

UNLOCK VALUE

WITH AN ENHANCED FLEET
SAFETY PROGRAM.

STRENGTHEN YOUR BOTTOM LINE WITH
AN INTEGRATED TELEMATICS APPROACH.

 **T-MOBILE
FOR BUSINESS**

GEOTAB®

What does an integrated approach to safety look like?

An integrated approach to fleet safety helps optimize your operations—minimizing risk, enhancing productivity, and maximizing savings.

Explore how integrating dynamic safety data can improve your safety program.

1

The results-driven approach to safety.

2

View all your data in one place.

3

Use integrated safety data for your needs.

4

How integrated safety data unlocks business benefits.

5

Four ways safety helps construction managers go further.

6

The best solution for safer operations.

1 **The results-driven approach to safety.**

2 View all your data in one place.

3 Use integrated safety data for your needs.

4 How integrated safety data unlocks business benefits.

5 Four ways safety helps construction managers go further.

6 The best solution for safer operations.

CHAPTER 1

The results-driven approach to safety.

U.S. construction costs saw an average increase of 4% in 2023.¹

With costs increasing, construction companies are constantly looking for ways to improve efficiencies and get better results from the investments they already have.

For construction companies, safety programs are one of the biggest sources of untapped potential. A well-executed safety strategy not only enhances job site safety but also drives operational efficiency and reduce financial risks. Your employees and clients are happier, your assets are more productive, and there are fewer bumps to your bottom line.

Harnessing the safety-generating potential of combined video and vehicle telematics does more than just elevate safety—it frees you to see more and do more, all while protecting your team in ways you previously couldn't. And crucially, you can generate broader value for the business in the process.

However, to drive more results from your safety program, you need clear insights on the relationships between actions and outcomes. That means you need to capture, integrate, and analyze more data from your telematics, employee behavior, and from industry benchmarks.

In this guide, we'll show you the basics of an integrated and data-driven approach to safety that boosts your bottom line—and the extra business benefits you can unlock.

A results-driven approach to safety helps you:

- Set and track safety goals
- Minimize risky behavior
- Reduce false claims, violations, and premium costs
- Increase accountability
- Reduce downtime
- Boost productivity

¹Globest, "Construction Costs Expected to Increase as Much as 6% This Year," 2024



1 The results-driven approach to safety.

2 **View all your data in one place.**

3 Use integrated safety data for your needs.

4 How integrated safety data unlocks business benefits.

5 Four ways safety helps construction managers go further.

6 The best solution for safer operations.

CHAPTER 2

View all your data in one place.

While many construction companies have vehicle and even video telematics devices of some kind, collating and understanding the data from them can be a difficult task. This is because:

A. There is so much of it.

B. All your data including vehicle, environmental, camera/video, and industry data, is stored in silos.

This means you end up wasting precious time aggregating and organizing the important data you need to get accurate insights and take swift action.

The alternative? An integrated platform that allows you to collect and view key components of your safety program in one place.

T-Mobile Fleet Management from Geotab connects key layers of field data and complements them with millions of historical data points. Integrating all of these sources provides a more accurate description of events and provides better insights for managers to build and maintain a safety program on.

Construction companies can proactively address potential issues, streamline operations, and reduce operational costs. The result is a more efficient, safer, and smarter site management system that aligns with the evolving needs of modern construction. The effectiveness of this approach is anchored in three key components:

- **Telematics:** Providing real-time insights into employee behavior and vehicle performance
- **Camera and video:** Capturing visual data to reconstruct events and enhance employee safety
- **Benchmarking:** Comparing fleet performance against industry standards to identify areas for improvement

Let's look at how these elements interact with each other.



1 The results-driven approach to safety.

2 **View all your data in one place.**

3 Use integrated safety data for your needs.

4 How integrated safety data unlocks business benefits.

5 Four ways safety helps construction managers go further.

6 The best solution for safer operations.

Telematics.

Telematics is the first layer of an integrated safety approach. When coupled with a safety program, baseline telematics help track and decrease the risk of safety violations by reducing risky behavior.

Telematics provides real-time insights into driver behavior by analyzing safety metrics such as speeding and harsh braking. If risks are detected, the operator can get immediate feedback—making them aware of risky behavior and shrinking the need for one-on-one coaching. The system can also track repeated patterns, which may prompt additional training.

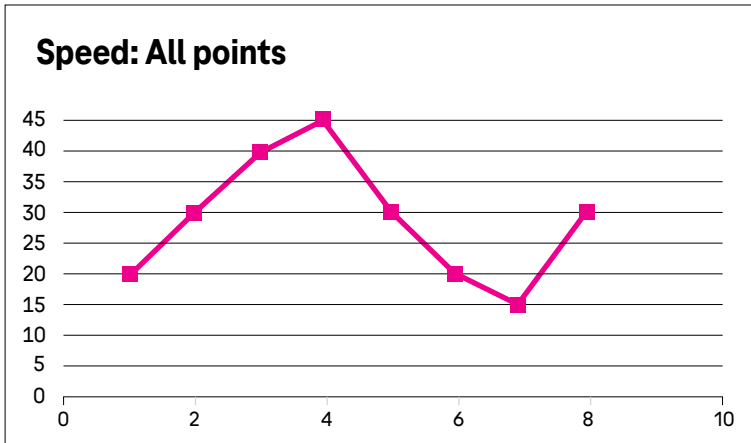
Beyond monitoring, telematics data can power safety dashboards, scorecard reports, and apps. This information provides quick and clear insights into performance, making it an essential tool for safe and efficient operations.

The curve algorithm.

However, there's a difference between baseline telematics and smart telematics.

The most effective managers recognize that the quality of the safety data their system collects will always underscore the value their program delivers. There's no point in capturing 95% of fleet activity if the missing 5% contains crucial insight into a critical event.

Graph 1



Geotab's curve logging method is optimized for smart telematics data because it focuses on meaningful precision rather than sheer quantity.

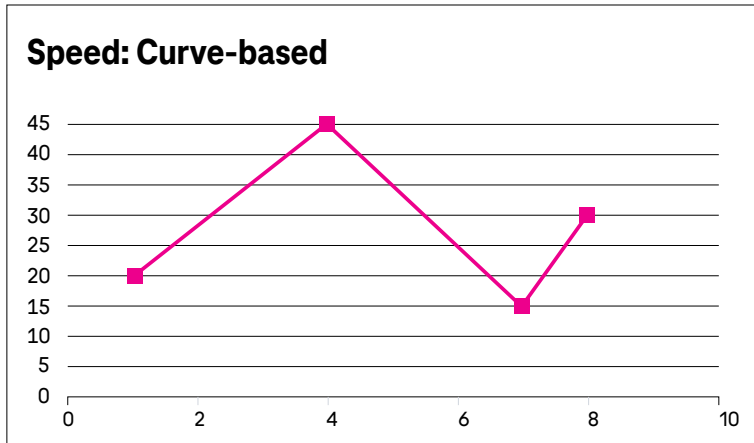
Here's how it works.

Instead of indiscriminately transmitting every data point, the curve logging algorithm continually assesses points for their significance based on predefined error margins.

If a data point's actual position significantly deviates from the predicted one, it's deemed essential and transmitted; if not, it's discarded.

This approach ensures that only the most meaningful and relevant data, like drastic speed changes or critical cornering events, is sent. As a result, rather than inundating the server with

Graph 2



countless redundant data points, the system will only send the handful that encapsulate the journey's essence. The comparison above shows the result after the curve logging algorithm is applied to the data. Graph 1 contains irrelevant details; Graph 2 shows only what is important. Using Geotab's curve algorithm for data collection offers fleets tangible advantages:

- Accurate tracking of fleet activities, eliminating errors like misrepresented routes.
- Reduced data costs and eases server loads.
- Insights gained from predictive analytics that aid in identifying potential issues and enhance operational efficiency and safety.

1 The results-driven approach to safety.

2 **View all your data in one place.**

3 Use integrated safety data for your needs.

4 How integrated safety data unlocks business benefits.

5 Four ways safety helps construction managers go further.

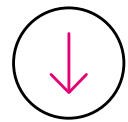
6 The best solution for safer operations.

Cameras and video.

Camera adoption—both employee- and site-facing— continues to rise, and for good reason:



The global commercial vehicle telematics market was valued at around **\$4.9 billion** in 2023 and is estimated to grow at a CAGR of around **15%** from 2024–2030.¹



A study from the U.S. Department of Health and Human Services found that monitoring technologies reduced the number of incidents by **60%** and the cost of vehicle collisions by **86%**.²

By capturing crucial moments before and after an incident, cameras alert operators to potential hazards, reconstructing events, helping you identify areas of improvement or exonerating drivers from false insurance claims.

Beyond these immediate benefits, the true potential of this second layer comes from their increased integration of AI.

Real-life scenario: Eliminating liability.

One of Peter's vehicles was involved in a minor incident at a job site, causing a third party to threaten legal action. With telematics, he knew when and where the incident occurred, as well as information like G-force and speed. But by using road-facing footage, he was able to provide proof of what happened, which showed his company was not liable.

AI use in cameras.

The introduction of AI in camera solutions helps fleet managers proactively promote driver safety while also improving the bottom line.

Built-in AI can respond to certain real-time event triggers and take actions that foster safer operating practices, decrease incidents, and ultimately save your company money. These triggers include:

- In-vehicle coaching alerts
- Real-time alerts from harsh equipment handling
- Alerts for equipment misuse or improper operation

¹MarkNtel, "Global Commercial Vehicle Telematics Market Research Report: Forecast (2024–2030)," 2024

²U.S. Department of Health and Human Services, "Evaluation of an in-vehicle monitoring system (IVMS) to reduce risky driving behaviors in commercial drivers," 2017



1 The results-driven approach to safety.

2 View all your data in one place.

3 Use integrated safety data for your needs.

4 How integrated safety data unlocks business benefits.

5 Four ways safety helps construction managers go further.

6 The best solution for safer operations.

Training helps prepare operators on what actions they can take before and during their day in the field, but Driver Monitoring, Advanced Driver Assistance Systems, and AI-enabled cameras take training to the next level.

Operators get real-time in-cab sound and/or visual alerts when they are engaged in risky behaviors so they can self-correct before an accident happens. These alerts include:

- Speeding alerts in work zones
- Proximity to equipment or personnel
- Distracted driving
- Improper maneuvers

If the operator modifies their actions, no event gets logged. However, if the risky behavior continues, a brief recording is generated for managerial review.

Employees may feel hesitant about AI-enabled cameras. It's important for drivers to understand that this technology will empower and protect them by increasing overall risk awareness through:

- In-cab visual alerts to help quickly recognize unseen dangers
- Analysis of usage patterns to sample potential risks and suggest proactive changes
- Independent self-correction without manager intervention

What does the right solution look like?

Whether you're looking to update your existing fleet cameras or evaluating which model to choose for the first time, you need an option that is reliable and can seamlessly integrate with your overall safety system. The cameras you pick must be easy to install, customizable, and deliver real-time feedback to enable proactive measures.



Surfsight Dash Cam.

The Surfsight Dash Cam offers an advanced, scalable solution with AI-powered features that provide you a complete view of your fleet. Features include:

- Real-time insights with live video streaming from dual cameras
- Simple installation
- Built for all vehicle types
- Easily customizable
- Seamless integration with MyGeotab

1 The results-driven approach to safety.

2 **View all your data in one place.**

3 Use integrated safety data for your needs.

4 How integrated safety data unlocks business benefits.

5 Four ways safety helps construction managers go further.

6 The best solution for safer operations.

Benchmarking.

The third layer of your integrated approach should bring in benchmarking—which uses all the information above to show you what your operation needs to improve to beat the competition.

The Geotab approach to industry benchmarking.

With access to over 4 million connected vehicles and 23+ years of experience, Geotab benchmarks give rich context to your operation's performance through telematics and camera data.

A vehicle's performance is compared to a peer group of about 1,000 similar vehicles. Each vehicle is ranked based on its predicted crash rate compared to the group. A score close to zero means the vehicle is likely to have fewer accidents than most; a score close to one means it may have more.

Geotab calculates an average crash rate for all vehicles in the group, and also identifies a “leader,” a vehicle that has a crash prediction rate better than 80% of the group.

Real-life scenario.

Vehicle X has a predicted crash rate of 1.41 per million kilometers, while the average for its peer group is 1.47. That means vehicle X is doing better than the group average but not as well as the top performers. Vehicle X's crash rate is slightly above the median of its group.



1 The results-driven approach to safety.

2 View all your data in one place.

3 **Use integrated safety data for your needs.**

4 How integrated safety data unlocks business benefits.

5 Four ways safety helps construction managers go further.

6 The best solution for safer operations.

CHAPTER 3

Use integrated safety data for your needs.

There's no one-size-fits-all when it comes to data consumption and implementation within diverse construction operations. As IT teams evolve, so will their data structure needs.

That's why Geotab has crafted a suite of tools designed for flexibility and efficiency, ensuring data not only informs but also empowers timely decision-making.

MyGeotab reporting is a robust and customizable set of dashboards that democratizes data. Users can log in, run reports, and download data as needed, making the dashboards the go-to for hands-on data analysis.

At the enterprise level, where the data stream becomes a deluge from multiple sources, it can be hard to find a coherent narrative. In these settings, you'll need the Geotab Data Connector.

This powerful tool acts as a bridge, offering a midway point between full Application Programming Interface (API) integration and the intuitive reporting of MyGeotab. It curates and pre-aggregates raw data then delivers it in graphic form through popular tools like Tableau and PowerBI. Users get deep insights and data-rich dialogue between, for example, fleet performance and financial metrics.

Lastly, the **API Adapter** works as a catalyst for integrating data from Geotab with other vital business systems, from maintenance schedules to CRM platforms. Here, the data doesn't just flow into Geotab; it's a two-way conversation, syncing with external systems to ensure a seamless data ecosystem.

With Geotab, it's not just about integrating and accessing data; it's about embedding it into the fabric of your operational workflow—efficiently, effectively, and tailored to your evolving business needs.



- 1 The results-driven approach to safety.
- 2 View all your data in one place.
- 3 Use integrated safety data for your needs.
- 4 **How integrated safety data unlocks business benefits.**
- 5 Four ways safety helps construction managers go further.
- 6 The best solution for safer operations.

CHAPTER 4

How integrated safety data unlocks business benefits.

With seamless access to the three layers of your integrated safety approach, you may wonder, “What’s next?” The key to unlocking the full potential of this harmonized safety system lies with Geotab’s data intelligence.

T-Mobile Fleet Management from Geotab helps enhance safety outcomes and operational efficiency by transforming raw telematics into actionable insights with features such as:

Collision detection and reconstruction.

Geotab’s robust data capture details the moments before, during, and after a collision. With machine learning algorithms analyzing accelerometer, speed, and GPS data, Geotab not only detects incidents but also reconstructs them automatically.

This comprehensive data is invaluable for court cases; Geotab is an authoritative expert witness that can save your company thousands litigation costs from false claims.

Detecting potential collisions.

Beyond reactive measures, Geotab offers proactive insights into potential collision events. The My Geotab rules engine can discern false positives from true collisions.

This high-precision screening reduces unnecessary vehicle checks and risk by focusing attention where it is truly needed.

Real-life scenario: Urban site safety training.

Construction site manager John faces rising insurance premiums due to frequent minor accidents at the urban construction sites his team operates in. Using Geotab’s data intelligence, he sees that distracted driving is the cause of most of the accidents. After introducing urban driving training—focused on pedestrian safety and navigating tight spaces—accidents drop, leading to reduced insurance costs.



- 1 The results-driven approach to safety.
- 2 View all your data in one place.
- 3 Use integrated safety data for your needs.
- 4 **How integrated safety data unlocks business benefits.**
- 5 Four ways safety helps construction managers go further.
- 6 The best solution for safer operations.

U-turn detection.

Recognizing U-turns as risky maneuvers, Geotab's model captures these events, providing an opportunity for driver coaching. By analyzing risky driving, Geotab promotes safer driving and enhances productivity.

Real-life scenario: Monitoring equipment operator safety scores

Sarah, a safety manager for a construction company, uses Geotab's ecosystem to monitor equipment operator safety scores in real-time. Noticing a high predicted incident rate in a specific area of the site, she provides targeted safety training to operators working in that zone. Over the next few months, incidents in that area decrease, significantly improving overall site safety.

Predictive maintenance.

Geotab delves into the data to pinpoint common causes of equipment failures on construction sites. By identifying these trends, Geotab drives proactive solutions, like recommending regular fluid checks and maintenance schedules to prevent system breakdowns. This not only reduces downtime but also extends the lifespan of the equipment components.

But, most importantly for site safety managers, actions taken based on data intelligence can increase performance and reduce operating costs.

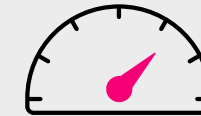
Four steps to better predictive safety analytics and benchmarking:



1. Geotab uses data from your telematics and camera tech and create driver safety scores based on factors like harsh handling and distracted driving.



2. AI and machine learning are applied to generate metrics like predicted collisions per 1 million km.



3. Benchmark data is applied to metrics to compare how the fleet and individual drivers compare to peer group averages and leaders.



4. You can identify which operators need additional training, and see actions needed to improve overall safety performance.

Users of our safety benchmarking see:

Collision rates decrease by

19.1%

Harsh braking decrease by

11.8%

Speeding decrease by

6.4%

Harsh cornering decrease by

5.6%

1 The results-driven approach to safety.

2 View all your data in one place.

3 Use integrated safety data for your needs.

4 How integrated safety data unlocks business benefits.

5 Four ways safety helps construction managers go further.

6 The best solution for safer operations.

CHAPTER 5

Four ways safety helps construction managers go further.

An integrated approach to safety—built on connected, contextualized data—keeps employees safer and delivers measurable business outcomes.

An integrated telematic safety approach provides fleet operators tremendous value in multiple ways. Four outcomes stand out as the biggest and best:

1. Risk reduction.

The goal of any safety program is reducing risk. Using camera and telematics data to capture incidents as they happen is just part of a larger solution.

A dynamic approach to safety—with a centralized platform to collate and measure data—allows you to see insights and actions you can take to proactively promote safer behavior. Risk reduction is critical for minimizing hazardous behavior and decreasing accidents.

An integrated approach in action.

Fleet managers at Black & Veatch, a global engineering and construction company, realized they needed to improve driving in the field but didn't have a solution that could measure performance accurately while also motivating drivers.

Through Geotab's integrated approach to safety, they were able to view their telematics data in one place and see driving trends and ways to enhance performance. They then used this data to develop driver safety scorecards to motivate drivers to follow safety guidelines.

The results?

- A 28% increase in average fleet safety score on the MyGeotab Driver Safety Scorecard
- Went from 5 to 3 accidents per million mile (PMM)
- Reduced high risk drivers by 87%



1 The results-driven approach to safety.

2 View all your data in one place.

3 Use integrated safety data for your needs.

4 How integrated safety data unlocks business benefits.

5 Four ways safety helps construction managers go further.

6 The best solution for safer operations.

2. Safety-powered savings.

Safer driving often means more fuel-efficient driving, leading to reduced fuel consumption rates, idle times, fines, and more.

3. Insurance premium reduction.

Fleets with more robust, comprehensive, and connected layers of safety can boost their bottom lines through insurance reduction. A culture of safety leads to fewer incidents and fewer insurance claims. Many insurance providers will offer reduced rates on premiums knowing Geotab is deployed in your fleet.

4. Reduced downtime.

Downtime on work sites can be expensive. Costs due to a loss in productivity can quickly spiral. Proactive fleet maintenance and built-in safety rules help slash downtime.

Real-life scenario: Improving harsh driving standards.

If all Geotab customers' fleets below the 50th percentile harsh driving benchmark improved to the standard of those in the top 50th percentile, each organization would, on average, use **1.9% less** fuel.

Real-life scenario: Cutting insurance costs.

A construction company implements Geotab's telematics solutions to streamline the collection and transmission of safety data across its operations. By leveraging this data to demonstrate improved safety practices and driver behavior, the company successfully negotiates lower insurance premiums during its annual renewal. This proactive approach not only enhances work site safety but also reduces insurance expenses, contributing to improved operational efficiency and cost savings for the firm.



1 The results-driven approach to safety.

2 View all your data in one place.

3 Use integrated safety data for your needs.

4 How integrated safety data unlocks business benefits.

5 Four ways safety helps construction managers go further.

6 The best solution for safer operations.

CHAPTER 6

The best solution for safer operations.

As the pressure rises on construction companies to improve safety, an integrated approach—one that’s flexible, employee-focused, and streamlined—is imperative for realizing a substantial return on investment.

You need a program that is more than the sum of its parts and unlocks unparalleled insight and efficiency. Improved and transparent fleet safety is a critical business advantage for your organization.



T-Mobile for Business helps Geotab deploy solutions to keep your construction operations running smoothly, safely, and on budget. Our nationwide network provides the speed and capacity needed to transmit critical data and video from virtually anywhere in the US to the Geotab platform for consumption and evaluation. With more than a decade of connecting fleets like yours with the Geotab intelligent platform, T-Mobile has earned a reputation in the industry as a critical, reliable business partner. Our ultimate goal—deliver connected solutions and achieve better outcomes and return on investment for your business today and tomorrow.



Geotab is advancing security, connecting commercial vehicles to the internet, and providing web-based analytics to help customers better manage their fleets. Geotab’s open platform and Marketplace allow both small and large businesses to automate operations by integrating vehicle data with their other data assets. Processing billions of data points a day, Geotab leverages data analytics and machine learning to help businesses improve productivity and enhance driver safety.

For real-life advice on how your fleet safety can accelerate your business, visit T-Mobile.com/Geotab or talk to a T-Mobile for Business representative.

T-Mobile, the T logo, Magenta and the magenta color are registered trademarks of Deutsche Telekom AG. Other logos are the property of their respective owners. © 2024 T-Mobile USA, Inc.
© 2024 Geotab Inc. All rights reserved. Geotab and the Geotab logo are trademarks of Geotab Inc.

This ebook 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.

Unlock value with an enhanced fleet safety program.



GEOTAB®