

Caution Ahead: U.S. Distribution Networks Face Triple Threat



Rising Transportation Costs, Shifting Consumer Trends, New Lease Accounting Rules Reshape Priorities

Three major market shifts are converging as we enter 2018, putting pressure on companies to reevaluate their distribution networks:

- 1 Significant increases in the cost of transportation affecting both inbound and outbound shipments**
- 2 Shifts in consumer expectations driven by disruptive companies such as Amazon**
- 3 Changes in balance sheet reporting requirements for leases**

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The impact of rising transportation costs alone would be a catalyst requiring a proper strategic response by supply chain managers. However, with all three of these issues occurring simultaneously, business leaders need to be especially focused to understand the underlying causes and create proactive plans with new levels of dynamic flexibility to remain competitive. It is important to act quickly, since cost and regulatory impacts are at risk.

By far the most urgent of the three forces is the dramatic rise of transportation services costs. The reasons for the increase are driver shortages, regulatory impacts and shrinking carrier capacity. Because of the nature of the supply chain, changes in one area create a ripple effect in cost, service, risk and responsiveness. As a result, rising cost pressures in the area of transportation have an impact on several other areas of the supply chain, including strategic distribution planning.

At the same time, consumer expectations in both the B2C and B2B sectors have changed because of disruptive technologies, shifts in demand and distributors such as Amazon, which is transforming the way America shops.

Adding complexity to these changes in distribution are new financial considerations such as balance-sheet reporting of leases (starting as soon as January 1, 2019).

The following article examines each trend, and suggests ways business leaders can assess their options to seize opportunities and mitigate risks in their distribution networks.

I. Rising Transportation Rates

Rate Increases and Driver Shortages

Truckload spot rates have increased by as much as 20% over this time last year, according rate indices such as DAT *Trendlines*TM.¹ Reasons for the increase include tightening trucking capacity as freight activity increases in a strengthening economy, combined with shifting freight patterns driven by major hurricanes Irma and Harvey, and continued driver shortages. These factors and others will continue to place upward pressure on transportation rates for the foreseeable future, according to a recent article in *Commercial Carrier Journal*, citing monthly spot market data for vans, refrigerated and flatbed transportation from Truckstop.com.²

While rates have always tended to fluctuate based on external weather events, seasonality and general economic conditions, many experts see this as more of a long-term shift and point to two key factors: Persistent nationwide driver shortages and the Electronic Logging Device (ELD) mandate, which took effect in December 2017.

¹ "November Van and Reefer Rates Hit 3-Year High." *Trendlines - DAT*, 5 Dec. 2017, www.dat.com/industry-trends/trendlines.

² Jaillet, James. "Spot Market Rates Jump to Highest Points since 2014." *Commercial Carrier Journal*, 1 Nov. 2017, www.ccjdigital.com/spot-market-rates-jump-to-highest-points-since-2014/.



Nationwide Driver Shortages

Driver shortages have been a major concern for transporters over the last several years, requiring companies to expend significant resources in their efforts to attract and retain qualified drivers. This issue now ranks as the top concern for trucking companies, according to a recent report issued by the American Transportation Research Institute, displacing the electronic logging device mandate, which ranked No. 1 in 2016's report.³ Other forecasts warn this issue will become even more acute. According to a recent report from the American Trucking Association, the driver shortage was projected to reach 50,000 by the end of 2017, signaling an all-time high for the industry. If current trends hold, the shortage could grow to more than 174,000 by 2026. To make matters even worse, there is also the issue of whether available drivers can meet the quality requirements.⁴

Electronic Logging Device Mandate

The availability of drivers worsens as demand and load ratios increase. And many industry analysts believe the driver shortage issue is further exacerbated by the electronic logging device mandate implemented on December 18, 2017. The ELD mandate specifies that commercial carriers electronically track, manage and share records of duty status (RODS) data. An ELD synchronizes with a vehicle engine to automatically record driving time for easier and more accurate logging of hours of service (HOS).⁵

While some experts maintain that ELDs will enhance driver productivity, many others argue that carriers will be negatively impacted. John Larkin, Managing Director and Head, Transportation Capital Markets, Research, Stifel Financial Corp, estimates the trucking industry will actually lose between 3% and 5% of its overall productivity once the federal regulations for ELDs go into full effect. He adds that small carriers will be most negatively affected, losing an estimated 6% to 10% of overall productivity.⁶ Many small carriers have been slow to

³ Jaillet, James. "Driver Shortage Overtakes ELD Mandate, Hours as Carriers' Top Concern." *Commercial Carrier Journal*, 26 Oct. 2017, www.ccjdigital.com/driver-shortage-overtakes-eld-mandate-hours-as-carriers-top-concern/.

⁴ Lockridge, Deborah. "Driver Shortage Could Hit All Time High This Year." *TruckingInfo.com*, 22 Oct. 2017, www.truckinginfo.com/channel/drivers/news/story/2017/10/driver-shortage-could-hit-all-time-high-this-year.aspx?cid=1318.

⁵ "Electronic Logging Devices." Federal Motor Carrier Safety Administration, United States Department of Transportation, 3 Sept. 2015, www.fmcsa.dot.gov/hours-service/elds/electronic-logging-devices.

⁶ Kilcarr, Sean. "ELDs: Predicting the Productivity Losses." *Fleet Owner*, 11 Mar. 2016, www.fleetowner.com/regulations/elds-predicting-productivity-losses.

Although the contract rate increases are not likely to soar to spot rate levels, the impact could still be significant.

adopt the ELDs. Because it takes a while for normal operations to adjust after implementation, the industry may see even greater productivity issues in the short term.

Driver shortages and ELD issues are impacting not only commercial carriers, but also private fleet operators. Many companies with private fleets have added or will add drivers and routes to account for the change. These requirements then reverberate through the industry, creating further rate and capacity pressures.

Higher Rates May Be Here to Stay

As driver shortages and economic growth continue to squeeze the available capacity, higher pricing levels will be factored into contract rates at renewal time. Although the contract rate increases are not likely to soar to spot rate levels, the impact could still be significant. For 2018, Larkin projects that contract price hikes for intermodal rates will increase 4-8%, railroad rates will grow 3-4%, truckload rates will rise 5-10%, and less-than-truckload rates will grow 4-6%. Some trucking companies are advising their customers to budget for transportation cost increases that may reach 10% or more.⁷ Furthermore, even for those with contract rates, because of the capacity pressures, availability of trucks at the times required could be a much more significant issue than in the past.

This position is supported by executives in leading transportation management companies. In an October 26th earnings call, David Yeager, CEO of intermodal marketing company Hub Group, said, "Due to the strong freight demand, capacity constraints, a severe labor shortage, and the mandated introduction of ELDs, we believe that this pricing cycle will be strong in 2018 and will likely extend through 2019."⁸

Jim Waggoner, President of Kuehne + Nagel subsidiary ReTrans Logistics Management, which manages nearly \$1 billion of transportation, agrees with Yeager. He recently shared this observation about ReTrans' outlook for the next several months: "We have seen a tightening market with significant pressures on capacity. It is a major consideration of our customers since it impacts the spot market and will also impact contracts as they are renegotiated. While rate and capacity pressures vary by area of the country, we believe that this is not a short-term situation. The impact of the ELD mandate on driver shortages along with economic conditions have exacerbated this situation such that we feel that higher rates will continue into the foreseeable future."

⁷ "Freight Volumes, Rates to Rise in '18: Analysts." *Today's Trucking*, 12 Oct. 2017, www.todaystrucking.com/freight-volumes-rates-to-rise-in-18-analysts.

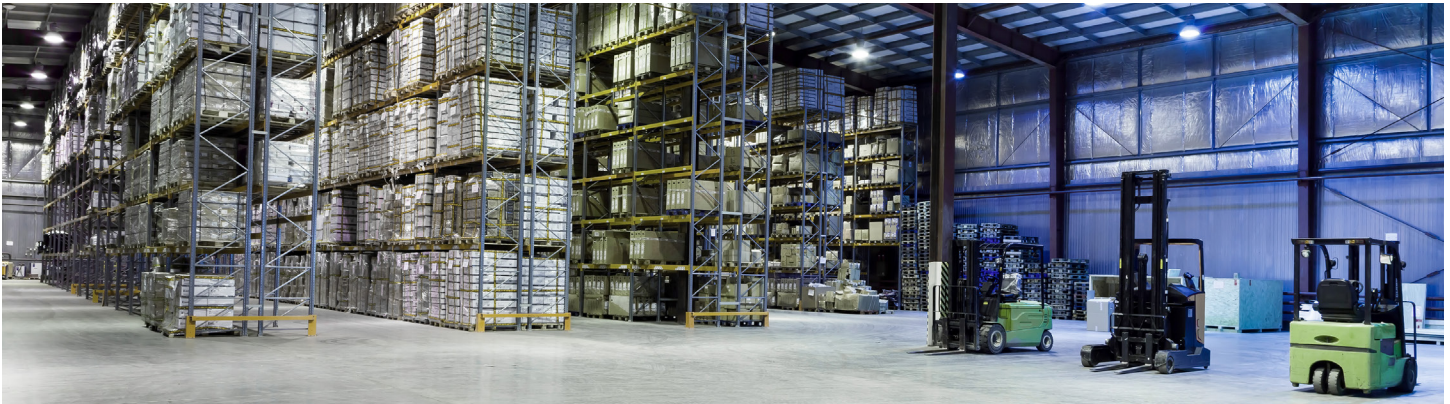
⁸ Hub Group's (HUBG) CEO Dave Yeager on Q3 2017 Results - Earnings Call Transcript, 26 Oct. 2017, www.nasdaq.com/aspx/call-transcript.aspx?StoryId=4117656&Title=hub-group-s-hubg-ceo-dave-yeager-on-q3-2017-results-earnings-call-transcript. Transcript provided by seekingalpha.com

Balancing Transportation Cost Increases in Distribution Networks

When properly developed, distribution networks are designed to balance many types of costs and service considerations within the network: inbound transportation costs, distribution operating costs, inventory costs, outbound operating costs, product constraints, customer constraints, various plant costs, etc. There are always changes in the various cost elements in the network. However, when transportation costs begin to reach the level we are seeing today with continued capacity pressures, it may be time for companies to reevaluate their distribution networks in order to optimize the cost structure.

- **Considering all other factors static, as transportation costs increase, it may become necessary to add distribution locations for some distribution networks.** Simply put, the cost of the additional or modified distribution location(s) may be more than offset by the savings from reducing the number of miles within the modified distribution network. At a minimum, companies need to evaluate the trade-off of increasing transportation costs. Several offsetting issues must also be considered such as a distribution network shipping via a single mode, e.g., all truckload, as well as other qualitative factors. Qualitative benefits such as maximum control and more consistency in process management are always important considerations.
- **Furthermore, it is critical to evaluate the distribution network in order to mitigate carrier capacity risk.** In some markets, both rates and carrier capacity are at a premium. To ensure that service levels are maintained, mitigating carrier capacity risk can be more important than rate concerns. ReTrans President Jim Waggoner asserts that it is more practical to identify carriers for fewer loads across multiple locations rather than more loads at fewer locations.
- **No matter what type of configuration a company's national distribution network has, all companies should seize this opportunity to analyze their network to drive down costs.** National distribution networks with only a single to a few distribution origins combined with high mileage have the most to gain from reevaluation. Those companies whose volume can't sustain multiple distribution locations, or whose distribution profiles don't allow for multiple distribution points, must ensure that capacity and cost are secured as soon as possible.

(See "Roadmap for Strategy Development," on page 8.)



II. Changing Customer Demand

Another variable to consider is the shift in consumer expectations with innovations from companies such as Amazon. Consumer demand impacts the way B2B is conducted, since the consumer at the end of the demand chain drives expectations up through the supply chain. These expectations affect customer engagement strategies and many other areas of consumer experience. Consumer expectations are changing with the omnichannel experience and quick response. The design and number of distribution locations is a critical consideration when evaluating this requirement.

One industry that illustrates this shift is the food industry, which has seen unprecedented change driven by consumers over the past several years. Today's consumers demand increasingly customized product offerings with fresh, local ingredients. Retailers have responded with a large array of fresh food offerings designed to meet the requirements of multiple demographic groups. These food offerings are generally the source of high margins for the retailers. With the ever-increasing options for consumers to purchase products, many food retailers are attempting to leverage the appeal of their fresh offers to attract consumers with the expectation that this will also positively impact their other product lines. Multiple types of food retailers ranging from restaurants, grocery stores, convenience stores and other food service providers are competing for this high margin business and must be able to deliver high quality offers through specially designed cold chains.

The demand for these short-shelf-life products is placing pressure on distribution capabilities. Distributors are forced to respond more quickly, with maximum-shelf-life products and multi-temperature distribution options. High functioning cold chains are being implemented that minimize temperature variability from the suppliers through distributors and to the final customer, with exacting requirements placed on product condition throughout. Maximum shelf life with high sell-through is critical. Long supply chains are not typically adept at fulfilling these objectives.

Thus, network design must consider market impacts along with distribution costs and service. This may lead to additional distribution locations to allow for the type of quick response driven by market conditions. These additional

distribution locations may be designed and used in entirely different ways than large national or regional distribution locations. They may function as depots, allowing the distributor to be closer to the customer. In addition, enhanced capabilities may be required to allow for specific requirements such as flexibility in collaboration with channel partners to allow for seamless integration. Other channel-specific requirements may include highly efficient cold chain designs as discussed earlier, which also integrate with other types of product requirements.

The convergence of consumer expectations, technology changes and omnichannel requirements, along with the changes in the balance of cost structures within the network, are forcing a reevaluation of distribution networks.

III. Changing Accounting Rules for Lease

At the same time that companies are evaluating their distribution requirements because of shifts in transportation costs and changing customer demand, they must be prepared to address these changes in the light of new requirements impacting their distribution center leases. Lease terms are taking on a new significance in 2019, due to a new accounting standard from the Financial Accounting Standards Board (FASB). Starting then, companies will be required to report the present value of their lease commitments and corresponding lease assets on the balance sheet.

The supply chain manager is generally focused on planning, developing and managing a distribution network that is cost efficient and service focused. Lease accounting is not often high on his or her radar. However, the impact of this requirement is also a critical part of the distribution network solution. Companies should treat the implementation of the new standard with care, closely examining all property leases to determine how shorter or longer terms will impact their current financial situation. Some leasing terms may need to be renegotiated to separate billing of operating expenses, utilities and other services from rent, for example.

Experts in lease administration can provide guidance in structuring leases that can significantly reduce the impact of these requirements.



Roadmap for Strategy Development

With the changing landscape of distribution in the U.S., today's supply chain manager must be able to think strategically to minimize risk and maximize efficiency. Proactive planning should include both a situational assessment as well as a plan for adapting to the evolving environment. This assessment and planning process should incorporate the following elements:

1 | Conduct a Distribution Network Analysis

When changes occur on the scale of what is happening today, a distribution network analysis can provide significant return on investment. Companies that frequently evaluate their distribution networks create agile, adaptable networks that position them to better respond to changes. These companies are then able to address competitive positioning in a proactive manner while mitigating cost and risk.

Many major third-party logistics providers (3PLs) are responding to market growth by adding facilities to fill in their network as companies determine that additional distribution locations are required. This additional capacity can provide the 3PLs' customers a way to reallocate their distribution. These customers are then in a better position to optimize their distribution network costs and to mitigate carrier capacity risks by allocating their shipping volume over more locations, based on the particular market selected.

2 | Build in Flexibility

In today's fast-paced distribution environment, it's vital to evaluate the need for flexibility. Given the changing consumer expectations and technology impacts, including the Internet of Things (IoT), as well as general economic trends, companies need to carefully weigh the tradeoff between cost and agility. Many companies feel that investing in agility is worth the cost over the long term.

For example, according to Nick Pacitti, the director of business development for Tippman Innovation, a leading cold storage facility design-

and-build firm, many distribution facilities are beginning to be designed with this type of flexibility in mind. Pacitti says that his firm is responding to the need for shippers of all types and sizes to occupy shared facilities. Tippmann is designing and building refrigerated warehouses with maximum flexibility to provide a range of solutions for years down the road. Building designs can now offer high functionality and capabilities, such as quick-freeze, quick-chill and thaw capabilities, along with other multi-temperature capabilities. He adds that the need for flexibility is not only for multiple temperature configurations, but also for shorter-term commitments.

Dry distribution space can be designed with flexibility for ceiling height, flat-floor systems, number of doors, configuration, etc. Perishables and dry product distribution may even be consolidated. Even though this flexible approach may cost more on the front-end, it is more than made up as the building can be adapted to multiple types of uses as the market requirements change.

3 | Evaluate Balance Sheet Impact of Lease Terms

As an integral part of the network design process, today's supply chain manager must accurately assess the cost/benefit of flexible lease terms against the potential cost savings and certainty of longer terms. This is even more important considering the changes for lease reporting discussed earlier. While the flexibility of terms can be a critical consideration for agility, the new reporting requirements mean lease terms can affect a company's balance sheet. As changes are made in the distribution network, these issues must be considered, presenting a new challenge to add to other issues addressed in distribution network evaluation.

4 | Lock in Carrier Capacity and Rates

In the current freight environment, it is especially urgent to lock in the required levels of capacity at the best rates possible. The negotiation position for carriers has been greatly strengthened; thus, new approaches may be required. Now is the time to leverage long-standing relationships with carriers used through the past several years.

Dr. Kevin Westbrook, an author, researcher and nationally recognized expert on negotiation strategy, advises, "As positions of leverage begin to change, it is critical to enter negotiations as soon as possible. In cases similar to the current state of the transportation services market, leveraging positions for buyers may continue to weaken in the future. Furthermore, it is important to work with providers to provide as much information on requirements as possible so that providers can use that information in their overall planning. Working with providers to minimize the total cost buildup, including hard and soft costs, is especially important."

Transportation and logistics management providers are a great source to consider at this time as well. Many of these companies have thousands of carriers under contract and have cultivated these carrier relationships even during the times when buyers held the upper hand. Contracting with these transportation management providers is a particularly good idea for smaller companies that do not have the leverage and resources of larger companies. This goes beyond broker transactions for loads but should be considered for the cost and service benefits for entire segments of transportation spend.

Time for Action

Times of change like those we are seeing in distribution today are ideal times to evaluate distribution strategies. Given the converging issues of cost increases, capacity risks and regulatory change, companies cannot afford the status quo. Supply chain managers who wait to address these issues may be placed in reactive positions with little flexibility. Supply chain managers who proactively address these issues not only can minimize cost impacts and avoid risk but can also place themselves in improved positions versus competitors who are slower to respond.



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