ShotSpotter Frequently Asked Questions

1. What is ShotSpotter?

ShotSpotter is gunshot detection, acoustic surveillance technology that uses sophisticated sensors to detect, locate and alert law enforcement agencies of illegal gunfire incidents in real time. The technology detects gunfire when a gun is discharged, protects officers with increased tactical awareness, and connects law enforcement agencies to the community and to their mission of protect and serve. The real-time digital alerts include a precise location on a map (latitude/longitude) with corresponding meta data such as the address, number of rounds fired, type of gunfire, etc. delivered to any browser-enabled device or mobile device.

2. Who uses ShotSpotter and what type of cities use it?

ShotSpotter is used in approximately 90 cities worldwide. It is highly regarded by law enforcement agencies as a critical component of their gun violence reduction strategy. ShotSpotter deployments include a diverse set of cities by size, geography and socioeconomic standards. Police departments are the typical core user of ShotSpotter, and the data has been shown to be valuable to prosecutors in court cases and city leadership for smart city initiatives.

3. How does ShotSpotter work?

ShotSpotter uses acoustic sensors that are strategically placed in an array of 15-20 sensors per square mile in order to reliably detect and accurately triangulate gunshot activity. Each sensor captures the precise time, location, and audio snippet associated with boom and bang sounds (impulsive noise) that may represent a gunshot. This data is first filtered by sophisticated machine algorithms that are then further qualified by an expertly trained and staffed 24x7 Incident Review Center at ShotSpotter to insure the events are in fact gunfire. In addition, they can append the alert with any other critical intelligence such as whether a full automatic weapon was fired. This process takes less than 45 seconds between the actual shooting and the digital alert (with a precise location dot on a map) popping onto the screen of a computer in the 9-1-1 Call Center.

4. How does ShotSpotter help law enforcement?

ShotSpotter helps protect officers by instantly notifying them of gunshot crimes in progress with real-time data delivered to dispatch centers, patrol cars and even smartphones. This enhances officer safety and effectiveness with critical intelligence such as: real-time access to maps of shooting locations and gunshot audio, actionable intelligence detailing the number of shooters and the number of shots fired, accurate and precise locations for those first responders aiding victims, searching for evidence and interviewing witnesses.

With ShotSpotter, officers can arrive at the scene of a crime faster and with an increased level of safety because they know exactly where the gunfire is taking place. In many cases, an officer can arrive with the shooter still live on the crime scene or if the criminal has fled, shell casings can be recovered and used for investigative and potential prosecution purposes.

5. Does ShotSpotter replace police officers?

This investment in technology should not be considered an either/or decision. The fact is police departments need both manpower and technology. ShotSpotter is a tool that augments and enhances the existing manpower to improve response time and quality of response. This technology is capable of doing something that no amount of manpower can accomplish, which is to comprehensively report in real-time

all outdoor illegal gunfire.

6. I heard ShotSpotter failed in a couple of cities is this true?

There has never been a single city where ShotSpotter did not technically work i.e. - detecting, locating and alerting on illegal gunfire. There have been very few isolated instances where agencies were not able to drive positive operational outcomes, or where they could not afford to pay their ongoing annual ShotSpotter maintenance contracts. In the case of the former, the deployment strategies were suboptimal since they were too small and could not effectively drive the procedural change management necessary to have impact. ShotSpotter (or any technology for that matter) is not a panacea and requires effective use to make a difference.

SST has gained valuable experience having deployed in more than 90 agencies in the U.S., and proven best practices show that integrating ShotSpotter into an overall gunfire reduction strategy with existing policing programs works. We also know that cities that do not implement standard best practices do not have the highest success rate. Cities that follow best practices experience a positive outcome in their gunfire reduction strategies and have measureable year-over-year reduction in gunfire.

The very few cities **that did not** have a positive experience had poor practices around the following:

- Not responding to gunfire alerts when they come into the PD from the ShotSpotter alert and not responding to the location on the map "dot on map"

- Not including ShotSpotter data as part of an overall gunfire intelligence and crime reduction program

- Lack of community engagement – Educating residents on the benefits of improved police response and how they can help empower community members to feel safe in their own neighborhoods

ShotSpotter customers who have **_expanded_** their service after initial deployment of ShotSpotter include the following U.S. cities:

- Oakland CA – **twice**
- San Francisco CA – **3 times**
- Richmond CA
- Redwood City CA
- Milwaukee WI – **twice**
- Minneapolis MN
- Omaha NB
- St. Louis MO
- Peoria IL
- Jefferson Parish LA
- Birmingham AL
- Wilmington NC
- Washington DC
- Camden NJ
- Trenton NJ
- Paterson NJ
- Springfield MA

- Boston MA

Recently expanded cities include: Camden, NJ; New Haven, CT; Peoria, IL and South Bend, IN; Long Island (Suffolk County), NY; Minneapolis, MN and Oakland, CA; San Francisco, CA; Trenton, NJ.

7. Is it worth the money?

Saving lives and improving the quality of life in neighborhoods across the country, while improving officer safety, is mission critical. We believe that we will be able to measurably reduce gun violence and improve public safety, and in the process enhance the resiliency of the communities we serve. In the long term, the positive impact of improved public safety is reflected in better social and economic outcomes. So in short - yes this is very much worth the money.

8. Will ShotSpotter violate my privacy? Can it record conversations?

No. ShotSpotter uses acoustic sensors designed to detect, locate and alert on gunfire – not record conversations. The acoustic sensors are located on top of buildings, rooftops and poles, roughly 30' or more above street level. The sensors are designed to trigger (or activate) on very loud noises, such as when a gun is fired. The sensors are designed to record seconds of the gunfire. For more information please check out the ACLU's review of ShotSpotter here: https://www.aclu.org/blog/free-future/shotspotter-ceo-answers-questions- gunshot-detectors-cities

9. What is a city missing without ShotSpotter?

The communities most affected by gunfire are least likely to call it in. With fewer than 1 in 5 shooting incidents reported to 9-1-1, gun crime is vastly underreported. When 9-1-1 calls are made, unfortunately the location information provided is typically inaccurate. Without knowing exactly where to respond, police waste valuable time and resources driving block by block looking for evidence as criminals escape the scene. **Dispatching officers to an active shooting without all available intelligence is a threat to officer safety** and needlessly **places the public at risk**.
Without ShotSpotter, a city may be missing many gunshot incidents and as a result, may not have the opportunity to respond to save victims and apprehend shooters in the act.

10. Where else is ShotSpotter deployed and has it been successful there?

ShotSpotter is in 90 cities worldwide. In our sample of 46 cities where ShotSpotter was deployed year-over-year, the median reduction in gunfire rates in 2015 was 12.8%. (Source: SST National Gunfire Index 2015). **More than one-half of the cities experienced a reduction of more than 21.20%,**

- **New York City**: Since deploying ShotSpotter in March 2015, ShotSpotter provided 1,672 alerts on where guns went off, 74% of which, weren't reported by 911. Cops said ShotSpotter helped recover 32 firearms, including 13 on cases with no 911 call, and has led to 21 arrests. Eight of those arrests had no 911 call. Source: NY Daily News, Jan. 20, 2016.

- **Wilmington DE**: saw a 42% drop in gunshots after technology was initially installed

- **Miami Gardens, FL**: Had an 80% decrease in New Year's Eve celebratory gunfire when comparing 2014/2015 over 2013/2014, where they went from 129 shots to 26, according to SST's 2015 National Gunfire Index.

- **Denver:** Since the technology was installed in January 2015 through December 2015, they have had 425 gunshot alerts, with 1,472 rounds fired. ShotSpotter is directly tied to 29 arrests and captured 16 guns, according to Capt. Steven Carter who manages ShotSpotter in Denver.

- **Kruger National Park, SA:** With a very small proof of concept deployment, ShotSpotter detected two poaching events that led to the capture and prosecution of several poachers as well as the recovery of a baby rhino (named Dot) whose mother rhino was poached.

11. Does ShotSpotter have video monitoring capability?

No. ShotSpotter is an acoustic based system. The sensors do not have any optical capability and cannot produce images of any kind. However, ShotSpotter can integrate with video systems by sending an alert to a video management system, which can then separately pan, tilt and zoom an IP addressable camera in the appropriate area.

12. Do you think you will be able to actually catch a shooter?

There are many cases in cities where ShotSpotter has been deployed where the ShotSpotter alert has led to the arrest of the criminal. More often than not critical forensic evidence such as casings retrieved from the scene resulted in key investigative data, which led to the introduction or arrest of a shooter. Local DA agencies also rely on ShotSpotter to prosecute some of the toughest criminals in our country. Currently, federal homicide prosecutors are using ShotSpotter analysis and evidence to determine if a gunshot has, or has not occurred, the location of the gunshot, and the precise location of the shooting. SST has been admissible in court cases in 17 states as well as in federal court. But keep in mind our primary goal is to prevent shooting incidents, which means that deterring the potential trigger puller is more valuable than capturing the trigger puller.

13. Do you have any supporting data to show that your technology helps to reduce gunfire in the areas that you have coverage?

Today, ShotSpotter is highly regarded as a critical component of any comprehensive gun violence preparation and reduction strategy and is playing an active part in making communities safer for future generations. SST technology is helping communities and law enforcement agencies work together to prevent gun violence at a global level.

The SST National Gunfire Index report data shows that law enforcement agencies and cities that have adopted SST solutions and best practices have experienced reductions in gunfire of up to 80% and reductions in related violent crime and homicides of as much as 40%. The company is becoming a recognized thought leader with the annual published **National Gunfire Index Report (see 2015 National Gunfire Index - http://www.shotspotter.com/2015NGI),** which details a comprehensive analysis and overview of unknown instances of gun violence. In addition, law enforcement agencies and the media have recently looked to SST for best practices on reducing celebratory gunfire.

14. How is ShotSpotter data being used in court?

Local DA agencies rely on ShotSpotter to prosecute some of the toughest criminals in our country. Currently, federal homicide prosecutors are using ShotSpotter analysis and evidence to determine if a gunshot has or has not occurred, the location of the gunshot, and the precise location of the shooting. SST has been admissible in court cases in 7 states as well as in federal court. ShotSpotter technology has withstood challenges under Kelly-Frye and Daubert. Analysts from SST frequently testify as expert witnesses and the company also provides detailed forensic reports for trial cases upon request.