

First Sign® Early Intervention





Research shows that traditional trigger-based Early Intervention systems have high rates of false positives and false negatives. The diagram at left illustrates this research for 100 officers across a department:

- Up to 17% of the officers may be involved in an adverse incident over the course of a year (officers in red)
- Trigger-based systems flag seven officers (outlined in orange)
- Most of the flagged officers do not engage in adverse activity (False Positives)
- Most of the adverse activity officers are not flagged (False Negatives)

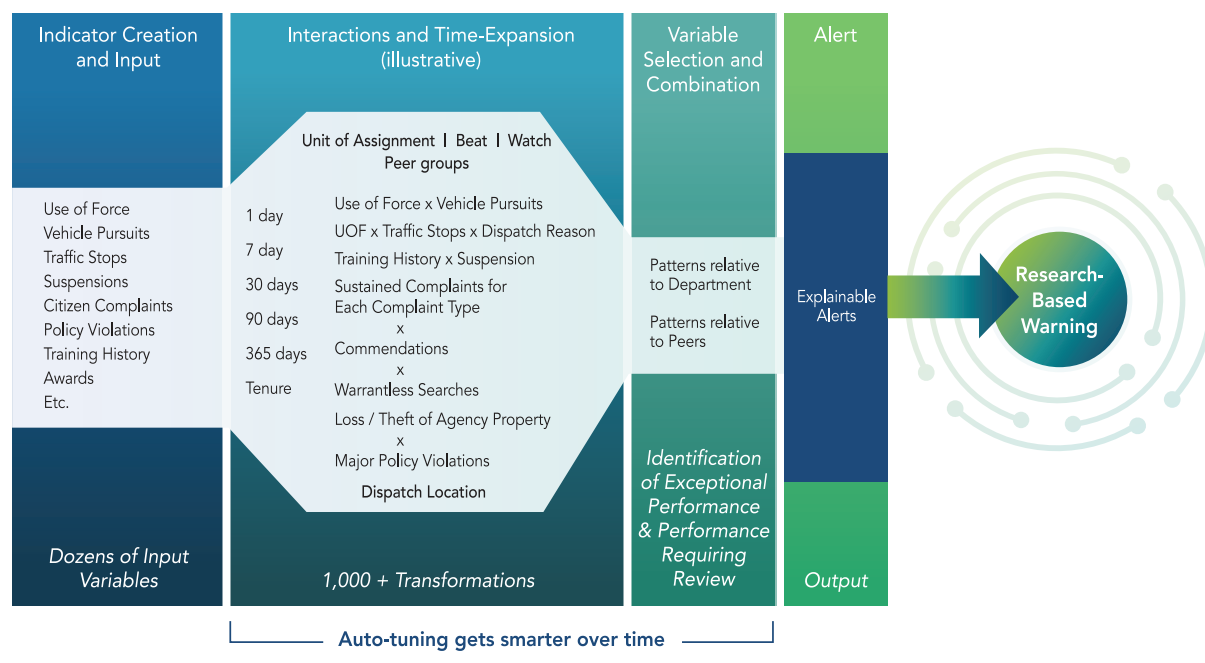
All views are based on anonymized data and simulated groupings.

RESEARCH-BASED EARLY INTERVENTION

Center for Data Science & Public Policy



Benchmark Analytics Research-Based Early Intervention System



Off-Track Conduct

First Sign® Early Intervention – developed in partnership with the University of Chicago – is the only research-based early intervention solution that provides early warning based on a variety of factors that go beyond simple triggers.

The system selects the patterns that matter most and provides explainable alerts to department supervisors.

Exceptional Conduct

Additionally, the system also provides departments with alerts on officers exhibiting exceptional performance.

Wellness Indicator

Lastly, the Benchmark system has a variety of indicators that measure exposure to traumatic incidents — to help ensure departments know when it's critical to check in with officers.

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The screenshot displays a user interface for a police department's performance monitoring system. On the left is a dark sidebar with a user profile for Martha Hearts, IA Commander, and a navigation menu with options like 'New Report', 'Home', 'Reports', 'Analytics', 'First Sign', 'C.A.R.E', and 'Log Out'. The main content area features two alert cards. The first card, titled 'Exceptional Performance', shows a green alert for Officer Reuben Vasquez (RV). The second card, titled 'Needing Review', shows a red alert for Officer Ross Evers (RE).

First Sign automatically examines data daily to identify changes in officer behavior. Officers that exceed a risk threshold generate alerts to supervisors, professional standards, or others based on agency configuration.

- The alerts from the system highlight officers that need review and those that may have exceptional performance worthy of praise.
- Clicking on the officer provides details on the alert and underlying pattern of data (see next page).

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Risk

Actionable
RiskRisk Rank
within agency

9

Performance
Pattern"Application
of Force"
(more information)

Interventions

Ross Evers

- Take Tactical Communication Course
- Assign Sergeant for oversight / mentoring
- Complete documented verbal warning for missed court appearances

(more information)

The Officer Alert Detail View provides a summary of why an officer has been flagged.

- Officer risk levels are grouped into Actionable Risk or Advisory Risk. The Actionable Risk officers are those with the strongest warning signals. The Advisory Risk officers are those warranting review but suggest greater discretion before intervention.
- Based on the underlying pattern of behavior, First Sign highlights the conduct that has been identified as needing review. This is referred to as the Performance Pattern. In the example on the left, the officer may have a problem with their Application of Force.
- If the C.A.R.E. module is enabled, a set of interventions are suggested. Interventions are always determined at time of configuration based on a department's policies, collective bargaining agreements, etc.

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Officer Activity Details

Officer Activity, 1. Arrests

Activity Type	Category ▼	Events	
		Officer	Peers
Arrests (Primary)	Very High	185	102
Arrests (Involved)	Very High	188	107

Officer Activity, 2. Activity

Activity Type	Category ▼	Events	
		Officer	Peers
K9 Deployed	Expected	0	0
Vehicle Pursuits	Expected	0	0
Firearm Discharged	Expected	0	0
Subject Resisting Arrest	High	2	1
Officer Injured in Line of Duty	High	2	0
ECW Discharges	High	1	0
Total Complaints	Very High	4	1
Use of Force Incidents	Very High	4	1

The Officer Alert Detail View also provides information on officer behavior over a 365-day period (or as determined by the Department). This view provides additional context to help supervisors understand how to engage and explain to the officer why they have received an alert.

- Officer activity is grouped into categories of general activity (e.g., arrests and dispatches), interactions resulting from activity, and out-of-policy activity (not shown here).
- Each type of activity is aggregated into the number of times the event has occurred, how many times the event occurred for the officer's peer group, and whether the officer is substantially higher or lower than their peers on the indicator.
- Peer groups are based on officer assignments, location, time of deployment, rank and other relevant details.

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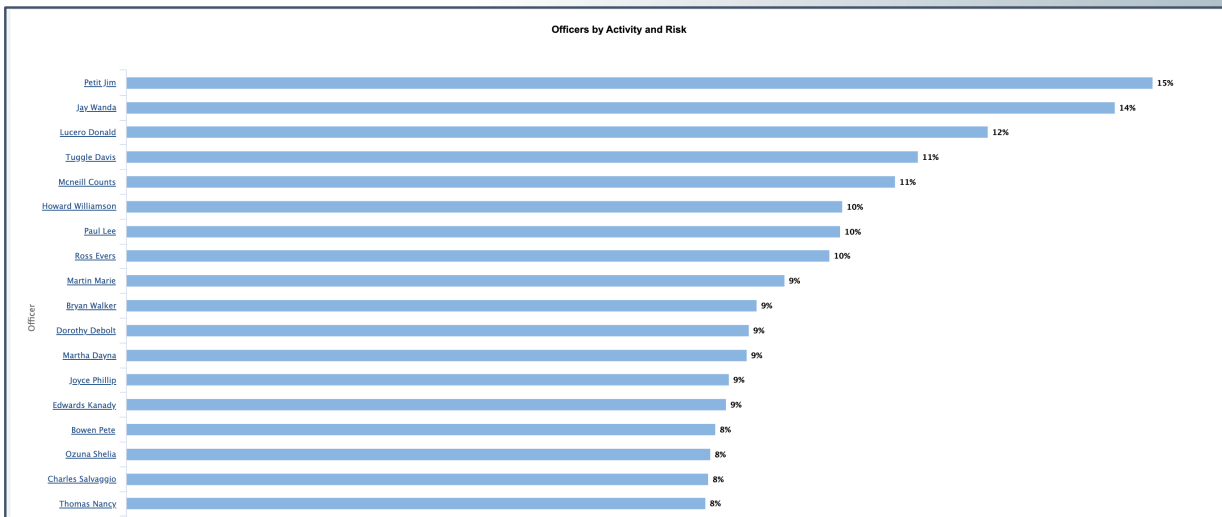
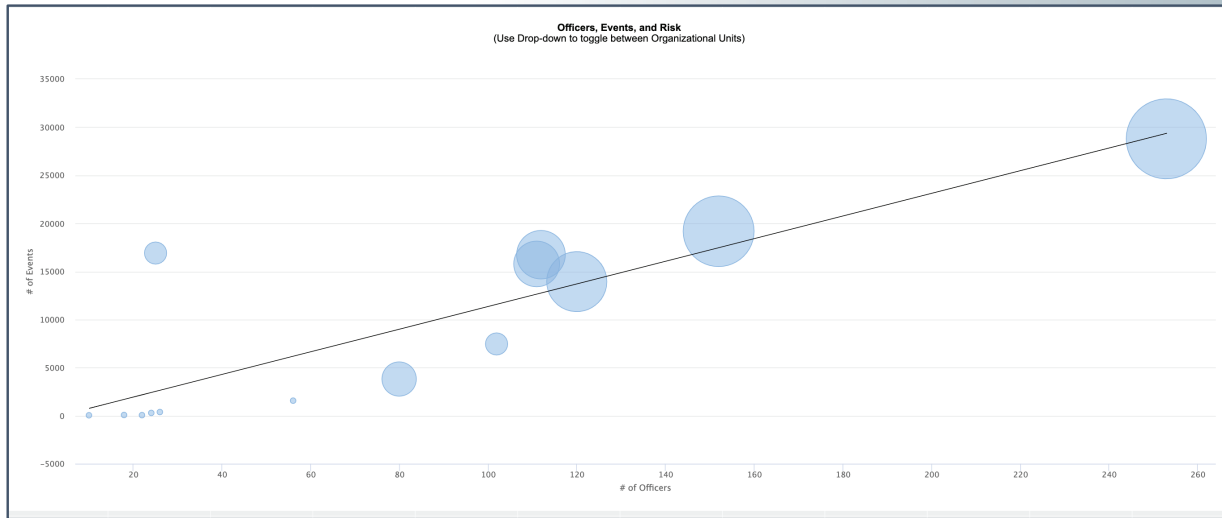




All of the activity, alerts and risk levels are aggregated to the department, precinct and unit levels for analysis. This enables chiefs, professional standards, and supervisors to see the patterns across their own officers.

- The department-wide view provides detail on currently active officers and which risk categories officers are in.
- Bar charts provide insight into which precincts/units have more alerting officers.

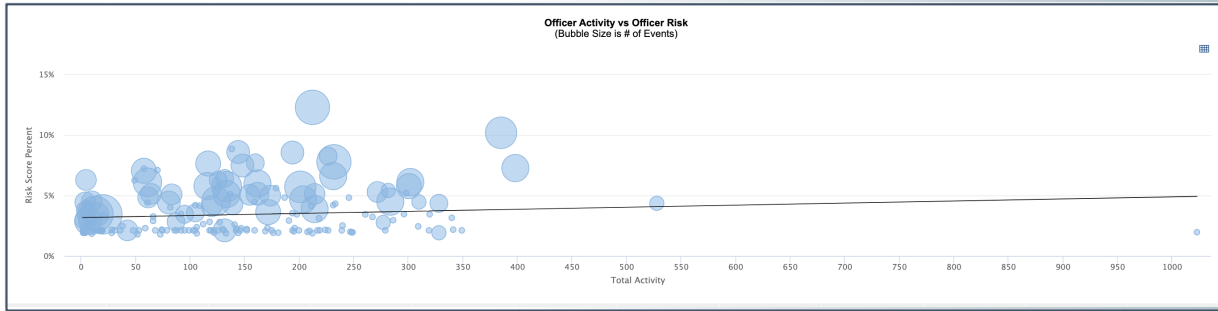
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Advanced visualizations provide an opportunity to understand the relationship between unit size, activity and risk as well as drill into individual officer performance.

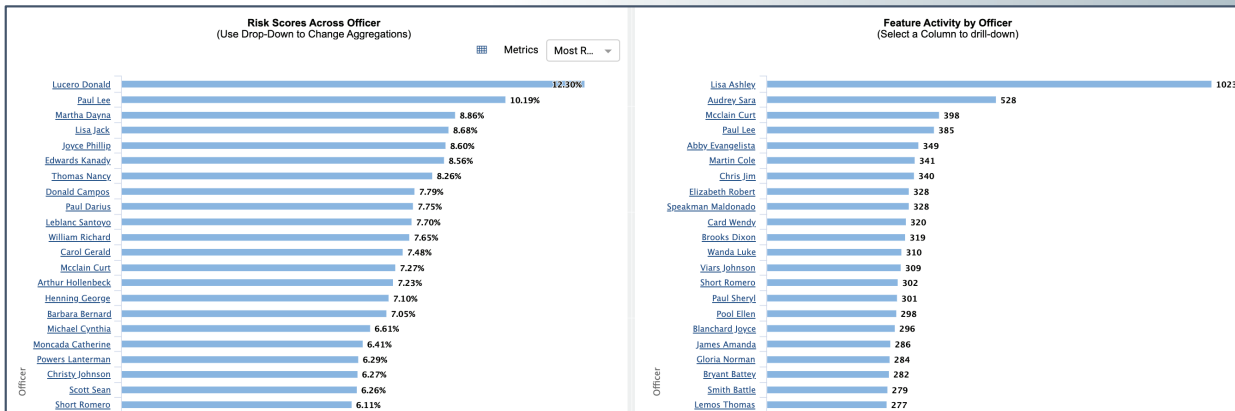
- The bubble chart on the left shows individual units and their activity levels. The bubble on the far right is the largest unit and has the highest level of overall activity — as well as has many officers at risk (larger bubble size). The bubble on the far left is a smaller unit, has almost the same amount of activity, and has few officers at risk (this unit may be worthy of praise).
- The bar chart shows the officers who are most at risk.

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The views shown here help hone in on officer patterns and show that in general, officer activity is not the main driver of risk.

Each bubble in the bubble chart on the left represents an individual officer. Officers with greater levels of activity are on the right side of the chart. Officers with higher levels of risk are toward the top of the chart. Officers that have already engaged in out-of-policy activity have larger bubbles.



The two bar charts show officers ordered by risk and officers ordered by activity. The most active officers on the right are not the ones generating the most risk on the left.

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