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ShotSpotter Fails on Its Own Claims

On their website, SoundThinking Inc. (formerly ShotSpotter, Inc.), claims that ShotSpotter enables law enforcement to "1) be able to respond to a higher percentage of gunfire incidents; 2) improve response times to crime scenes to better aid victims and find witnesses; and 3) help locate key evidence to identify and investigate suspects."[1] If we use SoundThinking's own marketing claims as metrics for the performance of ShotSpotter in Detroit, we can easily say that it fails on all three fronts.

Metric #1: Does ShotSpotter increase the number of gunfire incidents police departments are able to respond to?

No—While there is no estimate of the true number of gunshot incidents that occurred in communities monitored by ShotSpotter, we can say that ShotSpotter is not alerting police to gunshot incidents anymore than community members are a year after implementation. In their recent study, a team of researchers from Michigan State University, University of Michigan-Dearborn, and other institutions, estimated that ShotSpotter caused a 42.1% decrease in the average weekly gunshot-related 911 calls in Detroit. However, the researchers observed that in the following year, the number of gunshot-related 911 calls began to increase again, negating any effect of ShotSpotter.[2] This implies that there is a decreasing utility to ShotSpotter's effectiveness as a tool to identify unreported gunshot incidents and that the initial decrease in 911 calls was caused not by a sudden decrease in gun-related crimes but by a decline in the reporting of gun-related crimes, an overall net negative for communities. If anything, the increased number of ShotSpotter alerts are hindering the efforts of law enforcement by increasing the number of "false positive" reports. A 2021 MacArthur Justice Center study in Chicago found that 89% of ShotSpotter alerts resulted in no gun-related crime, and 86% led to no report of any crime at all.[3]

Metric #2: Does ShotSpotter improve officer response time?

No—Researchers found that ShotSpotter had no meaningful effect on the response time for Detroit police officers.[4] This is in line with previous research in St. Louis that found that ShotSpotter had a mixed relationship with officer response times.[5] Some municipalities have reported that officer response time has actually increased after ShotSpotter's implementation because of the dramatic increase in "false positive" reports.[6]

Metric #3: Does ShotSpotter lead to more arrests?

No—The same Detroit study found that ShotSpotter had no effect on the weekly number of non-fatal shooting arrests or on the monthly number of homicide arrests. Of the nearly 6,000 ShotSpotter alerts since its initial deployment in Detroit, only two resulted in at least one arrest.[7] A similar finding was observed in St. Louis and Houston.[8] In the latter city, only 5% of ShotSpotter alerts resulted in an arrest over a two-year period, which contributed to the city deciding to not renew its contract with SoundThinking.[9]

Recommendation:

Judging by its own metrics and at a potential total cost of $9 million to Detroiters, ShotSpotter is a redundant system that potentially lowers the number of community members reporting gunshots and does nothing to decrease officer response time or deter gun violence.[10] As such, **Detroit should not renew its ShotSpotter contract**. The money would be better spent on projects like community violence intervention. In addition, common-sense gun control policies and other policy-oriented solutions are more likely to result in a decrease in gun-related homicides than ShotSpotter.[11]

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[1] "ShotSpotter Frequently Asked Questions," SoundThinking, accessed May 14, 2026, https://www.soundthinking.com/faqs/shotspotter-faqs/.

[2] Dawson Kinsman, Hadi Chaaban, Divya Ramjee, Maimuna S. Majumder, Antonios Koumpias, Tian An Wong, "Causal Analysis of an Acoustic Gunshot Detection System: Evidence from Detroit," *Social Science Research Network*, (2026): 1, http://dx.doi.org/10.2139/ssrn.6379358.

[3] "ShotSpotter Generated Over 40,000 Dead-End Policy Deployments in Chicago in 21 Months, According to New Study," Roderick & Solange MacArthur Justice Center, May 3, 2021.

[4] Dawson Kinsman et al., 3.

[5] Dennis Mares and Emily Blackburn, "Acoustic gunshot detection systems: a quasi-experimental evaluation in St. Louis, MO," *Journal of Experimental Criminology* 17, (2021): 199, https://doi.org/10.1007/s11292-019-09405-x.

[6] Yilun Cheng, "Houston's gunshot alert system isn't curbing violence but delays police response times, data shows," *Houston Chronicle*, last modified July 11, 2023, https://www.houstonchronicle.com/news/investigations/article/houston-gun-alert-police-delays-18117579.php.

[7] Dawson Kinsman et al., 3.

[8] Dennis Mares and Emily Blackburn, 200-201; Yilun Cheng, "Houston."

[9] Stephen Goin, "Mayor Whitmire says he wants to end Houston's $3.5 million contract with 'ShotSpotter' gunshot detection tool," KHOU 11, updated May 30, 2024, https://www.khou.com/article/news/local/whitmire-shot-spotter/285-c63a87a5-2f64-4850-855b-5b12aef1340e.

[10] Elaine Rojas-Castillo, "Detroit City Council to weigh in on ShotSpotter renewal ahead of contract's expiration," CBS News, May 13, 2026, https://www.cbsnews.com/amp/detroit/news/detroit-city-council-shotspotter-contract-renewal/.

[11] Mitchell L. Doucette et al., "Impact of ShotSpotter Technology on Firearm Homicides and Arrests Among Large Metropolitan Counties: a Longitudinal Analysis, 1999-2016," *Journal of Urban Health* 98, no. 5 (2021): 617, https://doi.org/10.1007/s11524-021-00515-4.