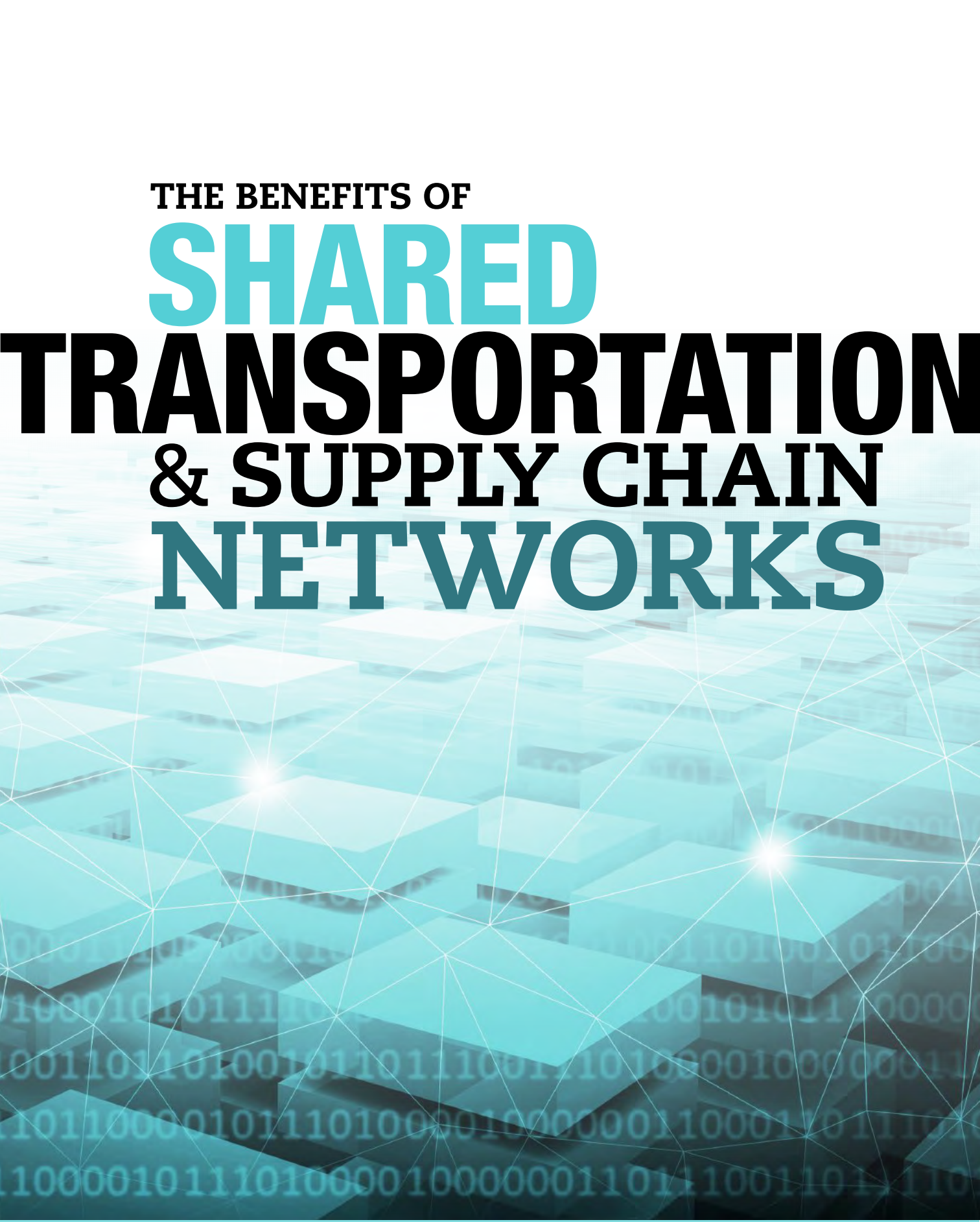
THE BENEFITS OF SHARED TRANSPORTATION & SUPPLY CHAIN NETWORKS



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Logistics MANAGEMENT

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Editorial Office

111 Speen Street, Suite 200
Framingham, MA 01701-2000
Phone: 1-800-375-8015

Logistics MANAGEMENT

welcome

Time for transformational thinking

As savvy logistics management professionals are painfully aware, the freight transportation market is currently walking a tightrope.

For most of the past year, we've witnessed a brief lull in the ever-rising logistics costs due to the confluence of one-time factors, including bloated inventories, a strong U.S. dollar hampering exports, and a sudden surge in extra truckload capacity. And while many *Logistics Management* readers have enjoyed this "shippers market," all reports indicate that this is about to change—and quickly.

In fact, most freight transportation analysts agree that we are about to enter a period of transition that *will* trigger many of the long-lingering concerns that *will* indeed tighten capacity and push rates higher.

For logistics professionals, it's clearly time for transformational thinking. Over the next few pages, the editors of *Logistics Management* have gathered four features designed to help mangers break away from traditional, "transactional" relationships and move more toward integrated provider partnerships that improve asset utilization, introduce strategic sourcing, and optimize existing freight transportation networks for the good of all involved.

Michael A. Levans, Group Editorial Director, Peerless Media
Comments? E-mail me at
mlevans@peerlessmedia.com
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THE BENEFITS OF Shared Transportation & Supply Chain Networks

As challenges continue to mount for shippers, shared networks can quickly lead to improved asset utilization for companies—whether it's warehouses or trucks.

THE TRANSPORTATION LANDSCAPE has become more complicated for shippers in recent years. In fact, there are currently several challenges facing the entire transportation and logistics industry as a whole.

Globalization, driver shortages, and the need for rapid order fulfillment are all impacting the freight transportation industry. According to PwC's 2016 Global CEO Survey, transportation and logistics professionals are extremely concerned about over-regulation, geopolitical uncertainty, the availability of key skills, and volatile energy costs. Fifty-eight percent

By Bridget McCrea, contributing editor

think changes in regulations and greater direct and indirect competition—and shifts in consumer spending and behaviors—will impact their organizations over the next five years.

"We refer to these challenges as 'disruptors," says Darin Cooprider, vice president and general manager of consumer packaged goods for the Supply Chain Solutions business segment of Ryder System, Inc. "The speed and scale of business has never been greater. This is driven by consumer demand—not just the products the consumer wants, but also when they want it."

Concurrently, major retailers are driving toward same-day—and in some cases, 2-hour—delivery. This puts pressure on businesses to receive, customize and ship products faster. Add in changing technology, a talent shortage throughout the industry (i.e., drivers, warehouse workers, and technicians), and increasing or changing regulations, and businesses have much to focus on to meet their customers' expectations.

Over the next few pages, we'll examine the current challenges of the transportation industry, explain how these issues have exacerbated supply chain inefficiencies, and show how shared transportation and supply chain networks can help companies overcome these obstacles.

Driver shortage and new regulations

The driver shortage is one of the biggest disruptors in the industry.

Currently the American Trucking Associations (ATA) estimates the industry is short about 50,000 drivers. That number is expected to climb to 330,000 by 2020. The effects of the driver shortage can be felt throughout the economy, as 68.9% of all freight tonnage is moved on the nation's highways.

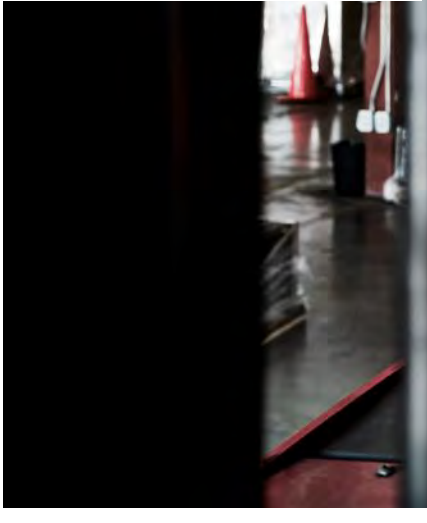
Specifically, according to the American Transportation Research Institute (ATRI), 34% of trucking's operational costs per mile is driver pay, which, with the recent drop in fuel prices, is quickly putting pay as the largest operational cost. And as driver pay increases due to the shortage, it has a significant impact on fleets.

Some 80% of American communities rely solely on trucks to deliver their goods, but a shortage of drivers is compounding an already tight capacity situation. "With drivers in scarce supply, companies can't afford to have empty or even partially filled trucks on the road," Cooprider explains. "Hence they're increasingly using less-than-truckload (LTL) arrangements to share space in trailers."

New and changing regulations are also making an impact on the way goods move on our nation's highways. Long after the deregulation wave of the 1980s, trucking

has remained a regulated industry. The heightened safety and environmental regulations issued over the past decade have become even more stringent, significantly increasing the administrative burdens, training, and compliance costs for all fleet owners. The Compliance, Safety and Accountability (CSA) regulations issued by the Federal Motor Carrier Safety Administration (FMCSA) in December 2010, for example, are a prime example.

The CSA measures carriers and publicly reports on their performance in seven categories ranging from unsafe driving and driver fitness to hours of service compliance and vehicle maintenance. Hours of Service (HOS) regulations are intended to make sure that drivers are not fatigued from long hours on the road without a break or rest. High profile incidents demonstrate the hazards of drivers who operate without sufficient rest.



However, accurate measurement of HOS compliance is hampered by the large numbers of drivers who are still working with paper logs rather than onboard computers. For example, many of the HOS issues that drivers and carriers face are the result of mistakes in the logs rather than driver fatigue—mistakes that will be avoided as more fleets and owner/operators deploy onboard computers to track HOS.

Complicating the freight situation even further is a new rule that's expected to be published in the fall of 2016, and that mandates the use of electronic trip logs. "This is a game changer for the industry," says Cooprider. "It will virtually eliminate accidental or even willful inaccuracies in trip logs. In the short-term it is also expected to exacerbate the driver shortage."

The transportation industry is also impacted by environmental regulations on fuel economy and emissions, both of which continue to expand. Engine technology changes mandated by the Environmental Protection Agency (EPA) in 2007 and 2010, for example, have significantly reduced greenhouse gas emissions, but also resulted in much higher vehicle cost and increased complexity.

More recently (June 2015), EPA and the National Highway Traffic Safety Administration proposed new standards to further reduce carbon emissions and increase fuel economy for medium and heavy-duty vehicles.

"Regulatory changes require the industry to adapt against a dynamic marketplace that has ebbs and flows in demand. This timing of the impact can change how the shippers and carriers feel it." Cooprider says. "Although it is expected to exacerbation in the short term, it will improve trip log accuracy in the long-run."

Sharing trucks and drivers

Like most forward-thinking concepts in the supply chain space, the idea of "shared networks," the "Uberization" of freight, and the optimization of the nation's truckload capacity have been discussed at industry conferences and on webcasts, yet there are few real-life examples showing how it works.

The good news is that asset sharing—warehouses, trucks, and/or drivers—is helping companies meet the demands of customers and work more efficiently.

In addition, 30% of companies that outsource logistics are growing their usage of load sharing in particular, according to the 2016 Third-Party Logistics Study. As demand grows, logistics experts are positioning services to make sure their customers reap maximal benefits of

sharing. Ryder, for instance, is developing LoadSmart to make sure trucks are packed to the gills, not only when they leave a factory or distribution center, but also on the way back.

Shared networks in action

With only so much warehouse and transportation space available, food companies are looking for ways to collaborate with peers, and even competitors, to drive efficiencies, improve service, and manage costs. With a client roster that includes the top 10 food and beverage companies in the United States, Ryder has helped build solutions for these companies by providing shared facilities and transportation networks.

Shared networks can quickly lead to improved asset utilization for companies, whether it's warehouses or trucks. By sharing space, they are also sharing costs—which will lower their overall supply chain cost and improve cash-to-cash cycles. "In California for example, we work with two competing grocers who share fleet assets and drivers across their networks," says Cooprider.

With stores needing to stock their shelves more frequently, while not keeping much inventory in the stock room, these grocers were tasked with sending smaller shipments closer to the time of sale. They were shipping at LTL rates, but through Ryder and its route optimization capabilities, the grocers were able to use the same trucks to ship their goods at preferred rates. This results in improved inventory and product freshness and cuts down on wasted deliveries. Plus, the shared network is smooth; the shipper has full visibility of its shipments, and is ensured its products reach the shelves on time.

Customers' expectations are met, and the shipper benefits from lower transportation costs, improved on-time delivery, and higher customer service levels. As consumer demands grow and the speed of business accelerates, companies in some industries are looking at opportunities to share transportation and logistics resources for greater efficiency and faster delivery.

Companies in many industries, face common issues such as a shortage of drivers and tightening capacity. They often have fleets traveling similar routes to the same or nearby destinations. Ryder also provides multi-client packaging and warehouse facilities as well as. This allows companies to not only share warehouse space, but save on operating costs. Examples of this can be found in the consumer packaged goods, oil & gas, retail, and healthcare industries. By offering multi-client warehouse facilities and shared drivers and equipment, Ryder is helping these companies work faster and more efficiently.

"By outsourcing to a third party logistics provider (3PL) such as Ryder, shippers can outsource the disruption," says Cooprider. "We see these disruptions all the time, and because of our experience, we can see disruptions before they come. Third party logistics providers, like Ryder, can help shippers reduce cost, increase efficiency, become more flexible, speed up their supply chain, and keep their products moving."

Managing disruption

Disruptive trends have a significant impact on fleet management, transportation, and logistics—making it difficult for companies to manage the complexities of running their own fleets and supply chains. They face an unprecedented array of issues across technology, regulations, and personnel, which often draw attention away from their core business.

With their combination of know-how, processes, engineering, and infrastructure, 3PLs like Ryder help shippers mitigate supply chain disruptions related to everything from natural disasters, to roadway and port congestion, to parts availability and vendor production issues. They also help shippers leverage the power of shared networks and allow them to reduce costs, make better use of transportation assets, speed up delivery times, and maintain high levels of customer service in today's fast-paced business environment.

"We help companies outsource many of these challenges to a partner with the experience, resources, and expertise to drive effective solutions," says Cooprider, "while increasing business speed, reliability, and efficiency." •

Bridget McCrea is a contributing editor to Logistics Management

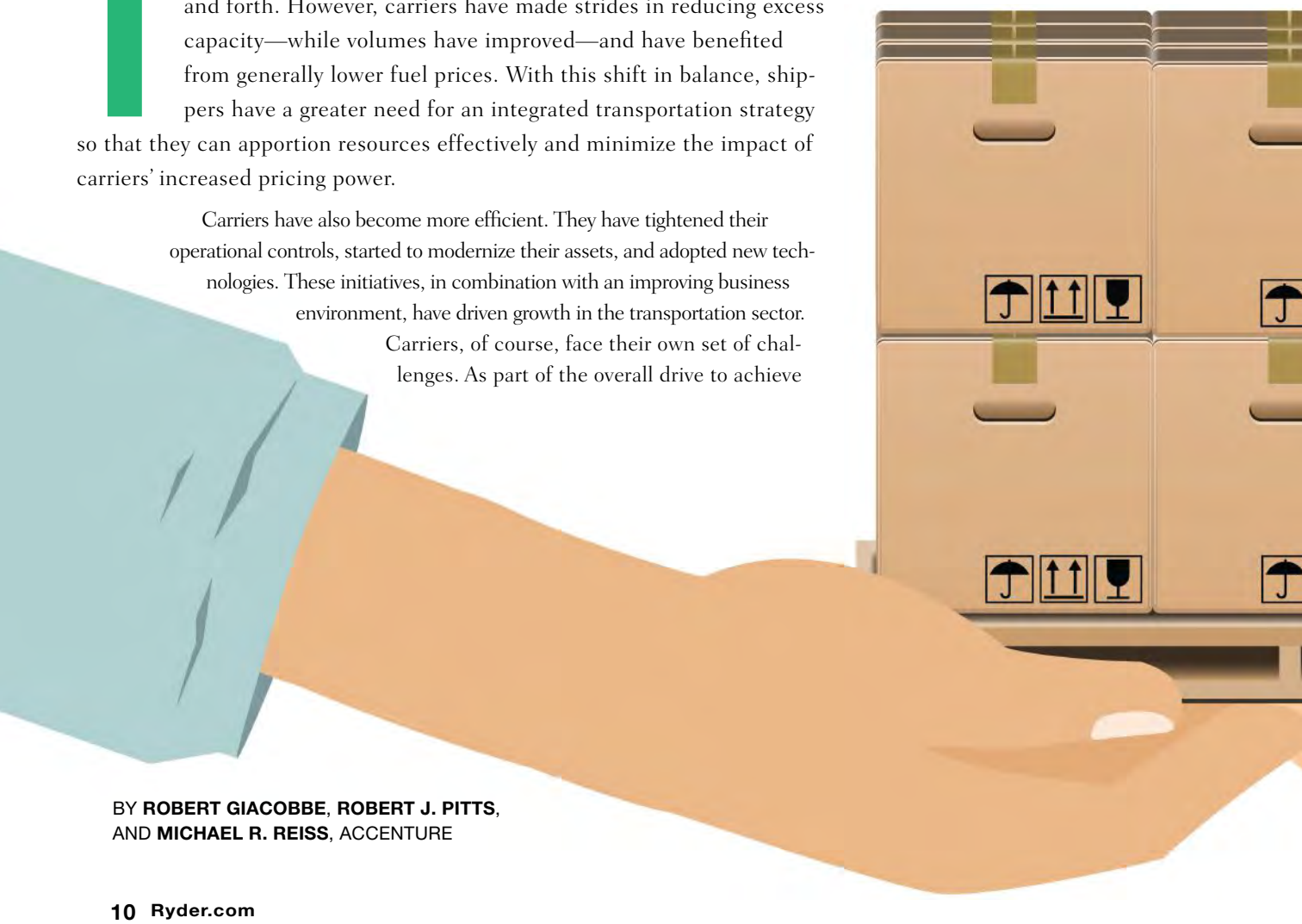
STRATEGIC SOURCING

Time for an integrated transportation strategy

With an integrated strategy in place as part of a digital supply network, companies can strategically source transportation events more efficiently. Here's how to begin the assessment of your internal and external operations on the way to gaining a critical edge.

THE BALANCE BETWEEN SHIPPERS and carriers swings back and forth. However, carriers have made strides in reducing excess capacity—while volumes have improved—and have benefited from generally lower fuel prices. With this shift in balance, shippers have a greater need for an integrated transportation strategy so that they can apportion resources effectively and minimize the impact of carriers' increased pricing power.

Carriers have also become more efficient. They have tightened their operational controls, started to modernize their assets, and adopted new technologies. These initiatives, in combination with an improving business environment, have driven growth in the transportation sector. Carriers, of course, face their own set of challenges. As part of the overall drive to achieve



BY **ROBERT GIACOBBE**, **ROBERT J. PITTS**, AND **MICHAEL R. REISS**, ACCENTURE

efficiency, carriers are accelerating their transition to a regionalized network model. While such models deliver significant operating efficiencies, they also exacerbate driver turnover, which is already high due to changing demographics—older drivers are retiring and not enough new drivers are entering the business—and competition from other industries.

In the midst of this, shippers are hardly standing still. Many are re-thinking their entire supply chain—considering how they can transform it into what we call a "digital supply network" that uses new technologies to change the way they design, source, make, move, store, and service products.

As they evaluate their transportation networks, they seek deeper insights through the use of analytics, greater collaboration, and near-real—time responses to changing market conditions. They also see transportation as a key component of the digital supply network, one that can help companies establish competitive advantage and contribute to sustained, profitable growth.

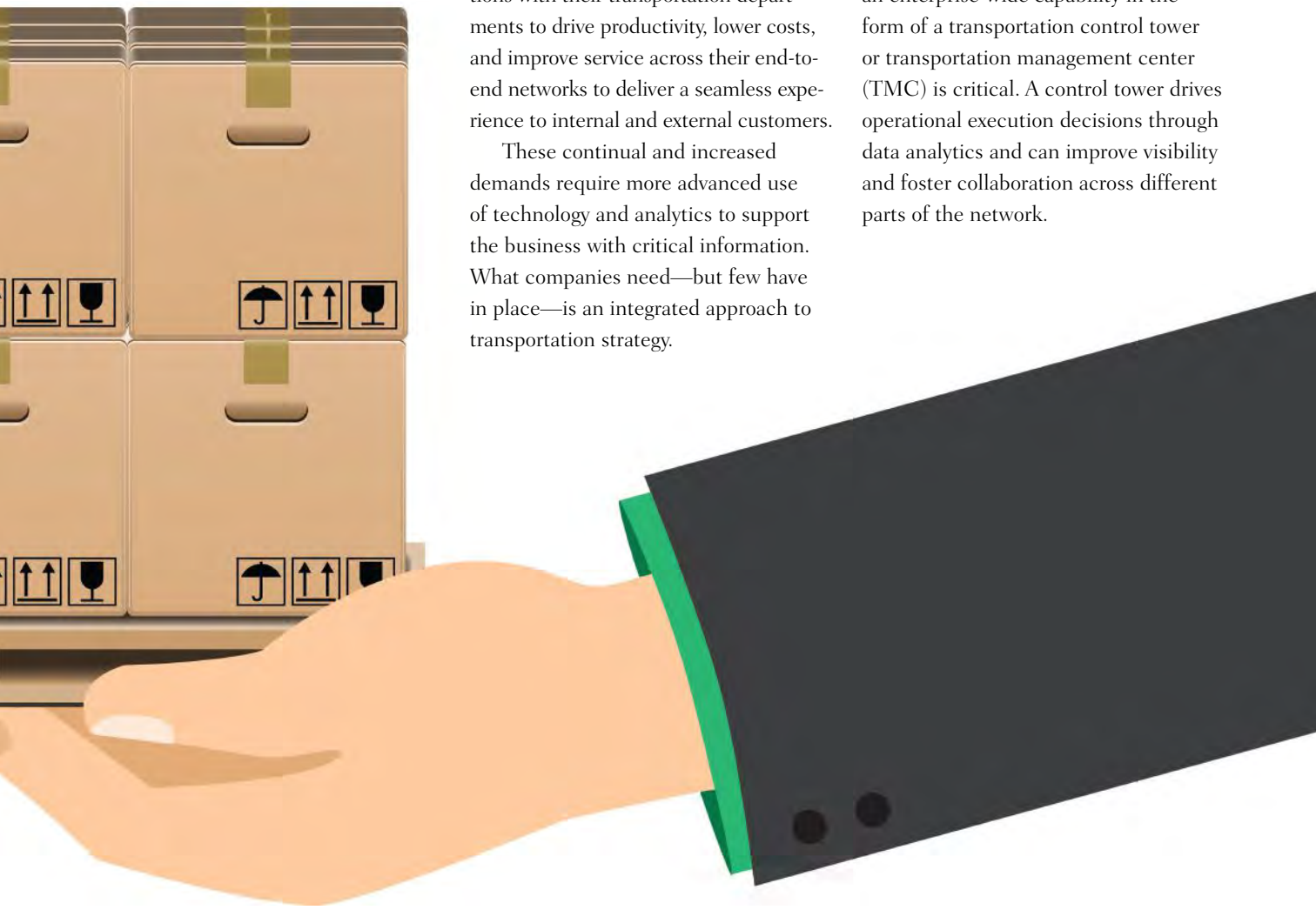
Creating a TMC

Shippers continue to increase expectations with their transportation departments to drive productivity, lower costs, and improve service across their end-to-end networks to deliver a seamless experience to internal and external customers.

These continual and increased demands require more advanced use of technology and analytics to support the business with critical information. What companies need—but few have in place—is an integrated approach to transportation strategy.

The integrated approach is based upon a central team that uses technology to track and identify potential disruptions. Their scope is holistic and extends across the supply chain ecosystem to other internal functions as well as to suppliers, partners, and customers. An integrated solution provides visibility as data is standardized across the supply chain ecosystem.

For companies that have not made the move to an integrated transportation strategy, a key first questions are: How is the network currently structured? Is it centralized or dispersed by region? No matter what the structure, an enterprise-wide capability in the form of a transportation control tower or transportation management center (TMC) is critical. A control tower drives operational execution decisions through data analytics and can improve visibility and foster collaboration across different parts of the network.



In particular, the TMC can manage daily planning and execution operations, while also enabling more strategic initiatives such as continuous collaborative improvement, efficiency, and cost reduction to support the entire transportation procurement strategy. With the introduction of cloud, such a system becomes less capital intensive and easier to extend to carriers and suppliers.

Considering today's complex environment, companies need a more collaborative approach to dealing with their transportation suppliers and increased visibility of shipments in the supply chain pipeline. This approach begins with data.

Considering today's complex environment, companies need a more collaborative approach to dealing with their transportation suppliers and increased visibility of shipments in the supply chain pipeline. This approach begins with data. Companies now have access to a vast amount of transactional data, such as cost per shipment, vehicle utilization, the mode selected, whether goods were shipped via parcel or in less than truckload (LTL) amounts, and the levels of service delivered by selected carriers.

By organizing this data properly and using sophisticated analytics and business intelligence tools, shippers can make better informed decisions about their entire transportation strategy, from big-picture issues such as network optimization and the location of distribution centers to more specific concerns related to pricing, cost to serve, compliance, and safety.

A second step involves evaluation of both the internal and the external factors that stand in the way of an optimized, effective digital supply network.

Internal factors, those within the company's control, include the capabilities, tools, and other assets needed to plan, manage, and execute transportation moves; enterprise-wide efforts to rationalize sourcing and realize operational efficiencies; and the company's ability to access information and data on a timely basis.

External factors, those outside the company's control, include such things as shifting fuel prices; regulatory and workforce issues affecting the transportation industry; inclement weather conditions; or even an unanticipated spike in customer demand.

Tying into the digital supply network

With internal and external factors evaluated, the company can lay the building blocks of an integrated transportation strategy. To support that strategy, companies will need to strengthen their digital network in areas such as business intelligence, analytics, scenario planning, and collaborative technologies.

A stronger digital network supports internal improvements, but also enables the shipper to work more closely with suppliers to realize greater efficiency and effectiveness. In our view, the digital supply network rests on four key attributes:

Connected. Digital supply networks are connected at their foundation and interact with the full business ecosystem, including the company's transportation management group and its ecosystem of suppliers and partners for real time information flow. Collaboration is proactive, and digital technology is utilized to actively capture customer feedback and carrier inputs as well as feedback on transportation performance. That information is processed and shared with internal teams for action.

For connected companies, the digital supply network provides real-time visibility throughout the network, using supplier data, shipment execution data, and market intelligence. Mobile technologies enhance its connectivity as it allows shippers to work with carriers, thereby enabling dynamic routing and delivery assurance.

Intelligent. Once fully networked, transportation becomes part of an integrated network, where analytics fuel transportation management decisions. Data is analyzed and insights are derived from the entire ecosystem of internal functions, as well as key suppliers and customers. As a result, the company benefits from dynamic reporting capabilities and a store of carrier performance information such as cost, service, capacity, safety, quality, and reliability.

That information can be used to conduct supply chain network analysis, transportation modeling, and business intelligence analytics to maximize value and minimize system-wide costs while meeting service level requirements.

Scalable. In addition to being smarter, digital supply networks also make it easier to scale a company's transportation services up or down as market volatility and circumstances dictate, with the plug and play capabilities afforded by these networks. As such, the connected, intelligent shipper finds it easier to maintain flexible resources and to add and/or reduce partners as needed. With a well-integrated, digital supply network, companies find it easier to enter niche markets and achieve a significant reduction of the time to market of new products.

Indeed, 51 percent of C-level operations and supply chain executives say that supply chains characterized by a multitude of partners and numerous geographies are their biggest challenge. Transportation is no small part of that equation. However, as companies leverage analytics, cloud, 3D printing, and social media to make their

supply chains scalable from end to end, they can contribute significantly to growth as digital technologies reduce time to market and enable swifter, cost-effective delivery schedules.

Rapid. Recognizing that speed may be the currency of the future, digital supply networks enable flexibility in operations across the entire supply chain ecosystem by taking key suppliers and customers into consideration. This lets the company react quickly to demand and supply volatility, adjusting their shipping plans accordingly.

Vital data can be stored in as close to real time as possible, and in a format that makes it accessible and easy to use. Just upgrading from PDF to Excel formats for reports can provide significant benefits on this front.

Building an integrated transportation strategy

With an integrated transportation strategy in place as part of a digital supply network, companies can strategically source transportation events more efficiently. The company begins with an assessment of its own network and internal organization.

During the assessment, the company should align its transportation decisions with its overall growth strategy. To achieve alignment, transportation management will want to conduct a market assessment, evaluate products in the pipeline, consider how they could affect future shipping activities, and they should engage with their stakeholders—including customers and suppliers—to better understand current levels of service and satisfaction.

With the big picture strategy established, the company can make more informed choices about its modal strategy and then align with the right planning and execution strategy. Information will also be needed to manage the carrier request for proposals process. Using an optimization-based scenario approach allows shippers to balance critical business constraints with carrier capacity, thus putting the right freight with the right carriers.

Management of complex compliance issues should also be factored into the integrated transportation strategy. Better information and more sophisticated analytics, which they can leverage through their digital supply network, can help companies comply with routing guides, track supplier safety metrics, and compare actual safety, fuel, and emissions performance against RFP and budget forecast numbers.

Additionally, if designed, sourced, and executed correctly, the strategy can help companies track suppliers' pricing and volume trends; the frequency with which they transport goods to and from different destinations and origins; as well as their operational performance in terms of reliability, timeliness, and safety.

Another way to build momentum and accelerate positive change and potentially help fund longer-term investments is through the identification of "quick wins" in areas such as local routing and delivery, load consolidation, freight contract management, and freight sourcing. These less complex, easier-to-implement initiatives also reduce costs and free up cash that can be used to fund strategic investments.

Benefits of an integrated approach

A holistic, integrated approach to transportation—undertaken as part of the move to a digital supply network—can deliver significant benefits to shippers. With the carrier base re-shaped, optimized, and rationalized, shippers can implement tighter cost controls, improve reliability, and record higher customer satisfaction scores.

Transportation services are aligned with the needs of internal and external stakeholders, so it's easier to develop transport strategies to support product development, to reach underserved markets, or to customize products for specific markets. And, when unforeseen events occur, the company is in a better position to respond quickly and effectively—minimizing the risk of disruptive events in the supply chain.

Implementing an integrated transportation strategy as part of a digital supply network is clearly beneficial. However, a digital supply network represents more than just the broad application of technology. The supply chain is evolving from a function concerned with the movement of materials to an inter-enterprise discipline intended to optimize materials, talent, information, and finances.

For both shippers and carriers, these are exciting times for the transportation sector. As a core element of the digital supply network, transportation has become central to a company's growth strategies. By integrating transportation within a digital supply network, companies can gain an edge over competitors who still see transportation as a series of disconnected components rather than a vital strategic capability. •

Robert Giacobbe, managing director, and Robert J. Pitts and Michael R. Reiss, senior principals, authored this article. All are executives in Accenture Strategy, Operations.

The Physical Internet:

Logistics Reimagined?

BY **MARÍA JESÚS SÁENZ**, DIRECTOR, ZLC-MIT SCALE

WHAT IF THE SUPPLY CHAIN COMMUNITY could emulate the "Internet world" and create a universal, open logistics network that is economically, environmentally, and socially efficient and sustainable? Such a concept exists, and it's called the Physical Internet. Today the Physical Internet is a vision for an end-to-end global logistic network, but there are plans to turn it into a reality by 2050.

Companies constantly strive to improve the efficiency of the logistics networks that move their goods worldwide. Although performance levels have increased significantly over recent decades, they are far from satisfactory. For example, too many containers and freight vehicles transport empty space or are idle because of operational delays. All too often, disruptions prevent products from reaching consumer markets, adding to the waste that pervades many logistics networks.

The Physical Internet proposes to eliminate these inefficiencies in much the same way that the Internet transformed the flow of information around the globe.

Before the arrival of the Internet data networks were highly fragmented. Communicating data across companies, especially on an international scale, was relatively costly, slow, and hampered by capacity limitations. Then came the information superhighway; a metaphor taken from the transportation space. The digital highway swept away these barriers by providing a standardized pathway for data transmissions that encircled the world. With a modest investment in equipment, any organization could join the highway. The speed and volume of data flows grew exponentially, as did the rate of innovation in data communications.

The Physical Internet is a "superhighway" for the movement and storage of physical objects. It was originally proposed in 2011 by Benoit Montreuil, currently the Coca-Cola Material Handling& Distribution Chair and Professor, Georgia Tech in the U.S. Since then the idea has gained many proponents, and the Third Physical Internet Conference will take place on August June 29 to July 1, 2016, at Atlanta, U.S. Hundreds of people from across the globe representing many industries are expected to attend the event.

In Europe, the Alliance for Logistics Innovation through Collaboration (ALICE), launched by the European Commission in 2013, has adopted the concept and is working towards a real-world Physical Internet by 2050.

The Zaragoza Logistics Center (ZLC), Zaragoza, Spain, one of the ALICE founders, is researching the horizontal collaboration and dynamic business models that will be required as the Physical Internet takes shape. Horizontal collaboration requires disparate logistics organizations to cooperate on increasing the efficiency and sustainability of freight transportation. In order to evolve towards a real-world Physical Internet the changing roles of key players and stakeholders will have to be integrated, and dynamic business models are needed to

achieve this integration.

ZLC is also working with MHI, the largest material handling logistics, and supply chain association in the U.S., to promote horizontal collaboration concepts and practices. MHI has created a community of industry thought leaders called the U.S. Roadmap for Material Handling & Logistics that is advancing the Physical Internet concept. ZLC and MHI are also conducting a study to identify possible international synergies between organizations. For example, a comparison of horizontal logistics practices in the U.S. and the European Union is part of the study.

But garnering support for the concept is only the first step; now comes the job of building a real-world global logistics system based on common standards and worldwide interconnectivity.

This will require an open market for freight transportation, as well as open, configurable and shared distribution networks. Goods will be carried in modular, standard and smart containers equipped with "smart" technology that enables every unit to be precisely tracked. Products will need to be designed to fit into these containers in order to capture huge gains in improved space utilization and cargo handling productivity. The design of shared infrastructure such as logistics centers also will have to comply with the system's requirements. Harnessing the achievements of technological innovations such as the Internet of Things is also important, especially in areas such as supply chain visibility. And, of course, industry and regulators will need to develop global protocols for the system's operation.

These challenges are daunting. Moving goods through a universal network rather than many small, independently operated networks, is a very different proposition than moving bits and bytes in this way. There are physical limitations in freight logistics that do not exist in the world of electronic communications. Developing a global consensus on operating standards in the logistics space presents some unique difficulties as well.

Achieving the level of collaboration needed to evolve towards a fully functional Physical Internet will require a profound change in business and managerial mindsets. Companies will have to redefine the competitive landscape as they join forces with other enterprises – including their rivals – to develop the Physical Internet.

Can the dream be realized? Given what the Internet has achieved, and the rewards that a real-world Physical Internet could bring, the answer is surely yes.

But overcoming obstacles like these will require the influence of resourceful organizations that span countries and industries. These organizations can serve as triggers, and they could be a private-sector, first-mover player with a global reach such as Amazon.com or Ali Baba or a government. Perhaps a group of retailers that is grappling with similar challenges as the enterprises transition to omnichannel supply chain models could fulfill the role of Physical Internet facilitator. After the trigger organizations take effect, it will be necessary to scale up the effort with the addition of a wider range of players.

The logistics industry has already taken some baby steps in laying the groundwork for the Physical Internet. For example, Amazon.com has partnered with the U.S. Postal Service to deliver packages to Amazon customers seven days a week. This horizontal partnership requires the organizations to align their huge distribution networks. Also, Amazon is dynamically redefining the competitive landscape in which it competes. The online retailers recently announced plans to open physical book stores, for instance.

Creating the Physical Internet will require an unprecedented level of cooperation and resources, but it's a journey that is worth taking. •

María Jesús Saenz is the director of the ZLC-MIT Scale program in Zaragosa, Spain. She can be reached by email at mjsaenz@zlc.edu.es.

Editor's note: The following column on the Physical Internet Initiative by Maria Jesus Saenz was originally published by the Zaragosa Logistics Center. It is reprinted with permission.

TRANSPORTATION NETWORK OPTIMIZATION

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

TRANSPORTATION NETWORK OPTIMIZATION

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

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

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.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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 as 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 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 where 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-evalutating 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 and efficient 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?

Discover how outsourcing with us can improve your fleet management and supply chain performance by calling **1-888-88-RYDER (option 1)** or by visiting **ryder.com**.