A SPECIAL SUPPLEMENT TO

FleetOwner Magazine

Can you survive?

A Guide to Trucking's Future

A Penton Media Publication

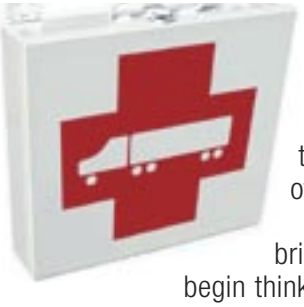
A GUIDE TO TRUCKING'S FUTURE:

Can you survive?

The daily business of running a truck fleet demands your immediate attention, leaving little time for contemplating scenarios and plans that stretch out longer than a week or so into the future. Once a year in this special 13th issue of Fleet Owner, we invite you to pick your head up from those urgent and essential daily concerns to take a quick look at the big-picture forces already beginning to shape that future.

The goal in creating this report is to provide a snapshot of the 10 most pressing issues trucking will face in the next decade or so.

As succinctly as possible, we've outlined the current situation for these truly transformative issues, and then attempted to identify the logical future implications for fleet operations of all types.



Our hope is that this brief guide will help you begin thinking about your fleet's place in that future and inspire you to get on with the planning you'll need to make sure it's a bright one.

— JIM MELE

EMISSIONS

Fleet owners worn down by the successive waves of EPA diesel-engine emission rulemakings spawned by the Clean Air Act Amendments (CAA) of 1990 can take comfort in knowing the next rule—taking effect in 2010—may be the last of its type to impact new medium- and heavy-duty trucks and tractors. But the story doesn't end there.

The 2010 on-highway diesel rule will result in trucks with emission levels near zero for both nitrogen oxides (NOx) and particulate matter (PM). This will equal a total reduction of 98% from 1988. EPA projections hold that these new trucks, once they fully replace all existing ones in the nation's fleet, will reduce emissions of smog-forming gases by 2.6-million tons and soot emissions by 110,000 tons a year.

The engineering advances required to produce 2010-compliant engines by the deadline appear to be moving apace at good clip. For example, Volvo Trucks North America has begun field-testing of 11 Volvo trucks equipped with the selective catalytic reduction (SCR) systems the OEM plans to use to meet the 2010 rule.

Most medium- and heavy-duty engine makers have already indicated that, like Volvo, they will produce 2010-compliant diesels by "building on" their current exhaust gas recirculation (EGR) engine and diesel particulate filter (DPF) aftertreatment technologies and adding SCR aftertreatment. SCR injects liquid urea into the exhaust stream from an auxiliary fuel tank to further reduce NOx emissions. But the biggest concern raised about SCR has not been whether it works, but whether it will require fleets to have—or operate within range of—a urea refueling infrastructure.

Adding quite a dash of drama to these proceedings was the recent announcement by Cummins that it will meet the 2010 standards for heavy-duty engines without adding an SCR system. But the engine maker will make SCR part of its medium-duty engine solution. "Longhaul fleets will breathe a sigh of relief that they will not have to worry about [buying] urea on the road" if they buy an EPA 2010 Cummins heavy-duty engine, according to Cummins' vp of sales Jeff Jones. On the other hand, said Jeff Weikert, the company's executive director of mid-range engineering, keeping urea "topped up" should not be a major issue for medium-duty fleets as their vehicles typically return to a domicile regularly and run at mileage levels that allow urea fill-ups to track with scheduled maintenance intervals.

Regardless whether an engine maker uses SCR or not, the 2010 engines will otherwise be based largely on technology that was fielded across the board to meet the 2007 rule—which should make the appearance of this next EPA milestone less vexing to fleets even as it delivers near-zero emissions.

Near zero may not be near enough. Look a little further out and there's the possibility that EPA is not quite done with issuing emission edicts that can impact trucking. Thanks to a recent ruling by the U.S. Supreme Court that found carbon dioxide (CO_2) emissions to be a pollutant under the Clean Air Act, the agency appears to have little choice in the matter. In fact, according to Administrator Stephen Johnson, EPA is currently "writing regulations on greenhouse gases" and will have to address the issue of CO_2 in both cars and light trucks. "Some have speculated that [EPA] might move forward [with CO_2 regulation] for medium- and heavy-duty trucks," Johnson said at a September news conference. "That's in discussion now."

Maybe after that it will be safe again to regard truck engines solely for their power, performance and economy.

—DAVID CULLEN

2 Capacity

"Dismal news" is how one economist characterizes current freight tonnage and capacity conditions in the for-hire segment of trucking. And the short -term outlook is no rosier, according to Bob Costello, chief economist and vp of the American Trucking Assns. But for those carriers able to slog through the next few quarters of overcapacity, "the biggest challenge long term is whether we can haul all the freight," he predicts.

Soft freight conditions and a huge influx of new Class 8 tractors purchased in 2006 to beat out emissions-driven equipment price increases in 2007 are the underlying causes of this year's persistent equipment underutilization among for-hire carriers.

And for now it isn't getting any better. Back in the spring, analysts estimated that the North American for-hire fleet had an excess capacity of between 116,000 and 120,000 Class 8 tractors. By the start of the fourth quarter, "it's more like the 145,000 to 150,000 range," says James Meil, chief economist for Eaton Corp.

Equipment utilization for the Class 8 for-hire fleet is at about 80% now, according to Meil. The "sweet spot" for utilization—the level where capacity is tight enough to support profitable rates, but still sufficient to move the available freight—is about 89%, he says. "My best guess is that we'll get back to that in late 2008."

Look beyond the next 12 months, though, and the picture brightens considerably. And quickly.

Once freight demand begins to pick up, capacity should tighten quickly for two reasons. First, after the pre-buy in 2006, fleets have pulled back on new tractor purchases. If you put the normal replacement cycle for longhaul tractors at about 230,000 trucks a year, tractor sales in 2007 will fall some 50,000 to 60,000 units below that threshold, essentially shrinking the overall North American for-hire fleet, according to Meil.

The second, and more important, reason to expect a quick capacity turnaround is that the industry has still not figured out how to attract enough new drivers. Without a pool of new drivers, fleets will not be able to expand readily, limiting the size of the N.A. for-hire fleet to near current levels.

That leads to quite positive long-term expectations for tight capacity and the solid freight rates that come with it. "The driver shortage remains acute, and that limits any top-end capacity growth," says Costello. And by his forecasts, there will be lots of new freight to fill trucking's relatively stable capacity. "We expect freight tonnage carried by truck to grow by 31% between 2005 and 2017," he says.

Eaton's Meil sees a similar scenario over the next ten years, with overall N.A. fleet utilization averaging that desirable 89%. However, Meil finds some of the current statistics used to measure and predict trucking activity are not following past patterns, which lends some uncertainty, in his view. "Best guess is that long-term utilization will average 89%, but not all the numbers are fitting into the box as nicely as they used to," he says.

Basically, Meil is puzzled by recent changes in the relationship between manufacturing activity, GDP and truck tonnage. In the 25 years since trucking was deregulated, freight has grown in tandem with manufacturing activity, which in turn has grown at the same general rate as GDP.

"Over the last two years, manufacturing measures have shown growth at GDP levels or above, but truck freight has been weak and declined," Meil says. "That's my core conundrum. I don't know why truck freight has gone down in a generally good economy."

Possible causes might be a change in domestic manufacturing to products that are less "truck-transportation intensive," higher exports moving more of the overall supply chain to other forms of transportation, or even a shift to more private fleet activity. "Or it's possible we're just in an odd period, and [the GDP/tonnage link] will go back to the norm in 2008," the Eaton economist says.

Bottom line for fleets looking to the future: Be ready to take advantage of a rapid tightening in truck capacity and learn how to keep shippers happy in an extended period of capacity constraints.

—JIM MELE

3 ENERGY

Scientists have been talking about finding new sources of energy for decades, but there is really no such thing as a "new" source. When it comes to energy, Mother Nature has always held all the cards. That will not change as the world is forced by declining oil reserves, increasing oil demand, climate change, and political and economic factors to explore energy options beyond the favorite fossil fuels of the past—oil, coal and natural gas. The question for trucking is, how can we best exploit these other options ?

What will separate the 21st century from the 19th and 20th will not be the discovery of amazing new energy sources, but an explosion in the variety of natural systems and resources which are employed to create usable energy. In the decades ahead, those three old fossil favorites will be augmented and gradually replaced by many other energy sources, including the wind, the sun, hydropower, geothermal energy, fuel cells and biomass-based energy. The ways in which these natural sources are harnessed and deployed, however, may be amazing indeed.

Using tidal current turbines to generate electricity, for instance, is a relatively new approach to making use of the power of flowing water. Tidal current turbines have already been deployed on a limited basis in the United Kingdom and are presently being explored at coastal sites in the U.S. as well.

Then there is the wind. Worldwide, wind-generating capacity has been growing by an estimated 29% per year, according to Worldwatch Institute, as compared to just a 1.7% growth in oil production. And wind power has many pluses: it's cheap, abundant, inexhaust-

ible, clean, climate-benign and widely distributed around the globe.

For some researchers, solar power holds more promise than all other technologies combined. According to the Union of Concerned Scientists, for example, it would take only 20 days of sunshine to replace the energy from all the world's reserves of coal, oil and natural gas. Today only about 1% of the world's energy comes from solar power, and most of that is derived from the use of solar panels.

Meanwhile, at Purdue University a team of engineers has created what they've dubbed a "tactical biorefinery." Initially intended for military applications, the portable generator is designed to turn trash, such as food, paper and plastic, into electricity.

Small-scale solutions like Purdue's little biorefinery may, in fact, be the best energy strategy of all, according to a new study from the Virginia Polytechnic Institute and State University (*www.sciencedaily.com*). The research suggests that small, green and very localized energy generation solutions are superior to the massive power grids American currently depends upon for its electricity, offering better security and reliability while reducing environmental impacts. Again, not a bad energy solution, one even much-abused Mother Nature could probably support.

—WENDY LEAVITT

Idle Reduction

Fleet managers have always recognized that idling a truck engine for any length of time is bad business because it's expensive. Now, however, idling is also being identified as bad citizenship, and that social pressure is proving much harder to bear than the cost.

An accepted rough estimate is that an idling heavy-duty diesel engine burns one gallon of fuel per hour without moving a single mile. In longhaul applications, various researchers have found that tractors idle an average 1,400 to 1,900 hours a year. And for utility and other types of field service with significant PTO requirements, idling hours can easily outpace time spend on the road.

With diesel stuck at around $3 a gallon, idling is clearly expensive. But fleets have traditionally accepted that cost as the price of doing business. Drivers in the sleeper need heat, cooling and electric power; a bucket truck needs hydraulic power to reach the power lines.

However, a pre-2002 truck emits 20 tons of CO_2, 240 lb. of CO and 250 lb. of NO_x in 1,900 hours of idling, according to the Argonne National Lab. And that, says one Argonne researcher, "is becoming as unacceptable as smoking in public places."

The result is that more than 20 states now have diesel-engine idling regulations for trucks of all sizes and enforcement efforts to go along with those rules. Even the diesel-engined auxiliary power units (APUs) used by some to avoid idling the truck's engine are coming under idling restrictions in the most aggressive states.

There are well over 40 aftermarket idling solutions already available commercially, but the field is still in its infancy. A few trends are being to emerge, though. Truck OEMs are beginning to offer integrated systems that reduce the initial cost of idling alternatives somewhat. Diesel-electric hybrid systems designed specifically for APU applications are beginning to appear as well. And efforts to extend plug-in "shore power" at truck stops and other locations are well under way.

Technology will offer a variety of paths to reducing a fleet's idling. The problem for fleets is how to pay for these idling solutions. Perhaps an even more difficult issue is the operational restructuring fleets will have to put in place to minimize idling where it is restricted and to take advantage of fixed solutions like shore power.

In the end, controlling idling is both good business and good citizenship for trucking. However, satisfying driver and service needs while still complying with ever more stringent idling restrictions will be a tough balancing act.

—JIM MELE

ALTERNATIVE POWER

The transportation industry is entering a period of power choice proliferation. There are already some 40-odd options, and additional alternatives are still emerging. For the next several years, until a "best solution" is clear, new fuels and other power options will be entering (and exiting) the market in greater number and variety than the industry has seen since the invention of the combustion engine.

If the conjoined problems of climate change and pollution could be said to have a silver lining, this boom in power research and development might well be it. One day, the result will be cleaner, cheaper, more sustainable power for the world. In the meantime, however, making decisions concerning the best power choice for your fleet is about to become complicated indeed.

Consider liquid fuels. The Volvo Group, for example, has been studying and evaluating all renewable fuels with the potential for use in Volvo products. Seven options were singled out for intensive evaluation according to climate impact, energy efficiency, land use efficiency, fuel potential, vehicle adaptation requirements, costs and infrastructure issues. This short list includes: biodiesel, synthetic diesel, DME (dimethylether), methanol/ethanol, biogas, biogas plus biodiesel, and hydrogen plus biogas.

Biodiesel and ethanol are considered to be "first generation" biofuels, produced by a process of esterification or hydrolysis and fermentation. The others are "second generation" alternatives, derived by means of gasification or via a biological process called anaerobic digestion, in which organic materials are broken down by enzymes or microorganisms into methane and carbon dioxide. These second-generation fuels are generally considered to be the more promising options, in part because most of them are more energy efficient and they do not have some of the performance issues, such as gelling in cold weather, associated with the generation one biofuels.

Making the switch away from petroleum-based fuels to these new renewable products is not as simple as planting, harvesting and processing, though. There are unintended consequences. Diverting some of the corn crop away from animal feed and toward ethanol production, for example, spiked price increases in dairy products, meat and poultry recently, while creating an ethanol glut rather than the hope-for ethanol boom.

So where do hybrids fit into this emerging power picture? The best news about diesel-electric and diesel-hydraulic hybrids is that they are entering the marketplace now and are expected to become the powertrain of choice for many fleets, such as transit bus operations, utility companies and refuse haulers, where stop-and-go duty cycles make hybrids an ideal choice. Diesel hybrids (like conventional diesel-powered vehicles) are also largely fuel independent. In other words, they could operate on most of the new alternative fuels, often with little or no modification required. In addition, hybrids are also a good jumping-off point for further alternative power research and development because other power sources, such as fuel cells or electricity, could replace the diesel engine sometime in the future.

In the short term, while fleets will have a growing number of fuel and powertrain options from which to chose, the issues driving those choices will remain much the same as they have always been: availability, cost, performance, reliability and the suitability of the power choice to the fleet operation. Some things never seem to change.

—WENDY LEAVITT

Labor

It's no surprise that truck drivers and service technicians are still among the most difficult job positions to fill. And the problem is getting worse. The Bureau of Labor Statistics (BLS), in fact, puts truck driving among the top five jobs that will be impacted the most by ongoing shortages of qualified workers.

A report prepared for the American Trucking Assns. by consulting firm Global Insight warned there is already a shortage of approximately 20,000 OTR drivers. By 2014, the number is expected to grow to a staggering 111,000.

As the average age of the workforce increases, filling these vacancies becomes an even bigger dilemma. Reports say that over the next 18 years, 7.2-million baby boomers will retire, but there will only be about 4.6-million Gen Xers to replace them.

The trucking industry will be hit particularly hard since the average age of longhaul drivers (mid-40s) is already higher than the workforce in general. The different attitudes toward work between older drivers and the younger generation is also an area that has to be managed as driver demographics shift.

Of course, stiffer background checks, new regulatory requirements and higher training costs, as well as the language barriers that could preclude many Hispanics or other foreign-language speaking candidates from entering the field, compound an already serious situation.

So do wages. BLS reports the median hourly wage for all heavy-truck and trailer drivers to be $16.85, while diesel bus and truck mechanics and engine specialists are getting $18.11 per hour.

Another predicament the industry has found itself in is related to poor public image. Jim O'Neal, chairman of the Truck Carriers Assn., said TCA has pledged to address chronic image problems as a way to help lower driver turnover.

On the technician side, Paul Taylor, chief economist for the National Automobile Dealers Assn., said there are currently about 32,000 technician job openings each year. That number is estimated to increase an additional 6,000 per year over the next five years. BLS projects that by 2012, demand for technicians will rise 12.4% to 101,184 annually, although the pool of potential applicants will grow less than 10%.

While good wages are always important, attracting workers to these fields goes way beyond the paycheck, most industry experts say. Keeping quality employees requires addressing the "soft" issues as well, including giving them respect and opportunity to grow on the job.

There are other more pragmatic issues to consider, too, such as the demand for higher levels of training to work on today's more sophisticated, electronically driven equipment. That problem will perpetuate going forward as fleets begin using more hybrid trucks and possibly fuel-cell semi-trucks.

According to L. Winslow, a transportation and economic advisor to the Online Think Tank, the shortage of qualified technicians and the growing complexity of the equipment itself means that the number of training hours to certify a master truck mechanic, as well as the way trucks are repaired and maintained, will have to change.

It's quite clear that something must be done to help attract good workers and secure the future of truck transportation. The industry has a long way to go to reverse the current trend, but here are some things that could make a difference now:

- Higher compensation packages, including salaries and benefits;
- Flexible work shifts and safer work environments;
- State-of-the-art equipment, including trucks and shop tools;
- Improved communications between workers and management;
- More aggressive recruitment of younger workers;
- Career development opportunities;
- Incorporation of technology to improve productivity of reduced workforce.

—DEBORAH MCGUFFIE-SCHYHOL

SAFETY

Long the classic back-burner issue in trucking, safety is now firmly planted on the front burner for any fleet owner who aims to stay in business both profitably and legally.

Safety has moved to the forefront and will stay there, thanks to the convergence of several factors. Number one is societal change—it is simply no longer acceptable to not demand the highest degree of safety performance possible in any endeavor. What's more, attempts at U.S. tort reform have so far made no discernible dent in the litigation of personal injury cases. And as the cry for safer roads, vehicles and drivers increases, it is only driving public policy toward greater regulation of trucking safety. Coinciding with this trend and accelerating it is the rapid growth in new safety technologies, which both meet existing performance demands and help create new expectations. On top of all that, globalization is bringing safety concepts and solutions from abroad stateside at a faster clip than ever before.

None of this is lost on government regulators, charged as they are with protecting the public good with or without the consent of business. Fortunately, though, the wider acceptance of the importance of safety in all walks of life and a better grasp of how safety improvements can significantly reduce a myriad of trucking costs—from insurance to legal to maintenance to driver turnover—is leading individual fleets and industry lobbyists to adopt new technologies voluntarily and work with government agencies on new regulations.

It's hard to say how the debate on the regulation most central to trucking—hours of service (HOS)—will play out, but it's a likely bet that court action will ultimately lead to a rule that's less flexible operationally than the existing one. In July the U.S. Court of Appeals vacated the 11-hour daily driving limit and 34-restart provisions of current HOS rules. The American Trucking Assns. asked for a stay, and in September the Court gave FMCSA until Dec. 27, 2007 to come up with an acceptable plan for keeping these provisions in place.

ATA argued that it would take months to "shift to a HOS regime with a different daily driving limit and without the 34-hour restart." The industry lobbying group said the adjustments by motor carriers would include retraining drivers, reprinting driver logs and other forms, reprogramming dispatching and electronic onboard recording software, re-engineering routes, addressing customer concerns, and even hiring new drivers and purchasing new trucks to compensate for anticipated productivity losses.

HOS is far from the only safety issue confronting trucking. According to Tim Johnson, division chief for NHTSA's Crash Avoidance & Heavy Vehicle Research Div., the government's "motivation for safety programs remains strong," driven by the "problem of [vehicle] crashes, which remain the leading cause of death for several age groups." But said Johnson, in a speech at a recent TMC meeting, the "integration of [safety] functions and the [resulting] cost reductions will make it easier for fleet executive to say 'yes' to safety technology," regardless of government mandates.

—DAVID CULLEN

Security

The challenge facing the trucking industry when it comes to security can be boiled down to one word: cost. While the need for security is clear, how to find the money to pay for it as fleet costs rise across the board is the real trick. "There are no silver bullets and no one right answer to trucking security," says Susan Chandler, executive director of the Security Council of American Trucking Assns.

One way to manage the cost issue, however, is to invest in technology that tracks assets to make operations more efficient because it will also provide better security.

"You roll an [IT] system out for better tracking and asset efficiency, but the byproduct of all of that is better security because the better you can see something, the better you can secure it," explains Rick Kessler, president and CEO of Horizon Services Group.

"It's about improving cargo visibility within the supply chain and securing it," adds Peggy Chen, principal product director for Oracle, a software developer

Yet in the absence of a government mandate, amid continuing questions about the costs and benefits of installing security and tracking devices, the market for these systems remains largely undeveloped, according to consulting firm ABI Research. "The cargo tracking and security market is not immune [to] the active vs. passive cost-benefit-performance debate," says ABI director Michael Liard. Since the Dept. of Homeland Security has not issued any mandate, end-users are stepping back, taking a "wait-and-see position," he adds.

Shippers and port operators are interested in tracking because they see it as an investment that, unlike those in security solutions, would offer a clear financial return. "So far, the U.S. government has wielded the carrot of expedited processing of sealed containers, rather than the stick of a legal mandate," notes Mike Ippoliti, ABI's research director. "[But] that carrot has not been tasty enough to tempt any of the interested parties."

Food transporters are finding that specific security efforts aimed at their segment of the market may be on the rise, according to Fletcher Hall, president of F.R. Hall & Assoc. and former executive director of the Agricultural and Food Transporters Conference. "Serious concerns about food safety and security from 'farm to fork' are expected to result in new laws and regulations that will affect how commercial agricultural and food transporters move, process and distribute all food products throughout the U.S.," he says.

Hall pointed to the recent contamination of pet food as an example of how a product in the food chain can be compromised. The incident may result in new laws and regulations regarding the transportation, processing and distribution of all food products within the U.S., which should also speed up demands for fail-safe inspections to detect and prevent contamination in the nation's food supply.

—SEAN KILCARR

Infrastructure

It seems our nation's highways and bridges are bottomless pits when it comes to funding their repair. In the last year alone, millions of dollars have gone toward infrastructure maintenance and emergency restoration.

Last July, DOT released more than $871 million in funds to repair roads and bridges damaged by a variety of natural emergencies in 23 states in the preceding three years. Then on August 2 the Minneapolis I-35 bridge collapsed. DOT distributed an additional $5 million to rebuild it, with promises of more to come. As Sec. of Transportation Mary Peters said "... it took a nationally televised tragedy to get people in Washington talking about what's wrong with our roads and bridges."

Increased fuel taxes, higher tolls, pay-per-mile and privatization of roads are some of the solutions being explored to help pay for the much needed infrastructure repairs. Higher construction costs, including labor and raw materials, are compounding the problem.

Many believe a fuel tax increase is the best approach. American Society of Civil Engineers president W.F. Marcuson III said a 10¢/gal. increase could raise more than $17 billion a year, while costing the average motorist less than $10 a month.

A report to the National Surface Transportation Policy & Revenue Study Commission stated that over the next ten years supportive federal and state policies—new toll facilities, adding tolls to existing free roads, and raising fees on current toll roads—could help increase the percentage of national highway revenues generated by tolls from 5% to 9%.

Privatization of roads is another less popular option for raising revenue. ATA president Bill Graves said that turning public roads over to private concerns could mean huge rate increases for truckers and other motorists.

Since 2001 Oregon as been experimenting with fees based on miles driven, and over the next two years field tests of pay-per-mile systems will also take place in several other states.

Increased congestion is another problem. The Texas Transportation Institute's 2007 Urban Mobility Report stated that traffic congestion has created a $78-billion annual drain on the U.S. economy in the form of 4.2-billion lost hours and 2.9-billion gallons of wasted fuel. According to DOT Sec. Peters, "We need to look at innovative measures like electronic tolling, which allows road charges to vary by time of day based on traffic levels."

New York City's mayor has proposed charging a congestion fee for access to those streets most overburdened with traffic. The federal DOT has promised to help fund it.

DOT has also announced that six Interstate routes have been selected to participate in its "Corridors of the Future" initiative, which is aimed at reducing congestion and improving the efficiency of freight delivery through measures such as building new roads and adding lanes to existing roads, building truck-only lanes and bypasses, and integrating real-time traffic technology like lane management that can match available capacity on roads to changing traffic demands.

—DEBORAH MCGUFFIE-SCHYHOL

GLOBAL TRADE

Trucking stands to benefit from increased trade between the U.S. and other countries. The challenge for fleets is to figure out how to adapt as freight lanes shift to and from ports and intermodal demand rises.

"More than 70% of the world's purchasing power and 95% of its population are outside of the U.S.," notes Israel Hernandez, assistant secretary for trade promotion. "The public and private sectors can do more to help...U.S. exporters and the U.S. economy grow and remain competitive."

Should such projected growth emerge, the payoff could be handsome for trucking.

The American Trucking Assns. (ATA) predicts that total trucking freight revenue will approach 88% in the U.S. by 2016. According to ATA's "U.S. Freight Transportation to 2016" report, produced by economic forecasting firm Global Insight, trucking will increase total annual tonnage to 13-billion, giving it a 69.1% share of the total market by 2016.

The trade group expects the U.S. to continue its trend toward becoming a finished-goods manufacturer, thus importing more semi-finished products. Meanwhile, rail intermodal will become more important to trucking, which will benefit local and shorthaul carriers.

Much of that global volume could come from Mexico and Latin America, increasingly viewed by international carriers as key markets for freight heading to the U.S. "The first [reason] is geographical proximity," said Mike Eskew, chairman & CEO of UPS, in a recent speech before the U.S. Chamber of Commerce. "In an era of just-in-time supply chains, proximity is everything. Latin American markets can be accessed by land and sea. Another key advantage ... is several free-trade agreements. [But] we have so many complicated customs and security requirements in place that it's often easier to import goods from Europe or Asia. So the choices are to adapt or become irrelevant."

But burdensome regulations, outdated labor laws and international trade barriers are growing threats to small businesses in the U.S., notes Frederick Smith, chairman, president & CEO of FedEx Corp. Also speaking before the U.S. Chamber of Commerce, he explained that those issues could significantly impact freight demand, since small businesses make up 97% of America's exporters and produce 26% of all export value.

To take full advantage of the freight international trade helps spawn, carriers must shift their lanes to accommodate more import/export volume, and have the right tools in place to manage it. "In a world gone global, with rapidly advancing technologies, emerging world markets and vastly extended supply chains, decision-making demands on logistics professionals are more critical than ever," notes John Fitzgerald, vp of global sales & marketing for freight forwarder Seko.

— SEAN KILCARR