

VIDEO TELEMATICS IS A NEW SAFETY NORM FOR COMMERCIAL FLEETS

*AI Powered Video Telematics—The Revolutionary
Road Safety Tool*

FROST & SULLIVAN EBOOK

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TOP CHALLENGES FOR FLEETS

One: Keeping Drivers Safe

Safety is the number one priority for 36% of fleet managers, with reduced driver distraction a key concern. FMCSA estimates that 71% of large-truck crashes occur due to driver distraction. Unsafe practices, including texting or calling while driving, increase the likelihood of crashes. They also affect a fleet's brand image and reputation, while creating challenges related to driver retention.

Two: Investigating Incidents & Fighting False Claims

In the absence of technologically sophisticated video safety systems, fleet managers expend considerable time and resources on identifying the cause(s) behind an incident and adopting remedial measures. This also hampers their ability to protect drivers and assets from fraudulent claims. Meanwhile, nuclear verdicts - where jury penalties exceed \$10 million—threaten both fleet owners and insurers. They are causing already rising insurance premiums to increase, in some cases by over 50% annually.

Three: Improving Overall Efficiency

Despite headlining fleet operators' agendas, cost / resource/ performance optimization remain elusive. The ongoing economic slowdown has now highlighted the urgent need to accelerate such efforts and identify innovative technology solutions that improve overall fleet efficiencies. Reinforcing driver education about the importance and benefits of government mandates / regulations such as HOS and DVIRs remains challenging but is critical to enhancing fleet capabilities.

In the US there were

4,800
FATAL CRASHES

involving large
trucks and buses
in one year



The Largest
Truck Accident
Settlement Cost



more than

\$80
million

Source: Frost & Sullivan's Latest Study—[Global Truck Video Safety Solutions Market, Forecast to 2025](#); FMCSA's Large Truck and Bus Crash Facts 2017 report.

PAYING THE PRICE

Calculating the Cost of Motor-Vehicle Injuries

■ Average Comprehensive Cost by Injury Severity

Beyond the economic costs incurred from an accident, the comprehensive costs also include the value of lost quality of life. This entails wage risk premiums and it represents the maximum cost that is spent to prevent a death or injury.

■ Average Economic Cost by Injury Severity

Productivity losses, wage, medical expenses, motor-vehicle damage, administrative expenses, and employers' uninsured expenses are the costs involved in motor-vehicle crashes.



Sources : Average Comprehensive Cost by Injury Severity, 2018; Average Economic Cost of a Crash, National Safety Council, 2018.

PAYING THE PRICE

Accident Costs can be Disastrous for Both Businesses and Fleet Operators

Crippling Insurance Payments

Companies might face crippling insurance payments in the form of higher medical insurance premiums, auto insurance and liability settlements, life insurance and survivor payouts. In addition, they might have to enroll in group health insurance schemes with dependent coverage. Nuclear verdicts burden insurers with exorbitant penalties forcing them to cascade down these nuclear verdict costs in the form of increased insurance premiums to fleets. These additional costs further weigh down heavily on otherwise steadily increasing insurance costs causing fleet owners financial difficulties.

Decreased Employee Productivity

Employee productivity also stands to suffer. Productive time becomes a casualty: supervisors lose time in terms of rescheduling, fleet managers lose time in order to coordinate vehicle replacement and repair, and time is lost in rehiring / retraining / reassigning / replacing personnel to cover for employees affected by the accident.



Damage to Property

Damage to property, both company and public, and a dented brand image are among the other major fallouts. From the need to repair and replace the vehicle involved in the accident to paying fines towards the repair of the damaged roads/road signs, accidents are a costly proposition. Inspection fees, towing expenses or costs related to having the vehicle released from impoundment add up to a hefty sum. Emergency medical services for the accident victims constitute another significant outlay.

Source: [The Use of Forward Collision Avoidance Systems to Prevent and Mitigate Rear-End Crashes](#) by National Transportation Safety Board (NTSB).

INTRODUCTION TO VIDEO SAFETY TECHNOLOGY

Vehicle technologies, like video telematics, can play a crucial role in minimizing accidents and investigating incidents. Video telematics capture the period before and after safety events and deliver footage to the cloud. The footage allows fleet drivers and managers to view the circumstances surrounding a safety incident as well as its outcome. This provides key stakeholders a keen understanding of what can be attributed to driver error and what is caused by external factors.

1

FORWARD MONITORING

- Records view of road
- Analyzes road conditions ahead

3

SIDE MONITORING

- Records side view of vehicle
- Option to record left and/or right sides of the vehicle
- Captures hard-to-see sideswiping incidents

4

REAR MONITORING

- Records rear view of a truck or trailer
- Captures backing up and rear-end incidents

1

2

3

5

4

2

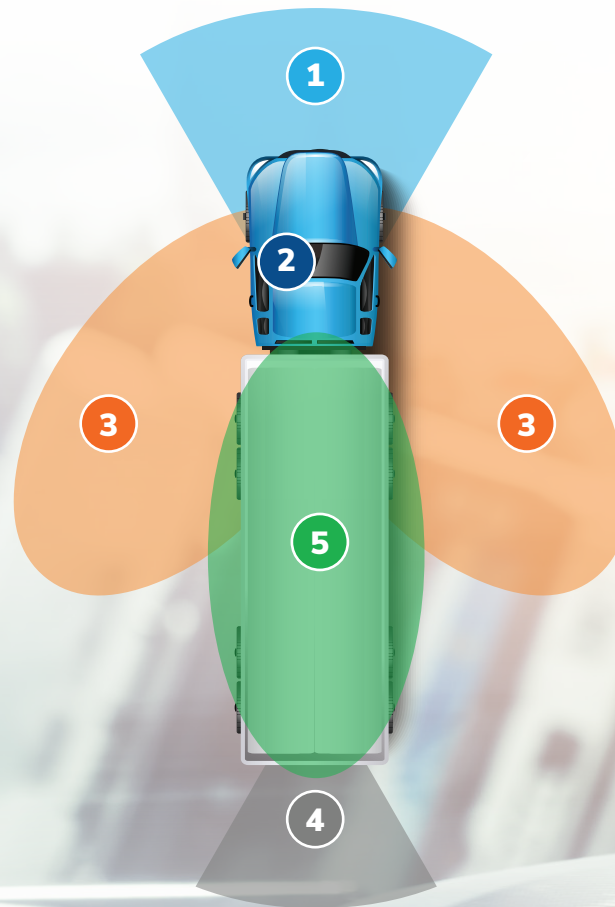
DRIVER MONITORING

- Records driver and cabin area
- Monitors distracted driving
- Monitors policy violations like usage of seatbelts or mobile phones for driver protection and compliance

5

INTERIOR MONITORING

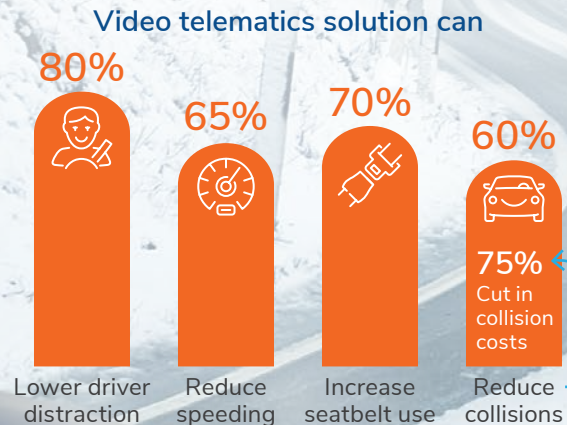
- Records inside vehicle or trailer
- Captures loading/unloading procedures, damages, disputes, and theft as video evidence



THE GROWING BENEFITS OF VIDEO SAFETY

Enhance Driver Safety

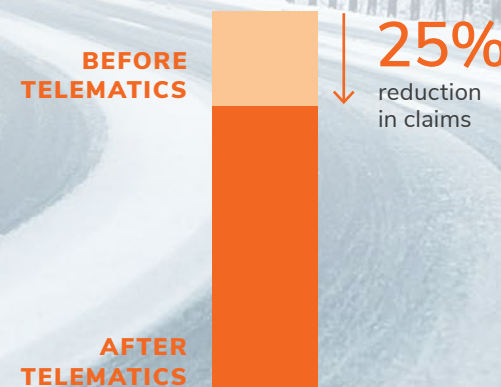
Providing fleet management solutions that engage drivers, promote safety and reward best practices is paramount. Incentivizing drivers based on objective-driven measures such as consecutive collision-free days and safe miles driven will strengthen safety standards. Here, the key enablers will be video-based safety solutions powered by AI and computer vision-based ADAS that proactively monitor, support and train drivers, ensuring driver/road/asset safety.



Act as an Objective Third Eye

Road accidents often disintegrate into protracted claims settling. Video footage provides an objective and reliable 'third eye' that protects fleet drivers from being unfairly blamed for the event, while helping quickly settle fleet insurance claims. Access to video evidence allows fleet companies and insurance partners to study events faster, lowering overall fleet costs related to collisions and reducing insurance premiums.

Video telematics result in less claims



Save Administrative Time

While fleet companies acknowledge that video data adds value, they do not want to spend time and resources wading through unnecessary footage. Fleet drivers are also understandably averse to constant scrutiny. To alleviate concerns, most platforms only store critical events related to unsafe driving behavior. This means that fleet managers and their drivers can focus on the most important footage.

Streamline accident investigation



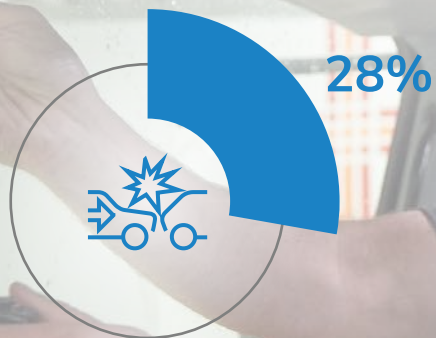
Source: Frost & Sullivan.

IN-CAB ALERTS CAN PREVENT ACCIDENTS

In-cab alerts, in the form of visual or audio alerts, continuously monitor, provide feedback, and correct risky driving behaviours. Therefore, they act simultaneously as collision avoidance solutions and on-the-job training tools. Unlike traditional G-sensor based solutions that are reactive, AI-based solutions are proactive and use on-board vision analytics capabilities to forewarn the driver of a risky event.

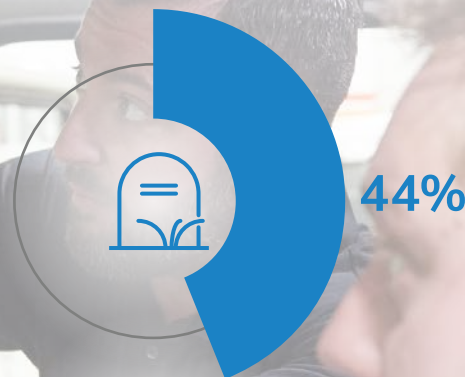
The implementation of
Forward Looking Collision
Avoidance technology
could reduce

REAR-END
CRASHES



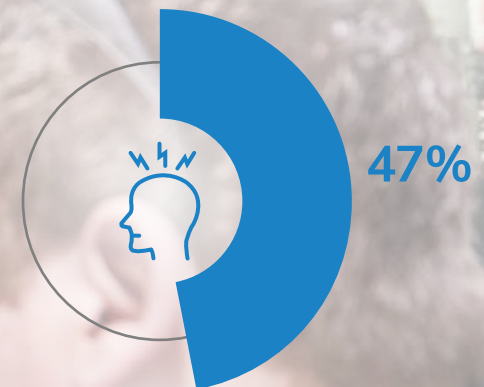
(over 4,500
every year)

FATALITIES



(almost 100
every year)

INJURIES



(almost 3,600
every year)

NOTE: Intelligent video solutions are also seen as a key technology with the potential to substantially mitigate accidents and related costs.

Source: Frost & Sullivan.

VIDEO SAFETY BENEFITS FLEETS, DRIVERS & INSURERS

- Shielded against fraudulent claims and cargo theft
- Compliance with seat belt regulation
- Increased driver retention
- Improved fuel efficiency—thanks to reduced speeding
- Increased vehicle component lifetime

FLEET



INSURANCE



- Better risk insights
- Easier processing for legitimate claims
- Identification of crash-for-cash scams
- Reduced claim rates
- Easier investigation and decision making

DRIVER



- Exoneration from false claims and accusations
- Monetary rewards and recognition based on improved driver score
- Consistent improvement in driving skills
- Safer overall working environment

EVOLUTION OF VIDEO SAFETY



Source: Frost & Sullivan.

MARKET OUTLOOK

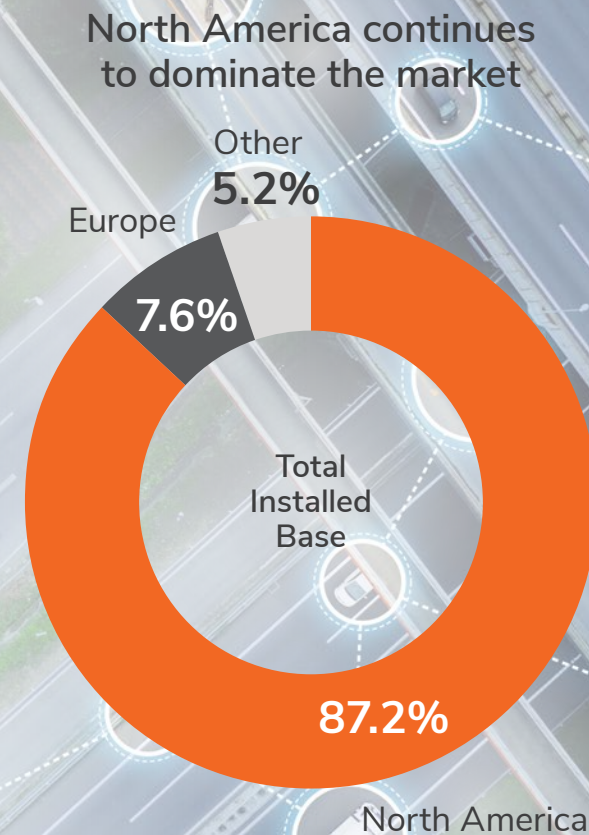
The US and UK have experienced immense growth and adoption of video safety solutions by commercial fleets in the last five years. Owing to growing demand for safety and proven positive ROI among commercial fleet operators, the market is expected to register a compound annual growth rate (CAGR) of 22.2% from 2018 to 2025, surpassing 3.5 million units by 2025.

North America continues to dominate the market—it accounted for 87.2% of the total installed base, followed by Europe that held a 7.6% share.

In North America, market penetration was 3% in 2018 and is expected to reach 8% by 2025. Globally, market penetration is expected to reach 2.4% in 2025 (from 0.7% in 2018) for total commercial vehicles in operation.

Although a major change in economic dynamics effected by the global economic slowdown and the ongoing pandemic situation is impending, fleets worldwide have turned towards innovative technologies to improve operational efficiency as a strategic response to tackle the recession. This reiterates the importance of safety technologies in improving efficiency and saving money.

The market is expected to register a **CAGR OF 22.2% FROM 2018 TO 2025**, surpassing 3.5 million units by 2025.



Source: Frost & Sullivan.

SOLUTION SPOTLIGHT: SAMSARA

A Unified System Propelling Safety, Efficiency and Sustainability

Samsara helps fleets increase their safety, efficiency, and sustainability by offering a comprehensive platform that serves a wide range of end user needs, like regulatory compliance, paperless workflows, and real-time equipment monitoring. Their video safety solution stands out for its embedded AI, data-driven coaching workflows, and intuitive safety reporting tools. These customer-focused solutions are easy-to-use, flexible, highly scalable, and support exceptional enterprise-grade security.

5 Key safety benefits of Samsara

LEVERAGE INSIGHTS



Gain visibility into the safety of your operations

SAVE LIVES



Analyze driving trends to impart safe driving practices

EXONERATE DRIVERS



Protect innocent drivers and defend yourself against false claims

BUILD A SAFER CULTURE



Incentivize safety with data-driven rewards programs

ENHANCE BRAND VALUE



Build a positive reputation and improve CSA scores

Source: <https://www.samsara.com/safety#impact2>

SAMSARA'S INTELLIGENT AI DASH CAMS YIELD NOTABLE GAINS

The innovative Samsara AI Dash Cam has been designed to mitigate a range of high-risk driving behaviors. Coming in both front-facing and dual-facing models, it offers in-cab driver assistance using live scene analysis and a built-in speaker for real-time alerts, which can minimize the incidence of distracted driving and warn drivers about near collisions. As soon as HD event footage is uploaded to the cloud—which only takes minutes—Samsara provides in-depth data and analytics to fleet managers for driver coaching and claims management.



Unparalleled Fleetwide Visibility

Cameras simultaneously capture high definition videos with 30 frames/second capture of both external (the road) and internal (the driver) environments with in-cab Infrared LED to optimize recording at night.

In conjunction with the Samsara Vehicle Gateway, their dash cams automatically upload video and still images, along with GPS data, engine diagnostics, and more, to the Samsara Dashboard, providing centralized visibility into fleet-wide operations.



Advanced AI to Prevent Incidents

Cameras use embedded AI to analyze road scenes in real-time, enabling detection of distracted driving and policy violations in the cab, as well as near collisions on the road ahead.

In-cab audio alerts help drivers adjust behavior to prevent accidents before they happen.

Dashboard Example



Streamlined Video Review

Event footage is always automatically uploaded to the Samsara dashboard and Admin App and can be accessed from any smartphone or web browser at any time, removing the need to manually recover memory cards from vehicles or download footage from a DVR.

Additional footage is easily requested and downloaded over-the-air. This helps to determine responsibility for the accident, exonerate drivers from false accusations, and facilitates insurance claims.

Reviewing incidents is easier to manage thanks to labels and smart folders for organization and filtering.

SAMSARA'S INTELLIGENT AI DASH CAMS YIELD NOTABLE GAINS



Creating a Positive Safety Culture

Driver scorecards make it possible to reward and incentivize safe driving and configure scores based on company-specific priorities

A mobile Driver App allows drivers to view their safety ranking relative to their peers, encouraging safe driving behavior.

Data-driven coaching workflows empower safety managers to give regular, consistent feedback to help drivers improve



Affordable and Ease of Use

Samsara dash cams offer high quality and value-added features that bring together state-of-the-art technologies—in imaging, encoding and wireless data networks, among others—at cost-effective prices.

They are also easy to install and use; the dash cams can be completely set up within ten minutes, while users can access footage on the Cloud dashboard without needing to be proficient in IT.



Straightforward Implementation

Samsara's sleekly designed plug-and-play hardware with intuitive features score high on both form and function.

In addition to the convenience of being able to achieve complete setup in under an hour, Samsara also offers 24/7 in-house support to its customers via phone and email.



Highly Scalable with Enterprise-grade Security

An enhanced safety profile is underpinned by single-sign on (SSO), role-based administration, and custom hierarchies. This is reinforced by superior scalability supported by open developer APIs coupled with the ability to rapidly scale up to tens of thousands of vehicles.

HD video, advanced analytics, and sensor data unify on a single, integrated platform to enable comprehensive 360° insights into incidents. This helps in the accurate reconstruction and identification of the causes behind incidents.

SAMSARA PROVIDES PROVEN ROI

Avoiding False Claims

Video recovery and proximity search make it easy to find the cause of the accident and avoid fraudulent claims. This pre-empts tedious claims processes and unnecessary settlements, enabling tremendous cost savings.



CASE-IN-POINT

Mitchell Companies achieved a **34% decrease** in auto claims with associated savings estimated at **\$150,000–\$200,000**.

Decreasing Insurance Costs

Insurance companies are aware that Samsara dash cams demonstrably enhance safety and reduce risk. Accordingly, many insurance companies offer premium discounts, credits or subsidies to fleets that install Samsara dash cams.



CASE-IN-POINT

Simco Logistics recorded fewer untoward incidents, with a subsequent decrease in its liability. The result was a **15% reduction** in the company's insurance premium.

Reducing Vehicle Wear and Tear

On detecting harsh events, Samsara dash cams provide in-cab audio alerts to the driver. This substantially reduces driving practices that contribute to vehicle wear and tear, while lowering associated maintenance costs.



CASE-IN-POINT

Empress Ambulance Services was able to **save \$15,000** in repairs per vehicle associated with fewer out-of-service episodes and higher uptime.

Minimizing Labor Costs

Samsara's digital driver safety scorecards and video coaching tools continuously improve driver performance. Positive interventions, combined with rewards programs, boost driver retention, thereby saving on costs to train new drivers.



CASE-IN-POINT

Dohrn Transfer Company experienced a **10% increase** in driver retention, **saving \$8,000** per retained driver in terms of hiring and replacement costs.

SAMSARA'S INTEGRATED PLATFORM: AN ALL-IN-ONE SOLUTION

Samsara's suite of hardware and software integrates seamlessly to support a range of outstanding benefits, including video safety, vehicle & trailer tracking, driver workflows, compliance, and more. Samsara's hardware architecture is modular and enables a range of customization options. The ability to deploy plug-and-play integration of this modular hardware with Samsara's suite of gateways, sensors, and cloud-based software means the offerings are extremely flexible and cost-effective.

GPS FLEET TRACKING



Live vehicle location tracking, trip histories, geofence alerts

FUEL & MAINTENANCE



Fault code monitoring, paperless DVIRs, usage-based maintenance

TRAILER TRACKING



Theft detection, utilization reporting, cargo and temperature sensors

REEFER MONITORING



Live temperature and reefer monitoring, historical logs

ROUTING & DISPATCH



Route monitoring, historical performance analysis

COMPLIANCE



Centralized reporting and analysis for HOS & IFTA

DOCUMENTS & MESSAGING



Centralized recordkeeping with uploaded photos of PODs, receipts, etc., two-way messaging

DASH CAMS



Automatic video uploads, distracted driving detection, in-cab voice coaching

COACHING WORKFLOWS



Driver scorecards, safety trends, and recommended coaching scripts

WIFI HOTSPOT



In-cab WiFi, cellular data included

SAMSARA'S ROAD TO SUCCESS—WHY SAMSARA IS A COMPANY TO WATCH

Right Mix of Customer Commitment and Innovation

Samsara is a trend setter in the video safety industry as it clearly solves major challenges for fleet operators and drivers with its path breaking video safety technology. Samsara's video safety platform is equipped with infallible security and highly customizable software architecture that gives great flexibility to customers both in terms of pricing as well as building a solution that precisely fits their needs.

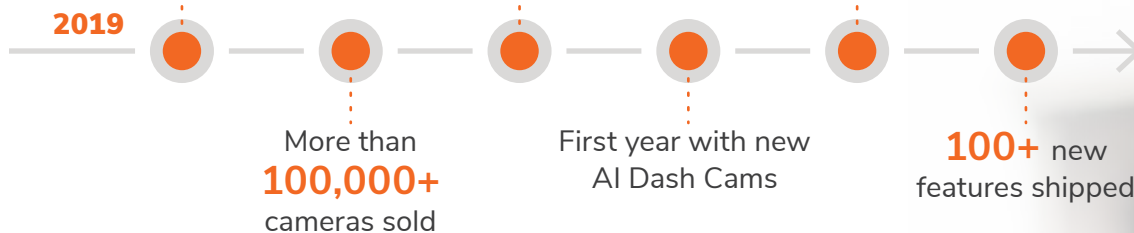
Mapping Samsara's past achievements and growth trajectory launches the company into an exponential growth projectile.

Fastest growing

video telematics
vendor by units
shipped/sold

200,000+
active cameras
deployed

More than
15,000
customers



Samsara's success factors are its customer targeted innovations and pre-/after-sales support which has created a huge base of happy customers. The company's technological expertise successfully solves many of the industry's lasting pain points. Samsara's video safety solution is poised to grow multifold taking on a sharp growth trend. By virtue of these, [Samsara is justifiably one of the most interesting companies to watch out for in 2020 and beyond.](#)



TWEET
THIS



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