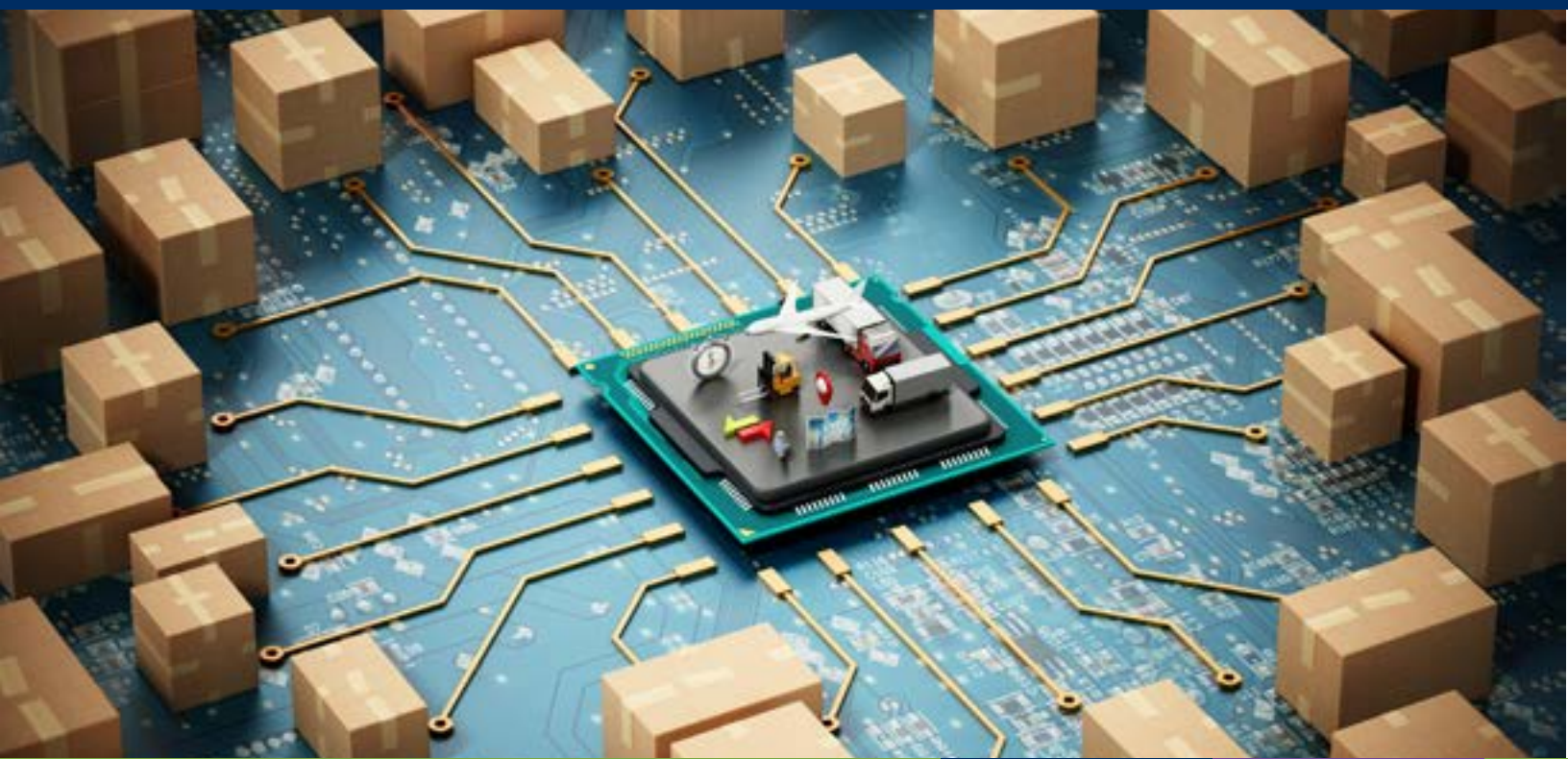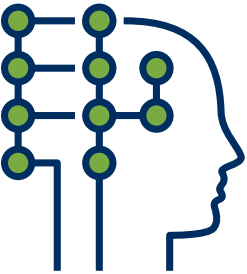# Transforming Freight Logistics

in the Era of Generative AI

5 Ways Logistics Leaders Can Harness AI to Scale Efficiency, Security, and Growth

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Executive Summary

Like other industries, freight logistics entered a new era in late 2022 when a little-known research company, **Open AI**, released **ChatGPT**. People in the C-suite and on the frontlines quickly formed expectations about how this and other large language models (LLM) could transform business and possibly eliminate jobs with "generative AI."

Dan O'Sullivan, owner of United States of Freight, a Delray, Florida-based 3PL specializing in transporting oversized equipment, views AI as a powerful tool for increasing productivity and expanding the scale, scope, and footprint of logistics companies.

United States of Freight is implementing a new transportation management system (TMS) with AI–powered tools to help agents do their jobs more efficiently and "focus on growing the business and expanding distribution faster," he said.

Logistics providers of all sizes are determined to leverage AI in some capacity. Candice Adams,

vice president of operations at Landstar System, an asset-light transportation and logistics provider based in Jacksonville, Fla., said, "AI went from being side conversations to being front and center at every board meeting and organizational kickoff meeting."

"You want to move quickly, but also be smart," Adams said. Adams notes that relationships have always been essential for logistics sales, capacity procurement, managing exceptions, and other functions. She doesn't want AI to replace that, but wants to "ensure that we're leveraging AI in a way that makes sense."

This TIA whitepaper highlights five areas where freight logistics leaders are betting on this transformative new wave of technology. The end goal, they say, is not to replace humans but to eliminate mundane, repetitive tasks to make work more efficient and enjoyable, which ultimately benefits customers and carriers.

1 Data Synthesis and Insights

Before ChatGPT and other LLMs surfaced, logistics providers used technology incorporating machine learning (ML), a narrower form of AI, to automate and optimize tasks like matching carriers to loads and evaluating data to create insights.

Generative AI complements ongoing efforts to embed machine-learning tools into logistics management. The new wave of technology quickly sorts through large amounts of information to make predictions and respond to questions in a humanlike voice.

Russ Felker, chief technology officer of Trinity Logistics in Seaford, Del., embraces the value of AI "copilots" for responding to user needs with relevant and timely support for decision-making processes. AI copilots use LLM to analyze data from multiple applications by following conversational instructions.

> A variety of co-pilots are going to be important, especially in transportation, for exception identification and shipper or carrier customer interaction," Felker said.

Such capabilities enable Trinity Logistics, one of the largest 3PLs with more than $1B in annual revenue and eight nationwide offices, to write and review custom software code more quickly. For example, the company developed an AI copilot that automatically gives users a synopsis of customer account activity during inbound calls.

Felker believes generative AI has a unique ability to generate insights by synthesizing data from disparate sources. He said, "this capability will not eliminate jobs but allow logistics companies to hire fewer people as they grow by scaling their businesses effectively."

2 Front-End Automation

Before generative AI entered mainstream technology, logistics providers were focused on digitizing front-end processes like rating and order entry. AI brings another dimension to arbitrage, enabling companies to price loads and respond to customer and carrier inquiries more quickly.

Below are examples of how AI impacts front-end communications.

■ **Rate automation:** Sunset Transportation in St. Louis, one of the largest 3PLs in North America, is working with technology partners to automate its rating process. According to John Sutton, Director of Corporate Strategy, the company uses DAT Freight Analytics and Greenscreens, AI products that leverage AI

and large datasets to provide highly accurate rates to customers on demand.

"They have done an excellent job of demystifying the process and giving us AI predictive rates within a certain confidence level," he said. "The rate insights help Sunset Transportation provide rates through a chatbot function and stay ahead of seasonal trends, such as Spring produce and peak retail."

- **Order entry:** Electronic load tenders are commonplace. Still, 3PLs receive many orders through unstructured formats like email and phone calls. Sunset Transportation is working on AI solutions to turn unstructured data into structured formats and apply decision logic to price loads accurately.

- **Capacity sourcing:** Rate negotiations and load communications with carriers are typically handled by phone or email. Don Everhart, chief technology officer of FreightVana, a power-only 3PL based in Phoenix, said AI can speed this process by synthesizing and bringing together disparate datasets.

FreightVana has a drop-and-hook trailer fleet for carriers and shippers. Using an AI chatbot to interact with carriers for rate negotiations is a possibility that could add more value, but Everhart is not rushing to implement one.

"Carriers get frustrated with anything they don't view as a relationship because they want to talk to someone right now. If you try to jump straight to carriers adopting an app, chatbot or automated phone system, you're cooked," he said.

"The challenge we have as an industry is building tools that end users' trust," he said. "If they can trust it, and it's the fastest way to get information, they will adopt it."

3 Look out for potential fraud on Web-based Platforms

An explosion in fraud is tampering with many of AI's benefits. According to CargoNet, reports of freight fraud more than quadrupled in 2023 from the year before, costing at least $500 million in estimated losses. Spoofing identities, doctoring documents, fraudulent load tracking and other practices have become rampant.

> As much as we're all excited about AI, we're also super nervous," said Erika Voss, DAT Solutions' vice president of security. "People are going to use AI as an attack vector. From a cybersecurity perspective, we see it happening now."

"Going forward, FreightVana's Don Everhart believes the risks posed by AI will lead to new methods and standards for conducting business. "The only way that we're going to be able to identify AI-driven fraud is with AI," he said. "I think we'll see different identity and authentication standards come forward, and we'll have to use AI to support that."

Today, logistics leaders combat fraud with powerful AI tools that detect early signs of risk. One of the most common signs 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.

Below are two ways logistics companies and technology providers use AI-powered tools to combat these common attack vectors.

- **Carrier monitoring and onboarding.** Most logistics companies interact with small fleets and owner-operators by phone or email, especially for first-time transactions. AI-powered carrier monitoring and onboarding

services can validate carrier credentials, such as comparing email addresses with those on file with the FMCSA.

Sunset Transportation uses a monitoring service from Highway, which "has a lot of very slick algorithms and data points to audit whether a carrier is performing deceptive, unethical or fraudulent business activities," Sutton said.

He is keen on a product that interfaces with Microsoft Outlook that cross-references Sunset's incoming email addresses with multiple data points to determine if the sender is trying to perform fraudulent or deceptive activity.

- **Payment auditing.** Ideally, logistics providers would transact business with shippers and carriers through a secure network with structured data that wouldn't require AI to detect fraudulent activity. However, many invoices are emailed and use paper or digital documents that can be altered.

Carrier payment platforms incorporating AI and machine learning can instantly audit invoices and documents received via email.

Garrett Wolfe, executive vice president and chief strategy officer of TriumphPay in Dallas, said **AI enables the company to audit freight invoices at a scale that humans could never do**. "We're making $25 billion in freight payments, and we have plans to get to $75 billion for payments very soon," he said. "We must see the entire data scale and what's happening. Undoubtedly, AI is an arrow in the quiver."

Wolfe said TriumphPay will continue deploying technologies to remove friction and heat loss in billing and payments and is moving upstream to help brokers find carriers they can trust and vice versa, to help carriers find brokers they can trust.

4 Customer Service Automation

While self-service chatbots appeal to logistics leaders, opinions vary on their successful deployment.

DAT Solutions' Erika Voss foresees chatbots and related technologies, such as speech recognition, becoming mainstream, with early indications of speech recognition gaining traction. Many logistics companies leverage AI-powered applications for real-time sentiment analysis and customer call monitoring.

For Jacksonville, Florida-based Landstar Transportation Logistics' Vice President of Operations Candice Adams, chatbots present a logical solution for handling generic inquiries from customers and carriers, offering efficiency gains without drawbacks. Similarly, FreightVana utilizes an AI-powered platform to capture data from customer interactions, facilitating real-time analytics to enhance service quality.

> " Everhart said FreightVana's platform detects when rate negotiations break down based on a change in tone. "Those real-time analytics can help us flip that call over to someone with more experience or tag them into the call to assist."

However, Trinity Logistics opts against direct chatbot interactions and prefers a human-centric approach. "We want a person talking to a person," Felker said. "We want them supported effectively. We want our team members to be supportive, but we don't want AI interacting with somebody."

Meanwhile, AI-powered applications are gaining popularity for non-customer-facing functions, such as shipment tracking, as seen in Sunset Transportation's adoption of an AI tool for detecting fraudulent activities. Sunset

Transportation also uses AI to automate appointment scheduling, allowing a chatbot to communicate with customers.

"We are seeing a shift. More and more 3PLs are doing this. The big guys adopted it initially, but the mid-market space is increasingly shifting towards automated scheduling platforms that can communicate with schedulers and even send emails," Sutton said. "We're still in control. It's not doing it for us automatically, but it's a huge time saver to compile that appointment request and get it out the door at the press of a button."

5 Ethical Concerns and Governance

AI has opened a fast lane to automation. Still, freight logistics leaders stress the need to establish clear guidelines and expectations for what companies want to accomplish with new technology. This will allay employee job concerns and mitigate the risk of people becoming overly reliant on technology and more vulnerable to fraud.

Trinity Logistics' Felker stresses the need to trust but verify, especially when using generative AI tools like ChatGPT for creating content and software code, among other examples. "You have to assume something in there is incorrect, not applicable, or just a plain lie," he said.

For Sunset Transportation, AI is helping the company improve its high-touch, service-focused organization. "Our product is our people, and we want to ensure that we have the best people in the industry supported by the best technology," Sutton said.

To allay concerns that AI will replace jobs, FreightVana's Everhart recommends companies emphasize how technology will allow them to move to more fulfilling roles within the organization.

"AI will improve people's quality of life and work-life balance because we view it as more of a force multiplier than a replacement," he said.

DAT Solutions' Voss said that AI offers many advantages but cautions people from thinking it can replace people's problem-solving ability. "You're still going to need your hands on the keyboard," she said, noting that organizations also will need "the right policies, procedures, or governance around AI."

Voss, a cybersecurity Ph.D., recommends that logistics companies adopt current frameworks and future guidance from the National Institute of Standards and Technology (NIST) when deploying AI-powered systems.

One of the challenges of adopting new and emerging technologies, such as ChatGPT, is that many companies developing toolsets are startups, and their LLMs could make your data part of the public domain.

> " I think our biggest challenge is not the value in AI but in wrangling and deploying new technology in a way that remains compliant with all the other areas that we must worry about," Everhart said. "We want to live on the cutting edge, but we also don't want to get cut."

Staying in front of the wave

NAI is transforming logistics companies' operations, from synthesizing data and generating insights to automating processes and detecting fraud. As with any transformative technology, there are ethical considerations and governance challenges. 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. By harnessing AI as a force multiplier rather than a replacement for human labor, logistics companies can empower their workforce, improve customer service, and stay ahead of the curve in an ever-evolving industry landscape.

O'Sullivan, from United States of Freight, recommends companies stay proactive and embrace AI's opportunities to move towards higher efficiency, productivity, and security while enhancing the user experience.

> **Many small-to-medium-sized players wait to see what the larger folks do and then try replicating that," he said. "But it's incumbent upon all of us to stay ahead of that wave."**

TIA

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