DAT iQ Analytics

Mitigating Risk

Leveraging Freight Market Intelligence and Benchmarking Analytics

The transportation and logistics industry is among the most risk-prone sectors.

From severe weather and demand swings to labor strikes, price hikes, and federal regulations, operational risk is present in every layer of the North American supply chain.

Shippers are tasked with navigating a continuous road of uncertainty where no two days are the same and new risks arise on the regular. Supply chain resilience is critical to sustained success.

In fact, supply chain resilience was a key theme of the Council of Supply Chain Management Professionals (CSCMP) 2023 State of Logistics Report, titled The "Great Reset". As the market has rebalanced from pandemic-related turbulence, shippers and carriers are proactively developing strategies and capabilities that mitigate operational risk. The age of designing transportation networks solely for cost reduction is over. Supply chain resilience is the new top value driver.

Freight market intelligence and benchmarking analytics are key components to supply chain resilience. By utilizing advanced data to drive decision-making, shippers can better identify, assess, control, and monitor operational risk, allowing them to establish proactive processes that position them to respond more effectively. Over the next several pages, we'll examine five operational risks common to the industry and highlight how market intelligence and benchmarking analytics help mitigate them.

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Major Operational Risks

For shippers, five operational risks that cause the greatest disruptions are labor shortages, supply chain bottlenecks, transportation market volatility, rapid demand swings, and government regulations.

Labor shortages

While dozens of industries have faced massive labor shortages over the past few years — primarily due to the COVID-19 pandemic — the issue continues to plague the transportation and logistics industry in a myriad of different ways. Despite demand returning to normal pre-pandemic levels, shippers are still contending with a range of labor-related challenges.

In 2023, over half (57%) of supply chain leaders have said that hiring and retaining qualified workers within manufacturing plants is their primary challenge, according to MHI and Deloitte's Annual Industry Report. Understaffed warehouses can't operate at full capacity, resulting in production delays that impact manufacturers and retailers. Amid the rise of e-commerce, the problem has been further exacerbated by understaffed fulfillment centers that cannot keep pace with order volumes.

Shipping labor shortages are also compounded by truck driver retention challenges. In 2022, ATA data indicated that driver turnover rates rose to 90% for large fleets and 77% for small carriers. This high attrition, in combination with the sector's ongoing labor shortages, is detrimental for shippers and carriers alike. It leads to supply paucity, volatility in order patterns, driver fatigue, increased accidents, and prolonged production timelines that disrupt processes and hinder performance.

Supply chain disruptions

Supply chain disruptions can impact the flow of products and materials across the entire distribution ecosystem, leading to rate increases and chargebacks that take a toll on shippers' profit margins.

For example, unpredictable weather events — like hurricanes, wildfires, floods, and droughts — can cause road closures, detours, and damage to trucks and cargo that result in delayed shipments and increased costs. In addition, with climate change accelerating, we'll likely see rapid upticks in the frequency and severity of these events, causing even more challenges for shippers in the coming years.

Similarly, deteriorating infrastructure also leads to fractures in the supply chain that spur elevated rates and chargebacks. While infrastructure might seem like a simplified supply chain issue to resolve, it's actually quite costly. The American Society of Civil Engineers (ASCE) gives the current U.S. infrastructure a grade of a C- and estimates it will cost approximately $4.5 trillion to fix our roads, bridges, and dams.

Rapid demand swings

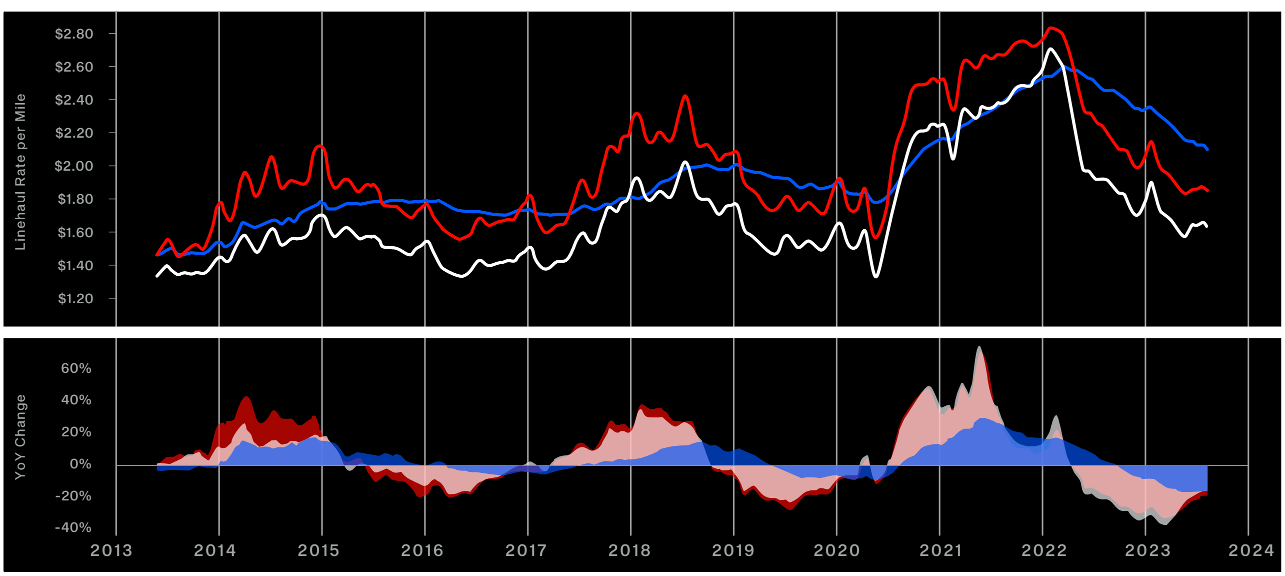
In addition to general transportation market volatility, there are periods when drastic shifts in consumer demand also cause major disruptions for shippers. For example, during the golden quarter when CPG purchasing spikes, or during the spring season when produce is ripe and must be transported on shorter turnaround times.

While these demands can generally be predicted — the holidays fall at the same time every year — the extent to which your network will be disrupted isn't as predictable. Both spring and the holiday season see rising demands that stretch overall market capacity and cause routing guide leakage, leading to fluctuations in short-term contract rates and premiums in the spot market.

Transportation market volatility

The truckload transportation market is never stable or flat. It continuously cycles through times of tight and loose capacity, shifting consumer demands, market fragmentation, and more. This fluctuating environment puts shippers in a constant state of risk, especially if they're not accurately monitoring and considering changing rates when planning.

Any number of changes can cause spot and contract rates to shift, and when shippers don't have the complete picture or most accurate data in front of them, it costs them a pretty penny.



Per Mile Rates

Shipper Contract · Broker to Carrier Spot · Shipper to Broker Spot

Top graph: spot and contract rates over the year to-date
Bottom graph: rates year-over-year

New regulatory environments

Lastly, increases in federal regulatory legislation around the transportation industry have forced shippers to adjust their processes and carrier relationships to avoid financial penalties. In some cases, operational efficiency and revenue growth can be hindered by these adjustments.

For example, the Food and Drug Administration (FDA) recently implemented several new regulations to preserve food and pharmaceutical safety, including rules that encourage faster identification and rapid removal of contaminated food and ensure that prescription drugs are identified and traced properly as they move through the supply chain. If shippers across CPG and healthcare do not have real-time traceability data that help confirm products were maintained in optimal settings, they not only put consumer health at risk but could also be subject to regulatory fines.

DON'T GUESS. KNOW

The U.S. Department of Transportation's FMCSA safety regulations can have an indirect impact on shippers. These regulations require carriers to impose strict guidelines on truck driver's hours of service:

11 hour driving limit

Truckers may drive 11 hours after 10 consecutive hours off duty

14 hour driving limit

Truckers cannotdrive beyond the 14th consecutive hour after coming on duty, following 10 consecutive hours off duty

When selecting carriers, shippers are responsible for properly vetting each company's background and safety record. Failing to inspect carrier licensing, registration, and safety protocols can result in the shipper being held liable for freight accidents caused by non-compliance with FMCSA regulations.

Mitigate risk with analytics and benchmarking

Making uninformed decisions based on hunches is a recipe for disaster. Integrating freight market intelligence, benchmarking, and analytics is key to improving decision-making and understanding the variability and operational risks experienced across the transportation and logistics industry.

Many of these operational risks are outside of shippers' control, but data helps connect the dots and identify opportunities to pivot. While you can't reroute a storm, you can reroute a shipment. Leveraging analytics and benchmarking generates the actionable insights shippers need to develop proactive response plans.

Improve flexibility through advanced forecasting

For operational risks like labor shortages, supply chain disruptions, market volatility, and demand swings, advanced forecasting allows for increased flexibility to help navigate unpredictable shifts and changes.

Rate forecasting models utilize real-time data and historical insights to predict spot and contract rates accurately and reliably. They can pinpoint when and where the spot market is expected to heat up, allowing shippers to make necessary cost adjustments when the market is tight. Additionally, the analysis can identify opportunities for shippers to take advantage of savings.

For example, the spring produce season creates a predictable surge in demand from mid-April through July. With advanced rate forecasting models, shippers can better identify when and where the market will see a surge and then develop strategies to handle the predicted freight volumes and pricing.

Rate forecasting should be a staple of daily operations, regardless of the market cycle or increased operational risk. It's a key tool to shine a light on instances in your network where rates may be higher or lower than anticipated and help shippers better prepare for shifting market conditions.

Enhance shipper/carrier relationships

Fostering positive and collaborative relationships between shippers and carriers is crucial to mitigating operational risk. When labor shortages, market volatility, and demand swings throw operations into disarray, it doesn't have to spell disaster for your network. Strong shipper-carrier relationships help ease transition times, maintain agility, streamline contingency plans, and establish transparency. By utilizing freight market intelligence, shippers can:

- **Confirm that bid rates are aligned with the overarching transportation market**
- **Determine if rates will hold up during the full term of their contracts**
- **Negotiate fair and cost-effective prices with carriers**

The benefits are twofold: it gives shippers an efficient supply of capacity at predictable rates while carriers continue to maintain business-critical revenue streams. Additionally, freight market intelligence helps establish a mutual level of transparency within the relationship. Whereas internal data can be unreliable or biased, neutral third-party data offers a single source of truth into what's really happening across the transportation market – ensuring contract negotiations are shaped around accurate accuracy and facts.

Optimize routes

In the wake of severe seasonal weather and supply chain disruptions, shippers and carriers must act fast to ensure orders are still delivered on time. By tapping into historical transportation data from freight market intelligence, they can analyze variables like traffic patterns, weather conditions, delivery histories, and driver performance to determine lane prioritization and establish efficient reroutes. This also helps reduce fuel consumption and transportation costs.

Freight market intelligence also helps shippers optimize routes during the RFP process to mitigate risk within their carrier network. Instead of sending every lane to bid or rolling all lanes to incumbent carriers, they can approach network optimization with the 80/20 rule in mind– 80% of volume will be concentrated on 20% of lanes – to better identify high-priority lanes where additional flexibility will help reduce costs.

Increase visibility into rates and lanes

To manage complexity and help mitigate uncertainty, freight analytics gives shippers the ability to establish data-driven contingency plans and navigate “what-if” scenarios with confidence. If a shipment falls through or a supply chain disruption occurs, contingency plans are crucial to quickly adapting to evolving conditions for minimized disruption delays. Granular freight market intelligence delivers real-time visibility across the end-to-end supply chain, allowing shippers to identify alternative lanes and modes, secure the best carriers and brokers, and determine fair rates for dynamic contingency planning.

Because contingency plans are specific to individual lanes and use cases, shippers must have access to timely and relevant insights that are aligned with their supply chain environment. DAT iQ’s full suite of product offerings is designed with that level of personalization in mind.

DAT iQ Network Analytics Solutions enable shippers to evaluate current and forecasted carrier rates and capacity trends to create a strategy that works best for them. With access to a database of nearly 500,000 transportation companies through products like CarrierWatch and Carrier Select, shippers have a holistic, real-time view of existing carrier networks and lanes – unlocking opportunities to build efficient and flexible transportation networks that help mitigate risk.

Streamline compliance

As federal regulations around the transportation industry increase operational complexity, shippers must ensure their reporting capabilities are designed for accuracy and efficiency to help mitigate the risk of non-compliance. Legacy compliance reporting processes like manual recordkeeping and paper-based spreadsheets are historically tedious and error-prone, especially for larger organizations managing thousands of shipments per day.

By leveraging freight market intelligence, shippers can automate the reporting of accurate location data across various touchpoints of the supply chain to confirm sensitive medications, vaccines, and food products remain in compliance from the first to last mile. Plus, teams can shift their focus away from spreadsheet entries and instead focus on more high-level responsibilities and strategic workflows.

Harness DAT iQ to mitigate risk

As a leading provider of freight market intelligence, DAT iQ provides transportation and logistics enterprises with the tools they need to mitigate risk and build supply chain resilience for the road ahead. To learn more about how DAT iQ's full suite of freight market intelligence products mitigates operational risk, visit our website or reach out to one of our experts to get started.

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