

# Gunshot detection solutions for safer communities

- **Business needs** - A way for gunshot detection sensors to alert police to the location of gunfire
- **Networking solution** - AT&T Global Subscriber Identity Modules (SIMs) power sensors that alert police to the location of gunshots, enabling quicker response and investigation
- **Business value** - Faster aid to victims, safer communities
- **Industry focus** - Technology
- **Size** - \$60 million annual revenue

## About ShotSpotter

ShotSpotter is a leader in precision policing technology solutions that enable law enforcement to respond to, investigate, and deter crime more effectively. The company's products are trusted by more than 120 cities to help make communities safer. The company's flagship product, ShotSpotter Respond™, is the leading gunshot detection, location, and forensic system. Additional solutions direct police patrol resources to areas of highest risk to maximize their impact and help detectives more efficiently manage investigations and solve cases.

## The situation

Early versions of ShotSpotter's system used point-to-point connectivity, the best available technology at the time. As telecommunications technology matured, company officials sought more reliable and redundant connectivity with higher bandwidth.

## Solution

ShotSpotter upgraded its gunshot detection and location sensors with AT&T Global SIMs and AT&T Control Center. Together, the solutions enabled ShotSpotter to streamline the deployment and management of its gunshot detection solution.

## Passion for a safer world

Annually, nearly 40,000 people in the U.S.—about 109 people every day—die from a firearm-related injury.<sup>1</sup> Unfortunately, more than 80 percent of gunfire incidents are never reported to police.<sup>2</sup> ShotSpotter was founded to fill this data gap and provide accurate, reliable reports of virtually all gunfire and enable law enforcement to provide equal protection for all communities and strengthen the relationship between police and the residents they serve.

ShotSpotter Chief Financial Officer Alan R. Stewart

said the company's acoustic surveillance technology detects, locates, and alerts on outdoor gunfire through an array of sensors deployed in coverage areas. The sensors are designed to ignore ambient noise, and they trigger and time stamp impulsive noises, like booms or bangs. "We provide solutions that help communities address gunfire in a way that really no one else has," he said.

Nearly 25 years after the company's founding, ShotSpotter officials remain passionate about how their products contribute to a safer world. Its solutions include ShotSpotter Respond, the flagship system that uses detection technology to identify and accurately locate gunshots in seconds. Other innovations include ShotSpotter Connect™, which dynamically directs patrol resources to areas of greatest risk and works hard to mitigate bias and over-policing, and ShotSpotter Investigate™, which helps detectives analyze and share case-related information more effectively.



<sup>1</sup> <https://www.cdc.gov/violenceprevention/firearms/fastfact.html>

<sup>2</sup> [https://www.brookings.edu/wp-content/uploads/2016/07/Carr\\_Doleac\\_gunfire\\_underreporting.pdf](https://www.brookings.edu/wp-content/uploads/2016/07/Carr_Doleac_gunfire_underreporting.pdf)

## Better reporting speeds dispatch

ShotSpotter provides services to law enforcement agencies across the U.S. and in several international locations as they can more effectively locate crime scenes and recover shell casings. It also offers security technology for colleges and universities and commercial entities such as large retailers and distribution centers.

Customers are attracted by the impact of ShotSpotter solutions. Without ShotSpotter, less than 20% of gunfire is reported; with it, more than 90% of gunfire is reported.<sup>3</sup> Dispatch time improves from an average of 4.5 minutes without ShotSpotter to less than 60 seconds with it.<sup>4</sup> ShotSpotter also reduces victim transport time to hospitals and helps law enforcement more effectively locate crime scenes and recover shell casings.

All the company's innovations are designed to improve case clearance rates and more effectively deter crime. In addition, its technology has been used to help reduce endangered animal poaching in Africa. "It can help park rangers find exactly where the poachers are, hopefully soon enough to save the animal, but certainly to apprehend the poachers as well," Stewart said. The solutions are also helping to safeguard coral reefs and underwater ecosystems in southeast Asia and other locations by detecting environmentally hazardous blast fishing that unscrupulous fishermen use to increase their hauls.

## The flexibility to place sensors anywhere

ShotSpotter places an average of 20-25 sensors per square mile to cover its clients' coverage area. "The number depends on the topography. If the area is



**"AT&T Control Center makes managing 10,000 lines super easy, and we like the reliability of the AT&T network."**

**Dorothy Jensen**  
Procurement Director, ShotSpotter

flat and the acoustics transmit easily, you can go with fewer sensors," Stewart said. Areas with many buildings or hills and mountains may require more. Sound waves bend, so sensors don't require direct line of sight. The company installs them primarily atop buildings.

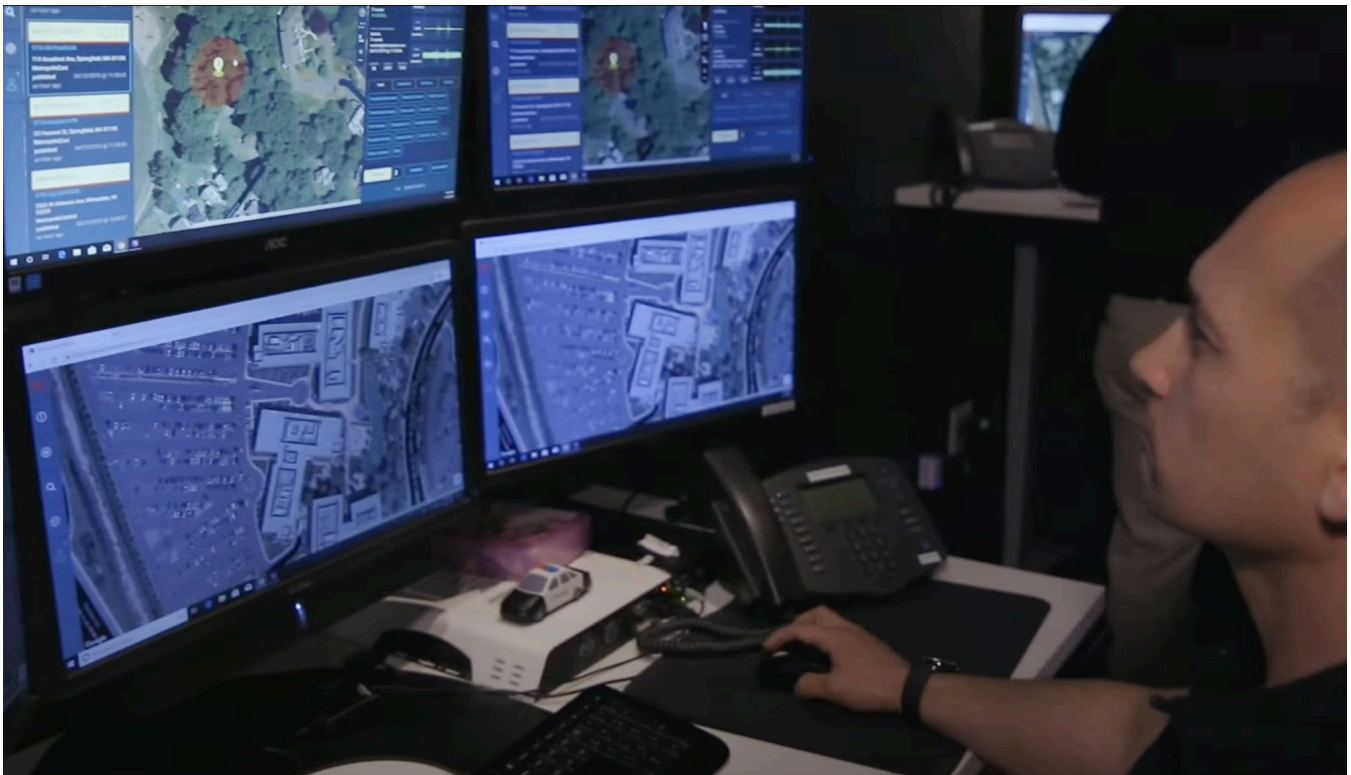
Connectivity was another hurdle in ShotSpotter's early days when the company had to hardwire analog phone lines to connect its sensors. "Ultimately we wanted the flexibility to be able to put the sensors just about anywhere," said David Halliday, ShotSpotter's Vice President of Operational Engineering. "We needed a connectivity solution that could span cities."

The company adopted new technologies as they emerged; officials once considered using Wi-Fi connectivity, which might have worked in some cities, but it required different sensors and approvals. "At the end of the day, the logical mechanism was obviously cellular communications," he said.

<sup>3</sup> <https://www.shotspotter.com/law-enforcement/gunshot-detection-technology/>

<sup>4</sup> <https://jolt.richmond.edu/2021/11/16/gunshot-detectors-a-helpful-asset-for-law-enforcement-or-a-concerning-issue-for-defendants/>





**“We needed a connectivity solution that could span cities.”**

**David Halliday**  
Vice President of Operational Engineering, ShotSpotter

## An international footprint

ShotSpotter chose AT&T Global SIMs and the AT&T Control Center to deliver the worldwide connectivity needed to run its groundbreaking gunshot detection system. The AT&T SIMs significantly simplify logistics support. “That’s where we rely upon AT&T Business greatly, on cellular communications, because it allows us to put the sensors on top of buildings and lampposts without the need to run fiber optic or cables,” Halliday said. “All it needs is a power source and it’s off and running.”

He said AT&T was an obvious choice because of the availability and reliability of its service. This is vital because of the life-and-death stakes involved in ShotSpotter’s ability to direct law enforcement to the scene of a shooting.

“AT&T Business helped bring depth of field and service reliability to our systems,” Halliday said. “The other benefit that AT&T brings over other carriers is the international footprint—the ability for us to be able to roam with AT&T Business sensors to places like the Bahamas and the islands of the Caribbean is very, very useful for us.”

Thanks to AT&T Global SIMs, ShotSpotter does not have to build separate sensors for its clients outside the U.S. “We just deploy our AT&T sensors, and they roam to those areas, and that is quite a big advantage,” Halliday said.

## Automation and ease of use

ShotSpotter uses the AT&T Control Center, powered by Cisco, to deploy and manage its sensors around the globe in real time. The cloud-based platform delivers visibility and agility.

Dorothy Jensen, ShotSpotter Procurement Director, said the platform greatly simplifies her work. “I love Control Center. I can’t say enough about it,” she said. “I love the automation and the ease of use. AT&T Control Center makes managing 10,000 lines super easy, and we like the reliability of the AT&T network.”

Jensen says the AT&T Control Center streamlines operations and helps control expenses. “AT&T Business works to help oversee our account to make sure we don’t have any overages. That kind of service is very helpful to us,” she added.



## Safeguarding its digital assets

As the company’s VP of Operational Engineering, Halliday oversees ShotSpotter’s information systems and cloud operations. He selected AT&T Business Fiber for review centers in the company’s headquarters and main data center. “AT&T high-speed fiber optic lines run between the two locations, which provides rapid reviewability,” he said. “This gives us a robust mechanism by which we can communicate, not just to the review center, but also to the internet as well.”

Halliday understands that ShotSpotter customers expect high levels of security. “We’re not a massive company, but we are playing in the space where our customers expect a lot more than a company our size would typically get. AT&T Business allows us to level up what we are doing by using the AT&T security services.”

AT&T Cybersecurity Services helps ShotSpotter safeguard its digital assets and detect cyberthreats to protect its business operations. “That went so well that we then extended into other security services from AT&T Business, including an Incident Response retainer so that heaven forbid we have an incident, we have somebody already lined up to assist us,” Halliday said.

## Investing in security

ShotSpotter also uses AT&T Penetration Testing Service to evaluate how its security holds up to real-world threats, and AT&T Vulnerability Scanning Service to ensure compliance with strict Payment Card Industry requirements.

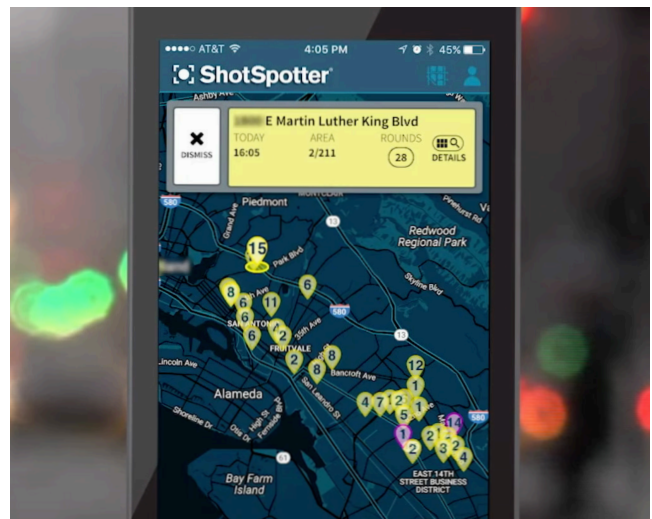
The company recently added AT&T Endpoint Security with SentinelOne, which delivers comprehensive endpoint protection against ransomware and other cyberattacks and works to detect advanced threats within ShotSpotter's network. "We've changed the way we're protecting our internal services and our devices by moving to next-gen endpoint protection from AT&T," Halliday said.

ShotSpotter counts on AT&T Business to help guide its security strategy. "We do have a strong field in-house and that's growing every year, and we're investing strongly in security," he said. "But having the extra set of eyes from AT&T Business and the services that it offers is definitely an advantage."

## A relationship of trust

From his perspective as CFO, Stewart sees the length of ShotSpotter's relationship with AT&T as proof of the trust that the two organizations have built. "We've been working with AT&T Business for years and years, and it has been a great vendor," he said. "We've found the solutions from AT&T Business to be successful, and our account team to be incredibly helpful."

Jensen appreciates the attentiveness of the account team from AT&T Business. "They're just great. They're super supportive and always willing to go the extra mile."



"We've found the solutions from AT&T Business to be successful, and our account team to be incredibly helpful."

**Alan R. Stewart**  
Chief Financial Officer, ShotSpotter

Halliday lauded the account team's willingness to help discover the best possible solutions for ShotSpotter's needs. "I find the interaction with the team is one of the best I've had with any vendor. It's refreshing that they're not always trying to push a solution." He said he counts on the reliability and availability of the AT&T services. "Ultimately, that's what is important to delivering our service to our customers."