



# 2022

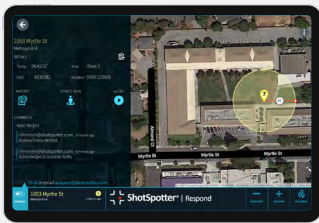
## Environmental, Social & Governance Report

SoundThinking, Inc. | NASDAQ: SSTI



# SoundThinking — Working to Create a Safer World for Everyone

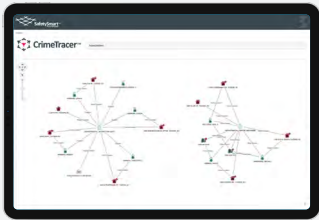
SoundThinking's SafetySmart™ Platform brings together specialized software and objective data to help law enforcement and civic leadership better protect their communities by ensuring the right resources are provided when and where they're needed most.



## #1 GUNSHOT DETECTION SERVICE FOR CITIES AND COUNTIES

### ShotSpotter®

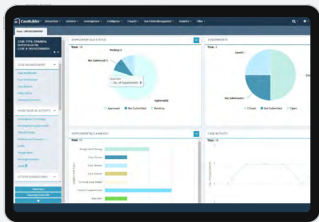
ShotSpotter is a proven acoustic gunshot detection system that alerts law enforcement to virtually all gunfire within a city's ShotSpotter coverage area within 60 seconds, enabling police to provide a consistent, rapid, and precise response.



## #1 SEARCH ENGINE FOR INVESTIGATIVE LEADS

### CrimeTracer™

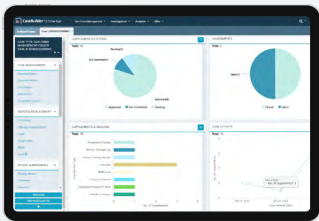
CrimeTracer is the #1 law enforcement search engine that enables investigators to search through more than 1.3B structured and unstructured data across jurisdictions to obtain immediate tactical leads, leverage advanced link analysis to make intelligent connections, link NIBIN leads to reports, suspects, and other entities, and more.



## INVESTIGATION MANAGEMENT

### CaseBuilder™

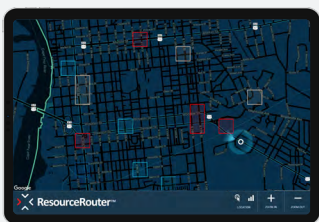
CaseBuilder is a smarter investigation management platform that enables investigative teams to efficiently organize and store case information, track and prioritize assignments, optimize resources, submit materials to prosecution, and more.



## NIBIN LEAD MANAGEMENT

### CaseBuilder™ Crime Gun

CaseBuilder Crime Gun is the first-of-its-kind gun crime tracking and analysis case management tool that enables agencies to better capture, track, prioritize, analyze, and collaborate on incidents that involve firearms.



## PATROL MANAGEMENT

### ResourceRouter™

ResourceRouter is a resource management tool that automates the planning of directed patrols using Part 1 crime data across an entire jurisdiction, daily, while also providing transparency and accountability surrounding key stakeholders' follow-up activities.



## Security Solutions

SoundThinking security solutions such as ShotSpotter® for Highways, ShotSpotter® for Campus, and ShotSpotter® for Corporate provide outdoor gunshot detection on highways and campuses to protect commuters, students, staff, and visitors from active shooters and neighborhood gun violence. The system provides notification of an event along with a precise location in less than 60 seconds, enabling law enforcement and security to mitigate the threat and direct people to safety.



## SoundThinking Labs

SoundThinking Labs is a technology innovation unit dedicated to developing applications of gunshot detection technology to safeguard wildlife and preserve the environment. ShotSpotter gunshot detection is deployed in Kruger Park, South Africa, home to the largest remaining population of protected rhino, and has helped reduce poaching.



# About this Report

SoundThinking's second annual Environmental, Social, and Governance (ESG) Report highlights our philosophy of being of service to our law enforcement and security customers and the communities they serve, our company colleagues and business partners, and our investors. We view the company's evolution from the perspective of our stakeholders, in which the shared purpose of driving positive public safety outcomes unites us.

We are proud of the progress we have made as a company over the years and firmly believe that we are building an enduring franchise that will create safer communities globally, offer significant opportunities for professional growth, foster mutually beneficial relationships with partners, and provide attractive risk-adjusted returns for our investors.

Our North Star is the guiding principle laid out by our founder, Dr. Robert Showen who stated, "The highest and best use of technology is when it can be harnessed for social good." As we continue to innovate and grow, this principle remains at the forefront of everything we do.

Thank you for reading this report, we look forward to any constructive feedback you wish to provide.

## SUSTAINABLE DEVELOPMENT GOALS

This report was developed based on the SASB sustainability disclosure framework and United Nations Sustainable Development Goals. For the SASB framework, we considered the six material disclosure topics for the Software & IT Services industry, which falls under the Technology & Communications sector. Throughout this report we have provided references to UN SDG goals as applicable. Unless otherwise noted, the data we provide is current through December 31, 2022.

# Welcome from Ralph Clark

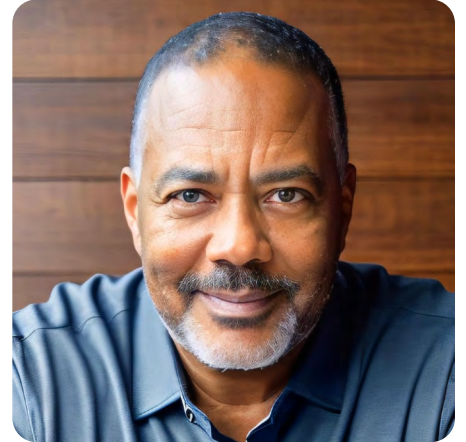
I am pleased to present to you our second annual Environmental, Social, and Governance (ESG) report, outlining SoundThinking's ongoing commitment to sustainability, responsible business practices, and creating safer communities through our innovative technology platform.

At SoundThinking, our purpose is to help guide law enforcement agencies in their digital transformation in order to become more efficient, effective and most importantly equitable in creating positive community safety outcomes. We understand that our responsibilities extend to addressing the needs and concerns of all our stakeholders.

This report demonstrates our dedication to incorporating ESG considerations into our operations, to delivering meaningful impact and creating long-term value. We are dedicated to fostering trust, promoting equity, and ensuring that our technology is used responsibly and ethically.

As we reflect on our achievements, we recognize that there is still much work to be done. Going forward, we will continue to invest in technology and best practices consultation, collaborate with community partners to drive positive change. We are excited about the opportunities that lie ahead and remain steadfast in our commitment to creating safer communities.

**RALPH CLARK,**  
President and CEO





# Welcome from Nasim Golzadeh

I am thrilled and proud to share SoundThinking's second annual ESG report with our community of stakeholders. This report identifies the values we live by. It highlights our responsibility toward, and our impact on the communities we live in and serve, our colleagues, customers, and vendors, and our approach to corporate governance. It also illustrates the controls and structures we have in place to ensure accountability to all stakeholders and to achieve our goals and objectives. Furthermore, it underscores our commitment to safeguarding the environment in which we all live.



For this reason, our second annual ESG report was created by a team composed of people from all departments and divisions. We realize this is an intentional journey, one that we all participate in with passion, responsibility, and a sense of ownership and community. We look forward to continuing this journey and sharing the results of our efforts and achievements in this annual ESG report.

**NASIM GOLZADEH,**  
SVP Support and Services



# Forward-Looking Statements

This report contains forward-looking statements about SoundThinking, Inc. and our environmental, social, and governance initiatives that involve substantial risks and uncertainties. All statements contained in this report, excluding statements of historical fact, are forward-looking statements. These statements can usually be identified by the use of words such as “expect,” “aim,” “goal,” and words of similar import. The outcome of the matters described in, or implied by, these forward-looking statements could differ materially due to a number of factors, including but not limited to: the company’s ability to successfully negotiate and execute contracts with new and existing customers in a timely manner, if at all; the company’s ability to address the business and other impacts and uncertainties associated with the COVID-19 pandemic; the company’s ability to maintain and increase sales, including sales of the company’s newer product lines; the availability of funding for the company’s customers to purchase the company’s solutions; the complexity, expense, and time associated with contracting with government entities; the company’s ability to maintain and expand coverage of existing public safety customer accounts and further penetrate the public safety market; the company’s ability to sell its solutions into international and other new markets; the lengthy sales cycle for the company’s solutions; changes in federal funding available to support local law enforcement; the efficacy of the privacy and information security measures implemented by the company and third parties; the company’s ability to deploy and deliver its solutions; the potential effects of negative publicity; and the company’s ability to maintain and enhance its brand, as well as other risk factors included in the company’s most recent annual report on Form 10-K and quarterly report on Form 10-Q and other SEC filings.

These forward-looking statements are made as of the publication date of this report. They are based on current expectations, estimates, forecasts, and projections, as well as the beliefs and assumptions of management. Except as required by law, SoundThinking undertakes no duty or obligation to update any forward-looking statements contained in this report as a result of new information, future events, or changes in its expectations.

The claims, data, assessments, or projections expressed by third-party entities are solely their own and do not necessarily represent the views or positions of SoundThinking or its management.



# Table of Contents

**1 ● SoundThinking — Working to Create a Safer World for Everyone**

**3 About this Report**

**4 Welcome From Ralph Clark and Nasim Golzadeh**

4 Ralph Clark, President and CEO

5 Nasim Golzadeh, SVP Support and Services

**6 Forward-looking Statements**

**8 SoundThinking — 2022 at a Glance**

**9 ● Social Impact — A Mission-Oriented Company Creating Safer Communities**

10 Shotspotter — Improving the Speed and Accuracy of the Response to Gun Violence

21 Data For Good — Repurposing Data for Greater Community Engagement

23 ResourceRouter — A Force Multiplier that Enables Impact without Over Policing

29 CrimeTracer — Empower Officers with Better Information, Decisions, and Outcomes

32 Building Trust Through Transparency, Backed by Third-Party Research

34 Forensics — Uniquely Court Tested and Validated

**36 ● Governance — Trust, Governance and Risk Management**

37 Corporate Governance Practices

43 Diversity, Equity, and Inclusion

46 Information Security Framework

52 Building Trust with Our Employees

58 Building Trust with Our Customers

62 Earning Investor Trust

**63 ● Environmental — Sustainable Practices and Protecting Our Planet**

64 Real Estate and Facilities

65 3g Sensor Replacement, Recycling, and Refurbishment

66 Sensor Electricity: Consumption, Considerations, and Solar Power

67 Protecting Reefs and Underwater Life in The Coral Triangle, Malaysia

70 UN SDGs Index

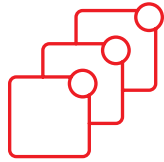
**71 Acknowledgements**







# SoundThinking — 2022 at a Glance



## 273,344

Published ShotSpotter Alerts



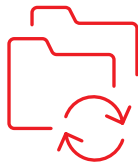
## 980+

Square Miles of ShotSpotter Coverage



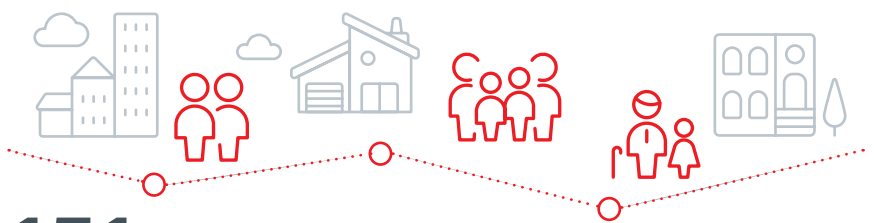
## 21,400+

ShotSpotter Sensors Deployed



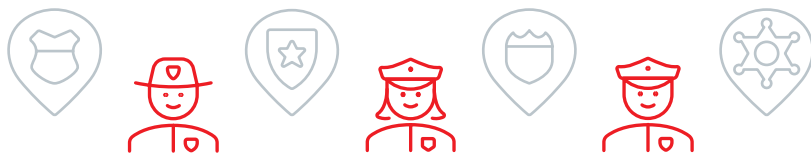
## 1.3M+

Cases Processed



## 151

Cities and Communities Covered by ShotSpotter



## ~ 2100

Law Enforcement Agencies using CrimeTracer



## 213

Employees



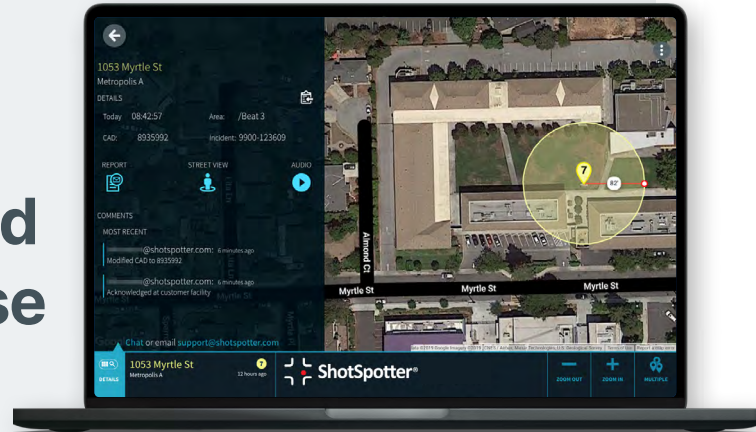
# Social Impact — **A Mission-Oriented Company Creating Safer Communities**

The community is at the heart of our business. Helping law enforcement make communities safer is not just a job. We are passionate about how our products contribute to a safer world, and this passion is ingrained in our company culture.

Our purpose is to earn the trust of law enforcement and the communities they serve. We strive to provide equal protection for all, with the aim of improving public safety. Doing work that matters begins with the SoundThinking family and extends to all communities we serve.



# Improving the Speed and Accuracy of the Response to Gun Violence



With ShotSpotter, SoundThinking creates safer and more connected communities. Fostering inclusive, safe, resilient, and sustainable cities is of paramount importance to us, which is why it is deeply ingrained in our business model and purpose.



To learn more about ShotSpotter, scan the QR code or visit: [soundthinking.com/law-enforcement/gunshot-detection-technology](https://soundthinking.com/law-enforcement/gunshot-detection-technology)

179

Victims found because of ShotSpotter, Albuquerque, NM

33%

Reduction in gun violence injuries, Greenville, NC

36%

Reduction in homicides year-over-year, Pittsburgh, PA

3.5 min

Reduction in GSW victims transport time



*“My team focuses on the continued success over the lifetime of our partnership with our customers.. As part of that success, we are looking at ways we can be part of a broader solution to reducing gun violence. Working with local community leaders, violence interrupters, and trauma care providers, we are finding ways to leverage our data to help those traumatized by gun violence, how to contribute to data-informed approaches to prevent gun violence, and ways to address the root causes of such crime.”*

**REGAN DAVIS,**  
SVP Customer Success and Field Engineering



PRODUCT USED



POPULATION

620,376

COVERAGE AREA

38.27 SQ. MI

CUSTOMER SINCE

2020



## City of Detroit, MI

In Detroit, a city with one of the highest rates of violent gun crime in the US, law enforcement enlisted ShotSpotter technology to help make the community safer.

In October 2022, Detroit Police Department (DPD) credited ShotSpotter with a 27 percent reduction in fatal shootings and a 43 percent decline in shots fired since launching the program in 2020. More recently, the department reported a 34 percent decrease in Part 1 violent crimes in the 8th Precinct. In the 9th Precinct, there was a 53 percent reduction in Part 1 violent crimes.

The results observed in 2022, during ShotSpotter deployment in the city of Detroit.

**27%**

Reduction in fatal shootings

**43%**

Reduction of shots fired

**257**

Guns seized

**128**

Search warrants or consent to Search

## Detroit Community Voices: Committee Meeting

The vice president of a Detroit neighborhood Block Club said, *“I’m in 100 percent support of ShotSpotter, even if no one calls [9-1-1], at least the police will be notified.”* He continued, saying: *“One of the elements that I think it will combat is when people see crime or hear crime, whether it’s due to culture or fear, they won’t call the police.”* A sentiment that Police Chief James White later qualified, stating that: *“Only 10 percent of #ShotSpotter events have a 9-1-1 call associated with them.”* The vice president of the Block Club also stated that police should be notified when someone is shot, and that he hopes his generation will be less fearful of speaking to police.

**The results observed in 2022, during ShotSpotter deployment in the city of Detroit.**

**953**

Incidents with shell casings collected

**503**

Connections to guns used in commission of a crime



At the same committee meeting, Sandra Turner-Handy, a resident of DPD 9th Precinct, said: *“I do not want our kids in this community growing up to think [gun violence] is normal...This technology is needed and necessary if we are to make safety a priority in our communities and in our city.”* Ms. Turner-Handy also stated that people who live in areas that are not affected by gun violence do not understand the quality of life for those that do. She mentioned that ShotSpotter is important to have in neighborhoods experiencing gun violence.

The DPD is increasing their use of ShotSpotter to combat gun crime and identify shootings that would not be known to them otherwise. They intend to expand the coverage to an area seven times larger than its current scope.

In September 2022, news reports stated that ShotSpotter led police to a location at the junction of Hazelridge and Chalmers where they found a deceased victim with multiple gunshot wounds. There were no 9-1-1 calls from people in the area who may have seen or heard something, once again marking the importance of ShotSpotter alerts.



*“I have been fortunate enough to build software products for the largest police departments in the US as a part of SoundThinking. It has given me the opportunity to learn and grow while working on challenging, rewarding, result-driven projects that have an impact on people’s lives. The company and leadership’s passion to reduce gun violence and make cities safer motivates me to do the work that matters.”*

**TARIQ ISLAM,**  
Business Analyst Technologic Solutions



PRODUCT USED	POPULATION	COVERAGE AREA	CUSTOMER SINCE
 ShotSpotter®	2.2 MILLION	23.5 SQ. MI	2017



## City of Las Vegas, NV

Las Vegas Metropolitan Police Department (LVMPD), in partnership with the Clark County Commission, began using ShotSpotter technology in 2017 in a pilot installation in two of their hotspot crime areas. The department recognized the technology’s impact almost immediately. Six months after implementation, a persistent hotspot reported a 26 percent reduction in violent crime. Nine months after implementation, the same area recorded a further 43 percent reduction. In 2022, ShotSpotter continued to be an integral technology for the LVMPD, helping officers locate evidence, victims, and suspects in hundreds of incidents throughout the year.

The results observed in 2022, during ShotSpotter deployment in the city of Las Vegas.

# 4,105

Cartridge casings recovered

# 110

Victims located

# 541

ShotSpotter alerts connected to other shootings via NIBIN

# 90%

Faster response to reported gunfire events than 9-1-1 calls

In one of the most significant incidents of 2022, the LVMPD leveraged ShotSpotter to catch a murder suspect. Officers responded to a ShotSpotter alert stating that two rounds were fired in a residential area, where they located a victim suffering from gunshot wounds to the head and neck. After rendering aid to the victim, officers were able to locate the suspect and the firearm used. The suspect was arrested for felony, attempted murder, and ownership/possession of a gun by a prohibited person.

The implementation of ShotSpotter technology has also decreased the response time to gunfire incidents. In 2022, the average time between gunfire and a ShotSpotter alert to the LVMPD was 46 seconds. In the same year, the average time between gunfire and a citizen call to LVMPD via 9-1-1 was 3 minutes and 50 seconds. ShotSpotter's alert system enables a swift response to gunfire, which enhances investigation outcomes while reassuring the wider community through active police engagement.



*“As a former police officer, who has spent the last 25 years developing, deploying, and evangelizing advanced technologies to enhance the mission of law enforcement, I couldn’t be happier to be a SoundThinker! After years of battling through struggling startups and enduring the dollar-driven culture of a Fortune 100 corporation, joining SoundThinking, a fundamentally mission-focused company is where I was meant to be. The people here truly care about the customer and are purpose driven to help make the world a better place.”*

**JOEL SteMARIE,**  
Director, Sales Solution, CrimeTracer



PRODUCT USED	POPULATION	COVERAGE AREA	CUSTOMER SINCE
 ShotSpotter®	561,008	29.57 SQ. MI	2020



## City of Albuquerque, NM

ShotSpotter has been used in the city of Albuquerque since 2020.

Chief of Police, Harold Medina, says that while ShotSpotter is currently being used in all area commands throughout the city, they hope to add more coverage in key areas. As Chief Medina explains, there is an interest in focusing on “*educational facilities and making sure that we get immediate notifications if shots are being fired*”.

The results observed in 2022, during ShotSpotter deployment in the city of Albuquerque.

**1,200+**

Shooting scenes identified

**179**

Victims located

**58**

Suspects identified



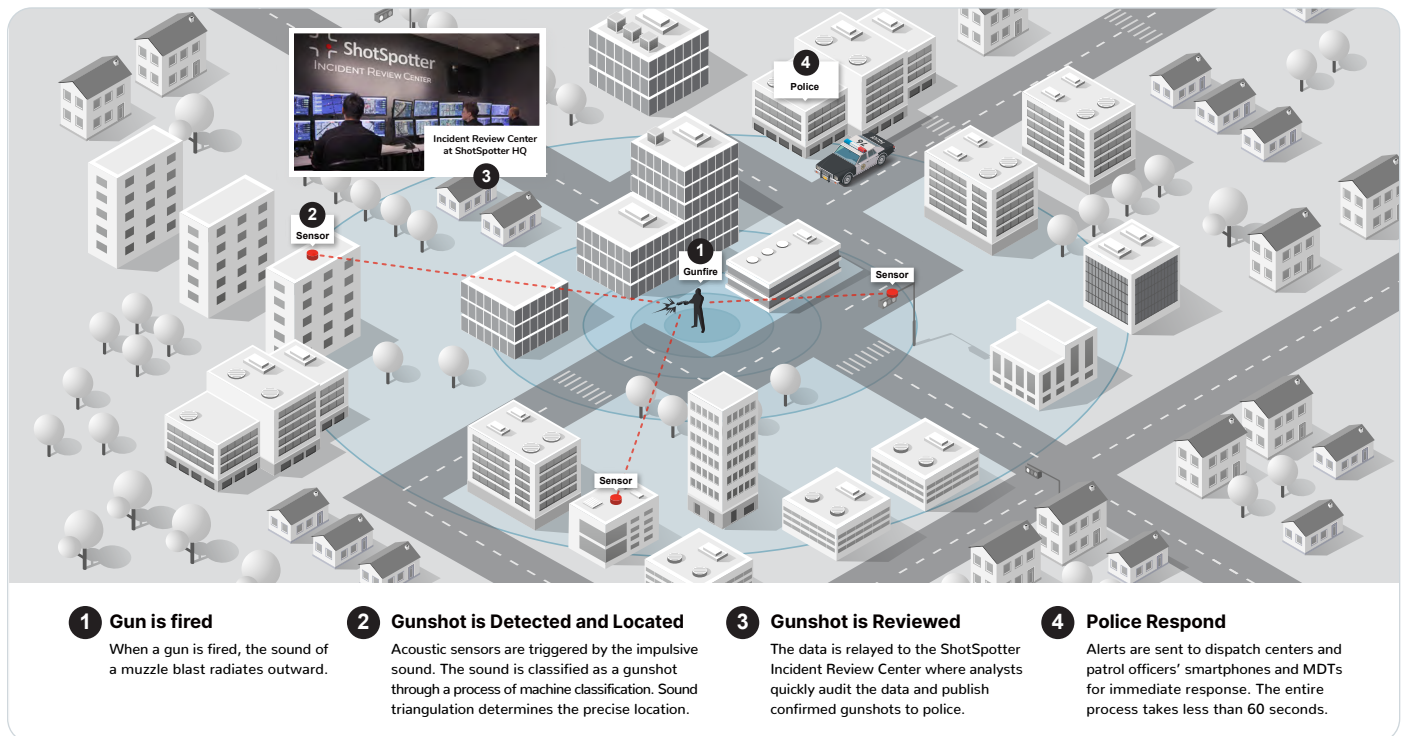
Often, the Albuquerque Police Department (APD) responds to calls for service where individuals are claiming they have shot in self-defense. With ShotSpotter, the APD can determine the sequence of events to see who shot first. They have credited ShotSpotter with providing precise information on the number of shots fired and where each shot came from. This information enables them to determine the validity of self-defense statements. *“It’s helped us in a number of investigations”*, says Chief Medina.

In one the most significant incidents of 2022, ShotSpotter alerted APD to the scene of a double homicide. The data from the alert contained all the necessary details about the incidents to enable the officers to arrive at the precise location quickly and safely.




*“It’s been a great addition”, says Chief Medina. “I think it still has a lot of potential and that as we move forward, we can definitely continue to use and even possibly grow the program...It’s everywhere from starting, to getting resources out there at the beginning of the shooting, all the way through [to] securing the conviction...I think it runs a very wide range of successes for us.”*

**HAROLD MEDINA,**  
Chief APD



How ShotSpotter Works



PRODUCT USED	POPULATION	COVERAGE AREA	CUSTOMER SINCE
 ShotSpotter®	245,787	3 SQ. MI	AUGUST 2021



## City of Winston-Salem, NC

ShotSpotter was implemented in Winston-Salem in 2021 in conjunction with the new Real Time Crime Center. This combination allows the department to respond to gunfire much faster, with situational awareness about the shooting location, mapped area, audio of gunfire, directions to the location, multiple shooter information, possible high capacity, and whether there were fully automatic weapons used. The Real Time Crime Center combines ShotSpotter with other sources of data and intelligence to better protect the community.

The results observed in 2022, during ShotSpotter deployment in the city of Winston-Salem.

**2**

Lives saved

**47**

Guns seized

**78%**

Increased gunfire awareness

**1,398**

ShotSpotter alerts

In just one year, Winston-Salem Police Department (WSPD) credits ShotSpotter with saving multiple lives, alerting them to crimes that 9-1-1 did not, and increasing findings of shell casings. When asked about the cost of the technology, Captain Amy Gauldin of WSPD stated that *“you cannot put a price on a life...It’s expensive, but if we’re taking guns off the streets and we’re saving lives, I think it’s a win-win for everybody”*.

With *“78 percent of crime or gunfire incidents in our three-square mile radius...not being reported”*, Captain Gauldin says that ShotSpotter’s alerts have played a vital role in their response to gun violence. *“It helps us connect more crimes...[and] generate investigative leads, which ultimately helps us to solve more crimes and put the people responsible for this kind of violence in our community in jail.”*

ShotSpotter has helped WSPD arrive on scene more quickly, allowing them to administer first aid to shooting victims, gather evidence, and speak to witnesses.

Captain Gauldin says the feedback by officers using ShotSpotter has been largely positive.



*“You know, especially the younger ones who are more adept with technology love it”, she explained. “We get an alert, or we have an app on our phone that gives us the alert. We know right then and there, we’re able to listen to it and go into it [the scene] more aware of how many rounds have been fired. Does it appear to be moving gunfire? Does it appear to be a fully automatic weapon? All those things that as an officer you need to respond to safely and tactically. It’s great.”*

**AMY GAULDIN,**  
Captain WSPD



PRODUCT USED	POPULATION	COVERAGE AREA	CUSTOMER SINCE
 ShotSpotter®	524,907	6.5 SQ. MI	2010



## Camden County, NJ

In their own words, the Camden County Police Department (CCPD) lists the use of SoundThinking services and a recent ShotSpotter alert that led to arrests and the collection of evidence.



*“Over the years the Camden County Police Department has partnered with ShotSpotter, which has proven to be a great tool of the many we use to enhance our ability to combat gun violence and save victim’s lives in the city of Camden, New Jersey. Often it has assisted us to respond to shooting related incidents before any 9-1-1 call(s) are received, if any were made at all.*

*In the past, we may not receive 9-1-1 call(s) for shooting incident(s), but now we are receiving ShotSpotter activations and 9-1-1 call(s) more often than not. Why? Because the community knows we are here for them, and they know our goal is to make them feel safe and to make their neighborhoods a safer place, which has been done by partnering with the community as a team, and by showing them how technologies like ShotSpotter assist us in accomplishing that.*

The CCPD credited ShotSpotter with a

**47%**

reduction in gunfire since implementation



*SoundThinking has assisted us in achieving our goals over the years, and a recent shooting incident has shown that. On Tuesday, September 13th, 2022, we received a ShotSpotter activation for five rounds in one of our neighborhoods within Camden, NJ. Due to the ShotSpotter activation and notification, officers arrived quickly on scene. Officers observed a vehicle fleeing the scene and conducted a motor vehicle stop.*



*During the subsequent stop, officers recovered three firearms from the vehicle and were able to arrest and charge the four occupants of the vehicle. As a result of the quick response of responding officers, another suspect vehicle related to this incident was located. It was unoccupied and parked blocks away from the scene. Through a later investigation, as a result of finding the vehicle, we were able to arrest and charge the two individuals responsible for the shooting.*

*ShotSpotter has proven to be an important tool in achieving our goal in the city of Camden.”*

# DATA FOR GOOD

## Repurposing Data for Greater Community Engagement

SoundThinking’s Data for Good program helps law enforcement customers identify offices of violence prevention, schools, city and county public health departments, and other community organizations that would receive gunfire data and analytics including heatmaps and dashboards. These tools indicate where gunfire and potential trauma may be occurring so the appropriate community resources can be deployed to offer immediate and lasting support and help address the core issues that drive crime.



To learn more about Data for Good, scan the QR code or visit: [soundthinking.com/community/data-for-good](https://soundthinking.com/community/data-for-good)

Through data sharing agreements with participating public safety departments, these dashboards are offered free of charge to the following non-law enforcement governmental organizations: offices of violence prevention, including offices of neighborhood safety and engagement; hospital-based violence intervention programs; educational institutions; and city, county, and state public health agencies.

### Key stakeholders that benefit from Data for Good:



Offices of Violence Prevention and Neighborhood Safety



School-Based Handle with Care Programs



Hospital-Based Violence Intervention Programs



City and County Victim Services Programs



Departments of Public Health



Federally Qualified Health Center Outreach Programs

## Walking One Stop | Miami-Dade County, FL

SoundThinking partners with [Walking One Stop](#) to provide data on where shootings occur in Miami-Dade County, enabling the organization to assist those from the areas that are most impacted. With a focus on bringing social and economic resources to the doorsteps of those who have recently or persistently experienced gun or gang violence, Walking One Stop has provided nearly 3,000 referrals for services and support between 2018 and 2020. The majority of those referrals connected community members with social service providers within one week of initial contact. Additionally, more than 20 elected officials, researchers, and national advocates have joined Walking One Stop to hear directly from families in need about the policies, programs, and interventions necessary to address crime and improve their neighborhoods.



## Baton Rouge Police Department | Baton Rouge, LA



"Gun violence is a community issue, not a police issue. So we're taking that same data and pushing it to our service providers. And for anyone else who is involved in dealing with the root causes of crime, we're willing to share that data with them as well. We're no longer holding onto the data. We're making it public. And we are asking the community to do their part in helping us reduce gun violence in our city."

Chief **MURPHY J. PAUL JR.**, Baton Rouge Police Department



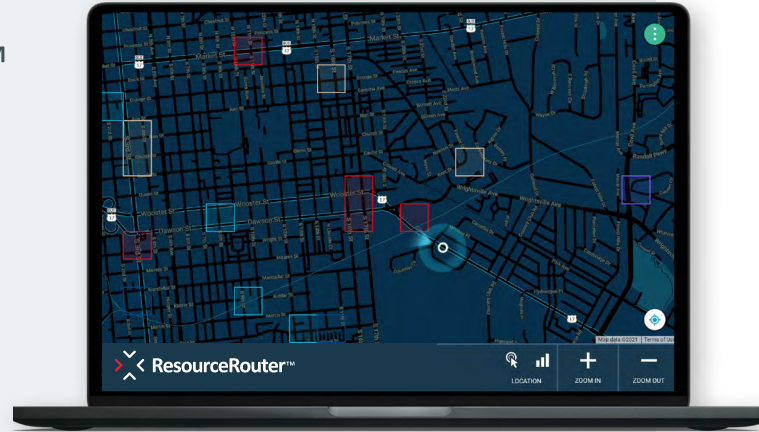
## Operation Echo Stop | Mobile, AL

SoundThinking and the Mobile PD have partnered with [Operation Echo Stop](#) to provide data that supports their victim services, family intervention outreach, and engagement activities. In addition, the partnership assists the Strengthening Opportunities for Achievement and Resilience (SOAR) initiative from the University of South Alabama, Mobile County Schools, and the Mobile Police Department. With a focus on reducing youth violence and suicide, SoundThinking helps SOAR identify students exposed to urban gun violence so they can provide mental health and safety interventions in a timely manner.





# A Force Multiplier that Enables Impact without Over Policing



Today’s law enforcement executives are facing budget and accountability pressures and need precision-policing tools to maximize their resource efficiency and promote more positive community engagement. ResourceRouter is a patrol and analyst tool that automates dynamic patrol location forecasts for all Part 1 crime data across an entire jurisdiction daily, enabling patrol and task force units to deter crime in a more precise and impactful way while also improving community engagement.



To learn more about ResourceRouter, scan the QR code or visit: [soundthinking.com/law-enforcement/resource-deployment-resourcerouter](https://soundthinking.com/law-enforcement/resource-deployment-resourcerouter)

## Save time and increase precision and impact with ResourceRouter’s automated directed patrols:



Are precise and produced daily, by shift and beat, across the jurisdiction



Reduce time spent conducting manual analysis each week, by as much as 80%



Free up bandwidth for crime analysts to focus on value-added investigative analysis





PRODUCT USED



POPULATION

103,110

CUSTOMER SINCE

JUNE 2021



## 📍 South Bend Police Department, IN

Like many law enforcement agencies across the US, the South Bend Police Department (SBPD) experienced a decline in staffing that was impacting community relations and making effective patrolling difficult.

Prior to deploying ResourceRouter, SBPD's crime analysts spent six hours each week analyzing data to produce one week-long persistent hotspot for the entire agency. Since deploying ResourceRouter, the same analysts spend approximately 45 minutes per week reviewing and enhancing ResourceRouter's automated directed patrols that are produced daily, by shift and beat, across the jurisdiction. This process not only creates an 80 percent time-savings for analysts each week, but also offers a more precise and impactful approach that optimizes analyst and patrol resources. *"I no longer manually pull data from multiple resources to analyze as ResourceRouter does it for me"*, explains Crime Analyst Brianne Denton. *"I spend my time focusing on value-add investigative work that is more beneficial to the department."*



*"SoundThinking is making a direct difference in our communities by providing officers with the latest gunfire detection technology. I look forward each day to #workthatmatters because collectively we are a part of a collaborative solution to gun violence."*

**GLADYS FERGUSON,**  
Instructional Design  
Training Manager

Maximizing efficiency and impact is more important than ever before given that SBPD has 15 to 20 percent fewer officers than they did just two years ago. Despite those staffing challenges, with ResourceRouter, the department is now maximizing the impact of its resources by driving more effective and precise directed patrols that are positively impacting a spectrum of crime across the entire jurisdiction such as robbery, aggravated assault, larceny, property crime, and homicides.

As Assistant Chief Dan Skibins, explains, *“Equitable policing across the jurisdiction is essential to building trust with the community while facilitating safety”*. He also credits increased community trust to ResourceRouter’s ability to fill prior gaps in patrolling: *“People feel safer because they’re seeing officers on the street.”* Assistant Chief Skibins further noted a dramatic decline in citizen complaints about a lack of police presence since starting with the system. Overall, ResourceRouter has enabled automated patrol plans that put officers at the right place at the right time in a way that limits potential bias, enhancing community confidence. SBPD has seen a significant reduction in Part 1 crime since deploying ResourceRouter despite limited staffing.



*“With minimum staffing levels, ResourceRouter has definitely helped with our action plan and determining the best place for resource deployment based on historical crime data and recent crime trends.*

*It certainly makes us more efficient in deploying those officers where they’re needed the most. It also helps us to build community trust, which is very important to us. We do a lot of outreach work, so officers being seen in areas where they’re needed most goes a long way, as well as foot patrols in those areas our citizens have been victimized the most in South Bend is very important.*

*It's not just a gun violence reduction tool for us, it's an overall crime reduction tool. Now that we have ResourceRouter, we know that our officers are spending time where they're needed most. Attending neighborhood meetings and hearing feedback from those who live in the actual neighborhoods that we are patrolling, they feel much more comfortable about seeing officers.*

*And so, it's beneficial to building trust and relationships with our community. And we have seen a 13 percent reduction in our Part 1 crimes since we began using ResourceRouter.”*

**DAN SKIBINS,**  
Assistant Chief SBPD

**Results observed since ResourceRouter deployment in the city of South Bend.**

**83%**

Reduction in hours preparing hotspot analysis

**15-20%**

Fewer officers than there were two years ago

**14%**

Reduction of Part 1 crimes since deployment

**PRODUCT USED****POPULATION****205,319****CUSTOMER SINCE****2014**

## City of Worcester, MA

Tiana Antul, Principal Crime Analyst from the City of Worcester Police Department (WPD) shares her experience with ResourceRouter and explains how the patrol management system helps them respond to, investigate, and deter crime.



*“We’ve deployed ResourceRouter for a little over a year now, and every time we’ve evaluated the program, what the data tells us is that we are reducing and preventing crime. So, I think the value of having ResourceRouter at our agency is really that it allows us to meet the expectations of modern-day policing.*

*ResourceRouter is a way for us to demonstrate commitment to today’s policing standards of being data-driven, evidence-based, and accountable to the community. Today, in addition to responding to calls for service and engaging with the community and solving problems, there’s the added expectation that we’ll be able to use and leverage data, to anticipate where and when crimes will occur to prevent them from happening in the first place.*

*I can tell you unequivocally that we would not be able to achieve what ResourceRouter allows us to do with directed patrols, with the resources that we have in terms of the number of analysts and time that that would require. Since we began using ResourceRouter, we have seen a reduction in Part 1 crime by approximately 13 percent.”*

**TIANA ANTUL,**  
Principal Crime Analyst WPD



PRODUCT USED



POPULATION

113,273

CUSTOMER SINCE

2019



## 📍 City of Springfield, IL

In October 2022, Springfield Police Department (SPD) hosted an innovative community event using ResourceRouter to determine the areas that would most benefit from social, medical, and economic resources. Several groups, companies, and organizations came together to offer those resources to residents. The goal is to revitalize areas that have been underserved, overpoliced, or that had populations experiencing some form of physical, mental, or emotional trauma.

This is SoundThinking’s Data for Good Program: a community-based program that shares precision data about where and when gun violence occurs so non-law enforcement organizations can provide prompt interventions to residents in need of services and support.



*“When I worked for local law enforcement, I found it very rewarding to serve and contribute to the community I lived in. Now that I work for SoundThinking, I am so energized by being able to work with law enforcement agencies around the entire country to help them serve the communities they are a part of and make those communities a safer place to live and work.”*

**PAIGE VEDDER,**  
Data Specialist

According to the academic medical journal *Annals of Internal Medicine*, survivors of firearm injury have a 51 percent increase in psychiatric disorders and an 85 percent increase in substance use disorders. Individuals exposed to ongoing gunfire incidents can experience PTSD-like symptoms and require immediate follow-up. Local and national organizations in communities across the country help to address this problem through a variety of means.

The Springfield, Illinois initiative Community Connections leverages ResourceRouter data to determine which areas of the city need additional resources. Focusing on community outreach, education, and engagement, Community Connections includes the city's public works and planning agencies, economic development agencies, Memorial Behavioral Health Center, The Outlet mentorship program, and many others.

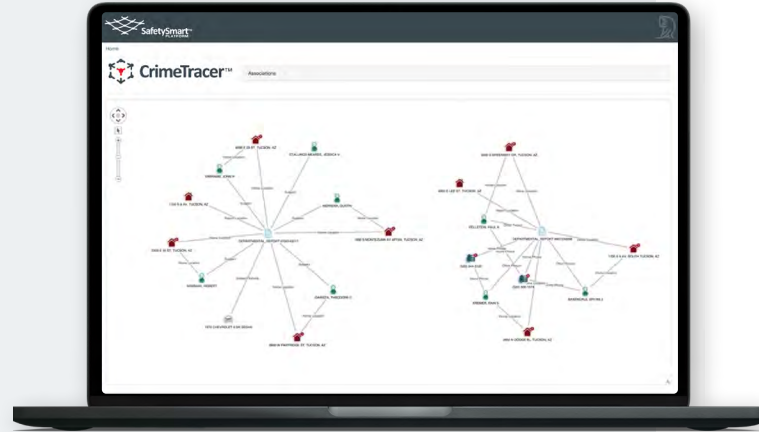
“What it's all about is helping these residents get a better path in life and how we can lift this whole area...If you transform 11th to 18th, South Grand to Cook, that's a transformational change for the east side. That's what it's all about, lifting up all of our neighborhoods [so] that each and every one of us would like to live there.”

**JIM LANGFELDER,**  
Mayor of Springfield, IL





# Empower Officers with Better Information, Better Decisions, Better Outcomes



CrimeTracer (formerly COPLINK X) is a powerful law enforcement search engine and information platform that enables law enforcement to search data from agencies across the U.S. using natural language speech terms and concepts. With CrimeTracer, officers have instant access to information they need, enabling them to strike the right balance between crime reduction, community engagement, and personal safety.



To learn more about CrimeTracer, scan the QR code or visit: [soundthinking.com/law-enforcement/crime-analysis-crimetracer](https://soundthinking.com/law-enforcement/crime-analysis-crimetracer)



The most powerful network of law enforcement information in the nation.

**1.3B**

Structured and unstructured data across jurisdictions

**>30**

Data sources

**2,500+**

Agencies using CrimeTracer in the United States



PRODUCT USED



POPULATION

346,000

CUSTOMER SINCE

XXXX

## City of Anaheim, CA

Empowered by CrimeTracer, Scott Eden of the Anaheim Police Department (APD) makes a difference in the community he serves as a police officer. With data from over 3,000 law enforcement agencies across the United States, CrimeTracer provides Officer Eden with access to over one billion documents enabling him to make intuitive decisions about the incidents and cases he investigates daily.

The City of Anaheim is home to over 346,000 residents and encompasses 50+ square miles. In addition to being the most populous city in Orange County, California, it is also home to the Disneyland Resort, the Anaheim Angels, and the Anaheim Ducks. The diverse population, expansive geographical area, and unique attractions make Anaheim a challenging policing environment. In 2022, the APD recorded over 200,000 calls for police services. The APD has four Community Policing Teams focused on short- and long-term issues requiring solutions and combined city and local resources.



*“Every day I am motivated by the collaborative efforts our teams make to improve our processes and enhance products for our customers. It’s the feeling of community and the opportunities to impact the communities at large that inspire me to continuously strive to build positive, professional relationships.”*

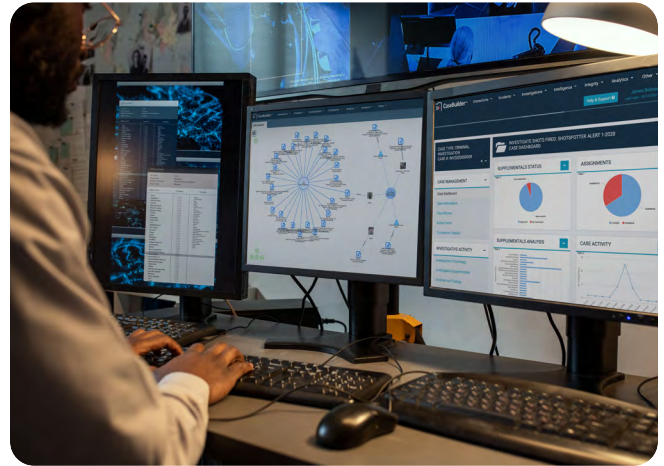
**DR KYSHA FEDD,**  
Director of Customer Success

Officer Eden has served the Anaheim community for over seven years. He is an army veteran who continues serving as a Major in the Army Reserve after years of active duty. Officer Eden, and the other members of the West District Community Policing Teams—Sergeant Brian Paqua, Officer Corey Reinmiller, and Officer Heather Scaglione—bring over 77 years of combined law enforcement experience to their mission. As part of the Community Policing Team, they work collectively to reduce crime and the fear of crime while improving the quality of life for Anaheim's neighborhoods, businesses, and visitors.

Officer Eden is one of the most prominent users of CrimeTracer in law enforcement. He has made CrimeTracer a regular part of his investigative practice. He has become the department leader in Anaheim in helping find information and investigative leads. Officer Eden has put the power of CrimeTracer's consolidated law enforcement data from police agencies across the nation to extensive use and has made a difference in solving problems in the community with the information he can view and link together. Understanding that information and data are key to successful investigations, he realized that CrimeTracer's advanced search technology allows him to develop leads successfully. By reviewing activity beyond his department's records, he can is able to connect individuals and solve crimes.

Officer Eden has had countless successes with CrimeTracer, his proficiency has led to case closures and arrests in auto thefts, burglaries, domestic violence, gambling, human trafficking, and fraud cases, to name just a few. Officer Eden was credited for solving an armed robbery case for another police agency after receiving a county-wide crime bulletin. Many of these investigations, paired with information from CrimeTracer, have eliminated problems in neighborhoods and business corridors. During 2022, he logged 7,292 queries into CrimeTracer for information on operational issues involving his team's mission in the community. CrimeTracer is part of his investigative process and layered approach to problem-solving. With the search capabilities and link analysis, Officer Eden has quickly identified involved parties for his assignments and casework.

CrimeTracer has put an ever-expanding array of documents and information at law enforcement's fingertips, empowering them to make real-time decisions on active investigations and enhancing their ability to decide a course of action. CrimeTracer enables officers to successfully put pieces from different cases together and develop realistic starting points from which to launch into action, all with an end goal of making the communities safer.



*"I like knowing that we are making a difference in communities and helping decrease gun violence. When an alert goes out, I know that officers are on their way and a life that could be lost can possibly be saved. SoundThinking is a great place to work. We all come together as a team and a family. SoundThinking makes me feel valued. I feel like I'm a part of a great company that is going to bring about change in the fight against gun violence."*

**LaFREDA SCURRY,**  
IRC Specialist and Shift Lead





# Building Trust Through Transparency, Backed by Third-Party Research

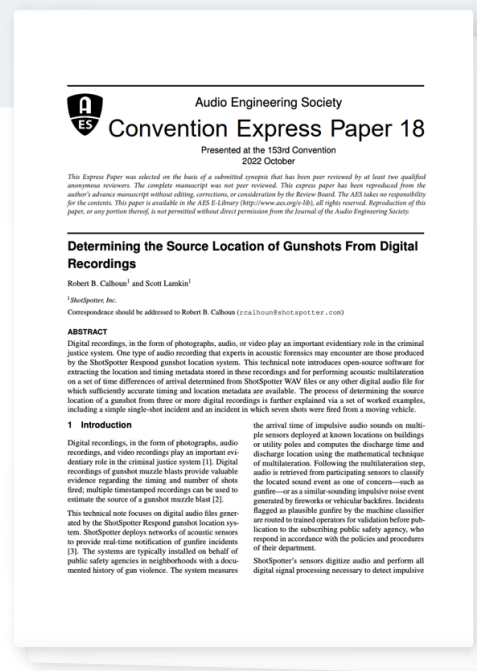


At SoundThinking, improving the police-community relationship is central to everything we do. A key component to improving this relationship is building trust—both the community’s trust in their local police departments and law enforcement agencies’ trust in the transformative solutions that make their difficult jobs easier.



Building and maintaining trust is a continuous responsibility, and one that cannot be taken for granted. It requires a complex, multifaceted approach, and we believe that practicing ongoing transparency is a critical component. For this reason, SoundThinking’s Principal Engineer and co-founder Rob Calhoun and Algorithms Engineer Scott Lamkin published a [whitepaper](#) <sup>1</sup> titled “Determining the Source Location of Gunshots from Digital Recordings”, and released open-source tools for reading ShotSpotter audio files and generating source location estimates from muzzle blast arrival times. Available on [GitHub](#), these tools <sup>2</sup> facilitate transparency by allowing experts in gunshot forensics to conduct independent analysis of ShotSpotter data, process, and results.

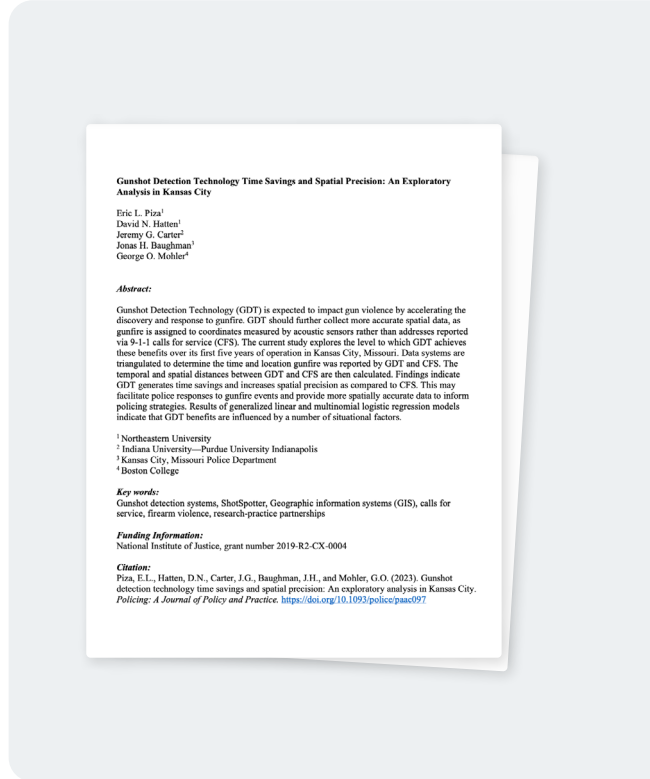
In addition to practicing transparency, we recognize that third-party research is a critical component for building trust in law enforcement and the public safety industry. We are proud to share that several comprehensive studies have verified the effectiveness of our ShotSpotter product.



Dr. Eric Piza, Associate Professor at John Jay College of Criminal Justice, found that in [Kansas City](#) <sup>1</sup> gunshot detection technology (GDT) generated median time savings of 93 seconds in comparison to 9-1-1 calls, offering a minute and a half “head start” for the victim transport process. Practical benefits are also evident from the spatial precision figures, as the median distance between GDT detections and 9-1-1 calls for service was found to be 234 feet.

Dr. Dennis Mares, Professor of Criminal Justice at Southern Illinois University Edwardsville, also conducted comprehensive research into the impact of GDT and published findings demonstrating the technology’s efficacy. In his report [“Gunshot Detection: Reducing Gunfire through Acoustic Technology”](#) <sup>2</sup>, Dr. Mares highlights that police survey responses to acoustic gunshot detection solutions (AGDS) were positive, reporting that it enabled quicker identification of a crime scene, enhanced video collection, facilitated prosecution, and provided faster aid to victims. Similarly to Dr. Piza, Dr. Mares found that AGDS tend to provide accurate locational data, meaning that officers arrive at more precise locations.

Practicing transparency and gathering third-party validation are equally important to building trust, and we take both very seriously. In addition to the academic and scientific aspects of the technology, at SoundThinking we stand behind our results and impact in the coverage areas and communities we serve. To obtain independent and impartial validation of our aggregate accuracy of 97% across all coverage areas, we commissioned Edgeworth Economics, a data analytics practice, to conduct an independent audit of the 2019 to 2022 data and analyses used to support our claim. Edgeworth Analytics’ audit of ShotSpotter data confirmed an accuracy rate of at least 97.60% for detecting, classifying, and publishing gunfire incidents in the corresponding period.



**Gunshot Detection Technology Time Savings and Spatial Precision: An Exploratory Analysis in Kansas City**

Eric I. Piza<sup>1</sup>  
David N. Hatten<sup>1</sup>  
Jeremy G. Carter<sup>2</sup>  
Jonas H. Baughman<sup>3</sup>  
George O. Mohler<sup>4</sup>

**Abstract:**

Gunshot Detection Technology (GDT) is expected to impact gun violence by accelerating the discovery and response to gunfire. GDT should further collect more accurate spatial data, as gunfire is assigned to coordinates measured by acoustic sensors rather than addresses reported via 9-1-1 calls for service (CFS). The current study explores the level to which GDT achieves these benefits over its first five years of operation in Kansas City, Missouri. Data systems are triangulated to determine the time and location gunfire was reported by GDT and CFS. The temporal and spatial distances between GDT and CFS are then calculated. Findings indicate GDT generates time savings and increases spatial precision as compared to CFS. This may facilitate police responses to gunfire events and provide more spatially accurate data to inform policing strategies. Results of generalized linear and multinomial logistic regression models indicate that GDT benefits are influenced by a number of situational factors.

<sup>1</sup> Northeastern University  
<sup>2</sup> Indiana University—Purdue University Indianapolis  
<sup>3</sup> Kansas City, Missouri Police Department  
<sup>4</sup> Boston College

**Key words:**

Gunshot detection systems, ShotSpotter, Geographic information systems (GIS), calls for service, firearm violence, research-practice partnerships

**Funding Information:**

National Institute of Justice, grant number 2019-R2-CX-0004

**Citation:**

Piza, E.I., Hatten, D.N., Carter, J.G., Baughman, J.H., and Mohler, G.O. (2023). Gunshot detection technology time savings and spatial precision: An exploratory analysis in Kansas City. *Policing: A Journal of Policy and Practice*. <https://doi.org/10.1093/polic/paac097>

**Edgeworth Analytics’ audit of ShotSpotter data confirmed an accuracy rate of at least**

**97.60%**

**for detecting, classifying, and publishing gunfire incidents in the corresponding period.**

## Forensics — Uniquely Court Tested and Validated

The value of a ShotSpotter alert for first responders is obvious. Being immediately notified of when and where gunfire occurs allows them to respond quickly and precisely to the scene of a shooting and render lifesaving aid to gunshot victims. It also allows police to identify witnesses, initiate investigations, locate valuable ballistic evidence, seize illegal firearms, and arrest those responsible for shootings. Investigators use it to establish timelines to shootings, explain crime scenes, and corroborate other evidence.

*“ShotSpotter alerts created an acoustic trail of breadcrumbs.”*

[Commonwealth v. Lincoln Ford ↗](#)



By responding quickly and consistently to shooting incidents, and by holding accountable the small number of people who commit violent crimes, law enforcement can reassure communities that have been plagued by gun violence for far too long that they have not been abandoned. That they are there to serve them. That they are committed to fair, effective, and equitable policing. They can start to rebuild trust.

But ShotSpotter’s usefulness does not end at the crime scene. It can also play an important role in the courtroom. Our alerts often contribute unique evidence to the constitutional analysis required to detain or search a person suspected of criminal activity. ShotSpotter also produces Detailed Forensic Reports and provides expert witness testimony that can provide unique evidence in trials, including audio recordings of shooting incidents.

*“It tells officers what, when, and where, but not who.”*

[State v. Nimmer ↗](#)





Throughout 2022, ShotSpotter’s value as evidence became increasingly prominent as numerous courts—from a US Court of Appeals to a State Supreme Court, to many appellate and trial courts—upheld ShotSpotter’s reliability, admissibility, and evidentiary value. This continues a trend from prior years and has strengthened the case law that supports the use of ShotSpotter evidence.

In fact, in 2022, SoundThinking’s forensic experts provided more testimony than in any prior year. In total, SoundThinking’s forensic experts have written thousands of forensic reports, testified in more than 250 cases across 22 states, and have survived dozens of challenges to the admissibility of their testimony. These figures do not include the many cases where courts have upheld law enforcement’s use of a ShotSpotter alert as one factor, along with others, in assessing the “totality of the circumstances” to support “reasonable suspicion” or “probable cause”.

ShotSpotter evidence is most often associated with prosecutions because ShotSpotter alerts to gunfire in urban areas, and that usually means a crime has been committed. But ShotSpotter can also provide valuable evidence for defending those wrongly accused of committing a crime. For instance, it can provide airtight alibi evidence, when a person can show they were somewhere else at the precise time of ShotSpotter alert.

SoundThinking’s forensic experts have testified many times on behalf of defendants. In 2022, SoundThinking provided a forensic report at the request of a legal aid attorney who was defending a juvenile accused of a shooting. The attorney credited the report as a deciding factor in the prosecution’s decision to dismiss the case.

To promote understanding and effective use of ShotSpotter evidence, SoundThinking regularly provides high quality legal training and litigation support to attorneys—both prosecution and defense—who may use it. This is important to ensure its appropriate and defensible use. As one scholar recently wrote, “[acoustic gunshot detection systems] are on track to become a common technology, especially in communities with elevated levels of gunfire”. So, too, is ShotSpotter on track to become common evidence in the courtroom.



*“Whether it is being used to prove guilt or innocence, I’m always proud to see our forensic services playing an important role in the discovery of truth and pursuit of justice. I think it’s just one more example of how the work we do matters. It’s the reason I came to work here. I have dedicated my professional career to trying to help make America safer and I saw the incredible potential in this company to save lives, reduce crime, and improve policing. I wanted to be a part of that.”*

**THOMAS CHITTUM,**  
Senior Vice President of Forensics and Analytics

*“ShotSpotter’s detection of gunfire is comparable to an officer hearing it himself.”*

[State v. Nimmer ↗](#)

*“The State has dismissed all charges against [my client] today. [He] was innocent and we believe that [ShotSpotter’s] report helped convince the State that [he] could not have fired gunshots on the day in question.”*

**DEFENSE COUNSEL**



## Governance — **Trust, Governance and Risk Management**

SoundThinking's mission is to improve public safety by creating equal protection for all. This mission shapes our core values, which in turn lead our decisions and operations. Our strong, transparent corporate governance ensures that the interests of our stockholders, stakeholders, and the community that we serve are protected, and that our ethical practices create a safe, inclusive, and diverse workplace that promotes equal opportunities for all.

# Corporate Governance Practices

Corporate governance encompasses a set of standards, processes, and structures that form the foundation for the other areas of internal control across SoundThinking. The components include SoundThinking's organizational structure, the assignment of authority and responsibility, and the oversight and direction provided by the Board of Directors.

SoundThinking's Board of Directors guides and ultimately approves the implementation, policies, and reporting of the ESG matters. Diverse Board committees are entrusted with the responsibility of conducting audits and overseeing Human Capital Matters, Diversity, Equity, and Inclusion initiatives, Cybersecurity measures, and other risk management and accountability concerns. These committees prioritize and guide the integration of relevant sustainability and ESG aspects into the company's purpose, governance framework, and strategic decision-making processes.

## Board of Directors

SoundThinking is governed by a Board of Directors, entrusted with the responsibility of overseeing the company's operations. The responsibility of the board and its standing committees (audit, compensation and nominating, and corporate governance) is to direct the business and affairs of the corporation, including but not limited to:

- ✔ Selecting and evaluating the CEO and other members of senior management
- ✔ Overseeing management to ensure that the company's business is being run properly
- ✔ Reviewing and, where appropriate, approving the company's financial objectives and major corporate plans, strategies, and actions
- ✔ Understanding the company's risk profile and reviewing and overseeing the company's management of risks
- ✔ Reviewing major changes in the auditing and accounting principles and practices to be used in preparing the company's financial statements
- ✔ Establishing and monitoring effective systems for receiving and reporting information about the corporation's compliance with its legal and ethical obligations, and articulating expectations and standards related to corporate culture
- ✔ Understanding the corporation's financial statements and monitoring the adequacy of its financial and other internal controls, as well as its disclosure controls and procedures

In consultation with the company's counsel, the Board of Directors has determined that each of the company's outside directors is independent within the meaning of the applicable NASDAQ listing standards.

## Board Leadership

The Chief Executive Officer is the principal executive officer of our company, holding primary responsibility for supervising the overall business operations and strategic direction. Our Chair of the Board, an independent director, facilitates the board's oversight of management and the company's long-range strategy and business initiatives. Additionally, the chair serves as a liaison between management and independent directors, and presides over and manages the meetings of the board, including scheduling and preparing board agendas.



*"I am proud to be the Chair of SoundThinkings's Nominating and Corporate Governance Committee. I have a unique opportunity through my civil rights lens to inform our Committee's work and how it embodies strong governance practices; ESG principles and community engagement.*

*Our committee provides critical oversight to ensure we maximize the collaboration and contributions of current members of our Board while also building a pipeline of potential new Board members who have a diversity of lived experiences. Our goal is to ensure our Board is able to guide SoundThinking through various complex issues and opportunities that arise when providing value as partners to law enforcement agencies, elected officials and the local communities they serve. I am grateful that our Company understands the strategic advantage of a deliberate and engaged Board that has a focus on continuous improvement and development at all levels of leadership."*

**MARC H. MORIAL,**

*President and CEO, National Urban League*

## Board and Committee Self Assessments

On an annual basis, the board, the Audit Committee, the Compensation Committee, and the Nominating and Corporate Governance Committee conduct self-assessments to ensure effective performance and to identify opportunities for improvement. As part of the self-assessment process, directors respond to a comprehensive questionnaire that asks them to consider various topics related to board and committee composition, structure, effectiveness, and responsibilities. Each committee, as well as the board, then reviews and assesses the responses and makes recommendations. The results of the assessments are then discussed by the board with a view toward taking action to address any issues presented.

## Role of the Board in Risk Oversight

One of the board's key functions is informed oversight of the company's risk management process. The board does not have a standing risk management committee, but rather administers this oversight function directly through the board, as well as through various board standing committees that address risks inherent in their respective areas of oversight. Our board is responsible for monitoring and assessing strategic risk exposure, including a determination of the nature and level of risk appropriate for the company. The Audit Committee has the responsibility of considering and discussing our major financial and cybersecurity risk exposures and the steps management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk assessment and management is undertaken. The Audit Committee also monitors compliance with legal and regulatory requirements. The Nominating and Corporate Governance Committee oversees aspects of our corporate governance functions and our environmental, social, and governance policies and programs, including recommendations regarding such matters. The Compensation Committee assesses and monitors our compensation practices and policies as they relate to risk management and whether they have the potential to encourage excessive risk taking. They also oversee matters relating to human capital management, including policies and strategies regarding recruiting, retention, diversity, and inclusion.



## Meetings of the Board of Directors and its Committees

In 2022, the Board of Directors met nine times, the Audit Committee met four times, the Compensation Committee met three times, and the Nominating and Corporate Governance Committee met twice. Each director attended 75 percent or more of the aggregate number of meetings of the board, and each of the committees on which he or she served, held during the portion of the last fiscal year for which he or she was a director or committee member. The company's independent directors met four times in regular executive sessions at which only independent directors were present.





## Composition and Refreshment of Our Board of Directors

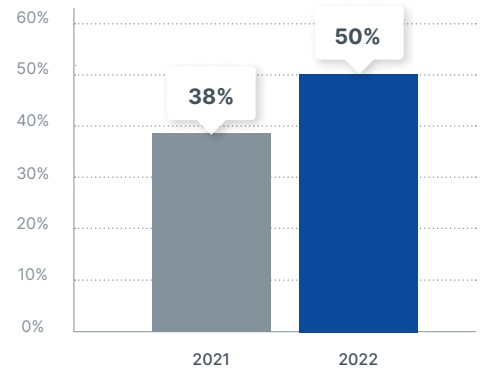
All board members are highly engaged and actively involved in overseeing our strategy. We are thoughtful in our approach to board refreshment and we also engage in board succession planning. As a result of our approach, our director nominees represent diverse perspectives and experiences and bring core strategic, operating, financial, and governance skills to our board.

As stated in our Corporate Governance Guidelines, the board considers diversity, skills, and other factors as appropriate. The board values diversity and recognizes the importance of having unique and complementary backgrounds and perspectives in the board room. The board endeavors to bring together diverse skills, professional experience, perspectives, age, race, ethnicity, gender, and cultural backgrounds that reflect our customer base and the citizens served by our customers, and to guide us in a way that reflects the best interests of our stockholders.

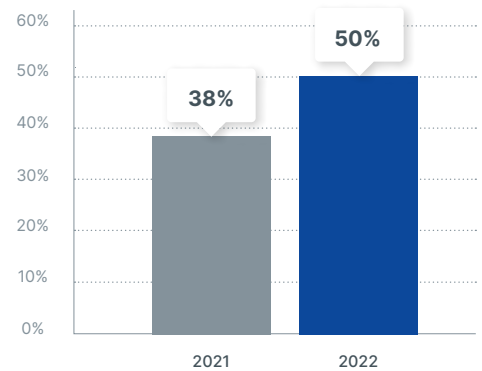
## Board Committees

Multiple focused committees within the Board of Directors guide the company's executive team. These committees include the Audit Committee, Nominating and Corporate Governance Committee, and Compensation Committee.

**Board of Directors Composition**  
*Female Directors*



**Board of Directors Composition**  
*Racial Diversity\**



\* Employees included in the Racial Diversity category include Black/African American, Hispanic/Latino, Native Hawaiian/Pacific Islander, Asian, and two or more races.



## Policies and Corporate Governance Framework

Strong corporate governance has been an important aspect of our company's public market debut and journey. Transparent communication with the entire spectrum of our stakeholders including employees, customers, and partners, in addition to shareholders, is a fundamental part of our growth strategy. Aligning these interests through a shared sense of purpose strengthens our company and enables us to have maximum impact.

### Code of Business Conduct and Ethics

At SoundThinking, we are committed to maintaining the highest standards of business conduct and ethics. Our Code of Business Conduct and Ethics reflects the business practices and principles of behavior that support this commitment. We expect every employee, officer, and director to read and understand the code and its application to the performance of business responsibilities.

The code addresses conduct that is particularly important to proper dealings with those we interact with, but it only reflects part of our commitment.



To facilitate compliance with this code, we have implemented a program of code awareness, training, and review. We have established the position of Compliance Officer to oversee this program. Our Chief Financial Officer, Alan Stewart, is SoundThinking’s Compliance Officer.

The scope of our Code of Business Conduct and Ethics obligates all SoundThinking employees to legal compliance with various policies and practices such as our insider trading policy; international business laws; antitrust; environmental compliance; all aspects of conflict of interest; maintenance of corporate books; records and documents; gifts, entertainment, and donations; fair dealing and confidentiality. All employees are encouraged to bring forward concerns to Mr. Stewart, and all executives and officers are mandated to formally complete the company’s quarterly disclosure controls and procedures questionnaire.



*“Working with law enforcement for the past 15 years has been very rewarding. It is a great feeling to hear that a law enforcement group has brought in the bad guys using the SoundThinking products that I worked with them to implement. I take pride in knowing that the work we do at SoundThinking is making a difference in our communities, and being part of such an important mission is incredibly gratifying.”*

**RHONDA FROMM,**  
Director, Professional Service  
CrimeTracer Division



*“Being a member of the SoundThinking team means you get to go home every night knowing that what you do really matters to millions of citizens across the hundreds of neighborhoods we serve in the US and abroad. It means working with a team that consistently puts customer and long-term trust over short term financial gain. It means constantly looking at how our technology can better serve the underserved. It means looking for ways to use minority or women-owned firms to support our business. It means never compromising our core values with respect to integrity, privacy, diversity, or inclusion.”*

**GARY BUNYARD,**  
SVP of Sales



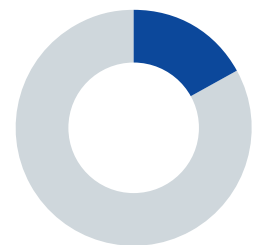
# Diversity, Equity, and Inclusion

Our vision is to advance diversity, equity, and inclusion across the company. We believe that everyone deserves respect and equal treatment, regardless of gender, race, age, disability, sexual orientation, gender identity, cultural background, or religious belief.

At SoundThinking, our purpose is to: *“Earn the trust of law enforcement to help them provide equal protection for all and strengthen the police-community relationship, ultimately improving public safety”*. We have extended this purpose beyond law enforcement and are committed to working directly with communities and organizations within those communities. We are keenly aware that staying true to this purpose begins with creating a culture of inclusion, equity, belonging, and safety for our own community and team.

To create products that solve challenging problems for people all over the world, we need employees with diverse perspectives and life experiences. We have a three-pronged strategy to foster diversity within the company. Firstly, we aim to attract diverse talent and ensure fair hiring through inclusive and strategic recruitment practices. Secondly, we are committed to cultivating an inclusive workplace environment that values and respects all employees. Lastly, we actively collaborate with our customers, partners, and peers to drive diversity within our industry.

Technical Team Diversity 2022



MALE FEMALE

83% 17%



WHITE RACIALLY DIVERSE

49% 51%

At SoundThinking, our values, culture, behavior, and conduct align with our mission to be a more powerful platform for social change. We are driven by a higher purpose: Creating safety and equality for all. Diversity, equity, and inclusion are among the most intentional and closely managed initiatives in our company. Accessibility and belonging are an important part of this effort, so we have implemented a series of formal policies, procedures, and training courses to ensure that our expectations and values are clearly communicated and responsibly practiced.

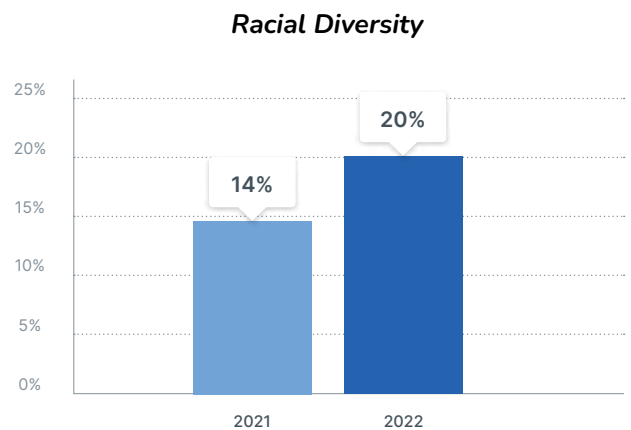
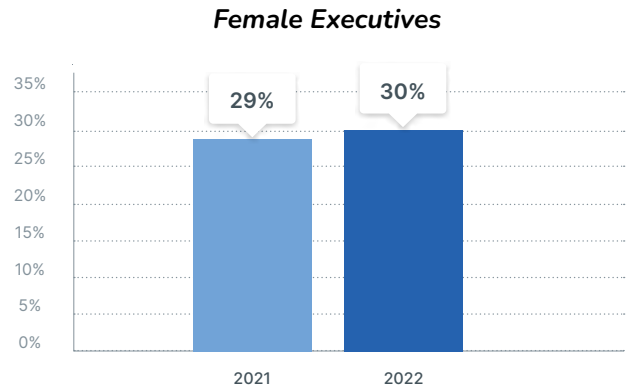
A subset of these policies includes the following:

- ✓ Policy Against Proscribed Harassment and Discrimination
- ✓ Standards of Performance and Conduct
- ✓ Code of Business Ethics and Conduct
- ✓ Equal Employment Opportunity and Diversity
- ✓ Workplace Security and Anti-Violence Policy
- ✓ Drug-Free Workplace

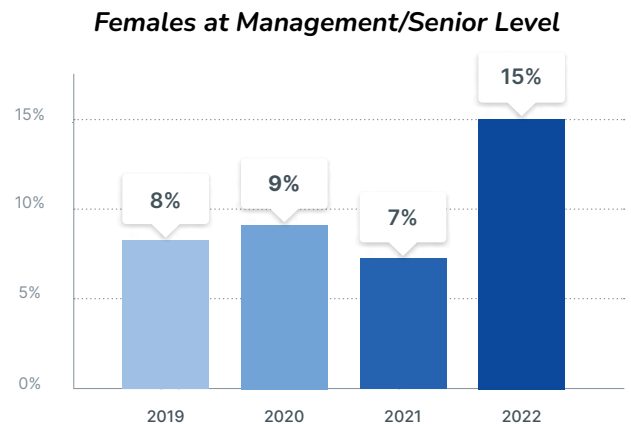
The policies' goal is to ensure that our processes are impartial, fair, and provide equal possible outcomes for every individual. It means fair treatment and a safe environment for all, regardless of gender, race, age, disability, sexual orientation, gender identity, cultural background, or religious belief. Our executive and management teams continuously nurture and strive for a culture of diversity, equity, and inclusion through creating awareness around these issues, implementing a zero-tolerance policy against harassment and discrimination, and celebrating differences. We ensure that our employees feel a sense of belonging and that our programs, policies, strategies, and practices create and sustain a diverse, equitable, and inclusive environment.

We have invested in analysis and transparency to demonstrate our commitment to equity and inclusion through fair compensation and opportunity for professional advancement. We define pay parity as ensuring that employees in the same job and location are paid fairly, regardless of their gender or ethnicity. We make efforts to ensure our employees receive access to advanced opportunities within the company.

### Executive Officer Diversity



### Employee Diversity





## Embracing Diversity

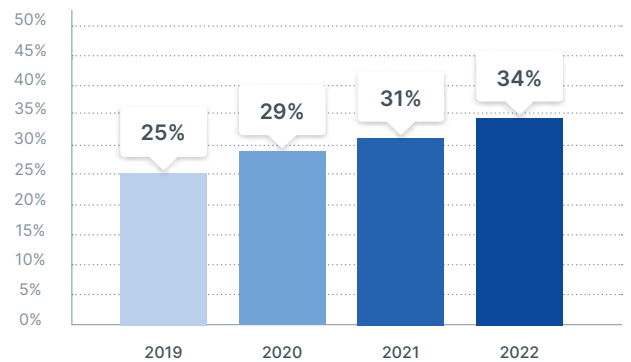
At SoundThinking, we work to promote and create awareness around diversity and inclusion to ensure that our workplace environment is a safe and nourishing environment for all team members. With that in mind, we work consciously to ensure diversity at all levels of the organization—from the Board of the Directors to our executive and staff teams.

Our diverse team enables us to provide optimal solutions for customers. As Deborah Elam, one of SoundThinking's board members and a distinguished expert in the field of diversity, explains: *“Engaging in a broad range of skills, backgrounds, cultures, and experiences enables creativity and productivity because you are looking at what you are trying to accomplish from multiple viewpoints rather than a single perspective”.*

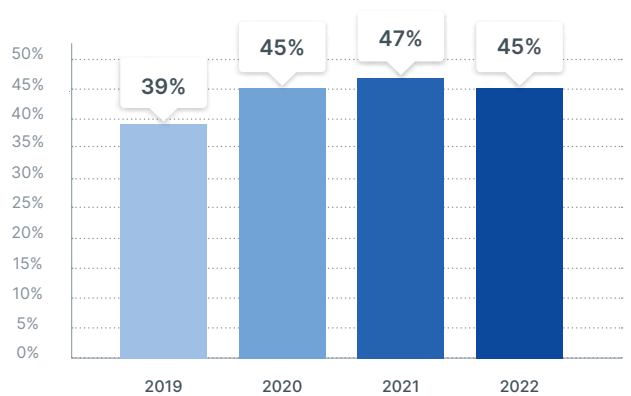
In 2022, we experienced significant growth and expanded our full-time employees by 29 percent. We are proud of maintaining and improving racial and gender diversity across the organization. SoundThinking also employs several foreign nationals in technical positions.

### Employee Diversity

#### Female Employees



#### Racial Diversity



\* Employees included in the Racial Diversity category include Black/African American, Hispanic/Latino, Native Hawaiian/Pacific Islander, Asian, and two or more races.

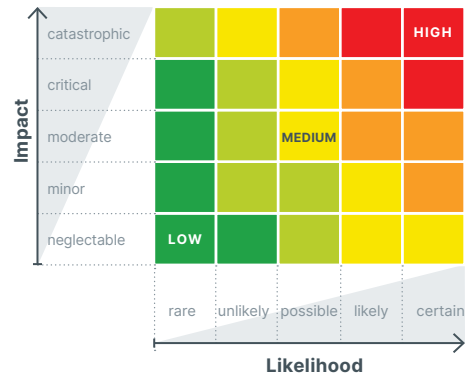


# Information Security Framework

## Risk Management

SoundThinking maintains an ongoing risk management approach and periodically updates an Internal Risk Register. The company also has a risk mitigation strategy in place and completed an SOC 2 Type 2 Audit in Q4, 2022.

Formal IT policies and procedures exist for governance and risk management, asset management, human resources security, physical security, communications and operations, access controls, systems acquisition and development, incident management and business continuity, and disaster recovery. All teams are expected to adhere to the SoundThinking information security policies and procedures that define how services should be delivered. These are located on an internal corporate SharePoint Site and can be accessed by all SoundThinking employees.



## Information and Security Initiatives

### SOC 2 Type 2

Compliance with SOC 2 requirements indicates that an organization maintains a high level of information security. Strict compliance requirements (tested through interviews and audits) help ensure sensitive information is handled responsibly. The “Type 2” portion of the audit ensures proper controls over time rather than at a single point in time.

As of December 1st, 2022, SoundThinking has completed its SOC 2 Type 2 audit for its products: ShotSpotter, ResourceRouter, and CaseBuilder, measuring the categories of security, availability, and confidentiality.

Our SOC 2 Type 2 Report provides detailed information and assurance about our company’s security, availability, processing integrity, confidentiality, and privacy controls, based on our compliance with the AICPA’s TSC, in accordance with SSAE 18.

SoundThinking has selected to cover the following three services categories to mitigate the key risks to the service we provide: security, availability, and confidentiality. The minimum audit requirement for a SOC 2 Type 2 Report is covering the security requirements. SoundThinking has exceeded the minimum to measure security, confidentiality, and availability for ShotSpotter, ResourceRouter, CaseBuilder, and required and associated business infrastructure.



✓ **Security:** SoundThinking has made commitments to maintaining adequate security over ShotSpotter, ResourceRouter, and CaseBuilder using reasonable safeguards over the hardware, software, personnel, and other relevant security controls, including role-based access controls, segregation of duties, least-privilege, multi-factor authentication, and related processes used to support the secure delivery of SoundThinking application services and systems.

✓ **Availability:** SoundThinking has made commitments to ShotSpotter and CaseBuilder customers to make the software available at least 99.9 percent of the time in any calendar month during the customer’s subscription term, excluding scheduled maintenance windows and any unavailability caused by circumstances beyond its reasonable control.

✓ **Confidentiality:** SoundThinking has made commitments related to the confidentiality of customer data through data classification policies, record retention policies, data encryption, and logging tools.

Independent Audit Process:

To obtain a SOC 2 compliance report, SoundThinking went through a rigorous and comprehensive audit by a third-party independent auditor. As part of the audit, 160 individual control items were reviewed. These control categories ranged from presenting a list of current employees to providing password controls for our applications by submitting source code submissions with timestamps to the review of individual termination tickets, network diagrams, change controls, and firewall settings. To establish the state of our current controls, we underwent a readiness assessment in 2021, and again in early 2022, to review progress and any changes. The auditors verified that we had robust controls in place.



“I love working on SoundThinking. It is one of the few companies I've worked for that actually walks the walk when it comes to balancing not only making our customers successful, but also the communities they serve as well as its employees. Helping to save lives as well as bringing criminal justice to those who deserve it inspires one to do their best day in and day out.”

**STEVEN McDOWALL,**  
Senior Director of Product Management,  
CaseBuilder



## NIST 800-53

The NIST 800-53 framework is designed to provide a foundation of guiding elements, strategies, systems, and controls, that can agnostically support any organization’s cybersecurity needs and priorities. SoundThinking has adopted NIST Special Publication 800-53 policies to drive an Information Security Program that is approved by the Board of Directors and senior management team and measured regularly. Our security policy is made available to all employees and is agreed to upon employment—the policy can be requested by an external party with an NDA in place. Additionally, our security policies are periodically reviewed, updated, and published to all staff.

## AppSec Program

SoundThinking’s Application Security Program (AppSec) is governed by a central Software Development Lifecycle Policy (SDLC), which consists of comprehensive lifecycle governance across planning/analysis, requirements definition, development, integration and testing, acceptance, and management activities.

The SDLC includes the implementation of the Secure Software Development Framework (SSDF) which is established and defined according to the guidelines provided by NIST 800-218. Additionally, it specifies control standards for three areas of AppSec:

- ✔ **Secure Development:** Threat modeling, identifying security requirements, and securing the software supply chain
- ✔ **Secure Capabilities:** The security features implemented in our products
- ✔ **Secure Lifecycle:** How we test and manage product security over the product life cycle

In 2022, the following practices were added to support the SSDF:

- ✔ A vulnerability management program was implemented up to identify, triage, and track remediation of platform and application vulnerabilities
- ✔ Network vulnerability scanning was increased from quarterly to weekly, hundreds of findings were detected, tracked, and closed with validation
- ✔ Dynamic and static software analysis tools were added to key continuous integration processes
- ✔ The Engineering Change Order (ECO) process now includes an AppSec sign off for AppSec-related changes



*“The dedication to our mission, which is not limited to providing quality products and services, but also to setting solid examples and standing tall as leaders in our field, is unparalleled. Through efforts like ESG, transparency, and community engagement, the company stands far apart from our competitors and non-competitors in showing how to conduct business with integrity. Leadership makes it a point of pride for everyone involved to have their work showcased in these efforts.”*

**ANTHONY CARUSO,**  
Quality Assurance and Help Desk Analyst  
Technologic Solutions

## CIS Level 1 or Better

The Center for Internet Security (CIS) is a nonprofit entity whose mission is to “identify, develop, validate, promote, and sustain best practice solutions for cyber-defense”. It draws on the expertise of cybersecurity and IT professionals from government, business, and academia from around the world to develop standards and best practices. CIS benchmarks are baselines and best practices for securely configuring a system.

As part of our security initiatives, SoundThinking configured and deployed CIS Level 1 or better baselines to our end-user devices, including laptops and desktop computers. This measure enhances the security of our assets and ensures regular evaluations of endpoint security.

## Other Initiatives

### Vendor Risk Assessment Program

A vendor risk assessment makes visible the risks that organizations are exposed to when using third-party vendors’ products or services. Risk assessments are particularly important when a vendor handles a critical business function, accesses sensitive customer data, or interacts with customers. As such, SoundThinking underwent a review of all critical partners (known internally as “Level 1”) in 2022 and obtained attestation reports or reviewed security responses to assess the level of risk to the business.

## Security Statistics

SoundThinking security staff follow a standard and practiced Incident Response Plan (IRP) for any incidents. We categorize incidents using the following:

- **Major:** Major loss of data including PII, extensive breach of systems, malware causing major downtime, ransomware, trojans and remote access, theft of PII by employees, or similar
- **Moderate:** Minor lateral spread from malware, minor data loss, or similar
- **Minor:** Equipment loss, phished credentials, isolated virus infection, or similar



“At SoundThinking everyone loves what they do and work great as a team. Everyone helps without hesitation, the company treats its employees like a family, and there is room for growth. When I come in to work, it doesn’t feel like work; I’m going in to do what I love while enjoying my team with a smile on my face!”

**SARDAE RISPUS,**  
Incident Review Center Specialist

Total Incidents Per Quarter  
2022



Minor	1	2	0	2
Moderate	0	0	0	0
Major	0	0	0	0

**Due to our strict controls and careful implementation of security practices, we had no moderate or major incidents in 2022.**

# Responsible AI— Enforcement Bias and Patrol Data Noise Mitigation Strategies

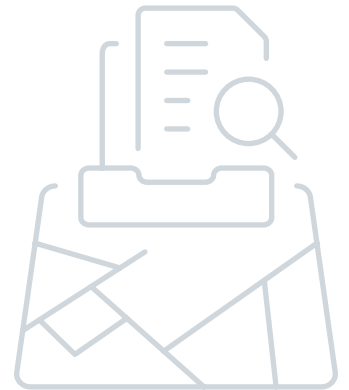


SoundThinking is committed to providing law enforcement solutions that help improve public safety while protecting individual civil liberties. ResourceRouter is designed to make officers more effective in reducing crime in a community. By utilizing data-driven insights, this software tool enables proactive patrolling of the highest-risk areas by district, beat, day, and shift. To limit problems with enforcement bias from traditional patrolling methods, ResourceRouter utilizes five approaches that are explained in detail below.

## 1 Better Crime Event Data

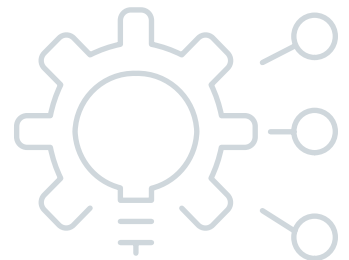
The historical crime data used to train the machine-learning models has the potential to suffer from the human biases that led to the recording of a crime in the first place. However, biased modeling can be mitigated with a modeling policy that is thoughtful about the source of data and by avoiding crime types that are vulnerable to enforcement bias.

Enforcement bias is significantly less present in Part 1 crimes (e.g., major crimes such as homicides, robberies, assaults, or burglaries) than it is in Part 2 crimes (e.g., drug-related, prostitution, or other nuisance crimes). To mitigate this risk, ResourceRouter focuses on Part 1 crimes, which are mostly reported by the public (e.g., called into 9-1-1), as opposed to being discovered or reported by the police. ResourceRouter does not use arrest, demographic, or personally identifiable data in its machine-learning modeling and risk assessment.



## 2 Crime Theory/Pattern Agnostic Modeling

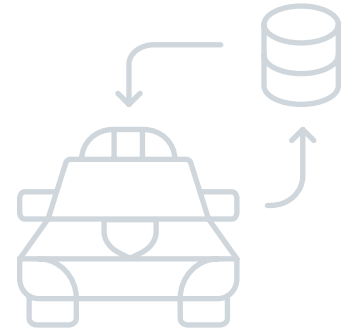
Historically, police departments have deployed patrols based on hotspot maps of past crime locations, assuming that future activity will likely occur at the same places. ResourceRouter's machine-learning modeling is crime theory/pattern agnostic and uses several additional variables and machine-learning algorithms to more accurately estimate the risk for future crimes at a particular location. We supplement local crime data with multiple sources of relevant data from independent open sources to further reduce bias. These include census data, weather data, risk terrain modeling variables, and terrain variables. By incorporating data from non-crime sources into the model,



new correlations can emerge in the forecasts, making the modeling process more objective. Additionally, this approach allows for a deeper understanding of the context of the crime. Typical examples of specific variables derived from non-crime data sets include the time of the month, the day of the week, the time of day, holidays, upcoming events, temperature, distance to liquor establishments, the density of gas stations, and population density. These variables are utilized to provide a broader context and to capture additional factors that may influence crime patterns and occurrence.

### 3 Smart Patrol Allocation

The risk assessments produced by the machine-learning system are turned into a patrol plan and disseminated to officers in the field. These plans help police address the problems that are affecting a community without introducing unwarranted biases. ResourceRouter utilizes intelligent patrol metering to measure the amount of time an officer spends in a directed patrol area and to minimize occurrences of over-policing. This feature significantly reduces the occurrences of over-policing and potential harm to the community by spreading out patrols. By creating accountability and measurement mechanisms, the system materially reduces noise, unconscious randomness, and bias from patrol practices.



### 4 Crime Type Weighting

ResourceRouter also limits bias that arises from police patrols focusing on certain crime types due to their prevalence in a specific area rather than their seriousness. With ResourceRouter, crimes of a more serious nature are elevated, increasing their chance of being subject to a directed patrol. The relative risk is determined by the probability and potential impact of the crime.



### 5 Reporting on Transparency and Accountability

ResourceRouter also limits bias in policing by providing better reporting. Better reporting helps police prioritize oversight and accountability. These reports provide command staff with insight into officer activities during uncommitted time, helping them make informed decisions for future patrolling decisions.



## ResourceRouter and Privacy

ResourceRouter does not use any personally identifiable information in its modeling or patrol allocation engine system. None of the variables used by machine learning to predict the presence or absence of crime in any part of the city and at any time of the day are derived from personally identifiable information.



## Building Trust with Our Employees

We recognize that our employees are the backbone of our success. We strive to create a workplace that values diversity, fosters inclusion, and promotes well-being. Our efforts to provide a safe and inclusive work environment, support professional development, and offer fair compensation and benefits are critical to our success. We are committed to maintaining a diverse workforce that reflects the communities we serve while upholding the highest ethical standards in all aspects of our operations.

In 2022, SoundThinking was designated a Great Place to Work® company for the fifth consecutive year. Since 1992, Great Place to Work has been the global authority on workplace culture. Using a rigorous, data-driven approach, they conduct surveys that measure and quantify employee experience. Our 30 years of continual research have proven that the definition of a great workplace is one where employees trust the people they work for, have pride in what they do, and enjoy the people they work with. Our leadership team has made it a priority to create a safe and inclusive environment that is conducive to wellness, growth, and collaboration.



Our values encourage us to be genuine, innovative, engaged, and exceptional. SoundThinking's success is driven by the belief that fostering creativity, innovation, and productivity begins with how we treat people and interact with one another. We are continually investing in our global workforce to further drive diversity and inclusion, provide fair and competitive pay, and to support and to foster the growth and development of all.

## Refresh Fridays

SoundThinking first introduced Refresh Fridays, one paid Friday holiday per month, in early 2020. It was a decision that came as COVID-19 forced us to work fully remotely, which meant many of us spent several hours per day in remote meetings. The executive team decided to allocate one day per month for staff to recharge, engage with the community, and spend time undertaking activities that supported their wellbeing.

In September 2022, as the social distancing mandates were removed and working in the same physical space became safe for our team, the company implemented a hybrid work model. This model balances working from the office, which fosters teamwork, collaboration, learning, and engagement, with the convenience of working from home. Following this transition, we changed the cadence and designation of Refresh Fridays to a quarterly event to allow for a day of no meetings so that staff can focus, recharge, and reflect.

SoundThinking has continued its financial support of the hybrid working model. All employees receive a \$100 stipend each month to assist with their home-office expenses.



Rewarding



Care



Purposeful

Empowerment

Passion



Success

Leadership



Strive



Gratification



Product

Mission

Inclusion

Community



Interesting



Dedication

Lifesaving

Impact



People

Impressed



Family

Opportunity

Teamwork



Challenge

Satisfaction



## Financial Wellness

SoundThinking considers financial stability and security as elements of wellness. SoundThinking offers a 401(k) plan with a discretionary company match of 50 percent of contributions up to 2 percent of the participants' eligible compensation, with a three-year vesting schedule. This program is offered to all SoundThinking employees across all divisions and 58 percent of our team members participated in the plan in 2022.

SoundThinking also offers all employees an opportunity for ownership in the company through our Employee Stock Purchase Plan (ESPP) as part of their compensation, which 45 percent of our eligible staff participate in.

Among other benefits, the team has access to company sponsored long term disability benefits, health care, and dependent care flexible spending accounts.

## Physical and Mental Wellness

SoundThinking offers a wide variety of choices for medical, dental, and optical insurance plans to match the individuals' preferences, choices for healthcare providers, and personal and family needs. Along with these benefits, employees and their families can take advantage of the confidential Health Advocacy Program (HAP) on a 24/7 basis. This service is available at no cost to assist our team members with explaining plan coverage, finding the right healthcare provider, clarifying diagnoses, researching treatment options, and assisting with billing and claim issues.

Our team and their families also have free and confidential access to the Employee Assistance Program (EAP), independent from their enrollment in any of the offered benefit programs. They are offered confidential assistance for personal, family, and work-related concerns from EAP counselors by phone. This program also offers online resources and tools for career development; parenting, child, and elder care; legal issues and financial concerns; and health and wellness resources.



*"SoundThinking has a great workplace atmosphere and excellent leadership, which makes me proud to work here. Being a part of this workplace culture that values its people is very important to me."*

**VANESSA MATOS,**  
Help Desk Analyst Technologic Solutions







NAACP ATTORNEYS, 1954. /nLeft to right: NAACP attorneys George E.C. Hayes, Thurgood Marshall and James Nabrit, Jr. celebrate their victory in the Brown vs. the Board of Education case at the Supreme Court in Washington, D.C., 17 May 1954.

## Social Awareness Holiday

As a mission-oriented company, being socially aware and responsible is central to all we do at SoundThinking. Our Board of Directors and executive team announced Juneteenth as a permanent paid, observed holiday beginning in 2021 in recognition of freedom and in celebration of equity and equality. This occurred ahead of the country making it a national holiday.

In 2020, we also began a program for one paid social awareness holiday per calendar year, with the goals of promoting social awareness, celebrating diversity, and creating an opportunity to learn about and appreciate the historical milestones that have shaped us as a nation. In the last quarter of each year, the ESG committee presents several important historical milestones to the entire employee base, who then vote on which they would like as the social awareness holiday for the following year.

SoundThinking observed Bloody Sunday as the social awareness holiday in 2022. In 2023, our social awareness holiday is May 17, in commemoration of the landmark Supreme Court ruling of Brown vs. Board of Education which deemed racial segregation in public schools as unconstitutional on the same date in 1954.





SoundThinking has a Historical Awareness Group (HAG) that was born from the social awareness holiday. This group research significant events across time, compiling reports and delivering company-wide information sessions on them. We believe that being better informed and knowledgeable about our history informs the present and future of both our company and the world.



## Personal and Professional Development

SoundThinking management focuses on offering growth and development opportunities to our staff. To support and encourage staff development, we have provided all our staff with unlimited access to Udeemy, an extensive online platform that offers access to more than 9,000 courses on various subjects. Access to Udeemy has enabled our staff to take classes based on their professional and personal interests at their own pace, on demand, with maximum flexibility. During the pandemic, having remote access to such a rich platform has become even more important and useful.

**The courses are organized into general categories, with several hundred courses under each category. These are just some of the available categories:**

 <p>Finance and Accounting</p>	 <p>Business</p>	 <p>IT and Software</p>	 <p>Office Productivity</p>	 <p>Personal Development</p>	 <p>Design</p>
 <p>Marketing</p>	 <p>Photography and Video</p>	 <p>Lifestyle</p>	 <p>Health and Fitness</p>	 <p>Music</p>	 <p>Teaching and Academics</p>

We are pleased to report that our team has taken advantage of this service with 84 percent of users having enrolled in courses and collectively having spent more than 2,250 hours watching training videos on this platform. Despite all difficulties surrounding training and staff development in the midst of the pandemic, 85 percent of our staff indicated “I am offered training or development to further myself professionally,” in the 2021 Great Place to Work survey.



# Building Trust with Our Customers

## Net Promoter — Positive Word of Mouth is Creating a Movement

We take pride in the partnerships we build with our customers and believe that the most important measure of our performance and effectiveness is our customers’ evaluation of us. We take every opportunity to obtain formal and informal feedback from our customers. As part of this continuous initiative, we conduct an annual customer satisfaction and Net Promoter Score (NPS) survey. We are excited and honored to have obtained an “Excellent” NPS rating for the sixth year in a row.

An impressive percentage of our customers responded “Strongly Agree” or “Agree” to the following statements:

**97%**

Increase in shell casings recovered

**99%**

SoundThinking is a true partner to our agency

**96%**

Reduction in response times to gunshot scenes

**98%**

Increase in gunfire identified

**92%**

Quickly identify victims needing medical assistance

**91%**

Increase in officer safety on scene

SoundThinking customers have also given feedback in other ways. Below are statements we received via email or found in news articles that were written following SoundThinking providing assistance with an inquiry.



*"This is pretty cool!  
As is everything you do!"*

**Bakersfield PD, CA**



*"I have to say, this is a very helpful and insightful email. This is far and beyond what other vendors do, it is very appreciated."*

**Jacksonville PD, FL**



*"Amazing! Thank you for looking into this! I can only imagine how much more data entry there will be with the potential expansion, and this could save us quite a bit of time!"*

**Toledo PD, OH**



*"I very much appreciated you coming out here and it was a pleasure meeting you in person. The training was outstanding and far exceeded my expectations. It was great seeing you in person too and the training was amazing. Thank you for sharing this information again with us."*

**Fort Lauderdale PD, FL**



*"Thank you again for the PowerPoint presentation. My supervisors reviewed it and were extremely happy with the product."*

**Monmouth County PD, NJ**



*"I also wanted to show you that your work is appreciated and being used. One million trillion thank yous! People are safer because of our use of ShotSpotter. This is a tool that should never go away. High ranking OPD staff completely believe in the product and understand its need and utility. Just finished a 60-day deployment using ShotSpotter data. It was very successful. Focused on high visibility resources. Put a car in one location and had no shootings during that time. Starting a new 45-day deployment with ShotSpotter data."*

**Oakland PD, CA**



*"Thx so much for your hard work on this project!"*

**Springfield PD, IL**



## Privacy Compliance (CCPA/CPRA)

In June 2018, the California Consumer Privacy Act (CCPA) was signed into law, creating new privacy rights for Californians and significant new data protection obligations for businesses. The CCPA went into effect January 1st, 2020. California's Office of the Attorney General has enforcement authority. The California Privacy Rights Act (CPRA), a ballot initiative that amends the CCPA and includes additional privacy protections for consumers passed in November 2020. The majority of the CPRA's provisions will enter into force January 1st, 2023, with a look-back to January 2022.

As a business based out of, and operating in, California, SoundThinking complies with CCPA and CPRA requirements. SoundThinking has a [privacy policy page](#) on its website which details the CCA requirements and compliance noting the privacy notice for California residents, which supplements the information contained in SoundThinking's general privacy policy.

## Customer and Public Privacy Protection Efforts

Our mission at SoundThinking is to help law enforcement provide equal protection and safety for all, and to strengthen police-community relationships. This demands that we remain very sensitive to privacy concerns around the technologies and tools that provide significant benefits to the community. Creating the right balance between the two has been at the forefront of our attention, and we have been proactive in taking steps to limit and minimize unnecessary intrusions on personal privacy. We have structured our technology, processes, and policies to minimize the risk of privacy infringements while we continue to deliver on our important public safety mission.

In order to ensure the alignment of our privacy approach with external benchmarks and to ensure an unbiased and quantitative, in the spring of 2019 we invited the non-profit Policing Project at the New York University School of Law to conduct an independent audit of ShotSpotter's privacy practices. The audit concluded that *"the risk of voice surveillance is extremely low"*. The report notes that there are important design frameworks and operational safeguards built into how ShotSpotter operates to prevent this from happening.

In their key takeaways and conclusions, the Policing Project indicated that: *“The Policing Project undertook this assessment because we believe it is essential that law enforcement and [the] communities they serve understand the costs and benefits of policing technologies like ShotSpotter before acquiring any new technology. Further, we believe it is incumbent on technology providers to take meaningful steps to improve their product’s design and operation to minimize intrusions on civil liberties.”*

As a result of this independent audit and assessment, SoundThinking received recommendations to strengthen ShotSpotter’s strong position on privacy and took decisive actions to implement such recommendations. Among these was reducing the duration of audio stored on ShotSpotter sensors from 72 hours to 30 hours. Additionally, we have implemented stricter controls and policies to govern access to the sensor audio.

The following excerpts from the Privacy Audit & Assessment of ShotSpotter’s Gunshot Detection Technology by the Policing Project showcase our commitment to, and progress toward, protecting personal privacy rights in the communities we serve.



*“Throughout this process, SST (ShotSpotter technology) has consistently demonstrated commendable commitment to modifying its technology to balance its public safety function with protections for individual privacy.”*

*“ShotSpotter has undertaken significant internal efforts to implement our recommendations and make ShotSpotter more privacy protective.”*

*“While it is surely possible that ShotSpotter sensors will, on occasion, capture some intelligible voice audio related to a gunfire incident, we have little concern that the system will be used for anything approaching voice surveillance...Other policing technology companies should follow ShotSpotter’s leadership and proactively embrace their responsibility to protect individual liberty with their products.”*

**BARRY FRIEDMAN,**

*Faculty Director, Policing Project*

As a result of these measures and our unwavering commitment to robust privacy protection, we have achieved widespread acceptance from some of the most progressive privacy commissions, including the City of Oakland.



## Earning Investor Trust

At SoundThinking, we are committed to strong outreach and engagement with our investor stakeholders. We actively seek feedback from the investor community to listen, learn, and gather diverse perspectives on how we are executing against the large market opportunity we have in front of us while driving positive social outcomes. Our mission to have a greater impact on the issues that matter to all of us.

Frequent and transparent investor communications are a priority. Throughout the year, we participate in several annual investor conferences and non-deal road shows which enables us to have dialogue with an extensive and diverse set of current and prospective investors. We proactively engage with them through frequent email and verbal communications, addressing important events, progress, and stakeholder concerns with our senior executives and encourage those investors to actively reach out to our client installed base to as a part of their investment process. Beyond our quarterly earnings release print/call along with the timely, appropriate and required disclosures, we maintain an easily accessible investor relations web site.

We are fortunate to be able to build and maintain relationships with over 12 investment banks, with nine of them providing us with analyst coverage. These analysts not only offer insights into our company's performance but also share detailed information from comparable companies to help us benchmark our performance relative to those comparable companies aggregated results. To stay at the forefront of best practices, we continually update our governance-related policies based on input from our investor, investment bank, and analyst stakeholders.



## Environmental — **Sustainable Practices and Protecting Our Planet**

As a company focused on public safety and the well-being of communities, SoundThinking intentionally prioritizes the environment and the implementation of sustainable practices that will safeguard our collective future.

With intent and urgency, we are working towards implementing sustainable practices. At present, we are carbon emission light, we responsibly manage our operations, technology, and deployments, and minimize our waste to protect the environment. Our technologies also play a critical role in our efforts to support and promote sustainable practices. Around the world, they are used to protect wildlife and safeguard endangered species.



# Real Estate and Facilities

Since our last ESG report, we have reduced our physical office space and facilities, eliminating 23 percent of the square footage of our physical office space, while increasing our headcount by 24 percent. The aim of this move was to increase collaboration, environmental friendliness, and cost efficiency. With the move to a hybrid model that allows staff to work between the office and home, we have continued to foster an environment that inspires collaboration and nurtures teamwork while reducing the impact of ground transportation and commute time for our staff and the company's carbon footprint from heating, cooling, electricity, and lighting.



The company mission and culture come together to form a unique workplace. In addition to focusing on the personal and professional growth of our team, we're streamlining other aspects of our business as part of our commitment to sustainability and the environment. We relocated our headquarters to new facilities in Fremont, California, which operate in an improved and modernized fashion. The new facility is an inviting office space that is optimized for collaboration and teamwork within a smaller footprint. By relocating our office to an area within walking distance from a Bay Area Rapid Transport (BART) station, it is easier for our colleagues to use BART to commute within the Bay Area. Similarly, our Washington, DC, office is within walking distance of Union Station, which reduces the need to commute by car. In New Jersey, we reduced our office space and streamlined our facilities by consolidating the workspace for our CrimeTracer division (formerly Forensic Logic/COPLINK X) in Arizona.

Since our last ESG report

**23%**

Reduction of square footage of our physical office space

**24%**

Increase in headcount



# 3G Sensor Replacement, Recycling, and Refurbishment

Sometimes the areas of environmental, social, and governance overlap in interesting ways. Refurbishing our acoustic sensors provided us with a unique opportunity to focus on environmental sustainability while upgrading our network of 3G sensors to mitigate supply chain challenges as part of our focus on business continuity.



SoundThinking has long practiced environmental responsibility through recycling standard office waste and the digital recycling of electrical and electronic waste (e-waste). E-waste includes end-of-life acoustic gunshot detection sensors that we transfer to specialty recycling centers.

In 2021, SoundThinking began upgrading older 3G sensors with newer LTE models, resulting in an increase in e-waste. While the metals extracted from old sensor circuit boards and components in the recycling process provided some consolation to the environmentally conscious SoundThinking team, we were motivated to develop a more ambitious upgrade process for the conversion. The final process involves 11 distinct stages executed by multiple third-party vendors before each 3G sensor is provided with a new LTE carrier connection, run through a rigorous test, and sent back to the field for installation. This was a successful effort towards the UN's Sustainable Development's Goal of responsible consumption and production.

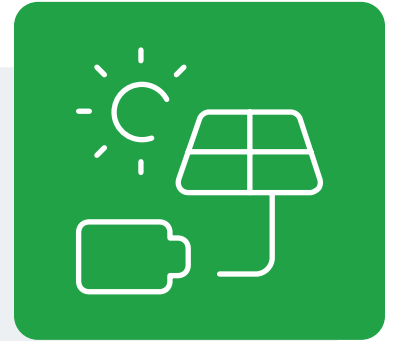
The project took nine months from concept to completion, through early prototypes, process development, vendor selection, and finalizing of the production line. The first batch of refurbished sensors were deployed in August 2022. This innovative process saves waste that would otherwise end up in landfill, diverting more than 1,400 sensors from recycling and creating cost-effective risk mitigation against potential supply chain shortages and challenges related to COVID-19.



*"I'm motivated by adventure, achievement, and change. SoundThinking offers me opportunities to learn and grow when faced with new tasks or challenges. I also get a sense of achievement from not just by advancing myself but my team and the company, and in being recognized for the work I'm doing, whether directly noticeable or behind-the-scenes."*

**Cody Keller,**  
Information Security

# Sensor Electricity: Consumption, Considerations, and Solar Power



Acoustic sensors are one of the core components of SoundThinking’s gunshot detection technology. These small, toaster-sized devices include a processor, GPS, cellular radio, and microphones. On average, we install 10 to 25 sensors per square mile for a city deployment. With each sensor requiring approximately 3 watts to operate, SoundThinking takes great pride in delivering one square mile of gunshot detection for less power than required for one 100-watt light bulb.



SoundThinking is using green energy to fight gun violence. We have been working with Optivolt to deploy state-of-the-art solar panels with integrated battery and charging systems that simplify installation and maintenance of our gunshot sensors. In addition, these panels have a new technology in them called “Shade Tolerance” that, unlike many older systems, allows them to continue charging the battery even when the panel is partially shaded, increasing efficiency even further.

We also use solar panels to power the sensors that drive our environmental projects: protecting rhinos in South Africa and protecting coral reefs in Malaysia. Solar panel usage is also on the rise for urban gunshot detection deployments. SoundThinking is experimenting with cutting-edge solar technology, with new features implemented to mitigate the critical mission risks associated with using older solar solutions in a public safety system.

## <100W

One square mile of gunshot detection requires less power than a 100-watt light bulb.



# Protecting Reefs and Underwater Life in the Coral Triangle, Malaysia

SoundThinking researchers have been working with the international environmental coalition Stop Fish Bombing for the last ten years to end fish bombing, a practice that threatens a majority of tropical reefs globally and the food supply of a billion people. This partnership exemplifies our dedication to biodiversity initiatives, showcasing our commitment in action.

In partnership with the NGOs Stop Fish Bombing USA (SFB USA) and Stop Fish Bombing Malaysia (SFB Malaysia), SoundThinking has repurposed urban gunshot detection technology for marine use to end fish bombing. This illegal, unsustainable, and environmentally disastrous fishing method causes irreparable damage to coastal ecosystems, devastating fish nurseries, destroying coral reefs, killing marine life, and reducing flourishing underwater habitats to rubble.

Ending fish bombing was considered “Mission Impossible” and had continued without a solution, until now. SoundThinking’s ShotSpotter solution has been deployed in Malaysia to fight fish bombing and to protect its precious reefs from destruction by underwater explosives.



*Coral reef before fish bombing*



*Coral reef after fish bombing*

The Integrated Reef Protection System (IRPS), which utilizes ShotSpotter technology, has decreased fish bombing in Marine Protected Areas (MPAs) by 80 percent. When a blast goes off underwater, it sets off sound waves. The IRPS uses a network of underwater acoustic arrays to identify, locate, and immediately report fish bombing incidents to marine law enforcement. At three locations adjacent to MPAs in Sabah, Malaysian Borneo, hydrophones measure the exact time and angle of arrival for each blast sound. Additionally, a marine radar on an island hilltop observes small boat traffic to correlate the underwater blasts with specific vessels. The radar tracks the blast, sending its location to an IRPS smartphone app and directly on to law enforcement.



Our most recent deployment to counter fish bombing was in Mabul, Malaysia, in June 2022. This array was partially funded by the World Wildlife Fund Malaysia as part of their coral restoration efforts at recently bombed sites. In the first 20 days of operation, our ShotSpotter technology detected and notified police enforcement of 138 blasts. Three boats filled with bombed fish were apprehended as a result.

From June until December 2022, a total of 263 fish bombs were detected. In June, a total of 138 fish bombs were detected. In July, this number dropped to 33. Such a dramatic decrease is attributed to the deployment of ShotSpotter technology, which alerted enforcement agencies to blasts and enabled them to apprehend fish bombers in the area where the sensors are deployed. The detection of fish bombs in the area continues, with all information being forwarded to local law enforcement.



*“The highest motivator is knowing you are working for an organization that is literally trying to affect people positively daily. You come into work knowing that you are not alone and that you have a support structure within the organization and within your team that is focused on helping you grow.”*

**Alberto Cortez,**  
Technical Support Engineer





In addition to helping identify and apprehend those responsible for this illegal activity, the technology helps law enforcement track and understand the scope and severity of fish bombing in the area. SoundThinking data has helped authorities identify trends in fish bombing. Notably, it has enabled them to determine correlations between fish bombing and the time of day and tide levels, which assists them with intercepting bombing activities before detonation.

The next generation of IRPS development is underway. Our fixed underwater acoustic arrays have successfully reduced fish bombing in the areas monitored, but to eradicate fish bombing requires mobile sensors deployable on boats, buoys, and unmanned surface vessels. These will fill in shadow zones and follow bombers as they migrate. Expansion of the capabilities of the M2 Marine Smart Radar will both allow us to follow bombers and to create exclusion zones for Illegal Unregulated Under-reported fishing. The system will be scalable to allow expansion to other countries with fish bombing problems in the Coral Triangle.



*“I’ve been blessed to be part of some of the top companies in the world, but after five years at SoundThinking I can honestly say that it’s been the greatest professional experience of my career. Our mission—to help save lives and reduce crime in our communities—brings together a diverse set of people who share a common purpose that is larger than all of us. It energizes us to move faster, go the extra mile, trust and support each other, and consider all stakeholders as we make decisions. I’m so honored and humbled to be a part of this special company that is making a difference for so many.”*

**SAM KLEPPER,**  
SVP Marketing and Product Management



# UN SDGs Index


**1 NO POVERTY**



Pages: [67](#)

[Learn more ↗](#)

**2 ZERO HUNGER**



[Learn more ↗](#)


**3 GOOD HEALTH AND WELL-BEING**



Page: [67](#)

[Learn more ↗](#)


**4 QUALITY EDUCATION**



Page: [57](#)

[Learn more ↗](#)

**5 GENDER EQUALITY**



Page: [45, 56](#)


[Learn more ↗](#)

**6 CLEAN WATER AND SANITATION**



[Learn more ↗](#)

**7 AFFORDABLE AND CLEAN ENERGY**



[Learn more ↗](#)

**8 DECENT WORK AND ECONOMIC GROWTH**




[Learn more ↗](#)

**9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**



[Learn more ↗](#)

**10 REDUCED INEQUALITIES**



Page: [45](#)

[Learn more ↗](#)


**11 SUSTAINABLE CITIES AND COMMUNITIES**



Page: [22](#)

[Learn more ↗](#)

**12 RESPONSIBLE CONSUMPTION AND PRODUCTION**



Page: [65, 66](#)


[Learn more ↗](#)

**13 CLIMATE ACTION**



[Learn more ↗](#)


**14 LIFE BELOW WATER**



Page: [67](#)

[Learn more ↗](#)

**15 LIFE ON LAND**



[Learn more ↗](#)

**16 PEACE, JUSTICE AND STRONG INSTITUTIONS**



Page: [9, 22, 29, 34, 45, 50, 56, 67](#)

[Learn more ↗](#)

**17 PARTNERSHIPS FOR THE GOALS**



Page: [9, 32](#)

[Learn more ↗](#)

**SUSTAINABLE DEVELOPMENT GOALS**





# Acknowledgements

Creation of this ESG report would not have been possible without the efforts and commitments from our cross functional ESG committee:

**GINGER AMMON,**

*Senior Manager of Training and Quality Assurance,  
Incident Review Center*

**JUSTINE CHEN,**

*Marketing Director*

**DORIS COHEN,**

*Analytics Director*

**CLARK DUNSON,**

*Director of Systems Engineering*

**DR. KYSHA FEDD,**

*Customer Success Director*

**GLADYS FERGUSON,**

*Training and Instructional Design Manager*

**NASIM GOLZADEH,**

*Managing Director of Technologic Solutions  
and Senior Vice President of Customer Support*

**DAVID HALLIDAY,**

*Vice President of Operational Engineering  
and Chief Information Security Officer*

**DEBORAH HERMAN,**

*Engagement Manager*

**DOROTHY JENSEN,**

*Director of Procurement*

**PAUL JOHN,**

*Director of Community Engagement*

**CODY KELLER,**

*Information Security Analyst*

**CHARLIE KNUST,**

*Vice President of Customer Support*

**RON MEYER,**


*CopLink X, CTO*

**DR. SIMEN OESTMO,**


*Director of Data Science*







 @SoundThinking\_

 SoundThinkingInc

 SoundThinking

[info@soundthinking.com](mailto:info@soundthinking.com)

 SoundThinking

 SoundThinkingInc

[www.soundthinking.com](http://www.soundthinking.com)

© 2023 SoundThinking Inc. All rights reserved. | SoundThinking™, SafetySmart™, ShotSpotter®, CrimeTracer™, CaseBuilder™, ResourceRouter™, the SoundThinking logo, the SafetySmart Platform logo, the ShotSpotter logo, the CrimeTracer logo, the CaseBuilder logo, and the ResourceRouter logo are trademarks of SoundThinking, Inc. ShotSpotter technology is protected by one or more issued U.S. and foreign patents, with other domestic and foreign patents pending, as detailed in Patents.