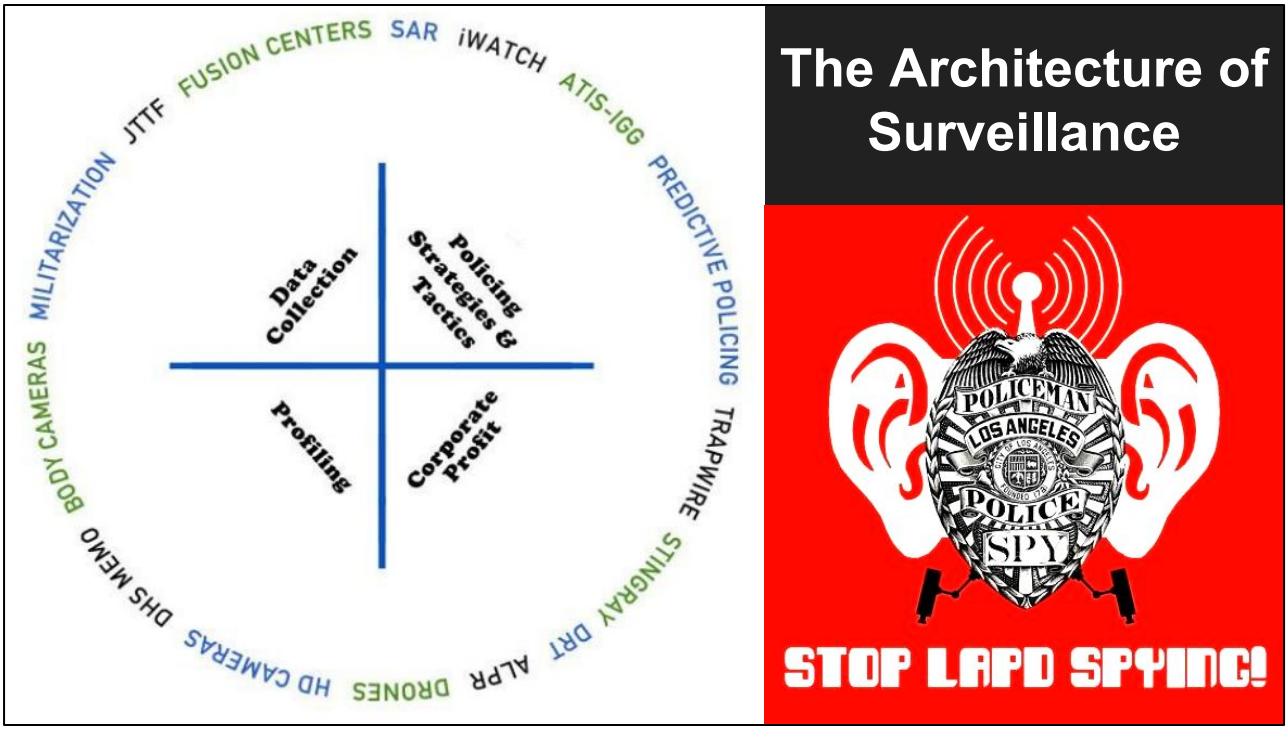
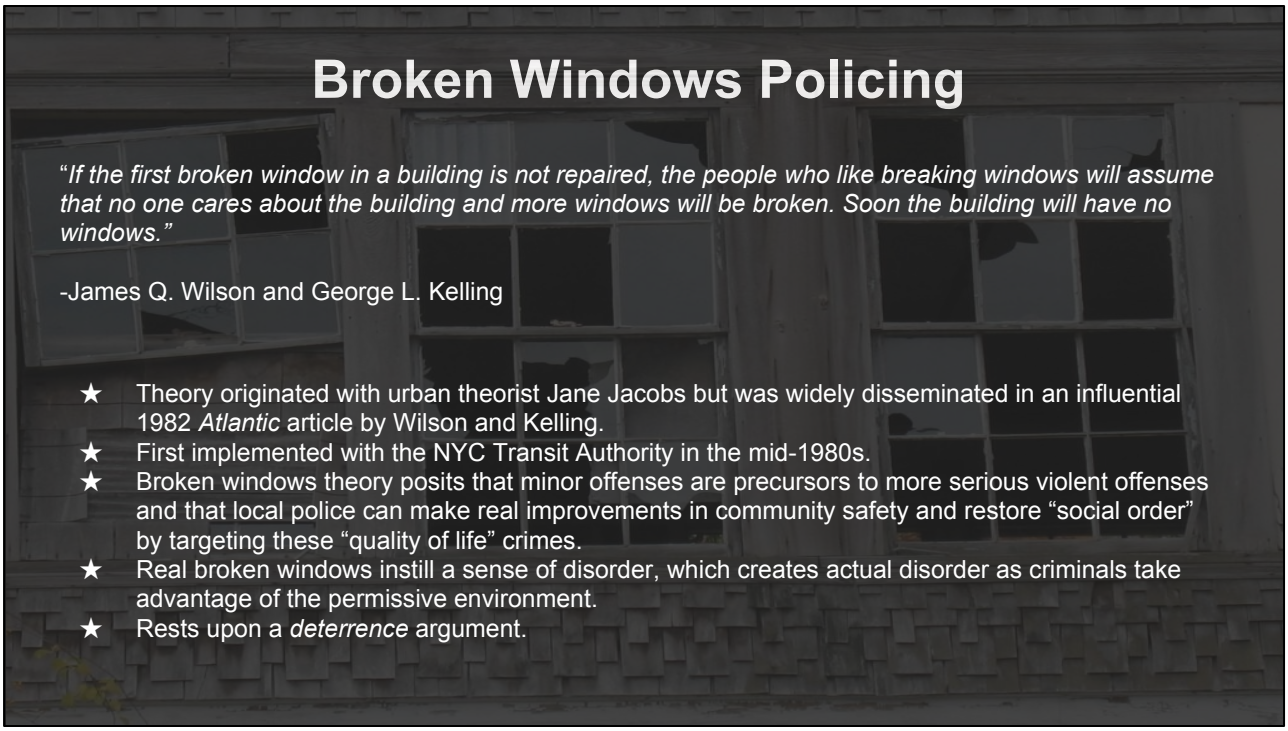

Predictive Policing
And the Rise of the Algorithm
STOP LAPD SPYING!



Before the next slide, one of us should say “Predictive Policing isn’t just something happening right now; it’s not a moment in time, but a tactic that has long been employed by police as part of the architecture of surveillance.”



"My neighborhood is like it's under martial law. We got all these rookie officers on each corner. These officers, they just run around and ask you for any excuse to ask you for your ID and write you a summons," said Angel Garcia, 34, of East Harlem, waiting in line at summons court in lower Manhattan last month."

Different contributors to broken windows theory have argued that "informal social controls" like watchmen and vigilante groups historically maintained community cohesion. Others argue that land use is a precursor to disorder as vacant lots breed crime whereas local business, convenience stores, and other institutions enforce social control meachnisms such as surveillance, intervention, and communication.

Broken windows is essentially a (neo)conservative theory of policing based on dubious research that was invented by Wilson, Kelling, Bratton and Jack Maple, which holds that minor crimes, left unattended, breed moral degeneration and social decay within communities leading to the breaking of more serious social norms (e.g. rape, homicide, terrorism) and produces greater insecurity.

-One broken window leads to many --- delinquent youth can grow up to be "supepredators"

Deterrence theory = crime thrives due to lenient law enforcement
Consistent with "rational choice" theory: people simply "choose" to commit crime because they either know they can get away with it and/or because the police are not around.

Holds that the causes of crime have little to nothing to do with various social and even psychological factors (aka “root causes”).

-Broken windows has now included within its purview the State’s obsession w/ counter-terrorism by more recently arguing that street level cops should be the eyes and ears of communities, receiving tips and information from residents that provide them with (often spurious) leads on “suspicious individuals.” Bratton and Kelling have mentioned that cops should be the front-line defense against terrorism through initiatives like community policing, which take officers out of their patrol cars and onto the streets of communities (read: COIN)

Safer Cities Initiative/ RESET

CompStat

- ★ CompStat collect, analyzes, and maps crime data and other essential police performance measures on a regular, timely basis, and holds police managers accountable for their performance as measured by these data.
- ★ Is both a philosophy and a set of management tools.
- ★ Focused upon quality of life issues.
- ★ Commanders observe weekly crime reports
- ★ Crime “hot spots” merit additional concentrations of police resources.
- ★ Relates to broken windows theory as minor criminal offenses result in summons and arrests, which feed the data and metrics that CompStat is based upon.

Structural Impact

- ★ **Information-sharing** - CompStat helped to facilitate the flow of information between divisions and from the top-down.
  - ○ Enabled leaders to take a more holistic, and less adversarial, view of the entire organization.
- ★ **Decision-making** - Moved away from hierarchical bureaucracy and “removed the handcuffs from police.”
  - ○ Commanders were provided with greater autonomy to implement measures they believe would reduce crime
- ★ **Organization-culture** - The agency became more creative, flexible, and better equipped to manage risk.

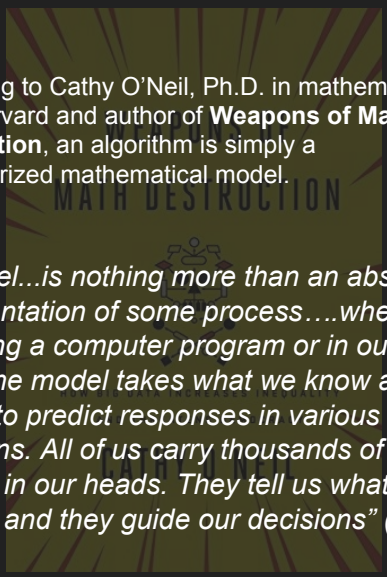
-Initially implemented with the NY Transit Authority and was further refined in the mid-1990s with NYPD.
-Community and Problem-oriented policing went hand in hand with CompStat as strategies meant to respond to shifting crime hotspots

Criticism of CompStat

- ★ Socioeconomic and demographic factors better explain the drastic reduction in crime in NYC during the 1990s.
  - Drastic reduction in unemployment
  - “LIttle-brother syndrome”
  - Transformations in the drug economy
  - Decrease in young people (18-24)
  - High level of violent crime from 1975-1990 was a historical anomaly
  - Awareness and prevention campaigns
- ★ Feeds into broken windows policing - officers are obsessed with bottom line/crime statistics.
  - Race and class based targeting, harassment, and killing on “quality of life” grounds.
- ★ Officers underreport serious crimes while focusing upon minor “low hanging fruit” in order to meet their numbers.

Background on Predictive Policing: Jeff Brantingham on Predictive Crime Patterns

Algorithms



According to Cathy O'Neil, Ph.D. in mathematics from Harvard and author of **Weapons of Math Destruction**, an algorithm is simply a computerized mathematical model.

"A model...is nothing more than an abstract representation of some process….whether it' s running a computer program or in our head, the model takes what we know and uses it to predict responses in various situations. All of us carry thousands of models in our heads. They tell us what to expect, and they guide our decisions" (19).

Here's an example of modeling in everyday life:

Let's say you are going to the airport. You know that one route is more direct but the traffic moves slower.

The second route is longer, distance-wise, but moves much faster overall.

If your goal is to get to the airport in the shortest amount of time, the second route seems better because of the knowledge that you have. If there is an accident on the second route, however, the first route now becomes much faster.

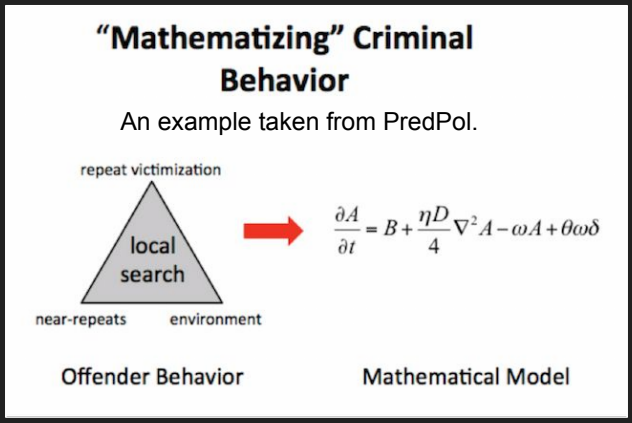
A model is simply using the information you have to make a prediction about some future outcome.

If the information is inaccurate or incomplete, the predicted outcomes are also inaccurate. Models only representing real life abstractly; they can never account for all of the factors of everyday life.

Models can also be represented in mathematical terms, like the amount a box can hold being represented by the formula
V = L x W x H.

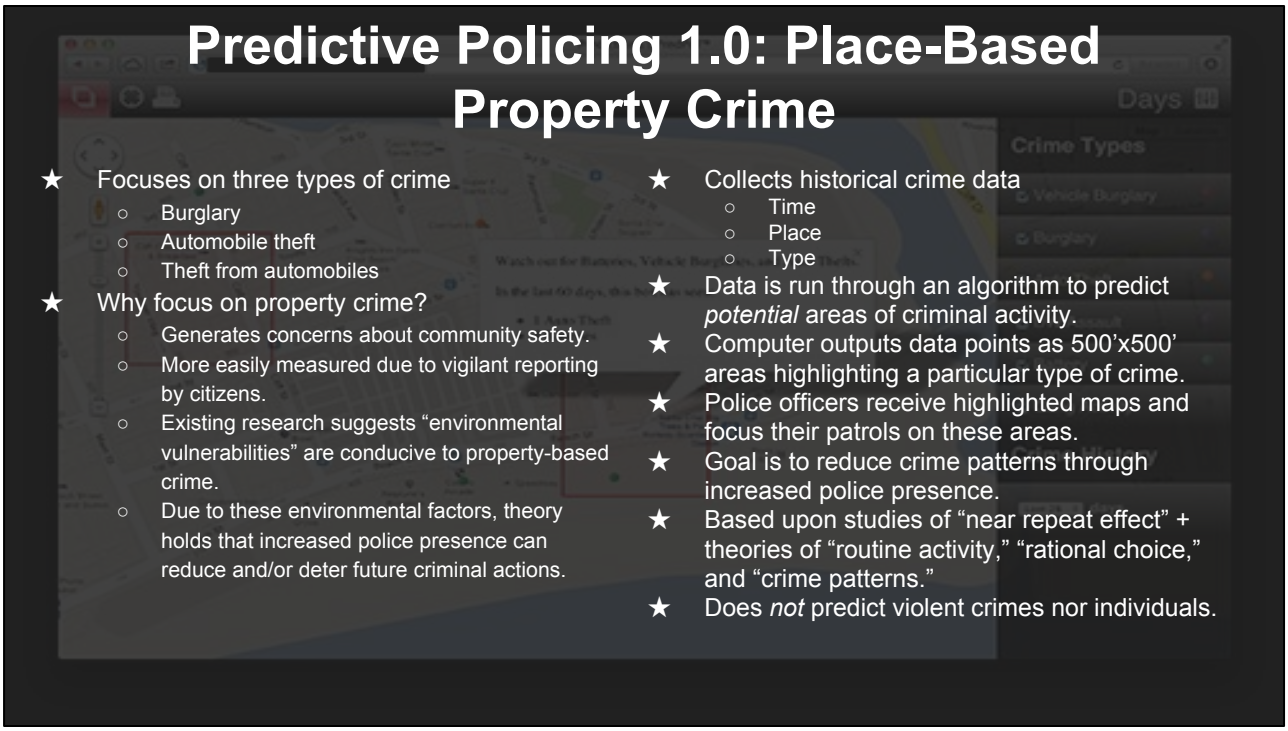
The companies (PredPol, Hunchlab, etc.) that create these algorithms do not share them publically to keep their algorithms secretive and therefore profitable. This means that communities being heavily policed because of these algorithms have no idea what factors are taken into consideration.

While we can see the abstract mathematical representation of PredPol's algorithm, we do not know what A, B, or any of the other symbols represent as far as real actual data goes like repeat victimization or near-repeats nor what factors they look at, environmentally, when they use their algorithm to distribute police resources nor do we know if this is the actual algorithm used by PredPol.



Smart computer algorithms can learn from their miscalculations and mistakes, but it's important to note that this takes thousands to hundreds of thousands of data points. When we're talking about police algorithms, those data points are people and neighborhoods where people live and the mistakes they are making echo throughout communities.

If people don't recognize the V = L x W x H example, draw a box and explain the volume, length, width, and height thing?



Predictive Policing 1.0 can also be inclusive of other factors such as weather (temperate, hot), season (holidays), time of day (night), day of week (paydays) or proximity to a particular event (concert, club), which could increase the risk of property-based crime.

These factors are reduced to data points.

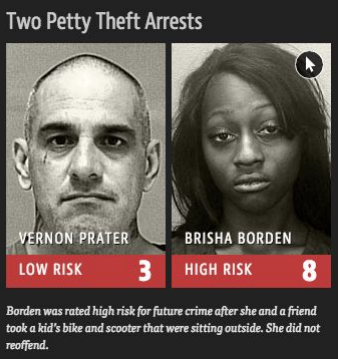
Near repeat effect - "...Crime is concentrated among relatively few victims. A significant number of people become repeat victims, some of them over and over again."
Routine activity - "...Offenders prefer to return to a location associated with a high chance of success instead of choosing random targets."
Rational choice - "Research has repeatedly demonstrated that offenders prefer to return to a location associated with a high chance of success instead of choosing random targets."
Crime patterns - "Crime also does not occur randomly. It tends to concentrate at particular places for reasons that can be explained in relation to victim and offender interaction and opportunities that exist to commit crime."

Predictive Policing 2.0: Hunchlab

- ★ Was created by Philadelphia-based company Azavea through a $600,000 federal grant
- ★ Tested out in Philadelphia, New York, and Miami
- ★ Hunchlab's software was designed to evaluate:
  - Temporal Patterns (Time of day, day of the week, day of the month, season, etc.)
  - Weather
  - **Environmental Risk Factors (location bars, bus stops, fast food restaurants etc.) also known as Risk Terrain Modeling**
  - Socioeconomic risk factors (low-income)
  - Historic crime patterns
  - Near repeat patterns

Azavea's C.E.O. Robert Cheetham has claimed *"We're not using data on who's been released from prison, or how many people of color live in this location. We don't feed any of that kind of data into the system."*

Another algorithm Hunchlab has designed for risk assessment of parolees has come under fire in a report by ProPublica as not only looking at color as a factor, but as a heavily weighted factor that creates biased and racist results.



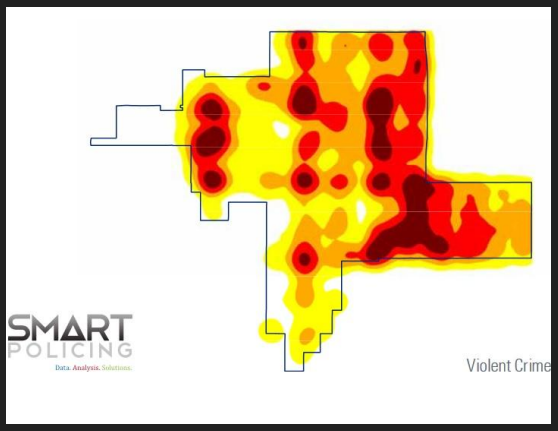
Note on the third star on the right: Many of the features of Hunchlab are part of Predpol with the exception of Environmental Risk Factors, aha, Risk Terrain Modeling. We also don't know how much each factor weighs on their algorithms - so while Predpol and Hunchlab both look at temporal patterns, we don't how heavily that weighs in on either software's predictions.

Note on the image: Borden was an 18 year old girl convicted of stealing a scooter that was sitting outside of her friend's house and taking it for a joy ride. A neighbor called the police. This was her first offense. Since her release, she has not reoffended. Prater has a record - shoplifting from a local Home Depot and two armed robberies. "Prater is serving an eight-year prison term for subsequently breaking into a warehouse and stealing thousands of dollars' worth of electronics." This is one of a multitude of cases like this. Remember: smart algorithms learn, but they take hundreds of thousands of data points to do so, and data points in predictive policing are people.

A Closer Look at Risk Terrain Modeling

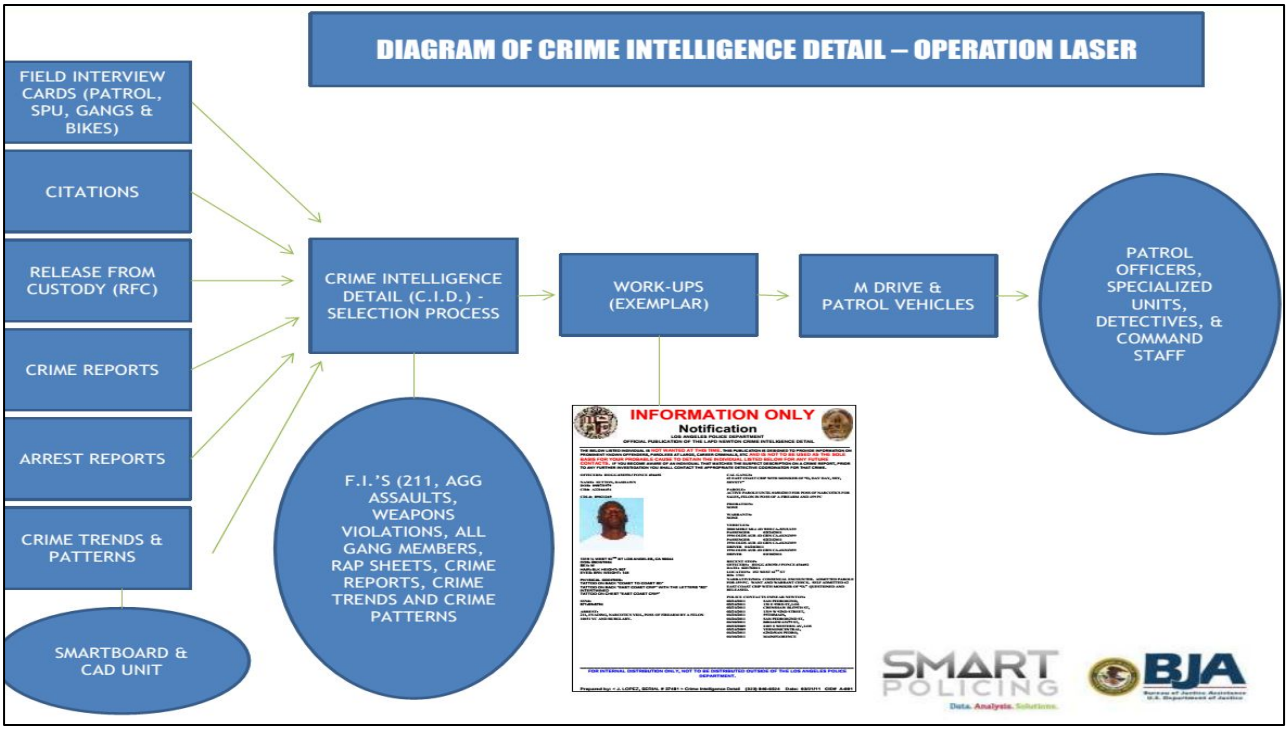
Predictive Policing 3.0: Person-Based Violent Crime "Operation LASER"

- ★ Los Angeles Strategic Extraction and Restoration (LASER) Program
- ★ Uses location-based and offender-based strategies
- ★ Its objective is to reduce gun related violence
- ★ Partnership between LAPD and Justice and Security Strategist (JSS) Dr. Craig Uchida
- ★ Examines:
  - ○ Crime data
  - ○ Location
  - ○ Arrests data
  - ○ Calls for police service from 2006-2011
- ★ Newton Division population 150,000 people, 9 square miles
  - ○ 3rd highest number of gun crimes



Launched 2011
LASER -

Exact offender
Restore peace
Remove anonymity of gun offender or gang members
Reduce gang- gun related crimes



CID collects data- patrol shifts, bicycle units, foot patrol, parole compliance unit, daily field identification cards, citations, release from custody forms, crime reports, arrest reports,
Use of Palantir
Selection of chronic offender
Risk factors applied

- 5pts gang member
- 5pts parole or probation
- 5pts prior arrest w/ hand gun
- 5pts violent crime on wrap sheet
- 1pt for quality interaction with police

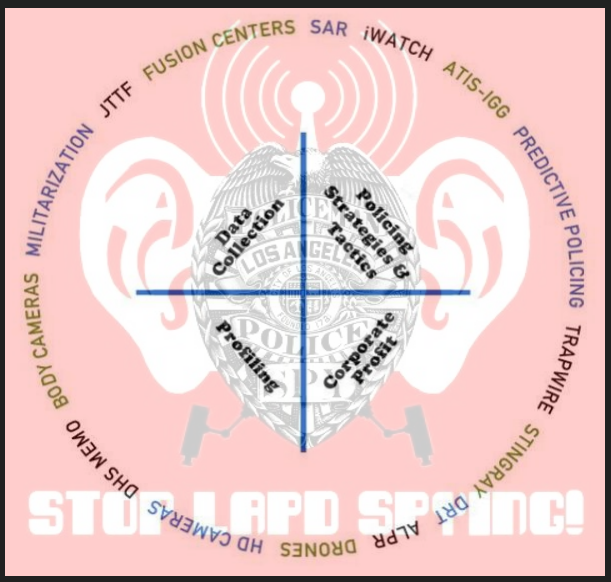
Uses surveillance- ALPR, CCTV, and cellphone trackers
CID unit works w/ RACR and Palantir to create crime bulletins
Bulletins are considered Intelligence Files
Developed by CIA's venture capital arm

Future Works

- ★ The relationship between the 4th Amendment and Predictive Policing
- ★ Further debunking the theories used behind Predictive Policing
- ★ Looking into new Predictive Policing software being developed
- ★ The impact of programs like LASER on the population
- ★ Community outreach and your stories
- ★ And more...

What do we do about Predictive Policing?

- ★ How did this sideshow work for you?
  - ○ Do you feel like you understand predictive policing more?
  - ○ What more do we need to know?
- ★ How do we debunk predictive policing?
- ★ What actions should we be taking now?
- ★ Any other questions, comments, or concerns?
- ★ One thing you can do is share this information with your friends, neighbors, and acquaintances. This slideshow will be put up on the Stop LAPD Spying website if you wanted to use it as a resource.



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