

Virtual Reality Solutions Reimagine Police Training

Police departments across the country are embracing cutting-edge VR technology to help de-escalate violent situations and save lives.

Axon is a network of connected devices, apps, and people that help public safety personnel become smarter and safer. With a mission of protecting life, the company's technologies give law enforcement and security agencies the confidence, focus, and time they need to keep their communities safe. Axon aims to make the bullet obsolete by providing police and security solutions that protect life (TASER), capture truth (bodycams), and accelerate justice (software/analytics). Axon VR Training is part of an overall training offering for police and security forces that focuses on de-escalation, mental health situations, empathy training, and less-than-lethal force.

A recent survey of 500 law enforcement professionals across the US found that 80 percent of officers believe there is a need for improved agency tools and resources to more effectively de-escalate dangerous situations. A 2018 study conducted by Wakefield Research found that more than four in five law

enforcement personnel say they want better training to de-escalate situations. Nine in ten respondents agree that improved training on less-lethal tools, such as TASER energy weapons, would result in reduced use of force in the field.¹

Police departments across the country are exploring new methods for training police officers, to help them deal more effectively with the many chaotic situations they encounter, with an end goal of improved safety for officers and community members alike.

New virtual reality (VR) training technology has become available in recent years that promises to transform the way officers and armed security personnel are trained. VR enables officers to learn from real-world scenarios anytime and anywhere, while allowing instructors to provide real-time feedback and instruction, even remotely.

“After the events of this [year] and the many tragic events that preceded 2020, it is clear that we need to offer law enforcement proactive versus reactive tools for reducing use of force,” notes Rick Smith, Axon’s founder, and CEO. “Being trained on when not to deploy force is just as important as tactical training on how to deploy force, and that is what we are addressing with these new training modules. Our mission has always been to protect life, and this training is a big step toward that goal.”

Police are often the first responders to mental health or social welfare calls, many of which can turn dangerous without the right approach. Studies have shown that some [7 to 10 percent](#) of police interactions – and [50 percent](#) of all police shootings – involve individuals with mental illnesses. Officers receive many hours of training in the academy and while on the job, but the majority of those hours are focused on physical safety. “Much of what you will see in training simulations are variations of shoot/don’t shoot scenarios,” explains Robert Murphy, Axon’s senior director of VR. “It is important, for sure, but many of the calls officers go to – most of them, in fact – do not require any use of force.”²

Axon’s VR solution

Axon and HTC VIVE believe VR has nearly unlimited potential to help officers better respond to a variety of situations, and thus can be an important part

of training in every police department and security company. VR has been shown to increase retention rates in all types of learning environments.³ It is ideal for police and security training because it enables organizations to create scenarios that heighten senses and introduce stressors that are difficult if not impossible to replicate outside of the real world.

Axon developed the VR training modules with input from numerous groups and individuals, including recommendations from community advocates, mental health organizations, clinicians, nonprofit organizations, academic experts, behavioral analysts, law enforcement training veterans, and others. Every scenario that is released is reviewed by a cohort of subject matter experts, who are involved in every step of the creation process, from establishing learning objectives to reviewing scripts to advising onset during filming.

One such expert that Axon is lucky enough to have on staff is Antoine Lane. Mr. Lane is director of policy and strategic initiatives at Axon and is a former lieutenant





and 30-year veteran of the Austin Police Department where he led academy and remedial training. His real-world experience, coupled with his master's degree in training and professional development, help guide Axon's VR Training program.

"The fact is, the community wants better law enforcement; state, local, and federal policymakers want better law enforcement; and sheriffs and police chiefs want to provide better law enforcement," Lane said. "So we asked ourselves, 'What are we doing to help make that happen? What can we do to satisfy the needs of all three of these groups?'"

Community engagement and simulator training

Axon offers two major VR solutions: Community Engagement Training and Simulator Training, each of which are made possible by HTC VIVE hardware.

The Community Engagement Training is offered via a subscription service or as a standalone solution and uses the industry-leading VIVE Focus 3 commercial-grade VR headset and handheld controllers. The trainee uses the headset to navigate a series of modules that places him or her on the scene with a subject in crisis. Examples include someone who has schizophrenia or autism, or a person experiencing suicidal ideation or another behavioral health issue. The officer is presented with a difficult scenario and must decide

the best way to de-escalate the situation by choosing between options on a branching, fixed-path scenario. The VR scenarios are presented in 360-degree video using live actors. They follow a scripted narrative through which officers have the ability to learn decision-making skills in a varied outcome format.

The scenarios focus on the foundational skills and tactics officers need to resolve difficult types of calls successfully and peacefully for service, while also providing them the ability to experience firsthand what an individual may be going through during a law enforcement encounter. Also included are situations that require intervention when a fellow officer is unnecessarily escalating a situation to the brink of misconduct. Existing modules are already receiving high marks from participating police departments, and new modules are being published on a monthly basis.

Non-lethal solution

Simulator Training includes a TASER controller that can be tracked by the VR software, as well as a training firearm. In the training modules, officers will encounter various subjects involved in dispute scenarios, such as potential domestic violence. Due to the full immersion in an "open-world" environment similar to high-end video games, the trainee can knock on a virtual door and interview a subject, who may respond in a multitude of ways: from open hostility or agitation to friendliness. The officer must make decisions on

how to remain safe, investigate the call for service, de-escalate the situation, or deploy their weapon if necessary. The Simulator also enables practice on repetition-based skills by including a TASER firing range and a firearm range.

Axon will launch the Simulator as a subscription service or standalone solution in the United States and Canada, with international expansion to follow.

Positive feedback from 1,000 deployments and counting

Police and security VR training technology are so new that large-scale studies have not yet been completed to fully measure its impact. However, feedback from the one thousand agencies that have purchased and implemented VR training has been uniformly positive.

The New Castle County Division of Police (NCCDP) in Delaware is one agency leveraging VR technology to better train its officers. The county police agency recently acquired HTC VIVE Focus units from Axon for training simulation. The solutions' six training modules focus on officers learning to safely interact and empathize with citizens who are suicidal, schizophrenic, autistic, and hearing impaired, or those suffering from Alzheimer's or Post-Traumatic Stress.

"The officer experiences the world through their eyes," said NCCDP Officer First Class, Grigori Lopez-Garcia.

"The officer is able to make decisions within the simulation that will lead to different outcomes. Once the scenario is over, the officer sees how the scenario played out from the officer's point of view."

Lopez-Garcia added that this type of training is a quantum leap forward from what the division had previously. "This is much superior to simply observing a familiar environment, such as seeing something on a 2D screen or in a PowerPoint," he said. "Because you are immersed in it, you are able to experience how the other person sees the world."

Forging the path ahead

VR offers a new paradigm in officer training and Axon is taking the next step by leveraging technology from HTC VIVE to develop VR solutions that simulate threats and teach alternative methods of conflict resolution.

Murphy said the company is working hard to address the element of humanity in policing, and train officers how best to respond and act with humanity in mind. "It is about identifying what's going on and de-escalating a situation through words and body language. Not only what you say, but how you say it," he explained. "Those scenarios are more what police do on a daily basis."

1 Based on a 2018 study conducted with Wakefield Research. https://s22.q4cdn.com/113350915/files/doc_news/archive/Axon-Announces-Enhanced-Empathy-Based-Officer-Training-Platform-for-New-TASER-7-Weapon.pdf

2 Durose, Matthew, and Lynn Langton. Requests for Police Assistance, 2011. Bureau of Justice Statistics, Sept. 2013, bjs.ojp.gov/content/pub/pdf/rpa11.pdf.

3 CB Insights. "How Virtual Reality Is Transforming Education Tech and Training." CB Insights Research, CB Insights, 15 Dec. 2020, www.cbinsights.com/research/virtual-reality-education-training-tech/.