SMARTDRIVE®

12 POINT BUYING GUIDE TO VIDEO-BASED SAFETY SYSTEMS

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NOT ALL VIDEO-BASED SAFETY PROGRAMMES ARE CREATED EQUAL.

These 12 criteria should be considered as part of your selection process. They can make the difference between a programme you quickly outgrow and one that keeps pace with your business.

INCLUDES COMPARISON WORKSHEET

12 POINT BUYING GUIDE TO VIDEO-BASED SAFETY SYSTEMS

PRINT FOR COMPARISON

		SMARTDRIVE	OTHER SYSTEM	OTHER SYSTEM
1	Combines video with integrated driving improvement program	☑	☐	☐
2	Triggers video events from multiple real-time data sources: accelerometers, vehicle data, active safety systems, and others	☑	☐	☐
3	Sampling volume is statistically relevant and measures all drivers	☑	☐	☐
4	Delivers a consistent number of reviewed videos each month	☑	☐	☐
5	Automatically offloads video within minutes of incident	☑	☐	☐
6	Flexible program that is configurable to your fleet policies & priorities	☑	☐	☐
7	Open platform that easily connects to other systems	☑	☐	☐
8	Includes variety of recording durations – including extended recording	☑	☐	☐
9	Separated camera with forward-facing only deployment option	☑	☐	☐
10	Directly integrates with back-office operational systems	☑	☐	☐
11	Delivers role-based management reporting and KPI's	☑	☐	☐
12	Ongoing product investment and active technology roadmap	☑	☐	☐

SMARTDRIVE 12-POINT BUYING GUIDE

1 INTEGRATED PROGRAMME

2 VIDEO AVAILABILITY

3 CAMERA OPTIONS

4 DATA SOURCES

5 COACHING WORKFLOW & TOOLS

6 RECORDING DURATION

7 MANAGED SERVICES/REVIEW

8 INTELLIGENT DATA

9 MANAGEMENT METRICS & KPIS

10 FLEXIBILITY

11 OPEN PLATFORM

12 BACK-OFFICE SYSTEMS INTEGRATION

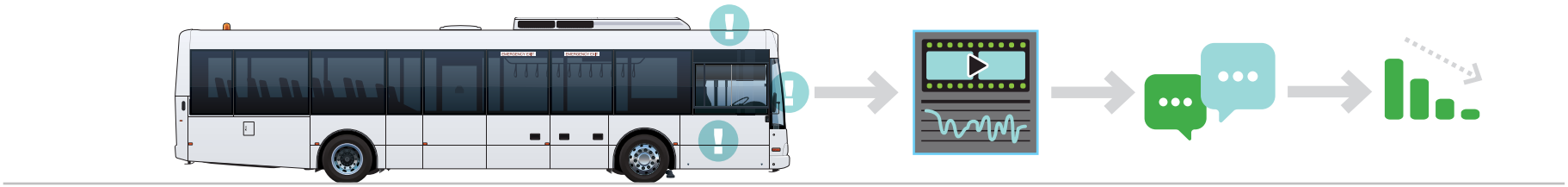
1 INTEGRATED PROGRAMME

☑ COMBINES VEHICLE DATA + VIDEO EVENT RECORDING WITH DRIVING IMPROVEMENT PROGRAMME

Video on its own is not enough.

- Video provides valuable insight that traditional tabular critical event reports cannot.
- Eliminating risk requires an integrated programme that includes a standardised and consistent process for identifying and coaching risky drivers, whether on rail or road.
- Adding video cameras alone does not make your company safer. Managed services programmes that include expert review of the video that's captured do the work for you and follow a documented methodology for assessing risk and prioritising driver coaching – fairly and consistently.
- This saves your team time – freeing them to focus on other areas and ensures consistency across your trainers, locations and company.

BOTTOM LINE: Lowering risk requires more than just a camera. You need an integrated managed services programme that combines expert review with an easy-to-use coaching process, resulting in ongoing and continuous driver improvement.



A variety of sensors identify and capture risky driving.

Experts review and score incidents for risk. The programme then prioritises drivers for coaching.

Managers coach drivers on areas for improvement.

The results: safer drivers, lower risk, fewer collisions.

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2 VIDEO AVAILABILITY

☑ AUTOMATIC OFFLOAD WITHIN MINUTES

Every second counts when it comes to safety.

- Video provides driving insight not possible from any other system. When something happens, you need to know what happened and why.
- Some on-board systems (DVR, CCTV, etc.) take hours, or days, to send video event data – offloading once per day at off-peak hours or requiring you to pay more to get the video more often.
- Or, they rely solely on the driver to push a button to offload the video when an incident occurs; if your driver is injured, you may not get the video when you need it most.
- Automatic offload via the cellular network within minutes of the incident should be included as a standard offering of the programme and your monthly costs, ensuring you have the information you need when you need it most.
- Quick access to the video can help get your vehicle back on the road and maintain your schedules.

BOTTOM LINE: Selecting a system that automatically delivers video within minutes of an incident can mean the difference between protecting your drivers and your company and putting them at risk – and you shouldn't have to pay extra to get that level of protection.

1 MINUTE AFTER THE COLLISION: Video automatically offloads

18 MINUTES LATER: Safety Manager alerted, has access to video

44 MINUTES: Police watch video ,clear driver

When a driver is accused and it wasn't their fault, you want that information now, not later. In a crisis, there is a big difference between access to video in minutes vs. hours or days.

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3 CAMERA OPTIONS

☑ MULTIPLE CAMERA OPTIONS, INCLUDING 360-DEGREE VIEW

☑ FORWARD-FACING CAMERA ONLY OPTION

Buses and coaches have different operating environments – you should have more than one option for deploying cameras.

- A road-facing and interior-facing camera provides the ultimate protection and verification. In addition to understanding what driver behaviour may have caused a collision or near-collision, it helps you to be proactive in reducing these incidents.
- While a forward-facing and interior-facing camera is the most effective way to capture risky driving and identify root causes, a forward-facing only configuration still provides a lot of value – and can be helpful when dealing with driver concerns. A separated camera provides ultimate flexibility in the installation process.
- Having the flexibility to add additional cameras provides insight in and around the vehicle to some of the common and costly collision and passenger risks that aren't visible from the front (side swipes, reversing, passenger incidents, etc.), along with reducing compensation claims by ensuring compliance or policy-specific safety practices are followed. In addition, it helps you understand what caused the latest mystery damage.
- High-quality video images are paramount to understanding what happened in the cab and on the road– providing clear insight in night time driving, extreme weather, etc. Ensuring the highest quality eliminates questions and helps identify causes of risky driving and incidents.

BOTTOM LINE: Single-unit cameras lock you in to a one-size-fits-all deployment. Flexible camera configurations deliver an optimal fit for your vehicles and drivers.

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4 DATA SOURCES

☑ REAL-TIME TRIGGERING FROM MULTIPLE DATA SOURCES

Accelerometers + engine and vehicle data + active safety systems + other risky driving manoeuvres

It takes more than accelerometers to capture risk.

- Accelerometers are the traditional technology used in cameras to trigger event video on passenger transport vehicles. They rely on g-force events and algorithms to identify risky driving.
- Accelerometer-based algorithms have limitations regardless of training or tuning, especially when there is limited or no g-force.
- For buses and coaches to truly capture risky driving you need a system that connects to the vehicle engine, triggering in real-time when that vehicle is under stress, has exceeded your established speed threshold, or when an on-board safety system has engaged. Today's intelligent safety systems include pedestrian detection and collision avoidance. For buses and coaches, in particular, lane departure warning systems, ABS and roll-stability control, manoeuvre-based triggers (aggressive swerves, U-Turns, etc.) and more, help identify risky driving specific to that vehicle.
- Leveraging all of this rich data captures the broadest spectrum of risk and is the fastest method to accurately identify your high-risk areas and reduce them.

BOTTOM LINE: Systems that rely on accelerometers, alone, take longer to identify high-risk areas – and longer to produce results. Your vehicle has valuable safety data available directly from the engine and operational systems. Why wouldn't you use it? The faster you identify risk, the faster you can reduce it.

Engine (ECU): PTO, throttle, RPM and more

Shock, g-force

Threshold speed

Active Safety Systems

Advanced manoeuvres: U -turn, swerve, and more

Collisions/ high-definition shock

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5 COACHING WORKFLOW & TOOLS

☑ INTUITIVE COACHING WORKFLOW

☑ EASY-TO-USE TOOLS

Ensure continual improvement and bottom-line results

You can't make a difference if you can't coach. You can't coach if you don't have time.

- Reviewing videos and coaching drivers is key to improving their skills and reducing incidents.
- Reviewing and coaching every event can be overwhelming. You need a prioritised queue that focuses you in on the right drivers, the right actions to take and makes it easy for you to coach with positive impact.
- Prep mode provides an easy-to-use workflow to facilitate coaching preparation – enabling coaches to add notes for review by colleagues, if necessary, or give kudos for outstanding driver performance.
- Skills-based or event-based coaching options provide the flexibility to individualise sessions to the needs of the driver.

BOTTOM LINE: Coaching is key to the success of any video-based safety programme. An intuitive coaching workflow, combined with easy-to-use tools, helps ensure continual improvement and bottom-line results.

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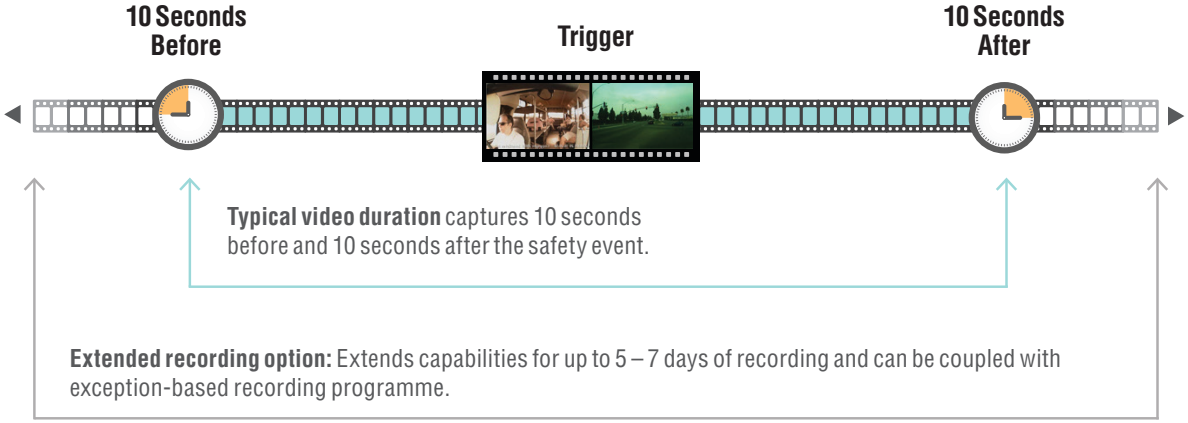
6 RECORDING DURATION

☑ MULTIPLE VIDEO RECORDING OPTIONS, INCLUDING EXTENDED RECORDING

The flexibility to capture just what you want, including everything.

- Programmes with a variety of options for recording duration provide the most flexibility.
- There are many types of safety events – some of which are under the radar (low or no g-force) and won't be captured by an accelerometer.
- Sometimes you need an extended recording option to get more information around incidents that exceed the typical 20-second video clip length.
- Continuous recording can be particularly helpful in capturing mystery damage, understanding employee's or public compensation claims, identifying compliance-related issues and more.
- Sometimes you need video when you least expect it. Mobile support, shopping cart functionality and the ability to order up to 24 hours of video provide broad flexibility when necessary.

BOTTOM LINE: Flexible recording options offer more value for your investment. Continuous recording provides deeper insight around a broad range of safety and compliance-related incidents.



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7 MANAGED SERVICES / REVIEW

☑ DELIVERS A CONSISTENT NUMBER OF REVIEWED EVENTS EACH MONTH

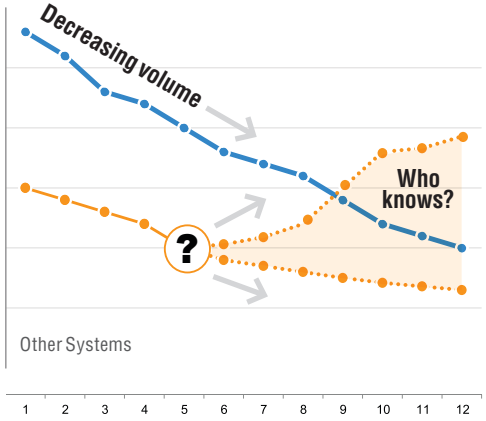
A consistent monthly baseline of reviewed video events is key to measuring improvement. For example, if the programme triggers and reviews ten videos one month, four the next month, and two the following, the only thing you know for certain is that you have fewer videos.

Are you getting safer? Accurate measurement of risk is critical to answering this question.

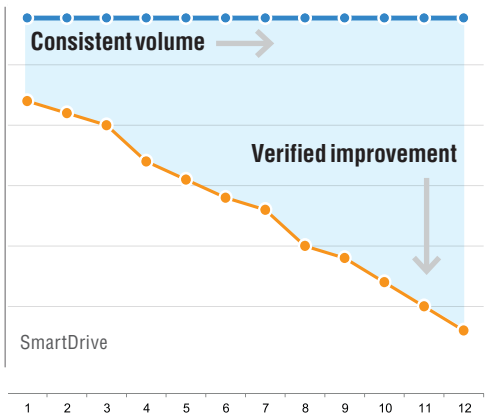
- Some systems quantify risk reduction based on the number of videos being triggered – meaning if you have fewer videos each month, you're getting safer.
- This approach overestimates improvement and relies on the trigger as the primary measure of risk.
- Triggering video is only the first step in the process. Expert review of that video is a necessary step to verify and quantify risk.
- The only way to know if your drivers are getting safer is to invest in a programme that captures and reviews a consistent sample of videos each month across your site, and measures the reduction in risk against that monthly sample.

BOTTOM LINE: Fewer videos each month is not an accurate measure of risk reduction. If you select a system that follows this approach, the results will be misleading.

Decreasing reviewed videos
Risky driving could be going down or up



Consistent reviewed videos
Verifies risk is going down



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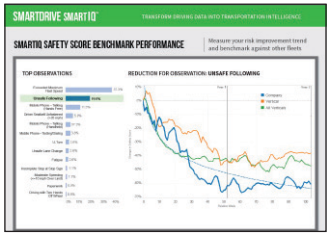
8 INTELLIGENT DATA

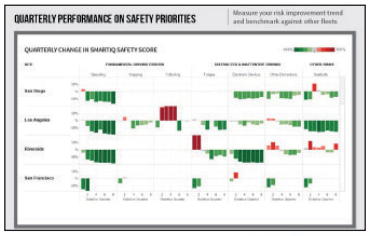
☑ POWERFUL, PREDICTIVE ANALYTICS THAT DRIVE RESULTS

Big data provides big savings.

- Video safety solutions generate enormous amounts of data – particularly when it's combining driver, video and vehicle data.
- One-dimensional, historical views of data with limited value – or that require significant analytics investments – don't provide insights that drive results.
- A comprehensive, video analytics platform combines a variety of data, providing the missing intelligence – definitive driver performance data combined with vehicle systems data.
- Combined intelligent algorithms, predictive models and advanced analytics provide a closed-loop prescriptive analytics approach that delivers insights at their point of maximum value.

BOTTOM LINE: Actionable operational metrics, management KPIs, reports and dashboards for managers; interactive visualisations for advanced analysis; and the ability to export data and integrate into an existing intelligence stack are the keys to changing driving skills and driving success.





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9 MANAGEMENT METRICS & KPIS

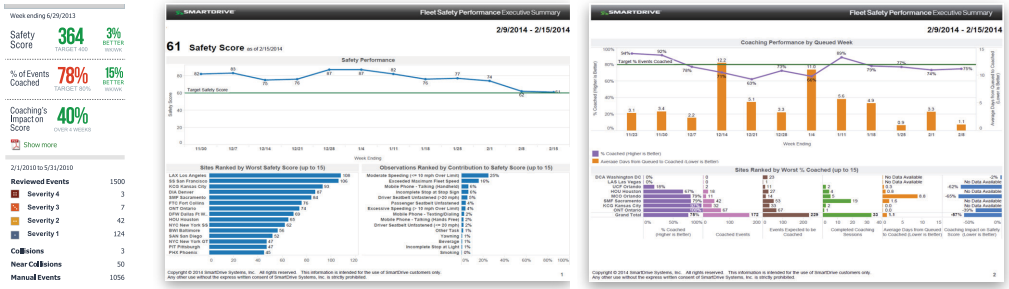
☑ ROLE-BASED MANAGEMENT REPORTING AND KPI'S

You can't manage what you can't measure.

- A robust set of management reports and Key Performance Indicators (KPIs) helps you manage the programme on an on-going basis and highlight areas of strength and opportunities for improvement.
- Reports focus on both driving and coaching performance, help identify trends, and support incentive and recognition programmes.
- Reports should be tailored to each level of your organisation – from executive to driver – ensuring that they have the right information to make decisions and improve performance.
- Most systems have a comprehensive and robust testing process in place to ensure that equipment deployed to your fleet is resilient, stable and reliable. On rare occasions, there may be instances where a piece of equipment may not be functioning as expected. The report suite should also include system health reports to proactively notify you when something needs attention. Safety reporting is your system's priority.

BOTTOM LINE: Selecting a solution that delivers actionable insights through easy-to-use management reporting and KPIs is critical to understanding whether your investment is paying off.

Reports should include KPIs and trend metrics to measure your coaches and driver improvement.



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10 FLEXIBILITY

☑ CONFIGURABLE PROGRAMME VS. ONE-SIZE-FITS-ALL

One size rarely fits all, especially when you operate in a dynamic business environment.

- A programme that combines a best practice approach with customisation options enables you to adjust the weighting for specific driving risk and determine what should be coached.
- The ability to fit the programme to your safety policy minimises the impact of change on your managers and your drivers, accelerating adoption and results.
- It also allows you to improve your safety programme's effectiveness over time, focusing on specific opportunities for improvement.
- The freedom to choose a video safety programme on your terms ensures your investment is protected. It also allows you to upgrade at any time with existing hardware when the time is right for you.

BOTTOM LINE: Selecting a one-size-fits-all solution locks you into a programme that you will quickly outgrow. A fully configurable programme drives maximum value by keeping pace with your business and your unique operating characteristics.

Fit the programme to your safety policy and priorities.

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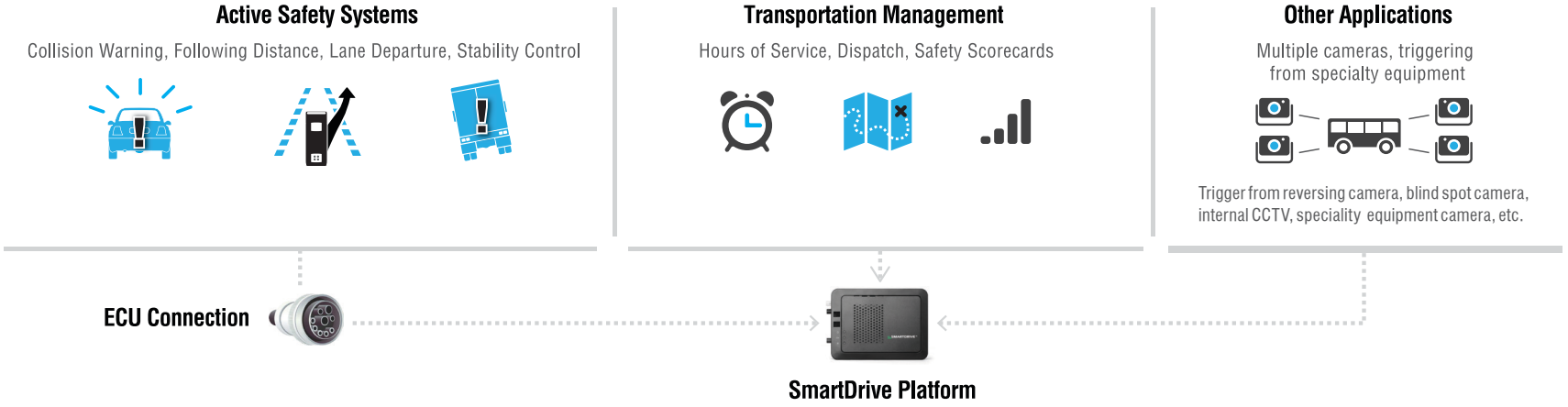
11 OPEN PLATFORM

☑ OPEN TECHNOLOGY PLATFORM THAT EASILY CONNECTS TO OTHER SYSTEMS

With a video-based solution, it's risky to focus only on the camera.

- Most systems are closed technologies offering limited or no integration and can quickly become outdated. Open platforms are designed to keep pace with technology.
- Systems architected from the ground up to be open generate more value from your existing safety technologies by incorporating real-time data from multiple sources, which has proven to be more effective at identifying unsafe driving.
- Integrating to the ECU takes full advantage of the information available from the engine, vehicle components, Active Safety Systems (e.g., stability control, collision mitigation, etc.) and related third-party systems.
- This approach captures a broader spectrum of risk and offers long-term expansion capabilities – whether to other systems, other cameras or other data sources.

BOTTOM LINE: An open platform approach enables you to take real-time advantage of all of the data on your vehicle, providing a unified view of your risk and actionable insights that help you respond quickly and with confidence. Best of all, you are not locked into obsolete technology.



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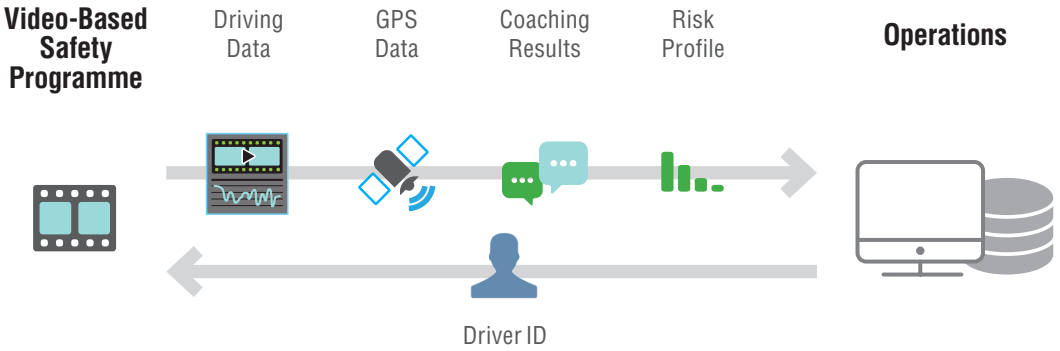
12 BACK-OFFICE SYSTEMS INTEGRATION

☑ INTEGRATION WITH BACK-OFFICE SYSTEMS

Break down the walls between your safety and operational systems.

- Sharing information between your operational software and your video-based safety system streamlines operations and unlocks the hidden value in your data.
- For example, as a driver logs into one system, there should be a connection within your video-based programme that identifies who is operating that vehicle, eliminating additional work and ensuring the accuracy of the data.

BOTTOM LINE: The ability to share data between your video safety system and back-office systems eliminates redundant work, informs other reporting and safety scorecards, and improves planning and decision making.



Data should be easily shared between the video safety system and other fleet operations systems.

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1 Combined vehicle data + video event recording with driving improvement programme	☑	☐	☐
2 Automatically offloads video within minutes of incident	☑	☐	☐
3 Separated camera with forward-facing-only or 360-degree options	☑	☐	☐
4 Triggers video events from multiple real-time data sources: accelerometers, vehicle data, active safety systems, and others	☑	☐	☐
5 Intuitive coaching workflow with easy-to-use tools	☑	☐	☐
6 Includes variety of recording durations – including extended recording	☑	☐	☐
7 Delivers a consistent number of reviewed videos each month	☑	☐	☐
8 Provides powerful, predictive analytics that drive results	☑	☐	☐
9 Delivers role-based management reporting and KPI's	☑	☐	☐
10 Flexible programme that is configurable to your fleet policies & priorities	☑	☐	☐
11 Open platform that easily connects to other systems	☑	☐	☐
12 Integrates with back-office operational systems	☑	☐	☐

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