GEOTAB

In the Driver's Seat: Accelerating ROI Through Trusted Data Insights

2024 State of Commercial Transportation Report

Contents

Foreword

As the Vice President of Data and Analytics at Geotab, it is a privilege to introduce In the Driver's Seat: Accelerating ROI Through Trusted Data Insights, the second edition of the State of Commercial Transportation Report, now with a global focus. The world of connected, autonomous, shared, and electric vehicles (EVs) is rapidly changing around us. Now more than ever, we are empowered with rich data and insight from these vehicles which is helping create safer, more sustainable means of transportation, and allowing businesses to be more efficient and productive daily. This report aims to provide insight into trends from 2023, and what we believe this means for the transportation industry in 2024.

Mike Branch
Vice President of Data and Analytics
Geotab Inc.

2023 was transformative for commercial transportation, with remarkable advancements in Artificial Intelligence (AI), data intelligence, safety measures, and fleet maintenance. This took place against a backdrop of rising fuel costs, regulatory requirements, and global economic uncertainty.

Generative AI (Gen AI) is optimizing the industry at breakneck speed, becoming a business advisor at your fingertips, setting the stage for AI assistants to drive business value. AI models powered by trusted data intelligence have emerged as indispensable tools in response to mounting pressure to optimize operations, ensure safety, and reduce costs. There is real return on investment for customers enabled with Geotab's AI-driven solutions, last year, fleets using Geotab's integrated safety features saw a 40% reduction in collision rates–demonstrating a potential of 3500 fewer collisions.

With fuel representing about 60% of total fleet operating costs, there is a growing emphasis on reducing fuel consumption, and carbon emissions, through sustainable fleet strategies. Across the industry, we're also seeing an increase in the age of vehicles, underscoring the importance of predictive maintenance to ensure safe and efficient operations.

All of this requires reliable data insights, for routing optimization, idling and braking, the integration of EVs, and so much more. Geotab continues to advance safety and sustainability related solutions by connecting businesses and cities to intelligent vehicle and transportation insights, providing better context to driver risk, and enhancing with hundreds of partner solutions through the Geotab Marketplace.

Introduction

EV adoption is continuing to grow, in the United States alone a record number of 1.2M EVs were sold in 2023. Despite new records being set, the EV market is growing at a slower pace than previously witnessed, and this report finds a decrease in growth in some countries also, notably Germany and Italy. The industry needs more selection, infrastructure, inventory, and incentives to help support growth. Geotab is supporting customers in their transition to EVs, the Electric Vehicle Suitability Assessment (EVSA) is a critical tool, and Geotab provides EV data support across multiple OEMs and over 300 EV makes and models. Overall, for 2023, we have seen an 8.5% reduction in emissions intensity (Kg CO2/mile) across all heavy duty vehicles.

As we navigate the complexities and opportunities shaping the future of commercial transportation, Geotab remains committed to innovation, sustainability, and safety. We will continue to empower businesses and cities with actionable insights that foster a more resilient, efficient, and environmentally conscious transportation sector. Together, we are embracing the transformative potential of data-driven solutions as we work toward a greener future for all.

Geotab is thrilled to unveil the latest edition of the State of Commercial Transportation Report for Q1 2024. With over 4 million subscriptions worldwide, generating more than 75 billion data points each day, Geotab leverages its Data Intelligence to glean deep insights into commercial mobility trends.

This report provides a comprehensive understanding of the trends seen in 2023, and predictions for the commercial transportation industry in 2024.

While this report is global in nature, we have also selected countries where Geotab has a confident data representation to derive some of the insights provided. It is worth noting that the data is heavily skewed towards North America.

Reflecting on Last Year's Predictions

The prevailing industry headwinds for 2023, along with an evaluation of how Geotab's previous year's predictions performed, as assessed by ChatGPT, include these highlights:

The fleet industry has grappled with several challenges throughout 2023 that significantly disrupted operations. A pivotal factor was industry upheaval, marked by the consolidation of fleet management companies and a reconfiguration of operational responsibilities, often amalgamating fleet management with procurement departments. This structural shift not only burdened fleet managers but also reshaped the required expertise within the industry.

The industry has also been confronting the intricacies and time constraints associated with the adoption of electric vehicles (EVs), amidst escalating inflation. This resulted in surging prices, dwindling business confidence, and a prudent financial approach from companies, thereby impacting fleet operations and investment strategies. Operational hurdles further compounded, as severe supply chain disruptions hindered the availability of vehicles and parts, leading to inefficiencies in asset management and operations. Unfavorable weather events and regulatory adjustments exacerbated these challenges.

Additionally, technological barriers emerged, with many industry leaders encountering unreliability and poor integration in their tech solutions, underscoring the imperative for improved adoption. Acquiring vehicles became increasingly difficult due to elevated costs, production delays, and limited availability, coupled with challenges in vehicle upfitting. Consequently, these issues extended the service life of existing fleet vehicles, amplifying concerns regarding safety and maintenance, and substantially impacting fleet budgets and overall ownership costs.

ChatGPT grades Geotab's 2023 predictions:

Trend	Scorecard	Assessment
Greater Emphasis on Data Value	Accurate 🟢	Geotab's emphasis on the value of data aligns with industry movements. Importance of high-quality data for powering AI and enhancing decision-making in fleet operations has been increasingly recognized.
Intelligent Fleets & Data Intelligence	Accurate 🟢	The increasing use of AI and data for fleet optimization has been observed, supporting Geotab's prediction. Companies are leveraging data for more efficient fleet management.
Outgrowing EV Growing Pains	Partially accurate 🟡	Global push towards EV adoption is evident, but challenges in infrastructure and supply chain persist. Transition may be slower than anticipated, despite alignment with industry trends.
Strategically Placed Plug-ins	Accurate 🟢	The need for a data-driven approach in EV charging infrastructure planning aligns with Geotab's prediction and is a growing concern in the industry.
Accelerating Battery Innovation	Accurate 🟢	Trend towards innovation in EV battery technology matches Geotab's prediction, with efforts to improve charging times and battery life being a focus area.
Demanding More from Supply Chain	Accurate 🟢	Companies scrutinizing their supply chains for sustainability matches Geotab's prediction, driven by the need to reduce emissions.
Prioritizing EV Supply Chain and End Users	Accurate 🟢	Focus on reprioritizing battery and materials supply chains due to high EV demand aligns with industry movements, especially considering the transportation sector's carbon emissions.
Shift to Shared Vehicle Ownership	Partially accurate 🟡	Trend towards shared vehicle ownership is developing but may not be as pronounced as Geotab predicted, indicating a more gradual adoption rate.

The headwinds encountered in 2023, encompassing industry disruption, inflation, supply chain disruptions, technological hurdles, and the intricate transition to EVs, significantly shaped the course of Geotab's forecasts. While the overarching trends aligned with their predictions, the velocity and efficacy of these advancements were undeniably influenced by the broader challenges prevailing within the industry.

Rewind: 2023 at Geotab

In 2023, remarkable advancements in data intelligence emerged, particularly in enhancing safety, fuel efficiency, and fleet maintenance. The real showstopper was Generative AI (Gen AI). Geotab launched Project G and recently announced Ace as well to democratize Geotab's customer access to insights.

Further, substantial investments in enhancing **fleet safety** were made, introducing **a new predictive safety score** that uses behavior data and machine learning to assess the probability of a collision per million miles driven. This score provides an objective evaluation of fleet safety performance, especially when paired with Geotab's safety benchmarking capabilities. This report provides a per country breakdown of this metric.

In the areas of **productivity and optimization**, critical metrics were examined, such as the average number of daily trips, average duration of trips, and trips to hour ratio by country providing essential insights into fleet activity, operational time efficiency, and work output, as well as the impact of 'vehicle vocation' which refers to a vehicle's purpose on the road.

The **sustainability** section examines trends in electrification and the shift to EVs, as well as a new analysis of **fuel economy, which is a key addition to this year's report**. Today, fuel represents approximately 60% of total fleet operating costs.

Lastly, insights into the average **vehicle age are explored**. The increasing average age of vehicles has led to more unscheduled maintenance, underscoring the growing importance of preventative and predictive maintenance practices.

Methodology

Geotab's customer mix continues to change thanks to its rapid growth. In order to overcome any bias in the data, a 'cohort' based approach has been adopted to limit the insights to fleets that have been using Geotab technology for a longer period of time in order to produce stable insights.

Specifically, a cohort is defined as the subset of vehicles that remained active across both 2022 and 2023.

By adopting this approach, noise from vehicles that may have been introduced or retired during the study period has been eliminated.

The Global Vehicle Acquisition Trend

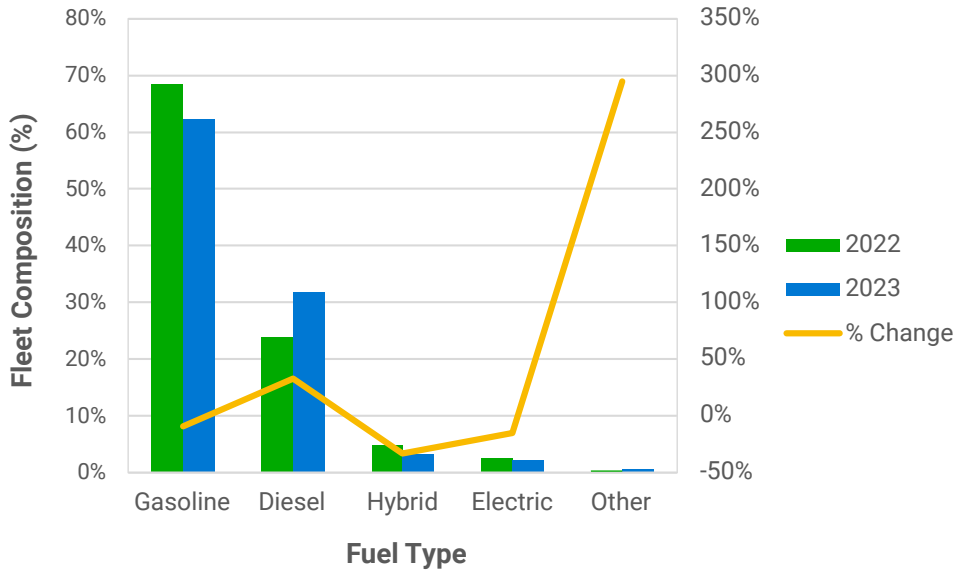
In 2023, in terms of new vehicle acquisitions, it was found that Ford Transit, Chevrolet Silverado, and Ford F-150 continued to compete neck and neck for the top 3 spots.

Figure 1 highlights the top 10 new vehicle models that dominated the Geotab-connected commercial ecosystem last year versus the model years from the prior year. Figure 2 shows the breakdown of the fuel type.

Fig. 1: Top 10 2023/2024 Geotab-connected commercial vehicles

Rank 2023 (2022)	Make / Model	Year	Rank 2023 (2022)	Make / Model	Year
↑ 1 (3)	Ford Transit	2023	↓ 6 (4)	Ram 1500	2023
2 (2)	Chevrolet Silverado	2023	↑ 7 (8)	International LT	2024
↓ 3 (1)	Ford F-150	2023	8 (-)	Mack MD (CBE)	2024
4 (-)	Nissan Rogue	2023	9 (9)	International MV	2024
↑ 5 (6)	Ram 2500	2023	10 (-)	Chevrolet Express	2023

Fig. 2: Fuel Type as Percentage of Onboarded Commercial Vehicles (2023, %)



Geotab Safety Features Reduce Collision Risk

In 2023, Geotab-Connected Commercial Vehicles drove fewer miles prior to a collision when compared to 2022: the total distance driven decreased by 10%, from 1.06 million miles in 2022 to 0.96 miles in 2023. This contrasts with the improvement seen in 2022, where there was actually a 17.45% increase in miles driven prior to collision when compared to the year before that.

However, fleets that regularly use Geotab's safety features have fewer collisions overall: vehicles equipped with Geotab's safety features experienced a collision rate that was 40% lower than those without. Based on this difference in collision rates, it is estimated that more than 3,500 collisions could have been prevented in 2023 if more vehicles had adopted these safety features.

The table below (see Figure 3) provides a snapshot for each country in 2022 and 2023, along with the percentage change between the two years.

Analyzing the data, a range of trends across different countries is observed. In Brazil (+4.03%), Italy (+5.25%), and Spain (+5.66%), there is an increase in the number of miles driven per collision, indicating enhanced safety measures and fewer accidents.

On the other hand, certain countries like Germany (-27.3%), Portugal (-30.03%), and the United Kingdom (-19.12%) and the United States (-12.63%) have witnessed a decrease in miles driven per collision, suggesting a need for increased focus on safety measures.

Fig. 3: Millions of Miles Driven by Commercial Vehicles Prior to One Collision (2022 - 2023, by Country)

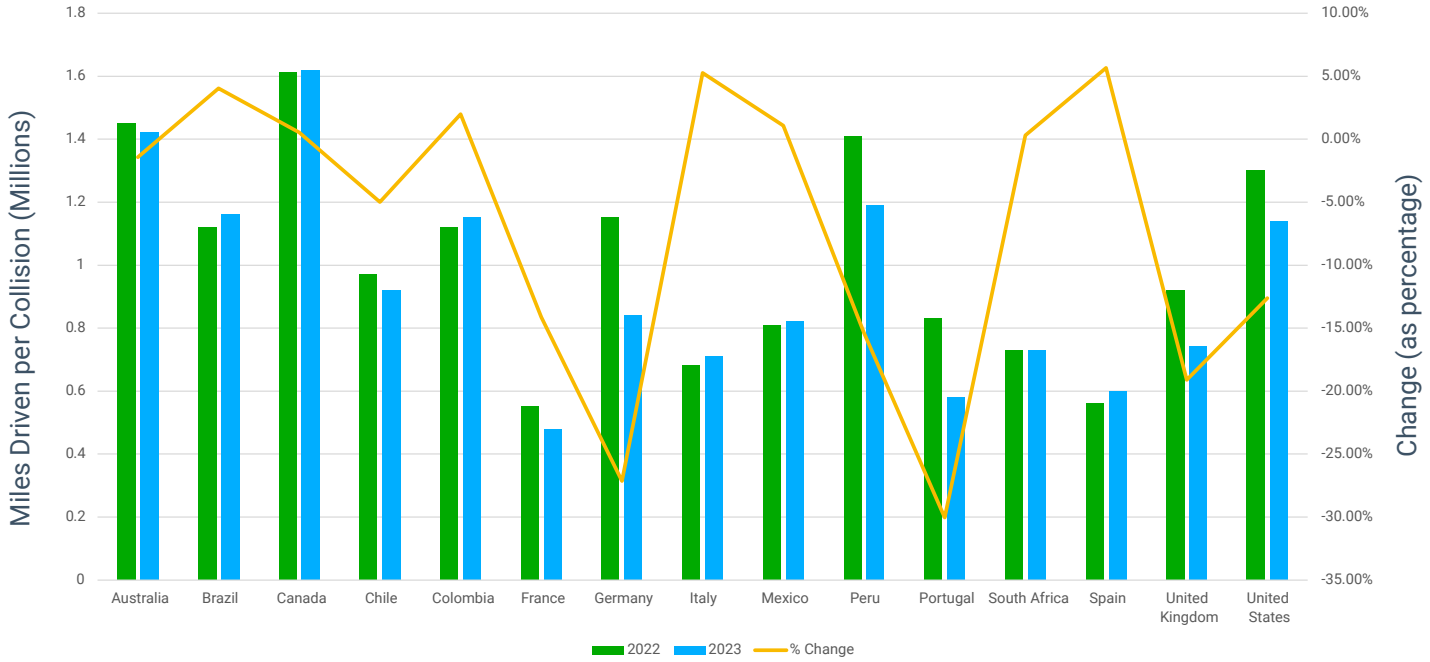


Fig. 4: Countries with Geotab-connected Fleets, 2022-2023 included in study

40% LOWER COLLISION RATE

in fleets that regularly use Geotab's safety features

Productivity and Optimization

Geotab-connected fleets continued to look to optimize. These fleets saw a decrease in average daily trips by 1.88% while also seeing a decrease in average daily vehicle operating hours by 1.84%—yielding more output on average with fewer vehicle operating hours. However, several countries including Australia, Brazil, France, Germany, Mexico, Portugal, Spain, and the United States experienced a decrease in the trips to hour ratio in 2023 compared to 2022, suggesting a reduction in productivity.

Average Number of Daily Trips by Country

Average daily trips made by fleets is a key indicator of fleet activity and can be influenced by various factors, including changes in demand, operational strategies, and efforts to improve efficiency. Figure 5 presents the average number of daily trips for different countries and the year-to-year changes from 2022 to 2023.

For most countries the number of trips is either decreasing or holding flat, which could be driven by operational efficiencies, or a reduced demand for goods and services.

Average Duration of Drive Time per Day by Country

Another important metric to consider is the average duration in hours of drive time per day. This metric provides a measure of the time efficiency of fleet operations and can be influenced by various factors such as route optimization, traffic conditions, and operational strategies.

Figure 6 presents the average duration in hours per day for different countries and the year-to-year changes from 2022 to 2023.

This data demonstrates that drive time remained relatively stable, ranging between +/-4% year over year. Countries showing an increase in the average duration of trips in 2023 suggests either a shift toward longer haul trips, or it reflects changes in traffic conditions or operational practices in these countries. On the other hand, a decrease in the average duration could indicate efforts toward more efficient routing, better scheduling, or a shift toward shorter haul trips.

Fig. 5: Average Number of Daily Trips By Country (Geotab-connected Fleets, 2022-2023)

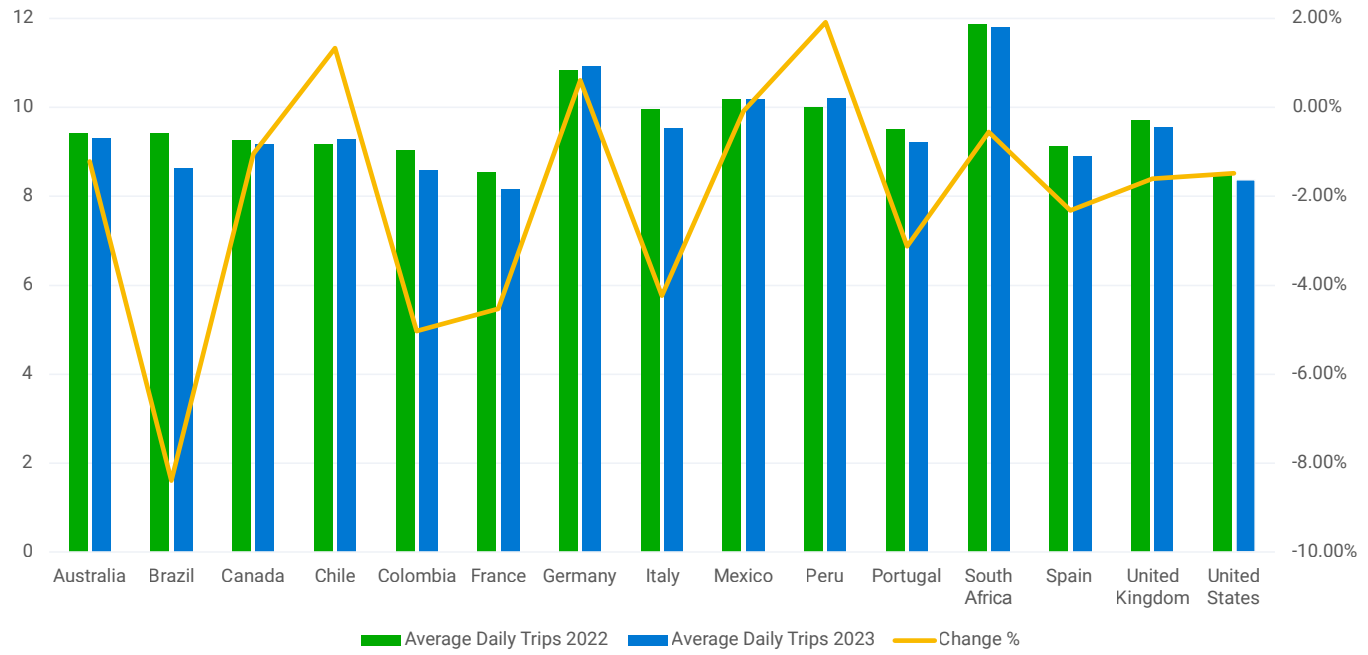


Fig. 6: Average Duration of Drive Time per Day By Country (2022-2023)

Country	Avg Duration in Hours per Day 2022	Avg Duration in Hours per Day 2023	% Change
Australia	2.60	2.62	0.74%
Brazil	3.51	3.53	0.35%
Canada	3.08	2.98	-2.53%
Chile	2.78	2.73	-1.71%
Colombia	4.29	4.12	-4.00%
France	3.76	3.84	2.04%
Germany	4.00	4.13	3.27%
Italy	2.96	2.83	-4.26%
Mexico	3.65	3.67	0.53%
Peru	4.26	4.18	-1.98%
Portugal	3.43	3.55	3.63%
South Africa	3.65	3.63	-0.55%
Spain	2.64	2.73	3.41%
United Kingdom	3.37	3.35	-0.49%
United States	2.87	2.83	-1.30%

The most significant decrease was observed in Italy, with a reduction of 4.26% in average trip duration.

Trips to Hour Ratio by Country

The trips to hour ratio serves as a valuable indicator of work output for fleets. This ratio is calculated by dividing the average number of trips per day by the average duration in hours per trip. A higher ratio indicates more trips being made per hour, suggesting greater efficiency or productivity.

Figure 7 presents the trips to hour ratio for different countries and the year-to-year changes from 2022 to 2023.

This data shows that Canada, Colombia, and Peru experienced a slight increase in the trips to hour ratio in 2023, suggesting improved efficiency or productivity in fleet operations.

Conversely, as mentioned above, several countries including Australia, Brazil, France, Germany, Mexico, Portugal, Spain, and the United States experienced a decrease in the trips to hour ratio in 2023 compared to 2022. This could be influenced by various factors, including changes in operational practices, traffic conditions, or the types of trips being made.

Fig. 7: Trips-to-Hours Ratio, By Country (2022-2023)

Country	Trips-to-Hours Ratio (2022)	Trips-to-Hours Ratio (2023)	% Change
Australia	3.69	3.63	-1.43%
Brazil	2.84	2.60	-8.44%
Canada	3.12	3.16	1.19%
Chile	3.37	3.45	2.36%
Colombia	2.34	2.35	0.41%
France	2.56	2.44	-4.68%
Germany	2.84	2.75	-3.27%
Italy	3.49	3.42	-1.92%
Mexico	3.17	3.16	-0.49%
Peru	2.51	2.54	1.12%
Portugal	3.16	2.99	-5.35%
South Africa	3.24	3.26	0.46%
Spain	3.58	3.40	-5.01%
United Kingdom	2.90	2.91	0.22%
United States	2.99	2.99	-0.09%

Vehicle Vocation and Trip Averages

Vehicle vocation refers to a vehicle's purpose on the road, which encompasses its behavior as it serves that purpose. Different vocations can have distinct patterns in terms of the number of trips per day, the average distance traveled per trip, and the average duration of trips. By examining these patterns across different vocations, deeper insights can be gained into how fleets are being utilized in different roles and how these trends have evolved from 2022 to 2023.

Figure 8 (see next page) presents the average number of trips per day, average distance traveled per trip, and average duration of trips for different vehicle vocations in 2022 and 2023. These vocations were created using Geotab's machine learning classification.

The following trends highlight the variations in fleet usage and operational practices across different vocations. They also underscore the importance of understanding these differences when analyzing fleet productivity and optimization. It's important to note that each country has different proportions of vehicle vocations, based on the size and diversity of the fleets managed by Geotab.

Long Distance: This vocation had the longest average duration of trips and the greatest average distance traveled per trip in both years. Interestingly, while the number of trips decreased slightly from 2022 to 2023, the average distance traveled per trip increased.

Regional: The metrics for this vocation remained relatively stable from 2022 to 2023, with a slight decrease in the number of trips and a slight increase in the average distance traveled per trip. The average duration of trips remained the same, suggesting consistent operational practices over this period.

Local: Vehicles in this vocation saw a slight decrease in the number of trips and the average distance traveled per trip from 2022 to 2023, but the average duration of trips remained relatively stable.

Hub-and-Spoke: This vocation also saw a decrease in all metrics from 2022 to 2023, indicating a potential shift in operational practices or demand.

Door-to-Door: Vehicles in this vocation made the most trips per day in both years, indicating high levels of activity. However, there was a slight decrease in all metrics from 2022 to 2023, suggesting a possible increase in efficiency or a decrease in demand.

Fig. 8: Average Trips, Distance and Duration by Vehicle Vocation (2022 - 2023)

Vocation and Examples	Trips 2022 (Avg #)	Trips 2023 (Avg #)	Distance 2022 (km)	Distance 2023 (km)	Duration 2022 (hrs)	Duration 2023 (hrs)
Long Distance *Freight trucking, Rental or company vehicles* The vehicle's range of activity is below 150-air-miles thus qualifies for the short-haul exemption under Hours of Service Regulations. In addition, the vehicle does not exhibit behaviour in line with other vocations such as hub-and-spoke and door-to-door.	6.6	6.3	320.3	331.9	4.8	4.9
Regional *Building supplies, Fuel carrier* The vehicle has a wide range of activity, over the 150-mile threshold for short-haul exemption, but tends to rest in the same location often. The vehicle is also neither hub-and-spoke nor door-to-door.	7.4	7.2	194.8	197.0	3.4	3.4
Local *HVAC, Beverage distribution* The vehicle's range of activity is below 150-air-miles thus qualifies for the short-haul exemption under Hours of Service Regulations. In addition, the vehicle does not exhibit behaviour in line with other vocations such as hub-and-spoke and door-to-door.	8.5	8.3	118.1	114.8	2.7	2.7
Hub-and-Spoke *On-demand services or delivery, Suppliers* The vehicle spends many of its work days making multiple round trips from a singular location.	10.4	10.1	129.6	129.2	3.2	3.1
Door-to-Door *Last-mile delivery, Waste collection* The vehicle makes significantly more stops than most per work day but also tends to spend very little time per stop.	14.4	13.5	127.9	126.0	4.2	4.1

Sustainability

Geotab is committed to helping customers reduce their carbon footprint by enabling them to adopt sustainable fleet strategies. From reducing fuel consumption in Internal Combustion Engine (ICE) vehicles to aiding fleets in their transition to electric vehicles (EVs), a range of tools and solutions that support Geotab customers wherever they are in their sustainability journey are available. For example, our Green Fleet Dashboard has been instrumental in helping fleets benchmark and reduce fuel consumption. This year's report includes a per-country perspective in the sustainability analysis, providing insights into idling patterns in different countries.

Fig. 9: Average Idling Duration by Country, in Hours, 2022-2023

Country	Idling Duration Per Day (Hours, 2022)	Idling Duration Per Day (Hours, 2023)	% Change
Australia	0.33	0.34	2.78%
Brazil	0.44	0.68	53.58%
Canada	0.44	0.41	-5.73%
Chile	0.37	0.36	-1.13%
Colombia	0.55	0.50	-9.15%
France	0.42	0.38	-10.41%
Germany	0.86	0.92	7.80%
Italy	0.49	0.46	-6.29%
Mexico	0.45	0.49	7.18%
Peru	0.68	0.72	6.70%
Portugal	0.29	0.26	-10.18%
South Africa	0.39	0.39	0.65%
Spain	0.35	0.35	0.47%
United Kingdom	0.51	0.55	7.52%
United States	0.35	0.34	-3.75%

Idling

Looking globally at Geotab customers, no changes in idling duration per day were observed, but for the 15 countries included in this report there was a 2.88% increase from 0.46 in 2022 to 0.47 hours in 2023. This suggests that fleets must focus on reducing idling as it is a significant contributor to fuel waste and CO2 emissions, and reducing unnecessary idling is a key aspect of sustainable fleet management.

The table (see Figure 9) presents the average idling duration by country and the annual changes from 2022 to 2023.

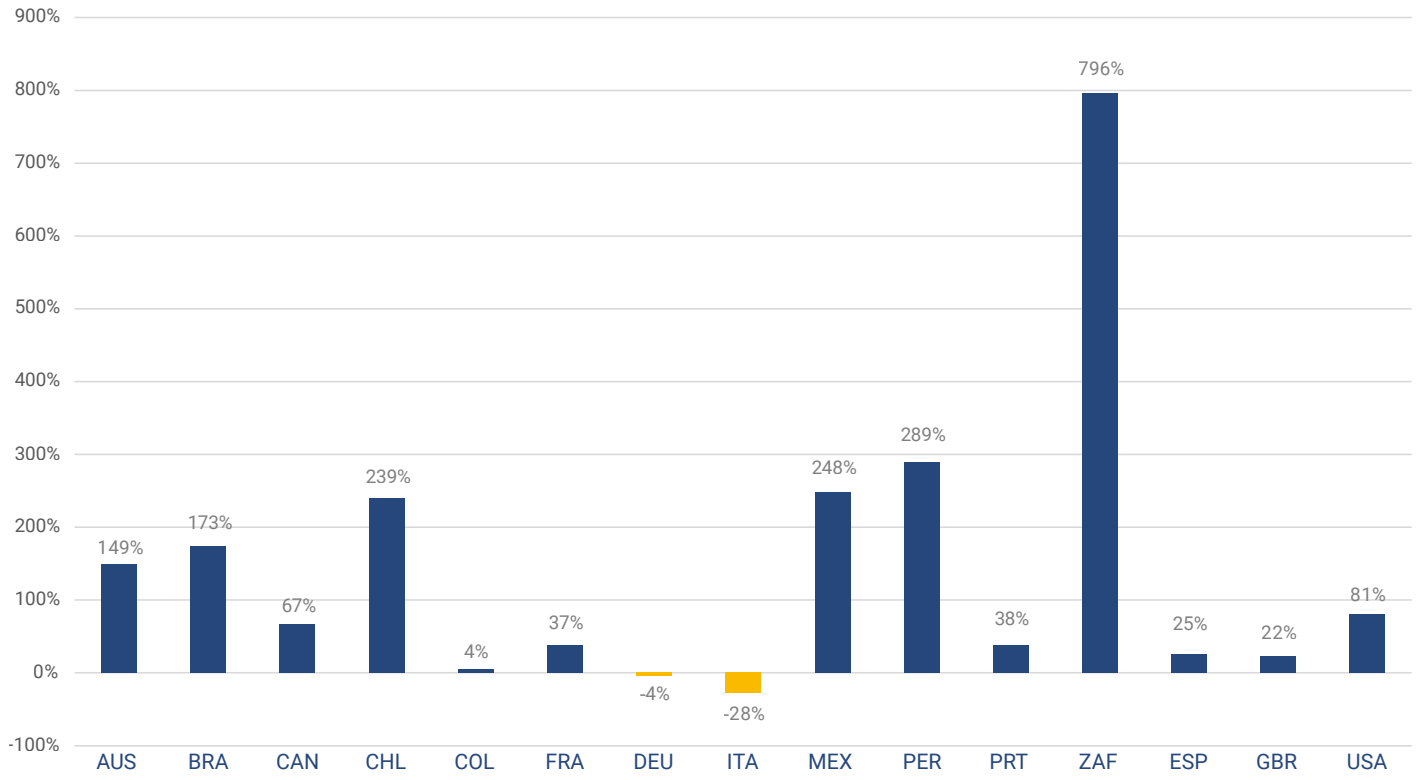
Analyzing idling times across various countries unearths several intriguing trends. Starting with North America, there is a promising movement toward sustainability. Both the United States and Canada have successfully reduced their idling times from 2022 to 2023, with decreases of 3.75% and 5.73% respectively.

On the other hand, Germany, the UK and Mexico have experienced a rise in idling time during the same period. This increase could indicate changes in traffic conditions or operational practices, highlighting an opportunity to further optimize fleet operations for greater sustainability. A higher adoption of EVs in Germany, the UK and Mexico could lead to substantial savings in fuel costs and a significant reduction in emissions.

EV Adoption

Geotab has been closely monitoring the adoption of EVs in commercial fleets across various countries. Overall, we still see very few EVs in our base, driven in part by the lack of currently viable

Fig. 10: Annual Change in EVs as part of fleet, 2022-23 (%)



commercial options for heavy duty trucks. We expect this to improve over time as commercial vehicle options are rapidly evolving. This indicates that the road to electrification is still steep. On a more promising note, the chart above (see Figure 10) presents the percentage growth of EVs year over year by country from 2022 to 2023.

This data illuminates several key trends for commercial fleets using Geotab:
Several countries such as Australia, Brazil, Chile, Mexico, Peru, and South Africa showed a significant increase in the adoption of EVs in 2023 compared to 2022. This rapid growth suggests a strong momentum towards EV adoption in these regions.

Countries like Canada, France, Portugal, Spain, and the United States showed a steady growth in EV adoption, indicating a continued commitment to sustainability and a progressive shift towards cleaner, more efficient transportation solutions. Interestingly, Germany and Italy saw a slight decrease in EV adoption in 2023 compared to 2022. This could be due to various factors such as changes in government policies, market conditions, or infrastructure challenges. It underscores the importance of supportive policies and infrastructure in facilitating the transition to EVs.

Geotab is committed to supporting customers in their transition to EVs. The Electric Vehicle Suitability Assessment (EVSA) tool plays a crucial role in this transition. By analyzing a fleet's own driving data and charging viability, the EVSA tool helps fleets identify which vehicles are best suited for electrification.

Fuel Economy
The fuel economy of a vehicle plays a significant role in the overall operating costs of a fleet, accounting for approximately 60% of the total. Additionally, fleets are under scrutiny to reduce their carbon emissions to help their organizations meet decarbonization goals.

Geotab is supporting this goal by helping answer critical questions such as:

- What are my fuel consumption and idling trends?
- What are the trends on aggressive driving, speeding, and idling?

This year's report introduces a new metric: fuel economy. This metric is expressed as miles per gallon (MPG). Looking globally, there has generally been a slight decrease in MPG from 2022 to 2023.

Fuel Economy Trends by Vehicle Class

Fuel economy trends across different vehicle classes within Geotab's ecosystem offers insights to improve its efficiency. The table below (see Figure 11) presents the average fuel economy values globally for various vehicle classes and the year-to-year changes from 2022 to 2023.

The data shows that Heavy Duty Trucks (HDT) made a slight improvement in fuel economy but overall there is an increase in fuel consumption for all the other vehicle classes. This suggests that there is room for improvement in these categories. It's important to note that a variety of factors can influence these trends, including changes in vehicle technology, driving behavior, and operational practices.

These insights underscore the importance of monitoring fuel economy and implementing strategies to improve it. Some effective strategies include reducing unnecessary idling, controlling driver behavior, setting speed restrictions, optimizing routes, practicing preventative maintenance, rightsizing vehicles to their tasks, lightening the load, using fuel cards, and adopting Electric Vehicles (EVs).

Impact of Aging Fleets

Proper vehicle maintenance, bolstered by predictive analytics, not only ensures the safe and efficient operation of a fleet but can also improve fuel economy by as much as 5% to 10% for class 8 trucks. The benefits extend beyond fuel savings, contributing to vehicle reliability, enhancing driver safety and satisfaction, and even reducing Commercial Vehicle Safety Alliance (CVSA) violations and fines. Predictive maintenance, underpinned by telematics data, has emerged as a potent tool in this endeavor.

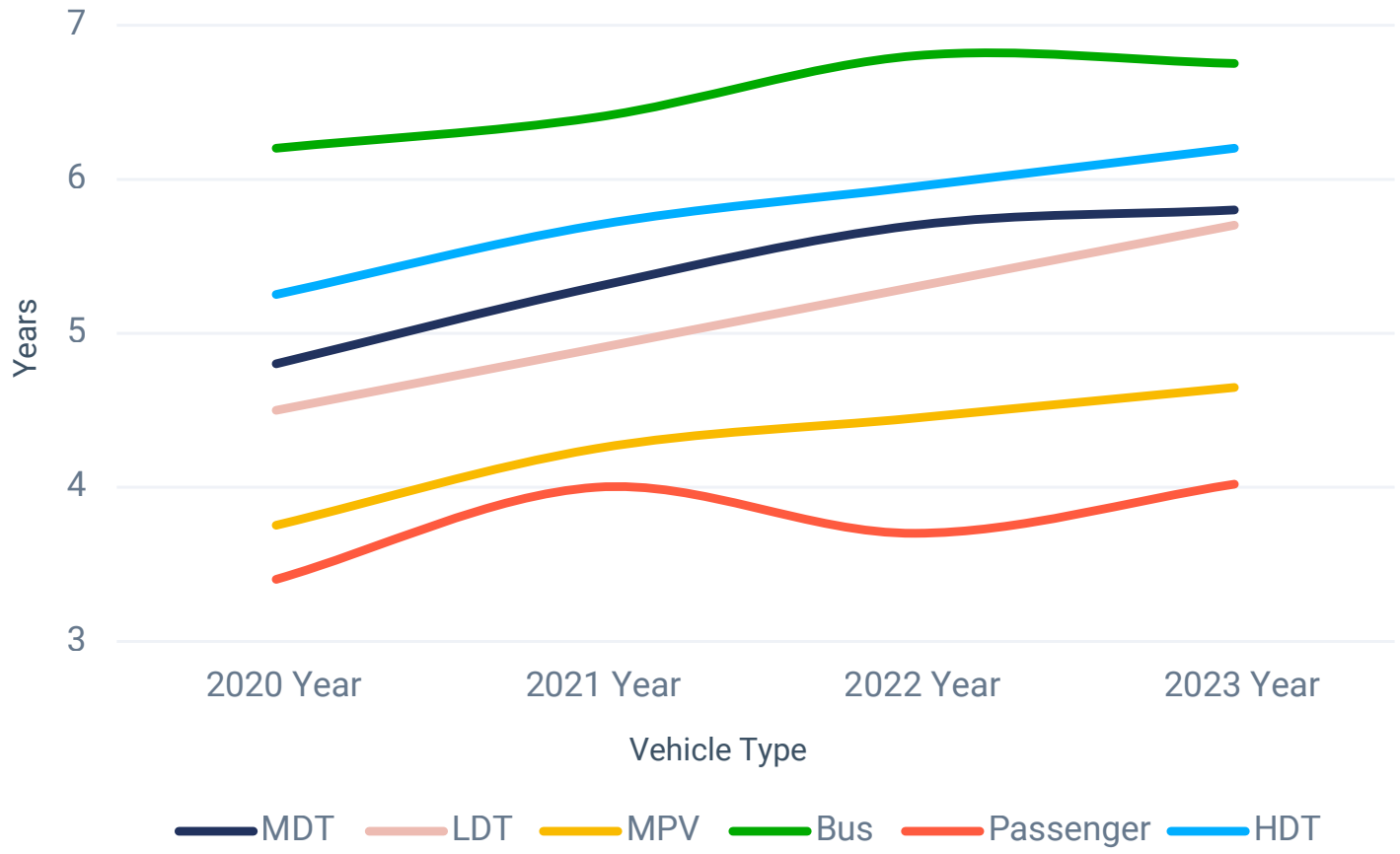
From engine oil levels to intake and exhaust systems, from wheel alignment to aerodynamic devices, each component plays a crucial role in the overall fuel efficiency of a vehicle.

However, the effectiveness of maintenance efforts is not just dependent on the components themselves, but also on the age of the vehicles in a fleet. With the cost of new and used vehicles on the rise and the availability of replacement vehicles limited, fleet managers are increasingly having to operate older, high-mileage vehicles.

Fig. 11: Fuel Economy by Vehicle Class in Geotab-connected Fleets in Miles per Gallon (2022-2023)

Vehicle Class	MPG (2022)	MPG (2023)	% Change
Omnibus (Bus)	7.7	7.6	-0.1%
Heavy Duty Trucks (HDT)	6.4	6.6	0.2%
Light Duty Trucks (LDT)	15.1	14.5	-0.6%
Medium Duty Trucks (MDT)	10.0	9.7	-0.3%
Multi-purpose Vehicles (MPV) *e.g. Sprinter Vans, SUVs*	19.0	18.3	-0.7%
Passenger Vehicles (Passenger)	33.5	31.4	-2.2%

Fig. 12: Average Age of Vehicle in Geotab Ecosystem by Vehicle Class (2020-2023)



This trend necessitates increased unscheduled maintenance, making preventative and predictive maintenance all the more important.

An analysis of the average age of vehicles in the Geotab ecosystem by vehicle class from 2020-2023 was conducted. The results are presented in Figure 12.

The data suggests a consistent increase in the average age of vehicles across all classes. This trend underscores the importance of effective vehicle maintenance, as older vehicles typically require more frequent and intensive upkeep.

At Geotab, our platform analyzes hundreds of thousands of telematics data points from vehicles of all models and classes to identify patterns that have led to past failures. This allows us to provide real-time alerts about potential failures before they occur, enabling proactive scheduling of repairs and preventing major damage.

Full Speed Ahead: 2024

With 2024 underway, there are increasingly more signs that a new era in commercial transportation, driven by the convergence of market factors as well as the rise of Gen AI, has begun. This transformation is the driving force behind key trends and predictions that will shape the commercial transportation landscape in 2024.

AI Predictability: The Year of Trust

2023 was a groundbreaking year for generative AI, but AI is still far from perfect. In 2024, the demand for quality data to fuel AI models will intensify. Companies will seek partners capable of translating extensive data into predictive analytics and benchmarking for high-efficiency operations, safety, and sustainability. Undoubtedly, this will be a year of trust. Geotab's Gen AI will continue to serve as a "back-pocket data scientist" for the transportation industry, dramatically shortening the time to insight for customers. The landscape of commercial transportation is always evolving, and AI-driven insights powered by robust foundational data will be crucial in guiding organizations through economic challenges, to propel sustainability initiatives, and ensure adaptability in an ever-changing world.

Balancing on the Cost Tightrope

Higher interest rates will continue to challenge the availability of capital, making fleet upgrades costlier, and straining budgets. As a cost conscious market looks for savings, data insights for better route planning, fuel savings, and predictive maintenance will deliver increasing value to the bottom-line. Geotab is providing these critical insights today, helping businesses make informed decisions that optimize operations and reduce costs. The ability to walk the cost tightrope this year will be a defining factor in an organization's success.

Sustainability: Small Steps for Big Change

The urgent need for climate action is driving companies to adopt a "small steps for big change" approach, recalibrating emissions goals to what is measurable and transparent with current technology, supply, and infrastructure. To advance sustainability initiatives, companies must demonstrate a return on investment, and present a practical roadmap outlining actionable steps. Challenges that arise along the journey will need to be addressed, and data-driven insights offer that support. It’s a data-driven downshift from sky-high to eye-level targets in the climate commitments landscape that is expected to continue throughout the year.

EV Sales Charge Ahead

EV sales set a new record in 2023, surpassing 1 million EVs sold in a year in the United States, and that growth will continue throughout 2024. Although there are concerns that EV sales are slowing due to economic pressure, a number of factors will drive both consumer and commercial EV adoption. The average price of EV batteries globally is expected to fall over the next few years and the availability of vehicle options continues to rise. Interest in EVs is not waning, new registrations in the United States increased in the last quarter of 2023, **up by 40% from the same quarter in the previous year**, and they will rise further as EVs approach price-parity with gas vehicles (predicted to happen in Europe as early as 2024). On the commercial side, EV adoption is growing year-over-year, supported by government mandates, incentives, large enterprise sustainability commitments and performance results.

Increased Collaboration on Standards

The year 2024 will see a concerted effort to continue to attempt to establish standards for connected vehicles. Fleets are eager for easy access to comprehensive connected vehicle data to optimize operations. Automakers recognize the importance of standards for connected cars. However, without standards maximizing the value of data poses a significant challenge. The coming year will be one of increased collaboration across the industry–to attract fleets seeking efficiency and output measurements, the industry will double down on getting more connected vehicles on the road, emphasizing software and data standardization. Geotab is at the forefront of this endeavor, working alongside industry partners to define and promote standards that will unlock the full potential of connected vehicle data.

1 MILLION+

EVs sold in the U.S. in 2023

Conclusion

The global telematics industry is strong and continuing to grow, in fact it's expected to reach $172.4B US by 2032, demonstrating an incredible **17% growth between 2023 and 2032**. The transformative potential of connected vehicles and the power of trusted data are clear. The trends highlighted in this report underscore the pivotal role that data and AI will play in driving performance, efficiency, profitability, and sustainability in the transportation industry. Amid complex economic, environmental, and technological transformations, Geotab is resolved in its commitment to provide exceptional insights that empower businesses to make informed decisions.

As this year unfolds, a dynamic landscape characterized by the convergence of Gen AI, data, cost-efficiency, sustainability, and industry-wide collaboration will continue. Geotab, armed with an innovative approach, is ready to help businesses navigate this changing industry, providing the trusted insights and tools necessary to evolve and thrive in the world of commercial transportation.

GEOTAB

geotab.com

This white paper is intended to provide information and encourage discussion on topics of interest to the telematics community. Geotab is not providing technical, professional or legal advice through this white paper. While every effort has been made to ensure that the information in this white paper is timely and accurate, errors and omissions may occur, and the information presented here may become out-of-date with the passage of time.