

# TRANSPORTATION NETWORK OPTIMIZATION

*Your customers' needs are dynamic and constantly changing; your transportation network should be in perfect tune.*



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*Businesses of all shapes and sizes know if they don't have a strong, reliable transportation network, their products won't reach customers. Let's face it, if customers aren't getting what they want, they will quickly move to another company that delivers what they need when they need it, damage-free.*

*Along with the challenge of delivering orders on-time, businesses have seen freight rates increase approximately seven percent since 2014. Freight volumes are also on the rise, up 13 percent in the past year. Coupled with a driver shortage, capacity constraints, changing federal safety regulations, and loss of productivity because of hours of service (HOS) changes, it's easy to see why companies have a difficult time managing their transportation network. These increasing complexities limit the time you can spend focusing on your core business.*

So how do you meet customer demands and keep costs as low as possible given the challenges in today's trucking industry? The solution is simpler than you might expect – an optimized transportation network.

A truly optimized transportation network means it is flexible enough to adapt with your company's strategy, changing needs, and a variety of constraints and variables. It takes advantage of all available mode options in order to deliver the lowest possible cost, while providing visibility and reliability at every step of the way.

## *Keeping your transportation options open*

Businesses have three major alternatives when it comes to transporting their freight over the road:

- 1. Private fleet** - you own the equipment and employ your own drivers
- 2. Dedicated (outsourced) fleet** - you use a third party provider to manage your equipment and drivers
- 3. For-hire carriers and freight brokers** - you use a range of for-hire trucking and logistics companies based on available capacity and lane rates

Taken independently, each of these alternatives has worked well enough in the past, but the transportation landscape has changed. To meet these new challenges head on, companies are taking an "all-of-the-above" approach for their transportation network – blending a dedicated fleet with third party for-hire

## *Transportation industry trends*

- 26 million trucks haul freight in the U.S.
- Freight shipments are up 13% over 2014
- Truckload rates increased 7% in 2014
- Industry is short about 48,000 drivers
- Trucking industry expected to grow 21% in 2015
- Trucking capacity approaching 100% active truck utilization

Source: American Trucking Associations

carriers, as well as private vehicles. This approach is what many are now calling an "integrated" transportation model or solution.

By considering all available modes of transportation, you can get the best of all worlds – dedicated drivers, guaranteed capacity, high levels of service, and predictable costs. What's more, you will gain the flexibility to ramp up your capacity using for-hire carriers when there are surges in demand. You can also take advantage of backhaul opportunities, negotiated rates, and fuel savings.

Moving to a more dynamic transportation strategy, you can realize gains in efficiencies and cost savings. Executed effectively, an integrated solution allows you to achieve significant network stability, guarantee capacity, and reduce costs. At the same time, there will be an increase in productivity that comes along with the benefit of right-sizing your fleet.





With an optimized network, you're able to adapt to the ebbs and flows of the business environment. You will also have a scalable transportation network that can easily adjust to customer demands, strategy realignment, and economic changes that may arise in the future.

### ***Optimization in practice***

The first step to optimizing your transportation network is to perform a complete evaluation of your current operation. Ask yourself these questions:

- Do my customers have fixed delivery windows, or would they be open to relaxing their delivery requirements – such as receiving larger shipments less frequently?
- How predictable are my shipment volumes and transportation needs?
- Do I have the right level of visibility to planned and in-transit shipments to make dynamic adjustments to my network?
- Are market factors like the driver shortage, hours of service, tightening capacity, and many others impacting my ability to maintain my 'current state' transportation solution?
- How much flexibility do I have today compared to how much I need to have in the future?

Implementing an integrated transportation solution can solve many of the challenges you face in today's transportation environment, but it is important to do your homework first. Along with the questions above, other factors that should be considered are distance traveled, number of stops, types of equipment, returns/vendor pick-ups, special handling, and delivery requirements. The goal is to deliver a more efficient and cost-effective operation, without jeopardizing operational constraints or service levels.

Even after considering all of these factors, optimization needs to take place on a regular cadence to reap the most benefit. For example, it might make sense to run a one-way lane with a for-hire carrier one week, and run the same lane with the dedicated fleet the following week, because of a backhaul opportunity. In addition, not all changes are implemented instantaneously. But when you are open to these types of dynamic adjustments, versus a more fixed plan, you have the potential to claim huge savings and efficiencies. Visibility is paramount in any operation and that includes your transportation network. For many, the investment is not only purchasing, but also effectively implementing the transportation technology needed to get the right visibility. This can be a daunting, and often, insurmountable undertaking, as you are increasingly turning to providers for the technology that will help diagnose, remediate, and optimize your network.

Centralizing route planning and engineering can also simplify decision-making, provide dashboards to identify waste in the network, and ultimately make smarter decisions that save money.

An integrated solution requires a lot of planning and control throughout the process to manage the different modes being used – you’re not just coordinating multiple vendors, but also the drivers and maintenance associated with the private or dedicated fleet. It is important to have a knowledgeable operating team in place to drive execution. The operating team should be armed with the right planning tools, deep knowledge on the transfer of goods, and have the right processes and procedures in place to manage tight delivery schedules. Setting your operations team up for success will ensure your transportation network is optimized.

### *Five ways an integrated solution can deliver for your transportation network:*

1. **Flexibility.** An integrated solution provides a foundation for core capacity and allows a better match of transportation resources with procurement capabilities when demand fluctuates.
2. **Cost savings.** Save money by making as-needed adjustments to lanes and other variables.
3. **Transparency.** Ensure you have full visibility into your transportation network across all modes.
4. **Waste reduction.** Make your network run LEAN through a reduction in miles driven, carbon emissions, and fuel consumption, and an improved utilization of resources.
5. **Collaboration.** As with any change to “the way things have always been,” success through an integrated solution requires a commitment to collaboration across all parties involved – from purchasing to the shipping dock. Collaboration can transcend carrier network operations and private fleet management concerns to deliver the best for your transportation network.

### *A network that grows with you*

Examples abound, showing how businesses are leveraging the flexibility inherent in an integrated solution to adapt to changing business requirements. Here are three case studies where Ryder has provided an integrated solution with positive results:



#### **Case Study 1: Managing Seasonal Demand**

One Florida plant nursery sought an integrated transportation solution to help it manage dramatic shifts in demand during peak season. The solution, which was contracted to Ryder, includes a dedicated fleet and transportation management of third-party for-hire carriers. The nursery ships plants to retailers in Florida, Alabama, Georgia, Arkansas, Mississippi, and Louisiana.

The nursery’s fleet consists of a half-dozen dedicated trucks and drivers, which is sufficient for the majority of the year. However, when spring arrives each year, its capacity needs surge by 400 percent, as it rises to the task of stocking retailers’ garden centers. The nine-week peak season from March to May accounts for nearly 80 percent of the nursery’s annual revenue.

All businesses have peak seasons, and it is imperative to have a flexible transportation network that can handle the additional volumes, but ok when they are no longer needed. For many companies, this is no easy task, especially when deliveries must occur without interruption and on time to keep your customers happy. In this scenario, having reliable providers – both the dedicated fleet and for-hire carriers – will make or break the success of the company, especially considering that 80 percent of revenues came from the peak season.

By leveraging an integrated solution – that uses a dedicated fleet year round and flexes with for-hire carriers for the peak season – the nursery has benefited from an increased ability to successfully fulfill orders, while controlling costs and service levels. It also has a model to leverage its business expands with new retailers.



### Case Study 2: Un-tightening capacity and reducing costs

For a company that manufactures paper rolls, liner sheets, and cardboard boxes from recycled corrugated materials, having an optimized transportation network

helped alleviate the pressures of tightening truckload capacity in their geography.

Before outsourcing to Ryder, the company struggled with escalating costs and poor carrier performance. With Ryder, the company was able to establish an integrated transportation model consisting of a dedicated fleet and transportation management of third-party for-hire carriers.

They got started with a staggered implementation plan, which when said and done, led to a conversion of 22 percent of for-hire carrier shipments to their dedicated fleet. As a result, the company avoided more than \$700,000 in for-hire carrier rate increases and saved \$1.4 million in for-hire carrier surcharges.



### Case Study 3: Fleet utilization and optimization deliver a one-two punch

In the Midwest, a vegetable canning company that supplies grocery retailers across North America knows having the right transportation network is the

difference between keeping shelves stocked or losing loyal customers. Family-owned and operated for nearly a century, the company knew business was their strength, but struggled with their transportation network. They partnered with Ryder to evaluate their network and implement numerous optimization strategies. The company distributes its products from three different locations – two in the south and one in the Midwest – and prior to optimization, their average haul was between 700 and 1,000 miles.

At the time they decided to outsource, the company was running a private fleet of 100 power units and supplementing it with for-hire carriers. Ryder determined that the existing fleet was heavily underutilized, and proposed a 50 percent reduction in fleet size. Combining the remaining dedicated fleet with Ryder's Transportation Management capabilities gave the

company the dedicated capacity and drivers it needs while leveraging Ryder's purchasing power of more than \$5.2 billion annually to procure for-hire carriers at pre-negotiated rates.

The company's transportation spend went from \$32 million to \$28 million annually. The results in the second year of its partnership were even more staggering. As the data collected from the first year of operations was analyzed, further optimization opportunities were found, and the fleet was reduced again. In addition, significant backhaul opportunities were identified that ultimately saved the company several million dollars.

This begs the question: *Why aren't more companies re-evaluating their networks if they can save millions by optimizing them?*

### What's next for the industry

For decades, the transportation industry has relied on people to collect and analyze data manually, who would then decide which mode to ship an order. Depending on the size of the transportation network, this process could take anywhere from a few hours to a few days – or more. This process, while necessary, keeps transportation managers up at night, wondering: Is the team analyzing the right data? Are the most cost effective decisions being made? What about the element of human error?

A recent survey of Fortune 500 companies conducted by the University of Tennessee's Global Supply Chain Institute revealed 76 percent of those surveyed use a combination of for-hire carriers and a dedicated fleet to deliver freight. Of the companies that use an integrated model, 27 percent do not have a clear process to assign shipments; and 53 percent do not use a routing tool to optimize their fleet.

With new technologies entering the market every day, it is only a matter of time until tools are developed that enabled the automation of some or the entire network planning processes. But there is still room for improvement, and innovations in this area will greatly improve the performance of supply chains everywhere.



## **Conclusion**

The facts are clear; a company that relies on trucks to deliver its products over the road is only as strong as its transportation network. With continuous pressure for cost containment, improved efficiency, on-time performance, and high levels of customer service, an optimized transportation network can give your company the competitive advantage it needs. By continuously evaluating your transportation network and analyzing opportunities for optimization, you can achieve success.

Ryder specializes in integrated transportation solutions that help you improve performance across every mode of transportation, derive more value from transportation partners and take control of your operation. Ryder offers the insight, management expertise, purchasing power, and standard operating practices it takes to increase visibility, make better use of assets, reduce costs and improve customer service.

### ***Is an integrated solution right for you?***

- ✓ Do you have a transportation network that consists of both a private or dedicated fleet and for-hire carriers?
- ✓ Do you have at least 48 hours to plan your routes in advance?
- ✓ Is your network impacted by seasonality or other variability in demand?
- ✓ Are you experiencing capacity constraints outside of your core network?
- ✓ Do you have significant LTL volumes that could be consolidated?

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