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Guide: **Leading the AI Arms Race in Trucking**

Top 4 Areas Where an AI-powered TMS Delivers Immediate ROI

Trucking and logistics companies have reached a crossroads.

They have lots of data. However, protecting razor-thin margins will require moving data faster and more accurately through pricing, order entry, planning, execution, settlements, billing, and other core functions.

Artificial intelligence (AI) can accelerate processes that historically required human interaction, saving time and money while improving decision-making and outcomes.

According to S&P Global Market Intelligence forecasts, generative AI technology offerings will generate **\$3.7 billion this year and skyrocket to \$36 billion by 2028.**



Technology incorporating machine learning (ML), a subset of AI, is widely used to analyze data and deliver insights to personnel in operations, finance, safety, and other departments. Generative AI is the next frontier with large language models (LLM) that quickly sort through copious amounts of information, to make predictions, and give answers in a human-like voice.

Generative AI took off in late 2022 when research company Open AI released ChatGPT. Since then, everyone from the C-suite to the driver's seat has considered the impact on business and their careers.

This guide helps transportation companies successfully harness AI and avoid downside risks. It focuses on four areas where AI/ML-powered systems deliver the highest and most immediate investment returns.



As big companies advance in the AI arms race, **standing by will significantly decrease your chances of survival.**

Trucking's AI Arms Race

The rapid advancement of AI has researcher and innovation consultant Christoph Burkhardt talking about a paradigm shift. Burkhardt says the first major industrial shift began with electrified factories, followed by digitized systems. Today, cognified machines are augmenting human intelligence.

For example, transportation companies are rolling out various AI-powered machines like dash cameras that detect and alert drivers to risky behaviors. These "AI point solutions," he says, are precursors to disruptive system changes like autonomous trucks.

Implementing AI-powered technology is a force multiplier. Transportation leaders view AI's greatest benefits as increasing the capacity of skilled workers and driving better decisions and outcomes.

With AI, any repetitive process is a prime target for intelligent automation. For example, AI tools can accelerate and improve the quality of freight pricing, order management, planning, and other functions to save time and money while creating value for customers.

Small- to medium-sized players traditionally took a wait-and-see approach to new technology. This time it's different. As big companies advance in the AI arms race, standing by will significantly decrease your chances of survival.

The following are four areas where companies of all sizes can swiftly deploy AI-powered systems to their advantage.

One

Order Management

A 2024 Forbes Advisor survey found that most businesses (53%) apply AI to improve production processes.

In transportation and logistics, production starts with receiving load offers. While no longer coming from fax machines, Internet-based order delivery systems are not always more efficient.

Motor carriers and freight brokers regularly use humans to process orders received through unstructured data formats like emails and phone calls. AI-powered solutions can transform order management by accepting data in any format and automating rating, acceptance, customer responses, and other front-end tasks.

Companies that digitize the front end can also enhance their freight network efficiency. Software systems with powerful rules engines and workflows save time and equip customer service teams with insights to make profitable order management decisions.

Companies that digitize the front end can **enhance their freight network efficiency.**

AI-powered systems that deliver front-end automation and intelligence help companies gain an edge by:

- Securing freight more swiftly than others stuck in manual review loops.
- Knowing if you are meeting, exceeding, or falling short of customer commitments.
- Utilizing insights such as network balance metrics and profitability ratings to inform decisions to accept or decline orders.



Two

Load Planning

The Forbes Advisor survey of businesses shows that AI is perceived as an asset for improving decision-making (44%), decreasing response times (53%), and avoiding mistakes (48%).

All of these benefits are sorely needed in chaotic and unpredictable truckload planning. Inevitably, companies have more freight than capacity, and vice versa, in key markets on any given day.

Uncertainty drives up costs and contributes to lost opportunities.

New AI-powered developments, like systems forecasting network balance for proactive load planning, can give users accurate, relevant, and timely decision support for improving bottom-line results.



A transportation management system (TMS) that uses an AI-powered load planning function to forecast network balance up to 5 days in advance can help planners mitigate potential oversold or undersold markets by proactively:

- Identifying problem areas with visual cues and warnings to resolve issues swiftly.
- Generating revenue and minimizing deadhead by allocating resources to over- and undersold markets.
- Repositioning resources based on future loads and capacity fluctuations, shifting network balancing from a cost center to a profit driver.
- Providing greater transparency to drivers and increasing their earnings by pre-planning load assignments.

Uber Freight research shows that 35% of all trucking company miles are empty. Using an average of 2,700 weekly miles per truck equates to \$1,890 in empty costs each week, or nearly \$100,000 yearly.

Three

Customer Service

The 2024 Forbes Advisor survey found that nearly two-thirds (64%) of business owners believe AI will improve customer relationships.

AI-powered chatbots present a logical solution for handling customer inquiries, but efficiency gains may have drawbacks.

Some trucking and logistics companies use chatbots to answer generic questions by instantly searching their databases. For example, a customer could get an immediate response when asking which routes most often have delays or how the carrier's service levels compare with its peers. Other possibilities include asking for recommendations to lower costs and speed up shipments.

AI-powered systems can also support office employees with insights and tools that make managing interactions with customers and drivers easier.

Routine customer-facing functions like appointment scheduling and shipment tracking can be automated, and self-service AI chatbots or web portals can provide instant answers to common questions, such as, "Where's my shipment?" or, more importantly, "When will it arrive?"

Modern, SaaS-based TMS platforms that deliver accurate shipment ETAs use algorithms that evaluate the complete chain of load events, starting

with drivers' pre-assigned loads and factoring in current load status details such as drivers' hours of service, weather, traffic, and historic dwell times for planned stops based on the day of the week and time of day.

Providing customers with accurate ETAs also requires having a TMS that integrates with a mobile driver app that captures driver intent for trip planning, such as where and when they plan to stop for fuel and rest breaks.



AI can support office employees with insights and tools **that simplify interactions with customers and drivers.**

Four Fraud Protection

According to CargoNet, reports of freight fraud more than quadrupled in 2023 from the year before, **costing at least \$500 million in estimated losses.**

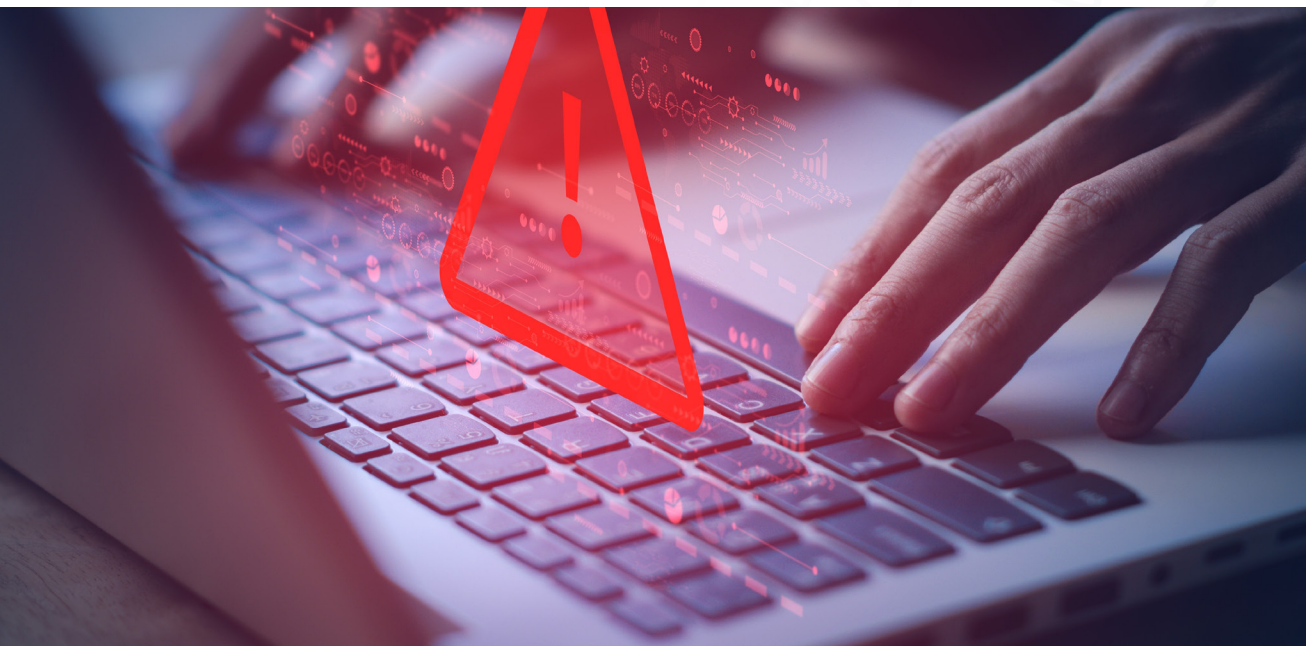
An explosion in fraud is tampering with many of AI's benefits. Data security and privacy concerns are prevalent among businesses, with 31% of respondents to the Forbes Advisory survey expressing apprehensions in the age of AI.

The transportation industry has reasons to be concerned. Spoofing identities, doctoring documents, fraudulent load tracking, and other practices have become rampant.

One of the most common types of fraud is when individuals or entities impersonate legitimate carriers to steal or double-broker loads. Fraudsters can also infiltrate in-stream transactions to submit fake invoices and divert payments.

Freight transportation and logistics are highly transactional businesses vulnerable to ransomware attacks. Cybercriminals know the value of data in this industry and can block access, putting companies out of business in a few days. AI is part of the cybersecurity solution that detects anomalies humans cannot.

Motor carriers and freight brokers can prevent AI-driven fraud by using TMS platforms to transact business directly with each other using structured data formats and secure integrations and networks.



The Keys to Success

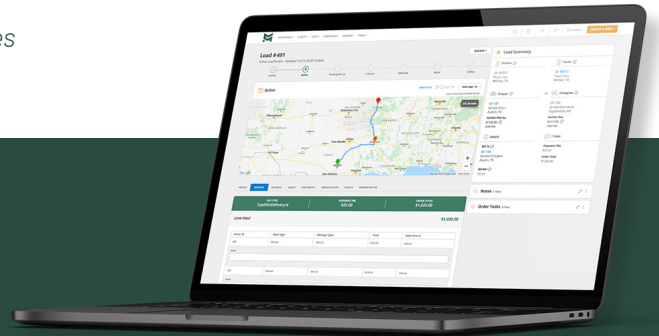
AI is transforming trucking and logistics companies' operations, from synthesizing data and generating insights to automating processes and detecting fraud. However, organizations must establish clear guidelines and expectations to ensure responsible AI deployment while safeguarding against potential vulnerabilities.

Ultimately, the successful adoption of AI in freight logistics hinges on balancing technological innovation with human expertise. Harnessing AI as a force multiplier will empower workforces to manage data more effectively and stay ahead of the curve in an ever-evolving industry landscape.

Organizations implementing new AI-powered systems to manage data more effectively can build competitive advantages while elevating people to more fulfilling roles.

Fortunately, you don't need a data scientist to use AI to transform systems and processes. AI-powered features and functions can be deployed at no additional cost by choosing a fully integrated, cloud-based TMS system that specializes in helping trucking and logistics companies grow and scale effectively.

This guide is brought to you by Magnus Technologies



Get Further Ahead with Magnus

Generative AI and ML have opened a fast lane for automation. The Magnus TMS offers dynamic, industry-first capabilities to trucking and logistics companies for order management, load planning, freight visibility, and a clear innovation roadmap for additional use cases.

Magnus Technologies is committed to continuously improving its solutions. A subscription to the SaaS-based enterprise platform includes ongoing updates at no additional cost, keeping customers at the forefront of the industry.

The Magnus TMS has other benefits for carriers and freight brokers who switch from outdated TMS platforms and get on the leading wave of AI-powered technology.

The benefits include:

Predictable subscription pricing that eliminates upfront and variable expenses.

Integrated Mobile Driver App that automates driver communications, document capture, and more.

The Magnus Carrier Advantage network for conducting secure freight transactions with trusted business partners.

A Business intelligence module with full, unfettered data access.

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