# Five Ways AI is Transforming Fleet Safety and Operational Performance

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**According to the Federal Motor Carrier Safety Administration, there are, on average, about 500,000 truck accidents in the United States each year, while a recent study from the American Transportation Research Institute found that liability insurance premiums increased nearly 19% from 2021 to 2024.**

It's no wonder that the importance of fleet safety has taken on a more strategic role in improving operational efficiency and retaining good drivers. At the heart of this shift is AI, which helps companies identify risks earlier, coach drivers more effectively, and identify unsafe behaviors before accidents occur.

In short, developments in AI mean businesses can maintain a safe fleet without sacrificing efficient operations.

## 1 Unifying Fleet Safety Intelligence Across Multiple Systems

A survey by Northland Insurance, a division of Travelers Insurance, found that 45% of small fleets and 42% of mid-sized fleets believed they have too much data without clear direction on how to use it.

Indeed, the problem for most fleets is that data, such as that generated by electronic logging devices (ELDs), dash cameras, collision mitigation systems, dispatch platforms, training programs and government compliance portals, resides on separate technology platforms. While each of these systems provides valuable information, the data is isolated, creating a time-consuming and difficult task for fleet managers when it comes to accessing and using it effectively.

AI aggregates and analyzes fleet-related data across multiple dashboards and reports, creating a comprehensive picture of driver behavior, vehicle performance, compliance issues and operational risks.

As a result, fleet managers can identify patterns and trends rather than react to isolated events. Data silos are eliminated, and decision-makers gain the insights needed to improve both safety and operational performance.

## 2 Identifying High-Risk Drivers and Behaviors Before Accidents Occur

Predictive AI models help analyze data, such as driving and historical crash records, to identify behavioral patterns associated with accidents. By examining such outcomes, AI can determine which combinations of behaviors are most likely to lead to collisions.

For example, a driver may exhibit multiple warning signs that, individually, may appear minor but collectively indicate an elevated risk. AI can recognize these patterns and flag drivers who exhibit behaviors that have historically resulted in accidents.

Crash counts are important but claims inflation is now a core issue. Fleet managers should ask: "Which drivers are most likely to create significant or even catastrophic financial exposure?"

Predictive capabilities allow fleet managers to prioritize their resources more effectively, and to focus coaching and intervention efforts with drivers most likely to experience a crash. They also help reduce insurance claims, minimize vehicle downtime, lower repair costs and prevent service disruptions.

## 3 Make Driver Coaching Faster, Smarter and Scalable

Driver coaching is one of the most important parts of fleet safety, but traditional coaching methods often focus too heavily on individual events. Instead, AI helps organizations shift from event-based to behavior-based coaching, and ensures the fleet manager has the right conversations, presenting the best content to reduce organizational risk.

For example, repeated speeding incidents, hard braking, and following-distance violations may all stem from poor speed-management habits. By recognizing these broader patterns, AI helps managers address root causes rather than symptoms, and develop comprehensive coaching plans tailored to individual drivers.

Additionally, automated summaries of driver risk profiles, coaching

histories and behavioral trends enable managers to spend less time gathering information and more time engaging with drivers. Because people learn differently, using multiple coaching methods increases the likelihood of meaningful behavioral change.

Plans can be generated automatically to make coaching more consistent and scalable across the organization. Talking points, recommended actions, training assignments, ride-alongs, follow-up assessments, or a combination can be included in plans.

## 4 Connect Safety Intelligence with Route Planning and Operations

Incorporating safety into operational decision-making is important in how we think about routing, dispatch and execution. By combining driver performance data with route planning data, fleet managers can make smarter decisions about how work is assigned. Certain routes may pose a higher risk due to traffic conditions, weather exposure or longer driving distances. AI can help identify these risks and match the most qualified drivers to those assignments. This integration benefits the business by improving both efficiency and safety in parallel.

## 5 Improving Fleet Performance Through Proactive Safety Management

Businesses already optimize routes and execution. Now it's time for them to optimize operational risk. Indeed, when AI analytics is used to unify data, enhance coaching and improve operational decision-making, the impact can be meaningful. Fleets often experience reductions in accidents, lower claims exposure, improved compliance, safety, accountability (CSA) scores, and stronger driver retention rates. Operational benefits may include better fuel efficiency, improved route performance, reduced downtime and higher on-time delivery rates.

Perhaps most importantly, AI helps eliminate waste throughout the organization. By automating data analysis and administrative tasks, managers can devote more time to meaningful interactions with drivers.

When managers have better information and more time to support drivers, trust improves, engagement increases, and safety performance often follows.

## Conclusion

As fleets continue to face increasing safety, compliance and operational challenges, AI is emerging as a powerful tool for creating safer roads and more efficient businesses. To help address these fleet management challenges, Descartes recently acquired Idelic, a provider of AI-powered driver safety and performance management solutions.

However, to successfully manage fleets, you need more than technology. "One of the biggest things that the technology has to do is to foster human-to-human engagement instead of replacing it," says Hayden Cardiff, VP, Safety Solutions at Descartes.

Overall, the AI solution allows fleet managers to engage drivers more effectively. Drivers take notice, changing their behavior and improving their safety and efficiency on the road, resulting in improved key measures and KPIs.

*Resource Link:* https://www.descartes.com