

Ethics of Predictive Policing

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Background

- Predictive policing is the utilization of tools such as technology to identify likely targets or locations that might need police intervention.
- Predictive policing operates under the assumption that people- including criminals- follow patterns in life and make reasonable decisions (taking into account their surroundings/environment) which allows technology to make predictions.
- Within the past few years, the city of Pittsburgh has began to adopt predictive policing tools and integrate them to try to improve police efforts.
- Used to predict crimes by identifying areas of increased crime risk or traits about the environment that are linked to increased crime, and predict offenders or suspects.

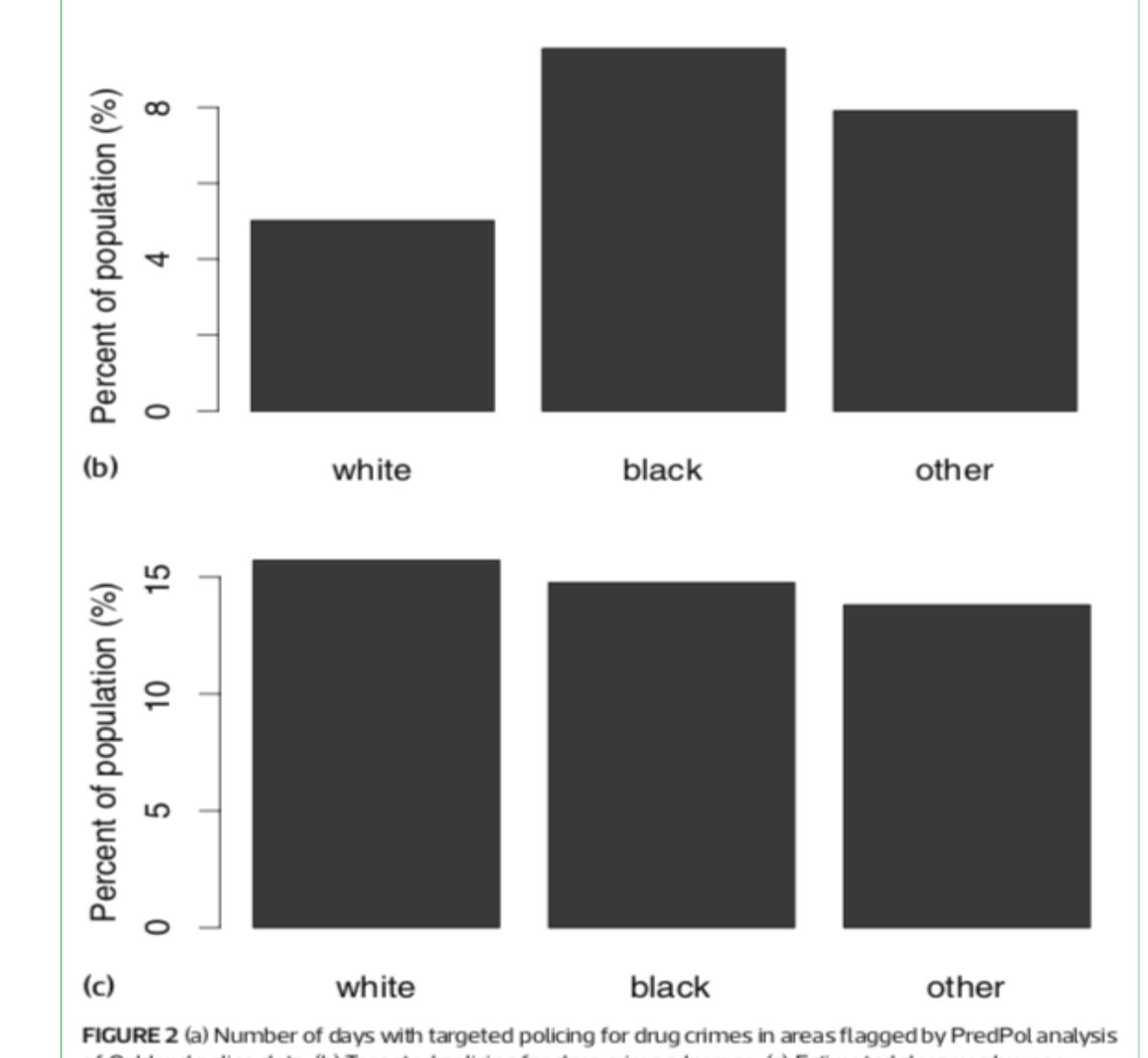
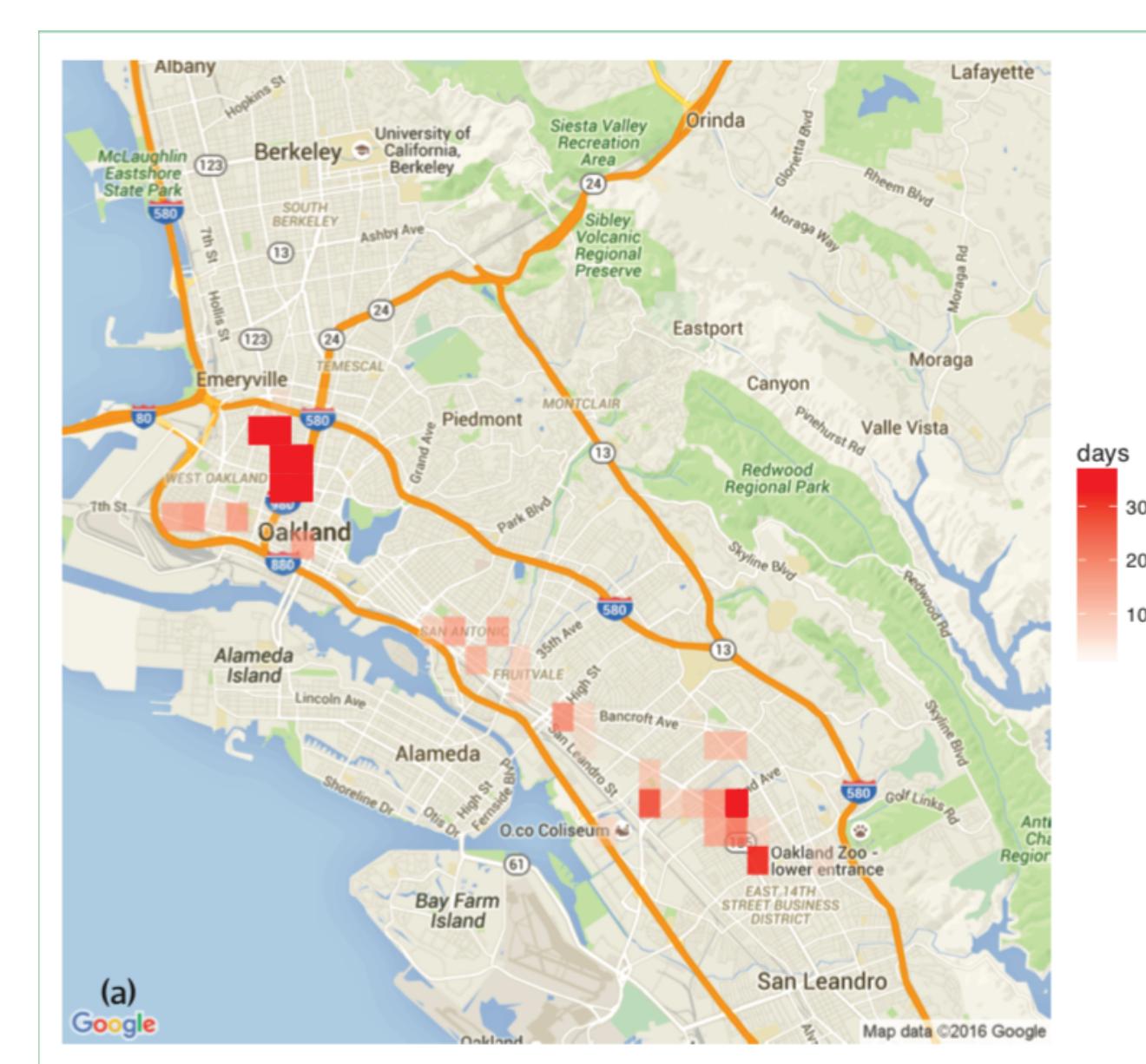
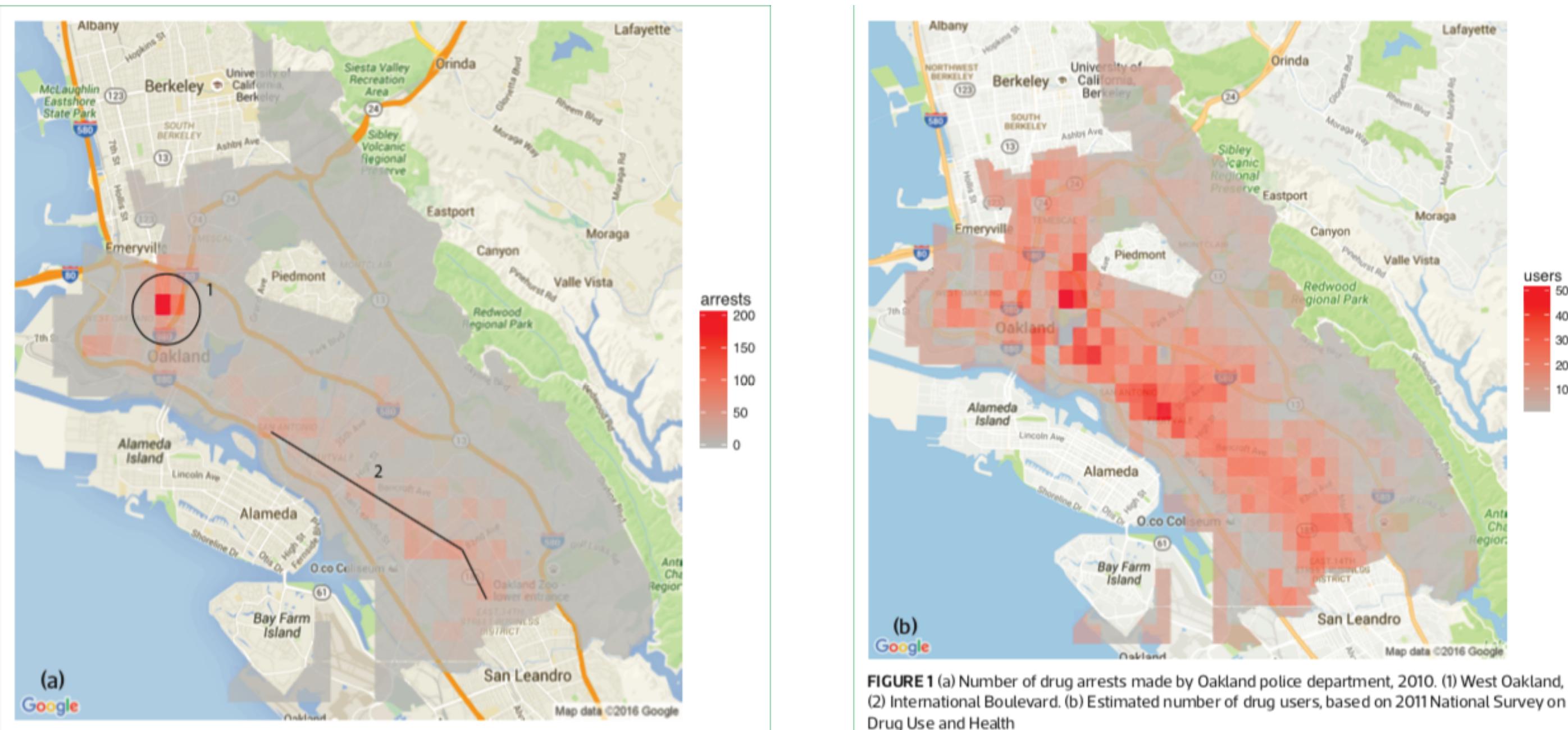
Conclusion / Call for action

- The current state and uses of predictive policing are unethical. To move toward more ethical practices of the use of predictive policing technologies, we propose:
 - Data - since current methods for predictive policing heavily rely on the input data, it is crucial that we practice good data collection methods such as ensuring that the data is accurate and reflective of real events. It is also important that we make sure that all data is being reported, not just a subset.
 - Increase Transparency - the technology that is being used in predictive policing is owned by private organizations which refuse to share the algorithm and methodology.

Consequences

Bias in data

Algorithms often reflect the views/values of the developers or the data provided. As a result, there are often unwanted biases shown in the results and decisions that the algorithm makes.

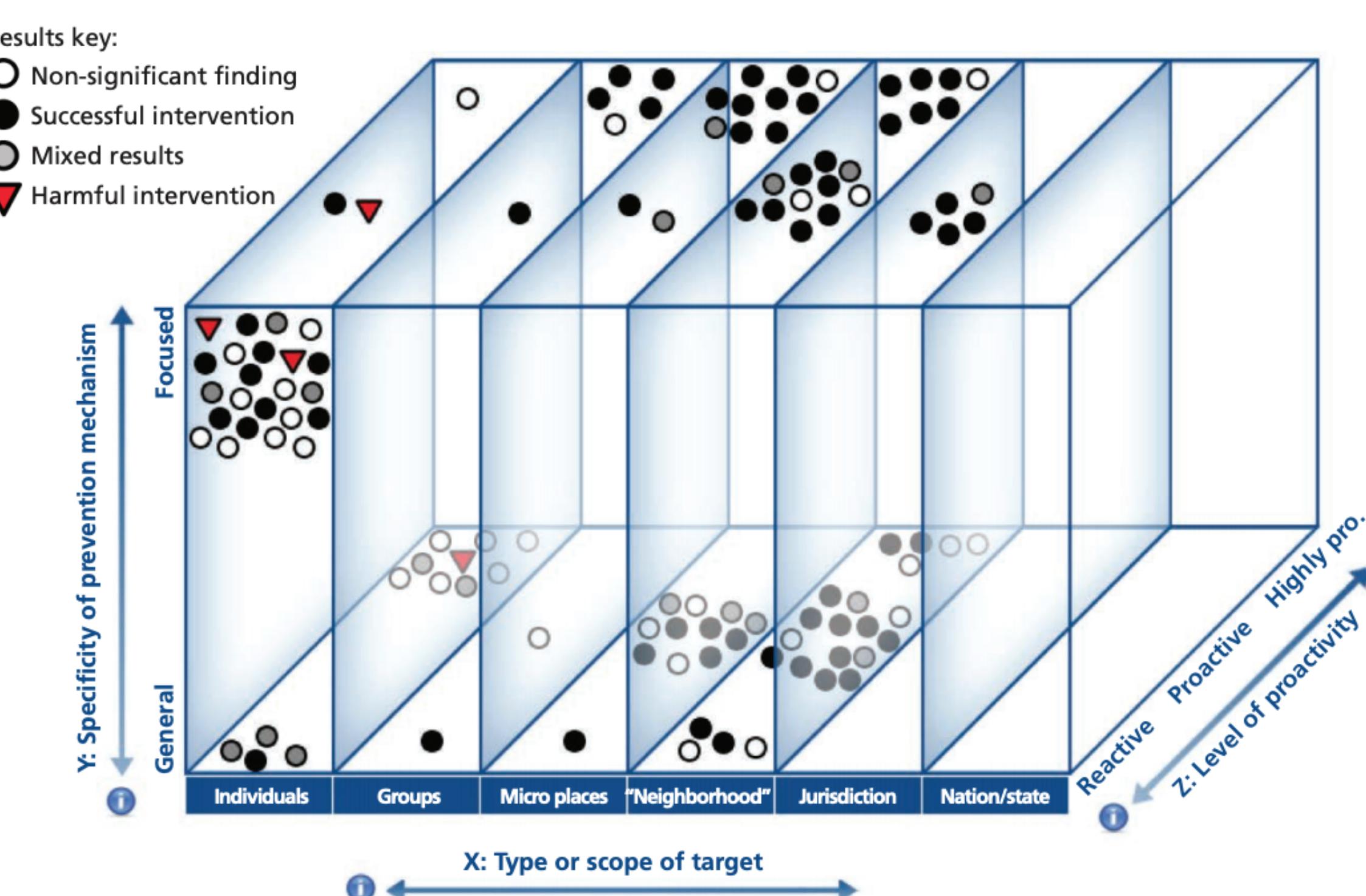


SOURCE: Lum, Kristian; Isaac, William (October 2016). "To predict and serve?"

Prediction accuracy vs. practicality

Machine learning algorithms often used in predictive policing often aim to find the patterns that result in the highest accuracy. However, this can result in a large area being marked as "high risk" which is not helpful to police force as covering a large area requires many police officers and resources.

Figure 3.1
Evidence-Based Policing Matrix

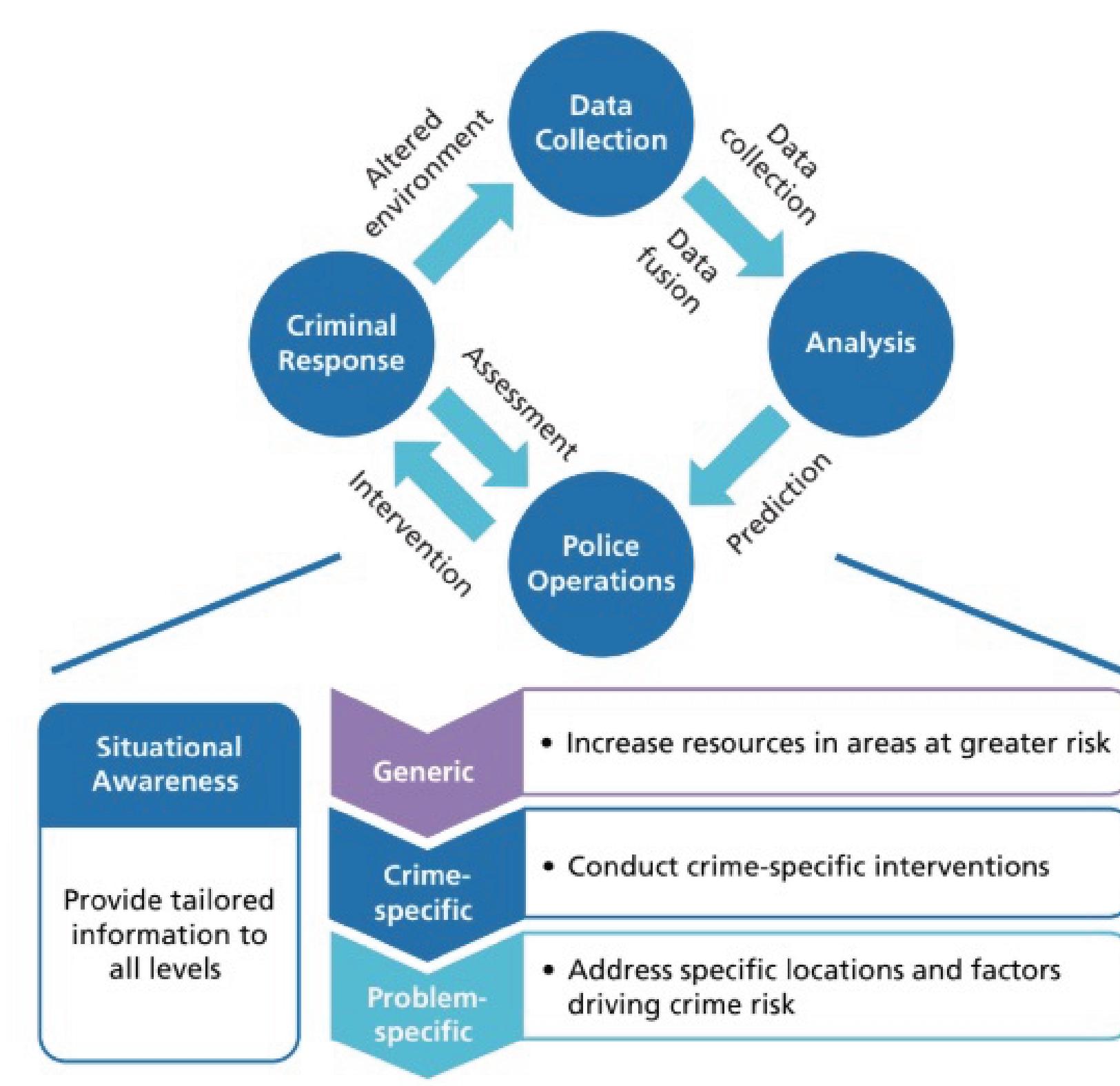


SOURCE: Created by Cynthia Lum, Christopher Koper, and Cody Telep at the Center for Evidence-Based Crime Policy, George Mason University, undated. Used with permission. The interactive version of the matrix can be found at <http://www.policingmatrix.org>.

RAND RR233-3.1

Positive Feedback Loop

Any traces of bias are going to be magnified by the feedback loop created by the system that this puts in place.



SOURCE: Perry, Walter L., et al. "The Prediction-Led Policing Business Process." Predictive Policing: The Roll of Crime Forecasting in Law Enforcement Operations, RAND Corporation, 2013.