

IMPROVING OVERALL SECURITY AND CUSTOMER EXPERIENCE FOR TICKETED GUESTS AT GILLETTE STADIUM

BY MIKE ELLENBOGEN, CEO, EVOLV TECHNOLOGY

No one responsible for security at major sports and entertainment venues wants to introduce changes that could lead to customer complaints about the screening experience. But as the number of random mass casualty attacks on soft targets continues to rise, many security professionals have decided that sticking with legacy setups just because they are stable may be a far riskier bet.

Mark Briggs, who oversees security at Gillette Stadium, the home of the New England Patriots, is one of these forward-thinking leaders. "Our industry could easily go through what the airline industry went through after 9/11, if we're not careful," says Mark, who is chief operating officer for TeamOps, which has provided security at Gillette Stadium since 2006. A successful attack on a major sports and entertainment venue would have a catastrophic effect on both the business and the local economy.

That's a lot of pressure, raised even higher by the fact that a sports and entertainment venue is not an airport. "Whether they want to or not, people have to fly, but they don't have to go to a sporting or entertainment venue. They can watch on TV or download music onto smart phones. So we need to protect our guests, while also making venues a fun place to be," says Mark.

I'm proud to report we've been working with TeamOps since last Fall to create this balance of heightened security and improved customer experience. Visitors to the suite entrances at Gillette, which are also used daily by employees who work at the stadium, no longer need to empty their pockets or be hand-wanded by security officers as they enter. Instead, they pass through our Evolv Edge screening systems at their normal walking speed. So far, our systems have spotted every threat object brought through as TeamOps tested the units, and Mark says he knows of no complaints of false alarms. "I've heard no reports of people going through secondary screening because of a car key," he says. "In fact, I haven't heard any customer complaints at all. When we've asked guests about the new screening protocols, they've said it was a very positive experience from their perspective—even welcoming."

Q&A

Mark Briggs had experience protecting high-profile organizations and events long before taking over responsibility for security at Gillette Stadium in 2007. After 16-year stint with the British Army in 2000, he helped design the public places at the 2000 Olympic games in Sydney, and then managed hundreds of events at the Wembley sports and conference center. At Gillette, he's responsible for protecting a wide variety of events—not just Pats games, but hundreds of music concerts, corporate events, soccer games and the daily job of providing security for the Kraft organization. In recent years, TeamOps has expanded from providing security services at Kraft venues to other entertainment and business venues in the North East.

Q: How did you first meet the folks at Evolv? What did you think of the Evolv Edge unit when you first saw it?

A: We were introduced to them by an investor in Evolv that we both know. What really grabbed me at first wasn't the Edge, but Mike and Anil's overall outlook on security. A lot of people look at security as something that happens at the doors of the venue. We agreed with them that if you only start looking for threats at the gates, you're too late. I don't want a potentially dangerous person to get within 1000 feet of the venue, much less 100 feet. So their vision is pretty much the same as ours: how do I create a safer environment, with rings of security, along with the best experience I can make?

Q: What's different about Evolv than other screening technology equipment makers?

A: They aren't focused on a particular screening technology or piece of hardware, but on software. They are focused on using software to bring together a collection of technologies that talk to each other. In today's world, technologies that are not interoperable are worthless.

Q: How does your staff like working with the Evolv Edge?

A: They love it. The customer is in a better mood, because they're not having to empty their pockets or stand with their hands up in the air to be hand-wanded. When the customer is happier, the job becomes more like being a concierge. It's a "have a nice day" kind of thing.

Q: So you told us you've had no major complaints from visitors to Gillette's suites about the screening process. But do people feel protected?

A: People often complain about delays and other hassles, but I strongly believe the most important thing to most customers is that the security works. The last thing I want to hear is when someone says, "Look what I got through the system." People expect to go through security experiences these days—and they want to, given some of the horrible attacks we've seen. They just want to know your process works, and that you're not wasting their time.

Within minutes of our first meeting with Mark and his team last summer, Evolv co-founder Anil Chitkara and I knew we shared a common vision for how security needs to evolve. Here are the main elements of this shared vision:

| Rethinking the Threat

For too long, the screening equipment industry has been driven by the needs of airlines and airports, who are used to operating metal detectors that frequently alert on small, commonplace items such as belt buckles, key chains and cell phones. “People don’t want to divest of every last piece of metal on their person under any circumstances—and definitely not after they’ve been tailgating for two hours and it’s the middle of a Massachusetts winter,” says Mark. Sports and entertainment venues are screening for a different level of threat, this provides a better balance.

Fortunately, the security threat in a stadium filled with guests is different than the threat in the confines of an airplane flying at 30,000 feet. What is critical is to have a screening technology that can adapt to an innovative and ever changing stream of threats. Rather than just a metal detector, the Evolv Edge is built on a multi-sensor architecture capable of identifying metallic and fully non-metallic threats including firearms and manufactured and improvised explosives.

| Customer Experience as a Core Principle

Our founding team spent decades developing screening equipment for airports, before founding Evolv to help protect soft targets. Very quickly, we learned that most businesses—particularly entertainment-based businesses—will not deploy technology that chases their customers away. That’s why we’ve focused on designing a system that requires no divestment, and can screen over 600 people an hour. That’s less than six seconds per person. We paid particular attention to aesthetics, so passing through the two-tower system feels no more imposing than passing through a welcoming gateway. That’s very different from the experience of entering

an enclosed screening chamber and being asked to raise your hands above your head for a body scan. “We liked that Evolv’s approach doesn’t treat visitors like criminals,” says Mark.

On the contrary, we believe our technology can actually enhance the visitor experience. For example, we’ve integrated face recognition into the Edge. With this added functionality, security personnel will be able to greet trusted guests and valued customers by name, and speed them through the screening process—think TSA Precheck.

| Identity-based Threat Detection

Our country is embroiled in a passionate debate about whether guns kill people or whether people kill people. The obvious answer is that it takes both a weapon and a person or people to commit an act of mass violence. In addition to the New England Patriots and New England Revolution games, Gillette Stadium and TeamOps manage major concerts and other events through the course of a season. By adding face recognition, we can now help address both sides of this equation. Venues will be able to maintain both “verify” lists for employees, repeat customers and important guests, as well as “detect” lists—for example, known gate-crashers or people who have been banned from the stadium.

At the end of the day, society will determine privacy laws to govern how identity-based approaches can be implemented. We intend to help create the best screening technologies to identify dangerous weapons and people, develop the software and networks to connect these “silos” of information, to provide the best possible, real-time intelligence to front line operators. Together, we’ll develop best practices that lead to a common-sense, effective balance of citizens’ rights to both safety and privacy.

| Security Starts at the Perimeter

Sports and entertainment venues, particularly large ones serving tens of thousands of people, must have concentric layers of security that start far beyond the ticket gates. Fans need to be protected as they tailgate in the parking lots, and as they wait during the inevitable last minute rush to get to their seats by game time. “We can’t change human nature, but have to deal with what’s coming at us,” says Mark. On most game days, that means 40,000 people entering during the 30 minutes before kick-off.

Our vision—and TeamOps’—is to use advanced connected sensors along with face and image recognition to identify potential threats as soon as they arrive on property or come in sight of the venue. Should our cameras spot someone of interest, or who might be carrying a suspicious object, we can give our law enforcement partners a heads up so they can take the appropriate action before the person gets within range to do major damage. Our credo is ‘prevent, don’t just react.’

To be sure, not all customers are like TeamOps. Under Mark’s leadership, Gillette Stadium has earned accolades for the quality and convenience of its security processes. It is one of only four NFL stadiums to have earned the DHS Safety Act certification, the highest level of protection awarded by the U.S. Department of Homeland Security. Mark credits New England Patriots owner Bob Kraft for sharing his commitment to providing the best possible security for all guests, employees and other visitors. “I’ve never been told I can’t do something that will enhance security at the stadium.”

We at Evolv want to thank Mark and his team for working with us to prove that outstanding security and an outstanding visitor experience are no longer mutually exclusive.

| Future Proofing Is Table Stakes

If anything is clear from the horrific rise in soft target attacks in recent years, it is that the bad guys are increasingly resourceful and willing to adapt their methods. We’ve designed our system to provide flexibility, by making it far more software-centric. For example, customers can easily ratchet up the sensitivity of the screening—say, if there are credible threats of attacks against a venue. For a small, internal event attended only by well-known guests, the sensitivity could be raised only for unknown individuals.

We also take it as an article of faith that bad people will come up with new threats. Unlike legacy systems, Evolv Edge is designed to accommodate new sensor technologies and updates to the algorithms to identify new weapons or explosive materials in response to intelligence. As Mark puts it, “You only have to change the software—not the technology. Most detection technologies are not like that.”

ABOUT THE AUTHOR:

Mike Ellenbogen is founder and CEO of Evolv Technology. Started in August 2013, Evolv is focused on reinventing physical security to help protect people and facilities by fusing together innovations in RF imaging and compressive sensing, advanced machine learning and human computation. Evolv is developing powerful, low-cost physical threat detection technology to support our national security efforts and keep people and places safe across the globe. Evolv is funded by Bill Gates, General Catalyst Partners, Lux Capital and Data Collective.

Mike has spent more than 20 years shaping the explosives detection industry including as co-founder and CEO/President of Reveal Imaging Technologies, Inc., as Vice President of Product and Business Development of PerkinElmer Detection Systems where he was responsible for Research and Development, Engineering and Marketing, and as Director of Marketing of Vivid Technologies, where he was instrumental in the transition following Vivid’s acquisition by PerkinElmer. At both Vivid and PerkinElmer, Mike was responsible for market research, definition and development of new products and product enhancements. He has been issued 16 patents in the field of X-ray inspection and automated detection technology and has been broadly published within the security industry. Mike holds a Physics degree from Colgate University.