

DRIVING CHANGE

The Need for Transportation and Logistics Companies to Leverage Data, Analytics, and Machine Learning to Fend Off Disruption

With Zirus Customer Success Stories



The Transportation and Logistics industry is at a crossroads; companies must transform, or be overtaken.

Customer expectations are higher. Margins are tighter. Competition is more fierce, with disruptors around every corner. Talent and resources are difficult to find, and keep. Supply chains are more disturbed than ever before.

COVID-19 has exacerbated this pressure on those in the transportation sector. The dichotomy between shutdowns halting production for some suppliers and demand uncharacteristically exceeding inventory for others has required freight and logistics operators to be nimble, resilient, and efficient to buoy the choppy waters.

Organizations in every industry are always at risk of disruption if they stagnate; however, transportation in particular is often regarded as one of the slowest sectors to adapt to changes in the competitive and technical landscape. An industry built on relationships and loyalty can be tempted to resist a shift to less person-dependent processes. How can operational efficiency improve without losing the value of a real human's touch?

By embracing new technologies that drive automation, transportation and logistics providers can demonstrate they value their customer's experience, providing an improvement to customer relationships without straining the organization's already sparse resources. Those with robust digital capabilities can anticipate and adapt quicker due to increased visibility, timely insights, and the ability to seamlessly activate decisions through online channels.

Prioritizing digital investments is a key to success. Defining use cases with business value, starting small, and expanding with the momentum gained from successful projects will sustain an organization's tolerance for slowly investing in these necessary and differentiating competencies such as Internet of Things (IoT), cloud and edge computing, machine learning and analytics, and AI and automation.

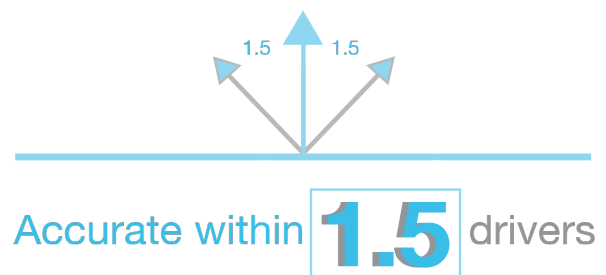
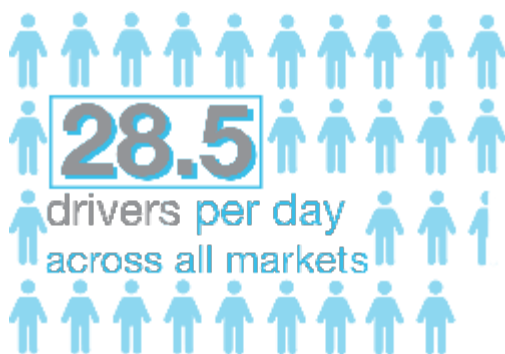
Once an organization is on board with their need to innovate, Zirous is the partner to help make it happen. With 35+ years of experience helping enterprises survive and thrive amidst opposing and disruptive forces, we know a thing or two about adaptation, agility, and delivering solutions that set companies up for the future. Here are some of the ways our Transportation and Logistics customers have embraced digital transformation.



FORECASTING

AI and machine learning can turn historical data into accurate forecasts and predictions. They can not only consider an organization's historical operations data, but also third-party sources such as weather, holidays, traffic, and geographic data. Predictive demand and asset planning can help detect process inefficiencies and bring attention to expected or unexpected trends, all in enough time to be considered when making decisions.

A nationwide trucking company needed to forecast how many drivers they would have available across their 100+ markets days and weeks in advance to optimally plan and schedule loads. With **machine learning** a model was created that— seven days in the future— accurately predicted each market's available driver count within 1.5 drivers. When compared to their previous process for forecasting available drivers, this model equated to an improvement in visibility of more than 28 drivers every day for the organization, meaning more profitable loads could be booked, with less empty miles driven.



BILLING & BACK-OFFICE AUTOMATION

One of the clearest symptoms of growing pains for transportation and logistics organizations is in manual back-office processes. Lack of standardization, a paperwork-heavy history run on legacy systems, and baked-in manual processes such as phone calls that were well-intentioned to strengthen the customer relationship leads to difficulty when it comes to scalable growth. Artificial intelligence (AI) techniques such as image recognition and natural language processing can offload simple tasks from customer service, billing, and accounting teams so they can focus on value-adding tasks.

A revenue solutions company for transportation service providers offloads and automates back-office processes for their contracted shipping customers. Using image recognition technologies and techniques, types of forms are automatically classified and sorted, and some bills are **automatically processed**, so the human billers can focus their efforts on what technology and automation can not do yet. Automating these tasks improves margins for the revenue solutions

company, but also delivers an exceptional experience for their customers who are able to receive expedited payments without unnecessary back-and-forth between the involved parties.

FLEET VISIBILITY & PREDICTIVE MAINTENANCE

The acceptable amount of time between status updates for a load is decreasing, rapidly. The technology surrounding the Internet of Things (IoT) now allows for data to be captured, analyzed, and presented directly from the device, also known as taking place “at the edge”. IoT is the network of these **connected devices**, and every intricate step along the supply chain these days can be outfitted with sensors and software to say what is happening, when, and where— almost instantaneously.

If companies can detect the signal amongst the noise of this unprecedented data volume, connected devices offer a wealth of information such as:

- Real-time fleet visibility
- Automated updates on shipments
- Delivering a instantaneous customer experience that users are now accustomed to
- Collect performance data allowing for scheduled maintenance versus repair service delays

Understanding how to connect to the discussed devices, how to store the information properly, and then how to translate those bits of data into usable information is something Zirus has experience helping transportation companies do.

LANE OPTIMIZATION

Lane optimization (also called “route” or “transportation” optimization) is all about minimizing empty miles and unnecessary layovers. **AI and machine learning** are great techniques to use when solving optimization problems because they have the innate ability to consider virtually unlimited factors when calculating the best solution.

A large transportation management company that offers services across dedicated assets, third-party logistics, and a national network of warehouses wanted to improve sightlines across all lanes in these three core business lines. Holistic reporting across all three business lines was very manual due to the data silos of the three different platforms housing the operational data.

By integrating the data sources and using cloud-native ETL and storage tools, visualizations were generated without manual interventions, and the company could now see available trucks for both third-party and dedicated assets to optimize their lanes, limiting their empty miles and ensuring deadlines were met for their customers.



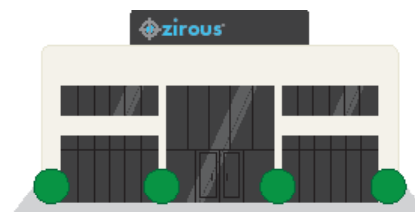
WHO IS ZIROUS?

WHO IS ZIROUS? For over 35 years, Zirus has been the solutions partner of choice for machine learning, artificial intelligence, marketing technology, identity and access management, application integration, cloud and development in North America.

WHY ZIROUS?

Our clients love us for three resounding reasons:

- We provide accessible experts that fit company culture.
- We're a partner who understands their business even better than they do.
- We are strategy-focused and not afraid to challenge the status quo.



Our clients tell us that we're an essential part of their team and their success because we work with them to reach their goals. We're not an in-and-out, one-size fits-all provider. We are truly custom solution providers, working through your specific business problems to provide the answers and resources you need to do your job best and boost your bottom line.



MEET THE AUTHOR



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Madison is a machine learning and artificial intelligence expert. She works to understand companies' business problems, sets goals with them, and identifies how they can harness data to empirically drive decisions through advanced analytics and machine learning. She's worked with Transportation & Logistics startups, to billion dollar enterprises, to lead decision makers in establishing a future-focused plan for capitalizing on one of their biggest assets - their data.

EXPERTISE

- Assessing data maturity
- Establishing data strategy
- Machine learning & artificial intelligence
- Business intelligence, visualization, and reporting
- Data literacy and data storytelling



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