

An Active Shooter Assessment

KEYNOTE PRESENTERS:

Greg Lilyhorn, Licensed Security Consultant and Expert Witness

Jeff Vaughn, Director of Security and Emergency Management, TIB, N.A.

WEBINAR SPONSORS:

Dave McLaren, Vice President of Sales, Shooter Detection Systems

Brian Toolan, Vice President Public Safety, Everbridge

EXECUTIVE SUMMARY SPONSOR:

James Connor, Head of Corporate Engagement, Ambient.ai

KEY TAKEAWAYS

- Mass shootings differ from workplace violence, and mostly occur in locations with limited security measures.
- When planning for an active shooter response, cooperation with law enforcement and practicing safety plans make a big difference.
- Following an active shooter event, it is important to plan for medical triage and communication.
- AI-powered threat detection and real-time context from Ambient.ai aid security practitioners in prevention and response.
- Security practitioners can use communications and alert systems technology to increase response speed.
- Everbridge uses integration and automation to decrease response time.

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OVERVIEW

In the past two years (2020-2022), the United States has recorded an increase in mass shootings. According to the Department of Justice (DOJ), these two years represent the highest rates of mass shootings in history. With the decline of pandemic restrictions and increased freedom of movement, that rate is expected to increase, creating a “next wave” of active shooter incidents. Given these statistics, there is an urgent need for practitioners to recognize the potential for extreme violence in today’s world and to prepare counteraction procedures.

In our live webinar, Jeff Vaughn and Greg Lilyhorn provided background of what active shooter events entail and how companies and facilities can prepare for such incidents. Dave McLaren explained how Shooter Detection Systems provides increased response time to active shooter situations. Brian Toolan shared information on Everbridge’s integration capabilities and emergency response applications.

EXECUTIVE SUMMARY SPONSORED BY:

Ambient.ai provides software that turns real-time surveillance video from existing camera systems into automated threat detection alerts with proactive response recommendations – prompting real-time security team engagement.

LIVE WEBINAR SPONSORED BY:

Shooter Detection Systems provides sensor technology and an integrated, centralized “breadcrumb trail” view of shooter movements.

Everbridge offers integration solutions to create a detailed alerting and communications response to emergency events.

KEY TAKEAWAYS

Mass shootings differ from workplace violence, and mostly occur in locations with limited security measures.

While workplace violence and active shooter situations are connected, it is important to understand the difference in order to best determine vulnerabilities.

Workplace violence often moves from a point of being disagreeable or agitated with someone to the point where an employee is advocating violence. Companies can access existing materials for guidelines on profiling persons of interest to help determine whether their actions will move to violence, including potential active shooter events.

The FBI and DHS define an **active shooter** as “an individual actively engaged in killing or attempting to kill people in a confined and populated area,” usually with firearms and no pattern to how they select victims. The sooner that assailants meet some level of resistance (e.g., law enforcement, security, etc.) the sooner damage will be mitigated.

Most mass shootings occur at “soft targets,” which are locations easy for shooters to access with firearms. When confrontation with responding law enforcement becomes unavoidable, which happens in 46% of active shooter incidents, 40% of mass shootings end in the shooter’s suicide and 14% end in the shooter’s surrender. Fleeing is usually not part of the shooter’s plan; less than 1% of cases end with the attacker fleeing.

There are **five phases of active shooter events** defined by the DOJ and law enforcement.

1. Fantasy	The shooter pictures himself doing the shooting.
2. Planning	The suspect is deciding on the "who, what, when, where, and how" of their targets and how they play in to the next phase.
3. Preparation	During this stage the suspect may be obtaining the type of weapons and supplies that can be taken to that location, considering especially what can be used to harm as many people as possible.
4. Approach	The Approach stage is a very dangerous stage. The suspect has made his plans and decided to act.
5. Implementation	Once the shooter opens fire, immediate action needs to be taken. Speed is one of the key elements in next-wave training. Alerts have to be made quickly and reaction times have to be cut down. Initial responding officers need to rapidly proceed to the suspect and stop the threat.

When planning for an active shooter response, cooperation with law enforcement and practicing safety plans make a big difference.

Greater detail in training and planning will reassure and give confidence to employees that they know what they're doing in an active shooter situation, especially because they will be under extreme pressure.

Law enforcement's #1 goal of is to **locate, contain, and stop the shooter**. It is critical that employees or individuals taking active shooter training know what to do and why. For example, staying on the ground with hands open or above their heads, fingers out, is something that individuals might find hard to do, but training must emphasize the importance of staying down until law enforcement can clear the area.

Ideally, whoever responds, whether it's patrol [or] a special SWAT team . . . the first time they set foot in your building should not be when an incident happens. Having them walk the corridors, to see your space and understand it, is a huge bonus to the speed at which they can resolve that situation.

Jeff Vaughn, TIB, N.A.

Additionally, it is important that employees understand that in a mass shooting, law enforcement will not stop and treat injured persons, nor will they immediately evacuate individuals.

- The first wave of on-scene law enforcement is focused on making contact with the shooter.
- The second wave of law enforcement will establish safety quarters and begin an evacuation.

But preparation for an active shooter situation includes facilities and businesses establishing their own evacuation methods or safe quarters, guided by how much time it takes for individuals to reach those locations. Working out those details in advance with local law enforcement is important to ensure optimal safety in an actual event.

Active shooter training must be dynamic. That's because attackers will adapt their tactics to counter known or publicized safety procedures. Companies must take that into account in planning. Training involving drills, in which individuals practice moving to their safe area or evacuation point, are preferred versus roleplay scenarios, as roleplay creates anxiety, stress, and psychological strain on employees.

More detail in preparation plans is the goal here.

Greg Lilyhorn, Licensed Security Consultant and Expert Witness

Following an active shooter event, it is important to plan for medical triage and communication.

Planning for how to handle a mass shooting should include processes for what happens after the shooter is disarmed, as the immediate aftermath of an active shooter incident can be chaotic.

After an attack, law enforcement will have to slowly and meticulously clear the entire facility. The injured will need to be removed to locations where they can receive medical care and counseling. Having a predesignated basic on-site triage area and first aid training can be helpful, as it can take time to get enough emergency responders to treat everyone. Practitioners should consider designating both a liaison with law enforcement and a liaison with emergency medical teams.

As a practitioner, getting a headcount in the immediate aftermath to identify anyone who might be still missing is critical. This will assist with family notifications so that loved one can quickly be notified. Designating a point of contact for the facility or company is a part of that.

A higher-level company manager should manage media communications, including active shooter training communication, and employees should be instructed not to speak with the media, to be respectful of those who might have died in the incident.

AI-powered threat detection and real-time context with Ambient.ai.

Threat detection and real-time context are critical to effectively responding to and preventing active shooter incidents.

Ambient.ai leverages computer vision, AI, and existing security camera and access control infrastructure to accurately detect security threats and provide real-time context on threat behaviors – aiding security teams in the prevention and response to active shooter incidents.

- **Early indicators:** Ambient.ai scales the detection of hard-to-spot physical behaviors that can be precursors to active shooter incidents, like tailgating and loitering. Using existing surveillance cameras and automated computer vision algorithms, Ambient.ai alerts security teams in seconds to prevent incidents before they escalate. An Ambient.ai customer reports a 93% reduction in alarm volume due to the accuracy of computer vision intelligence compared to standard event-based alerting systems.
- **Detection:** The Ambient.ai Platform accurately detects 125+ unique threat behaviors in real-time, including person brandishing a firearm. Once detected, the Platform sends a visual alert with the relevant video surveillance clip to operators, guards and first responders. Ambient.ai customers report 10x faster incident response times.

- **Incident response:** The Ambient.ai Context Graph™ tracks the relationships between events, time, and physical spaces, providing an auditable trail of real-time updates and responses as the incident evolves.
- **Forensics:** AI-powered workflows speed forensic search by 20X – quickly providing a full picture of the incident.

Figure 1: Automatically detect threat behaviors and early threat indicators

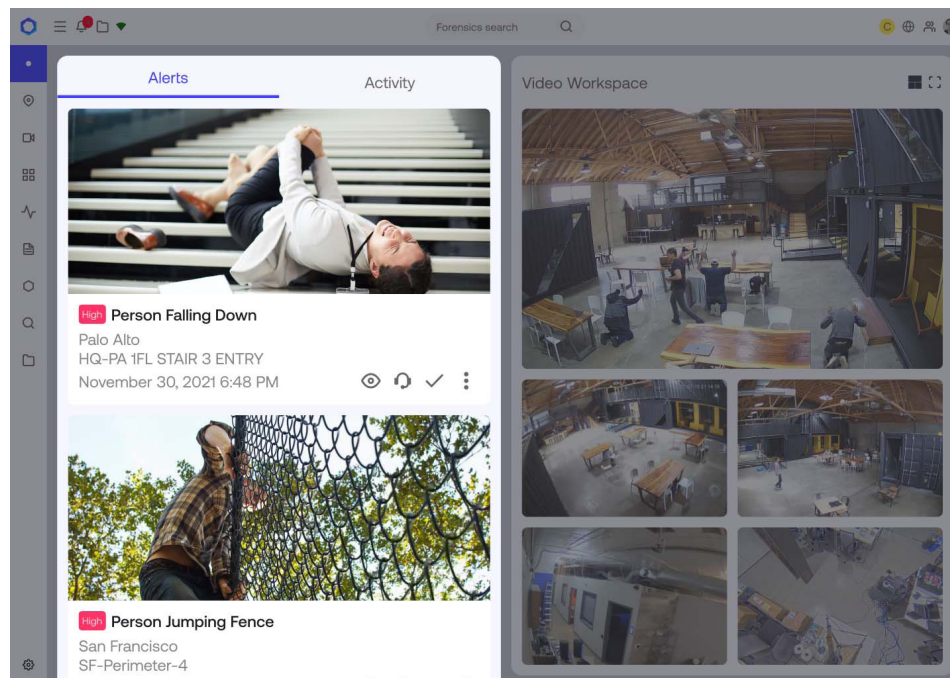
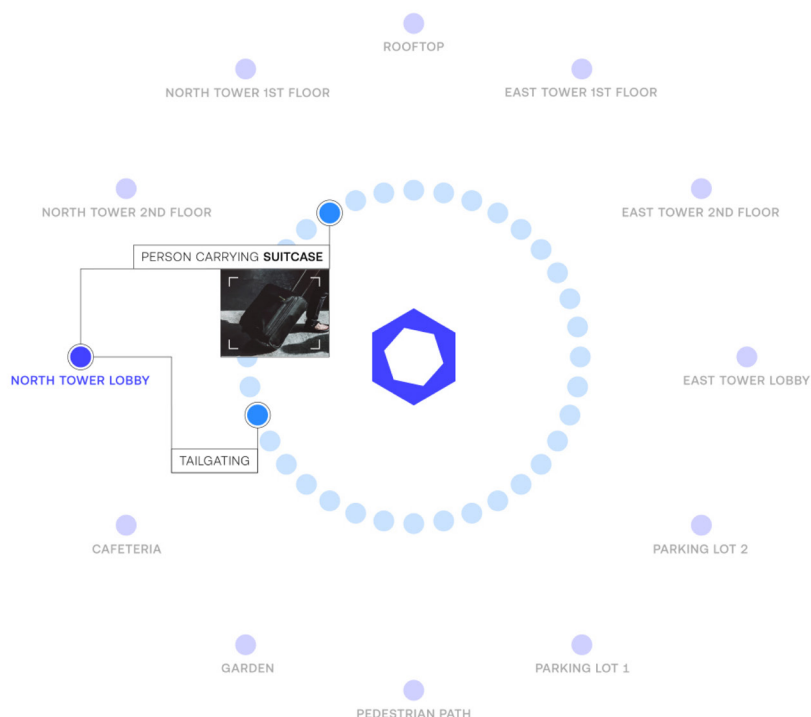


Figure 2: Automatically analyze video events, evaluating behaviors with context



Effective and proactive physical security matters. Computer vision intelligence with Ambient.ai automates threat detection, shifting the burden of monitoring for early warning indicators from human operators to highly accurate and capable computers. This makes human focus on proactive security operations possible, providing security teams with consistent and reliable communication on early indicators of risk and enabling faster response.

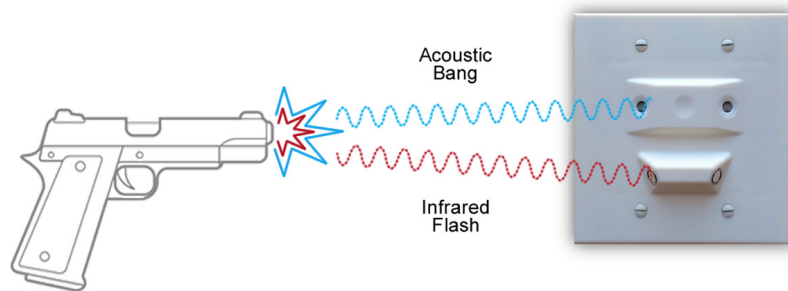
James Connor, Ambient.ai

Security practitioners can use communications and alert systems technology to increase response speed.

On a large campus or facility, the ability to send communication across a broad area and to identify where the threat is, based on sound or camera, saves time and therefore potentially saves lives.

Shooter Detection Systems is the most accurate and reliable device on the market for indoor gunshot detection. Gunshot detection helps determine where shots are being fired and when shooting started, as well as how many shooters there are. In less than one second, Shooter Detection Systems can detect exactly which building, floor, and location a shooting is occurring in, using two modes of detection for reliability. The first mode is detecting infrared flash, or heat signature, off a gun. This is quickly followed by the second mode, which detects the acoustic (loud bang) of the gun. The two modes together provide over 99% accuracy, or less than one false alert per five million hours (300 years).

Figure 3: Two-mode detection provides 99.8% detection accuracy



The device is a dual-gang light switch box that can be wall- or ceiling-mounted. It comes in PoE (power over ethernet) or wireless and no triangulation or calibration is required. The device is fully supervised and comes with the Shooter Response situational awareness application that provides first responders and security personnel a breadcrumb trail of where the shooter is moving in the floor plan, which supports quick action on safety protocols. Shooter Detection Systems also offers full API integrations with several providers for ease of integration.

I live outside of Columbus, Ohio. Just in the last five months, we've had a shooter in a mall, we've had a shooter at a grocery store, we've had a shooter at a hospital. It can happen in any vertical, any time, and there's no rhyme or reason why.

Dave McLaren, Shooter Detection Systems

Figure 4: The Shooter Detection Systems application shows breadcrumb trail on a facility's floorplan



Everbridge uses integration and automation to decrease response time.

Everbridge firmly believes in automation to speed response time in emergency situations. Being able to integrate with different solutions (currently over 400) and to automate helps provide the best and most accurate response. This includes integration with:

- **Data management**, to ensure all proper employees are accounted for, and for notifications.
- **Calendars**, to understand where an employee is supposed to be at any given time.
- **Access card readers**, to know who is and who is not in the building, time of entry, and so forth.
- **WiFi in the building**, to locate exactly where an individual might be at any given time.

Everbridge also provides risk-intelligence monitoring of 25,000 channels, including social media and other platforms. Whether due to an active shooter or some other natural or manmade disaster that may impact operations, integration with Everbridge or other products empowers employees to raise alerts directly from their phone, set off the security chain of events, and push a panic button, as well as access information such as reunification plans, corporate policies, and who is tasked with what actions in the case of an emergency event.

Last year, Everbridge deployed a new travel risk-management system to keep employees informed as they travel. This provides executive protection through the ability to understand some of the risks that might be present or coming up at a destination.

At the end of all this, we have to have a quick and clear accountability and reunification system, we need to be able to account for our employees, understand that everyone's safe, understand where people are located, and be able to get them the assistance they need.

Brian Toolan, Everbridge

ADDITIONAL INFORMATION

- **Ambient.** To learn more, visit <https://ambient.ai>
- **Everbridge.** To learn more, visit <https://www.everbridge.com>
- **Shooter Detection Systems.** To learn more, visit <https://shooterdetectionsystems.com/todayshow>

BIOGRAPHIES

Greg Lilyhorn

Licensed Security Consultant and Expert Witness

Greg Lilyhorn is an accredited practitioner with years of diverse, broad-based knowledge and experience in security and law enforcement. A trusted trainer, investigator, and subject matter expert with extensive experience in unique specialized security and investigative tasks and operations, he has substantial research and analytical experience conducting complex investigations involving relevant fact-finding, interviewing, and reporting of significant, valued, or necessary matters.

Greg also has extensive knowledge and experience in the development of complex security plans/policy, security inspections/assessments, instruction training, and evaluations of all-hazard protection protocols. He has specialized security protection experience within unique high-risk or high-profile environments including high-rise buildings, hospitals, tech centers, drug-clinics, homeless centers and women's shelters, and government centers. Greg is also an accredited court-qualified expert with "successful court case experience" in formal reviews and detailed written opinions on matters involving: premises liability, foreseeability, negligent or inadequate physical security.

James Connor

Head of Corporate Engagement, Ambient.ai

James Connor is an industry veteran leading global program development and C-Suite strategies for the effective implementation of advanced technologies. He has a law enforcement background in the US Coast Guard and has led teams to build security programs, policies, and procedures in every global major market. Throughout his career, James has worked with top Silicon Valley technology brands such as Symantec and PeopleSoft to expand and redefine the boundaries of security. He is dedicated to the full digital transformation of the physical security industry through improved effectiveness and resilience that new technologies will provide.

Dave McLaren

Vice President of Sales, Shooter Detection Systems

Dave is a results-driven sales and operations leader with decades of experience in the security industry, having served in leadership roles on both the manufacturer and integrator sides of the business. As an integrator Dave oversaw the sales and service departments for a large supplier of security lines including video, access control, nurse call systems, and fire panels.

On the manufacturer side Dave led sales teams specializing in mass notification at Alertus, sound and paging at Valcom, and video analytics at Check Video. As VP of Sales for Shooter Detection Systems Dave brings this leadership and product experience full circle and leads the company's efforts to bring customers integrated gunshot detection solutions through channel partners.

Brian Toolan

Vice President Public Safety, Everbridge

Brian Toolan joined the Everbridge family in April 2016 as the Technical Account Manager for the AlertFlorida statewide notification system, and currently serves as the Vice President of Public Safety. Brian came to Everbridge after completing a 24-year career in public safety with the State of Connecticut. Brian served as the program manager for the Urban Search and Rescue Task Force where he gained valuable experiencing utilizing the Everbridge platform as a customer.

Brian was also the Operations Chief for the State Emergency Operations Center and served the State during historic blizzards, hurricanes, floods, the largest natural gas power plant explosion in the U.S., and other natural and man-made disasters. While serving as the TAM in Florida, Brian has assisted the State Division of Emergency Management in the Florida Emergency Operations Center during Hurricane Matthew and Hurricane Irma.

Jeff Vaughn

Director of Security and Emergency Management, TIB, N.A.

For over 10 years, Jeff Vaughn has provided leadership and education in Security and Emergency Management. Jeff has had leadership experience in event and site security as well as executive protection and physical risk mitigation. He holds numerous training certificates and instructor credentials as a firearms trainer and private security instructor at both the national and state level. He teaches emergency management procedures at the individual, corporate, and municipality level. He currently serves as the Director of Security and Emergency Management at TIB, N.A. and instructs state-approved certification courses for Purple Mountain Institute.