

VISIONLINK®

Feature Focus: Safety

Construction sites pose inherent risks, with hazards that can threaten worker safety. Caterpillar's innovative safety technologies aim to help prevent accidents and ensure everyone returns home safely every day.



FROM DISTRACTION TO ACTION SEE, MITIGATE, AND MANAGE JOBSITE HAZARDS

Many people experience brief moments of inattention due to fatigue or distractions, a common aspect of human nature that can lead to serious consequences.

This is where safety technologies become invaluable. By enhancing human capabilities, these technologies improve attention, perception, and situational awareness, empowering individuals to react more swiftly and effectively than those without such tools.

Cat® Detect technologies, integrated with VisionLink®, offer an innovative solution that enhances human factors on the jobsite. These technologies generate insightful data that drive continuous improvements, ultimately transforming safety practices and promoting a culture of responsibility and awareness.

CAT SAFETY TECHNOLOGIES - THE POWER TO IMPROVE JOBSITE SAFETY



POWER TO SEE: Supplement operators visibility to identify jobsite hazards.



POWER TO MITIGATE: Deliver actionable information (audio and/or visual warnings) to avoid potential hazards.



POWER TO MANAGE: Provide data analytics and reporting to gain insights and inform continuous improvement.

CAT® SAFETY TECHNOLOGIES

SAFELY HOME. EVERYONE. EVERY DAY.



USING DATA TO BUILD A FOUNDATION FOR SAFETY

Caterpillar is transforming our growing suite of safety solutions by integrating safety data into the VisionLink ecosystem. This upgrade empowers managers to identify safety trends quickly and take proactive measures to create a safer work environment.

NEED HELP WITH STRENGTHENING YOUR SAFETY FOUNDATION?

Caterpillar Safety Services offers various consulting services aimed at promoting a proactive safety culture, minimizing incidents, and encouraging continuous improvement.

Caterpillar Safety Services can conduct a comprehensive worksite assessment to evaluate your current safety system. This assessment examines all aspects of safety practices at your site(s), including personal protective equipment (PPE), tools and equipment, employee understanding of safety policies, hazard identification, safety communication, and emergency procedures.

The result is a detailed report highlighting what is working well and what needs improvement, and provides recommendations on the best ways to implement those improvements.

Guiding You Toward Better Safety - Wherever You Are Starting From

For over 50 years, Caterpillar Safety Services has utilized the latest research and methodologies to enhance safety excellence within organizations.

CAT DETECT - SEAT BELT REMINDER

BUCKLE DOWN ON SAFETY



External Beacon - Optional

SAFETY MADE SIMPLE

Wearing a seat belt is one of the simplest ways to help protect operators from injury during rollovers, sudden stops, or other unexpected movements. However, busy workers may occasionally forget or become distracted. The Cat Seat Belt Reminder prompts operators to buckle up and remain buckled for the entire duration of their shift.

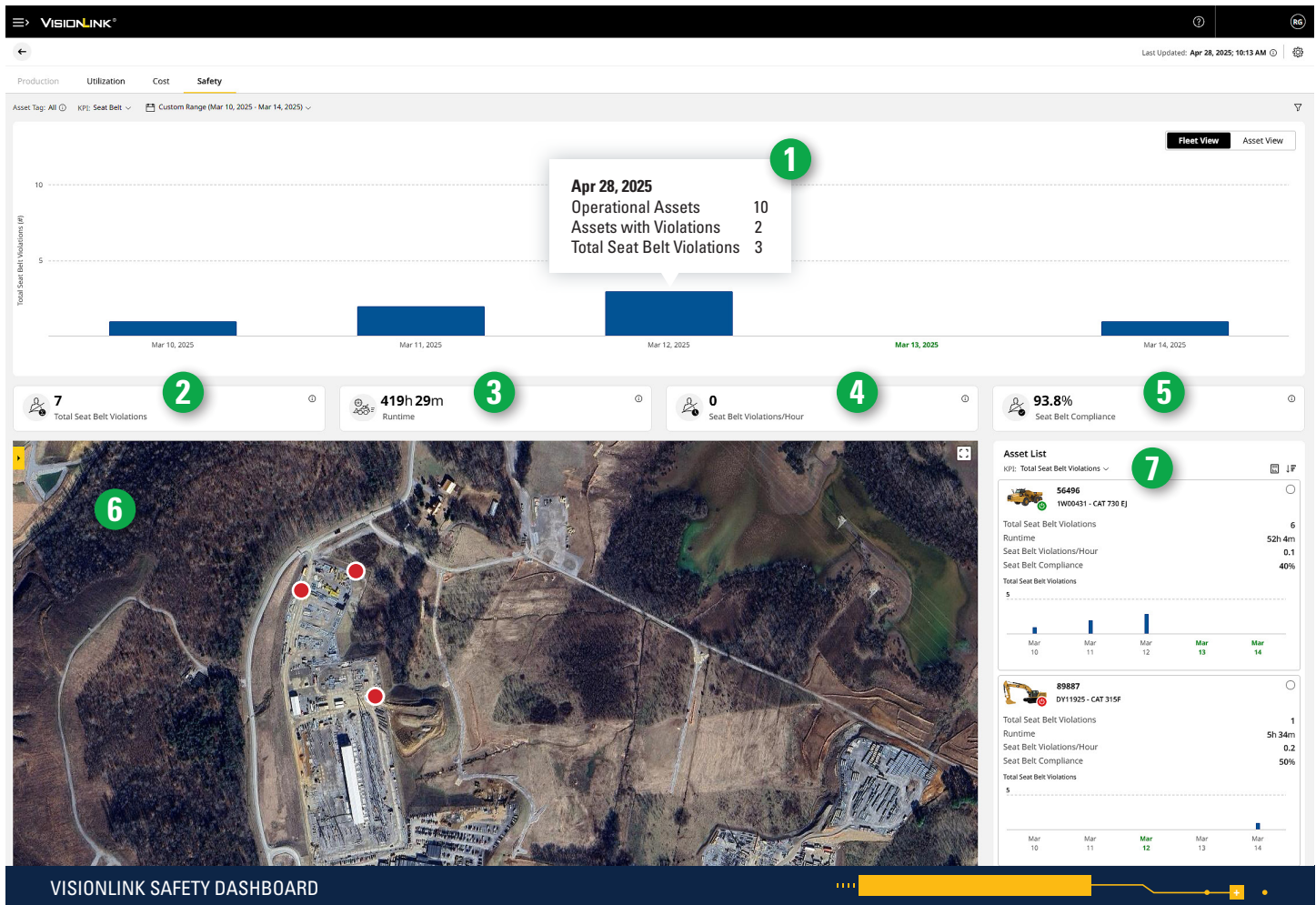
There's nothing complicated about the Cat Seat Belt Reminder. If an operator begins working a machine without fastening their seat belt, an audible alarm will sound in the cab, and a light will illuminate on the seat belt buckle. Additionally, this event is recorded in VisionLink. An external beacon can also be installed on top of the cab to visually alert site supervisors of their seat belt status. Once the operator buckles up, the alerts will cease.

A SOLUTION THAT WORKS ACROSS YOUR FLEET

Installing the Cat Seat Belt Reminder in a mixed fleet is straightforward. It accommodates both Cat machines and other brands. The system works with 12-volt and 24-volt DC configurations.

VISIONLINK INTEGRATION

CAT DETECT - SEAT BELT REMINDER



REAL-TIME SAFETY TRACKING

When a seat belt alert is triggered, an event is recorded, and the data is sent in real-time to VisionLink*. This enables you to monitor the frequency of seat belt violations and identify opportunities for operator training.

KEY SAFETY INDICATORS

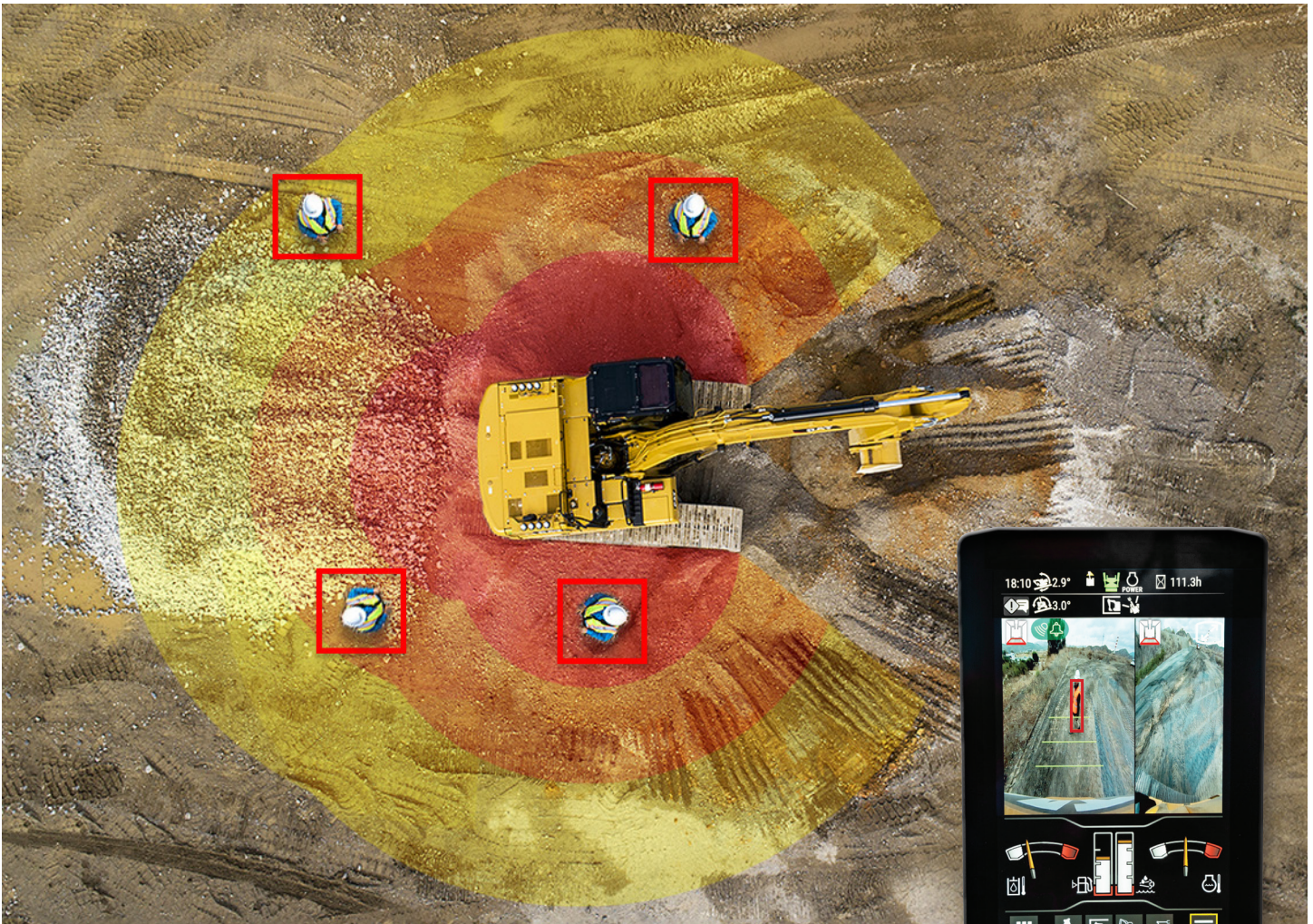
Using the Safety Dashboard, you can easily assess your operators' seat belt performance at a glance. Analyze safety KPIs on your site cards to identify trends and determine where you can take action to promote safe and productive work.

1. You can view a graphical representation of total seat belt violations over a specified date range (up to 7 days). By clicking on a specific date, you can see a detailed list of violations.
2. Total Seat Belt Violations - This represents the number of times seat belts were not worn while a machine was operating during the selected date range. A violation is a seat belt being unfastened for more than five minutes while the machine is in use.
3. Runtime - This denotes the total operational time for all equipment capable of reporting seat belt violations.
4. Seat Belt Violations/Hour - This metric reflects the hourly average for the selected date range, calculated by dividing the total seat belt violations by the runtime.
5. Seat Belt Compliance - This summarizes the performance of seat belt usage on your site for the selected date range.
6. Asset Map - This feature displays the location of each asset's seat belt violation.
7. Asset List - This provides a detailed view of safety data for each machine within the selected date range.

**VisionLink subscription and compatible Product Link hardware required. Availability may vary by region, consult your Cat Dealer for more details.*

CAT DETECT - PEOPLE DETECTION

SUPPLEMENT SITUATIONAL AWARENESS



Cat Detect - People Detection for Excavators

ENHANCE AWARENESS

People working near heavy equipment on a jobsite are at risk of being struck by a machine. While machines are designed to maximize operator visibility, constantly monitoring what is happening around them can be challenging. Cat Detect - Smart Cameras are intelligent vision systems that alert operators when someone enters the machine's hazard zone*.

TWO SYSTEM CHOICES

1. Cat Detect for Excavators - People Detection: A three smart camera system for 313-352 model Cat excavators.
2. Cat Detect - Smart Camera: A universal single smart camera system that can be installed on any OEM machine, a mixed fleet solution.

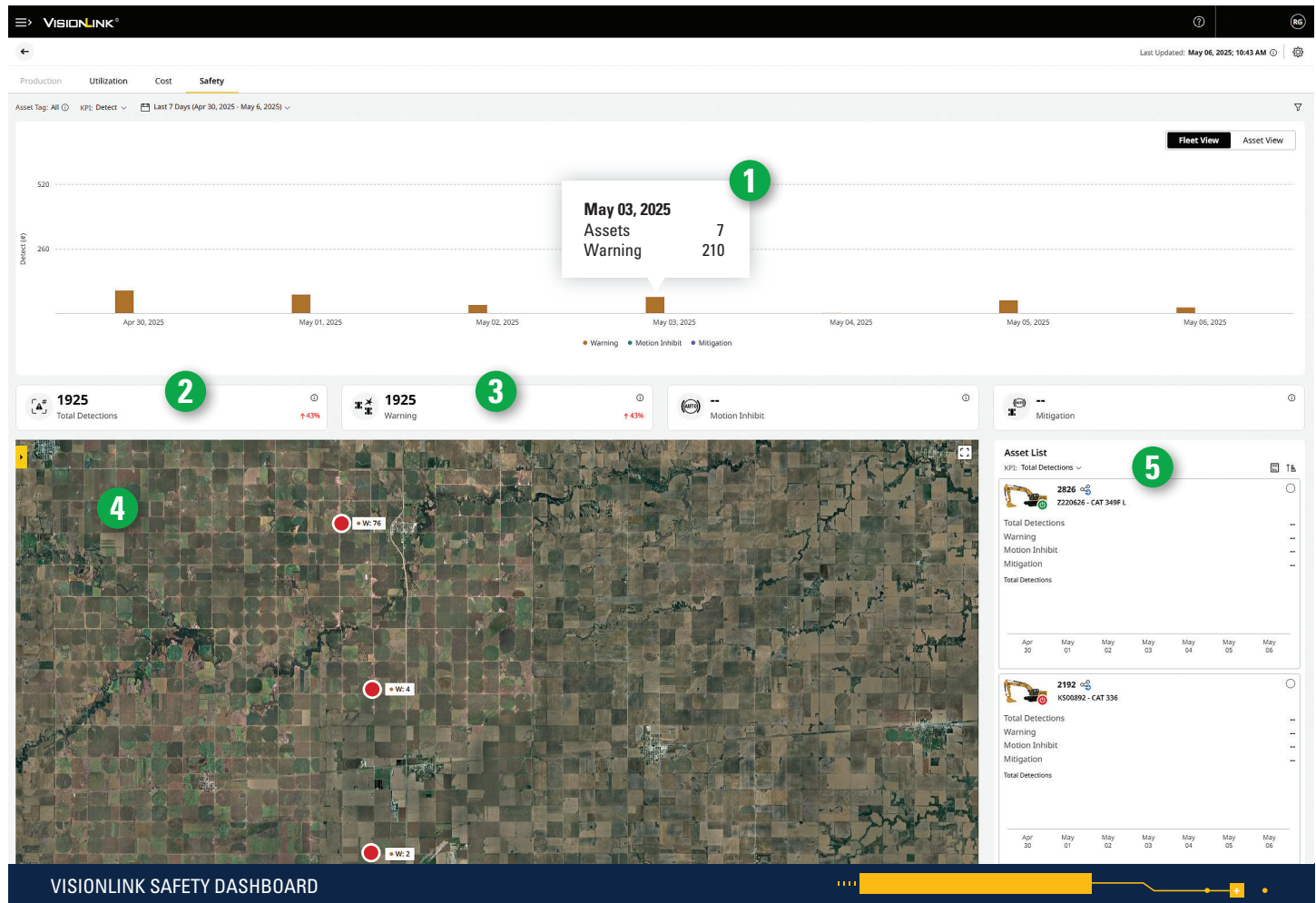
INTELLIGENT ALERTS THAT KEEP PEOPLE SAFE

Cat Smart Cameras are an effective tool for enhancing workplace safety, awareness, and confidence. The cameras actively monitor for people near machinery, providing operators with an additional layer of observation. The systems have a high-resolution touchscreen display that highlights people with red detection boxes and audio alerts to help increase operator awareness when individuals enter a machine's hazard zone*.

*The system may not detect personnel in certain circumstances, such as fast swings speeds, people lying down or crouching, or when cameras are impaired by low light conditions (dusk, dawn, overcast), inclement weather (snow, rain, fog), or other similar conditions.

VISIONLINK INTEGRATION

CAT DETECT - PEOPLE DETECTION



REAL TIME SAFETY MONITORING

When someone is detected within a critical red zone, an operator alert is triggered, and the event data is transmitted in real-time to VisionLink*. This allows you to monitor detection frequency and identify opportunities to enhance safety training on the jobsite. By staying informed, you can create a safer working environment and optimize your operations.

KEY SAFETY INDICATORS

Using the Safety Dashboard, you can easily assess your operators' safety performance at a glance. Analyze safety KPIs on your site cards to identify trends and determine where you can take action to promote safe and productive work.

1. You can view a graphical representation of total detect warnings over a specified date range (up to 7 days). By clicking on a specific date, you can see a detailed list of detections.
2. Total Detections - This represents the sum of all warning, motion inhibit, and mitigation counts for all assets within the selected date range.
3. Warning - Denotes the total number of critical (red zone) warnings for all equipment during the selected date range.
4. Asset Map - This feature displays the location of each asset's detection warning.
5. Asset List - This provides a detailed view of safety data for each machine within the selected date range.

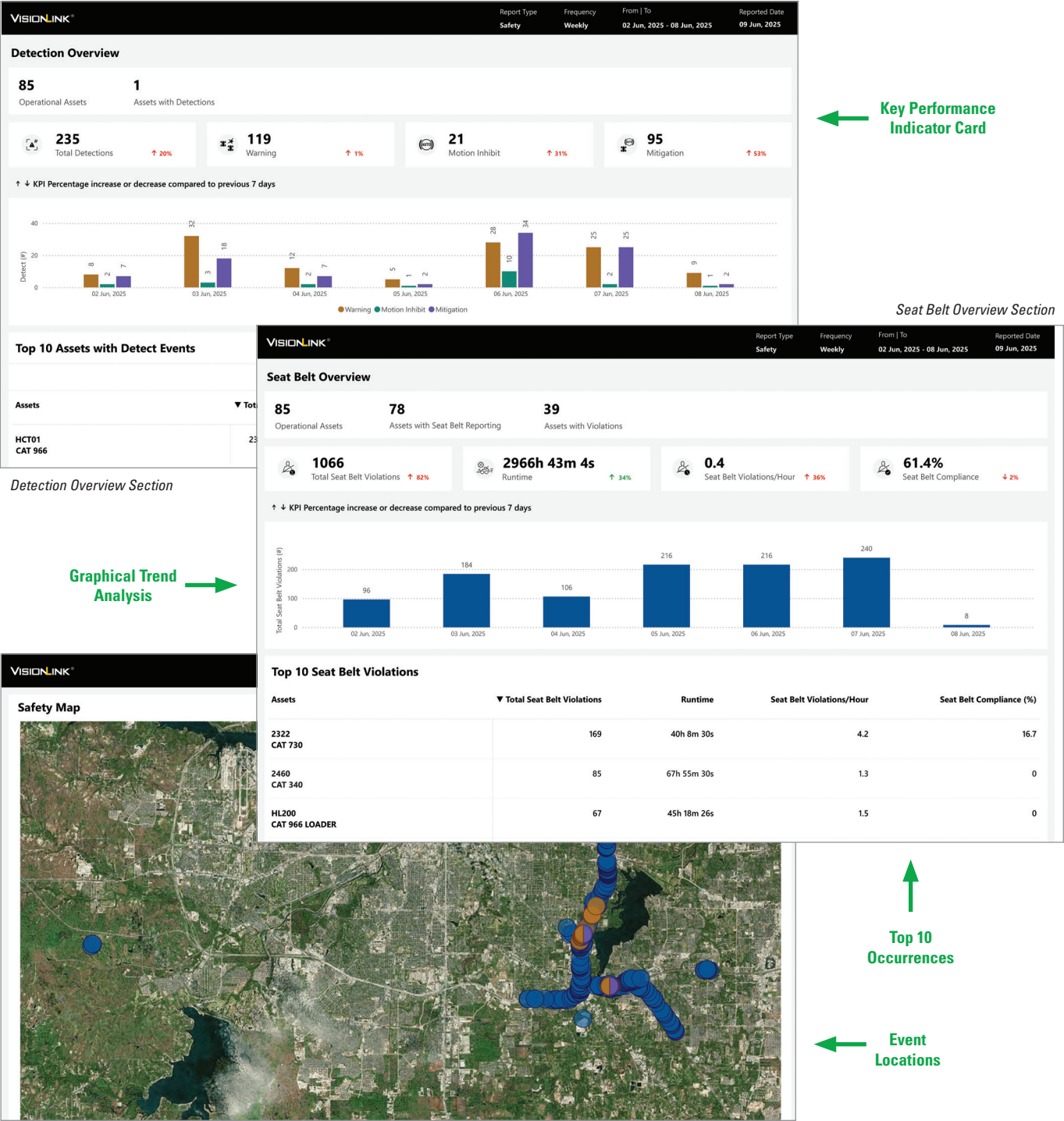
**VisionLink subscription and compatible Product Link hardware required. Availability may vary by region, consult your Cat Dealer for more details.*

SAFETY SUMMARY REPORT

REVIEW TRENDS FOR INFORMED DECISION-MAKING

Utilize the Safety Summary Report within VisionLink to compile, share, and analyze offline safety data for your site. You can regularly send this report to your team members to keep them informed. The report includes all safety metrics based on the duration and available data, and it is presented in PDF format with charts, tables, and maps.

Depending on your safety review requirements, you can schedule the reports to be delivered daily, weekly, or monthly.



VISIONLINK INTEGRATION

CAT DETECT SAFETY TECHNOLOGIES

The table below outlines the current Cat Detect safety technologies integrated with VisionLink. Caterpillar is dedicated to expanding this portfolio to equip our customers with tools that reduce risks from human and equipment interactions.

TECHNOLOGY	DESCRIPTION	INSTALLATION OPTIONS	EQUIPMENT AVAILABILITY	REGIONAL AVAILABILITY
Cat Detect - Seat Belt Reminder	Reminds operators to buckle up and stay buckled when operating equipment.	Factory* and Aftermarket Kit	Universal - All Brands (Mixed Fleets)	Global
Cat Detect for Excavators - People Detection	A three-camera system that can alert an operator when a person enters a machine’s hazard zone.	Retro-Fit Kit** (Dealer Installed)	Cat Excavators (Models 313-352)	Global
Cat Detect - Smart Camera	A single-camera system that can alert an operator when a person enters a machine’s hazard zone.	Aftermarket Kit	Universal - All Brands (Mixed Fleets)	Global

**Factory installation varies by machine model and regional availability. Consult your Cat Dealer for details.*
***Retro-fit kits are aftermarket options designed and tested for specific Cat equipment models.*

Cat Detect Safety Systems Availability May Vary by Region and Model.
Consult Your Cat Dealer for Details.

