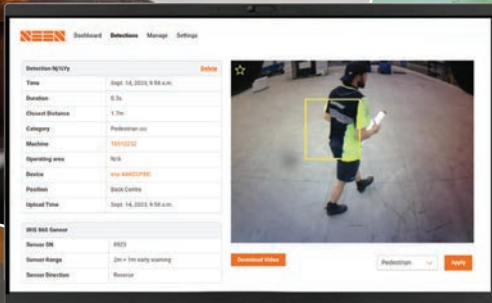# SAFETY SYSTEMS THAT *SAVE LIVES*

Introducing the **SEEN SAFETY SYSTEM** Mobile Retro-reflective Striping Detection

Effective detection of ANSI 2 & 3 PPE

Critical Incident data sent to Safety Manager

Iris 860+ Insight

SEEN™

Directly impact the bottom-line and <u>**SAVE LIVES**</u>!

▶ *Reduce* OSHA incident rates.

▶ *Reduce* equipment downtime and production loss.

▶ *Reduce* equipment and infrastructure damage (buildings, doorways, inventory storage racks).

Selecting Safety Systems

A checklist to use for picking the right "*proactive*" safety system for your business

When evaluating Safety Systems, consider the benefits of using an proactive system and its direct impact on the bottom line:
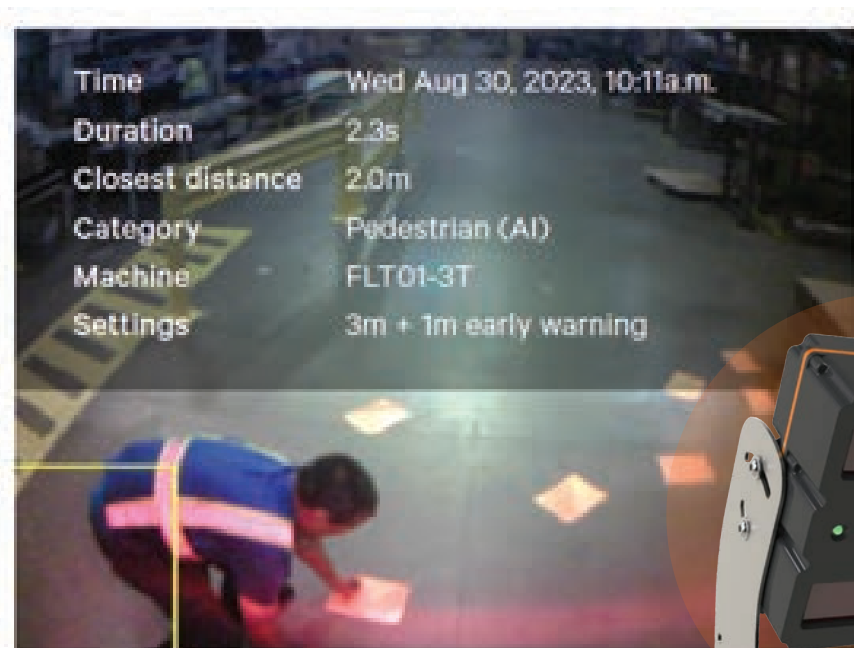
– Reduce OSHA incident rates, results in lower insurance premiums.

– Decreased legal fees.

– Less downtime, resulting in increased productivity.

– Minimized equipment damage costs.

– Preserved infrastructure integrity (such as buildings, doorways, production lines, and inventory storage racks).

	SEEN Safety
1. Passive or active? Operational safety hinges on a blend of passive and active measures. While foundational safeguards like vests and procedures lay the groundwork, the critical second tier of active warning systems—like collision avoidance and proximity alarms—offers real-time detection and intervention. This dynamic approach not only combats human error and passive system limits, but also ensures immediate responses to risks, fortifying safety for workers, equipment, and critical infrastructure.	✓ Active "real-time" Detection
2. What to detect? Certain radar systems detect anything within their range, alarming for various objects like walls, pallets, racking, and people. While helpful for preventing damage, they often produce too many alerts, reducing effectiveness. Selective detection systems, however, only alert for specific targets/tagged items, like people or load-bearing columns, disregarding irrelevant objects. This results in fewer, more actionable alerts, enhancing effectiveness.	✓ Selective detection
3. Tag or no tag? RFID detection systems typically rely on electronic tags for reliable detection, but they come with challenges: – Tag issuance and training are cumbersome, especially with visitors and subcontractors. – Tags are costly, require regular charging and testing, adding expenses. – Integration with IT systems complicates deployment, and controlling detection zones can lead to over-reporting. – Alternatively, AI optical camera systems detecting humans, face reliability issues in adverse conditions such as dirty, wet environments, and demand intricate setup. Regardless of the system chosen, it should complement existing safety measures without necessitating behavior changes from workers.	✓ No tag needed or complex AI processing

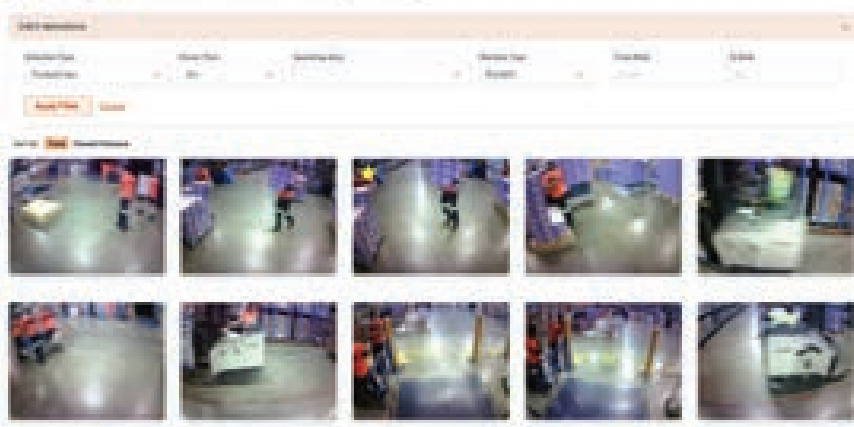# // SAFETY SYSTEM CHECKLIST

	SEEN Safety
4. Detection area Over-detection can nullify the effectiveness of any system. Finding the optimal balance within the detection area is essential for ensuring meaningful safety benefits without overwhelming operators with unnecessary alerts. When it comes to pedestrians in proximity to mobile equipment, a 360-degree detection approach could lead to an excess of alerts. Instead, focusing on targeted detection in critical risk zones proves more advantageous, providing support to operators without causing undue nuisance. <u>Tailoring detection zones to individual machines and specific applications, can significantly reduce irrelevant alerts, thereby amplifying overall effectiveness.</u>	✓ Precise detection zone
5. Operational impact Downtime is costly. Faster, simpler installation gets machines back in operation swiftly, boosting earnings. Reliability is key; any technology failure results in expenses for repair or replacement. Plug-and-play systems with minimal setup lower overall ownership costs. Easy installation facilitates sensor transfer between machines as needed. Complex systems with multiple components, IT integration, and testing require staff training and oversight, adding to the total cost of ownership in terms of time and expenses.	✓ Simple to install and use
6. Tag fixed objects for detection Along with prioritizing people, reducing the significant risk of collisions with other machines or objects is critical for many operations. Tagging allows for swift and cost-effective tagging of any object for detection. <u>This creates greater integration operation to include mobile equipment and infrastructure</u>.	✓ Tag any object with reflective tape
7. Cost The costs for purchasing, installing, and maintaining a system dictate the number of sensors feasible for deployment. Even with an excellent system, if it's too pricey to outfit all machines, the safety benefits won't fully materialize, risking lives. Consider not only upfront expenses but also ongoing service and support costs.	✓ Affordable No ongoing cost
8. Reporting / data / interoperability Sensors are great at detection and warning, but when it comes to accident prediction and prevention, <u>data is king</u>. When evaluating a system, check that it has the capability to output data that can be used to provide meaningful and user-friendly insight into the near misses happening on your site.	✓ Critical incident data reporting
9. Reliability Work sites pose challenges for high-tech sensors with factors like dust, dirt, weather, RF interference, and varying light conditions affecting their reliability. In physically demanding settings, simpler technology outperforms complex sensors. Evaluate the number of hardware components, maintenance needs, and the requirement for specialist support. Complex systems with regular support needs can escalate costs and frustrations rapidly.	✓ Reliable detection in all conditions

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Time   Wed Aug 30, 2023, 10:11a.m.
Duration   2.3s
Closest distance   2.0m
Category   Pedestrian (AI)
Machine   FLT01-3T
Settings   3m + 1m early warning

Download Video

Iris 860
+ Insight

Critical incident
data sent to
Safety Manager

With Seen Safety Reporting, managers can:

▶ Proactively identify areas with higher risks of accidents
   or near-misses

▶ Take preventive measures before incidents occur.

▶ Have data uploaded to their computer and mobile devices

▶ Identify unsafe spots,

▶ Use reports to review and analyze details to enhance a safety program

Standard reporting includes: Location, Time of Day, Duration of Interaction,
Closest Distance, Machines and Personnel involved, Picture of incident,
and the ability to download a video of the entire incident

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The Seen Safety System
(simple as 1+2+3)

1. Hardware

- Easily Installed
- Reliable Detection in dirty, wet, dusty, and poorly lit environments
- Self-Check ensures dependability
- Low Cost of ownership

2. ANSI 2 & 3 Personal Protective Equipment and Striping

- Active detection of existing PPE
- Easily add Non-Employees, contractors, visitors, etc with a safety vest
- No Irrelevant Detections
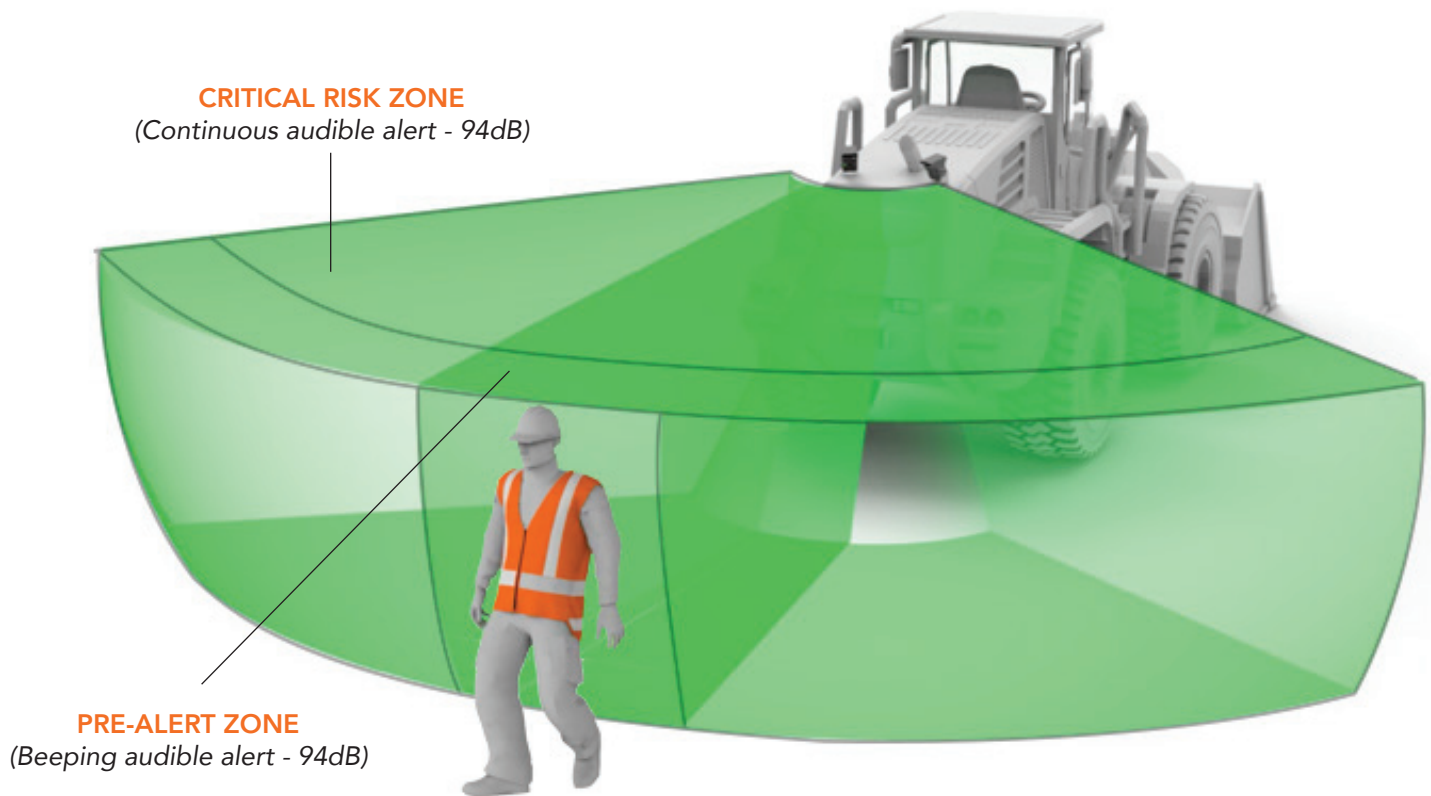- Minimize costly equipment damage and operational disruptions
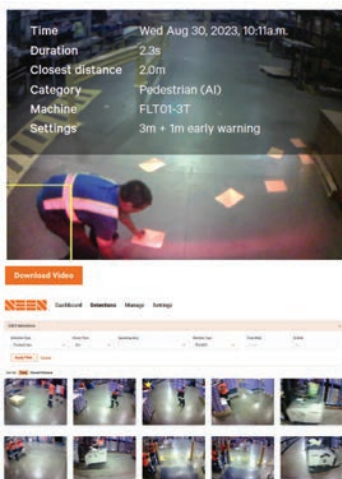
3. Safety System Reporting

- Capture Crucial data: time, date, duration, distance, and trace-path
- Image uploads for every detection event, with downloadable video for incident analysis and training
- Data export to Excel for comprehensive analysis and site-to-site comparisons
- Actively drives improvements in safety programs, reduces costs, and *ensures everyone goes home safely at the end of their shift!*

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Let AES Provide You With A Custom Safety System That Is **Simple, Effective, Affordable!**

▶ The **SEEN SAFETY SYSTEM** has a minimum 60 x 45 (degrees) field of view, and can be attached anywhere on the machine, with a maximum detection range of 26 feet.

CRITICAL RISK ZONE
(Continuous audible alert - 94dB)

PRE-ALERT ZONE
(Beeping audible alert - 94dB)

Multiple sensors can be used to achieve a 120° field of view. The detection area can be configured with two alert zones, a pre-alert zone (beeping audible alert), and the critical risk zone (continuous audible alert). The pre-alert gives the operator and pedestrian time to modify their behavior before they enter the critical risk zone.

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