



# Optimizing Freight Procurement

Sponsored by:



January 2013

On behalf of:



Conducted by:



## Optimizing Freight Procurement

---

### Summary of Key Findings

While the United States shipping industry remains vulnerable to a capacity crunch, it is clear that many shippers and carriers could do more to help mitigate the strain on the system through more effective planning. A recent study from U.S. Xpress shows that more widespread and efficient use of transportation management systems, clearer supply chain visibility, improved analytics and more up-to-date data could go a long way toward helping to optimize loads and reduce costs for shippers who have come to rely on just-in-time inventory management.

Shippers and carriers have made great strides in this area, yet this study reveals that there is still a significant amount of work to be done and room for these parties to work together to make it easier for both sides to achieve their objectives.

### Background

The U.S. trucking industry faces an array of issues affecting shippers who utilize surface transportation to move their goods. Most of the issues concern the industry's ability to provide enough capacity to haul goods that are increasingly managed in a "just-in-time" inventory environment.

For logistics and transportation managers (shippers), the major effect of the Great Recession has been a reduction in real capacity in the trucking industry. A handful of major truckload carriers have cut their truck fleets by 15 percent to 20 percent during the depth of the recession. And, some less-than-truckload (LTL) carriers have reduced capacity by about 10 percent.

Entering 2013, analysts and carrier executives say capacity is roughly where it was in 2008. While sales of Class 8 heavy trucks are enjoying boom times, it's clear that those new trucks are merely for replacement of older trucks—not adding any real capacity to the system.

Better use of technology may be a solution for shippers as they cope with worries of insufficient capacity and higher freight rates. The prospect of growing freight level demand, coupled with the industry's limited ability to add sufficient capacity, has savvy shippers wondering about the best uses of technology in planning and executing their ground transportation moves.

Using optimization strategies—dynamic optimization in particular—is one approach that may enable shippers to progress and reinforce their freight transportation decisions. In logistics, dynamic optimization is noted as a web-based, real-time load and consolidation tool that enables shippers to gain cost savings by optimally using carrier resources. It allows for data to be used through a changing environment and takes into consideration various factors such as carrier availability and rates to find the most cost effective way to optimize efficiency and control costs. And while dynamic optimization may be a lot of "buzz," the method for applying current data for transportation routing and costing should be a boon to both shippers as well as carriers.

A recent study conducted by Peerless Research Group on behalf of *Logistics Management for U.S. Xpress Enterprises* revealed that as they look to control shipping costs and improved carrier performance, shippers require planning flexibility to meet their freight transportation demands.

The following findings focus on how transportation and logistics professionals are using metrics such as transportation management systems (TMS) and dynamic optimization software to better manage their transportation planning leading up to almost certain capacity crunch.

## Optimizing Freight Procurement

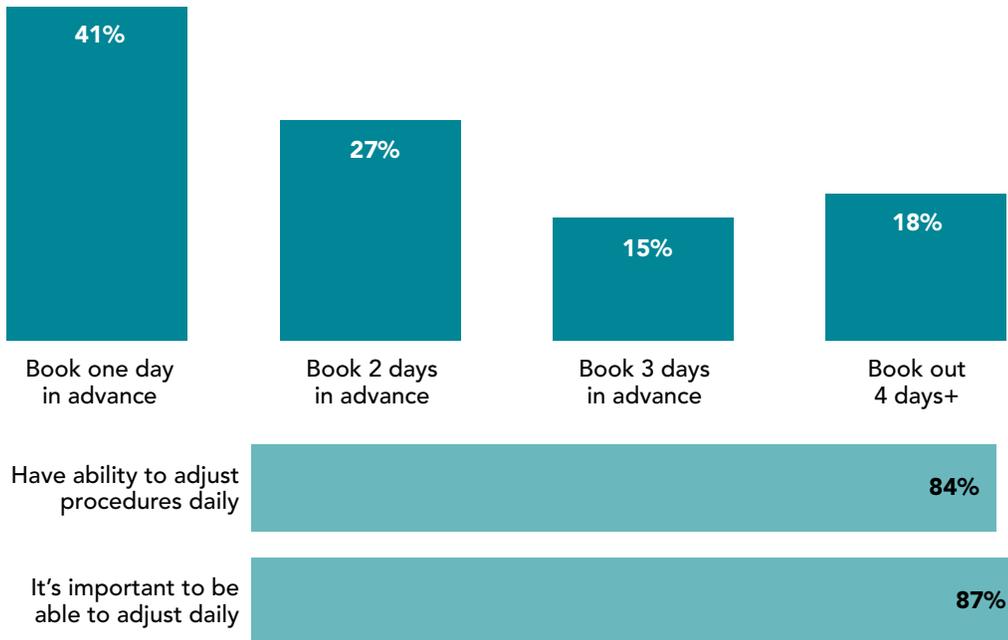
### Usage of Analytics for Shipping Procedures

Time is money in transportation. According to our findings, freight transportation is increasingly done “on the fly.” Shippers regularly book shipments one day in advance with more than four out of five scheduling their arrangements within a three-day timeline. Auspiciously, the vast majority (84%) have the ability to adjust shipping procedures quickly and can, in fact, do so on a daily basis—which is a highly critical consideration to the majority of shippers (87%).

**“We need to improve our internal communications to prevent last minute shipments.”**

—Logistics, Distribution Manager  
Transportation Services  
\$100M - \$250M in annual revs.

### Time Allowed for Shipment Bookings



When asked how companies are further working to contain rising freight costs, consolidating shipments, smarter planning, partnerships with fewer carriers and forwarders, and greater utilization of internal resources are showing to be the more successful strategies.

In addition, shippers are also profiting from web-based transportation application implementations. More than one out of three (39%) say that they have adopted or are implementing internet-based transportation management solutions.

**“We have reduced the number of carriers based on historical performance and load ratings.”**

—Corporate Management  
Wholesale Trade  
<\$10M

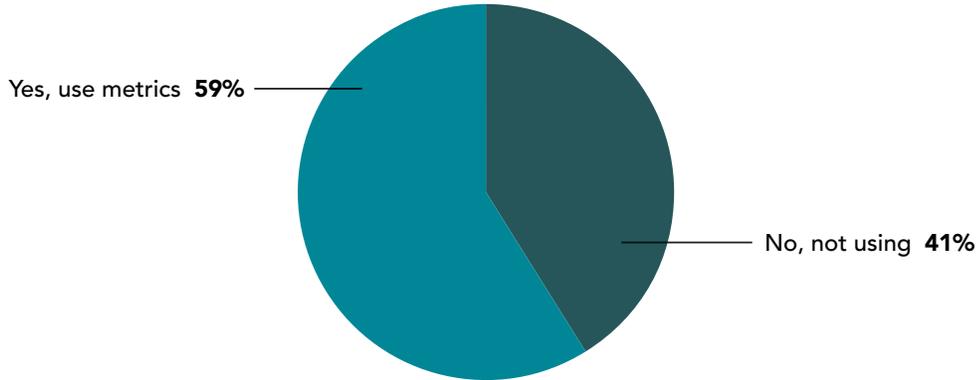
### Strategies for Managing Freight Costs



## Optimizing Freight Procurement

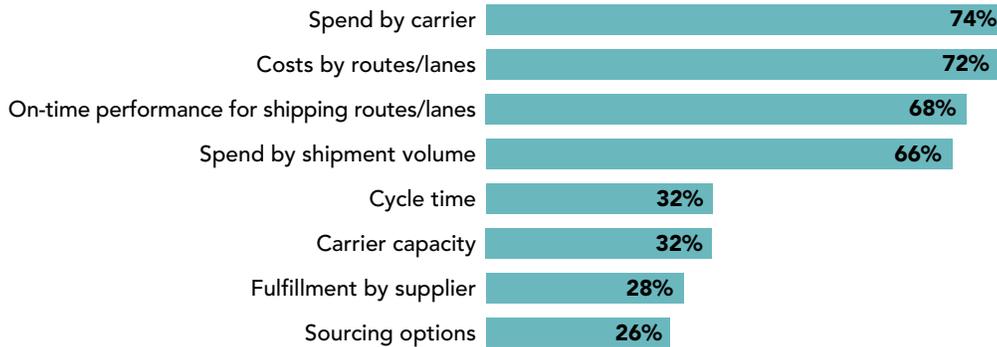
Interestingly, only 60% of those we studied now use performance metrics to better identify and manage freight transportation costs. This, conversely, indicates that these analyses are not prevalent among shippers as approximately four out of 10 are not utilizing solutions to gauge their shipping costs and related activities.

### Usage of Metrics to Analyze Transportation Costs



Among those who are evaluating their freight costs, managing spending on transportation is the main reason for using a metric solution. Analyzing costs by routes, on-time performance indicators and spend by shipment volume were also listed as primary purposes for using freight analysis tools.

### Aspects of Shipping Function Being Analyzed



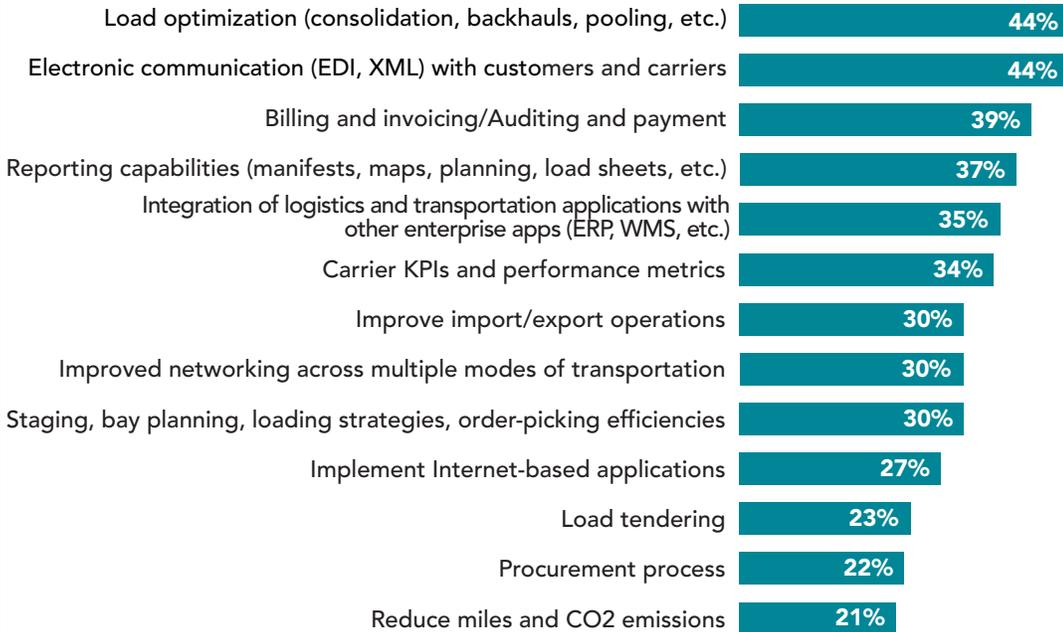
## Optimizing Freight Procurement

Shippers are continually seeking to advance their shipping and transportation operations. In particular, areas earmarked as priorities for improvement are to pursue better electronic communications with customers and carriers, improve their load optimization (through consolidation, pooling, backhauls, etc.), upgrade billing and payment procedures, upgrade carrier key performance indicators (KPIs) and other performance metrics, and execute a seamless integration of logistics applications into their ERP platform.

*“We are looking to align our purchase orders in an end-to-end visibility and cost containment cycle.”*

—Logistics Manager  
Computers & Electronics  
\$2.5B+

### Aspect of Shipping Operations in Need Of Improvement



## Optimizing Freight Procurement

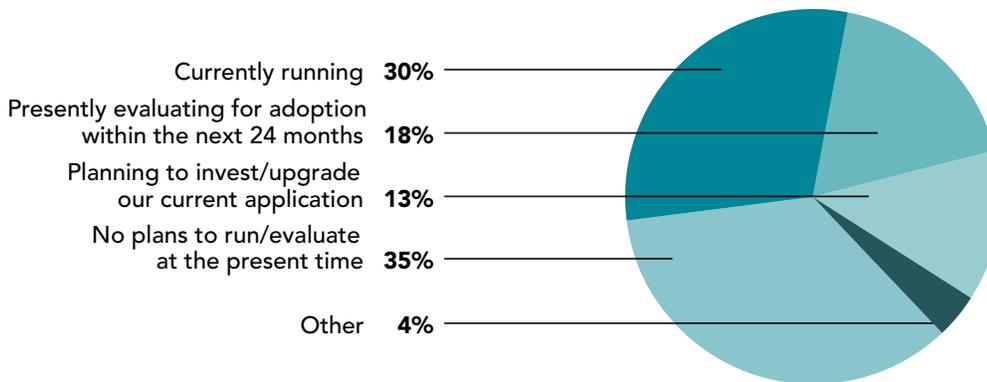
### Usage & Adoption of Transportation Management Systems

According to our survey findings, the market would appear to be ready for greater engagement and utilization of TMS by shippers. While fewer than one half of these shippers (43%) are either currently running a TMS solution or planning to upgrade their current app, and roughly one in five are evaluating and expect to adopt TMS during the next 2 years (18%), others contend that they have no plans for TMS at the present time and list cost, a lack of knowledge or information on TMS, no perceived need at present, or that they lack the resources or skilled personnel to manage.

*“The gross majority of our freight moves via parcel freight and is packed and shipped the same day an order is placed. I have yet to find a TMS system that can operate effectively given these restraints.”*

—Logistics, Distribution Manager  
Chemicals & Pharmaceuticals  
\$2.5B+

### Usage and Adoption of TMS



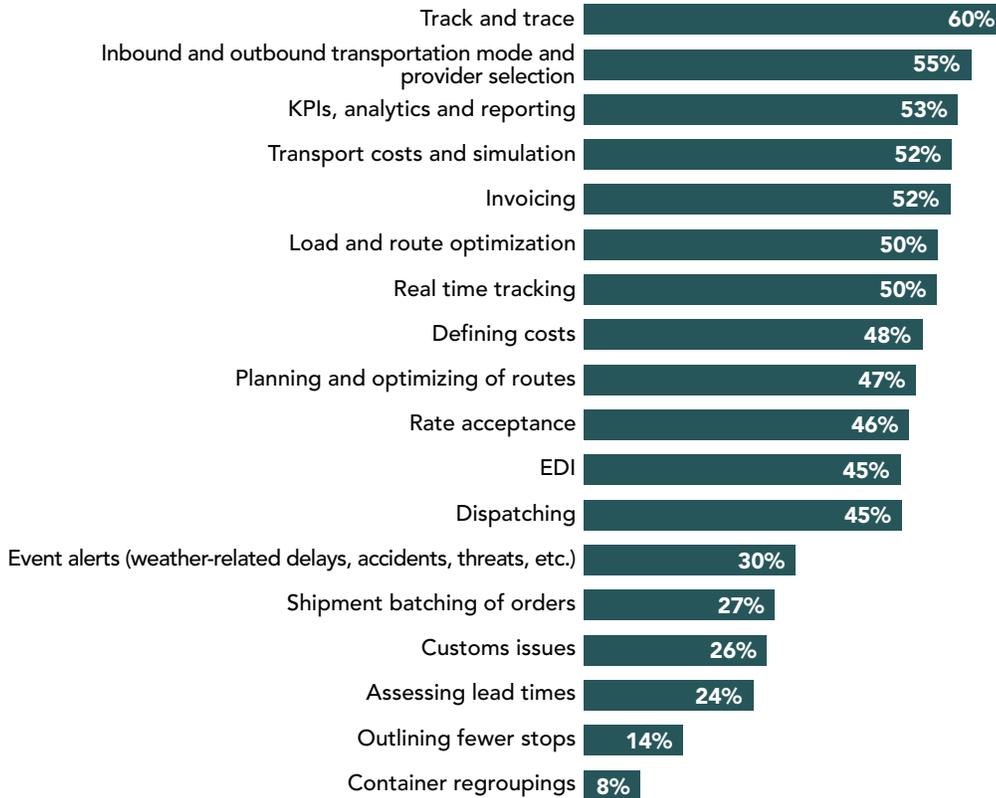
## Optimizing Freight Procurement

Transportation management system users are garnering the advantages presented by a TMS implementation and are running their application to support multiple initiatives. The main applications of TMS are for tracking and tracing, inbound and outbound mode and carrier selection, analytics and reporting, watching transport costs and modeling, billing, and real time tracking and load and route optimization. And, those using a TMS package are effectively deploying a solution that is licensed and hosted internally (53%) or running as a SaaS/Cloud-based application.

***“We are using TMS technology for award execution from RFQ events and visibility to carrier performance awards.”***

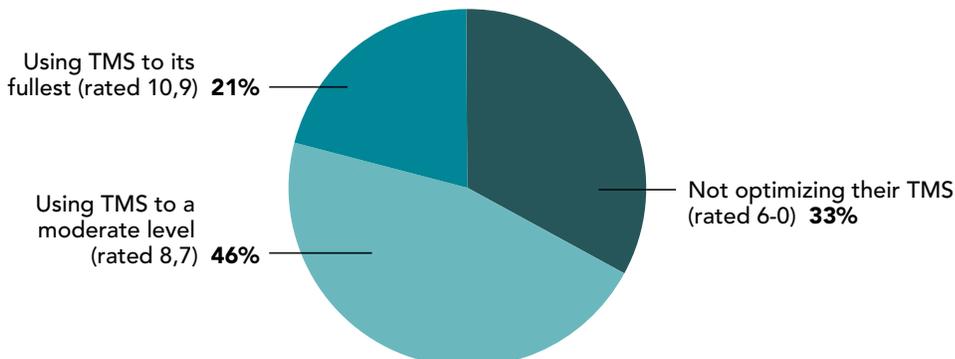
—Logistics & Distribution Mgr.  
Fast Moving Consumer Products &  
Industrial Materials  
\$2.5B+

### Applications of TMS Solutions



However, those now using TMS generally admit that they are lacking in attaining full optimization of their application. While one out of five (21%) are using their TMS to its fullest, and 46% are tapping into much of its capacity, one-third are falling short in using their TMS to its capabilities.

### Optimizing TMS Applications

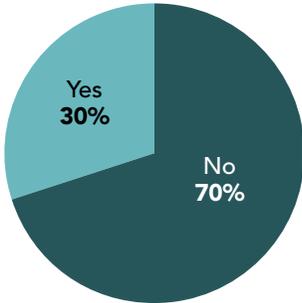


## Optimizing Freight Procurement

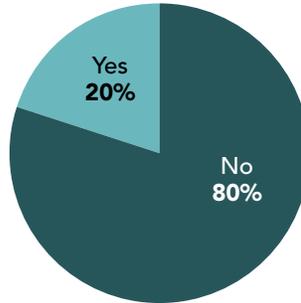
### Utilization of Freight Transportation Information for Decision Support: “Static Optimization” and “Dynamic Optimization”

The terms and concepts “static optimization” and “dynamic optimization” seemed foreign to many of those we surveyed, particularly as it relates to freight transportation activities. Only twenty percent say they’re familiar with the term or concept, “static optimization,” or the procurement of transportation services using fixed data, which are based on historic trends.

#### Familiarity with Terms



Familiar with term  
“Dynamic Optimization”



Familiar with term  
“Static Optimization”

### Static Optimization

Many of those familiar with the term “static optimization” either misunderstood the concept or simply had little idea what it means.

*“It’s one time, scheduled transportation optimizations.”*

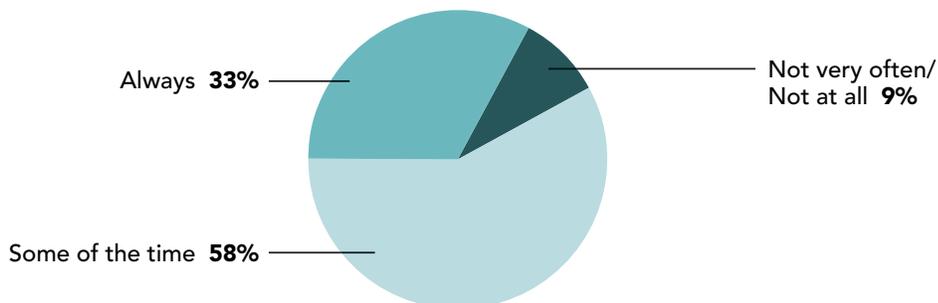
*“It’s optimization of transportation operations.”*

*“It’s improving existing process without major changes.”*

*“I’m not sure as optimization and static don’t necessarily correlate.”*

Yet, while the majority is unfamiliar with this term or concept, most tend to rely on “static” data for their transportation procurement decisions. More than nine out of 10 claim they depend on historical or previous information when making decisions pertaining to their shipping operations.

#### Reliance on Historical/Previous Data for Shipping Decisions

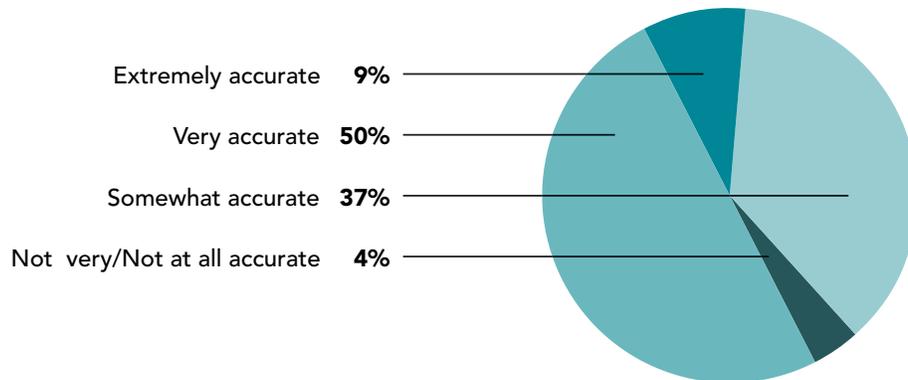


## Optimizing Freight Procurement

Data on rates and cost (83%) and information on previous carrier usage (78%) were the primary uses of past data. Prior information on volume (57%), time for delivery (54%) and transportation modes (50%) are also referenced when deciding on which freight carriers to use.

For the most part, those we surveyed claim the historical data that serves as the basis for their decision-making is accurate. Six out of 10 assert their data are highly accurate while, overall, more than nine out of ten say they can use their past data with some level of confidence. However, areas for which shippers need greater accounting include overall costs and fuel rates, shipping lanes, load and volume sizes, track and trace, delivery schedules, international markets information.

### Accuracy of Historical Data Use



***“We need current information as close to now as can be.”***

—Vice President  
Food & Beverage  
\$10M - \$50M

***“When looking at historical data, it gets us in the ballpark on most lanes. Differences would be fuel surcharges which can change frequently, unforeseen demurrage charges which may or may not be passed on to the customer or supplier depending on our agreements.”***

—Vice President  
Chemicals  
\$50M - \$100M

***“I wouldn’t say an improvement is needed to be more accurate. The current market values are different from what it was last year and a few years ago. Costs are always changing.”***

—Logistics Analyst  
Household Appliances  
\$250M - \$500M

# Optimizing Freight Procurement

## Dynamic Optimization

Alternatively, slightly more claim to be familiar with “dynamic optimization.” Thirty percent of our survey respondents have some recognition of this term, or the process of applying real-time solutions using live, variable sets of data for their procurement decision-making. Dynamic optimization is perceived as a solution for improving decision support processes, maximizing costs, modes, routing, loads, real-time shipping optimization and attaining ideal flexibility for shipping activities.

## Shipper and Carrier Relations

Interestingly, for some, there would appear to be a slight disconnect between what shippers want and what they’re getting back from their carriers. Among the shippers we interviewed, the majority (76%) says their carriers use present or actual shipment load and performance measures in setting freight rates. One-third also say (36%) that shippers are setting rates based on historical data (the total exceeds 100% as shippers either rely on more than one carrier or that carriers may use both present and past data).

Comparably, most shippers (72%) prefer that carriers use present, actual shipment characteristics on load and performance measures, just one in five favor that carriers use historical information.

*“It’s having a system choose the mode based on all the costs, Line haul, fuel surcharge, and accessorial charges.”*

Corporate Management  
Food & Beverage  
\$250M - \$500M

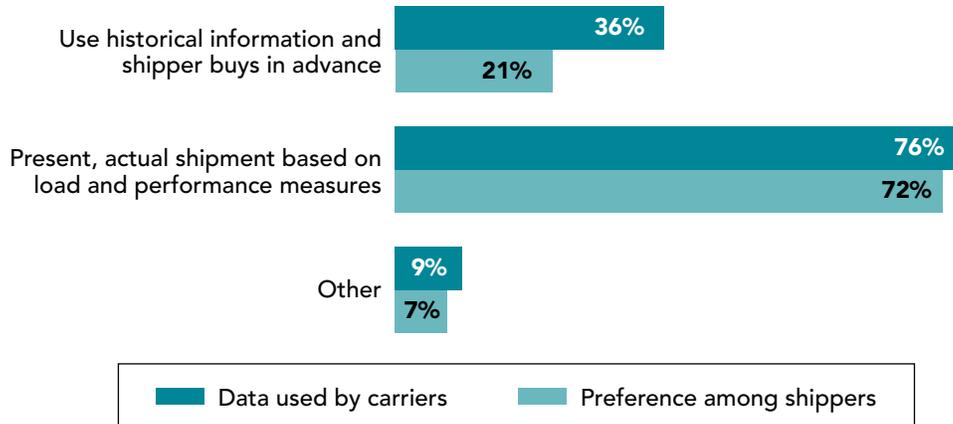
*“Dynamic optimization uses the TMS in real-time to optimize all freight (trap/hold/multi-stop/pool/etc.). It’s execution in real-time.”*

Corporate Management  
Transportation & Warehousing Services  
<\$10M

*“Dynamic optimization is using a decision support process or application to make the “optimal” decisions based on the specifics of the current situation.”*

Logistics Manager  
Retail Trade  
\$10M - \$50M

### Data Used by Carriers to Set Rates



## Optimizing Freight Procurement

When asked how their carriers respond to expressed interest in basing their pricing on performance, shippers were mixed on reactions from their carriers. Many perceived that carriers were not overly keen on this notion and expressed resistance. However, some shippers we surveyed claim their carriers were more willing to base their pricing method as dictated by the market.

While nearly one-half of our respondents thought that their organization had sufficient ability to share and exchange information with customers and suppliers almost one out of five unfavorably rate their company in this area.

***“It’s a mixed bag! Some carriers are willing to provide top notch performance, but that comes with a high price. These high prices sometimes make us non-competitive with other shippers. The challenge is to get it done right without extra costs.”***

—Logistics & Distribution Mgr.  
Steel  
\$1B - \$2.5B

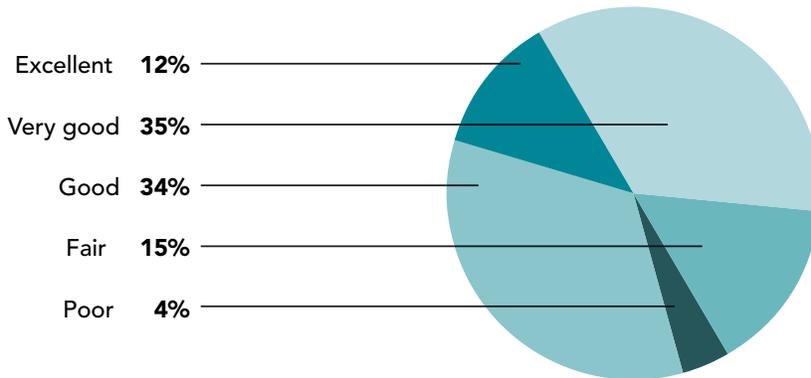
***“Shippers often try to force performance penalties into contracts. Obviously, carriers are more open to programs that have both incentives and penalties, but these programs are extremely difficult to track, invoice, and audit correctly.”***

—Supply Chain Manager  
3PL  
\$100M - \$250M

***“We work as partners, looking at what contracts we have and move forward. Some are better than others, and some are looking at total contract over multiple sites and areas.”***

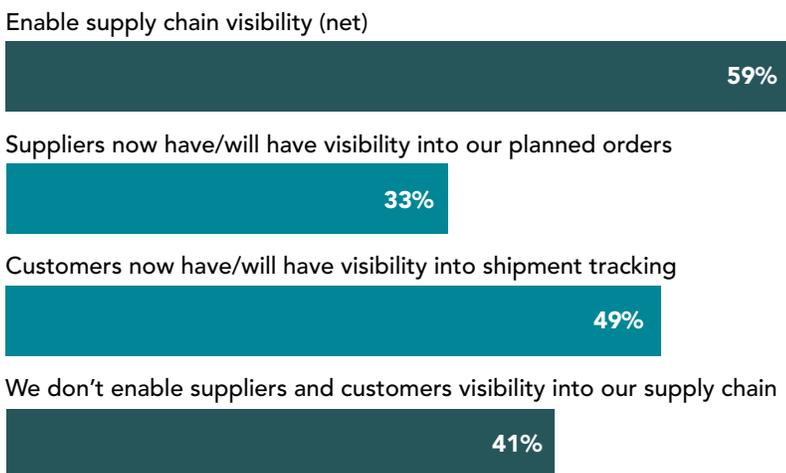
—Traffic Manager  
Fabricated Metals  
\$2.5B+

### Ability to Share and Exchange Information with Customers and Providers



Shippers seemed somewhat split over the visibility they allow within their supply chains. Overall, roughly six out of 10 (59%) allow their transportation partners visibility into their network. One-third enable their suppliers access into their planned orders and about one-half (49%) provide visibility into shipment tracking to their customers.

### Partners with Supply Chain Visibility



# Optimizing Freight Procurement

## Methodology

This research was conducted by Peerless Research Group on behalf of *Logistics Management* magazine for US Xpress Enterprises, a leading transportation solutions provider. This study was executed in October/November 2012, and was administered over the Internet among subscribers to *Logistics Management*.

Respondents were qualified for being involved in decisions regarding the evaluation, implementation and usage of transportation management solutions for either their company or for others.

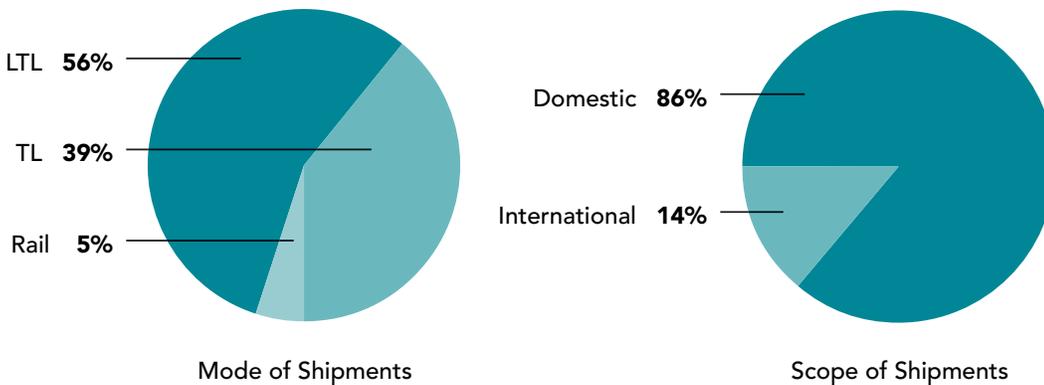
The findings are based on information collected among 425 top logistics managers.

Respondents are predominantly executive management (35%) and logistics and operations management (31%).

The companies represented in the study cover a wide range of manufacturers as well as nonmanufacturing businesses. Food, beverage, and tobacco, automotive and transportation equipment, chemicals and pharmaceuticals, plastics and rubber, and paper goods largely comprise the manufacturing sector while 3PLs, wholesale and retail trade cover the nonmanufacturing businesses. All size companies are also well-represented: 55% of the respondents are employed in small businesses (<\$100M in revenues), 21% work in mid-size companies ((\$100M - \$500M), and 24% are from large enterprises (\$500M+).

The shippers we studied are further defined by:

### Responding Companies' Shipping Characteristics



### About US Xpress Enterprises

Founded in 1985, U.S. Xpress Enterprises is the nation's second largest privately-owned truckload carrier, providing a wide variety of transportation solutions throughout North America. As early adopters of technologies such as satellite communications, automatic traction control, autoshift transmissions, and anti-rollover control, U.S. Xpress is equipped to meet the demands of customers while simultaneously improving the company's safety record. U.S. Xpress also offers Electronic Data Interchange (EDI) capabilities, maintaining a highly advanced EDI system, as well as load optimization, a versatile document imaging system, and IT services that integrate with a customer's existing TMS system. These integrated systems allow for free a flow of information and the optimization of load planning, network design and route planning.

#### Contact info:

For more information call (800) 251-6291 or visit [usxpress.com](http://usxpress.com).

