IMPACT STUDY

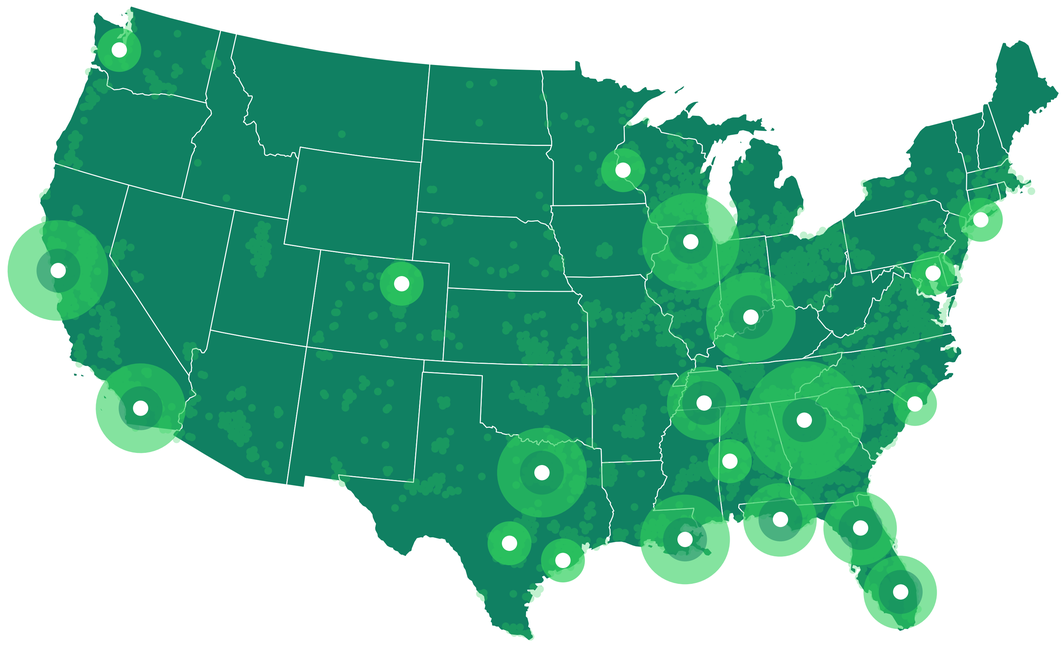
How Many Crimes Do Automated License Plate Readers (ALPRs) Solve, Anyway?

flock safety

As Automated License Plate Reader (ALPR) technology has become more ubiquitous, discussion has shifted from the proven utility to **understanding how they contribute to solving crimes**.

Recent studies highlight significant positive outcomes, such as increased follow-up arrests, identification of stolen vehicles, and improved case closure rates.

To better understand effective deployment and usage of ALPR cameras, Flock Safety, the leading provider of ALPR technology to 4,000+ communities across the United States, conducted a large-scale analysis of ALPR outcomes correlated with crime clearance and reduction data.



Methodology

The study utilizes a comprehensive survey of Flock Safety ALPR customers, conducted from April to June 2023. Individual agencies' crime clearance data is analyzed in conjunction with FBI-reported crime data, employing multilinear regression to isolate the impact of ALPR-centric, agency-centric, and jurisdiction-centric factors. The survey focuses on raw numbers of crimes solved, filtering out minor offenses. Data which did not meet rigorous criteria for inclusion are also filtered out, leading to 123 survey respondents, representing a diverse range of sizes and demographics, with sufficient granularity for analysis.

The study employs single and multilinear regression to identify factors most associated with ALPR-assisted clearance rates. Notable findings include the importance of ALPR-centric factors, agency behavior, collaboration with other agencies, and surprising success in challenging environments.

10%

Flock Safety devices are now helping solve 10% of reported crime in the U.S.

200x

A typical agency that works with Flock will have access to more than 200 times the number of cameras that they own

9.1%

A typical agency that acquires an additional 1 Flock Device per Sworn Officer, may expect a 9.1% increase in clearance rate

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Key Findings

Access to Evidence

Agencies with more Flock Devices per Sworn Officer and shared devices exhibit higher clearance rates, emphasizing the power of additional investigative evidence.

Agency Behavior

Broad access to ALPR technology within an agency correlates with higher success in solving crimes, highlighting the role of officers in the field and the importance of proper technology use. Agencies who provide Flock access and training to a broad spectrum of officers, from patrol to their investigative bureau and beyond, see more success with the technology.

Collaboration with Other Agencies

Network effects, both locally and on a national scale, should agencies choose to engage in such, can play a significant role. In fact, the number of nearby Flock customers and shared devices per sworn officer may greatly impact clearance rates. As an example, the addition of 20 Flock customers near an agency can lead to a 1% increase in clearance rate.

Overcoming Challenging Environments

Agencies with fewer sworn officers and larger population areas achieve higher clearance rates when using ALPR, suggesting ALPR's effectiveness in addressing resource challenges. This is especially important when considering the current hiring and retention challenges that agencies across the country face.

This research provides valuable insights into ALPR technology's impact on law enforcement outcomes. The identified factors can guide agencies in optimizing their use of ALPR technology for enhanced crime clearance rates.

Applying this framework to all of Flock's customers and estimating the totals, over 700,000 crimes each year are solved using Flock Safety technology. This represents roughly 10% of reported crime nationwide.

These findings warrant further research specifically examining the impact of ALPR usage on specific categories of crimes, especially in examining the before-and-after impacts of those changes. Such a study is presently underway as part of a joint research project by Texas Christian University and the University of Texas at Tyler.

Read the full white paper, published on Researchgate.