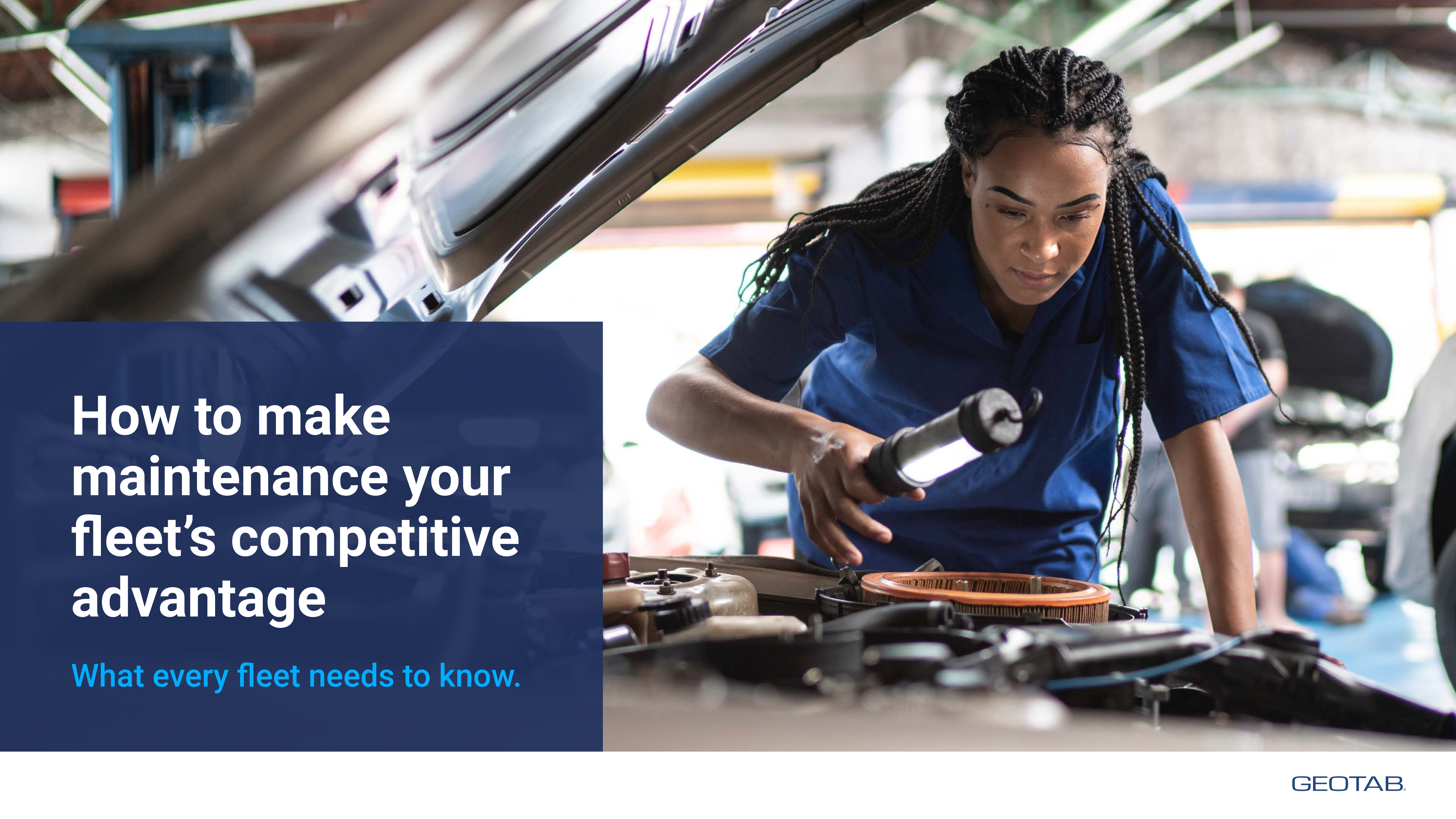


A woman with long braids, wearing a blue short-sleeved shirt, is focused on working on the engine of a car with its hood open. She is using a flashlight to inspect a component. The background shows a typical garage setting with various tools and equipment.

How to make maintenance your fleet's competitive advantage

What every fleet needs to know.

Introduction

The new competitive edge for fleets.

For too long, fleet maintenance has been viewed as a reactive chore that cuts into the budget and only becomes a priority when a vehicle breaks down. But this view overlooks a powerful reality: maintenance is not just an expense; it's a strategic lever for competitive advantage.

This guide will show you how to:

- Move beyond the break-fix cycle.
- Harness the power of predictive maintenance to protect your operating margin.
- Enhance asset utilisation.
- Secure your position as a leader in your industry.

A proactive, data-driven approach to fleet maintenance can transform your operations from a traditional cost centre into a driver of efficiency, service reliability and profitability.



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CHAPTER 1

The modern fleet's maintenance challenge

Vehicle health is the bedrock of any profitable fleet. But operations leaders face a host of interconnected challenges that threaten uptime and erode the bottom line. Surely some of these issues sound familiar.

Unscheduled downtime: The enemy of profitability.

Unexpected breakdowns are a direct threat to your revenue and reputation. When a vehicle is out of commission, it disrupts schedules, delays customer deliveries and hurts your on-time delivery rate. Depending on your vehicle mix and industry, downtime could cost your fleet £400 – £4,000 per day in direct and indirect costs.

The rising cost of an aging fleet.

The average age of fleet vehicles is steadily increasing, from around 9.5 years in the early 2000s to 13 years today, depending on the source. Older vehicles mean more frequent and expensive maintenance needs, directly affecting your total cost of ownership (TCO). Double-digit inflation in parts, labour, insurance and overall cost per mile have compounded the financial impact, placing immense pressure on operations managers to find efficiencies.



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Driver behaviour and vehicle health.

Driver behaviour is usually considered a safety issue, but poor driving habits like idling, speeding and harsh braking directly increase vehicle wear and tear, leading to higher maintenance costs. Idling, for example, not only wastes fuel and increases your cost per mile, but also causes soot build-up in the engine, requiring more frequent cleaning, repairs or replacement of components that can cost thousands of pounds. Driver behaviour also influences tyre wear, unnecessarily shortening the replacement cycle on this costly component.

Add in repairs or replacement in the event of a collision and it's easy to see how monitoring driver behaviour is a core strategy for cost control and operational efficiency.

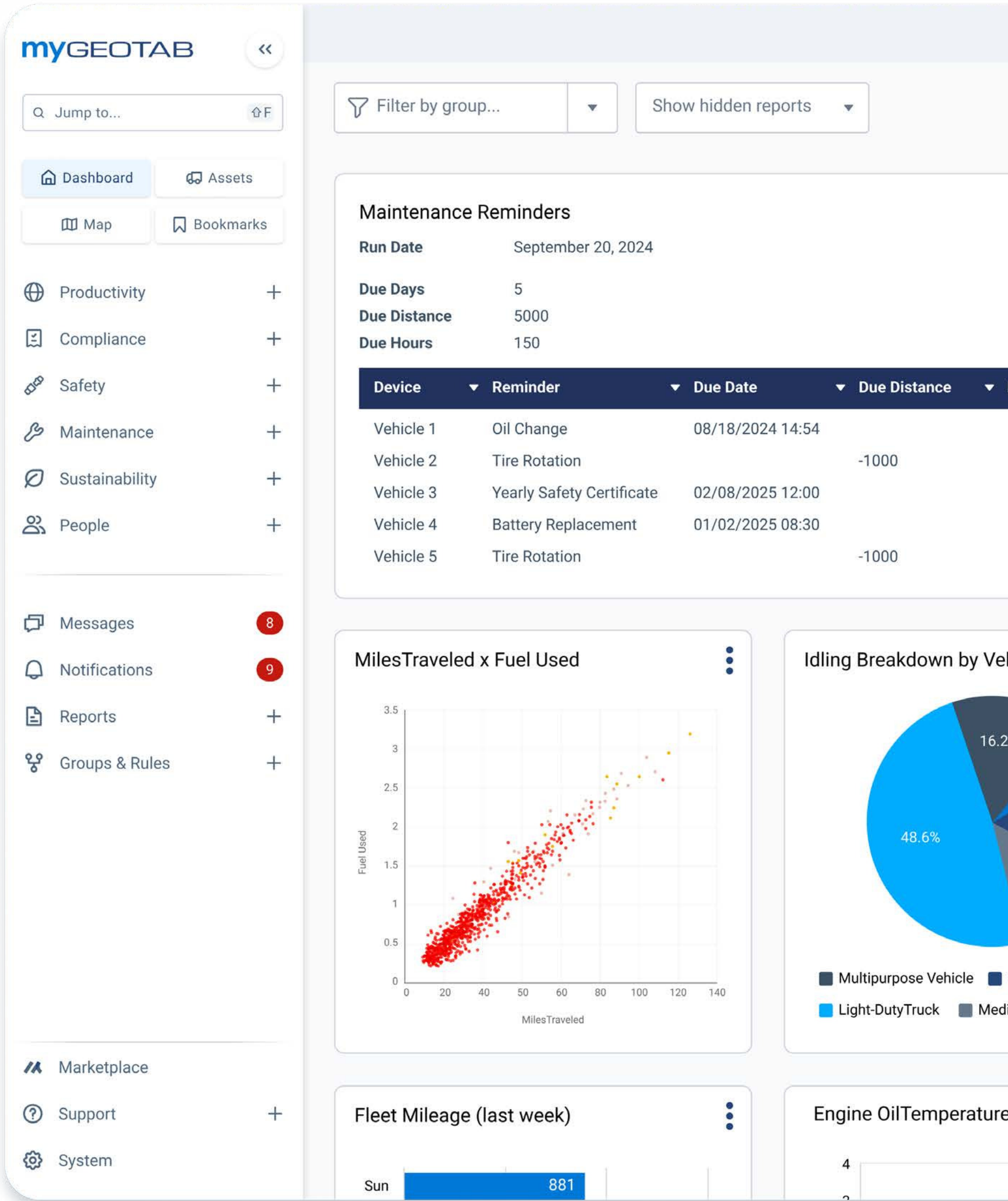
Complicated compliance requirements.

Daily Walkaround Checks can be time-consuming and lead to gaps in your maintenance history. Paper records make it especially inefficient to find information, gain insight and complete compliance requirements. Without reliable compliance records, fleets are vulnerable to prohibitions and Fixed Penalty Notices.

In addition, when inspections aren't completed proactively, drivers may miss important vehicle issues that need attention. Incomplete maintenance records can also place limits on the resale value of your vehicles.

Frontier Technologies reduces aging fleet costs

With an aging fleet, companies can expect to see maintenance costs rise, but **Frontier Technologies** has seen the opposite. "[Geotab] has freed up money spent on the fleet for other priorities," says the company. [Read Frontier's story.](#)



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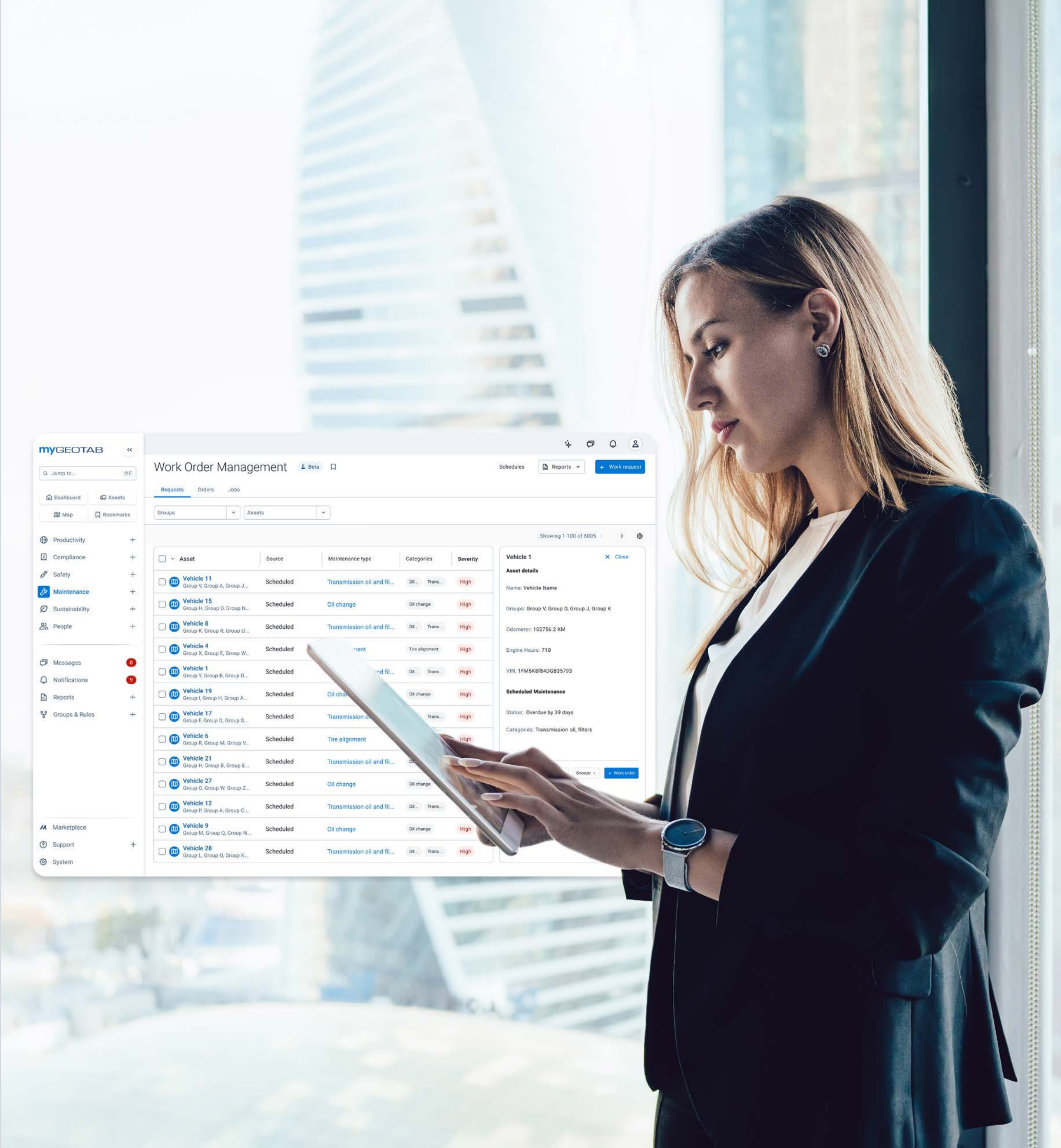
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Key takeaways.

Downtime is a direct threat: Unplanned vehicle downtime isn't just an operational headache; it's a direct threat to your bottom line, leading to lost revenue, damaged customer trust and cascading logistical chaos.

Maintenance impacts the entire business: A single vehicle failure can disrupt schedules for the entire fleet, highlighting how deeply interconnected maintenance is with overall operational performance and profitability.

The "break-fix" model is obsolete: Relying on outdated, reactive maintenance methods and fragmented data leaves your operation vulnerable. A modern, strategic approach is essential to remain competitive.

ENMAX Power Corporation turns vehicle insight into savings

Manual and paper-based compliance remains a common practice, even among medium and large fleets. **ENMAX Power Corporation** relied on “essentially sticky notes” to manage daily defect reports and reporting vehicle issues before implementing Geotab’s real-time notifications, work order tracking and digital daily defect reports. [Watch ENMAX’s story.](#)



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CHAPTER 2

Measuring what matters: The KPIs of a high-performing fleet

Today's operations leader measures success through specific, quantifiable metrics. To demonstrate the value of your maintenance programme and prove ROI to senior leadership, you must track the right key performance indicators (KPIs).

Here are industry-standard benchmarks you can use to measure your performance:



Total cost of ownership

This goes beyond the purchase price to include every cost associated with a vehicle throughout its life: acquisition, fuel, insurance, repairs and depreciation. A clear understanding of TCO is essential for making smart, data-driven decisions about vehicle acquisition and replacement cycles.



Cost per mile

This is the ultimate measure of efficiency. By dividing your total operating costs by the total miles driven, you can benchmark performance across vehicle types, routes and regions, identifying precisely where inefficiencies are hiding.



Vehicle uptime

This is your primary measure of fleet readiness and reliability. High uptime means your assets are on the road generating revenue, not sitting idle in the garage. It's a direct indicator of your ability to meet customer commitments.



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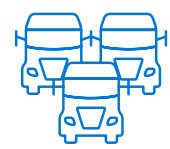
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Fleet asset utilisation rate

This KPI helps you identify underused assets that could be reassigned or retired, preventing unnecessary spending on maintenance, insurance and depreciation for vehicles that aren't contributing to the bottom line. Your goal should be to have 95% of your fleet actively available and on the road.



Scheduled vs. unscheduled repairs

A successful proactive programme will see scheduled work far outweigh emergency repairs. The ideal goal is 80% scheduled work.



Repeat repairs percentage

This metric tracks the effectiveness of your technicians and parts. Your goal should be less than 3% repeat repairs on the same vehicle.



Vehicle maintenance completion rate

This measures shop efficiency and can be highly variable depending on the type of maintenance, but here are some guidelines:

- **Preventative maintenance:** 95% completed within 4 hours
- **Minor repairs:** 90% completed within 24 hours
- **Major repairs:** 85% completed within 72 hours



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The competitive advantage of KPIs comes from data-driven precision in a field often run on intuition. While competitors operate with vague goals, these specific KPIs empower you to pinpoint inefficiencies, optimise resource allocation and build a powerful business case for strategic investments, ensuring your maintenance operations are always aligned with profitability and growth.

Key takeaways.

Go beyond the purchase price: The most accurate measure of a vehicle's financial impact is its TCO, which includes all expenses over its entire lifecycle, from acquisition to fuel, maintenance and resale.

Measure efficiency and reliability: Track cost-per-mile to pinpoint operational inefficiencies and monitor vehicle uptime as a direct measure of your fleet's readiness and ability to meet customer commitments.

Make every asset count: Use asset utilisation data to ensure every vehicle is a productive part of your operation, allowing you to reassign or retire underused vehicles that drain the budget.



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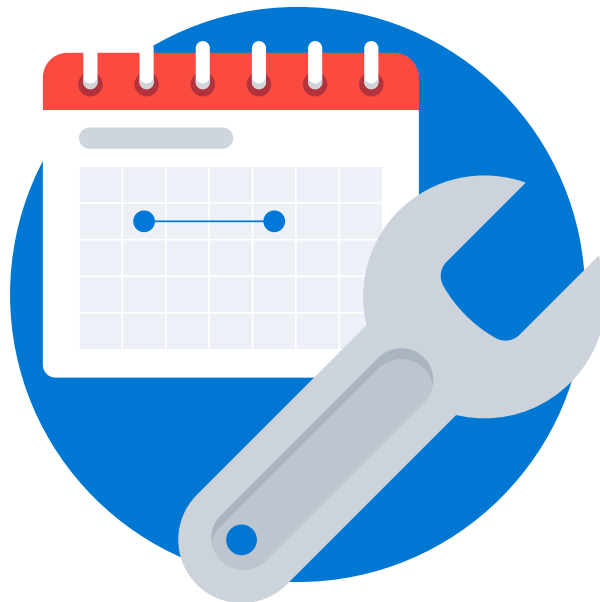
The strategic shift: From reactive to predictive maintenance

Transforming your maintenance operations for optimal competitive advantage involves a crucial evolution in mindset and methodology, in three distinct stages.



Stage 1 – Reactive maintenance

This is the "if it ain't broke, don't fix it" approach. Maintenance is performed only after a component fails. It's the most expensive and disruptive model, defined by unplanned downtime, emergency repairs and operational chaos.



Stage 2 – Preventive maintenance (PM)

This is a scheduled, time-based approach. Oil changes, tyre rotations and inspections are performed at regular intervals (e.g., every 5,000 miles or 90 days) regardless of the vehicle's actual condition. While a significant improvement over a reactive model, it can lead to unnecessary servicing of healthy components or, conversely, fail to catch a part that's wearing out faster than the schedule anticipates.



Stage 3 – Predictive maintenance (PdM)

This is the ultimate goal. PdM leverages real-time data and advanced analytics to predict potential failures before they happen. By analysing engine fault codes, sensor readings and historical performance data, you can identify a failing alternator or a deteriorating battery days or weeks in advance. Integrated AI can also link specific driving behaviours to predictive maintenance needs, allowing you to proactively manage component life and protect your assets.

Informed intelligence

Geotab's predictive analytics tools are built on data from over 5.5 million connected vehicles generating more than 100 billion data points daily. It's field-proven, reliable intelligence you can trust to make critical business decisions.

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CHAPTER 4

The telematics advantage: Your central insight hub

The primary barrier to making maintenance an ROI driver is data chaos. Information may be scattered across paper inspection forms, siloed software systems and multiple spreadsheets, making it impossible to get a clear, up-to-the-minute view of your fleet's health. A robust fleet tracking platform solves this problem by serving as your central intelligence hub - a single source of truth for all maintenance-related activities.

These essential tools can streamline your entire maintenance workflow:



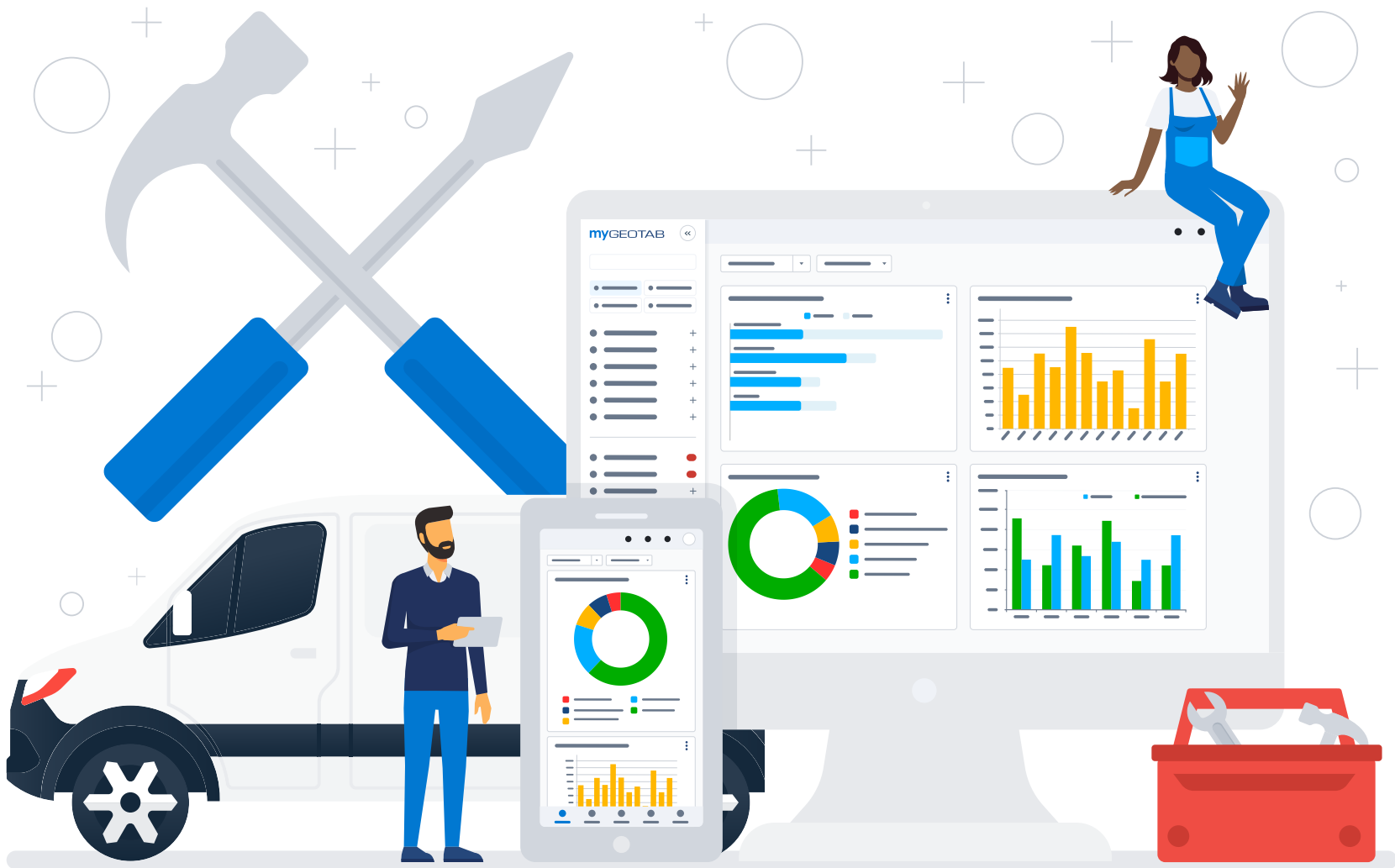
Predictive analytics

Advanced fleet monitoring systems analyse data from your fleet to identify vehicles at the highest risk of failure. This allows you to move beyond a one-size-fits-all preventative schedule and focus your resources where they're needed most, proactively servicing at-risk vehicles before they fail.



Fault code enrichment

A standard engine fault code is cryptic. The most intelligent vehicle diagnostics systems automatically translate these codes into plain language, explain the likely cause and recommend a specific course of action. This crucial feature allows your team to assess urgency, prioritise repairs with confidence, prevent costly failures, reduce unnecessary shop visits and support driver safety.



Work order management

This feature can instantly convert identified issues from vehicle inspections or fault codes into digital work orders. You can track every step of the repair process in one place, from scheduling and parts ordering to completion, giving you a complete picture of technician workloads, costs and vehicle downtime.

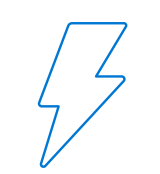


Compliance automations

For true competitive advantage, your telematics platform should automate compliance processes, for example, allowing drivers to complete inspections on their tablets or smartphones, streamlining daily walkaround checks and making them more consistent and reliable. When a driver identifies a defect, it can be automatically converted into a work order, seamlessly linking compliance to your maintenance workflow.



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Electric vehicles

Monitoring and managing EV battery health is fundamental to maintaining mixed fleets. Your telematics platform should provide detailed battery health and charge data to prevent breakdowns, optimise performance, maximise utilisation and increase your ROI.



Lifecycle support

Your fleet tracking platform should support a complete and accessible maintenance history. Comprehensive maintenance records prove a vehicle has been well maintained to directly increase its resale value and can be integral for validating OEM warranty claims, preventing your company from losing out on parts warranties due to missing documentation.

Key takeaways.

Solve data chaos with a central intelligence hub: The biggest barrier to efficient maintenance is fragmented data. A telematics platform provides a central intelligence hub, creating a single source of truth for all vehicle health and repair information.

Turn data into actionable intelligence: The goal isn't more data, but clear answers. Features like work order management and fault code enrichment translate complex information into a prioritised action plan for your technicians.

Leverage predictive analytics: Advanced telematics that uses predictive analytics can identify vehicles at high risk of failure. This allows you to proactively schedule service where it's needed most, preventing costly unplanned downtime before it happens.

Eliminate analysis paralysis

MyGeotab’s maintenance features are designed to eliminate the analysis paralysis that hinders less efficient fleets. Geotab integrates seamlessly with your existing transportation management system (TMS), enterprise resource planning (ERP) and finance systems, and exports curated fleet data directly into popular business intelligence tools like Power BI. Our goal is not to overwhelm you with data, but to provide context to your data and actionable intelligence to improve outcomes.

myGEOTAB

Q Jump to...

DashboardAssetsMapBookmarks

ProductivityComplianceSafetyMaintenanceSustainabilityPeople

MessagesNotificationsReportsGroups & Rules

MarketplaceSupportSystem

Faults

GroupsAssetsTodaySources

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Asset	Fault Code	Fault
Vehicle 1 Light Duty, Group K, Group...	P0130	Fault – Variable length data logging tu data...
Vehicle 24 Heavy Duty, Group U, Group...	P0130	Fault – Variable length data logging tu data...
Vehicle 6 Light Duty, Group P, Group Z...	P0130	Fault – Variable length data logging tu data...
Vehicle 7 Light Duty, Group O, Group...	P0130	Fault – Variable length data logging tu data...
Vehicle 11 Light Duty, Group R, Group...	P0130	Fault – Variable length data logging tu data...
Vehicle 76 Heavy Duty, Group Y, Group...	P0130	Fault – Variable length data logging tu data...
Vehicle 13 Light Duty, Group A, Group...	P0130	Fault – Variable length data logging tu data...
Vehicle 26 Heavy Duty, Group A, Group...	P0130	Fault – Variable length data logging tu data...
Vehicle 62 Light Duty, Group A, Group...	P0130	Fault – Variable length data logging tu data...
Vehicle 71 Light Duty, Group A, Group...	P0130	Fault – Variable length data logging tu data...
Vehicle 17 Light Duty, Group A, Group...	P0130	Fault – Variable length data logging tu data...
Vehicle 45 Light Duty, Group K, Group...	P0130	Fault – Variable length data logging tu data...
Vehicle 3 Heavy Duty, Group U, Group...	P0130	Fault – Variable length data logging tu data...
Vehicle 23 Light Duty, Group P, Group Z...	P0130	Fault – Variable length data logging tu data...

Fault code: P0117 / Asset 1

Asset Details

NameAsset Name

GroupsFBT_2025

Odometer303030.45

Engine Hours1037

VINSTDZDJKFDS

Faults Data

Latest Log Time05/26/24 14:32:43

SourceVehicle

DescriptionEngine coolant temperature sensor 1 circuit low

Diagnostic NameEngine coolant temperature sensor 1 circuit low

Dismiss Fault

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CHAPTER 5

Building your strategic maintenance plan

By following a structured approach, you can build a robust, data-driven maintenance model that delivers consistent results and gain a competitive advantage over other fleets with ad-hoc maintenance procedures that suffer from inconsistency, increased liability and wasted resources.



Benchmark your performance

Start by establishing a baseline. Use the KPIs from Chapter 2 to understand your current TCO, cost-per-mile, uptime rates, asset utilisation, etc. This data will reveal your biggest opportunities for improvement and help you measure the impact of your new strategy.



Establish clear policies

Create a formal Vehicle Maintenance Policy. This document should standardise procedures for everything from daily walkaround checks and defect reporting to scheduling proactive maintenance services and authorising repairs. A clear policy ensures consistency and accountability across your entire team.



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Leverage technology to automate

Implement a centralised platform like MyGeotab to automate manual and complex tasks. Use it to set maintenance reminders, digitise work orders and create custom reports. Automation frees your team to focus on strategic tasks rather than admin work.



Foster a proactive culture

True transformation requires buy-in from everyone, from drivers to technicians to leadership. Train your team on new procedures, share performance data to highlight successes, and emphasise the shared goal of maximising uptime and efficiency.

A formal, data-driven plan moves your operation from reactive fire-fighting to disciplined strategy. This systematic approach lowers risk, ensures compliance and creates the kind of smooth, predictable efficiency that allows you to focus on strategic growth rather than operational emergencies.

Key takeaways.

Benchmark first, then build: Start by using your core KPIs to establish a performance baseline. This data will reveal your biggest opportunities for improvement and allow you to measure the financial impact of your new strategy.

Standardise for success: Create a formal vehicle maintenance policy to ensure consistency and accountability. This document should standardise everything from daily inspections to repair authorisations.

Empower your team: Technology is only one part of the solution. True transformation requires fostering a proactive culture by training your team on new processes and sharing performance data to align everyone around the shared goal of maximising uptime.



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CHAPTER 6

More than a vendor: Your strategic partner in growth

Choosing a telematics provider is a long-term commitment, and the fear of being locked into an inflexible, proprietary system is a valid concern. Your business needs change and your technology stack should be able to evolve with you.

This is why Geotab is built on an open platform. We believe in flexibility and choice. Our open architecture and extensive Marketplace of third-party integrations allow you to build a completely customised fleet management solution, enabling you to:



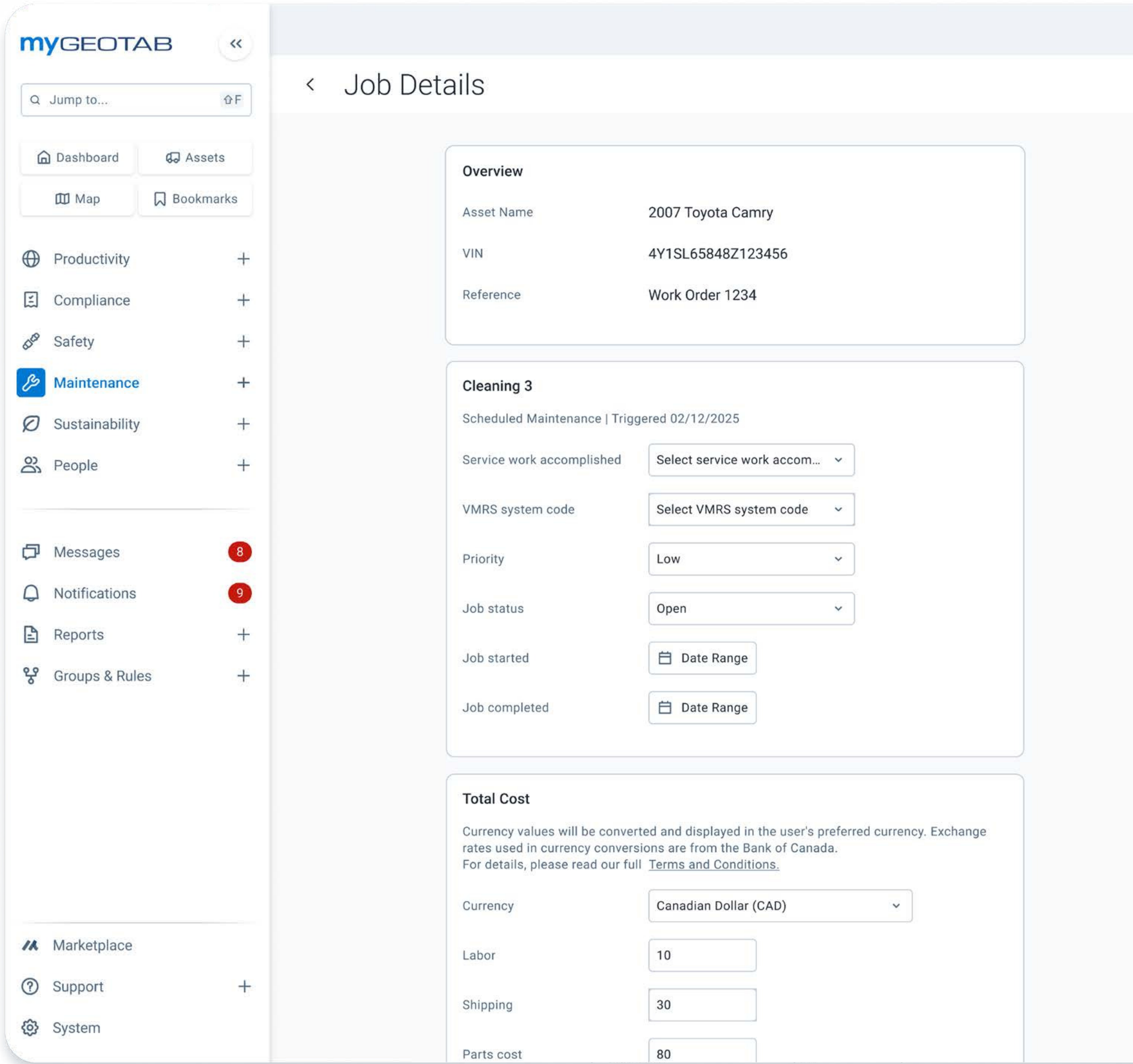
Integrate with existing systems

Seamlessly connect your telematics data with other essential software, such as TMS, fuel card or accounting platforms, to create a unified view of your operations.



Add specialised tools

Enhance your capabilities by integrating best-in-class solutions for tasks like advanced diagnostics, parts stock management or digital inspection forms.



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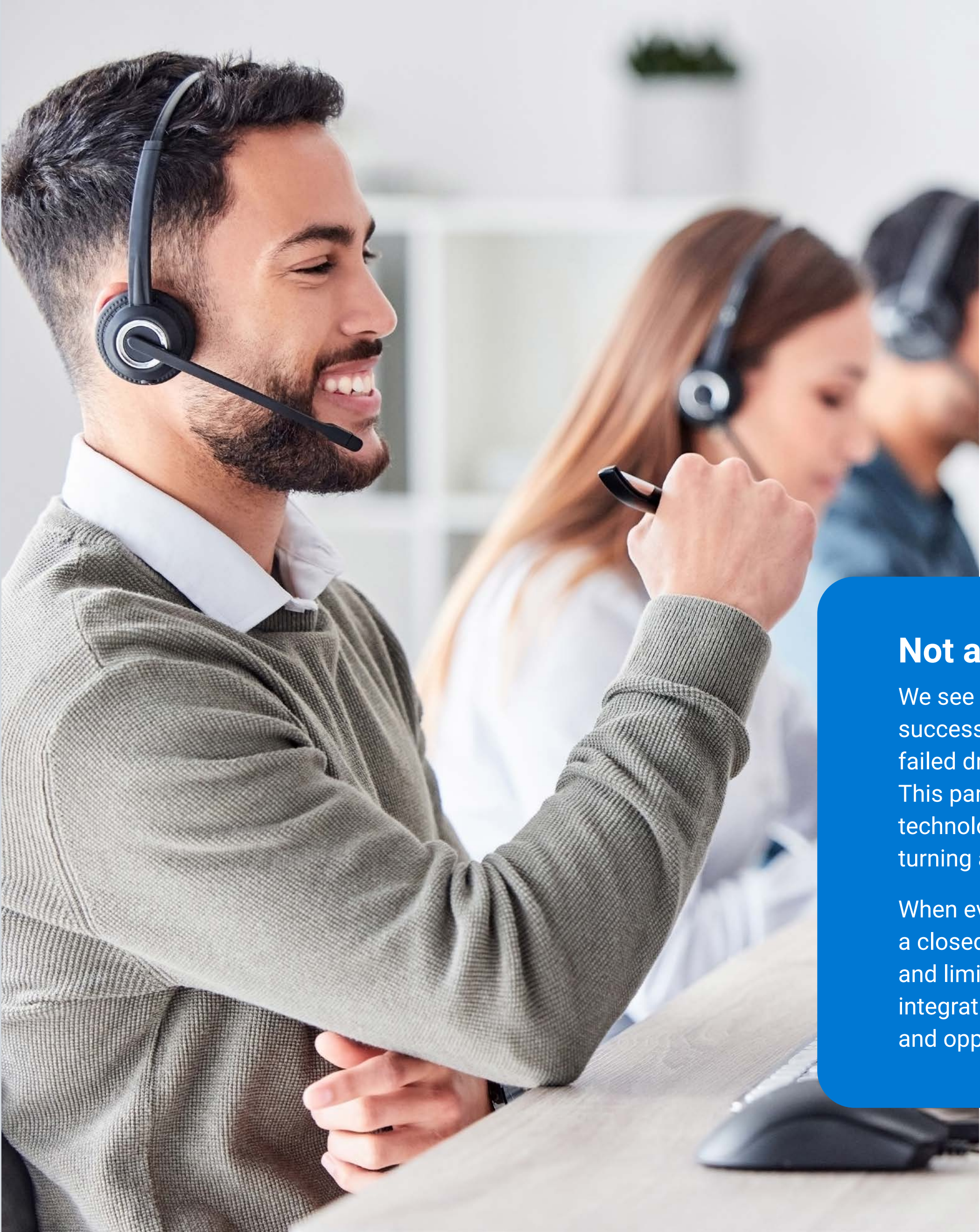
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Future-proof your investment

As your fleet grows and diversifies — incorporating EVs, for example — our platform adapts. You can manage your entire mixed fleet in a single interface, ensuring your technology never holds your business back.



Access reliable, responsive support

We offer 24/7 support from trained fleet specialists with an average call wait-time of 26 seconds or less. This ensures that when issues arise, you get fast, effective resolution to minimise operational disruptions.

Not all platforms are created equal

We see ourselves as more than a vendor; we are a strategic partner invested in your success. While competitors struggle with unresponsive vendors, long hardware delays and failed driver adoption, with Geotab, your fleet gains a partner committed to your success. This partnership de-risks your investment, accelerates your time-to-value and ensures your technology delivers on its promise of lower costs, higher uptime and improved efficiency — turning a purchase decision into a long-term strategic asset.

When evaluating telematics partners, consider their core philosophy. Some providers offer a closed, all-in-one system, which can seem simple upfront but often leads to data silos and limitations as your needs evolve. A truly open platform, by contrast, is designed for integration and flexibility, ensuring your technology stack can adapt to future challenges and opportunities without restriction.



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CHAPTER 7

Conclusion: Securing your competitive edge

The journey from reactive to predictive maintenance is a strategic imperative. In a world of tight margins and high expectations, the efficiency of your fleet is the efficiency of your business.

By embracing a data-driven approach, you can move beyond the costly cycle of breakdown and repair. You gain the foresight to prevent issues, the tools to streamline workflows and the intelligence to make smarter financial decisions across the entire vehicle lifecycle.

Geotab provides the platform, the data intelligence and the open ecosystem you need to turn your maintenance operations into a source of undeniable competitive advantage. Take control of your fleet's future, and leave the chaos of reactive maintenance behind.

For more information on fleet maintenance, [please visit us online](#).



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About Geotab

Geotab is a global leader in connected vehicle and asset management solutions, with headquarters in Oakville, Ontario, and Atlanta, Georgia. Our mission is to make the world safer, more efficient and sustainable. We leverage advanced data analytics and artificial intelligence to transform fleet performance and operations, reducing cost and driving efficiency. Backed by top data scientists and engineers, we serve approximately 100,000 global customers, processing 100 billion data points daily from more than 5.5 million vehicle subscriptions. Geotab is trusted by Fortune 500 organisations, mid-sized fleets, and the largest public sector fleets in the world, including the United States federal government and UK public sector bodies. Committed to data security and privacy, we hold FIPS 140-3 and FedRAMP authorisations. Our open platform, ecosystem of outstanding partners and Geotab Marketplace deliver hundreds of fleet-ready third-party solutions. This year, we’re celebrating 25 years of innovation.

Learn more at geotab.com and follow us on [LinkedIn](#) or visit [Geotab News and Views](#).

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