



Using Data to Determine High Visibility Enforcement/*Engagement*





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Metropolitan Nashville PD

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OVERVIEW

- Introduce data-driven strategies, and place-based and evidence-based concepts and how they can be effectively used for crash and crime reductions AND improving the quality of life for your community
- Metropolitan Police Department
 - High Visibility Enforcement
 - Koper Curve – Hot Spot Research
 - Data Collection Process and Plan Development
 - Results of Three Trials
 - Lessons Learned/Further Research
- DDACTS 2.0 - High Visibility Engagement

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WHY WE ARE HERE

37,731 Fans at Fenway

36,120 crash deaths occurred



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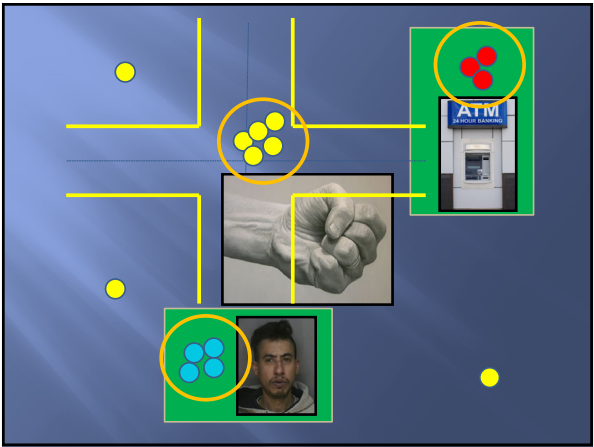
WHY WE ARE HERE

Fill Fenway Stadium 224 times equals one year of property crimes in USA

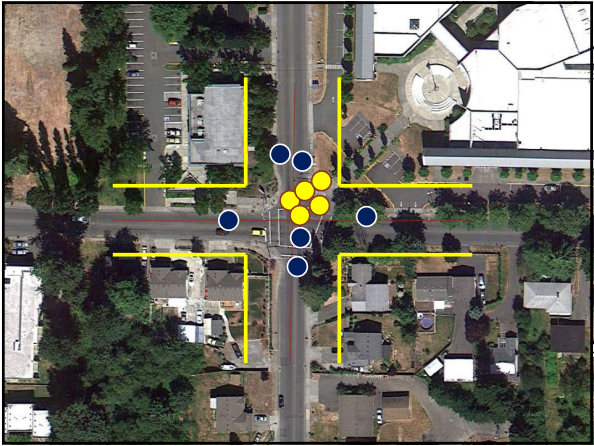
$\times 224 =$ USA Yearly Property Crimes
(Approx. 8.2 million)



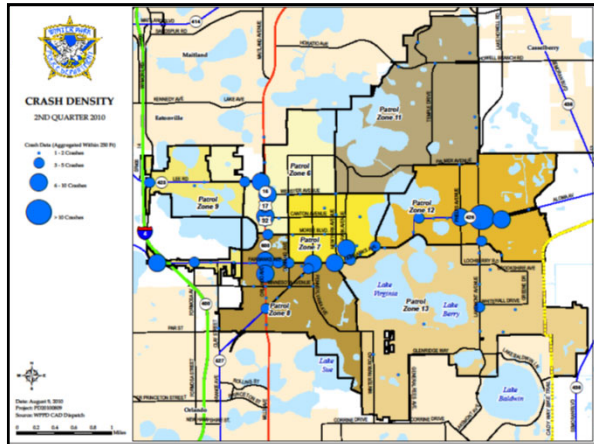
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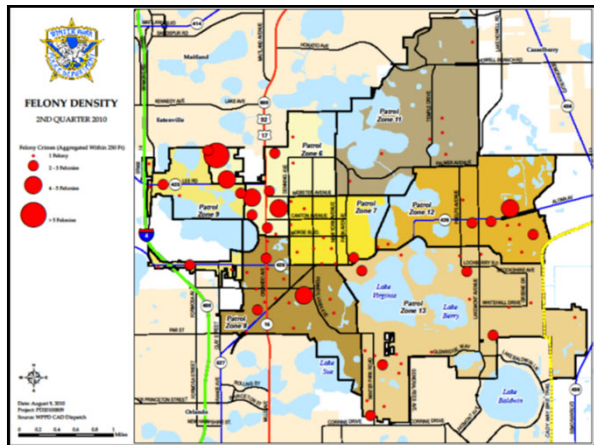
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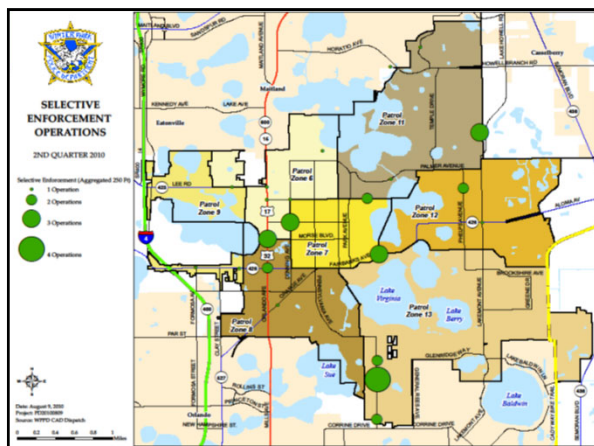
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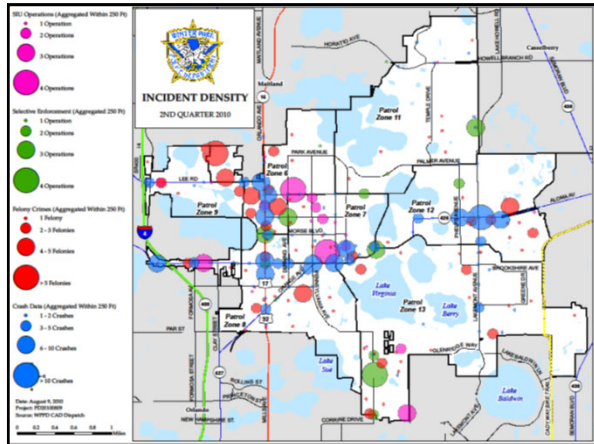
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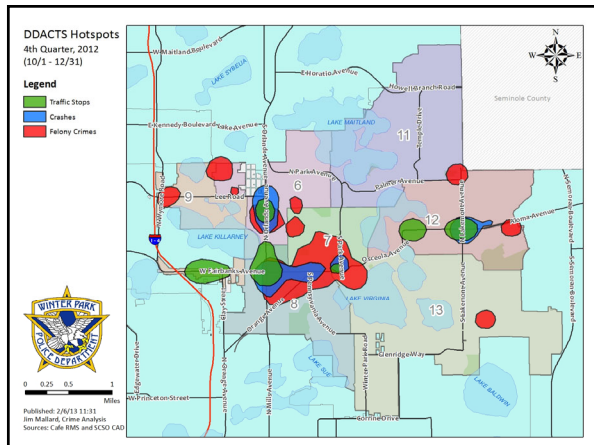
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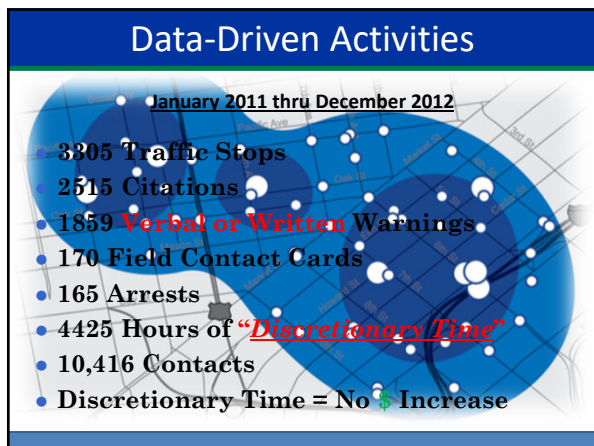
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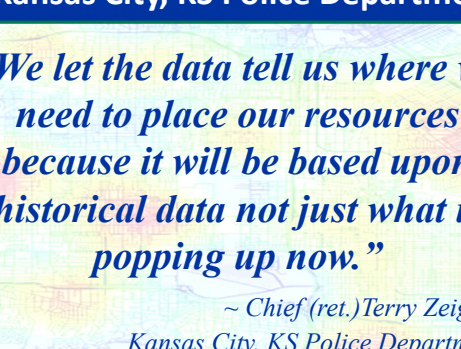


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Why a Data-Driven Approach?

-  Crashes and crime often occur in close proximity.
-  Social harms often involve motor vehicles.
-  Crashes are a significant drain on agency resources.
-  Vehicle stops can yield valuable intelligence.
-  Increasing Demands and Limited Resources

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Kansas City, KS Police Department

“We let the data tell us where we need to place our resources because it will be based upon historical data not just what is popping up now.”

~ Chief (ret.) Terry Zeigler,
Kansas City, KS Police Department

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A word cloud graphic with 'Evidence-based practice' as the central theme. The words are arranged in a circular pattern, with 'Evidence-based' and 'practice' being the largest. Other prominent words include 'research', 'community', 'work', 'model', 'client', 'process', 'making', 'emphasis', 'best', 'literature', 'lack', 'clinical', 'decision-making', 'adapting', 'development', 'skills', 'social', 'family', 'steps', 'include', 'definition', 'figure', 'practitioners', 'involves', 'access', 'understanding', 'described', 'impact', 'experience', 'practice', 'evaluation', 'model', 'case', 'policy', 'practice', 'best', 'literature', 'lack', 'clinical', 'model'. The background is black with a white border.

What is meant by “evidence based”?

- Has shown that it is supported by data, not just based on theory
- Has been repeatedly tested and is more effective than standard care or an alternative practice, &
- Can be reproduced in other settings (generalization).

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Place-Based Policing

- Also, known as “Hot spots” policing
- It is a data-driven strategy within community policing, problem-oriented policing, and predictive policing.
- Place-based policing (PBP) has been developed, practiced, and researched over the last 30 years.
- The method implemented correctly (using data to identify problem areas) has been regarded as effective.
- Effectiveness = crime reduction
- It is also considered an *evidence-based strategy*.

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“Facts” About Crime:



Crime is not geographically random

Repeat victimization of certain people and places is common

Highly motivated offenders are responsible for approximately half of crimes committed.

— Weisburd, et al, 2017

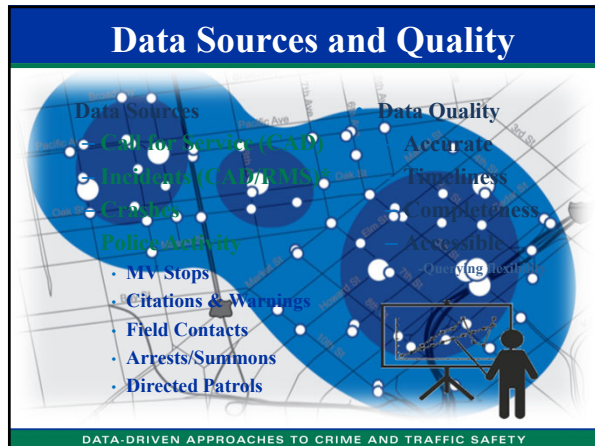
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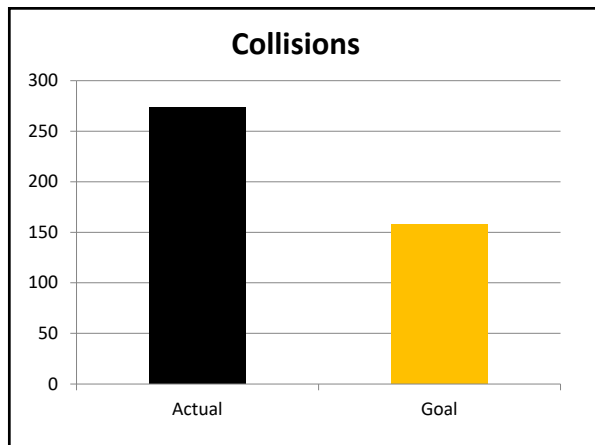
DDACTS as a Data-Driven Premise

The basic premise of DDACTS is the use of Highly Visible traffic Engagement (HVE/Contact) in areas that have been shown to experience high levels of both crime and traffic problems and is an efficient and effective way to improve the safety of the public.

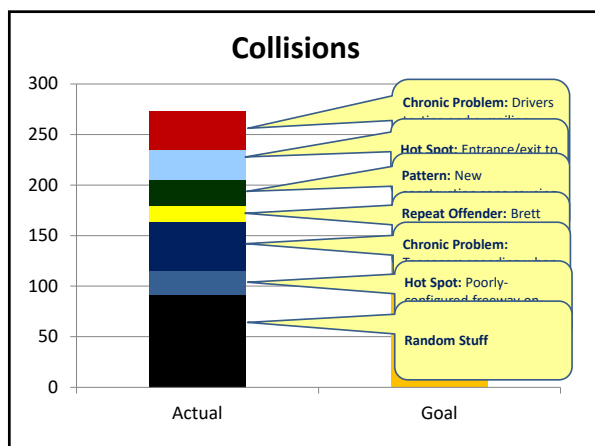
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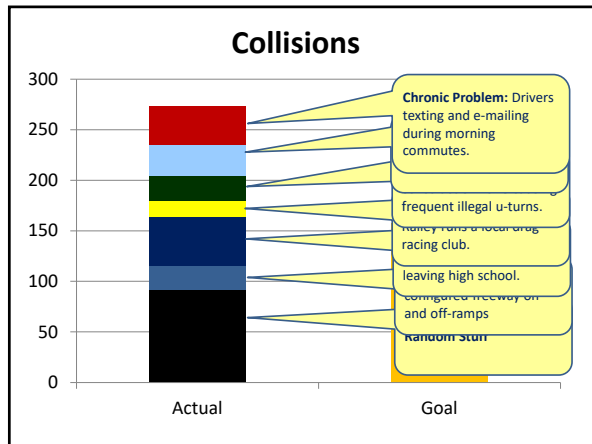
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WHY DDACTS?

Opportunities to build trust exist in every call, every meeting, every conversation.

And:

DDACTS is the ONLY crime AND crash reduction model that puts structure and emphasis on community outreach using a transparent, and data-driven strategy.

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WHY DDACTS?


EVERY dot on a map is the victim of a REAL Crash, Crime or Some Other Social harm.

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Using Data to Determine a High Visibility Enforcement Dosage


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High Visibility Enforcement

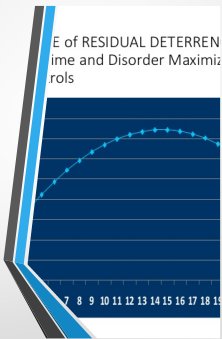
- "HVE combines highly visible and proactive law enforcement targeting a specific traffic safety issue." –NHTSA
- Departure from traditional, every-day enforcement
- Designed to make enforcement efforts obvious to the public
- Gain voluntary compliance with the law, change behaviors
- Deterrence Theory



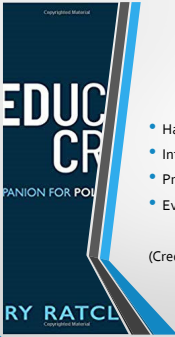
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Koper Curve Hypothesis

- 1995 study by Dr. Christopher Koper
- Found that police could maximize reduction of crime and disorder in a hotspot by making 10-15-minute stops at locations on a random, intermittent basis
- Maximize deterrence and minimize time spent in hot spots
- Hypothesis: Deploy HVE on a random, intermittent basis in crash hotspots. Is there an ideal "dosage?"



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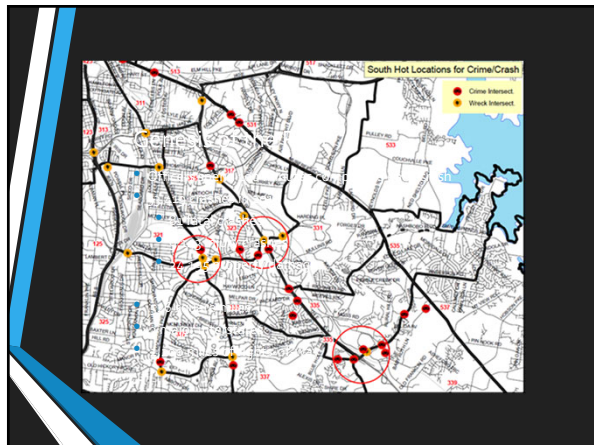


Believing the "HIPE"

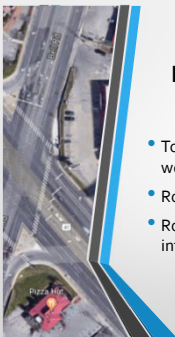
- Harm focused
- Intelligence led
- Problem oriented
- Evidence Based

(Credit: Dr. Jerry Ratliff – Temple University)

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Identifying Hotspots

- Top Crash Intersections – past 12 weeks
- Roadway Characteristics
- Roadway Segments rather than intersections


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Top Crash Intersections

- Weekly Compstat Reports
- Past 12 weeks
- Plotted to closest intersection
- Recent fatal crashes



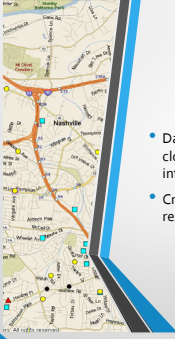
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Teen to face vehicular homicide charges in Antioch crash that killed 2

Posted: Jul 31, 2017 10:44 AM CDT
Updated: Feb 16, 2017 6:54 AM CDT
Posted by Kara Appel | CONNECT
Reported by Briana Armstrong | CONNECT

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Roadway Segments

- Data showed several intersections within close proximity as being top crash intersections
- Crashes were not necessarily intersection related

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Collecting the Data

- Crash Counts
- Contributing Factors
- Temporal Analysis

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Contributing Factors

- List of relevant crashes sent to State for analysis
 - First Harmful Event
 - Person Action
 - Person Condition
- Following too Closely
 - Distracted Driving
- Speeding
- Failure to Maintain Lane

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Officer Instructions

- Team given roadway segments
- Instructed to focus on driving activities that are contributing to the crash problem
- Told that number of stops is not the goal rather stopping the right offenders
- Officers included in entire process resulting in buy-in

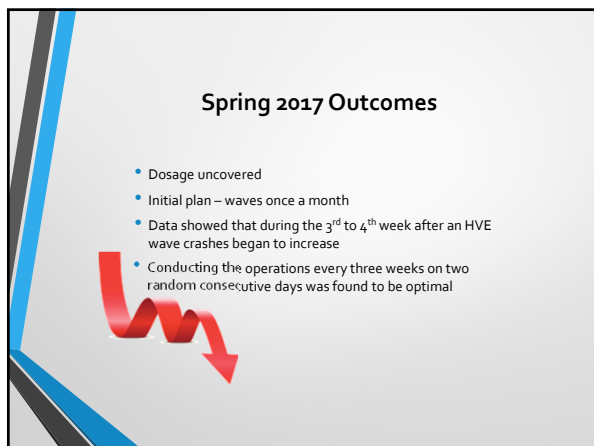
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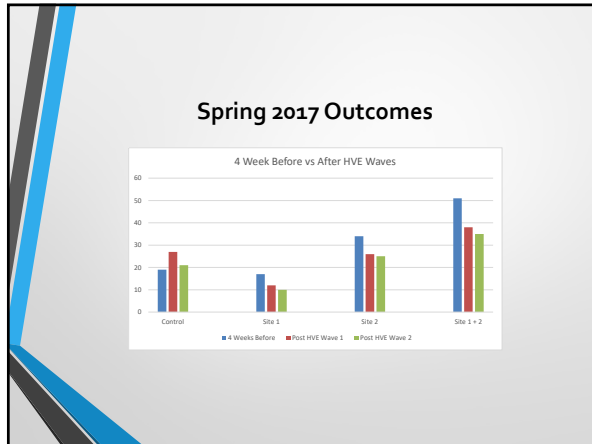
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Scaling Up – Spring 2019

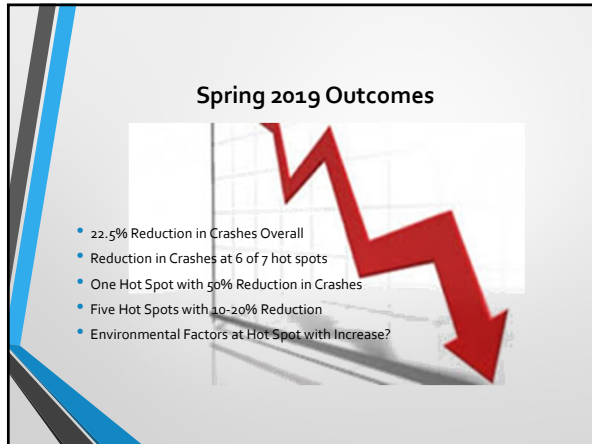
- Developed a rotating schedule of hotspots
- Two days a week/two hours a day/hot spot
- Over seven hotspots for six weeks
- Enforcement at each Hotspot 4 days over the six weeks

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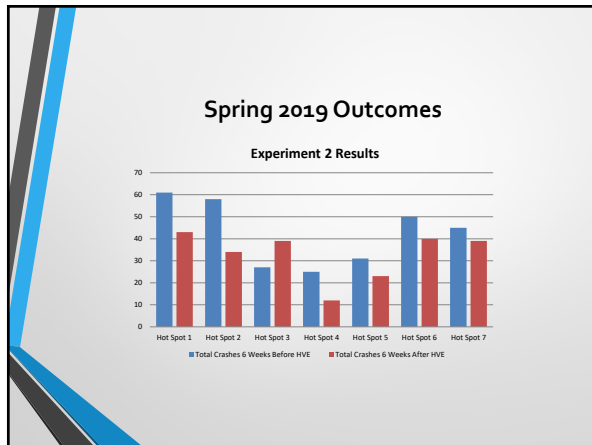
Spring 2019 Plan

- Same Officer Instructions
- Same Concentration on Contributing Factors
- Limitation: Hot Spot Specific Contributing Factors not identified

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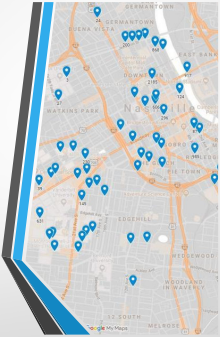
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December 2019 Trial

- 20% Crash Reduction at Hot Spot 1
- 11% Crash Reduction at Hot Spot 2



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Lessons Learned

- Plan did not go as planned
- Not all of the HVE aspects were executed
- Weather, manpower, and outside events impacted deployments




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Lessons Learned



Commitment to the plan and dosage is required for success



Outside events can impact plan depending on priorities

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Future Research/Next Steps



- Improving internal data analysis capability
- Sustaining enforcement – standard practice
- Randomized Control Trial
 - Stronger Evidence of Dosage
 - Dosage likely depends on several factors/could be location specific

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Sustaining the Program

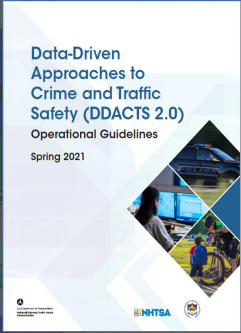
- Motor Unit Reorganization – November 2020
- Schedule of eight hotspots created
- 4 hours per day – 2 hot spots per day
- Unallocated time to address neighborhood/citizen requests
- Evaluation soon!



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DDACTS 2.0

Moving from high visibility enforcement to high visibility engagement.



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Moving from HVE to *HVE*



- Officers and agencies are hesitant to do high visibility traffic enforcement, especially in marginalized communities.
- So crashes and crime are increasing.
- Agencies can conduct highly visible engagement in these same hot spot areas, that can be positive and approved by community members.

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Justification for High Visibility Engagement



Overwhelming majority of the people committing crimes are driving to and from those crimes!

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Overcoming Concerns Regarding Traffic *Engagement*

The purpose of traffic engagement is **not** to issue tickets. It is to

- “provide public safety,
- interact with the public in a professional manner to impact behavior and
- reduce crime through increased contact with habitual offenders.”

George Kelling (April 2015)

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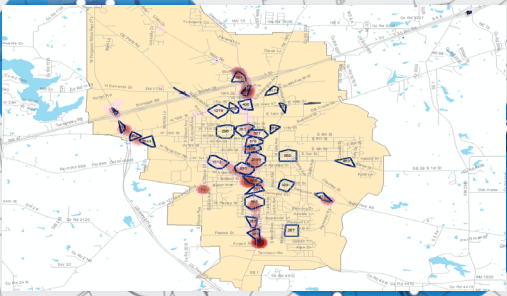
Enforcement/Engagement Must Be Consistent

- Continuous presence in problem areas
- Stopping drivers for behavior that actually cause crashes
- At a time and place where dangers are most likely to exist
- Intelligently deployed **to data**

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Intelligently Deployed



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High Visibility Engagement Activities

- Meet with community members in the DDACTS zones to determine what types of activities THEY want, and may even need
- Get out of your car and meet with business owners in a positive way and ask them for a status report about what has been happening around them.
- Use traffic safety signage and speed detectors to deter careless driving behavior.
- Look for traffic safety violations, e.g., speeding, DWI, erratic lane changing, distracted driving, and conduct traffic stops for violations for causal factors.
- Gather driver's information and issue the *least* enforcement-oriented action, e.g., warning tickets, verbal warnings, etc.
- When stopping a car, explain to the operator WHY this activity is happening specifically in the DDACTS zone and how they can help to reduce crashes and crime.



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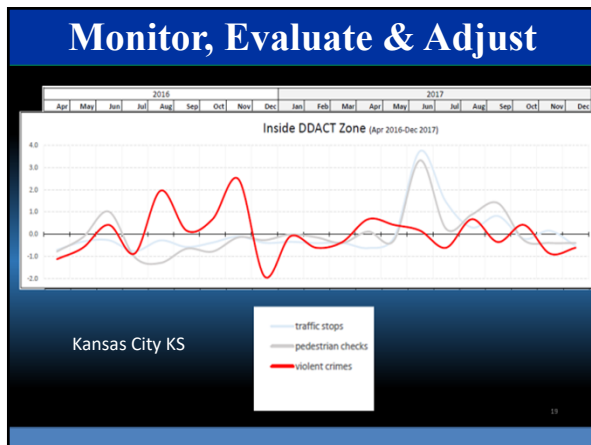
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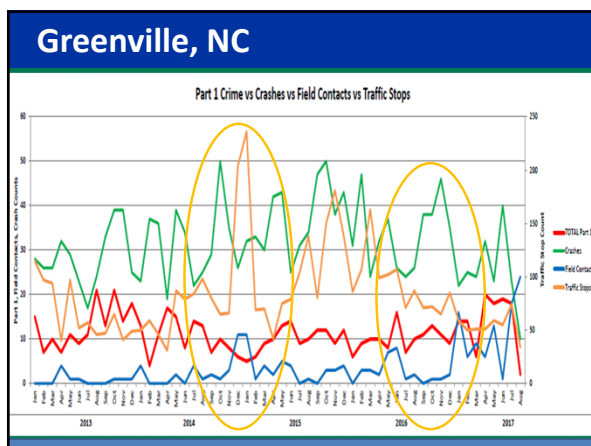
How can using a data-driven approach improve quality of life for your citizens?

- 
Renews emphasis on traffic safety and making meaningful stops
- 
Increases agency accountability & productivity
- 
Strengthens relationships with partners & stakeholders by keeping them informed

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LAW ENFORCEMENT CHALLENGES



- Agencies not communicating effectively with citizens, media, partners & stakeholders.
- Agency CEOs and administrative staff not communicating effectively with staff and line officers.
- Agencies not having analytical resources, i.e., full time analysts, CAD/RMS systems are antiquated, limited software.
- Myth that agencies “do not have the time” to implement a new program due to *reactive* policing.

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Resources

There are numerous of articles, references and documents including Data-Driven, Evidence-Based documents and documents available here:

- <https://www.indleest.org/training/daacts/documents>
- Also, click on NLEARN and join content





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2021 DDACTS Program Deliverables

- **Seven** DDACTS workshops.
- **Three** Evidence-Based Strategic Decision-Making Workshops.
- **Eight** Webinars, began February 18th, describing the elements of each Guiding Principle.
- **Two** “Analytical” Training workshops.
- **10-part** Microsoft Analytical online training series.
- **Eight** roll-call training blocks designed in 12-minute increments for agencies to use to teach their officers.
- Technical Assistance, upon request using Log-me-in software.

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