



WHITEPAPER

40 Years After Deregulation, Outsourcing Tank Truck Logistics Has Never Made More Sense

By: Thomas Dirmyer &
Kevin Sotak

CLX LOGISTICS

INNOVATION THROUGH PEOPLE, PROCESS AND TECHNOLOGY

PREFACE

In 2020, the Motor Carrier Act of 1980 celebrates its 40th anniversary. This monumental piece of legislation changed the landscape of domestic trucking forever. It was the catalyst to the proliferation of carrier choices in the United States for LTL, Van TL, and tank truck. This Whitepaper examines the tank truck marketplace in the United States and discusses the challenges it faces and the primary factors that support outsourcing tank truck shipments.

Deregulation led to a significant rise in the number of trucking companies, from 20,000 in 1980 to over 1.2 million today. Within the tank truck space, there are hundreds of choices available to domestic shippers of chemicals and food ingredients. From single trailer owner-operators to massive carriers with thousands of power units, the vast array of choices shippers face poses significant challenges.

With so many carriers and a variety of equipment, rates, and service levels, making the right strategic and tactical carrier selections can be daunting. The dynamic nature of chemical shipping demand, seasonality, and production cycles can put shippers at a disadvantage against their competitors. They also strain carrier partnerships, as forecasting becomes nearly impossible.

An outsourced solution can alleviate these problems and give liquid bulk chemical and ingredient shippers of all sizes the chance to focus on core business practices that drive value throughout their organization. At the same time, they eliminate risk and lower costs by leveraging readily available technology to make data-driven decisions in procurement and operations.

Driver Capacity Considerations

Driver capacity issues continue to plague the tank truck industry. The average age of drivers is steadily increasing as the industry struggles to recruit new professionals. Currently, there are no signs of the driver shortage slowing down. A 2019 ATA study reveals that the driver shortage between 2017 and 2018 changed from approximately 10,000 to 60,800¹, and it's on course to double over the next decade.²

The demand for tank truck services fluctuates regularly for many reasons, such as varying production cycles, the availability of raw materials, seasonality, and swings in demand, all of which can be costly. Capacity crunches can cause numerous issues for chemical shippers that far exceed the costs of using non-core carriers or spending a premium to book a carrier with a less attractive rate.

Some costs are difficult to quantify and are rarely measured, even by the most sophisticated liquid bulk shippers. Lost orders, late orders, product integrity issues, and pricing issues for formula-based products can be hard to track. But, they can be avoided mainly by ensuring capacity is balanced within the carrier network. This balance can be difficult when shippers have only a few carriers in their service provider portfolio. An outsourced solution leveraging the relative abundance of connections a 3PL or 4PL carrier network has allows shippers to add flex capacity when needed, without any additional staff workload to ensure carriers are compliant, approved, have adequate insurance, and so on.

Another option is to implement a dedicated fleet. Dedicated fleets can insulate companies from capacity issues and severe market fluctuations, such as the 2018 capacity crunch. Those with dedicated fleets saw a minimal decline in delivery performance and often paid less than the spot market at the time. An experienced 3PL will efficiently manage a dedicated fleet to meet all mileage commitments. With proper management, drivers can often be home on the weekends – just one benefit that goes hand in hand with being a shipper of choice, which we'll also cover soon.

Equipment Considerations

Today's confusing bulk transport marketplace makes it challenging to choose the right tank truck carrier for your strategic and tactical needs. While many decision-makers never see the trucks or trailers moving their products, factors like product integrity, safety, and payload force them to carefully monitor equipment.

Purchasing bulk transport often comes with an innate and sometimes unearned level of trust. These considerations need to be approached with carriers contractually and must go be much more in-depth than "clean, dry, and odor-free" trailers on the shipment tender. Once, this was sufficient. But today, with sophisticated Transport Management Systems (TMS) handling tendering and the overall pool of in-service trailers being so vast (most carriers today have a 5:1 ratio of trailers to power units), it's crucial that shippers choose the right equipment.³

Top Buyer Considerations:

Tractors and Power Units: Today, power units, their size, associated engines, and fuel standards all matter. In the age of environmentally responsible choices and sustainability, buyers of bulk transport need to take these factors into consideration. In the EU, it's becoming easier to approach this contractually and mandate specific engine statuses, but it's more challenging to accomplish in the USA without sophisticated technology.

In the USA, a large amount of bulk capacity is pulled via independent contractors (ICs) or owner/operators. Monitoring power units based on the current availability of ICs, from a tactical standpoint, for a shipper's entire team of core carriers, is nearly impossible. Outsourcing this and leaving the decisionmaking to a capable 3PL with world-class systems is the only way to manage this process consistently.

Trailers: Trailers, their specific build specifications, the status of fittings, and necessary cleaning methods create a conundrum of requirements, often driving shippers to rely on their local terminal and plant to understand those requirements, and "figure it out."

Alternatively, you can implement site-specific equipment requirements, carefully documented within the carrier contract and the TMS so that critical dispatch and tender details can be seen on paperwork by the dispatcher, driver, and tank wash staff. The requirements for accessorial equipment like fittings, pumps, and compressors can make the difference between a perfect delivery, a contamination or safety issue, or worse.

Trailer make, model, and year, the condition of the inner barrel, running gear, lights, brakes, and other features are critical to providing a seamless delivery. Advanced suspension engineering means you can depend on modern trailers for safer service. They're capable of handling larger payloads and have a lower

propensity for claims. Establishing these criteria one time upfront with a 3PL can make shippers' lives significantly easier, as opposed to establishing guidelines based on each carrier's availability, data retention capabilities, and the like.

TMS: There are myriad critical decisions to be made and requirements that need to be properly sent to the carrier during the tender process. The only guaranteed error-free solution is a modern TMS with experienced operators entering and maintaining carrier data. This supports outsourcing the entire tank truck function. By doing so, shippers can electronically monitor and confirm that each component of a shipment gets to the right carrier, leaving no element to chance.

Shipper-of-Choice Advantage

One advantage of outsourcing transportation is the relationship that a 3PL or 4PL has with its carrier base. Typically, they work with a core set of dependable, high-performing carriers. Those partnerships come with significant benefits. Those that strictly work on a transactional basis will be hard-pressed during times of uncertainty, such as the COVID-19 pandemic. The ability to leverage your carrier base to ensure capacity and service levels are paramount. Being a **Shipper of Choice** gives a clear competitive advantage to those who work with their carriers and offer:

- Flexible scheduling
- Safe and enjoyable working conditions
- Premiums when necessary
- ELDs and Telematics to improve process flow and reduce driver dwell times

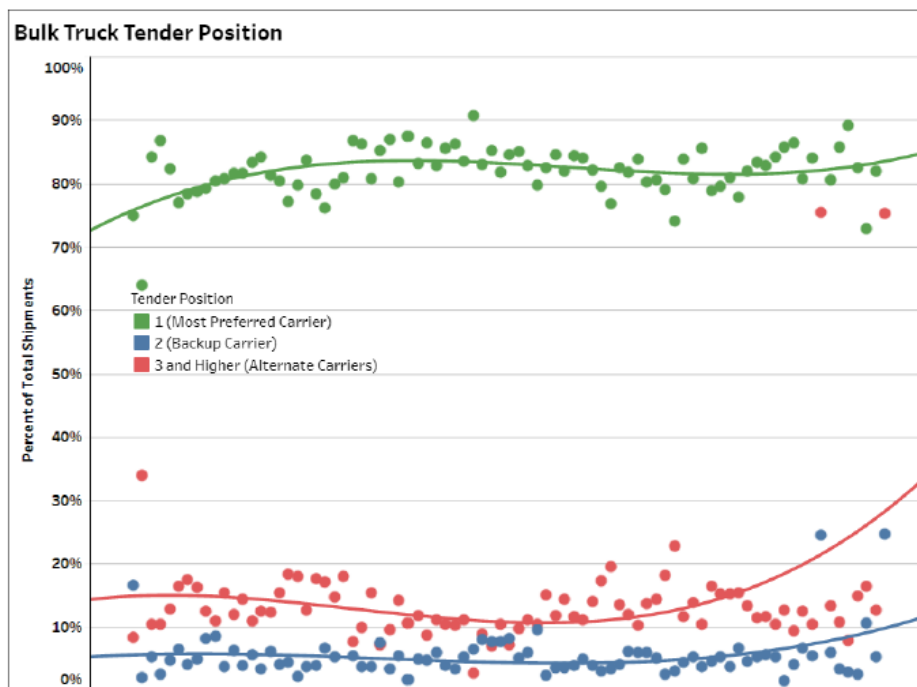
Technological Advances

Today's 3PL and 4PL marketplace offers many options to outsource carrier management, carrier selection, and associated compliance. The look and feel of an outsourced solution can vary greatly, and the infrastructure requirements can be simple or complex: from a basic brokerage model to a multi-tenant, cloud-based TMS that support global operations and thousands of daily shipments. The specific outsource solution and the associated processes, people, and technology needed are typically customizable. And, if chemical shippers choose the right partner, the solution can be implemented efficiently, and shippers can enjoy quick results relative to outsourcing other business functions.

Data-Driven Decisions

Outsourcing tank truck logistics allows for an instant infusion of world-class technology. Generally, it also lets you make decisions using broader data sets that can influence purchasing trends and tender/carrier selection behaviors. The right partnership, coupled with the right technology, will allow shippers to look at the tank truck market in its entirety, not just one shipper's network. The ability to monitor trends like tender position can give shippers foresight into capacity issues, potential changes in spot rates, and – most importantly – the ability to serve customers well.

The example below shows tender position by carrier preference and is indicative of thousands of shipments, not only the shipments in one shipper's network. This is a great example of how leveraging a logistics provider's technology can enable data-driven decisions and behaviors. By outsourcing procurement and execution to the right logistics partner, shippers can transition from making reactive decisions to a collaborative environment where their logistics partner can analyze trends and make more informed decisions on the shipper's behalf. This strategy helps protect them from capacity crunches, inflated spot rates, and costly service failures.



Source: CLX Logistics US carrier network. YTD March 2020. Customer pickup and return shipments excluded.

Data-driven decision making doesn't only have to be about capacity and rates. Today's newest technology has track-and-trace capabilities that are leaps and bounds more accurate than the phone-driven processes of the past. Outsourcing can provide shippers with instant access to technology that enables real-time track

and trace to become a core component of a shipper's repertoire. The industry is buzzing about Telematics and its ability to provide real-time breadcrumb tracking for nearly all modes of transportation. All of the top-performing shippers and logistics providers have or will have live tracking capabilities. Live tracking capabilities allow for proactive shipment management and notifying customers of potential delays or early shipments, all while accounting for transit time, hours of service, weather, and traffic patterns. The potential to reduce unnecessary labor, wait times, and production schedule changes is significant, adding a whole new level of visibility within a supply chain.

Settlement

Few shippers, even those who outsource their freight pay functions, know the true costs of freight settlement and payment. Outsourcing tank truck logistics can provide shippers with single, accurate, electronic, and consolidated invoices that can be sent directly to their ERP systems for systematic and efficient settlement. Today's TMS systems can:

- Automate payments
- Handle exceptions and approvals of accessorial charges
- Provide transportation costs accruals using accurate rate

The "new world" of freight payment allows you to free your office of unnecessary paper, multiple invoices for planned accessories, and the need to pay for a third-party freight payment service.

Performance Metrics and Benchmarking

Two often-overlooked benefits of outsourcing also happen to be inherently large parts of the value proposition. First, you get access to powerful technology with minimal investment. Second, you get best practices and experienced analysts who can extract true value for shippers. Regardless of the TMS platform or business model a company maintains, your logistics provider needs to be able to merge data from a variety of external sources into its algorithm architecture. This capability lets shippers visualize data and generate cost savings projects, determine transport spending trends, and view bulk truck spend from a macro perspective.

Today's TMS systems allow for deeper analysis and comparisons to larger data pools, typically those of the logistics provider's other customers, including:

- » Cost of Carrier Performance vs. Peer Group
- » Modeling and Predicting Logistics Spend
- » Real-Time Spend Comparison to Peers

- » Degrees of Variability in Customer Demand
- » Unplanned Transportation Spend with Market Comparison

Regulatory Environment

Navigating current regulatory environments involves several complex and interrelated issues, such as insurance, green initiatives, and security. Managing each of these topics with 10, 20, or 100 carriers can consume a great deal of an employee's time, and still may not be done correctly, putting shippers at risk.

The single "layer of safety" provided by a 3PL or 4PL to ensure regulatory compliance is almost immeasurable compared to the risk of non-compliance and the associated liabilities related to chemical transport.

Current technology-forward logistics providers manage regulatory environments with sophisticated systems that ensure 24/7 compliance with:

- » DOT operating authority on a state-by-state basis
- » System-driven, shipper-specific insurance coverage and compliance monitoring:
 - Automobile
 - Cargo
 - General liability
 - Environmental
 - Product liability
 - Worker's compensation
- » Hazmat endorsement status and compliance
- » SCAC changes and TIN verification
- » Compliance with shipper-determined regulations it requires of carriers

Managing these key elements separately can be expensive, timeconsuming, and prone to errors. Outsourcing allows you to maximize efficiency while minimizing your exposure to liability.

Environmental Footprint

The environmental outlook and the momentum behind chemical manufacturers and distributors working to improve their sustainability programs directly impact all the stakeholders in the supply chain. Instead of trying to work with multiple carriers, focus your efforts on selecting the right outsourcing partner to achieve a complete sustainability program. Outsourcing to an elite partner who's better equipped to measure and report sustainability is not only convenient; it may soon be a reporting requirement.

Outsourcing tank truck logistics can help shippers understand their position in terms of their tank-truck-related environmental footprint, as well as determine the near- and long-term goals and expectations of their network. Within an efficient

tank truck network, there are opportunities for optimization, such as selecting the correct mode (intermodal vs. tank truck), utilizing clean transport technologies and the most fuel-efficient power units, requiring sustainable fuels, reducing total miles by using route optimization technology, and measuring carbon output as a whole.

Staffing Considerations

Since deregulation, perhaps the most prolific change in the industry is the human element. Technological and system improvement and development have shifted the barrier between work tasks performed by humans and those performed by systems and algorithms. The logistics labor market has seen (and continues to undergo) major shifts. Over the past 40 years, the tank truck logistics management role evolved from a relatively simple purchasing job to a critical nerve-center of decision making where systems, processes, expensive equipment, and substantial financial expenditures come together.

Modern chemical shippers must focus on managing the key elements of their tank truck network across multiple carriers and, in many chemical companies, across other modes. The concept of managing capacity, equipment, shipper-of-choice advantages, technology, freight payment and settlement, benchmarking, KPI's, and regulations while simultaneously making data-driven decisions across multiple carriers is challenging to say the least. Also, chemical companies are rarely organized in such a way that this function is scalable, and often fail to factor in vacations, professional development, turnover, and other variables.

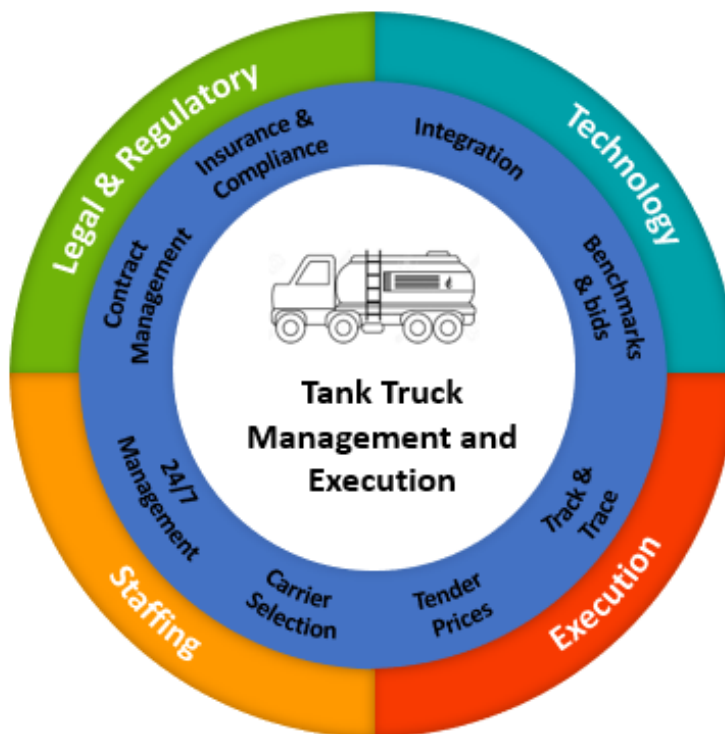
Outsourcing with the right partner ensures coverage of all the afore-mentioned functions without any additional costs and gives your company access to technology without making massive capital investments.

The current job environment and economy often make it challenging to hire experienced logistics professionals. Experienced logistics specialists are in high demand and can be a valuable asset to a company's future. Looking at the future of a given operation, it's generally far more economical to outsource this function than employ someone to handle procurement and requests for internal resources from the regulatory group, legal, information technology, and finance/accounting. A strategic decision to outsource reduces the demands on these valuable internal resources and puts these functions in the hands of an experienced logistics partner with domain expertise, technology, relationships, and contracts already in place.

Summary

On its surface, tank truck logistics outsourcing is simply about deciding who does what work. But it goes much deeper than that. Tank truck logistics outsourcing is about finding a tactical, collaborative partner with the technology in place to manage, measure, and execute according to the critical needs of any liquid bulk chemical or ingredient manufacturer.

A strategic view of the tank truck management function makes it clear that the job encompasses a wide range of tasks spanning an entire organization. It's virtually impossible to handle all these tasks at a palatable cost with the speed and efficiency of the right logistics partner. To achieve maximum success in managing an expansive Tank Truck network, shippers must understand the collaborative nature of a cross-functional team. The right partner can eliminate substantial time and energy and costs and provide superior management solutions with the proper scope and contract.



Forward-looking chemical shippers have many options when considering how to manage their tank truck networks. Outsourcing is the ideal solution to handle today's fast-paced shipping environment where innovative technology, a complex regulatory environment, and ever-changing market dynamics all compete for time and resources.

CLX LOGISTICS, LLC

CLX Logistics, LLC is a global provider of comprehensive logistics management, technology, and supply chain consulting services to a broad base of industry verticals. The global company, with offices in North America and Europe, is dedicated to solving its customers' most vital logistics challenges by leveraging a broad range of industry expertise, best-of-breed technology and a personalized, high-touch approach to deliver

REFERENCES

1. Truck Driver Shortage Analysis 2019, American Trucking Associations, July 2019
2. US Truck Driver Shortage Is On Course to Double in a Decade, Bloomberg, July 2019
3. Trailer Pools: Friend or Foe, DAT Freight & Analytics, January 2019

CLX Logistics, LLC

Philadelphia, PA (HQ) | Chicago, IL | Eindhoven, NL

1.800.288.4851

+31 (0)40 293 86 16

information@clxlogistics.com

clxlogistics.com