

TIP Trailer Services Anticipates an 11% Revenue Increase with Transmetrics' Predictive Optimization Tool AssetMetrics

The background

Managing a transport fleet of over 90,000 units, TIP Trailer Services provides trailer leasing, rental, maintenance and repair solutions to transportation and logistics customers across 70 locations in 16 European countries.

With the sharing economy quickly becoming the preference of younger consumers, revenues from sharing-based platforms within Europe are expected [to grow 35 percent each year](#) over the next decade. Accordingly, TIP has committed itself to meeting customer demands for greater flexibility in the devolving worldwide logistics industry.

In 2017, the company set out to meet these needs by expanding its offerings to include dedicated fleet pooling where TIP manages a large fleet for a major operator and its logistics partners with a contractual commitment to reduce empty miles and overall total cost of ownership (TCO). Operationally, this involves enabling one-way rentals which wouldn't require customers to return rented equipment to the initial location, but rather allowed customers to leave the assets in any other TIP location at customer convenience. To deliver this service, TIP needed an advanced understanding of fluctuations in asset demand across its many European locations, as well as a data-driven plan for fleet repositioning capable of meeting that demand.

The problem

In today's market, top-tier transport companies must be able to reposition their fleet equipment in order to meet even 'instant demands' for transport from point A to point B. In the past, TIP lacked a reliable way of forecasting demand and thus an efficient fleet repositioning schedule.

As a result of these difficulties in anticipating peaks in demand, TIP has at times left a surplus of unused assets at one location while experiencing a shortage at another – they have even been forced to reject customer orders due to unavailability of assets at certain locations. Another complication at that time was the fact that TIP didn't have an online booking platform in place and therefore had a very general understanding of how many customer bookings were actually turned down.

The assignment of Transmetrics

TIP turned for help to Transmetrics, the leading provider of predictive optimization and AI tools for logistics. Leveraging AI and machine learning technologies, Transmetrics applied its recently-developed predictive asset management product called AssetMetrics.

Piloting this new AssetMetrics product in their work with TIP, Transmetrics could apply its proprietary algorithms to fill in the gaps in TIP's historical data. By doing so, AssetMetrics would improve these data sets to the point where an intelligent algorithm could produce reliable predictions.

For Transmetrics, the task was twofold. First, it needed to be able to predict on a very granular level where and when each type of TIP's assets would be needed, especially with the implementation of one-way rentals. Next, Transmetrics needed to develop a cost-effective repositioning scheme, increasing the client's asset utilization rate and decreasing the number of assets remaining idle.

What Transmetrics did

The AssetMetrics implementation process was done in three phases:

Data Cleansing and Enrichment ► Integration of Forecasting Module ► Integration of Optimization Module

- 1) **Data Cleansing and Enrichment:** First, Transmetrics applied AssetMetrics to cleanse, enrich, and restructure TIP's records. Because TIP lacked sufficient data for creating complete historical reports, Transmetrics also supplemented TIP's asset booking history with third-party data from a leading European freight exchange platform that had a strong presence in Benelux and France. Improving TIP's records in this way, Transmetrics was able to obtain datasets that were sufficiently complete for analysis. The clean and enriched data was then systemized into historical reports.
- 2) **Forecasting Module:** The next step was forecasting overall market demand at each branch for trailers and other TIP assets. Using AssetMetrics proprietary forecasting algorithms, Transmetrics was able to come up with a highly accurate granular forecast by combining already enriched and structured historical data and a set of customized external factors. With this complete picture, Transmetrics provided TIP with an automated model capable of continuously updating precise predictions of demand for each asset at each branch.
- 3) **Optimization Module:** With an accurate demand forecast in hand, the final step was the integration of the optimization module. By applying AssetMetrics' advanced optimization algorithms, Transmetrics provided an assets repositioning plan that accounted for geographical and seasonal variations in demand as well as an expense report. The company then computed the counterfactual budget improvement to ensure the repositioning scheme was as cost-efficient as possible.

Results and value for the client

As a result of this AssetMetrics pilot project, TIP Trailer Services was able to predict asset demand on an aggregated country level with 98% accuracy 2 weeks ahead and with 95% accuracy 6 weeks ahead. On a very granular daily level per branch, Transmetrics managed to achieve over 90% accuracy up to 6 weeks in advance. With an optimized fleet relocation scheme, TIP was able to implement one-way rentals and offer its customers a significantly more flexible product.

As a result of their collaboration with Transmetrics, TIP Trailer Services anticipates a potential 11 percent increase in revenue. Furthermore, the enriched and structured historical reports created during the pilot project provided TIP with a solid understanding of company's historical data. Building on this understanding, TIP started an implementation of an online booking platform to improve the quality of data availability on executed and rejected bookings.

Transmetrics' very successful collaboration with TIP Trailer Services demonstrates the potential of Transmetrics' asset management solutions. Through its predictive analytics, artificial intelligence, and optimization software, Transmetrics can substantially improve customers' asset utilization rates. Transmetrics software can also be applied along the entire logistics value chain, generating sustainable improvement in logistics operations and opening the door for new business opportunities. What's more, AssetMetrics is applicable to several other use cases, such as the optimization of empty container logistics and empty wagon logistics.

Customer testimonials

Yvan Giroud, Product Manager at TIP Trailer Services: *"Transmetrics talked the talk and then walked the walk as well. When we at TIP Trailer Services consulted vendors to assess how predictive analytics could help optimize our fleet management and trailer pooling solutions, Transmetrics stood out as one of the very few specialists that could actually deliver. Once engaged, we particularly appreciated their can-do attitude: they just kept powering through imperfect data, flawed processes and evolving requirements. Transmetrics is now a valued partner in our mission to increase fleet utilization and lower the total cost of ownership for logistics and retail companies."*

About Transmetrics

Transmetrics is a Big Data, predictive analytics solution which was created exclusively for the cargo transport industry. By applying AI and machine learning, Transmetrics product is solving the existing inefficiencies of the industry concerning capacity utilization. The product implementation consists of multiple steps: data cleansing, advanced forecasting, predictive optimization, and execution controlling. Transmetrics' products help companies make better, data-driven decisions and continuously improve their operational performance. Transmetrics works with the world's leading logistics companies, including global Fortune 500 companies. <http://transmetrics.eu/>