

Smart Innovators: Video Analytics For Safety

By Brittany Sayers
With Nathan Goldstein

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Amid rising pressure to reduce serious injuries and strengthen proactive risk prevention, video analytics has become a high-impact technology for EHS, operations and IT leaders. This report provides a benchmark of 10 video analytics vendors focused on core safety applications, evaluating their strengths across five key capabilities: PPE detection, behavioural safety, unsafe conditions, area controls and vehicle safety. It also assesses five technical differentiators shaping vendor performance: configurability, privacy and security, detection accuracy, systems integration and analytics. EHS professionals and IT leads can use this report to assess solution maturity, compare vendor capabilities, explore emerging innovations such as vision language models (VLMs) and AI agents, and guide future technology selection. Video analytics vendors can leverage the insights from the report to evaluate their competitive positioning and understand evolving buyer needs.

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Organizations mentioned

3motionAI, AIVID, Aligned Ventures, Ambient.ai, AMCS, Antler, Benchmark Gensuite, Bosch, Briotix Health, Buddywise, CameraMatics, Contractor Compliance, Cority, Geotab, HawkVision AI, Hedosophia, Hikvision, Inseer, Intellex, Intenseye, International Organization for Standardization (ISO), Irisity, J12 Ventures, Lightspeed Venture Partners, Make UK, Marks & Spencer, Matroid, Milestone Systems, MiX Telematics, Moovency, Motorola, NewRoad Capital Partners, Organisation for Economic Co-operation and Development (OECD), Pelco, Protex AI, Quentic (an AMCS company), Riskex, Safety Vision, Salesforce Ventures, Samsara, Sandalwood Engineering & Ergonomics, Sphera, Spot AI, Surveily, TuMeke, US National Institute for Occupational Safety and Health (NIOSH), VelocityEHS, Venturewave Capital, Verizon Connect, viAct, Visionify, visionplatform.ai, VIZO361°, Voxel AI, Wolters Kluwer Enablon, Zebra Technologies.

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Summary for decision-makers

- EHS professionals and IT leads can use this report to assess solution maturity, compare vendor capabilities, explore emerging innovations such as vision language models (VLMs) and AI agents, and guide future technology selection.
- Safety-focused video analytics vendors can leverage the insights from this report to evaluate their competitive positioning and understand evolving buyer needs.
- This study draws on Verdantix market data, buyer preferences, vendor scoring and a review of safety-focused video analytics platforms. It evaluates 10 vendors across functional and technical capabilities, using a structured methodology combining questionnaires and proprietary research.
- As buyers prioritize interoperability and scalable oversight, vendors that combine high detection accuracy, configurable rule frameworks, strong privacy controls and robust integration are best-positioned for adoption and long-term market leadership.
- Advanced capabilities such as VLMs, AI agents, predictive safety intelligence and integrated EHS-IoT data platforms are rapidly reshaping vendor differentiation, shifting the market from rule-based detection to intelligence-driven safety management.

Figure 4
Video analytics for safety: capabilities assessment

| | Safety capabilities | | | | | Technical capabilities | | | | |
|------------------------------|---------------------|--------------------|-------------------|---------------|----------------|--------------------------------------|--------------------|---------------------------------------|--|------------------------------|
| | PPE detection | Behavioural safety | Unsafe conditions | Area controls | Vehicle safety | Configurability & model adaptability | Privacy & security | Detection accuracy & alert management | Integration with EHS systems & workflows | Inbuilt analytics & insights |
| Buddywise | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| HawkVision AI | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Intenseye | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Milestone Systems (BriefCam) | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Protex AI | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Surveily* | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| viAct | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Visionify | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| visionplatform.ai | ● | ● | ● | ● | ● | ● | ● | ● | ● | ○ |
| Voxel AI* | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

| | |
|--|---|
| Market-leading functionality, with differentiated offering | ● |
| Strong functionality | ● |
| Average functionality | ● |
| Some functionality | ● |
| No demonstrated evidence | ○ |

Note: *Denotes a firm scored via publicly available information and existing Verdantix research.
Source: Verdantix analysis



Firms confront safety blind spots with real-time video intelligence

Video analytics for safety has rapidly grown into a transformative, high-impact technology in modern safety management, reshaping how organizations detect and prevent risk. These systems leverage machine learning (ML) and neural networks to recognize patterns in image and video footage, and take action or provide recommendations. Proven use cases are detecting personal protective equipment (PPE) non-compliance, preventing serious injuries and fatalities (SIFs), securing restricted zones via area controls, and improving driver safety. With an increased focus on proactive safety management and risk prevention across verticals, computer vision technology is emerging as a key enabler of safe and compliant workplaces. This report offers vendors a comprehensive benchmark of the current video analytics market for core safety, and equips buyers with insights to guide their future technology adoption strategies.

EHS leaders turn to video analytics as traditional safety models struggle to keep pace

EHS professionals are operating in an increasingly complex risk environment. The effectiveness of traditional safety approaches is stretched by the compounding impacts of workforce shortages, greater reliance on contractors and heightened pressure to reduce SIFs. As a result, organizations increasingly seek technologies that provide greater visibility into operational risk. Video analytics is emerging as a compelling solution, enabling the continuous monitoring of workplace activities and automated detection of unsafe conditions. By augmenting human oversight with AI-driven insights, firms can actively address a range of safety challenges that they may previously have struggled to handle. With strong operational viability, video analytics is gaining traction as a high-impact technology within EHS programmes, driven by:

- **Increasing demand for leading indicator metrics to support proactive safety management.**
Across industry verticals, EHS leaders are moving decisively towards proactive safety approaches. A Verdantix survey highlights this trend: 78% of 204 EHS decision-makers rank efforts to increase the use of leading indicator metrics as either 'very important' or 'important' to their future EHSQ technology goals (see [Verdantix Global Corporate Survey 2025: EHS Budgets, Priorities And Tech Preferences](#)). Video analytics technology can enable the real-time detection of unsafe acts and conditions, addressing those persistent accidents which, historically, organizations have failed to reduce through lagging indicator approaches. In video analytics, convolutional neural networks (CNNs) analyse video feeds to identify hazards such as line-of-fire exposure, unauthorized zone entry and vehicle-pedestrian interactions, helping to prevent falls from height, struck-by incidents and transportation accidents. With an increased focus on potential SIF (pSIF) reduction, these systems can also identify near-miss events that often go unreported, allowing organizations to intervene early and address hazards before injuries occur.
- **Growing need for system consolidation and solution interoperability.**
Organizations are seeking greater system consolidation and seamless interoperability across their safety and operations technology stacks. Leading video analytics vendors understand this demand, and offer seamless integration with EHS management platforms, Internet of Things (IoT) sensors and access control systems, enabling closed-loop workflows and feedback across functions. Vendors such as Intenseye and Protex AI have focused on building partner networks with broad EHS software platforms, to enable easy integration. By unifying video-derived insights with broader operational data, organizations gain enterprise-wide visibility into risk. With computer vision benefits seen across functions – including safety, quality and operations – firms should seek to leverage cross-functional data collection.



- **Rising technology maturity and falling barriers to entry.**

With easy integration into existing hardware, increased model accuracy and built-in safeguards, video analytics in safety has evolved into an enterprise-ready capability that delivers consistent, reliable results at scale. Modern video analytics platforms leverage deep learning models to detect PPE compliance, posture, motion and complex human-machine interactions with increasing precision. With flexible deployment across edge and cloud environments, coupled with integration into existing CCTV infrastructure or mobile applications, upfront costs are minimized. At the same time, improvements in contextual understanding and false-positives reduction have increased trust in the technology, while built-in privacy-preserving features such as blurring and anonymization address regulatory and workforce concerns. Positive use cases have emerged, validating the deployment of the technology in safety applications. Global bottling business Swire Coca-Cola, for example, implemented Intenseye's computer vision technology, seeing a [60% reduction in hazard detection](#). A logistics provider, meanwhile, enjoyed an [85% decrease in area control risks and a 62% lessening of incidents](#) after implementing Surveily's AI-powered solution.

- **Ongoing labour challenges and workforce changes.**

The Organisation for Economic Co-operation and Development (OECD) reported [tight labour markets in OECD countries in 2024 and 2025](#), with more vacancies than unemployed workers. While tightness has eased to some degree post-pandemic, employers are still struggling to find suitable workers to fill vacancies. Ongoing skills shortages have reduced the number of experienced workers on site, increased reliance on contractors and temporary labour, and stretched the capacity of traditional safety supervision. Higher workforce turnover also introduces greater risk, as new workers are statistically more accident-prone and the effectiveness of safety training varies widely across roles and locations. Video analytics helps organizations adapt to these realities. Acting as a 24/7 digital safety observer, the technology can continuously monitor work environments and identify risks across shifts and sites.

Strategic partnerships and investment injections reshape the competitive landscape for video analytics vendors

Skills shortages and rising expectations for stronger safety performance are driving demand for video analytics. As the technology matures, vendors are responding with increased investment and strategic partnerships to scale their capabilities (see **Figure 1**). Verdantix finds that:

- **Vendor partnerships and acquisitions accelerate capability expansion.**

AI-first start-ups have long dominated the video analytics market, developing solutions with AI embedded at the foundation. With rising demand and sustained capital investment, many of these firms are now progressing towards small- to medium-sized enterprise (SME) scale. At the same time, some EHS-native platforms are moving into the video analytics space, developing solutions which are, by design, deeply embedded within EHS workflows. Most notably, VelocityEHS offers a market-leading motion capture ergonomics solution. Quentic (an AMCS company), meanwhile, is strengthening its position in the market with the planned launch of a video analytics solution in 2026/27, focused on risk detection across unsafe conditions, behavioural safety and PPE monitoring. Beyond this, numerous strategic and technology partnerships are shaping the market, with leading broad EHS software platforms actively expanding their presence. Significantly, 2024 and 2025 saw Benchmark Gensuite partnering with 3motionAI, while Cority built partnerships with Inseer and Protex AI. This underscores a clear prioritization of interoperability and seamless integration across EHS platforms, boosting market accessibility and providing strong directional growth for video analytics applications across EHS. Vendors that prioritize strong partner networks will be viewed with favour by prospective customers.



Figure 1
Video analytics market activity 2024-26

| Date | Transaction | Vendor | Description |
|--------|-------------|---|---|
| Jan-24 | ACQUISITION | VelocityEHS | VelocityEHS acquired Contractor Compliance, a safety and risk management solution provider. |
| Feb-24 | INVESTMENT | Intenseye | Intenseye raised \$64m in a Series B funding round led by Lightspeed Venture Partners. |
| Mar-24 | INVESTMENT | Buddywise | Buddywise raised \$3.8m in seed funding from Aligned Ventures, Antler and J12 Ventures, to enhance real-time workplace safety in Europe. |
| May-24 | PARTNERSHIP | Inseer → Cority | Cority partnered with Inseer to integrate the latter's video analytics software for industrial ergonomic applications into its platform. |
| Nov-24 | PARTNERSHIP | Protex AI → Cority | Cority partnered with Protex AI to integrate the latter's computer vision technology into Cority's Incident Management solution, to enhance workplace safety monitoring and hazard detection. |
| Jan-25 | PARTNERSHIP | Protex AI → Make UK | Make UK partnered with Protex AI to provide direct access to AI-powered technology, to gain greater visibility of unsafe behaviours in facilities. |
| Jan-25 | PARTNERSHIP | VelocityEHS → Sandalwood Engineering & Ergonomics | VelocityEHS partnered with Sandalwood Engineering & Ergonomics to provide customers with access to certified consultants, in conjunction with its industrial ergonomics solution. |
| Jan-25 | INVESTMENT | Protex AI | Protex AI raised \$36m in a Series B funding round led by Hedosophia, with participation from Salesforce Ventures and existing investors. |
| Jan-25 | PARTNERSHIP | Benchmark Gensuite → 3motionAI | Benchmark Gensuite partnered with 3motionAI to integrate the latter's RiskAI motion analysis technology, to enhance its ergonomic assessment offerings. |
| Apr-25 | INVESTMENT | viAct | viAct secured \$7.3m in Series A funding led by Venturewave Capital, to advance AI capabilities. |
| Jun-25 | INVESTMENT | Voxel AI | Voxel AI raised \$44m in Series B funding led by NewRoad Capital Partners. |
| Jan-26 | PARTNERSHIP | HawkVision AI → Riskex | HawkVision AI partnered with Riskex to inject AI-powered risk detection directly into EHS workflows. |

Source: Verdantix analysis



- **Venture capital (VC) investment signals confidence in computer vision innovation.**

The video analytics market has historically seen a steady influx of VC investment, and this trajectory has remained consistent. In 2025 the market witnessed multiple investment plays, such as Protex AI raising \$36 million in Series B funding, viAct securing \$7.3 million in Series A and Voxel AI raising \$44 million in Series B. These developments indicate strong backing and growth within computer vision technology. The influx of investment resulted in major product developments from video analytics vendors throughout 2025, with faster and more accurate real-time processing, and improved hardware technology. The maturation of AI within EHS reporting, particularly in safety, has removed key adoption barriers around data quality, trust and integration. This places video analytics vendors in a position of broad market readiness, set to become foundational components of modern safety management systems.

- **Very high- and high-risk industries lead adoption, with strong piloting cases in lower-risk sectors.**

The adoption of video analytics for safety has historically been led by very high- and high-risk industries, where the consequences of incidents are most severe and the business case is robust. Sectors such as manufacturing, logistics, construction, energy and transportation have moved first, deploying video analytics to address critical exposure areas, including SIF risks. However, strong pilot programmes are also emerging in traditionally lower-risk sectors, as organizations recognize the value of proactive hazard detection. Marks & Spencer [implemented Protex AI's computer vision technology at a distribution centre](#), resulting in an 80% incident reduction over a three-month period, and a 10% increase in near-miss reporting, relating to incidents that were previously unseen or unreported. These early pilots lay the groundwork for broader adoption, signalling that video analytics is evolving from a high-risk application into a foundational safety capability across a wider range of industries.

- **Proven business value and quantifiable ROI accelerate mainstream uptake.**

Video analytics has moved into the mainstream of safety technology adoption, delivering proven business value and return on investment (ROI). Early adopters report measurable results, such as reductions in incident rates, improved PPE compliance, decreased near-miss severity and faster corrective action cycles. These improvements hit the bottom line directly, through avoided incidents, lower insurance premiums, reduced operational downtime and stronger safety culture metrics. A chemical manufacturing firm reported [financial gains of 42%, with a 295% ROI](#), after implementing Visionify's solution, while viAct delivered savings of [over 5,000 hours of downtime for a chemical plant in Singapore](#). As organizations increasingly validate these benefits at scale, video analytics shifts from a 'nice to have' innovation to a defensible, value-driven investment supported by both safety leaders and executive stakeholders.

Introducing the video analytics market for safety applications

The video analytics vendors discussed in this report focus on delivering solutions that address core safety priorities and risks. Verdantix defines video analytics for safety as:

“The use of machine learning algorithms and neural networks to process and interpret video streams for the automated detection, classification and analysis of safety-related risks. These systems analyse live and recorded video data from fixed, mobile or wearable cameras to identify unsafe conditions, behaviours and human-machine interactions.”

To gain an in-depth understanding of how video analytics is used within safety applications, Verdantix evaluated 10 video analytics providers. Among the evaluated vendors, nine specialize in safety risk detection: Buddywise, HawkVision AI, Intenseye, Protex AI, Surveily, viAct, Visionify, visionplatform.ai and Voxel AI. One vendor – Milestone Systems (BriefCam) – focuses on security, but also offers dedicated safety capabilities.

Our scoring provides a structured view of where solutions differentiate and how the market is set to evolve as firms strive for proactive safety management.



Understanding the EHS video analytics vendor landscape

Video analytics plays a critical role across multiple EHS applications, targeting distinct safety, health and environmental priorities. While this report focuses on core safety use cases, we identify five broader EHS usage scenarios (see **Figure 2**), covering:

- **Security and threat detection.**

Security and threat detection video analytics applies computer vision to identify, assess and respond to potential security risks in real time. Vendors such as Ambient.ai, Milestone Systems (BriefCam) and Pelco analyse video streams to detect unauthorized access and threat indicators (such as gunshots and firearms), and for people-counting, to manage occupancy. By combining object detection, behaviour analysis and contextual awareness, security-focused platforms can distinguish suspicious or escalating situations and trigger alerts for rapid response. They typically integrate with access control systems and video management platforms, enabling faster investigation and coordinated incident response. Prioritizing precision, low latency and situational awareness, security computer vision technology helps firms protect their people, assets and facilities.

- **Core safety.**

Safety-focused video analytics uses computer vision to proactively identify unsafe conditions and behaviours that could lead to workplace injuries or serious incidents. For safety applications, these platforms typically analyse live or recorded video and use neural networks to detect and classify objects of interest, such as people and body parts, vehicles, equipment, machinery and PPE. Objects are tracked and analysed, with contextual awareness and safety-related rule logic. Computer vision can thus detect a broad spectrum of risks, such as PPE non-compliance, line-of-fire exposure, hazardous zone intrusions, unsafe equipment use, vehicle-pedestrian interactions, and working-at-height risks. Video analytics platforms such as those offered by HawkVision AI, Intenseye and Protex AI integrate seamlessly with existing EHS systems to automate data flow and provide visibility across operations.

- **Ergonomics.**

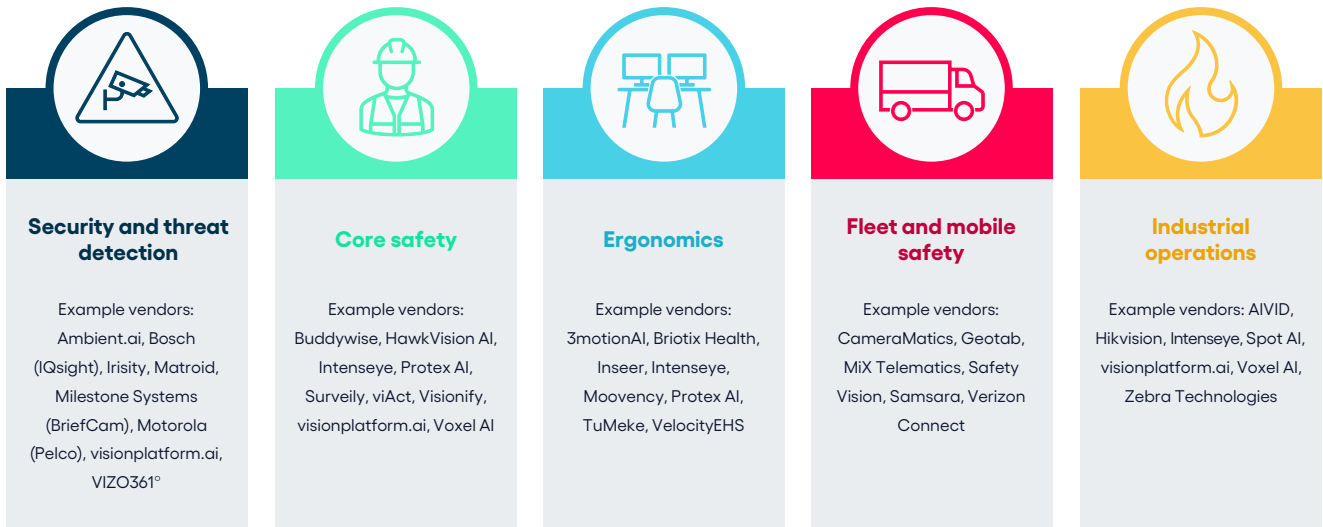
Ergonomics-focused video analytics applies deep-learning-based pose estimation to identify people and extract key skeletal points, such as head, shoulders, elbows, wrists, hips, knees and ankles. These key points form a digital human body, enabling the modelling of posture, movement and orientation, to assess how workers move and interact with their environment over time. Posture is measured against established ergonomic assessment frameworks such as RULA (rapid upper limb assessment), REBA (rapid entire body assessment) and NIOSH (US National Institute for Occupational Safety and Health). Vendors such as Inseer, Moovency and VelocityEHS provide data-driven insights into worker patterns that can lead to musculoskeletal disorders (MSDs) and cumulative strain, thereby supporting ergonomic assessments and job redesigns to improve wellbeing and reduce injury.

- **Fleet and mobile safety.**

Fleet and mobile safety video analytics extends computer vision beyond fixed environments, analysing video from moving vehicles, mobile equipment and dynamic operational settings. Combined with telematics and sensor data, events are contextualized using factors such as speed, driving conditions, proximity and braking. Using inward and outward-facing cameras, the systems can detect unsafe driving behaviour, such as fatigue, distraction and mobile phone usage. Platforms such as CameraMatics and MiX Telematics enable real-time driver alerts and coaching, as well as post-event review.



Figure 2
EHS video analytics vendor landscape



Source: Verdantix analysis

- Industrial operations**

Video analytics vendors bring continuous oversight to complex industrial operations, helping organizations identify hazards and ensure regulatory compliance. AI-powered platforms analyse live and recorded video streams to interpret what is happening across a facility – recognizing machinery in operation, monitoring how equipment is used and observing how people and vehicles move through workspaces. By tracking activity over time and applying contextual safety rules, the systems can detect subtle deviations from normal operations. A small change in equipment behaviour, an emerging chemical leak or an unsafe workflow can trigger an alert long before it becomes a serious risk. Vendors such as Hikvision integrate with IoT sensors, supervisory control and data acquisition (SCADA) and other operational systems, correlating visual data with process conditions to enable predictive risk analysis. Platforms such as AIVID and Spot AI surface deviations from standard operating procedures (SOPs) and highlight patterns of non-compliance.

Evaluated firms and selection criteria

Verdantix defined vendor inclusion criteria to ensure comparability across the featured platforms, narrowing down the inclusion to 10 vendors. To evaluate firms’ capabilities, we requested evidence of functionality from all 10 vendors. We received supplemental information from eight vendors; for the remaining two, we reviewed capabilities outlined in the public domain. Vendors included in this report:

- Offer a video analytics solution covering core safety capabilities.**

For inclusion in this study, we required vendors to have a core solution focused on safety applications within video analytics. Firms solely specializing in security, ergonomics, fleet safety and training were excluded from the evaluation.



- **Provide functionality across at least three core safety capabilities.**

To fall within the scope of this study, we required vendors to demonstrate functionality across at least three of the five core capabilities: PPE detection, behavioural safety, unsafe conditions, area controls and vehicle safety.

- **Have at least ten employees.**

As a start-up-focused market, this report focuses on vendors with a minimum employee headcount of 10.

Video analytics for safety centres on five core capabilities and five technical capabilities

Video analytics solutions for safety applications target a common set of hazards found across industrial sites, warehouses and workplaces. Most vendors address core use cases such as PPE compliance, unsafe acts and conditions, restricted area monitoring and vehicle-pedestrian safety. Differentiation in the market therefore increasingly depends on technical capability rather than breadth of common use case coverage. Leading vendors distinguish themselves through the quality of their model training, accuracy and reliability of detections, flexibility to configure custom safety rules, and depth of integration with existing operational and EHS systems (see **Figure 3** and **Figure 4**). Prospective buyers should evaluate providers based on their ability to deliver:

- **Configurable and adaptable models that support flexible rule-setting.**

Vendors exhibit a range of configurability across safety rules, alerts and thresholds. Leading providers offer easy-to-configure, no-code rules through an intuitive dashboard or via drag-and-drop functionality. However, robust rule management requires more than simple configuration. Effective platforms balance industry-specific requirements with firm-wide governance, while still enabling site-level flexibility. Vendors achieve this by enforcing rule consistency across multi-site deployments to support global safety standards, while allowing local teams to tune rules to reflect site-specific risks and operational realities. Configurable parameters typically encompass occupancy limits, vehicle speeds, designated travel paths, geofencing boundaries, and restricted or hazardous zones. Advanced platforms extend this flexibility, enabling organizations to apply rules at multiple operational levels, from enterprise-wide policies down to specific sites, zones, tasks, shifts or times of day. Some solutions also support temporary rule sets, allowing teams to introduce additional controls during maintenance, shutdowns or construction activities. Crucially, leading vendors embed customer feedback directly into the improvement loop, leveraging user insights to refine rules and continuously enhance system performance.

- **Robust privacy and security controls that meet regulatory requirements and workforce expectations.**

Employee acceptance remains a critical factor in the deployment of video analytics, with buy-in hesitancy due to privacy breaches a prominent barrier to adoption. In regions with strict data protection policies, workers and regulators scrutinize how organizations capture, process and store video data. Vendors must therefore build privacy and security into the architecture of their platforms from the outset. Providers in this study ensure enterprise-grade encryption of data both in transit and at rest. Some offer flexibility of deployment options to meet individual customers' risk profiles and IT policies, with the option of edge, cloud or hybrid deployment. To protect individual privacy throughout real-time monitoring, face anonymization and body blurring features are standard across vendors. Leading providers go further. Some enable edge-only processing, analysing video locally on cameras or edge devices without transmitting or storing identifiable footage. Others allow organizations to disable video recording entirely and retain only metadata or safety events. Alongside certified compliance with the EU General Data Protection Regulation (GDPR) and ISO 27001, such functionality gives buyers confidence that deployments will be both safe and secure.



Figure 3

Safety-focused video analytics: categories and definitions

| | Category | Assessment criteria |
|-------------------------------|--|---|
| Safety capabilities | PPE detection | Ability to accurately detect and verify the presence and correct use of required PPE across defined areas, tasks and roles. This includes identifying missing, improperly worn or task-inappropriate PPE (e.g. unfastened helmets or incorrect gloves for the activity). |
| | Behavioural safety | Ability to monitor, detect and alert to unsafe human acts that increase the risk of injury. This includes identifying behaviours such as failure to use handrails, unsafe movement patterns (running, jumping, climbing), excessive crowding, and distracted behaviour due to mobile device usage. The system should distinguish normal operational activity from elevated risk scenarios. |
| | Unsafe conditions | Ability to continuously identify unsafe working conditions that contribute to slips, trips, falls and collisions. This includes detecting obstructions in walkways or vehicle paths, misplaced materials and visible leaks or spills. The solution should provide timely alerts. |
| | Area controls | Ability to enforce area-based safety controls by detecting unauthorized access, occupancy violations and breaches of defined safety perimeters. This includes monitoring restricted zones, machine guarding areas, and capacity limits for workers and vehicles. The system should support configurable zones, real-time alerts and differentiation between people, vehicles and equipment. |
| | Vehicle safety | Ability to detect, classify and track vehicles and pedestrians to identify unsafe vehicle-related behaviours and interactions. This includes monitoring compliance with designated routes and travel directions, detecting speeding relative to site-specific thresholds, and identifying vehicle-pedestrian proximity events and near-misses. The system should incorporate motion tracking, zone awareness and interaction analysis, particularly in environments involving forklifts, pallet jacks, automated guided vehicles (AGVs) and other mobile equipment. |
| Technical capabilities | Configurability & model adaptability | Ability to configure, adapt and continuously optimize both safety rules and computer vision models to site-specific layouts, operational tasks, defined zones and varying risk levels. This includes support for configurable detection thresholds, alerting logic and custom safety rules. Effective solutions enable continuous improvement through feedback and retraining, while maintaining model governance and performance stability. |
| | Privacy & security | Ability to support privacy-by-design and enterprise-grade security requirements across data capture, processing, storage and access. This includes features such as anonymization and blurring, role-based access control, configurable data retention policies, and compliance with relevant regulations and standards (e.g. GDPR, ISO 27001, SOC 2). |
| | Detection accuracy & alert management | Ability to consistently detect safety-relevant events with high precision and recall across varied environments, lighting conditions and camera perspectives, while minimizing false positives. The system should process video or images and generate alerts within timeframes that support meaningful intervention and risk prevention. |
| | Integration with EHS systems & workflows | Ability to integrate seamlessly with existing EHS management systems, incident reporting tools, corrective action workflows and analytics platforms. Strong solutions allow for the automated creation of incidents, observations or near-miss records from video/image events, data exchange via APIs or native connectors, and support for closed-loop safety processes. |
| | Inbuilt analytics & insights | Ability to transform detected safety events into meaningful, actionable insights. This includes providing inbuilt dashboards and reports that surface leading indicators such as unsafe act frequency, near-miss trends, high-risk zones and recurring behaviours. Strong solutions enable users to analyse data by site, time, task, role or risk type, track trends over time, and link insights to actions taken. |

Source: Verdantix analysis



Figure 4
Video analytics for safety: capabilities assessment

| | Safety capabilities | | | | | Technical capabilities | | | | |
|-------------------------------------|---------------------|--------------------|-------------------|---------------|----------------|--------------------------------------|--------------------|---------------------------------------|--|------------------------------|
| | PPE detection | Behavioural safety | Unsafe conditions | Area controls | Vehicle safety | Configurability & model adaptability | Privacy & security | Detection accuracy & alert management | Integration with EHS systems & workflows | Inbuilt analytics & insights |
| Buddywise | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| HawkVision AI | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Intenseye | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Milestone Systems (BriefCam) | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Protex AI | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Surveilly* | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| viAct | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Visionify | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| visionplatform.ai | ● | ● | ● | ● | ● | ● | ● | ● | ● | ○ |
| Voxel AI* | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

| | |
|--|---|
| Market-leading functionality, with differentiated offering | ● |
| Strong functionality | ● |
| Average functionality | ● |
| Some functionality | ● |
| No demonstrated evidence | ○ |

Note: *Denotes a firm scored via publicly available information and existing Verdantix research.
Source: Verdantix analysis



- **High detection accuracy and effective alert management, to ensure reliable performance.**

Robust detection accuracy, low latency and intelligent alert management are essential capabilities for any video analytics solution. Detection speed and the interval between recognition and notification differ widely among vendors. Leading providers continuously process data on edge devices, delivering alerts in as little as a fraction of a second, and up to two seconds. However, even the best systems face challenges: false-positive alerts often arise when visual noise is not effectively managed. Top providers tackle this problem through a blend of refined models, context-aware rules, human-in-the-loop feedback, verification processes, configurable thresholds and temporal filtering. Beyond mitigation strategies, vendors rigorously track accuracy metrics, monitoring model precision, maintaining alert volume stability, maximizing recall and minimizing false-positive rates, to ensure consistent, reliable performance.

- **Seamless integration with EHS systems and operational workflows, for end-to-end visibility.**

With EHS technology buyers increasingly demanding interoperable systems, vendors must deliver seamless integration between safety-focused video analytics, EHS management platforms, business intelligence (BI) dashboards and IoT devices. Vendors such as Intenseye and Protex AI recognize this as a priority, cultivating robust partnerships with leading EHS software providers such as Benchmark Gensuite, Cority, Intellex, Sphera and Wolters Kluwer Enablon. Other providers, including Intenseye and viAct, enhance integration through proprietary camera technology, enabling more efficient workflows. Intenseye's Sentinel suite delivers heightened accuracy and faster performance, while viAct's viMAC provides a comprehensive 360° view to bolster machinery safety.

- **Inbuilt analytics and insight capabilities that surface trends and identify hotspots.**

Vendors provide critical tools to analyse safety performance and uncover recurring incident patterns. Interactive dashboards serve as the centrepiece, offering dynamic safety scoring, heatmaps and hotspot visualizations that make trends instantly visible and actionable. Top-tier providers push beyond basic analytics, delivering fully closed-loop systems that automatically confirm whether corrective actions have been implemented and enable post-incident reassessment. Some platforms incorporate predictive analytics and AI-driven recommendations, flagging potential hazards before they escalate and helping organizations prioritize interventions.

Next-generation AI capabilities drive vendor differentiation

Innovation continues to reshape the market as vendors push for greater automation and truly proactive risk management. Predictive AI capabilities and closed-loop systems lead this advancement, allowing firms to rely on computer vision to anticipate risks and strengthen safety performance across operations (see **Figure 5**).

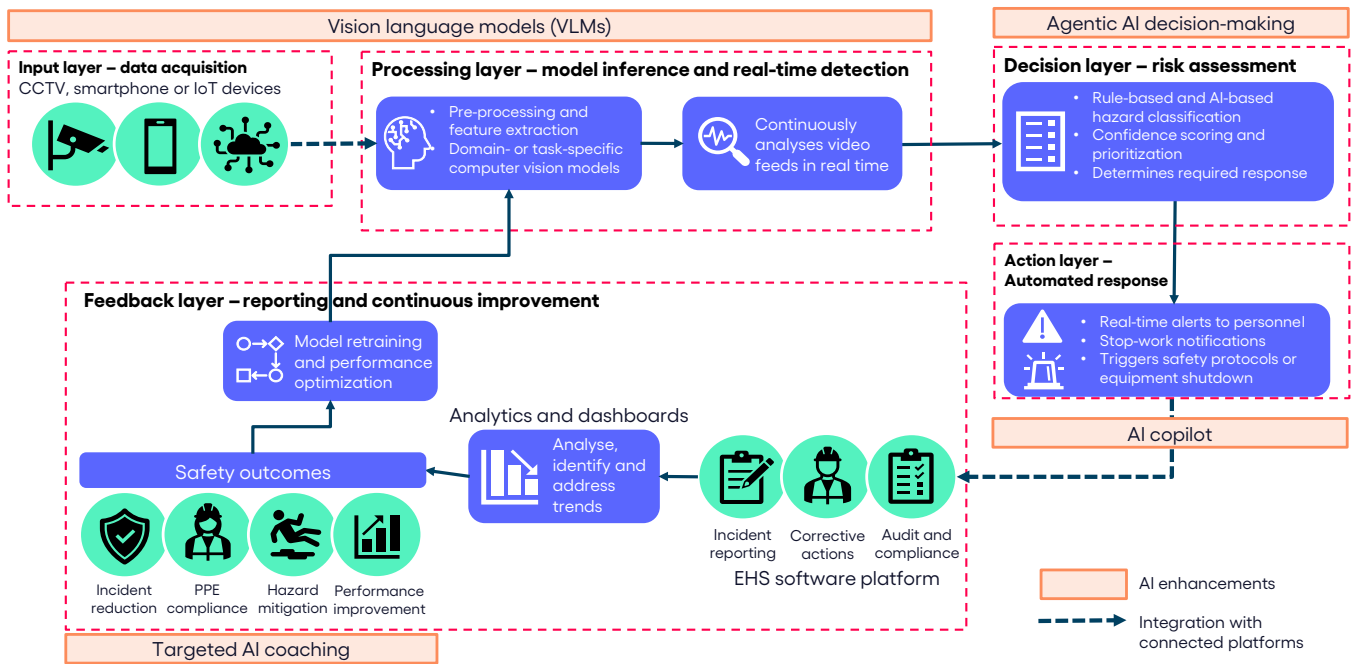
Verdantix finds that firms are innovating by:

- **Integrating vision language models (VLMs), negating the need for rigid rule-based configuration.**

One of the most transformative innovations in video analytics for safety is the integration of VLMs. These systems combine visual recognition with large language models (LLMs), enabling them to interpret complex scenes in ways that go beyond simple object detection. Instead of training a separate model for every rule, users can prompt the model in natural language, allowing it to process the video and instruction together. AI can interpret complex events, contextualize worker behaviours within the broader environment, and enable semantic search over video footage. Natural language search allows safety teams to query video footage using plain language, while contextual safety analysis enables AI to understand nuanced risk patterns, helping organizations proactively address hazards before accidents occur. For example, visionplatform.ai leverages VLMs to analyse video and produce structured natural language descriptions. By merging visual and linguistic intelligence, these innovations make video analytics not only faster, but far more actionable in creating safer workplaces.



Figure 5
AI-enhanced computer vision safety workflow



Source: Verdantix analysis

- Transforming isolated alerts into predictive trends with agentic AI frameworks.**

AI agents represent the next major leap in the wider EHS software world, and video analytics is no different. Instead of treating detections as isolated alerts, AI agents operate as continuous observers, analysing multiple camera streams simultaneously and summarizing what happened, why it matters and what action should follow. Video analytics vendors can run many concurrent detection configurations at scale, such as for perimeter breaches, line-crossing, crowd anomalies, behavioural deviations and unattended objects. Agents blend vision-based models with contextual logic, allowing them to classify patterns, identify precursors to risk and convert raw detections into actionable insights. Emerging platforms use AI to automatically draft safety narratives, generate event summaries, route issues into workflows and generate corrective and preventative actions. This is a trend aligned with broader EHS innovation, where AI systems leverage video, text and operational data to flag hazards and recommend preventative controls.

- Targeting training programmes through real-time event insights.**

AI agents go beyond safety monitoring tools – they can be leveraged as digital safety coaches that reinforce behaviours and guide preventative actions. As video analytics platforms evolve, AI agents can use camera-feed outputs and behavioural and condition-based insights to generate coaching guidance that supervisors can apply in toolbox talks, one-to-one conversations or shift briefings. Employee training thus moves from generic, to targeted and evidence-based. With the emergence of VLMs, systems can generate natural language summaries explaining why certain behaviours increase risk, thereby enhancing psychological safety discussions and making coaching more accessible to frontline teams. By embedding AI insights directly into coaching workflows, organizations can turn moment-in-time detections into habit-shaping learning moments. This closed loop, from observation to action, strengthens safety culture.



- **Unifying video analytics with operational, IoT and EHS data.**

The next wave of innovation in integrated safety intelligence platforms centres on their ability to unify video analytics with operational and IoT data in a truly intelligent, automated way. Beyond merely centralizing information, emerging platforms use AI to detect patterns across systems, linking video observations with sensor readings, machine status and worker behaviour. The system may identify patterns such as equipment malfunctions occurring alongside unsafe pedestrian movement, automatically triggering alerts or adjusting workflows. Advanced integration also allows for dynamic, cross-system responses, such as temporarily restricting access to high-risk zones or adjusting environmental controls in real time. By combining contextual awareness with predictive insights and autonomous operational actions, the market moves from passive monitoring to intelligence-driven safety management.



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Contact

Verdantix Ltd,
Woolyard, 52-56 Bermondsey Street,
London SE1 3UD, United Kingdom

contact@verdantix.com
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