Cost- Benefit Analysis of SoundThinking (ShotSpotter)

IMPROVING THE POLICE RESPONSE TO GUNFIRE

Background Information

- Center for Crime Science & Violence Prevention (Southern Illinois University)
- Dennis Mares, Research Partner for Strategies in Policing Innovation (SPI) Grant
- Independent study
- No Cost

Implementation Overview

- Implementation in August 2021
- 3 sq mile radius coverage area (based on violent crime data)
- Data collected for evaluation from 2020-2022
- WSPD responded to over 1,500 unique gunfire calls/alerts in SST area – more than double the # of responses prior to implementation

Key Findings

Improved response times to SST alerts as compared to calls from residents (-5 min.)

ShotSpotter calls = greater investigative time & increased amount of evidence recovered

Fewer than 1 out of 4 ShotSpotter calls had a corresponding 911 call for service (80%)

Key Findings

- Aggravated assaults are down 26% in SST area post implementation
- Cost benefits analysis indicates cost of gun violence in W-S reduced by approx. $5-$8 million in SST area
- SST estimated to provide a return of $15-$25 for each dollar spent on the technology

Improved Response to Discharging Firearms

Crimes directly connected to alerts		
7 homicides	3 robberies	41 aggravated assaults

Arrests related to SST Alerts	
17 direct	50 indirect

Evidence recovered	
47 firearms	1,577 casings

Limitations of the study

Limited data with only a bit more than a year of post-implementation data.

The number of homicides/robberies is too small to provide a confident assessment of impacts.

The comparison area is not as similar as one would like and has slightly lower crime levels.

Conclusions

- Complete secondary study in 2024
- Use as tool in determining next steps after CGIC grant ends in 2024
- Public remains an important partner in reporting crime, but they can't do it all. Gunshot detection systems provide a way to more consistently respond to outdoor shooting events.
- SST enhances police response by quickly and precisely locating gunfire and improving investigative recoveries.