

ShotSpotter[®] Missions[™]

Product FAQ August 2019

What does this product do for a police department?

- Helps to **deter crime** by providing a crime risk forecast for a precise location and time and pushes tactics to officers in the field to reduce those risks.
- It helps an agency manage and dynamically **optimize patrol resources** and better align them with the priorities of the department, city, and local community. Automated patrol missions provide a way to standardize, track and review the way patrols are deployed. Missions are randomized and specific times are suggested to prevent over-policing. Command staff can review the data, make changes in the patrol tactics for the best and most efficient use of resources relative to goals.
- **Increases the capacity and value of the Crime Analyst function and makes it more easily accessible for patrol officers.** The system automates routine labor-intensive analytical tasks leaving more time for higher value-add activities like developing effective strategies and tactics to address crime. The risk models that are generated are automatically sent to patrol officers in the field, so they have access to the latest information and recommendations without having to directly access analysts.

What size agency is this for?

- Agencies of all sizes can use it, but mid-sized to large agencies will get the most benefit as they typically have the most crime incidents and an enormous amount of data to feed the model.
- Crime analysts, patrol officers and patrol command staff are the most common users within an agency.

What crime types does it forecast?

- Gunfire, homicide, aggravated assault/battery, robbery, burglary, motor vehicle theft, and theft

Can it track only crime types that are of interest to me?

- Yes, crime forecasts can be configured based on those crimes of interest to a police department. For larger agencies, each district may have their own crime type priorities and that can be easily accommodated.
- A separate risk model is created for each crime type enabling the technology to have a unique configuration for each agency and their jurisdictions that use it

What data feeds into the crime risk model?

- Historical and current ShotSpotter gunfire incidents, crime incidents, calls for service, seasonality, time of day, day of week, socioeconomic indicators, upcoming events, and environmental features (e.g., density of bars, density of vacant parcels, etc.).
- ShotSpotter Missions does not use personally identifiable information to create its predictions. It is focused on predicting where and when a crime will occur, not who will commit the crime. It relies on other data sources such as ShotSpotter incidents, crime data, calls for service, seasonality, time of day, day of week, socioeconomic indicators, upcoming events, and environmental features to create crime forecasts.

How often are the crime forecasts updated?

- The forecasts are generally updated for each shift, but this is configurable and can be updated more or less often.

Does Missions replace human experience and intuition?

- Officers know their beats well and may be skeptical of an analytical tool that can provide further benefits. The product is intended to supplement officer knowledge and hunches with data that is constantly being collected and analyzed. Authorized users can add or suppress Missions based on new information or shift-to-shift or day-to-day swings in patrol capacity.

What kind of tactical advice does the product have?

- The product recommends several tactics based on the agency's preferred tactics such as foot patrol, talking to business owners, knocking on doors, etc. depending on the current crime forecast and patrol location. It also tracks the effectiveness of the tactics to help hone best practices.

What kind of protections does Missions have to reduce the risk of bias or discrimination?

- Missions creates crime forecasts that limit bias by incorporating objective ShotSpotter gunfire data and non-crime data such as weather, event schedules, geospatial, and census data. The system also automatically randomizes patrol assignments to avoid oversaturating high-risk areas and ensures that lower risk areas receive adequate crime deterrence treatment. In addition, Missions does not use any personally identifiable information (PII) for any purpose.

Does the company provide information on how Missions determines its crime forecasts?

- Yes. Missions uses a type of machine learning model that enables us to share key variables that are important in driving a particular forecast. Other systems have more of a 'black box' model where there is no way to provide specific insights.

Will Missions cause oversaturation of patrolling and cause community dissatisfaction?

- Many police agencies have either the same patrol plans for several months in a row or leave it entirely to the discretion of officers. This can result in patrol oversaturation in some areas. ShotSpotter Missions recommends patrolling only the highest risk areas for the most important crime types as deemed by the agency. The system intelligently meters out when those missions occur and limits their duration to prevent oversaturation.

What is unique about the product?

- Use of real-time ShotSpotter data to create and continuously update gunfire forecasts makes forecasting more comprehensive and accurate since only 20% of gunfire is reported by citizens
- Use of non-crime data such as calls for service, seasonality, time of day, day of week, socioeconomic indicators, upcoming events, and environmental features avoids recency bias and makes forecasting more accurate than standard hotspot mapping
- Flexibility of system to configure to an agency's needs such as choosing which crime types to focus on, weighting those crime types relative to each other, which tactics to use and track etc.
- Ease of use of the system for patrol officers
- Proactive suggestion of patrol tactics based on crime type and agency best practices once arriving at forecasted crime area. Tactics can be experimental and measured to determine effectiveness
- Transparency about how it works and what data is used

How long does it take to deploy?

- It is a relatively straightforward and streamlined deployment process. Step one is getting data integration feeds from police CAD and RMS with historical and real time crime data. There is an option to include vehicle location data via AVL to track officer engagement.
- Step two is ShotSpotter setting up the system using the police mapping and beat data and configuring the system to an agency's needs
- Step three is having ShotSpotter load and set up the logic for patrol tactics and activities
- The deployment process can be completed in a matter of weeks with onboarding of officers and go live following soon thereafter

How much does ShotSpotter Missions cost?

- For ShotSpotter gunshot detection customers, there is an annual subscription for gun-related crime types based on the size of your ShotSpotter coverage area. There are options to go beyond the coverage area and/or use more crime types.
- For new customers, there is a tiered annual subscription fee for all crime types based on the service population
- There is also a one-time set up fee that includes provisioning the account; agency data integrations; configuration of maps, crimes types, and tactics; model creation; and training and best practices.
- Included is 24x7x365 customer support and best practices consulting help

ShotSpotter Data Integration

What is the new ShotSpotter Flex data integration?

For agencies that have ShotSpotter Flex, ShotSpotter Missions uses historical and continuously updated ShotSpotter gunfire data to create new gunfire forecasts for ShotSpotter coverage areas.

How does the new ShotSpotter Flex data integration benefit customers?

The integration provides comprehensive and accurate gunfire forecasts in ShotSpotter coverage areas since it is estimated that only 20% of gunfire is reported by citizens.

Missions Reports

What is the new Missions Sessions Report?

The new Missions Sessions report helps command staff better understand which officers executed missions, when they executed them, and what the officer did during the mission.

Specifically, the report provides a quick overview of shift activity including total number of available missions, total mission sessions, total minutes in mission, and the number of officers on shift. It also allows the agency to:

- View details for each individual mission including the total mission sessions and minutes in mission in addition to the officer name, vehicle number, mission start time, tactic used, and minutes in missions for each officer.
- Filter missions by date & time, area, and patrol or special task force units