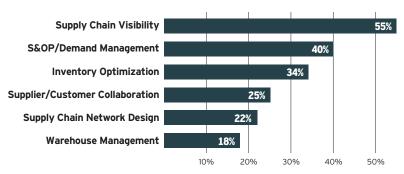
Supply Chain Redesign: High-Tech vs. Other Industries

High-tech industries are ahead of the curve in terms of supply chain transformation.



Technology Adoption Plans for High-Tech Companies in 2008

High-tech companies' technology priorities reflect business drivers; response management/supply chain visibility and S&OP are the top areas of focus.



SOURCE: Aberdeen Group, December 2007

PLUG IN: ADDITIONAL RESOURCES

Electronics Supply Chain Association (ESCA) electronicssupplychain.org

Consumer Electronics Association ce.org • Reverse Logistics Association reverselogisticstrends.com

Transported Asset Protection Association (TAPA) tapaonline.org





Palm Inc.'s entrepreneurial legacy means it is always looking for the next big product innovation. But these days the \$1.56-billion maker of smart phones and handhelds is plowing new ground in an area most electronics companies give little thought to: reverse logistics. Many firms have outsourced much of the reverse logistics process, largely viewed as a cost area, and set up processes to shuttle returned products back to low-cost return and repair centers around the globe.

Larry Maye is on a three-year mission to change all that, making some decidedly against-the-grain moves to satisfy the twin challenges of containing costs while keeping customers happy.

When Maye joined Los Angeles-based Palm as senior director, global repair and logistics, the company had already shifted from the relatively low-cost customer-direct reverse logistics approach to one centered on retail partners. Customers take their Treo

no problem is found—consumers changed their mind, wanted different models, or couldn't afford the purchase. Even if the customer had the product for only 30 days, it can't simply be put back on the shelf. It has to be inspected, refurbished, repaired, or at least repackaged.

"I looked at the total cost of ownership and realized we could take days out of the supply chain, gain turnaround efficiencies, and cut feed stock, all by moving

"We're going from zero visibility to 100-percent visibility. It's a challenge

or Centro back to a wireless store, which batches the returns and periodically sends them back to Palm. In the meantime, the customer gets a refurbished device as a replacement.

Maye's analysis of that process revealed one standout metric: in 60 percent of those returned products the initial returned-product segregation and refurbishment process closer to the customer," Maye says.

So he brought in ATC Logistics & Electronics (ATCLE), a 3PL serving high-value, serialized devices in the wireless, broadband, and medical industries. Phase One of the project was establishing ATCLE's





Dallas facility as a segregation center: the 3PL receives the returned product, performs an initial evaluation, and dispatches it to repair vendors as needed.

Now the company is about to complete Phase Two, separating those products by level of refurbishing required, and addressing easy level one and two repairs—fixing a scratch on the case, or installing a reflash of the software, for example.

Sounds simple, but performing those repairs in Texas-even with U.S. labor rates-takes four

means 20,000 fewer units in feed stock; instead, those needs can quickly be fulfilled with rapidly refurbished devices.

"That's a significant savings for us," Maye says. Phase Two should be fully operational by April.

ATCLE forwards units needing higher-level repairs to low-cost providers in Mexico or back to original equipment manufacturers (OEMs) in China or Taiwan. Palm continues to take direct repairs for non-cellphone service contract customers.

At the same time, Maye is straying from the standard technology approach to outsourcing reverse logistics. Instead of using the 3PL's infrastructure exclusively to manage processes, or forcing the 3PL to use Palm's-both standard practices-Maye is seeking to develop a management platform that provides Palm with full visibility and control of reverse logistics activities by requiring key data from 3PLs while allowing them to use their own preferred platforms. That gives Palm the best of what the 3PL has to offer, while not being locked in through deeply entangled integration.

"I can use several 3PLs, and

visibility tools and managementby-exception processes offered to the forward supply chain are not fully developed for reverse logistics, particularly via the software-as-a-service model Maye favors, so that platform is a work in progress.

But the visibility and control Palm has already gained allows the company much greater control over costs. Already, Palm buys and resells parts to its repair vendors to track and manage material usage through a partnership with Avnet. And using a sortation facility prevents vendors from cherry-picking the easiest repairs.

Much of the payoff will come with completion of Phase Two, and even more when Maye's technology visions are realized.

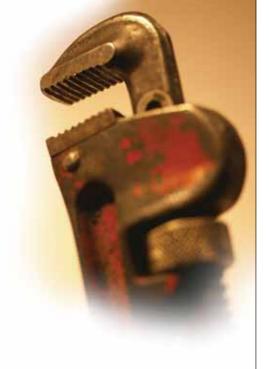
"The financial benefits to Palm will be substantial," he predicts. Other benefits include increased velocity, efficiency, control and flexibility, with reduced turn-around times, fewer touchpoints and transportation legs, and reduced back-office costs.

"We're going from zero visibility to 100-percent visibility," Maye notes, significantly

to achieve, but it is where the electronics supply chain still has a gap."

days out of turnaround time and reduces the quantity of feed stock required to replace products for customers. At a rate of, say, 5,000 units a day, four saved days multiple types of return channels and methodologies, without adding exponentially more cost to IT infrastructure," Maye says. Unfortunately, the kind of increasing Palm's decision-making ability. "It's a challenge to achieve this, but it is where the electronics supply chain still has a gap."

L.I.T.TOOLKIT



by Merrill Douglas

A tissue manufacturer wipes up excess costs with load optimization software.

Solving the Cube

emember the Rubik's cube, the 3D puzzle that drove adults crazy, although kids solved it with ease? Getting the colored squares to line up on each face of the cube was hard enough. Imagine if every movable piece were a different size and shape, and you had to make them fill an oblong box with no leftover space.

That's just the sort of puzzle shippers wrestle with every time they fill a trailer or shipping container.

"Calculating how cargo fits on a trailer, and the best way to load it, can't physically be done at the customer service desk or in the shipping department," notes Mike Jansen, vice president, supply chain management at SCA Tissue North America, Neenah, Wisc.

For SCA Tissue, it's crucial to make an accurate match between a full truckload order and the space on a trailer as it struggles with rising diesel prices and customers who hate leaving part of an oversized order behind on the dock.

Last year, SCA brought some heavy computational power to this problem.

Since implementing the Ortec optimization system in June, SCA has squeezed significant air from its truckloads and increased its already excellent order fill rates.

SCA Tissue North America provides tissue products—napkins, toweling, bath and facial tissues, and specialty wipes—along with dispenser and soap systems for the food service, office building, health care, and industrial markets. A unit of Swedish firm Svenska Cellulosa Aktiebolaget, SCA Tissue North America sells its products through a network of distributors.

A GUESSING GAME

Most distributors order product from SCA in full truckloads. But with a product line of several hundred SKUs in a variety of dimensions, it's hard to know how much product will actually fill a trailer. In the past, as a rule of thumb, the company called 3,300 cubic feet a full truckload. As they built orders with customers, service representatives relied on their experience to determine when they reached that limit.

But some product mixes fill the space more tightly than others. Less optimal loads leave empty space on the truck, a luxury that shippers can't afford as diesel prices keep pushing up the cost of delivery.

"We pay close to \$1,000 to get the truck to its destination whether it's nearly full, or 100-percent full," Jansen says.

On the flip side, sometimes a "truckload" order ended up with too much bulk. "We would build a load that was not able to be shipped," Jansen recalls. "We'd have the product available on the dock, but our dock workers would discover they did not have room to load all the cases."

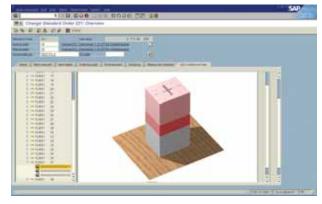
The excess product had to stay behind until the next time the customer placed an order. So although SCA had the product in stock and was

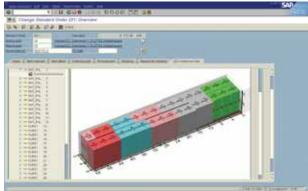
prepared to ship it, all the customer saw was a shortage—a service failure.

"In the past, nearly 30 percent of all case shortages were the result of a lack of space on the trailer," Jansen says. "The alternative would have been building smaller cube loads to avoid shortages, but that would have significantly increased transportation expense.

"We ship bulky products and spend a lot of money on freight. It's important that we optimize the process," he adds.

Jansen considered the solution a change management project more than a logistics challenge. To get more bang from the company's transportation





buck, it would have to get the customer service department, customers, and the shipping department to do their jobs differently. "So instead of appointing the director of transportation logistics to head the project, I asked the manager of customer service to be the project leader," he says.

CHOOSING A SOLUTION

After exploring numerous load optimization solutions and issuing a request for proposals, the project team chose Atlanta-based Ortec.

Ortec's optimization solution helps shippers better match loads to capacity, taking into account both volume Ortec's optimization solution helps SCA Tissue better match loads to capacity, taking into account both volume and weight. The solution is fully embedded with SAP's ERP software.

and weight. Ortec sells the solution in two formats: fully embedded with SAP's enterprise resource planning (ERP) software or as a standalone system that interfaces with another ERP system. SCA uses the embedded version.

Ortec draws on four kinds of data in its calculations. The first accounts for product dimensions—the height, length, width, and weight for each SKU the shipper might transport. The embedded version of the software takes that data from SAP's material master table, eliminating the need to collect the information during an Ortec implementation, says Bobby Miller, vice

president of industry operations for consumer products at Ortec.

The data might require some special attention, though. "The information is often old and hasn't been maintained," Miller says. "So it's best to assemble a data integrity team to make sure the data is correct."

The second category of data gives the dimensions of each kind of trailer, railcar, intermodal container, or other equipment the shipper might use.

The third provides a list of restrictions that customers impose on shipments for their own convenience. These might dictate, for example, that certain products must always travel



together, or that pallets containing certain products need to face a particular direction in the trailer.

The fourth category covers stackability rules: "What products can be stacked on top of something else, and how many times can they be stacked?" Miller says.

Given these parameters, Ortec's software determines how best to fit a specific order into the available space and, if there's room left over, how much more product the shipper can fit. At SCA, customer service reps use this information to get customers to increase their orders, when appropriate, to better fill the equipment.

"The buyer has to work with the customer service person to understand what's optimal to fit on the trailer and how they can change their order pattern," Jansen says. "That gives us the flexibility to swing an order up to take advantage of the trailer space."

INSTRUCTIONS FOR LOADING

Once the buyer and rep finish building the order, Ortec's software creates instructions for dock personnel to follow as they place items on pallets and load pallets on the trailer. Besides allowing the shipper to make the best possible use of trailer space, these instructions can help cut down on loading time.

"With potentially 26 to 30 slots on the trailer, the software will tell dock personnel which unit goes into each slot, and which orientation it should go in, to physically get the most out of the trailer," Jansen says.

Experienced employees probably can figure that out on their own. "But for new, inexperienced people, the learning curve goes away, because the answer to the test is handed to them for every order," he says.

For shipments that involve multiple stops, Ortec also offers route optimization, although SCA, with its full truckload shipments, doesn't use that feature.

Load Planning/Optimization Solutions

By Mark Rowan

TOPS Engineering

800-889-2441 • www.topseng.com

MaxLoad Pro

TOPS Engineering estimates that 10 to 25 percent of all shipping costs can be cut by using <code>MaxLoad Pro</code>. The software utilizes a 3D drag-and-drop editor, which allows shippers to build and edit load plans that can be e-mailed to customers or co-workers using any e-mail client. <code>MaxLoad Pro</code> also provides users with the best container to ship loads, while rules and calculations are used to minimize transient damage.



Soft Truck

support@softtruck.com • www.softtruck.com

CargoWiz

CargoWiz offers an easy-to-use interface and simple integration with shippers' current cargo data. CargoWiz can also provide swift information to customers who ask for a certain number of different products. After running a quick simulation, users can tell their customers how much space is left in the container, and what products can be added to fill it. Soft Truck offers a 20-day software trial.

Prophesy Logistics

877-652-2362 • www.prophesylogistics.com

ShipperPlus Loadbuilder

For shippers who have to push a box out the door, *ShipperPlus Loadbuilder* can help. Generally, shippers can justify the purchase in two to four months with the cost savings the software provides. *ShipperPlus* provides the ability to look at an order from an individual cost standpoint, and not only tell the user where a shipment is, but when it will arrive. Prophesy also offers help with dispatching—allowing shippers to track and reroute shipments at will.

Ortec Logistics

678-392-3100 • us.ortec.com

LOADDESIGNER

Ortec's software solution comes with *TMS-Connect* and *Connect For R/3*, which guarantees compatibility with current IT systems. LOADDESIGNER also supports eight different languages, and more are available upon request. The software's mobility allows users to e-mail loading graphics and bring the load instructions to the dock via mobile or stationary monitors. Ortec offers customized solutions depending on industry; unique features for the automobile, beverage, chemical, and paper industries are included.

When SCA started using Ortec's solution, many customers increased their orders to better fill the trailers, but some balked at the idea.

"A number of them are incented on turns and inventory levels," Jansen says. "So when we told them we want to ship another hundred cases of a certain item, some buyers said they didn't need those cases."

To help win them over, reps explained that ordering more product would save labor in their own DCs. "Over time, instead of 13 trailers coming to their dock, they're receiving 12," Jansen says. "That's worth something to them as well."

Many shippers use price incentives to get their customers to order fuller loads. "The more customer behavior changes, the better for them, because they'll get some kind of discount," Miller says.

WORKING TOGETHER FOR SAVINGS

SCA doesn't use that strategy, but its customers understand that better capacity utilization saves them money in the long run.

"They realize that if we're inefficient, eventually we will pass that along in the form of higher prices," Jansen says. "But if we work together, all of us in the supply chain can be more efficient."

Since SCA started using Ortec's software, the company has been averaging five to six percent better cube utilization on its trucks.

"In addition, our case fill rates of 99.6 percent have increased to 99.8 percent, primarily driven by eliminating 'trailer full' shortages," Jansen adds.

Besides using the software to optimize outbound shipments to customers, SCA Tissue recently started using it to build more efficient loads when shipping product among its own facilities.

"It's a different process," Jansen acknowledges, "but we should realize the same benefits."

If you are looking for a little more logic in planning your truck shipments, here is a list of companies that can help take a load off.

Optimum Logistics

info@loadplanner.com • www.loadplanner.com

LoadPlanner

Optimum Logistics' LoadPlanner is a rules-based solution. That means it is more than capable of handling an array of constraints and business rules that shippers may struggle with daily. LoadPlanner takes these restrictions and applies them to the shipper's load. Optimum Logistics offers free, unlimited access to LoadPlanner through its Web server for business and educational needs. A free evaluation copy of the solution is also available on the Web site.

Magic Logic

888-274-8616 • www.magiclogic.com

Cube-IQ

The optional addition of more complex features makes *Cube-IQ* stand out. Shippers can go beyond what is normally offered and add the ability for the software to handle Unit Load Devices, or ULDs, which are used on airlines. Roll loading and sofa loading are also options that can be tacked on to the base version of *Cube-IQ*. The solution can be up and running in a few days, and can be configured to work with any system that can create XML data.

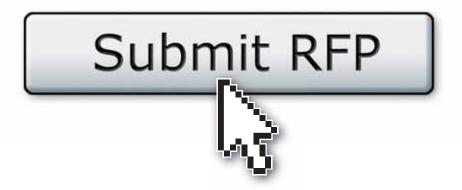
Advanced Logistics System

360-378-5398 • www.advanced-logistics.com

Advanced Loading System

The Advanced Loading System can help maximize cubic volume utilization for road, rail, ocean, or air shipments. While the solution ensures shippers get the most out of each load, it also makes sure trucks pass at the scales. The software computes legal axle weights along with defined priority loading rules and stacking limits. The Advanced Loading System also operates online, so shippers can access the diagrams and information the solution provides whenever needed.

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DCSOLUTIONS



by Amanda Loudin

Quenching the Thirst For Enhanced DC Design

ne key component of running a successful warehousing and distribution operation is constantly evaluating your network to determine how many distribution centers you need, where to locate them, and how large they should be. That's the process Southern Wine and Spirits of America Inc. embarked on recently when it opened a new facility in Lakeland, Fla.

Southern is one of the country's largest domestic wine and spirits distributors, capturing more than 19 percent of the industry's total domestic wholesale revenues.

During the past few years, annual sales have risen rapidly, currently topping \$7 billion. Growth in 2006 was 10 percent and the company expected to hit 20 percent in 2007. Because Southern has expanded largely through consolidation, it recognized a need to reevaluate its distribution network.

Southern has consolidated its network from five to two DCs in Florida, both much larger than their predecessors. "Our plan is to consolidate investments into fewer facilities but build them larger," explains Bobby Burg, senior vice president of supply chain strategy for Southern Wine and Spirits. "At the same time, we are making those DCs more efficient and productive."

The new Lakeland facility stands as a shining example of the "fewer-but-bigger" strategy. The 650,000-square-foot DC was built from the ground up to fit Southern's needs. As a facility handling some of the highest volumes of wine and spirits distribution in the country, it showcases sophisticated technology and materials handling equipment–juggling 12,000 beverage SKUs and moving 10,500 cases per hour.

FINDING THE RIGHT MIX

The company represents 1,500 global wine, spirits, beer, and beverage suppliers—marketing, promoting, merchandising, and distributing approximately 5,000 brands. Southern calls on 185,000 domestic retail and

A consolidated

DC network combined

with the right
technology provides

Southern comfort.

DCSOLUTIONS

《 CONTINUED FROM PAGE 65

restaurant customers weekly.

Southern is deeply committed to customer service and strives for next-day delivery to most customers. "Orders that come in by 5 p.m. receive next-day delivery, except for remote areas in a few states," says Burg.

To accomplish this, the Lakeland DC's 250 employees work three shifts, five days a week. During peak season in November and December, the DC often adds a sixth day of operations to keep up with demand. Most orders are shipped as cases; few pallet loads go out.

HUB OF ACTIVITY

From its central Florida location, the Lakeland distribution center serves as the core of Southern's hub-and-spoke distribution system. The DC moves product to cross-docking facilities using Southern's fleet of 120 18-wheelers and 1,100 local delivery trucks. The local trucks deliver goods to customers.

Because Southern's operations often require a high volume of split cases, the new DC needed the right equipment to properly match supply to demand.

"Our goal for the Lakeland facility was to move high volumes of product at lower costs," says Burg. "Continued investment in technology and automation allows us to achieve that goal."

When Southern began planning the Lakeland DC, it shopped for the best solution that would help increase throughput even as volume grew. After considerable due diligence, it settled on a system from Dematic, a global logistics and materials handling automation solutions provider with U.S. headquarters in Grand Rapids, Mich.

"Dematic's solution offered a unique



High-tech solutions prove to be a tonic for Southern Wine and Spirits of America's distribution challenges. Tracking and sorting systems at the company's new 650,000-square-foot facility have reduced errors by 60 percent.

design and the company's representatives demonstrated how its equipment could help us attain faster throughput while protecting our fragile products," says Burg.

That level of care was key for Southern, which moves glass bottles that can break when handled roughly. The new equipment processes bottles at a rate of 150 units per minute, or 9,000 per hour–much faster than other systems Southern considered.

"Dematic performed simulations that proved how quickly it could move product without breakage," Burg explains. "The system's breakage rate is about 50 percent lower than the industry average."

TOP-NOTCH DESIGN

The new system features three levels of pick modules and 7,000 feet of conveyors. Two-inch rollers on accumulation conveyors minimize gaps, which helps maintain low breakage rates. The conveyors progressively release a group of products—or "slugs"—with smooth starts and stops to safely aggregate and convey the fragile loads, which weigh an average of 35 to 40 pounds.

Using the slug merge system, Lakeland's DC can run and merge 12 lines, increasing system throughput and eliminating "bottlenecks." The merge evens out line variances from multiple pick areas and optimizes batch cycling. "The slug merge can handle eight to 12 cases from one line at once," says Burg. "This has dramatically minimized gaps."

Products are picked, put on roller conveyors, labeled with an ID tag, and sent to an accumulation area. The cartons are scanned, then released into another merge area.

This process would normally create a gap and limit throughput without reducing speed, but Dematic uses a unique technology at the merge that pre-builds slugs, then pre-sets product gaps on the slug belts. "Releasing the

slugs to the merge before going into the sorter provides more precise handling of fragile products," says Don Passarella, business development manager for Dematic.

Before being released into the merge, cases are scanned on the conveyor in real time, creating little gap between cartons. As a result, products move faster through the sorter than they do through conventional merge systems.

At the sortation point, Dematic's

"Find a partner that understands technology and what it can do for you. Technology doesn't add value if it doesn't fit your business."

-BOBBY BURG,

senior vice president of supply chain strategy, Southern Wine and Spirits

high-speed sliding shoe sorter provides quiet sortation and high throughput. Sixteen chutes come off the sorter and funnel into 12 truck lanes for shipping. System capabilities can expand to 20 chutes if needed.

The fast-moving sorter handles an hourly product volume of 10,500 cases. At the end of the sorter, a five-sided scan tunnel verifies the source classification codes against shipping links.

"This technical customization uses point-camera technology to compare the bar codes on the cases with those on the shipping label," says Passarella. "The technology ensures that the right shipping label is applied to the right case."

Dematic's materials handling system has netted dramatic improvements in many areas of the Lakeland DC. "We've been able to reduce inventory and our fill rate is one to two percentage points better than at our older facilities," says Burg.

In addition, the facility has been able to go completely paperless. "We scan and check all shipments as they go out the door, so accuracy is up as well," he adds.

Shipping accuracy, in fact, is greatly improved. Before implementing the new system, Southern averaged a one-percent error rate out the door; now it averages a 0.2 percent error rate, a 60-percent reduction.

Volume increases are noteworthy as well. Before installing the new sorter, the company processed about 150 cases per man hour for the entire DC. Now, it handles 200 cases per man hour, a 33-percent productivity increase.

Southern considers its Lakeland DC to be among its first "new generation" facilities. Because it has been so successful, the company is currently constructing several more "second generation" DCs.

WHAT WORKS

Building the Lakeland facility and selecting its sortation and materials handling systems has allowed Burg to learn what does and doesn't work.

"Most importantly, make sure you find a partner that understands technology and what it can do for you," he advises. "Technology doesn't add value if it doesn't fit your business. A good partner wants to find success with you."

In addition, he recommends training employees thoroughly on any new systems.

"Don't skimp on training time and make sure your staff understands how their training fits into the entire system," Burg says. "Southern's management provided on-floor direction during training, which was critical to success. You can't implement a new system and walk away."

3PLS



Logistic Dynamics • www.logisticdynamics.com



Logistic Dynamics Inc. (LDI) is one of the fastest growing, privately held 3PLs in the United States. LDI provides reliable and cost-effective full truckload, LTL, and intermodal services to shippers both large and small throughout the United States, Canada, and Mexico. At LDI, we understand and appreciate that customers attach their good name to every shipment they send, and we are committed to treating customer freight as if it were our own.

Transfreight • www.transfreight.com

A premier third-party logistics provider, Transfreight delivers customized lean supply chain solutions that reduce total logistics cost for leading manufacturers. Our innovative, multidisciplinary team uses robust technologies/processes to create solutions that optimally connect their manufacturing operations and suppliers. Transfreight solutions include network rationalization and optimization; crossdocking and facility services; transportation; packaging design and management; and consulting.



CAREERS/RECRUITERS



ABL Logistics Group • www.abllogistics.com

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EDUCATION



Elmhurst College • www.elmhurst.edu/scm

Elmhurst College offers the Chicago area's only graduate program in supply chain management. In this program, you'll gain a sound technical foundation and hone skills that are absolutely critical for today's professional: communication, negotiation, team building, information technology, analytical thinking, working in diverse business environments, and sound business decision-making. All course work maintains a balance between current theory and its real-world application.

Georgia Tech Supply Chain & Logistics Institute www.scl.gatech.edu



The Supply Chain & Logistics Institute (SCL) offers a comprehensive curriculum of short courses and seminars in which participants can earn a professional certificate in logistics. More than 10 open enrollment logistics short courses are offered each year. SCL can also assemble a curriculum designed for individual company needs. SCL students come from all segments of the logistics community – from manufacturing and distribution, warehousing, transportation and third-party logistics, to consulting and information technology.



Institute of Logistical Management • www.logisticseducation.edu



Since 1923, The Institute of Logistical Management (ILM) has provided specialized education and training worldwide to over 84,000 graduates, both civilian and military. ILM integrates all areas of transportation, logistics, and the supply chain to prepare and certify individuals to join the \$1-trillion logistics industry. ILM focuses on real-world skills and practical application through its Certified Logistics Practitioner's Program and college accreditation. Students also can transfer ILM credits toward a college degree. ILM is articulated with the University of Phoenix and other leading degree-granting colleges and universities. For further information contact us at 888-456-4600 or dean@logisticseducation.edu.

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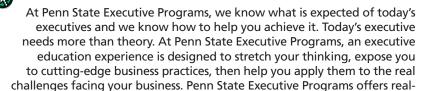




Michigan State University - Eli Broad College of Business www.bus.msu.edu

The Eli Broad College of Business at Michigan State University's department of Marketing and Supply Chain Management is widely acknowledged as a leader in creating, integrating, and disseminating marketing, procurement, manufacturing, and logistics knowledge. The school's vision for this area of study embraces all aspects of creating customer value and delivering a standard of living in the global competitive economy. MSU offers strong research-based knowledge products and education excellence to executives, PhD, MBA, and undergraduate students. Find out more by visiting the Web site.

Penn State Executive Programs • www.smeal.psu.edu/psep





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The MBA at the Sam M. Walton College of Business at the University of Arkansas has been redesigned to focus on retail marketing, information systems, logistics, and supply chain management. There are two options – full and part-time. The full-time program begins in January and continues for three semesters. The part-time program begins in the fall semester and students only attend class one Saturday a month for two years. Students are able to participate in this program from all over the country. Visit our Web site for more information.

University of Wisconsin-Madison, Executive Education exed.wisc.edu

UW-Madison's executive education programs meet today's ever-changing business demands while enhancing organizational effectiveness and leadership capacity. Ranked #1 internationally for "value for the money" by the Financial Times of London (2007), our 200-plus open-enrollment courses cover 80 business topics and incorporate 10 certificate series, including Supply Chain Management and Transportation and Logistics Management. Visit our Web site for program overviews, planning calendars, and online registration or call 1-800-292-8964.





The World Academy • www.theworldacademy.com

The World Academy offers a myriad of seminars both in-house and at selected venues dealing with logistics, supply chain issues, and import/export compliance. Our teachers are all experienced professionals from the logistics industry with a minimum of 19 years of hands-on experience. We offer classes on certification for shipping dangerous goods, C-TPAT workshops, import/export compliance management, and many others. Please visit our Web site at www.theworldacademy.com to view our course offerings.

FREIGHT BILL PAYMENT

PowerTrack • www.powertrackglobal.com

The PowerTrack Network effectively collaborates with customers around the globe to create solid links between physical supply chain events and financial processes and payments. Since the beginning, PowerTrack has allowed its customers to use supply chain data to make faster, more accurate payments for supply chain partners worldwide – vendors are paid within days, not months. The results are lower supply chain costs and increased financial control and visibility. To learn more about how PowerTrack can help you, visit www.powertrackglobal.com.



LOGISTICS IT



Cheetah Software Systems Inc. • www.cheetah.com

Cheetah Software Systems Inc. provides dynamic, intelligent, wireless solutions for automating and optimizing pickup, delivery, dispatch, and customer service. Fully scalable and Web-based, Cheetah solutions increase productivity and profitability for carriers of any size with minimal up-front costs. Cheetah's private fleet and LTL customers utilize GPS-enabled phones and PDAs to schedule, route, and track drivers and shipments.

REAL ESTATE

Verde Realty • www.verderealty.com

Verde Corporate Realty Services is a leading developer, owner, and operator of corporate real estate on the U.S.-Mexico border and gateway cities such as Austin, San Antonio, Houston, and Monterrey. Verde has developed and acquired more than 12 million square feet of industrial buildings and has land in master planned parks throughout this target market to develop an additional 18.5 million square feet.



SITE SELECTION



Greater Columbus Chamber of Commerce • www.columbus.org

Did you know Columbus is the third fastest growing major metropolitan area in the Midwest? That means opportunity. Locating or expanding in Columbus, Ohio connects you to a thriving seven-county region. Our distribution and transportation system connects you to the world; our highways connect you to the Midwest; and our education system connects you to a skilled workforce. The Columbus Chamber leads and supports economic growth and development in the greater Columbus Region. Visit our Web site for specific information to help you expand or relocate.

Joplin Area Chamber of Commerce • www.joplincc.com

Thinking of Joplin, Mo., as the next site for your headquarters or distribution center? Your first stop should be The Joplin Area Chamber of Commerce's Web site. You'll find a complete business profile of Joplin, including population, location, infrastructure, labor, education, real estate and cost-of-living statistics. The Joplin Area Chamber of Commerce is a private, not-for-profit organization of business and professional people committed to improving the economic prosperity and quality of life in the Joplin area. Member of NASCO.



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North Carolina Global TransPark • www.ncgtp.com

The North Carolina Global TransPark currently offers prime commercial real estate and excellent shipping capabilities to any size company anywhere in the Mid-Atlantic region and beyond. Here, business owners will find cutting-edge transportation systems, first-rate materials handling capability, and a premier training center. While future growth and change at the Global TransPark beckon, the business opportunity is now. Explore this Web site and imagine the business opportunity waiting for you.

SUPPLY CHAIN MANAGEMENT

Sterling Commerce • www.sterlingcommerce.com

Sterling Commerce offers solutions that simplify the planning and management of your supply chain. Our solutions enable full collaboration between you and your business partners, and real-time visibility into all of your supply chain processes – from order capture, configuration, and fulfillment, to in-store inventory. With more than 30,000 customers worldwide across all major industries, Sterling Commerce provides a true, cross-channel experience for your customers.



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Industry experts amass supply chain management best practices and skill sets, and invest in new research and evaluation tools. Now you can benefit. Inbound Logistics has selected this collection of whitepapers that will give you a jump on important supply chain issues. For more information on any of these whitepapers, visit the Web sites listed below.



Discover how France's logistics property markets operate in this whitepaper from ProLogis.

ProLogis

TITLE: France's Logistics Property Markets - Distribution

Gateway to Southern Europe (Fall 2007)

LENGTH: 16 pages

DOWNLOAD: www.prologisresearch.com/supplychain/default.asp?reid=A3U2820487DE

SUMMARY: This report on France is the second in a ProLogis Research series investigating how European logistics property markets operate. Currently, France is caught up in a sweeping pan-European logistics revolution. Given the country's central location and extensive highway system, many companies in Europe have incorporated one or more French markets into their pan-European distribution networks. France today possesses the largest inventory of modern and for-lease facilities on the continent, but virtually all of them have been built during the past 10 years. Every country's logistics property markets have their own idiosyncrasies, and the goal of this series of whitepapers is to help you understand their differences as well as their commonalities.

LXE

TITLE: Achieving Best-in-Class Performance in Retail Stores With Mobile Computers

LENGTH: 6 pages

DOWNLOAD: www.lxe.com/pdf/wp Retail.pdf

SUMMARY: Store-level execution is under the spotlight as retailers seek to distinguish themselves in a marketplace where price and product no longer differentiate. The good news is that, with the right software and hardware tools, stores can plan for and prioritize replenishment and other tasks, allocate labor accordingly, and work through to-do lists quickly and accurately. The advent of wireless networks has revolutionized the way retail staff can communicate with applications, data, and each other. This whitepaper shows how wireless mobile computers can make every store-level task faster, more accurate and visible to all stakeholders, from in-store inventory, pricing, and promotions tasks to customer service activities and manager dashboards that monitor transactions and enact decisions.



PEAK Technologies

TITLE: Selecting an Approach for Industrial SAP Data Collection Solutions

LENGTH: 19 pages

DOWNLOAD: www.peaktech.com/sapwp

SUMMARY: Written by Chris Schultz, senior SAP systems architect at PEAK, this whitepaper compares three major approaches-SAP Console, ITSMobile, and Mobile Web Dynpro-for real-time industrial data collection using mobile devices in an SAP environment, such as a wireless warehouse. Schultz describes the unique characteristics of each approach, and provides an objective, side-by-side comparison of the similarities and differences. He also explores the kinds of supply chain operating environments that each approach best serves. Merits and limitations of each approach are explored by reviewing key technical and operational attributes such as solution architecture and availability; levels of support; device compatibility, user interfaces and ease of use; and security capabilities and application performance.

Institute for Supply Management

TITLE: Supply Management Professional Development Paths

LENGTH: 17 pages

DOWNLOAD: www.ism.ws/files/Education/SMProfDevPathsWhitePaper.pdf

SUMMARY: This latest whitepaper is part of a series that provides guidance and direction to individuals and organizations looking to build a comprehensive professional development program. Specifically, this document focuses on training paths for entry-level to senior-level supply professionals, and provides direction for cross-functional positions relating to supply management. A content chart, designed to be used as a template, guides a deeper view, and identifies subjects across content areas and levels. Discover how ISM's Supply Management Professional Development Paths can help you or your organization by downloading this document today.

Supply Chain Consulting

TITLE: Mastering Proactive Carbon Management

LENGTH: 8 pages

DOWNLOAD: www.supplychain-consulting.com/index.php/downloads

SUMMARY: How ready is your organization to reduce its carbon emissions? Find out by downloading this informative whitepaper, which looks at an approach that delivers long-term, financially sustainable carbon footprint reduction supported through the adoption of appropriate technology over time. The paper takes a brief look at the Carbon Management Maturity Model, a strategy that allows companies to deal with current challenges while they find the optimal balance between financial performance and footprint reduction. This is then linked to Carbon Visibility, which allows a company to move away from simple manual reports.

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WhitePaper Digest is designed to bring readers up-to-date information on all aspects of supply chain management. We're building a database of SCM whitepapers, and you can help. E-mail us with whitepaper recommendations: editorial@inboundlogistics.com.

TECHUPDATE

THE LATEST IN LOGISTICS TECHNOLOGY



Noregon Systems

WHAT'S NEW: The release of an improved version of its vehicle diagnostics application. THE VALUE: Version 3.0 of JPRO Fleet Diagnostics provides technicians with key data points, which display all the relevant vehicle information for each fault, and can automatically launch OEMs' specialized component diagnostics applications for further analysis.

> **⇔** www.noregon.com © 336-768-4337

hardware

WHAT'S NEW: The addition of a sensor that detects the height of a lift truck's forks.

THE VALUE: Able to determine height levels up to 30 feet from the floor, Sky-Trax Lift Height Sensor provides a stable mast height determination within one second. An optional USB interface allows users to capture lift height data on a computer.

© 866-927-4927

Glacier Computer

WHAT'S NEW: A touchscreen tablet computer.

THE VALUE: The Ridgeline Tablet, which withstands drops of up to three feet, works with Bluetooth, and numerous I/O formats and hard drive options. Users can input data via touch or pen.

Special software allows for signature capture and character recognition.

> © 603-882-1560

Citizen

WHAT'S NEW: The launch of a line of bar-code and label printers.

THE VALUE: The CL-S700 series, designed with an all-steel frame to withstand warehousing and manufacturing environments, switches from Datamas to Zebra emulations with the touch of a button. The printer also features a front-loading rewinder option, providing easy access to its ribbon in confined settings.

> **⇔ www.citizen-systems.com** © 800-421-6516

Accu-Sort

WHAT'S NEW: The introduction of a camera-based identification solution. **THE VALUE:** The AV6010 Long Range Camera System reads 1D and 2D bar codes and can be used in highspeed parcel sortation, as well as warehouse and distribution center applications.

₩ www.accusort.com

© 800-227-2633



Psion Teklogix

WHAT'S NEW: The addition of six RFID readers to its line of handheld terminals.

THE VALUE: The readers enable Workabout Pro devices to support various radio spectrum options including Low Frequency, High Frequency, Ultra High Frequency (UHF) Passive, and UHF Active to address a wide range of RFID applications.

© 800-322-3437 ⇔ www.psionteklogix.com

To learn more, contact these companies directly. Remember to mention this issue date and page to get the right information.

Wavetrend Technologies

WHAT'S NEW: The introduction of an integrated global tracking system. **THE VALUE:** *GlobalEyes* combines multiple communications and tracking technologies with a software management suite to monitor assets, people, and vehicles.

⇔ www.wavetrends.net

© 703-539-8502



software

CorePartners

WHAT'S NEW: The launch of an inventory and warehouse management system.

THE VALUE: Core-IMS handles purchasing, receiving, inventory management, sales orders, and shipping. Designed for small warehouses, the application scans and prints bar codes, compiles information into customizable reports, and integrates with standard accounting, shipping, and ERP software.

₩ www.coreims.com

© 301-695-2673

Llamasoft

WHAT'S NEW: The enhancement of its *Supply Chain Guru* solution.

THE VALUE: The supply chain network design software now includes greenhouse gas (GHG) emissions modeling and optimization capabilities. Intended to help companies reduce their impact on the environment, the application calculates the organization's GHG footprint, determines where GHG emissions can be reduced, and incorporates carbon offset purchases into their cost and footprint calculations.

© 734-418-3119

McLeod Software

WHAT'S NEW: The addition of a new module to the *PowerBroker* and *LoadMaster* enterprise management systems.

THE VALUE: The *Agent Access For Truckload* module allows brokers, logistics providers, and carriers that dispatch their own trucks to manage

those assets from a remote location. The Web-based tool provides agents with full capability to manage vehicles without the need to install a full-scale enterprise management system at each location.

₩ www.mcleodsoftware.com © 877-362-5363

Descartes

WHAT'S NEW: The enhancement of its route management solutions.

THE VALUE: The new release of Descartes' *Delivery Management Suite* offers improved image quality and rendering speed, enhanced geocoding speed and accuracy, support for larger geographic areas, and expanded route-optimization related attributes.

⇔ www.descartes.com

© 519-746-6114



State of Alabama

WHAT'S NEW: The launch of a Web site for truck drivers.

THE VALUE: The state can provide commercial drivers with information on safety issues, road rules and regulations, maps identifying welcome centers and rest areas, and emergency road closures. Truckers can also purchase trip and fuel permits on the site.

Inovis

WHAT'S NEW: The introduction of an image-exchange support system.

THE VALUE: The latest enhancement to *Inovis Catalogue*, an online product-information database, gives marketers, manufacturers, and suppliers the ability to share linked images and product data with retailers.

© 877-446-6847



NEWSERVICES

YOUR BUSINESS LOGISTICS RESOURCE

GREENBOX

WHAT'S NEW: The introduction of a recyclable, temperature-controlled shipping system.

THE VALUE: In addition to being 100 percent recyclable and made from organic-based, non-toxic, biodegradable materials, GREENBOX packaging keeps shipments such as pharmaceuticals and biological supplies at a stable temperature for five days or longer. GREENBOX also cuts distribution costs by offering lease, purchase, or pay-per-use shipping options. Each package can be used at least 100 times.

⇔ www.greenboxsystems.com © 877-447-6269

ICS Logistics

WHAT'S NEW: The construction of a refrigerated facility.

THE VALUE: The 227,000-squarefoot warehouse, to be located in Jacksonville, Fla., will provide services to shippers of perishable items. The warehouse will offer refrigerator, freezer, and room-temperature space. © 904-786-8038

Emirates Shipping Line

WHAT'S NEW: The launch of an ocean service linking China, India, and the Middle East.

THE VALUE: Emirates Shipping Line provided three of the six vessels for Hyper Galex II, one of the few services in the region offering a direct connection between Qingdao and Bandar Abbas, as well as Colombo and Xingang. The service also opens the only direct route from Mundra into Northern China.

NYK

WHAT'S NEW: The start of a feeder service connecting major European cities with Russia.

THE VALUE: Tokyo-based ocean carrier NYK's new Baltic Express Service calls on ports in Amsterdam; Hamburg, Germany; St. Petersburg, Russia; and Kotka, Finland, increasing the range of transportation networks available to ocean shippers.

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WHAT'S NEW: An increase in the number of next-day shipping lanes in Texas. **THE VALUE:** The improvements reduce transit times to cities in south and west Texas between El Paso, Laredo, San Antonio, Austin, and Harlingen.

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WHAT'S NEW: The opening of a station in Omaha, Neb.

THE VALUE: The Nebraska facility





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WHAT'S NEW: The expansion of its Canadian warehousing facility and shrink-wrapping operations. THE VALUE: With its 12,000-squarefoot addition, G.O.A., which specializes in transporting alcoholic beverages, soft drinks, and bottled water, can package products faster. The facility increased its daily output of shrink-wrapped products from 4,200 cases to 12,000 cases.

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March 26-28, 2008, Northeast Trade and Transport Conference, Newport, R.I.

At the Coalition of New England Companies of Trade's 12th annual event, focus areas will include supply chain pricing and benchmarking, regulatory issues, legislative updates, and pricing and service trends. Chris Koch, president and CEO of the World Shipping Council, will provide the keynote address.

508-481-0424 www.conect.org

April 20-23, 2008, Navis World 2008, San Francisco, Calif. Leading marine terminal operators, inland logistics managers, shipping line executives, and industry analysts will gather to exchange ideas and learn about emerging supply chain technologies at Navis World 2008, focusing on the most pressing issues facing today's supply chain

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April 22-24, 2008, Transplace Sixth Annual Shipper Symposium, Rogers,

Ark. The event's agenda features presentations on different aspects of the symposium theme, Sustainability in the Transportation Industry. Panels showcasing timely topics include how to cope with rising oil prices, sustainability and growth in the supply chain, and how to handle enterprise-wide supply chain changes. On April 23, the Supply Chain Management Research Center, a research unit of the Sam M. Walton College of Business at the University of Arkansas, will sponsor a conference segment showcasing the theme, Sourcing and New Market Development in the Global Supply Chain.

479-575-7334 http://symposium.transplace.com

April 27-29, 2008, The National Private Truck Council's Education Management Conference, Cincinnati, Ohio. Workshop topics include curbing driver turnover, reducing accidents through investigation, surviving a DOT

audit, and wringing out fuel purchase savings. Attendees can also browse the exhibit hall and get new perspectives from featured speakers.

703-683-1300 www.nptc.org

May 18-20, 2008, The Enterprise Procurement Exchange, Pinehurst,

N.C. An exclusive gathering designed for heads of corporate procurement organizations tasked with ensuring the competitiveness of their businesses, this event will address common challenges faced by the profession, their solutions, and the latest strategies for improving efficiency and performance for smarter cost savings.

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May 4-7, 2008, Warehousing Education and Research Council's 27th Annual Conference, Chicago, III. Speakers from major companies such as Frito-Lay and Procter & Gamble will explore topics including materials equipment options, best security practice implementation, and lean principles. Facility tours of six distribution centers, including the world's largest package distribution facility, let conference attendees see how it's done in the real world.

630-990-0001 www.werc.org

May 27-31, 2008, International CeMat Conference, Hannover, Germany.

Presented by the CeMat trade fair and developed in conjunction with the Supply Management Institute of the European Business School, this program includes discussions of climate protection, raw materials, health care, disaster relief, future market developments, and international collaboration in the coming years.

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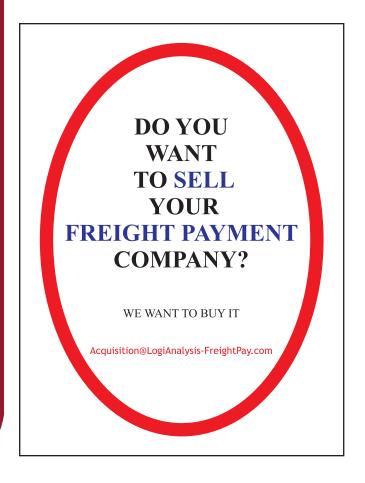
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INDEX

DVERTISER	PAGE
merican Military University	43
American Society of Transportation and	
ogistics Inc. (AST&L)	36
ATC Logistics & Electronics	11
Bellevue University	34
California State University, Long Beach	36
CRST Logistics	Cover 3
Imhurst College	33
verest Group	36
George Mason University	40
Seorgia Tech, Supply Chain & Logistics Institute	37
Georgia Tech, EMIL	38
Grubb and Ellis	81
nstitute of Logistical Management	40
lobsinLogistics.com	40
ludge Group	40
andair	19
ehigh University	44
ion Technology	34
ogistics Horizons	42
ynden	23

ADVERTISER	PAGE
Maine Maritime Academy	42
NA 2008 - Material Handling Industry of America	5
Mattech 2008	73
Michigan State University	38
Motorola	7
MRI Executive Solutions	44
National Shipping Company of Saudi Arabia	9
Northeast Trade & Transportation Conference	52
Pelican Products	51
Pennsylvania State University, Smeal MBA	35
Progressive Manufacturing Summit	25
Ryder	Cover 2
Shey-Harding	44
SmartTurn	44
Supply Chain Operations Private Exposition	17
Syracuse University, Whitman School of Managem	ent 34
University of Arkansas	39
University of Wisconsin – Madison	4
Unyson Logistics	21
UPS Freight	Cover 4
Verizon Wireless	3

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American Cheese

rom the Big Apple to Little Chute, Wisc., WOW Logistics recently brought together two American traditions in a landmark presentation of "cheesy" proportions.

The third-party logistics provider's Little Chute distribution facility served as the backdrop for cheese carver Troy Landwehr's unique re-creation of the Statue of Liberty.

From two 640-pound blocks of Wisconsin's finest, Landwehr carefully crafted an 800-pound likeness of the monument using an eight-inch scale model.

The two blocks of cheese, which cable channel Showtime purchased from Wisconsin Aging and Grading, a WOW Logistics customer, were stacked vertically on top of a stand for Landwehr to work from. The carving exhibition, filmed for broadcast on Showtime's *Tracy Ullman's State of the Union* program, was performed in the 3PL's temperature-controlled Grading Room—a facility its cheese customers use to test product and check on the aging process.

Landwehr, who has also sculpted a model of Mount Rushmore, is making a niche career out of cheese carving that fits nicely with his other job—winemaking. For WOW Logistics, which estimates 25 percent of its business comes from cheese financing and other dairy-related business, indulging the aesthetic tastes of cheese and art connoisseurs alike is just another day on the job.

WOW's Slice of the Cheese Market

WOW Logistics operates locations in Wisconsin, Idaho, and Illinois. It has multi-temperature rooms in each of its cooler DCs that are set at specific temperatures based on cheese aging processes. Cheese is usually aged for a minimum of three months and sometimes as long as 12 to 14 months. All cheese is brought in via refrigerated units and WOW Logistics uses specialized equipment to handle product as it arrives in bulk form or as finished product on pallets.

489,354 total square feet of refrigerated storage in all three locations

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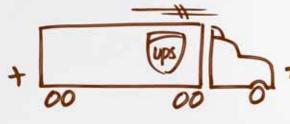
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