PredPol is not a Black Box

P. Jeffrey Brantingham
UCLA Professor of Anthropology & Co-Founder of PredPol

jeff@predpol.com

Key Points
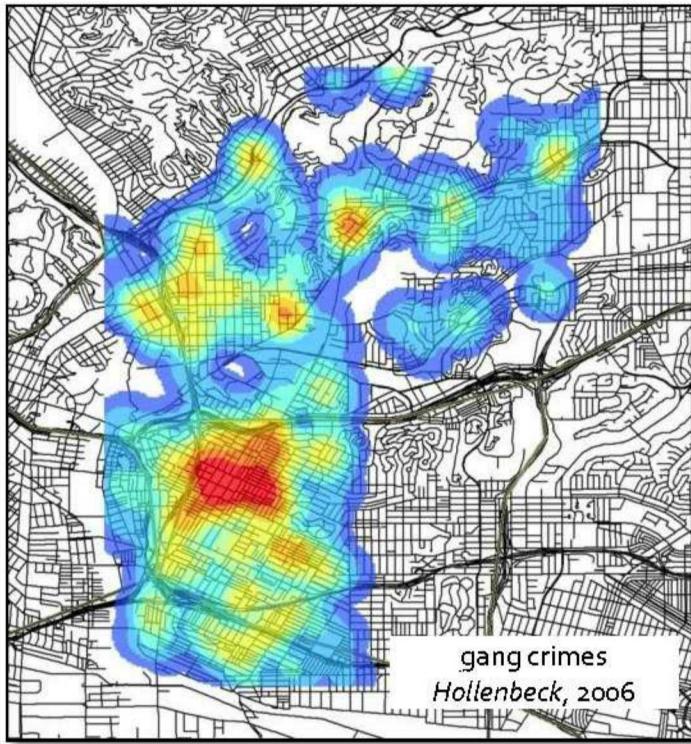
1. functionality – the science behind PredPol

2. testing – randomized trials & deployments

3. customization – no distractions

4. implementation & security – fast & robust

5. integration – flexible, seamless fit

6. demonstration – PredPol live
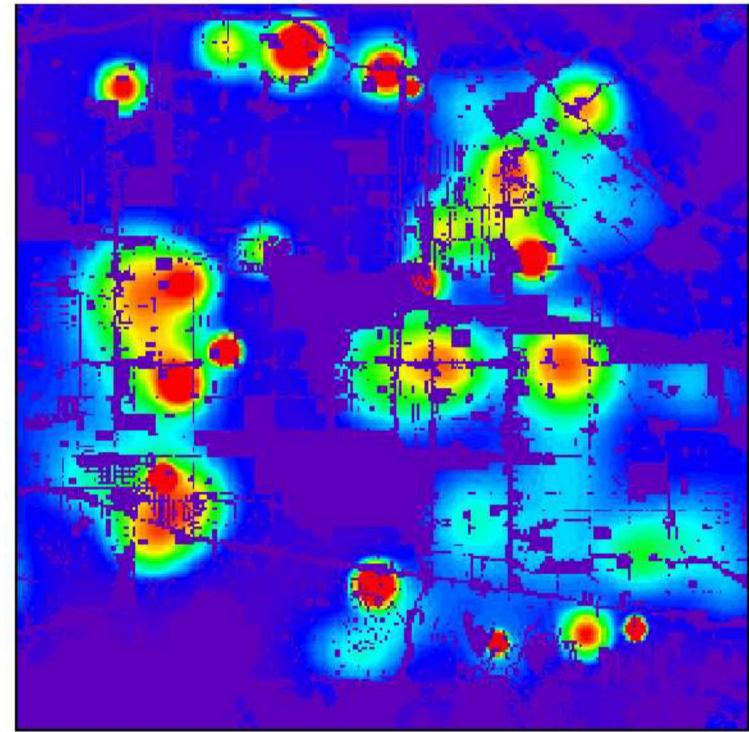
PREDPOL®

WWW.PREDPOL.COM

1. functionality

gang crimes
Hollenbeck, 2006

long-term resource allocation   chase overnight crime
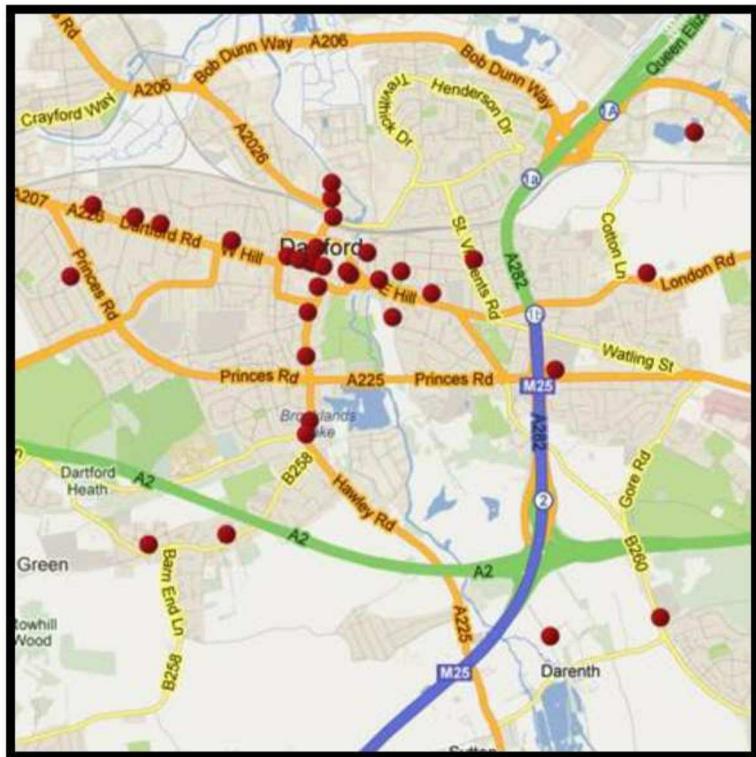
PREDPOL®

WWW.PREDPOL.COM

event data + math
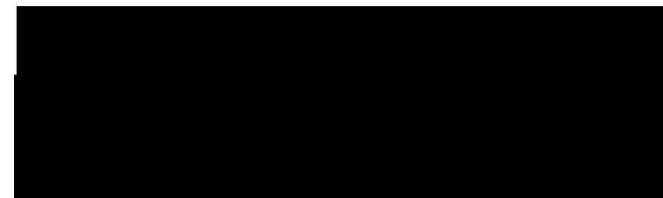
near real-time data

repeat victimization

local search
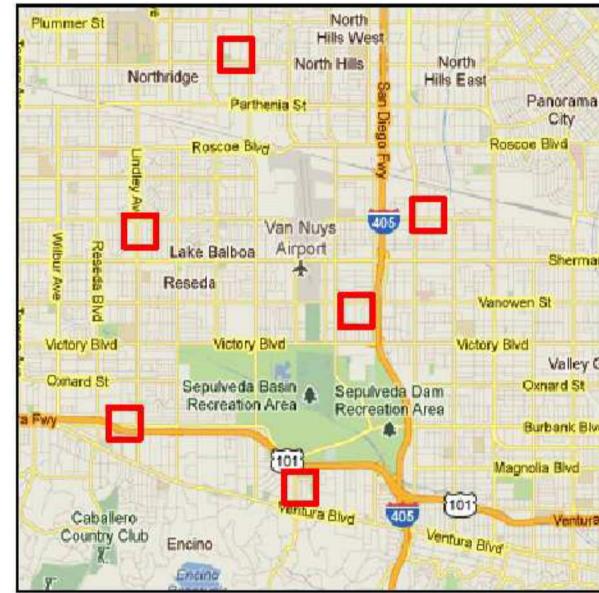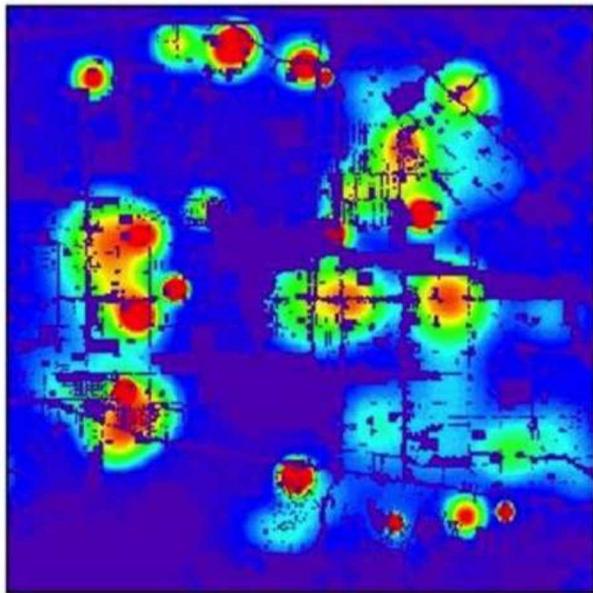
near-repeats   generators

low friction


tactical ambiguity

tactical clarity
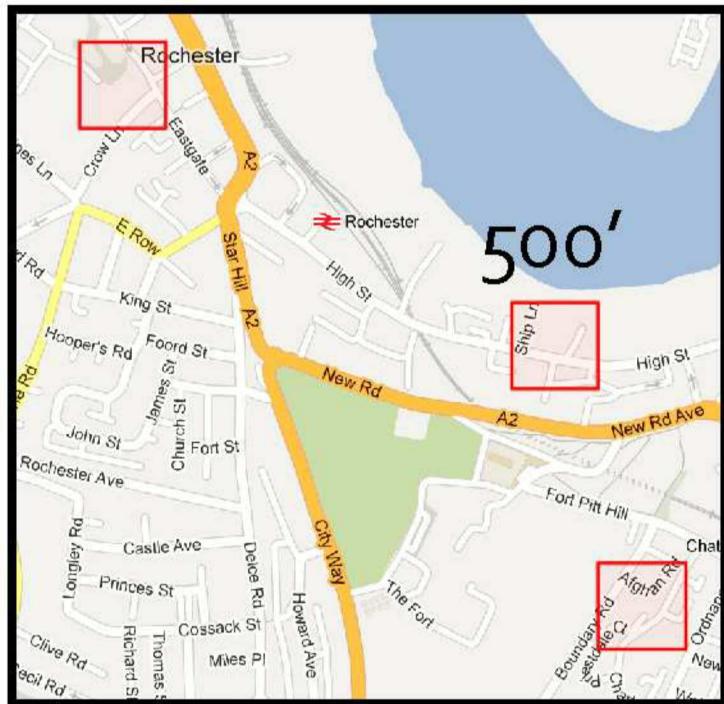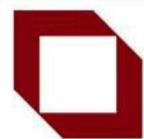
dynamic micro-scale predictions

precision & tactical clarity

knowledge, skills & experience

problem-oriented

environmental design

community policing

2 A226, Gravesend, England
Address is approximate

500 ft

A226

DEBENHAMS

BUS
STOP
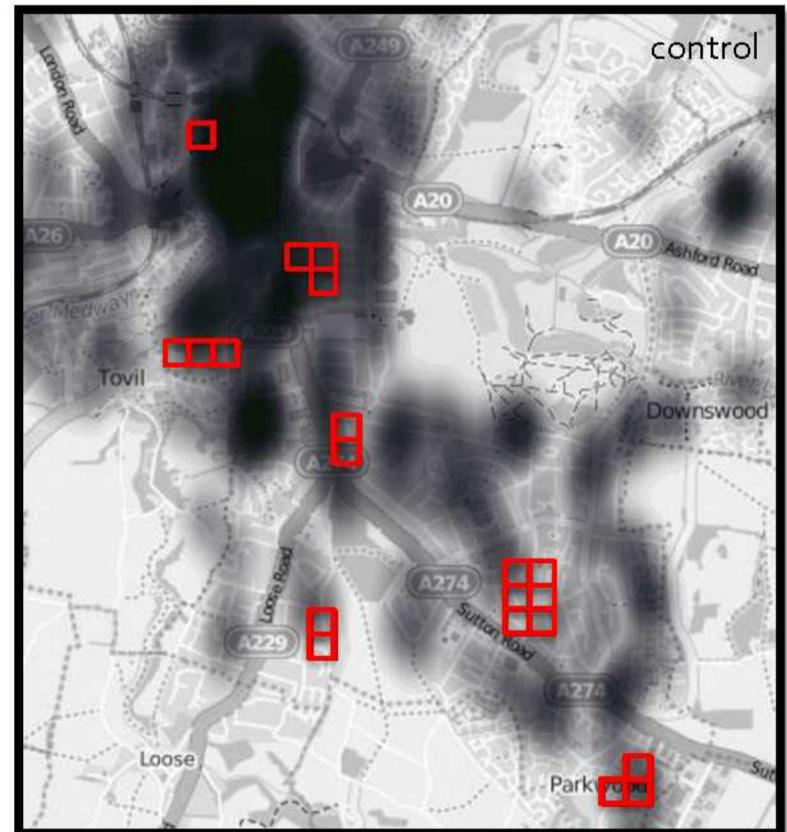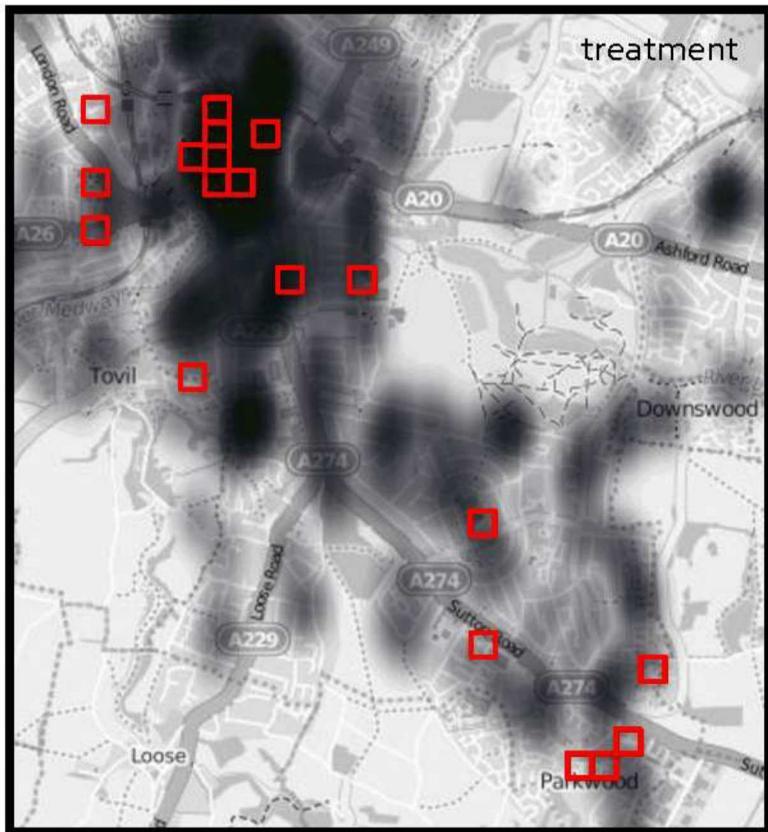
place-based
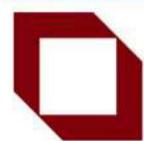
intelligence-led

broken-windows

2. experimental testing

randomized controlled trials • matched areas • natural dosage experiments
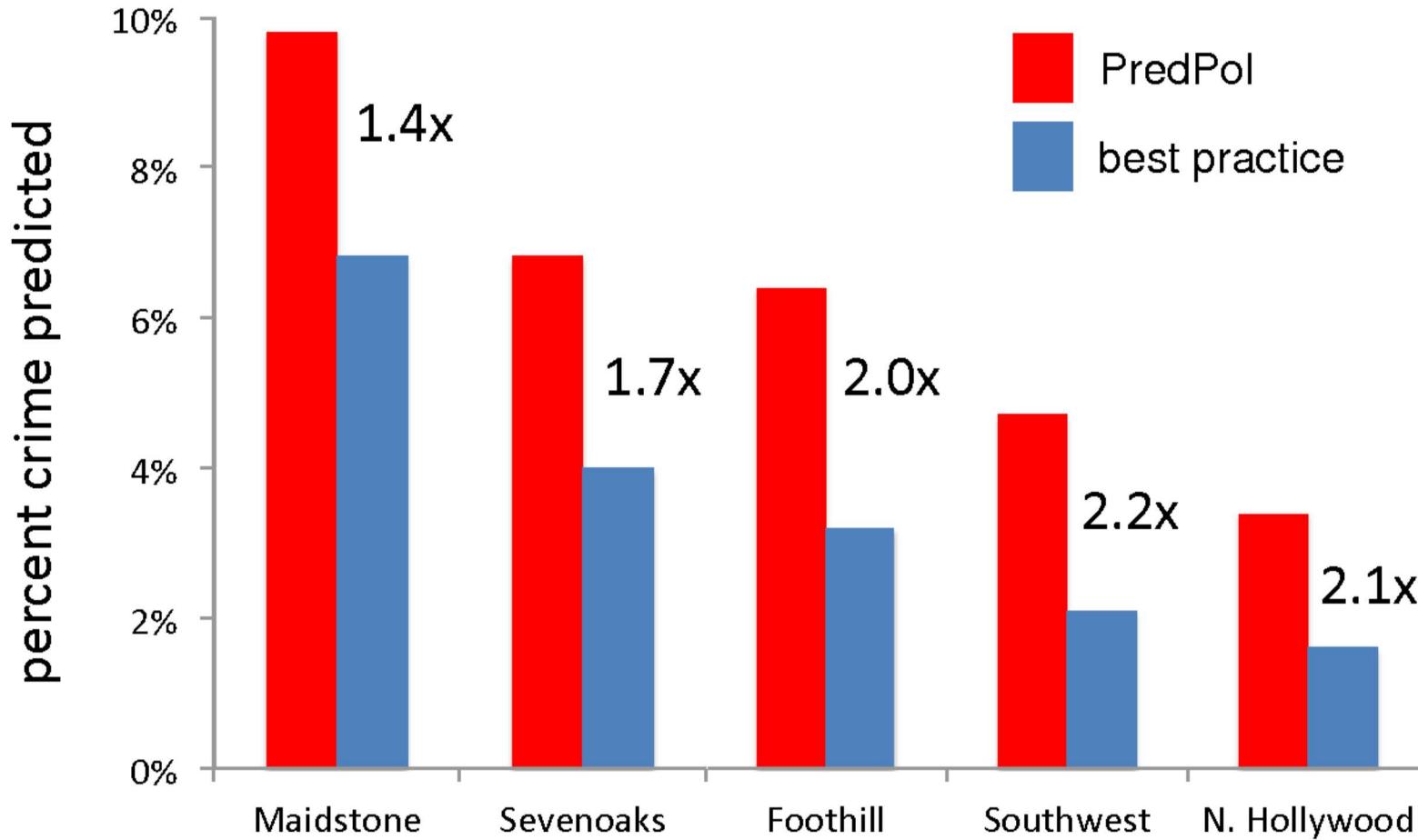
PREDPOL®

WWW.PREDPOL.COM
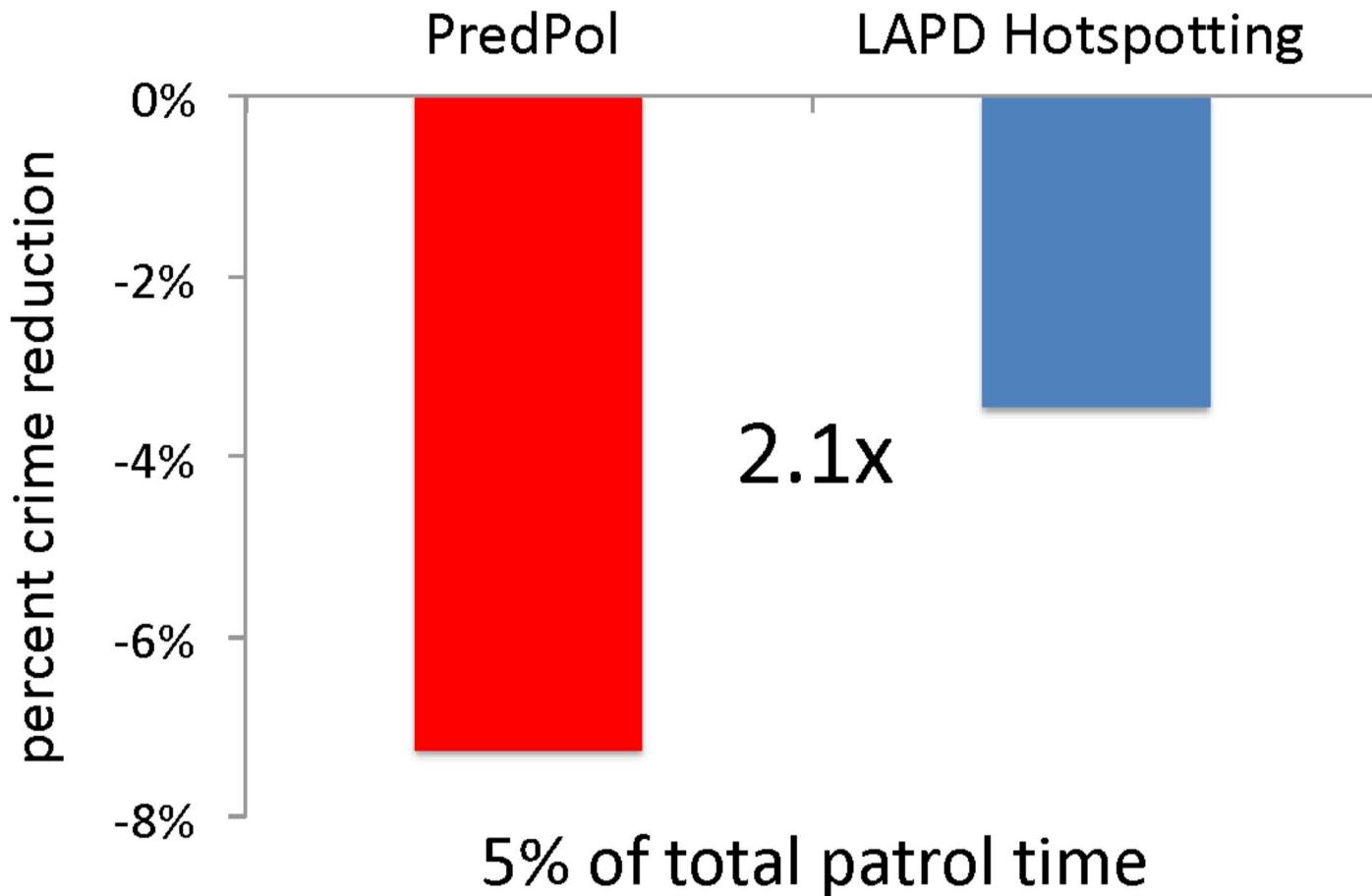
head-to-head accuracy
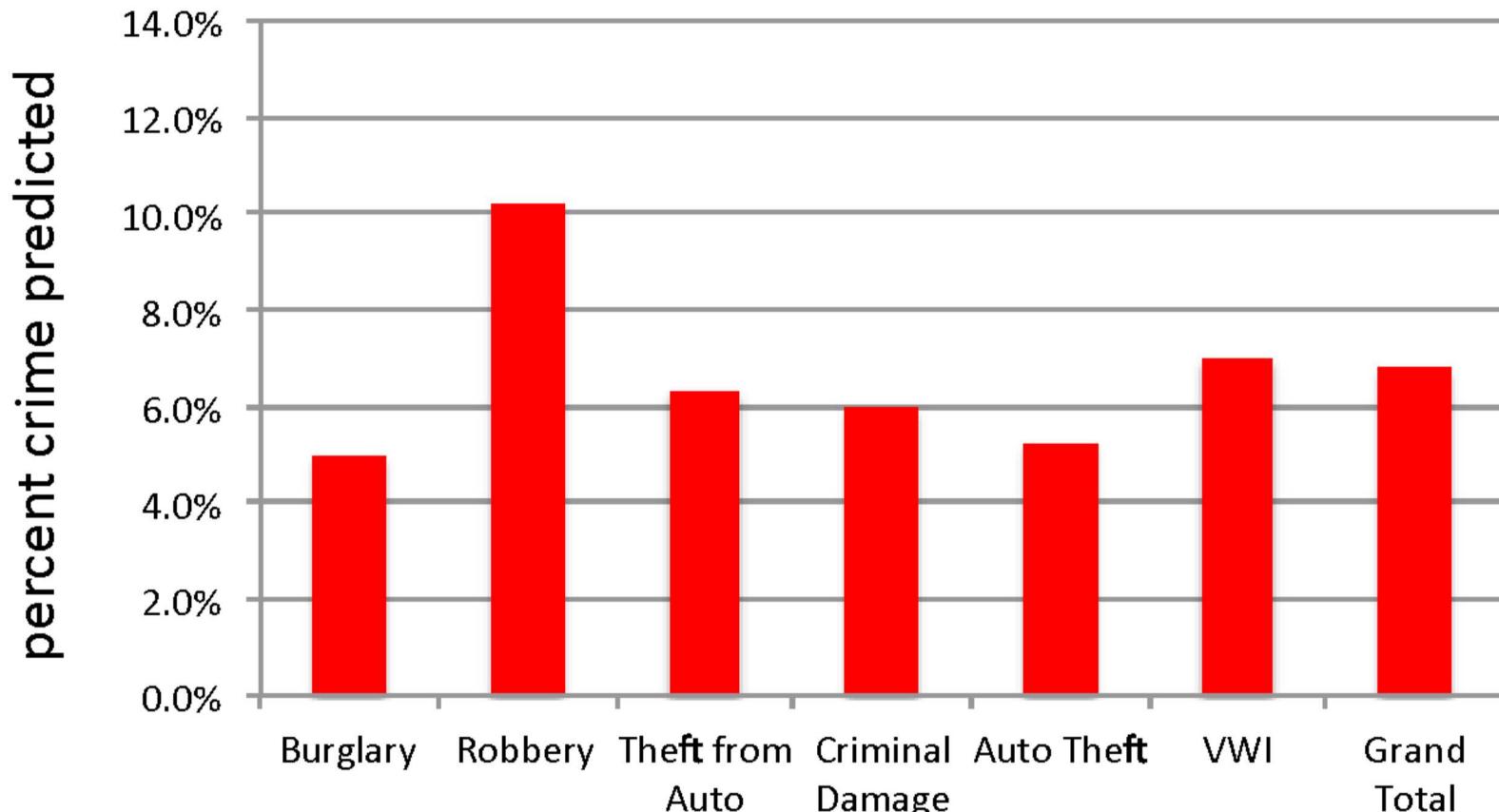
2015. Mohler et al. Randomized controlled field trials of predictive policing. *Journal of the American Statistical Association*.

head-to-head crime reduction
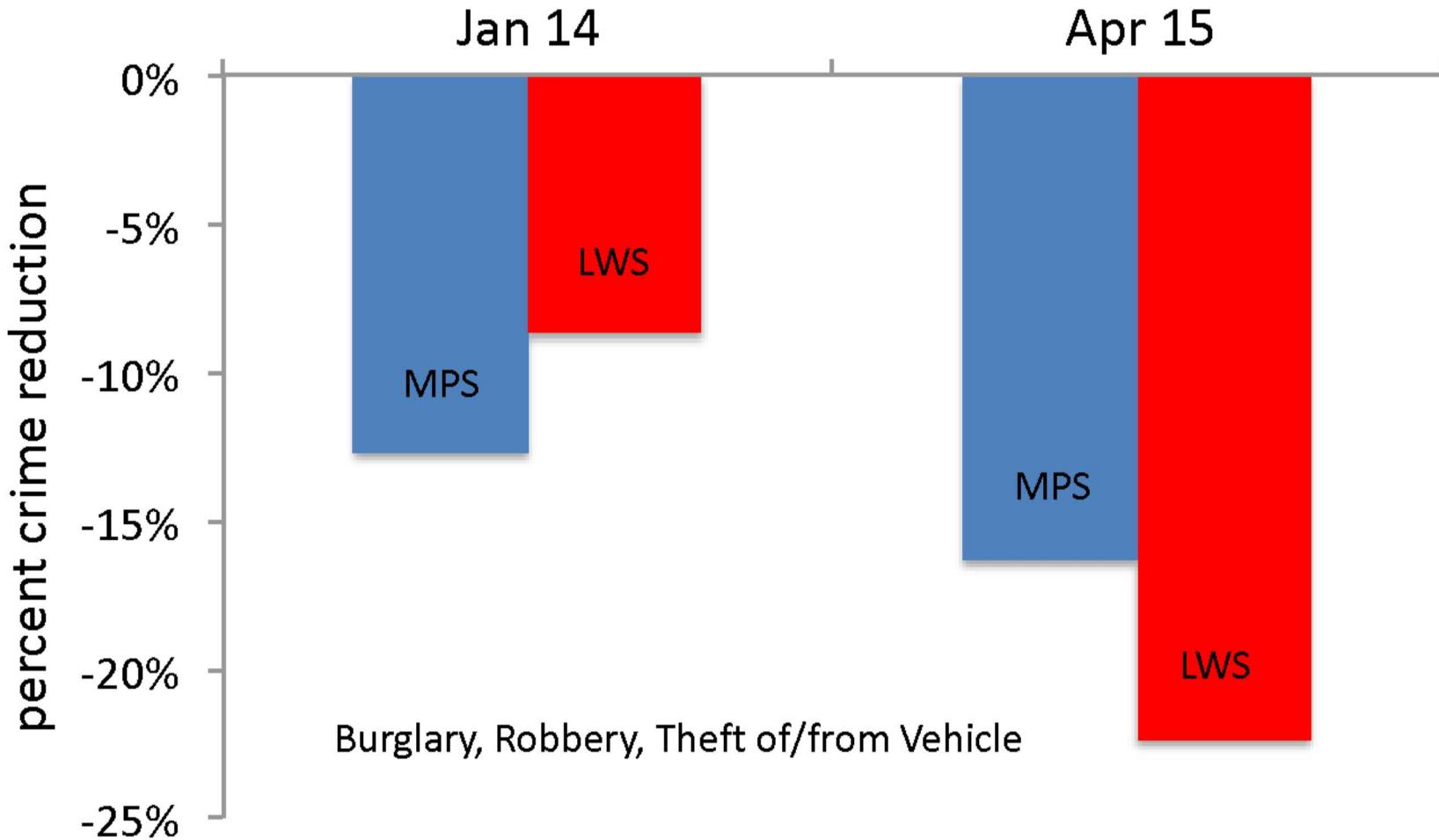
2015. Mohler et al. Randomized controlled field trials of predictive policing. *Journal of the American Statistical Association*.

MPS Lewisham Feb-Mar 15

1.2% of land area under prediction – 6.6% accuracy overall

Lewisham Crime Impact

percent crime reduction

Jan 14 — Apr 15

0%, -5%, -10%, -15%, -20%, -25%

MPS, LWS

Burglary, Robbery, Theft of/from Vehicle

NYPD Tests July 2015

First Platoon   Second Platoon   Third Platoon
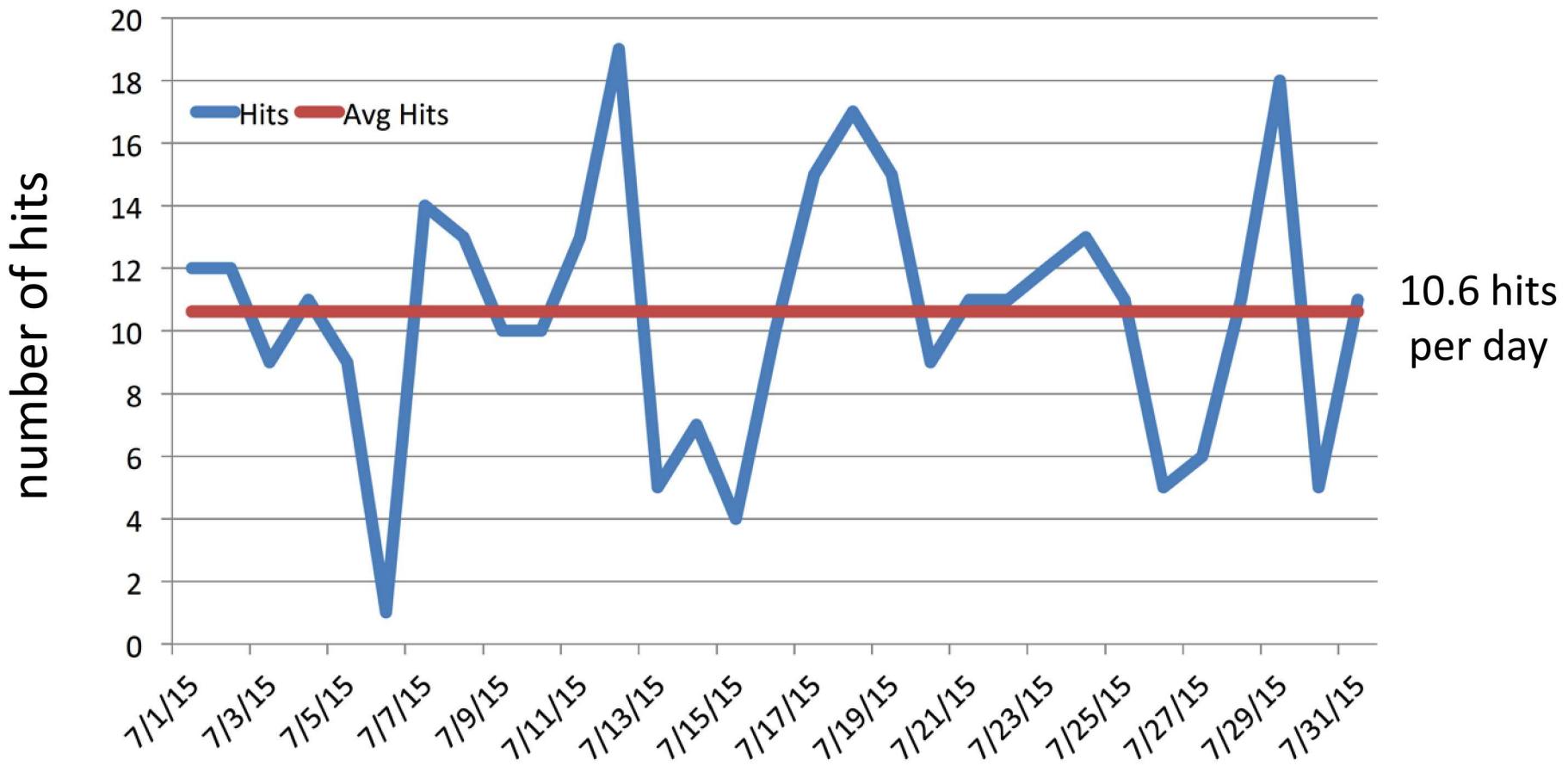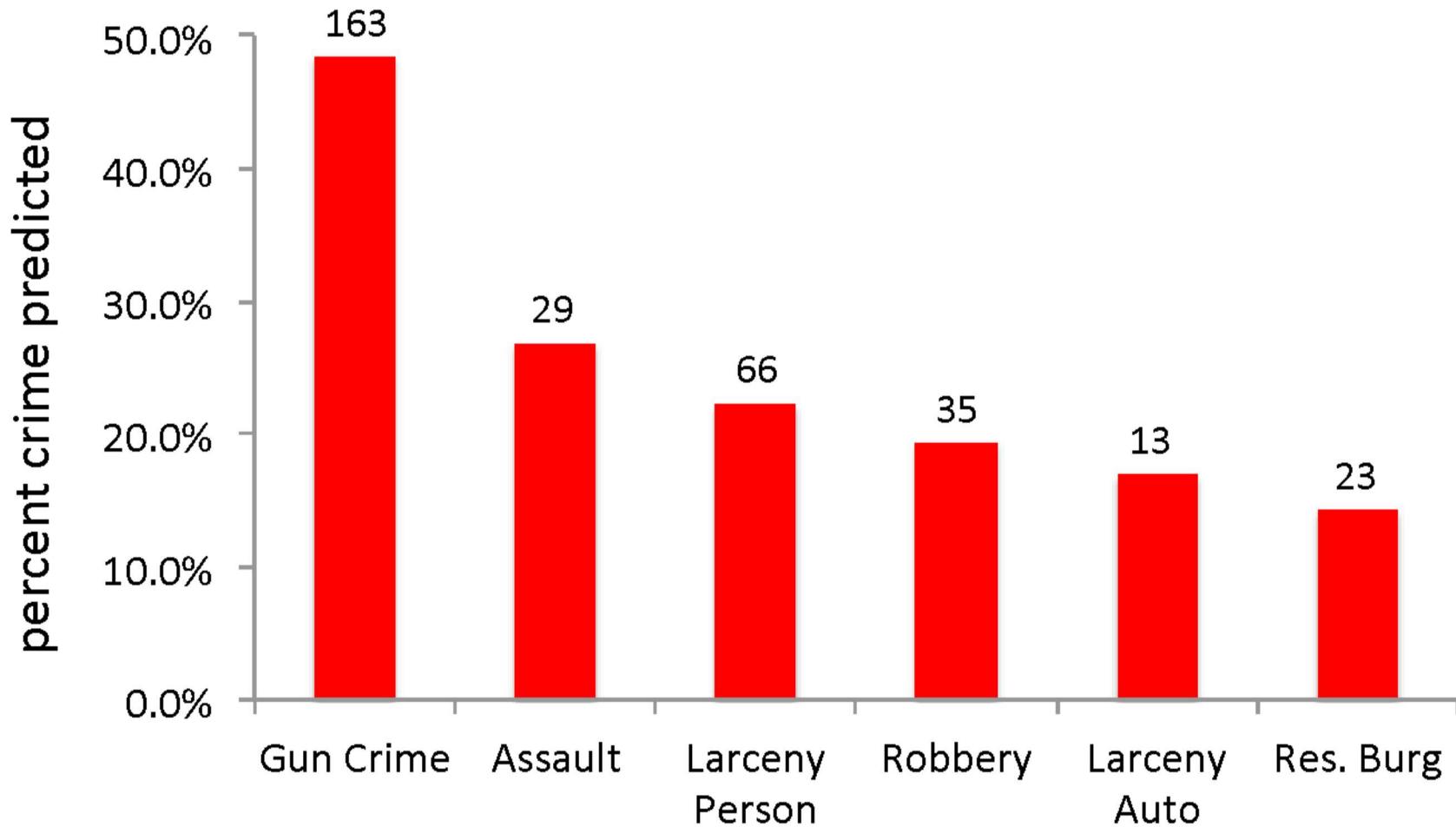
Manhattan North • Queens South • Staten Island
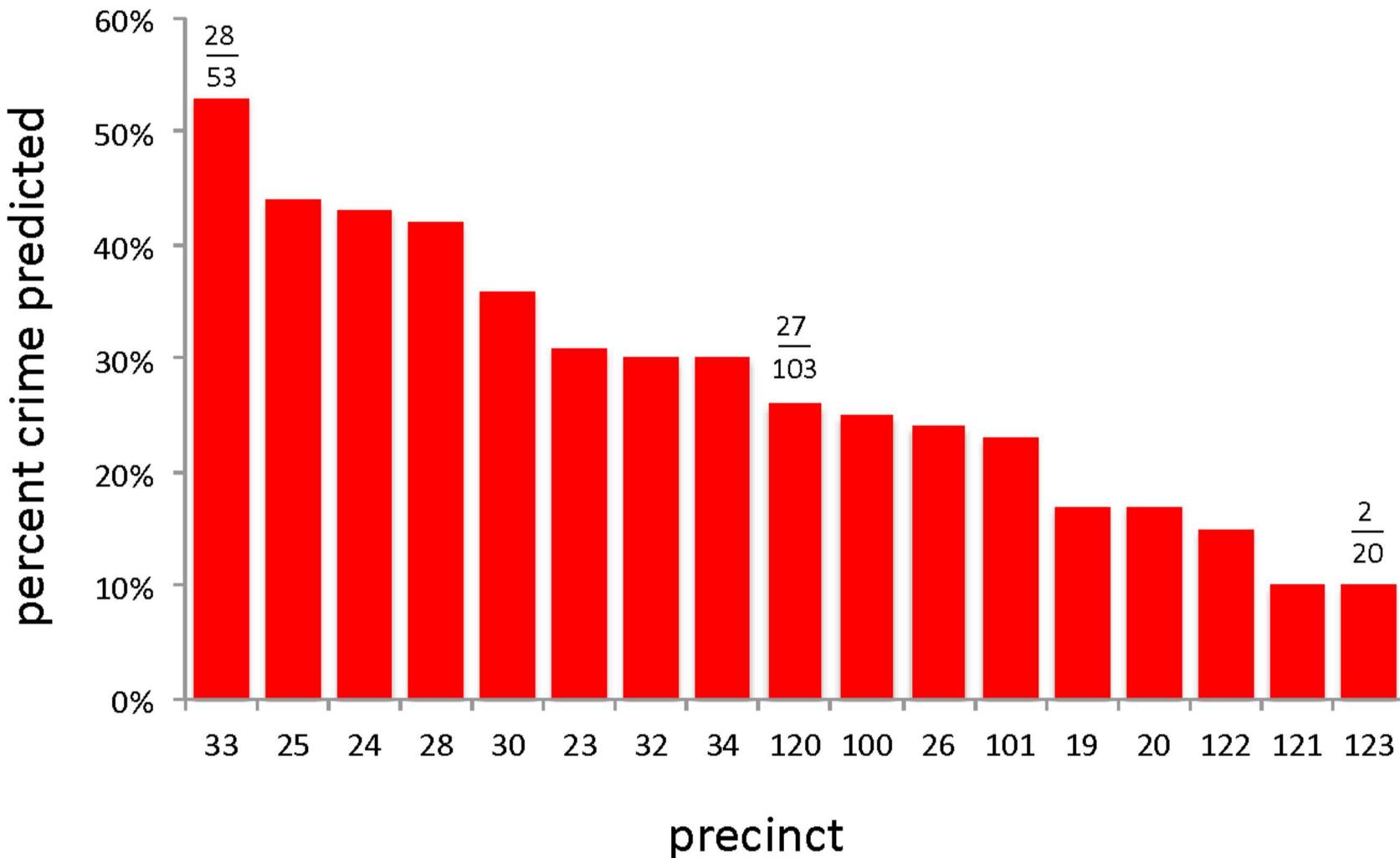
NYPD by Day July 2015

NYPD by Crime July 15

NYPD by Precinct July 2015
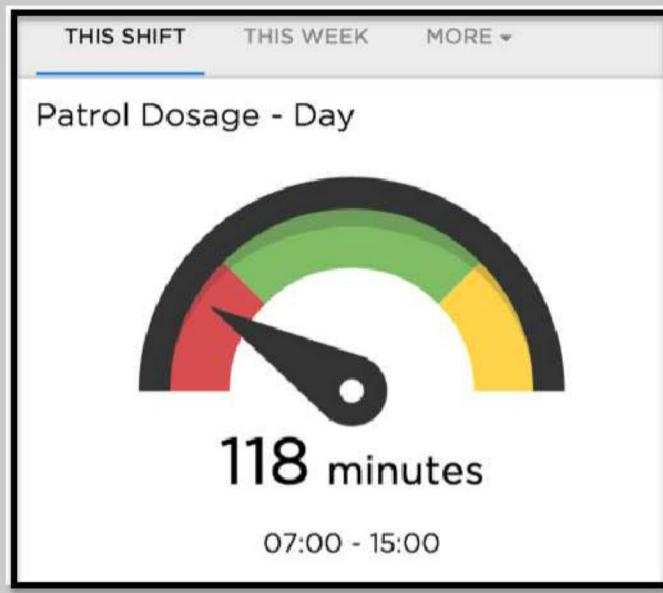
3. customization

mission maps

July 30, 2015 / Day

Robbery, Violent Crimes, Burglary, Vehicle Crimes

A	85 Crystal Av	B	469 Ryerson Ave
E	250 S Grove Ave	F	600 Villa St
I	100 W Chicago St	J	355 E Chicago St
M	1585 Dundee Ave	N	841 Bode Rd

real-time dosage tracking

THIS SHIFT   THIS WEEK   MORE ▾

Patrol Dosage - Day

118 minutes

07:00 - 15:00

user, data & deployment management

My Profile   Users   Department   Audit Report   Crime Search   Districts

shift & crime

DAY ▽ ⚙ ?

Crime Types
for predictions and history   ✕

● Robbery

● Violent Crimes

● Burglary

● Vehicle Crimes

○ Theft

○ Gang Crime

Crime History
days of crime to map

3 7 14 28 📅
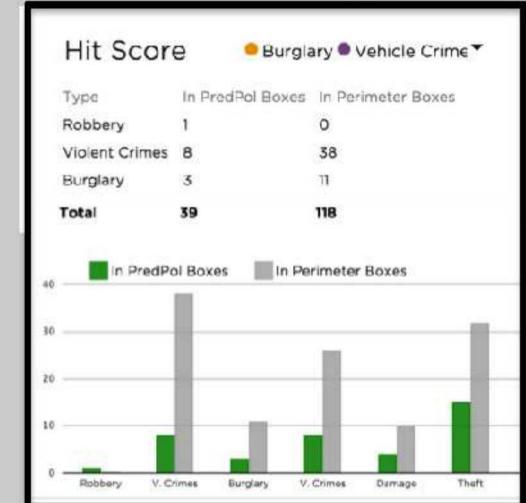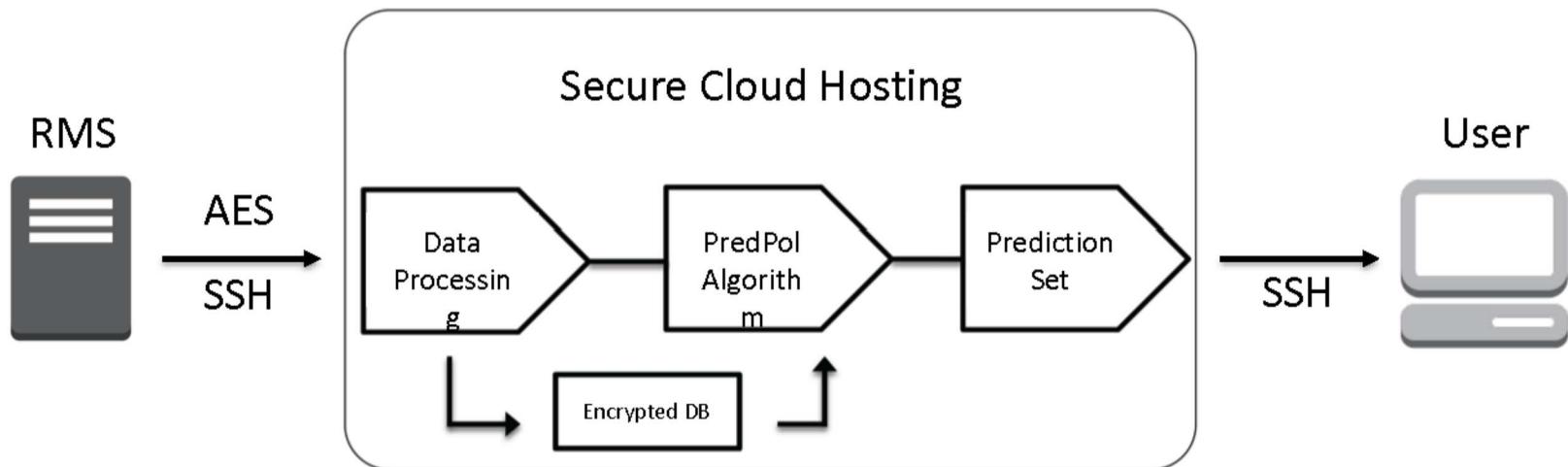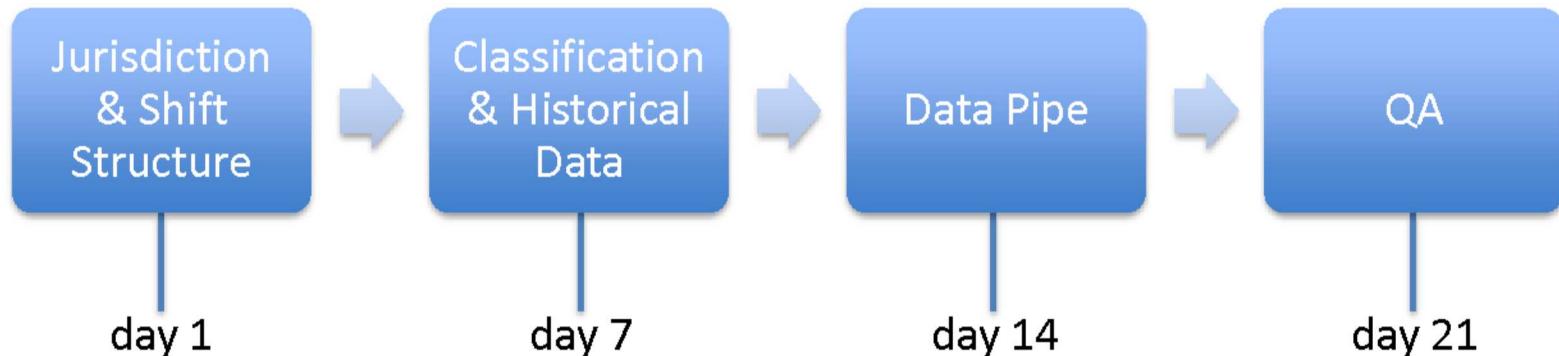
pre-schedule missions

Mission Schedule

Monday	Watch 1	AM Resd/Auto Burg
	Watch 2	AM Resd/Auto Burg
	Watch 3	PM Comm/Auto Burg - Auto Theft
	Watch 4	PM Comm/Auto Burg - Auto Theft
Tuesday	Watch 1	AM Resd/Auto Burg
	Watch 2	AM Resd/Auto Burg
	Watch 3	PM Comm/Auto Burg - Auto Theft

hit-scoring

Hit Score   ● Burglary ● Vehicle Crime ▾

Type	In PredPol Boxes	In Perimeter Boxes
Robbery	1	0
Violent Crimes	8	38
Burglary	3	11
Total	**39**	**118**

■ In PredPol Boxes   ■ In Perimeter Boxes

4. implementation & security

Jurisdiction & Shift Structure		Classification & Historical Data		Data Pipe		QA
day 1		day 7		day 14		day 21

Secure Cloud Hosting

RMS

AES

SSH

Data Processing

PredPol Algorithm

Prediction Set

Encrypted DB

SSH

User

5. integration

web & mobile
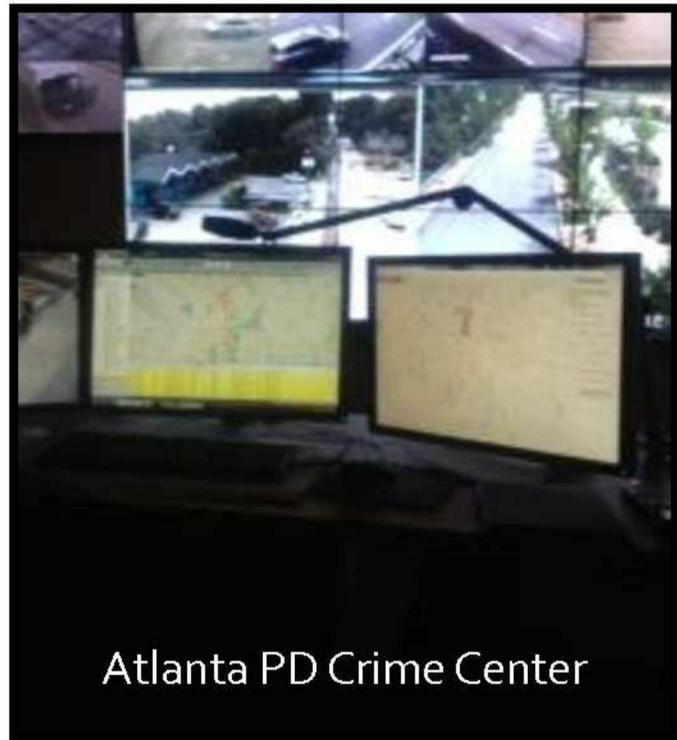
automated delivery

full API integration
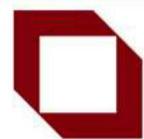
Foothill PredPol

PQ	7654 LAUREL CANYON BL BC 16A81	PH	10274 Tujunga Canyon Boulevard
PR	8500 Sunland Boulevard BC 16A77	PB	12016 Neenach Street
PF	11961 Allegheny Street BC 16A77	PG	9460 Laurel Canyon Bl
PK	13053-13077 Carl Street BC 16A23	PL	10855 Fellows Avenue BC 16A23
PO	11374 BORDEN AV BC 16A23	PP	12360 Foothill Boulevard BC 16A11

Atlanta PD Crime Center

PREDPOL®

WWW.PREDPOL.COM

PredPol

is NOT:

- profiling of individuals
- a replacement for knowledge, skills & experience
- new infrastructure

IS:
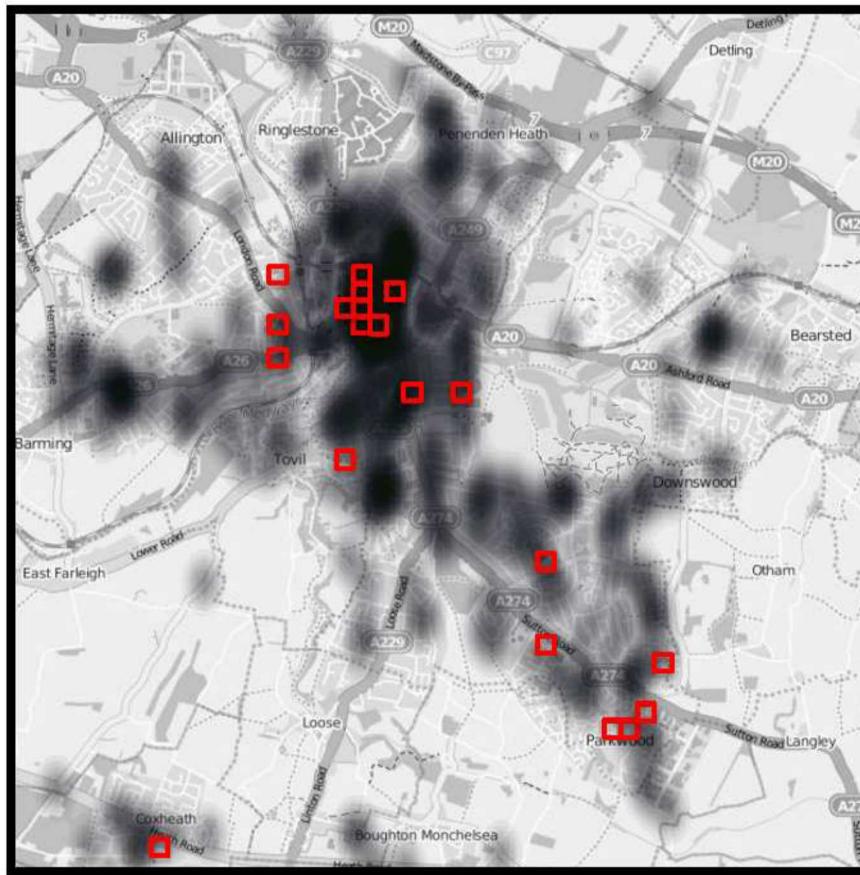
- accurate prediction of crime location & time
- day-to-day operations focused
- a means for reducing the costs of crime

PREDPOL ®

WWW.PREDPOL.COM

Questions?

PREDPOL®

jeff@predpol.com

WWW.PREDPOL.COM