

# What demand planning looks like with 2020s supply chain data

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WHITE PAPER

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## Overview

In today's fast-paced and increasingly digital world, shippers are facing new challenges and opportunities. The ability to accurately predict demand is more critical than ever, directly impacting operational efficiency, cost-effectiveness and customer satisfaction. Demand planning, a key process in supply chain management, involves forecasting the demand for products to ensure they can be delivered in a timely manner to meet customer expectations. The goal is to strike a balance between having sufficient inventory levels to meet customer needs without having a surplus, which can tie up resources and increase costs.

Traditionally, demand planning has relied on historical sales data and manual processes. But these traditional methods often fall short. Factors such as labor force changes, economic shifts, severe weather, natural disasters or global crisis events can significantly impact demand, making it difficult to make accurate predictions based on past trends alone.

Shippers have often found themselves reacting to changes in demand rather than anticipating them. This reactive approach can lead to inefficiencies, missed opportunities and increased costs. A sudden surge in demand can result in stockouts, lost sales and dissatisfied customers. On the other hand, overestimating demand can lead to excess inventory, increased storage costs and potential waste. Without the ability to accurately predict demand, shippers are left navigating the market without a clear view of future demand.

In recent years, the power of supply chain data has become increasingly apparent. This data, encompassing a wide range of near real-time sources, provides valuable insights that can significantly enhance demand planning. By leveraging it, shippers can make more accurate forecasts, improve operational efficiency and better meet customer needs.

In this white paper, we will explore how supply chain data can revolutionize demand planning for enterprise shippers. We will delve into the limitations of traditional demand planning methods and then highlight the transformative potential of supply chain data. We will examine how this data can be used to improve demand planning, discuss the benefits and challenges and provide recommendations for shippers looking to leverage supply chain data for demand planning. Our aim is to provide you with valuable insights that can help you navigate the complexities of demand planning and make informed decisions that drive success.



The Outbound Tender Reject Index, or the percentage of loads rejected by carriers, shown with the Outbound Tender Volume Index. Chart: FreightWaves SONAR. To learn more about FreightWaves SONAR, [click here](#).

## The Old Way to Plan Demand

Historically, enterprise shippers have faced significant challenges in demand planning, particularly in the medium term. The traditional approach, which often involved a reliance on historical sales data and manual processes, was not without its shortcomings. This was especially true given the dynamic and complex nature of the freight transportation industry.

The traditional approach was often reactive rather than proactive. Shippers would monitor sales and market trends, adjusting their strategies based on what had already occurred. While this method was somewhat effective for short-term adjustments, it lacked the foresight necessary for medium-term planning. Without a clear view of future market conditions and consumer behavior, shippers were often left guessing, leading to uncertainty and risk.

In the short term, companies could adjust their freight flows based on immediate demand signals, such as internal sales numbers and weekly survey data. However, when it came to medium-term demand planning, which involves predicting consumer behavior and economic activity over the next several months or quarters, the traditional methods often fell short. Questions about future shopping seasons, the impact of delayed produce harvests on refrigerated trucking capacity or the potential for port congestion were difficult to answer with certainty.

Large enterprises, including big-box retailers and major manufacturers, often found it challenging to accelerate information flows within their organizations quickly enough to respond to these medium-term questions. Relying on internal data, such as freight bills paid, often meant looking at historical data that might not reflect current or future market conditions. This reliance on outdated data, coupled with the need for confirmation of a trend before making a decision, could delay the response even further.

This delay was exacerbated by the struggle with the speed of information flow in the traditional approach. In large organizations, information can move at a snail's pace, meandering through various departments and levels of approval before decisions can be made. This sluggishness is particularly problematic in the fast-paced world of freight transportation, where market conditions can change rapidly and without warning. The delay in response time could mean the difference between seizing an opportunity or missing it entirely.

The emergence of high-frequency supply chain data is beginning to transform this landscape, however, offering a new way to address these challenges.

Market Dashboard <b>Plus</b>												
My Lanes												
		Origin		Destination		TRAC Spot				Capacity Score		
Date	Miles	City	State	City	State	Equipment	Current	High	Low	WoW	Lane Score	Current
06/15/2023	622	Webster	New York	Chicago	Illinois	VAN	\$1.98	\$2.12	\$1.82	▲ 0.1%	54	
06/15/2023	409	Webster	New York	Columbus	Ohio	VAN	\$2.62	\$2.93	\$2.02	▲ 7.7%	48	
06/15/2023	171	Allentown	Pennsylvania	Cortland	New York	VAN	\$4.13	\$4.46	\$3.50	▲ 4.4%	43	
06/15/2023	275	Allentown	Pennsylvania	Webster	New York	VAN	\$3.42	\$3.86	\$2.98	▲ 5.5%	44	
06/15/2023	154	Allentown	Pennsylvania	Glen Burnie	Maryland	VAN	\$4.36	\$5.00	\$4.00	▲ 0.9%	40	
06/15/2023	445	Allentown	Pennsylvania	Columbus	Ohio	VAN	\$1.80	\$1.90	\$1.67	▲ 0.4%	55	
06/15/2023	270	College Park	Georgia	Concord	North Carolina	VAN	\$2.69	\$2.95	\$2.43	▼ 1.3%	70	
06/15/2023	258	College Park	Georgia	Nashville	Tennessee	VAN	\$3.27	\$3.52	\$3.07	▲ 1.9%	71	
06/15/2023	330	College Park	Georgia	Gainesville	Florida	VAN	\$3.00	\$3.22	\$2.82	▼ 0.5%	71	
06/15/2023	185	College Park	Georgia	Troy	Alabama	VAN	\$4.06	\$4.55	\$3.76	▲ 1.3%	72	

Market Dashboard Plus. Chart: FreightWaves SONAR. To learn more about FreightWaves SONAR, [click here](#).

## The Difference Supply Chain Data Can Make

The transformative potential of supply chain data in demand planning is probably best illustrated through real-world case studies. Two such examples come from a [consumer packaged goods company](#) and an [automotive manufacturer](#), both of which leveraged FreightWaves SONAR to significantly improve their demand planning and transportation purchasing behavior.

The CPG company, a newer entrant to the industry with a sizable direct-to-consumer business, experienced exploding demand throughout the pandemic as people hunkered down. This surge in demand made demand planning more challenging as the future became increasingly uncertain. “Unprecedented” became one of the most widely used words

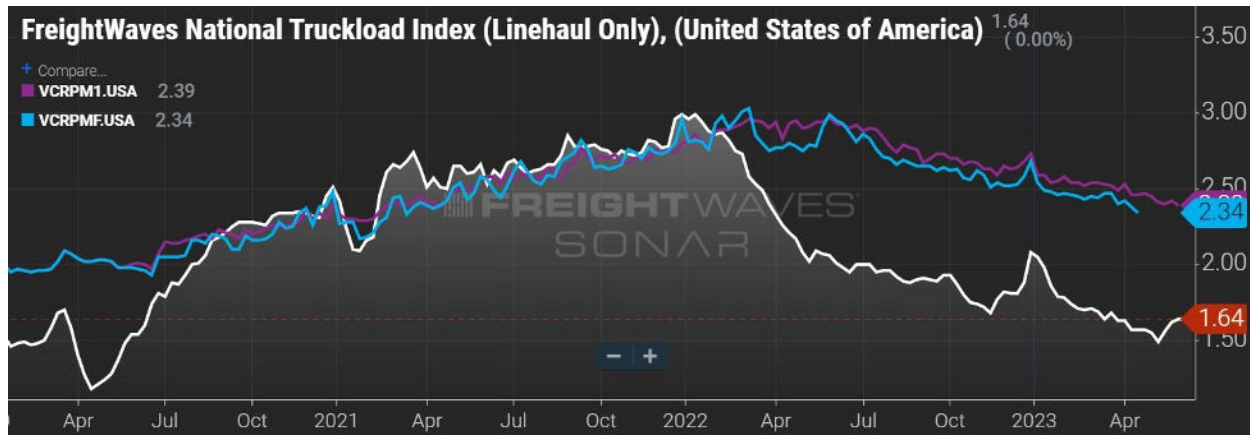
in the English language. So the company turned to FreightWaves SONAR to help identify key macroeconomic and freight market trends.

By using FreightWaves SONAR, the supply chain team at the CPG company was able to focus on the data in a single source. The platform combined high-frequency freight market data with slower-moving macroeconomic indicators, allowing the company to make faster decisions based on facts. The company was able to benchmark the rates it was paying to its broker compared with the market rate on numerous lanes, leading to areas of opportunity for rate reductions or finding new service providers.

The company also used the platform to track used equipment prices, freight demand and capacity metrics in a single dashboard, allowing them to move closer to developing a private fleet, reducing transportation spending with an outside entity. As the company matures, the knowledge and decision-making data that FreightWaves provides via the SONAR platform will allow the CPG company to be more nimble and drive better results while also reducing impacts from broader freight market trends.

In the case of the automotive manufacturer, the company was grappling with securing truckload capacity, leading to increased shipping costs and service failures. With an annual transportation expenditure exceeding \$1 billion in North America alone, the company needed a way to identify potential savings and reduce exposure to service failures. The manufacturer turned to FreightWaves SONAR and Supply Chain Intelligence (SCI) platforms to benchmark its current rates against those of its peers and the overall market rate. This benchmarking process allowed the company to identify areas where it could adjust its rates lower, leading to direct cost savings.

Furthermore, the SCI platform enabled the manufacturer to identify lanes at the highest risk for capacity failures. The platform's lane score, ranging from zero to 100, indicated the ease or difficulty of securing capacity on a given lane. This information allowed the manufacturer to proactively manage risk within its network, ensuring necessary capacity arrived as expected and without overpayment. As a result of using FreightWaves SONAR and SCI, the automotive manufacturer uncovered \$15 million in transportation savings and identified over 4% of its network at high risk of service failures. This proactive management of risk helped maintain network fluidity and reduced unwanted exposure to the spot market when rates were high.



The National Truckload Index (linehaul only), or the seven-day moving average of the daily dry van spot rate less the cost of fuel, shown with initial and final recordings of dry van contract rates. Chart: FreightWaves SONAR. To learn more about FreightWaves SONAR, [click here](#).

Beyond these case studies, it's important to understand the broader implications of using high-frequency supply chain data for medium-term demand planning. High-frequency supply chain data, like that provided by FreightWaves SONAR, offers a more granular and up-to-date view of the market, allowing shippers to make more accurate and timely predictions. For instance, daily tender rejection data can provide a real-time snapshot of trucking market activity, helping shippers to identify shifts in demand and adjust their strategies accordingly.

In the fast-paced and often unpredictable world of freight transportation, the ability to make data-driven decisions quickly can be a game changer. By leveraging high-frequency supply chain data, shippers can improve their demand planning processes, seize opportunities more effectively and ultimately drive greater efficiency and profitability in their operations.

Moreover, high-frequency supply chain data can help shippers build conviction quickly on fresh data and drive decisive responses. This is particularly important in medium-term demand planning, in which the stakes are high and the window of opportunity is often narrow. With the right data at their fingertips, shippers can make confident decisions that can have a positive impact over the next 90 to 180 days and beyond. As more and more shippers recognize the value of this data, it's likely to become a standard part of demand planning in the freight transportation industry.