

**Effect of Dashboard Camera Installation
Incentives on Automobile Insurance Rates
(HR 197)**

Report to the Legislature



Louisiana Department of Insurance

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Louisiana Department of Insurance

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HR 197

Effect of Dashboard Camera Installation Incentives on Automobile Insurance Rates Louisiana Department of Insurance – December 30, 2022

Background

HR 197 of the 2022 Regular Session by Rep. Robby Carter urged and requested “the Department of Insurance to study and make recommendations to the Legislature of Louisiana regarding the effect of dashboard camera installation incentives on automobile insurance rates.”

HR 197 was preceded by HB 290 by Rep. Robby Carter which would have amended and reenacted R.S. 22:1457(E) to do the following:

1. Require a five percent (5%) premium reduction for the following coverages:
 - a. Bodily injury liability.
 - b. Property damage liability.
 - c. Personal injury protection.
 - d. Medical payments.
 - e. Collision.
2. Require insurers to establish a system for certification of the installation of dashboard cameras.
3. Permit the insurer to impose a penalty and to deny future discounts for insureds that falsely certify the installation of a camera or receive the discount for inoperable cameras.
4. Require the commissioner to promulgate rules for qualifying devices.
5. Permit the commissioner to maintain a list of approved dashboard cameras.
6. Require the commissioner to promulgate a form for the insured to certify that he has installed a dashboard camera that conforms to the size, installation location, and product specifications requisite to receive the premium reduction provided in Subsection (E). The certification form shall include a statement that informs the insured of his duty to maintain an operating dashboard camera at all times and that the insurer may impose a penalty pursuant to Paragraph (3) of Subsection (E), if the insured makes a false certification or it is discovered that his dashboard camera is no longer operating.

Other States

In the 2021-2022 New York legislative session, there were companion bills, S5546 and A2673, addressing dashboard camera insurance discounts for “non-commercial private passenger insurance.” The bills provided for the following:

1. Require a five percent (5%) premium reduction for the following coverages:
 - a. Bodily injury liability.
 - b. Property damage liability.
 - c. Personal injury protection.
 - d. Medical payments.
 - e. Collision.
2. Permit insurers to establish a system for certification of the installation of dashboard cameras. Require the insurer to include in each certification completed by an insured a statement that informs the insured his duty to maintain the camera and the penalty for failing to do so or to falsely certifying installation.
3. Require the superintendent of financial services, in consultation with the commissioner of motor vehicles, to promulgate rules relative to the discounts and the installation of dashboard cameras.
4. Permit the insurer to impose a civil penalty and to deny future discounts for insureds that falsely certify the installation of a camera or receive the discount for inoperable cameras.
5. Require insurers to review any available images from dashboard cameras installed in any vehicles to which the claim relates in the settlement of a claim.
6. Require insurers to certify the review to the superintendent of financial services.
7. Require consideration of the images based on the “totality of the circumstances of a claim,” which “shall not be dispositive, but shall be considered as any other evidence relating to a claim.”
8. Require vehicle safety inspections to include a determination of the installation of an operational dashboard camera pursuant to rules promulgated by the commissioner of motor vehicles.
9. Require the commissioner of motor vehicles to forward records of inspection to any insurer relating to dashboard camera inspections.
10. Require the commissioner of motor vehicles to promulgate rules on the installation of dashboard cameras.
11. Permit the commissioner of motor vehicles to maintain a list of approved dashboard cameras.
12. Amend the civil practice and criminal procedure laws to provide that “Any image or images produced by a dashboard camera shall be admissible as proof of the occurrence or event depicted in such image or images.”

Louisiana

Currently Louisiana does not have any specific insurance laws or regulations relating to the use of dashboard cameras or other insurance technology (insurtech) in automobile rates. There are commercial automobile (CA) and private passenger automobile (PPA) programs that provide for various safety discounts, including telematics, cameras, other technology, or a combination thereof.

Report by Cambridge Mobile Telematics

Attached is a report prepared by an insurtech company, Cambridge Mobile Telematics, which goes into greater detail on the use of dashboard cameras and various factors affecting their evidentiary utility. The report finds that a discount of five percent (5%) or greater is possible with an appropriate camera and data storage system.

Cost to Consumer

The 2018 average bodily injury/property damage (BI/PD) liability annual premium in Louisiana was \$817.78. Using five percent (5%) as the discount factor, the annual insurance savings to a consumer using a dashboard camera would be \$40.89 ($\$817.78 \times 0.05 = 40.889$). The dollar amount of the discount would increase with coverage for medical payments and collision. Louisiana does not have personal injury protection (PIP), which is a no-fault coverage.

The attached report from Cambridge Mobile Telematics shows some example dashboard cameras available to consumers. They start at a price of \$50 and increase from there to \$100, \$120, and \$260, respectively. (Report, pp. 5 & 6). Depending on the price of the camera chosen and the insurance premium, a five percent (5%) discount could pay for a camera in one to two years.

Conclusion and Recommendations

The attached report prepared by Cambridge Mobile Telematics shows that there is a basis for actuarially justified automobile insurance premium discounts for the installation of dashboard cameras with appropriate technical capabilities. This field is growing and changing at a pace faster than legislators and regulators can monitor for changes in automobile insurance costs.

Actuarially justified discounts will be a function of increasing technological capabilities and the degree to which the technology is adopted by consumers. Legislative mandates of specific discounts will not keep pace with changes in technology.

The Louisiana Department of Insurance (LDI) recommends against specific mandated discounts for the use of dashboard cameras. A better approach would be to require rate filings to reflect actuarially justified discounts for the use of dashboard cameras and other safety technologies.

2022 Regular Session

HOUSE RESOLUTION NO. 197

BY REPRESENTATIVE ROBBY CARTER

A RESOLUTION

To urge and request the Department of Insurance to study and make recommendations to the House of Representatives of the Legislature of Louisiana regarding the effect of dashboard camera installation incentives on automobile insurance rates and to report its findings and recommendations.

WHEREAS, Kelley Blue Book reported in January 2022 that Louisiana is the state with the fourth highest average monthly cost for car insurance in the United States; and

WHEREAS, costs associated with insurance fraud play a pivotal role in the calculation of automobile insurance rates; and

WHEREAS, costs associated with litigation play a pivotal role in the calculation of automobile insurance rates; and

WHEREAS, video recordings are an admissible form of evidence that can objectively verify or rebut witness testimony; and

WHEREAS, a verified timeline of events and a verified cause of damage may minimize the cost of litigating an insurance claim; and

WHEREAS, an increased likelihood of being recorded on video may deter bad actors from attempting to engage in fraudulent behavior; and

WHEREAS, advances in recording technology have increased the quality of video recordings while decreasing the costs of dashboard cameras; and

WHEREAS, an automobile insurance discount for vehicles equipped with dashboard cameras may increase the number of vehicles equipped with such cameras; and

WHEREAS, savings from decreased litigation expenses and fewer fraudulent insurance claims may be passed down to policyholders in the form of lower insurance rates; and

WHEREAS, it is the duty of the Department of Insurance to study and regulate the insurance industry for the state of Louisiana.

THEREFORE, BE IT RESOLVED that the House of Representatives of the Legislature of Louisiana does hereby urge and request the Department of Insurance to study and make recommendations to the Louisiana Legislature regarding the effect of dashboard camera installation incentives on automobile insurance rates.

BE IT FURTHER RESOLVED that the Department of Insurance shall report its findings and recommendations in writing to the elected members of the House of Representatives of the Legislature of Louisiana and the David R. Poynter Legislative Research Library on or before January 1, 2023.

BE IT FURTHER RESOLVED that a copy of this Resolution be transmitted to the commissioner of insurance.

SPEAKER OF THE HOUSE OF REPRESENTATIVES

2022 Regular Session

HOUSE BILL NO. 290

BY REPRESENTATIVE ROBBY CARTER

INSURANCE/AUTOMOBILE: Provides for a five percent insurance rate reduction for motor vehicles with a dashboard camera

1 AN ACT

2 To amend and reenact R.S. 22:1457(E) through (H) and to enact R.S. 22:1457(I), relative
3 to motor vehicle insurance rate reductions; to provide a reduction in motor vehicle
4 insurance premiums to policyholders with a dashboard camera installed in their
5 motor vehicle; to provide a penalty for policyholders who falsely certify that there
6 is an operating dashboard camera in their motor vehicle; and to provide for related
7 matters.

8 Be it enacted by the Legislature of Louisiana:

9 Section 1. R.S. 22:1457(E) through (H) are hereby amended and reenacted and R.S.
10 22:1457(I) is hereby enacted to read as follows:

11 §1457. Discounts; rate reductions

12 * * *

13 E.(1) An insurer who delivers or issues for delivery in this state a policy for
14 motor vehicle insurance coverage shall provide a five percent reduction in premiums
15 charged for bodily injury liability, property damage liability, personal injury
16 protection, medical payments, and collision coverage with respect to a motor vehicle
17 equipped with an operating dashboard camera.

18 (2) An insurer who delivers or issues for delivery in this state a policy for
19 motor vehicle insurance coverage shall establish a system for the submission of

1 proof and certification that a dashboard camera has been installed in an insured's
2 motor vehicle and that the camera is in operating condition.

3 (3) If an insured receives the premium reduction provided for in this
4 Subsection and the dashboard camera is no longer in operating condition or the
5 insured has falsely certified that the motor vehicle is equipped with an operating
6 dashboard camera, the insurer may impose a penalty upon the insured, in an amount
7 not to exceed the premium reduction granted for one year or the period such
8 reduction was wrongfully granted, whichever is shorter. An insurer may thereafter
9 deny the premium reduction provided for in this Subsection, regardless of whether
10 an operating dashboard camera is installed in the motor vehicle in the future.

11 (4) The commissioner shall promulgate rules to establish standards for the
12 size, installation location, and product specifications of dashboard cameras that,
13 when installed in an motor vehicle, will qualify the insured for the premium
14 reduction provided for in this Subsection. The commissioner may maintain a list of
15 approved dashboard cameras that conform to the specifications established by the
16 commissioner.

17 (5) The commissioner shall promulgate a form for an insured to certify that
18 he has installed a dashboard camera that conforms to the size, installation location,
19 and product specifications requisite to receive the premium reduction provided in
20 this Subsection. The certification form shall include a statement that informs the
21 insured of his duty to maintain an operating dashboard camera at all times and that
22 the insurer may impose a penalty pursuant to Paragraph (3) of this Subsection, if the
23 insured makes a false certification or it is discovered that his dashboard camera is no
24 longer operating.

25 F. A rate reduction shall be authorized by the commissioner, if actuarially
26 justified, upon application of a rate filing by the carrier on motor vehicle liability and
27 physical damage insurance for coverage of any motor vehicle when the insured
28 vehicle is equipped with daytime running headlights or headlights equipped to
29 activate in inclement weather.

1 F: G. A rate reduction shall be authorized by the commissioner, if actuarially
 2 justified, upon application of a rate filing by the carrier on motor vehicle liability and
 3 physical damage insurance for coverage of any motor vehicle when the insured
 4 vehicle is equipped with a global positioning system (GPS) or a vehicle tracking
 5 system which aids in the recovery of stolen vehicles as such system shall be further
 6 defined by rules and regulations promulgated by the Department of Insurance.

7 G: H. For fire insurance rates, all insurers shall assign the fire protection
 8 grade of the fire servicing area where the property of the insured is located, provided
 9 that the property is located within seven road miles of the nearest responding fire
 10 department.

11 H: I. Any insurer who makes application to the commissioner for a rate filing
 12 shall provide in its application details as to what discount or reduced rate will be
 13 given to insureds who comply with the State Uniform Construction Code.

DIGEST

The digest printed below was prepared by House Legislative Services. It constitutes no part of the legislative instrument. The keyword, one-liner, abstract, and digest do not constitute part of the law or proof or indicia of legislative intent. [R.S. 1:13(B) and 24:177(E)]

HB 290 Original

2022 Regular Session

Robby Carter

Abstract: Provides for a 5% insurance rate reduction for motor vehicles with a dashboard camera.

Present law provides certain insurance rate discounts and reductions.

Proposed law retains present law and provides a 5% reduction in premiums charged for bodily injury, property damage liability, personal injury protection, medical payments, and collision coverage with respect to a motor vehicle equipped with an operating dashboard camera.

Proposed law provides that every insurer issuing motor vehicle insurance shall establish a system for the submission of proof and certification that a dashboard camera has been installed in an insured's motor vehicle and that the camera is in operating condition.

Proposed law provides that if an insured receives the premium reduction provided in proposed law and the insured has falsely certified that the motor vehicle is equipped with an operating dashboard camera or the dashboard camera is no longer in operating condition, the insurer may impose a penalty in an amount not to exceed the premium reduction granted for one year or the period such reduction was wrongfully granted, whichever is shorter.

Proposed law provides that an insurer may deny the premium reduction provided in proposed law if the insured has previously falsely certified that he had an operating dashboard camera.

Proposed law provides that the commissioner shall promulgate rules establishing standards for the size, installation location, and product specifications of dashboard cameras that, when installed, will qualify the insured for the premium reduction in proposed law.

Proposed law provides that the commissioner shall promulgate a form for an insured to certify that he has installed a dashboard camera that conforms to the size, installation location, and product specifications required to receive the premium reduction provided in proposed law.

Proposed law provides that the certification form promulgated by the commissioner shall include a statement that informs the insured of his duty to maintain an operating dashboard camera and that the insurer may impose a penalty if the insured makes a false certification or it is discovered that his dashboard camera is no longer operating.

(Amends R.S. 22:1457(E)-(H); Adds R.S. 22:1457(I))

Dash Cams: A Safety Incentive for Auto Insurers

An overview of the benefits of dash cams for consumers, ride hailing drivers, and insurers

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Executive Summary

Dash cams can be very affordable, are instantly available, and have demonstrated huge value in both consumer and commercial contexts. Today's recording technology is making high quality video recording affordable to most.

Due to the wide array of dash cams available, it is hard to discern the market leader. In fact, a random sample of 250 drivers was seen using over 60 brands.

When drivers buy dash cams, it is for peace of mind and proof of incidents (insurance, safety, or rating). All the most desired features are available on most cameras. As a result, drivers do use them a lot: more than 70% of a survey sample of ride hailing drivers viewed footage at least once per week and more than 50% submitted video footage as evidence of personal safety incidents or claims while on the job and on personal time.

Dash cams are however still very much evolving with more intelligence on the edge of the device, allowing for better understanding of risk and faster intervention in case of an incident.

Accelerating the usage of dash cams in the US could be instigated by the industry that would benefit from it the most. Today most telematics insurance programs give a 5% introductory discount or more to new customers because of the self-selection – safer drivers typically choose telematics insurance products.

A similar approach could validate a 5% discount to new drivers if they install a dash cam. However, a dash cam **combining video and telematics capabilities** could warrant a 15% or greater discount for its ability to not only capture video, but then to be able to offer additional data/insights into the driver, and other vehicle(s) behaviors, speeds, distance, etc.

Most dash cams on the market have the capacity to reduce litigation cost by half or more and the minimum requirements are low, mostly focused on the quality and the angle of recording. They would suffice to warrant a 5% insurance premium discount.

Effectively reducing legal costs is possible today with better quality dash cam devices and services that prioritize data security, protect against video tampering, and utilize cloud access. These better solutions could be incentivized by a 10% premium discount.

Making drivers safer using dash cams requires the latest technology, including programs with incentivization to improve driving behavior: scoring, contests, and reward models provided by actors such as insurance companies. Combining video data with telematics data, drivers could save as much as 15% on premium with advanced dash cam solutions.

A. The US dash cam consumer market today

There are many different versions of dash cams available today, from very basic to very sophisticated. In their most simplistic form, dashcams are cameras that are mounted on the dashboard or windshield of a vehicle. They record sounds and images inside and outside of the car while it is being driven.

Basic functionalities

Videos:

Dash cams have an array of capabilities. Low-end models are typically mounted on the windshield and record facing the road. More sophisticated models can be mounted on the dash and simultaneously record up to three channels: front, rear, and cabin. Sometimes they can even record in HD or 4K, with night vision or infrared.

Storage:

There are typically three ways to store data. Some cameras come with removable SD cards that overwrite the oldest footage as the card fills. Other cameras record wirelessly and send data via Wi-Fi or Bluetooth to a phone. Others still send data to the cloud using a cellular connection, which often comes with its own subscription.

Recording:

There are options for how and when the dash cam records. All of them record on a continuous loop after being turned on. Depending on the models, some have impact detection (moved comment to end: many). Pricier models offer “parking mode” with motion sensors that will record even when turned off.

Impact:

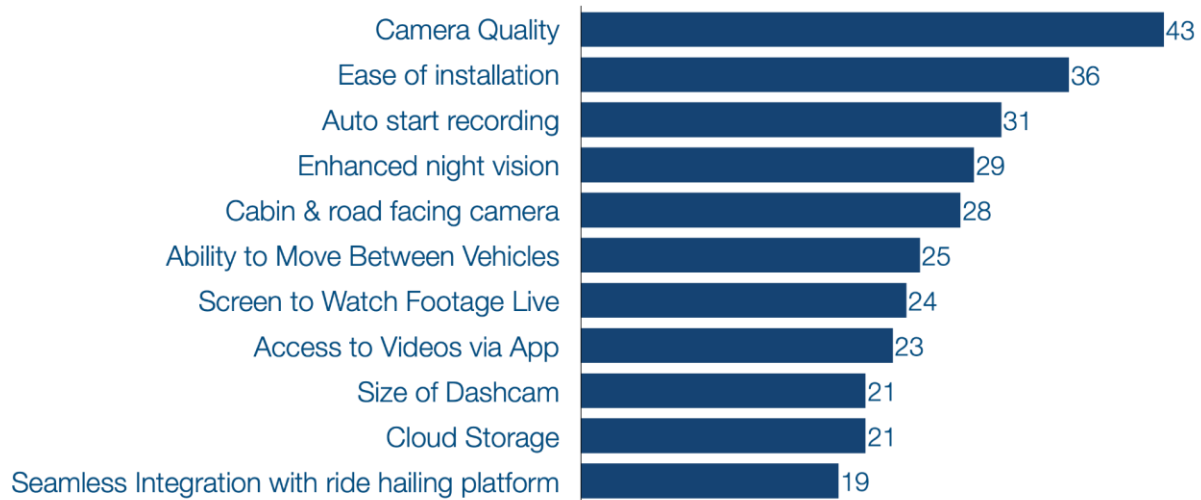
Most dash cams will start recording or avoid erasing a segment of recording after a crash is detected. Due to the high probability that the cause of the collision is out of sight by the time the shock is detected, higher end dashcams offer a 30-second buffered recording before and after the impact.

More advanced features include:

- GPS to track time, speed, and location of the event
- Bluetooth connection to smartphone app to play back videos, download footage, or change settings
- Remote control to let the driver keep a recorded event while driving without taking their eyes off the road

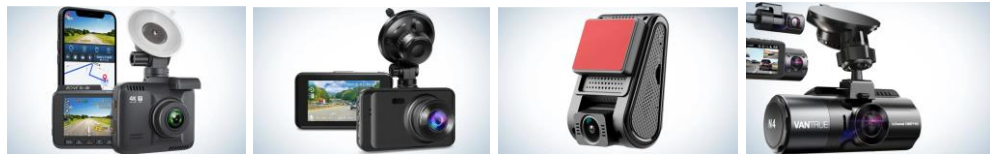
In a 2022 independent survey of ride hailing drivers using a vast array of dash cams, the following question was posed:

Which three dash cam features are most important to you?
(percentage of responses)



Availability and prices

Dashcam are easy to find through retail aggregators as well as common department stores. Their prices vary based on branding, functionalities, and build quality. Below are prices and illustrative examples.



	Rove R2 4k	Ssontong DashCam	Viofo A119 V3	Vantrue N4
Resolution	4K	1080	1440	4K/ 1080
Night mode	√	√	√	√
Field of view	150 degrees	170 degrees	140 degrees	150, 160, 165 degrees
Number of cameras	1	1	1	3
Display	√	√	√	√
GPS	√	x	√	x

Wi-Fi	√	x	x	x
Storage	512GB (not incl.)	32GB (incl.)	256GB (not incl.)	256GB (not incl.)
App	√	x	x	√
Parking mode	√	x	√	√
Recording buffer	1 min before & after	x	15s before/ 30s after	
Price	\$120	\$50	\$100	\$260

Legality of use in the US

Dash cam use is legal in all states, but some state rules apply.

Most states mandate that positioning on the windshield must not obstruct drivers' view. Other states regulate that dash cams must be fewer than 5 square inches if they are in the upper center of the windshield, and fewer than 7 square inches if they are in the lower right corner. They also must not be placed anywhere an airbag may deploy.

Dash cam footage can be used as evidence in most courts across the US. If there's evidence of a crime, a police officer or litigator can subpoena dash cam footage from the driver. Refusal to provide dash cam footage or deletion can lead to fines or even jail time.

Evidence of a crime is prerequisite. If there's no reason to believe a crime has been recorded, law enforcement cannot request footage without a warrant. Therefore, police officers are not allowed to ask to see a driver's dash cam footage after pulling them over.

Dash cam consumer benefits

Video footage can serve on the road, but also on parking lots or private property roads and driveways. The primary use of dash cams is to have first-hand evidence of any road incidents involving another driver, to avoid contradictory moments, and to enable law enforcement and insurance companies to identify faults.

Drivers also have the opportunity to help others by providing footage to the police involving incidents such as road rage. This will help with driver and vehicle identification from the license plate.

A secondary use of the dash cam, when it includes a cabin-facing camera, is driver safety. Dash cams encourage self-discipline and allow drivers to review their trips to improve. They can be an effective motivator for younger drivers to behave safely – avoiding reckless and distracted driving. Equally they can also provide long lasting road trip memories.





Security is a tertiary use. The parking function of some of the dash cams on the market enable constant surveillance of the vehicle as well as alerting if a collision takes place.

B. Dash cam use in commercial fleets

Professional features

Dash cams used in a fleet context are focused on driver management and claims handling. Aside from providing proof after the fact, these cameras are also used for risk analysis and accident prevention. Professional dash cams are more than a hardware solution: they combine more advanced hardware with data analysis to provide a range of services.

Fleet-focused dash cams vary from consumer dashcam in features, functionalities, and price. Below are prices and illustrative examples of dash cams used in ride hailing.

				
	DriveScape	RMP Model - T	322W Camera	Nexar Pro
HARDWARE				
Road and cabin-view cameras	√	√	√	√
Touchscreen built into camera	x	√	√	x
Enhanced night vision	√	√	√	x
No memory card required	√	x	x	x
Built-in GPS	√	x	√	√
LTE connectivity	√	√	x	x
Storage	Cloud	Cloud	MicroSD 128GB	MicroSD 32GB
Suction vs. adhesive mounting	Adhesive	Adhesive	Adhesive	Adhesive/Suction
Interior camera quality	720p @30fps		720p @60fps	720p @30 fps
Exterior camera quality	720p @30fps		1080p @60fps	1080p @60fps
Field of view	100°	145°	140°	135°
Charging	12V battery	12V battery	USB cord	USB cord
Actively uses Bluetooth	√		√	√
FUNCTIONS				

Auto-start recording	√	√	√	√
Impact detection	√	√	√	√
Access to audio recording	√	√	√	√
Parking mode	x	x	x	√
Access to videos via app	√		√	√
SERVICES				
Incident reporting system	√	√	√	
Cloud storage (unlimited & free)	√	√		√
Partnership with free legal support company		√		
Fully integrated with ride hailing and insurance backends	√			
Cost	\$300 or \$5/month	\$20/month	\$80-\$400	\$95-\$200

Fleet-specific benefits

In the fleet context, dash cams provide benefits in four developing areas:

- The use of sensors to produce telematics data identifying dangerous events such as harsh acceleration, braking, or cornering.
- The use of the cabin-facing camera to recognize patterns of behavior and trigger alerts. This can include driver drowsiness or distraction.
- The use of the external-facing cameras to recognize patterns of dangerous driving such as lane changes and trigger alerts.
- The use of cloud-based portals to manage video access and generate alerts.

As a result, fleet managers can receive incident footage and details like location, time, and key events. They are able to measure contextual risk factors, such as distraction, fatigue and tailgating, and analyze incidents more quickly to make decisions on driver or vehicle status.

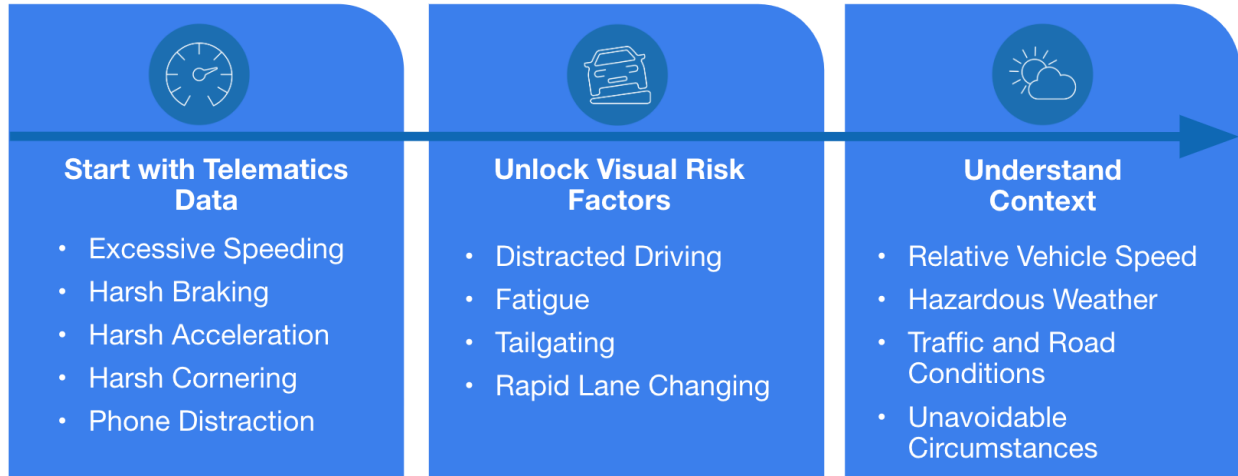
They can then use the videos to coach drivers on improving safety and performance before an accident happens. The information will be useful to protect drivers from false claims and to proactively manage risk, potentially leading to lower insurance rates.

From a practical safety management perspective, dash cams enable fleet owners to:

- See the full incident videos with contextual events directly in the fleet management portal.

- Identify targeted, coachable events using video for driver training.
- Identify the riskiest drivers or high-risk events using the fleet manager's portal dashboard.

Fleet dash cam solutions go far beyond cameras



Fleet dash cams' external-facing cameras are still frequently used but alone can only provide indirect analysis of a driver's attention. Accurate capture of driving risk is done using the driver's head (eyes, direction faced) and body gesture analysis from the cabin-facing camera. This can ideally be combined with contextual data to provide higher robustness and accuracy.

To that extent, new triggers are needed to identify patterns of behavior. These can include:

- Short patterns to generate immediate alerts on dangerous situations.
- Medium patterns to evaluate distraction and drowsiness.
- Long patterns to detect fatigue and driving habits that require driver coaching.

Dash cams are also generating vast databases of accident patterns that can be used in claims cost analysis. Machine learning technology and claims data can then continue to improve the detection of new dangerous driving patterns.

Ride hailing driver benefits

Dash cams used in ride hailing can operate with the same hardware and functionalities, but the service levels are much higher. In this market segment, drivers are at risk of losing their employment if their rating falls. It is therefore imperative for them to be able to dispute negative ratings or harassment claims. In a survey done with 255 ride hailing drivers, 67% of the participants bought a dashcam to have proof against harassment and unjustified low ratings.

The bad behavior is also found on the riders' side. Another 59% bought their dash cam to deter bad behavior from passengers. In fact, over 87% of respondents reported seeing better

behavior in their passengers after they installed a dash cam. Clearly riders appear less likely to misbehave if they know they are being recorded.

Have you noticed better behavior in your passengers after installing a dashcam?
(Percentage of respondents)



Because the footage is potentially carrying important information, 66% of respondents are reviewing their footage at least once a week and 41% are reviewing it every day. Whether they are reviewing footage for insurance or ride hailing purposes, or for personal use, drivers appreciate being able to review footage. 1 in 4 respondents mentioned having access to videos via an app is one of the most important features.

After reviewing the footage, it is critical the drivers can submit a video containing an incident to the ride hailing platform. 57% of drivers have submitted footage to their employer through an app.

Submitting footage prevents deactivation and unjustified low ratings, the two main reasons respondents reported buying a dashcam. When sending footage to their employers, drivers are most likely reporting passenger conflicts. When submitting to an insurer, the drivers are more likely to be reporting a crash, 59% of respondents said they have.

Dedicated functionalities

In the ride hailing segment, ownership and access of video footage is paramount to the service provision. This user segment is facing very specific difficulties such as high and continuously rising insurance costs alongside high liability caps and litigation rates. Video recording inside the vehicle is needed to identify potential issues between passengers and drivers and that data must be secured end-to-end with no tampering possibility.

Dash cam solutions integrated with ride hailing service providers can benefit from automatic transmission of the video for quick assessment with near real-time notification of incidents or unsafe driving behavior. The alerts include incident footage with GPS location, time, and key events description as well as contextual risk factors, such as distraction, fatigue, and tailgating.

The company is then able to efficiently triage incidents with unbiased footage of what really occurred on a trip, identify “bad actors,” and remove them from the platform based on video and telematics data. In the case where the driver is innocent, it is also essential they can get back on the road working as fast as possible.

From a driver perspective, DIY installation is critical because drivers at times aren't willing or able to go to a workshop to get the camera hardwired to the car battery. The camera needs to be able to detect incidents outside and inside the vehicle autonomously and/or using a discrete manual trigger. Finally, access to the footage needs to be easy and drivers need to be able to share it with their employers immediately.

The drivers then need full access to the videos on the server and the ability to request them for a specific time period. It is important that they have access to a trusted source to rely on when bad things happen on the road. Also, immediate video feedback can create a culture of continuous improvement and safety.

In terms of data ownership, ride hailing companies cannot own the video data due to contractor law obligations. Since the cameras can be on for any type of trip, they also record personal time data.

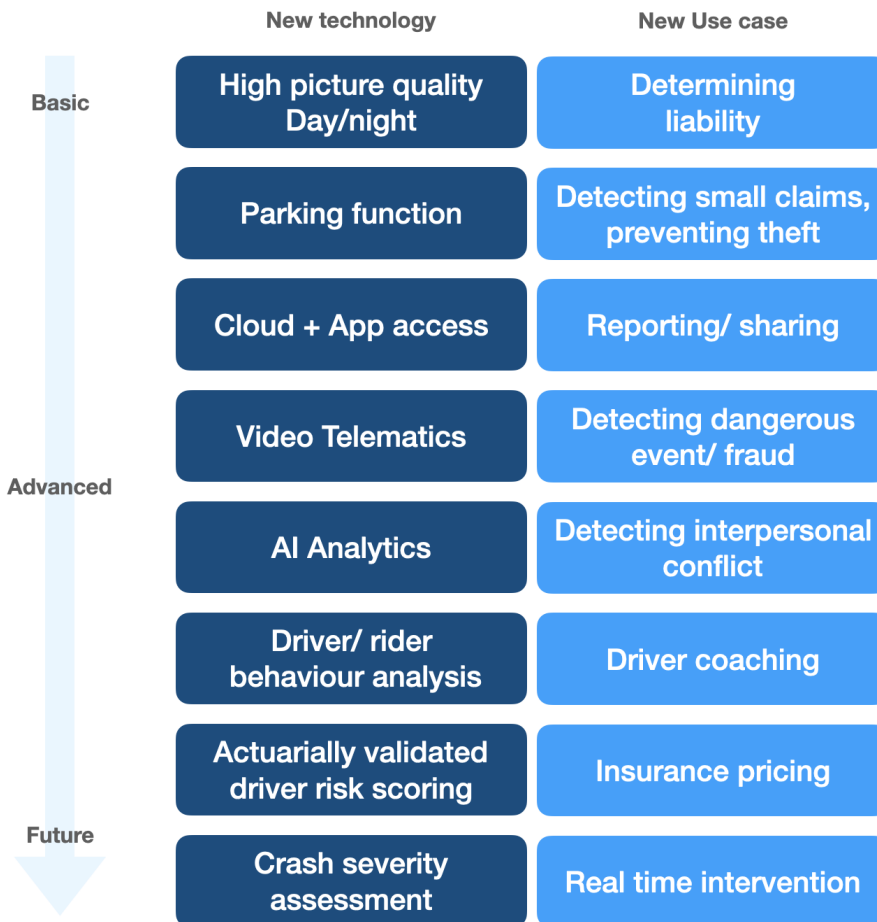
Legality of use in the US

Some videos include recorded audio. In the context of ride hailing, it is important to note that the use of electronic recording equipment is governed by federal and state laws. In 38 states the recording of conversations without the consent of the persons concerned is permitted, while 12 states (California, Connecticut, Florida, Illinois, Maryland, Massachusetts, Michigan, Montana, Nevada, New Hampshire, Pennsylvania, and Washington) require the consent of all parties to a conversation. Federal law always makes it illegal to disclose the content of a call without the consent of the parties.

The evolution of dash cams

The chart below demonstrates how dash cams are continuously advancing. While hardware updates have been at the center of the evolution recently, data analysis is now central to the latest innovations. In parallel, the use cases of the dash cams have changed, as well.

8 steps in dash cams evolution



C. The eyewitness account problem

Several studies led by the National Academy of Sciences, American Psychological Association, and the Department of Psychology at Stockholm University¹ have been looking at current practice and use of eyewitness testimony with the aim of understanding why identification errors occur.

Eyewitness identification has a long history of use in this capacity by law enforcement and the courts. The consequences of wrong convictions based on flawed eyewitness accounts are profound and well documented.

Broadly speaking, eyewitness misidentifications can be characterized as failures of visual perception or memory, the former being seeing things inaccurately, the latter being loss of accuracy or precision in the storage, maintenance, and recall of what was seen. Having access to video data has become an essential part of investigatory periods, as evidenced by CCTV and police body cameras. Enabling drivers to collect video footage while they work can provide them with an objective retelling of the event that cannot be misconstrued.

How do people see and identify

Sight is the initial process of detecting light and extracting basic image features. The sensation of seeing fades quickly; depending on the level of attention and varying external and internal limitations, only a fraction of what is sensed is actually perceived.

Perception is the process that integrates visual information and links it to environmental causes, makes it coherent, and categorizes it through the assignment of meaning, utility, value, and emotional impact.

What is perceived is what populates visual experience and memory. The reliability of reported visual experience is limited by three factors: uncertainty, bias, and confidence.

Uncertainty refers to the probability that what has been seen could have been affected by “noise.” This can be natural sources, such as occluding surfaces, glare, or shadows, or from sensory content not relevant to the observer’s goals, like a distracting sign or a loud sound.

Biases fill in the blanks when visual information is uncertain. They are a reflection of what we believe is likely to be true based on prior experience. For example, prior knowledge that bank robbers carry guns enhances the probability that the bank robber will be perceived with a gun in hand in an eyewitness’ memory, even when the sensory evidence is equivocal. In other words, misinformed biases cause us to perceive or make decisions about things that don’t necessarily exist.

¹ [Why Eyewitness Fail](#) (2017). Proceedings of the National Academy of Sciences (PNAS)

To make matters worse, the perceptual naiveté born from uncertainty and bias is often associated with misplaced **confidence**, which is arguably the most pernicious feature of eyewitness reports. An eyewitness may be wrong for the reasons described above, but a witness who testifies in court with confidence is generally very compelling. Contrary to common intuition, however, courtroom statements of confidence are very poor predictors of accuracy.

In adjudication, judges and juries have long embraced self-assured reports of what was seen. The complacency and reliance on eyewitnesses have been put into question in recent years by two facts:

- Post-conviction DNA analyses reveal that eyewitnesses sometimes identify the wrong people
- The sciences of vision and memory indicate that wrongful conviction based on eyewitness testimony is likely a priori, given conditions of uncertainty, bias, and overconfidence.

Modern science including dash cam, machine learning, and AI, is now having a profound influence over a critical matter of public policy, legal practice, and judicial standards, and in doing so brings our society to a place of greater justice.

D. Insurance and legal benefits

Over the past 10 years, commercial auto insurance has not generated an underwriting profit. This has been driven by increasing claims costs, the changing nature of risk, and challenging liability environments.

Because dash cams solve the eyewitness problem, insurers and the legal profession have long perceived them as a useful tool to assess liability, manage claims, and reduce costs. Until recently, US insurers have stopped short in providing casual drivers incentives to install a dash cam.

Outside the US, carriers such as [MyFirst](#) in the UK give discounts of up to 30% to prospective customers to install a dashcam. The company uses dash cams to improve their book of business by motivating safer driving and by measuring risk with greater context and precision. They also have been able to mitigate losses since dash cams provide the objective recollection necessary to resolve claims quickly and efficiently.

Dash cams reduce settlement time and litigation costs

Insurers are keen to secure First Notification of Loss (FNOL) as fast as possible and have access to any video evidence that helps them confirm liability, reduce claims processing times, and minimize costs.

As an illustration, the average cost of a claim when reported within two hours is \$1,250 compared with over \$5,000 when there is a delay.² Video footage can settle claims up to twenty times faster, as dash cam evidence enables insurers to settle disputes and helps drivers prove they were not at fault.³ The chances of a split liability outcome are also significantly reduced as definitive video evidence makes it easier to see which party holds the blame.

For insurers to reduce settlement time with dash cams, the following conditions must be met:

- *The video data must be transferred, stored, and secured in a way that prevents tampering but continues to guarantee privacy rights.*
- *Recorded incidents must be immediately stored on secured servers for easy event sharing and searching. Removable SD cards do not qualify as storage is unsecured and could be altered.*

Dash cams have demonstrated major benefits with respect to **litigation costs** as well. Video recordings are an admissible form of evidence that can objectively verify or rebut witness testimony. From the insurance perspective, an estimated [25% of car insurance premiums](#) go toward fighting fraudulent claims such as staged accidents or exaggerated reports. The National Insurance Crime Bureau (NICB) revealed that P&C insurance companies in America lose an average of [\\$45 billion to insurance fraud every year](#). Auto insurance fraud makes up the largest portion of that loss – \$29 billion – and incentivizing the use of dash cams positions insurers to help fight that fraud.

A study examining data from 4,000 vehicles belonging to a home-delivery fleet encompassing more than 5,500 claims in December 2018, compares the claims data between the vehicles that were equipped with a dash cam and those that were not.⁴ The results demonstrate that having video of the incident from a connected dash cam was helpful in clarifying important details, resulting in a 55.14% percent overall drop in all payouts for Hit-by-Third-Party Claims. Claims costs were 72% lower for camera-equipped fleet vehicles that were hit by third parties while stationary. In addition, 60% of claims were successfully dismissed in those cases, compared to just 35% for trucks without a camera. When the fleet vehicle was hit by a third party from behind, costs ended up about 42% less.

In terms of payouts, the study found that when vehicles were outfitted with dash cams, claims costs were lower for nearly all incident types – even when the fleet vehicle was shown to have

² Source: Zurich Global Corporate

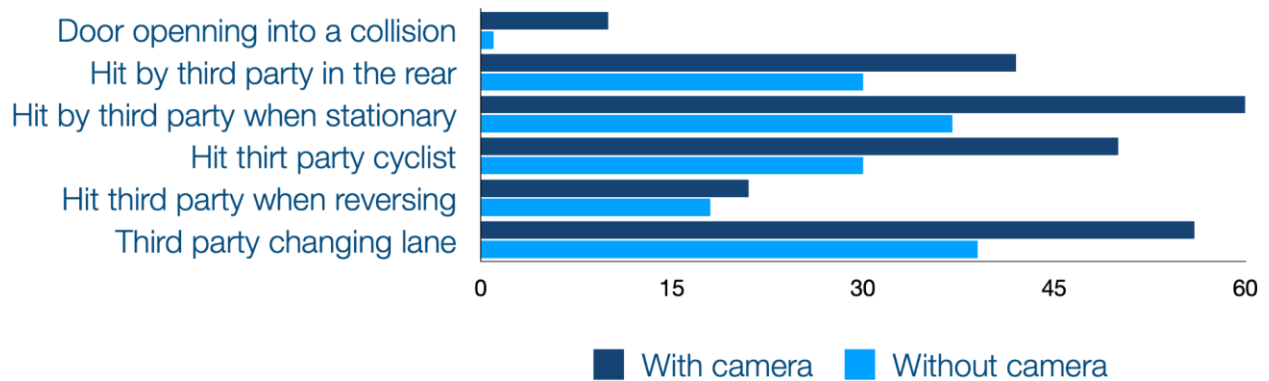
³ Source: Insurance Edge <https://insurance-edge.net/2021/10/14/in-car-technologies-can-help-insurers-manage-risk/>

⁴ Study source: <https://surecam.com/wp-content/uploads/2019/10/SureCam-Plexus-Law-UK-Study.pdf>

struck a third party. Costs dropped by over a third for collisions with cyclists, and by at least half for rear-end collisions and accidents with third parties when the fleet driver was in reverse.

An early positive outcome in litigation is when false claims are dismissed altogether. That was the case for camera ready fleet vehicles hit by cyclists and by third parties while stationary, as well as when a third party was changing lanes, as shown in the chart below.

Percentage of successfully dismissed claims (%)



Source: Plexus Law

For insurers to reduce litigation costs with dash cams, the following requirements must be met:

- *It includes a minimum screen resolution quality of 1080p @30fsp recording*
- *It is capable of clearly filming at night*
- *It comes with a viewing angle superior or equal to 100°*
- *It is easy to install by the driver*

Dash cams measure and reduce risk proactively

Dash cams do not actively alter driver behavior – they are primarily installed as a witness, not influencers. Thanks to technological evolution in data analysis, commercial dash cams have demonstrated they can increase safety and reduce risk.

There are suggestions that using dash cams can cut at-fault accident rates by up to 20% thanks to a combination of factors.⁵ First, when drivers feel the camera is on them, they are more likely to act responsibly. Second, identifying dangerous driving habits such as distraction can be used as feedback with the goal of changing behavior. Dash cams can also help fleet managers and

⁵ Source: Trakm8 <https://www.trakm8.com/fleet-management/improving-driver-behaviour/>

drivers identify poor driving patterns – such as speeding or aggressive maneuvers and provide targeted training to improve specific skills and driving abilities.

The National Surface Transportation Safety Center for Excellence (NSTSCE) found⁶ that when combined with driver coaching, dash cams reduced safety-related accidents by 52%.

Outside the professional fleet sector, automatic event detection using telematics and visual risk factors can produce a precise driver score that reflects how drivers can improve. However, without tangible incentives such as rewards or discounts, behavior change will not take place. This has been well documented by the usage-based insurance sector.

In effect, a discount or rebate on the dash cam price may convince the driver to purchase and install one. But only a behavior-based reward or discount will make that driver (1) stay engaged in the program, and (2) undergo habitual driver change, thereby becoming less risky.

For insurers to generate risk reduction benefits with dash cams, the following requirements must be met:

- *It needs to be able to combine telematics and video data to accurately reflect the driver's risk.*
- *It needs to be paired with an app that allows the drivers to see their score.*

Note: Drivers need to ensure their camera is always on when they drive. Insurers can occasionally require drivers to submit a sample video to verify it is set up and working correctly.

Some states are already thinking ahead about incorporating dash cam footage into premium pricing. Because unbiased video data helps reduce settlement time and litigation costs, as well as fight fraud and reduce risk, New York has introduced a bill proposing a mandatory 5% insurance premium discount to casual drivers using dash cams. Currently, the bill continues to make its way through New York's legal system and has not yet been enacted, but if it passes, it will pave the way for other states to follow suit both in personal and commercial lines.

⁶ Source: NSTSCE report: <https://zubie.com/blog/fleet-dashcam-transition/>

Conclusion

Dash cams are video cameras with manual or complex triggers enabling the recording of an event. They are affordable, widely available, and come with a variety of features. Today, dash cams have demonstrated they can reduce litigation and fraud, lower court costs, and accelerate legal procedure. **Accelerating the usage of dash cams in the US could be instigated by the industry that would benefit from it the most.** New York has recently introduced a bill proposing a mandatory 5% insurance premium discount to non-commercial drivers using dash cams. This report proposes that insurers consider incentives to consumer, ride hailing, and commercial drivers installing dash cams in their car for a 5-15% premium discount, proportional to the dash cam capabilities.