DAT iQ Analytics

The Power of Prediction

How Forecasting Models Can Fortify Your Transportation Network

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Knowing where rates are headed is essential for shippers to effectively procure capacity and plan budgets.

Without this foresight, transportation networks are weakened by guesswork that leads to cost overruns and service failures. By having the right forecasting and rate analytics in place, shippers can award freight to carriers with pricing that holds up for the life of contracts.

Using accurate rate forecasts and analytics in transportation network planning is like a personal trainer providing the exercise routines, feedback and data-driven insights every step of the way to optimize network planning and execution.

Transportation network planning is an exercise that starts with a heavy lift – the annual RFP – where carrier, lane and market data are collected and analyzed. It concludes with negotiating contract rates with carriers to establish a transportation budget.

The budgeting process does not end when the ink dries on freight contracts, however. Regular adjustments are needed to fortify budgets as capacity and demand shifts and creates upwards and downwards pressure on spot and contract rates.

This guide illustrates how shippers can use rate forecasting to strengthen the core processes of procurement, budgeting, surge pricing, and carrier relations.

Leveraging the power of forecasting in these four critical areas will enable shippers to build healthier transportation networks, increase customer satisfaction, and boost efficiency and profitability for their organizations and for their strategic carrier partners.

Rate forecasting strengthens four key areas:

1 Procurement

2 Budgeting

3 Surge Pricing

4 Carrier Relations

Making the Most of Procurement

The annual RFP remains alive and well, but transportation procurement has become more of a continuous process. With rate forecasting shippers can more quickly arrive at contract rates that will be resilient through the full term of contracts.

The data helps shippers smooth the negotiating process with carriers during the annual RFP and “mini-bid” events on a scheduled or ad hoc basis.

When preparing for an RFP event of any magnitude, shippers can use rate forecasting insights to establish realistic pricing targets based on current market trends and predictions for weeks and months ahead. With this foresight shippers can validate if the bids they are getting from carriers are aligned with market trends today and into the future.

Forecasting is most effective when shippers combine accurate rate predictions with historical rate analysis to compare what they have been paying carriers to current market benchmarks, lane by lane.

This type of analysis simplifies the process of justifying rates in each lane. The analysis can identify outliers and prompt searches for new sources of capacity, especially when shippers are paying above market but not getting requisite service levels in critical lanes.

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When conducting an annual RFP or other bid event, rate forecasts can be combined with historical analysis to plan for seasonal patterns and make pricing adjustments to retain capacity. Shippers can start with an analysis of historical lane volumes to identify when surge periods happen in their networks. But don’t neglect the spot market — successful shippers consider all options, and many are beginning to incorporate strategic spot market uses into their RFP process and pricing strategies.

Creating Flexible Budgets

Shippers that use accurate rate forecasts can build flexibility into their budgets to better manage uncertainty and volatility in spot and contract freight markets.

Most shipments in the spot market are handled – and priced – on a one-time, transactional basis. With sufficient data, rate forecasting models can accurately and reliably predict spot pricing trends and the direction of contract rates.

Awarding contracts with prices that end up being too low carries the risk of losing capacity if the spot market heats up and carriers go after more profitable freight. Conversely, paying too much in contract rates needlessly cuts into a shipper's bottom line. Rate forecasts can pinpoint when and where the spot market is expected to heat up to make necessary cost adjustments to retain capacity in tight markets.

Analyzing historical data for volumes that move via contract versus spot can help shippers better leverage forecasting insights to project costs for both rate categories in their overall network and for specific lanes.

Historical tender rejections in key lanes is an important variable to assess future spot market risk and update budget plans. Suppose a shipper's annual budget is based on a 10% spot and 90% contract freight mix. Historical analysis of a key lane may show a high tender rejection rate and a significant number of loads going to the spot market. With this finding the shipper could decide to revise its budget to plan for a 20% spot and 80% contract mix. By reviewing spot and contract rate forecasts the shipper could then project how the freight mix will impact its network costs to make budget adjustments.

Ongoing use of historical analysis and forecasting data of this type can help shippers mitigate spot market risks by pinpointing lanes and carriers most likely to have a price increase. Likewise, the analysis can identify opportunities for shippers to take advantage of savings when and where the data shows the market will soften.

Working Through Surges

The freight market is impacted by dynamic changes in the supply of truckload capacity and demand to move shippers' load volumes. When demand outpaces supply, surges result. Barring unforeseen events like a global pandemic or severe weather, most cycles in the market are predictable.

The spring produce season, for example, creates a predictable surge in demand from mid-April through early July. With accurate rate forecasting shippers can identify precisely when and where the market will see a surge in freight volumes and pricing, and then drill down to see how and when surges will impact their own networks.

Macro and lane-specific insights help shippers anticipate seasonal changes in the freight market for specific lanes and carriers. During procurement events, shippers can use rate forecasting to establish pricing that smooths seasonal spikes to minimize cost overruns and maintain consistent service levels. Rate forecasting should be staple of daily operations no matter where you're at in the market cycle. Just as it optimizes your spend in lean times, it can help you prepare to reap the rewards of shipper-friendly market conditions. Consistency is key.

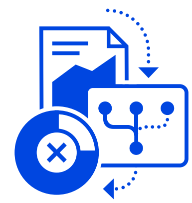
Forecasting can shine a spotlight on instances in your network where rates in certain lanes are projected to be significantly under market during seasonal swings.

For these pockets of risk, shippers can proactively contact incumbent carriers and negotiate surge rates that better align capacity with forecasted volumes and rates.

Having insights of when and where rates will shift during the produce season and other freight cycles is vital to determine when and where to leverage the spot market in a way that maximizes efficiency and limits cost risk. For example, some lanes in your network may be limited to seasonal volumes and not be well-suited for annual freight contracts. For these lanes you could negotiate seasonal pricing with carriers or freight brokers tied to a dynamic market index or rate forecasts from a trusted data provider.

Strengthening Carrier Relations

A common trait of shippers that carriers want to work with is having transparent, data-driven methods to build trusted, long-lasting partnerships that benefit both parties.



Rate forecasts help shippers to establish fair rates with strategic carrier partners to keep contracts aligned more closely with market rates throughout the year. This gives shippers a steady supply of capacity at predictable rates. In turn, carriers get steady business to create an efficient network that supports profitability.

By using rate analytics and forecasting, shippers can see if the rates they are paying carriers — or the rates they are receiving from bids — are aligned with the market. More importantly, they can determine if market rates will hold up during the full term of the contract.

During the RFP process, forecasting helps shippers build strategic relationships with carriers by communicating when and where surge pricing and volumes are expected. If contract rates are aligned with forecasts and feed into surge pricing, then shippers can proactively establish rates to keep carriers returning instead of looking for better opportunities in the spot market. This type of transparency isn't a trivial nicety, it's how sustainable businesses are built. Trusted, long-term relationships will save you more money than one-time cost-savings measures. When conditions are in your favor, take advantage of them, but don't forsake the long game.

Some carriers may decide to reorient their capacity when contract rates are slightly lower than spot markets, but strategic long-term carriers understand that loads in the spot market involve more administration and introduce risk from unknown brokers. Even if contract rates are lower, carriers still benefit from the predictability and lower administrative costs by sticking with contract loads and rates.

Four Essentials of Accurate Rate Forecasts

Just like weight training programs, no two transportation databases and rate forecasting models are created equal nor do they produce the same results.

The data sets, prediction model, and algorithms that produce the most accurate, reliable results on a consistent basis typically have four essential components.

Day of Week Bias

Truckload rates have a strong day-of-week bias. Prices on Mondays tend to be higher than Tuesdays. Days at the beginning and end of the month, especially near the end of the quarter, also affect prices. Rate predictions also must create exceptions for holidays.

1. Data Depth & Breadth

A deep reservoir of historical rates covering multiple years, with minimal gaps, is necessary to capture true supply-and-demand metrics. The data needs to be varied across lanes, industries, shipment types and other attributes to account for differences in freight pricing.

2. Timing Elements

Algorithms should account for the day of week, where that day lands in the month, where that week lands in the year, and other timing and seasonal factors that impact rates.

3. Quality Control

Predictions from the model need to be validated against the actual market prices based on daily rate contributions from a robust, representative sample of shippers, carriers, freight brokerages and 3PLs.

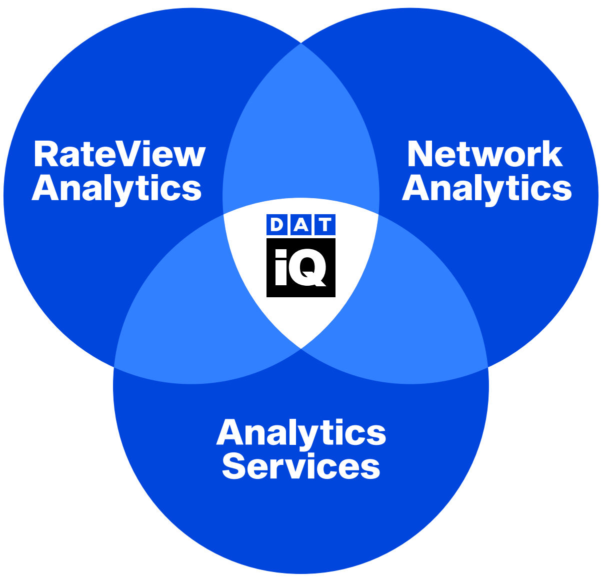
4. Linehaul Isolation

Unique to each load are variables like fuel surcharges and accessorial charges for detention, storage and lumpers. Separating these from linehaul rates ensures rate forecasting is aligned with broader supply-and-demand market factors.

Greater Visibility Ahead

Transportation analytics from DAT iQ provide the most accurate, relevant and timely insights for shippers to optimize transportation networks. Rate forecasts and benchmarking reports are essential for shippers to negotiate long-term contracts, create realistic transportation budgets, effectively manage through surge periods, and strengthen carrier relationships.

DAT iQ provides the deepest and most accurate rate forecasting data insights, powered by transportation analytics from over $125B in paid freight invoices in 2021. Shippers that use transportation data and freight intelligence from DAT iQ can strengthen their network planning and execution with:



RateView Analytics

Use rate forecasting to align bids from carriers with market trends, establish resilient pricing, and set realistic transportation budgets.

Network Analytics

Evaluate current and forecasted rates from carriers to create a procurement strategy that works for the long haul.

Analytics Services

Leverage industry experts and data analysts to optimize your operations with expert consulting, integration support, and data services.

Contact DAT iQ for more information about using innovative freight analytics and forecasting tools to make better decisions.

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www.DAT.com
800.551.8847