Data-Driven Approaches to Crime and Traffic Safety (DDACTS)
DDACTS is an operational model that uses the integration of location-based crime and traffic data to establish effective and efficient methods for deploying law enforcement and other resources.
Why DDACTS?

- Increasing Demands and Limited Resources
- Executives Must Prioritize Competing Demands for Service
- Conflict Between Resources and Priorities
- Crime and Crashes Often Occur in Close Proximity
- Many Crimes Involve a Motor Vehicle
- Vehicle Stops Can Yield to Criminal Identification and Arrest
DDACTS Goal

Reduce the incidence of crime, crashes and traffic violations in a community

Reduce Social Harm
“However beautiful the strategy, you should occasionally look at the results”

Winston Churchill
The Simple Explanation of DDACTS

- Map where your crimes occur
- Map where your crashes and traffic problems occur
- Where these areas overlap, you create hot spots
- Work the hotspots with high visibility traffic enforcement
High Visibility Traffic Enforcement Philosophy

- IACP & NHTSA believe an increase in traffic enforcement in a community results in a decrease in motor vehicle crashes, injuries, and fatalities and they have the studies to prove it! In fact, no single other program or strategy works as well as law enforcement in making the roads safer.
DDACTS Advantages

Collaborative Effort
Grounded in Community-Oriented Policing
Evidence Based Problem-Solving
Provides Focused Area for Enforcement
Ensures Accountability
Applies High Visibility Enforcement
Fewer Ethical and Legal Concerns
“If the data analysis reveals that criminal activity and traffic crashes occur at a specific place within a community, then it is at that place that law enforcement activities need to be focused. A non-biased, data-driven approach to crime and traffic safety delivers law enforcement services at the right place and at the right time.”

Joseph A. McMillan, NOBLE President
Data-Driven Approaches to Crime and Traffic Safety (DDACTS)

Operational Guidelines

August 2009
DDACTS Guiding Principles

Partners / Stakeholder Participation
Data Collection
Data Analysis
Strategic Operations
Information Sharing and Outreach
Monitor, Evaluate and Adjust Outcomes
Identifying a Hot Spot

*Data extracted from the Rochester, NY (DDACTS Pilot Site).*
Tools Used to Achieve a DDACCTS Philosophy

Zone Intensity Maps
County-wide perspective based on 4 weeks worth of data.
Baltimore County Police Department
Nine-Month Enforcement Activity, 2008

- 51,625 on-duty patrol hours
- 1,169 arrests
- 20,945 citations issued
- 31,010 written warnings
Preliminary Results
Four Months, 2009

- Robbery: 25%
- Auto Theft: 31%
- Burglary: 37%
- Crashes: 4%
- Vehicle Stops: 49%

On-duty hours in target areas (April-July) 24,000+
Advice from NHTSA:

“You can start a DDACTS program with a shoebox full of 3x5 cards and a warm patrol unit.”

Earl Hardy, NHTSA
Approximately 95 miles long
- 20 miles across at its widest point
- Total Sq miles is 1,472
- One-quarter of total is water – Bayou Lafourche
- Population of 100,000
- 50 miles south of New Orleans
Crash Crisis

Louisiana Highway Safety Commission rates Lafourche Parish as Tier 1

- 2008 – 34 Fatal Crashes (21 alcohol-related)
  ● Highest in State
Crime Crisis

- Post Katrina Lafourche Parish experienced spike in transient population.
- Increased Part 1 Personnel and Property Crimes.
- No accurate data capture or analysis.
Challenges to DDACTS Implementation

- No Crime Analyst Dedicated to Project
- No Data-Driven Ideology
- Minimal RMS Capabilities
- Minimal Crime/Crash Mapping Capabilities
Two Hot Spots staffed five days per week for two hours per shift

- Combined Hot Spot allocation investment:
  - 8760 elapsed hours since program began
  - 540 total man-hours assigned to project
  - ZERO overtime!!

- DDACTS assignments built into daily operations
## Changing Traffic History

<table>
<thead>
<tr>
<th></th>
<th>2005 to 2008 Average Crashes</th>
<th>2009</th>
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<tbody>
<tr>
<td>20</td>
<td>2531</td>
<td>1972</td>
</tr>
<tr>
<td>20I</td>
<td>802</td>
<td>643</td>
</tr>
<tr>
<td>20F</td>
<td>23</td>
<td>11</td>
</tr>
<tr>
<td>22.09%</td>
<td>Crash Reduction from 05-08 to 2009</td>
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</tr>
<tr>
<td>19.83%</td>
<td>Injury Crash Reduction from 05-08 to 2009</td>
<td></td>
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<tr>
<td>52.17%</td>
<td>Fatal Crash Reduction from 05-08 to 2009</td>
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</table>
DWI to Fatal Crashes

- **Data-Driven Approaches**
- **Crime and Traffic Safety**

<table>
<thead>
<tr>
<th>Year</th>
<th>DWI Arrests</th>
<th>Fatal Crashes</th>
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<tbody>
<tr>
<td>2007</td>
<td>20</td>
<td>144</td>
</tr>
<tr>
<td>2008</td>
<td>27</td>
<td>150</td>
</tr>
<tr>
<td>2009</td>
<td>11</td>
<td>300</td>
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The graph shows the increase in DWI arrests from 2007 to 2008, followed by a decrease in 2009. The number of fatal crashes follows a similar trend, peaking in 2008.
Crime Data
January to March 2009 v. 2010

Persons Crimes:
42% reduction

Property Crimes:
11% reduction

*Data extracted from the LPSO Records Management System*
DDACTS Highlights

Lafourche Parish

E - AREA FOR JUNE 09

<table>
<thead>
<tr>
<th>COMPLAINT TOTALS</th>
<th>103</th>
<th>103D</th>
<th>103F</th>
<th>18</th>
<th>67</th>
<th>92.1</th>
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<td>1800-2000</td>
<td>10</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>2</td>
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<tr>
<td>2000-2200</td>
<td>11</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>2200-2400</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
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</tr>
</tbody>
</table>
DDACTS Highlights

Lafourche Parish LA
St. Albans, Vermont

- Maple Sugar Capital of the World
- County seat of Franklin County, near Canadian border
- Population 7,500
- County Population 48,000
- Rising crime problem
- DDACTS pilot site
- City PD partner with the State Police, County S.O.
“The challenge we have is being smart about doing our business and getting away from the old practices of just routine patrols and going up on the interstate and running radar. If you’re going to run radar, you need to do it in an area where you are having traffic or crime problems. Don’t spend the majority of your time in areas where you aren’t seeing any significant increases or aren’t seeing any traffic- or crime-related issues.”
Map of Crimes and Traffic Accidents

Figure 2. Locations of crimes and crashes in St. Albans City, August 2007 – July 2008.
Traffic Enforcement Results Franklin County
(first six months)

<table>
<thead>
<tr>
<th>Year</th>
<th>DUI Arrests</th>
<th>Suspended DL</th>
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<tbody>
<tr>
<td>2008</td>
<td>113</td>
<td>194</td>
</tr>
<tr>
<td>2009</td>
<td>210</td>
<td>242</td>
</tr>
</tbody>
</table>
St. Albans City Results
(first six months)
Traffic Crashes Franklin County
(first six months of the year)
City of Shawnee, KS

- Suburb of Kansas City
- Population 60,000
- PD started DDACTS effort July 6th
- Study area chosen approximately .8 square miles
  - 4,691 population
  - 15.2% of all personal crimes
  - 17.4% of all property crimes
  - 13.1% of all crashes
Data-Driven Approaches
Shawnee Hotspot Map
Crime and Traffic Safety

Evening Shift
Crime Density & Traffic Accidents
Preliminary Results
First Month

Assaults
Auto Burglary 20%

Auto Theft
Vehicle Stops 52%

Vandalism
On-duty hours in target areas (July) 283

Vehicle Stops 100%
Vandalism 86%
Shawnee Police Department

- Overall Crime in Study Area down 26.7%
- Traffic crashes are up 3 crashes
Shawnee Kansas 90 Days Out

Data-Driven Approaches

Crime and Traffic Safety

- 154% Increase in Pro-Active Enforcement (214% Increase in Traffic Stops)
- 60% increase in Pro-Active Reports (103% Increase in Warrant Arrests)
- 44.8% Decrease in reported targeted crimes in DDACTS area
- Crime Decreased 7.7% in the non-DDACTS area of the City
- Crashes were up slightly

- Note: after 150 days crashes are now down 35%
DDACTS
Return On Investment

Reduction in Crashes
Reduction in Crime
Less Time Investigating and Reporting
Increased Time For High-Visibility Patrols
Increased Deterrence
Improved Information Gathering
Reduced Social Harms
Improved Quality of Life
So you’ve heard about DDACTS. Your department is engaged and ready to launch. Where do you start?

Start with Collect Data.

Next, Determine and Report Outcomes.

Then, Monitor, Evaluate and Adjust.

After that, Strategize Operations Plan.

Finally, Collect Data again to start the cycle.
Technical Assistance for Starting DDACTS

- Currently, No Grant Money
- Agency Assessment (where are you now)
- What are your needs
- Analysis/Mapping Assistance
- Operational Assistance
- Site Visit by DDACTS Implementation Team
- Presentations to Staff and Stakeholders
- Ongoing Assistance and Mentoring
NIJ's Mapping and Analysis for Public Safety (MAPS) program supports research that helps agencies use GIS to enhance public safety. The program examines:

- How to use maps to analyze crime
- How to analyze spatial data
- How maps can help researchers evaluate programs and policies
- How to develop mapping, data sharing, and spatial analysis tools
Crime Mapping
Free Training and Software:
http://www.ojp.usdoj.gov/nij/maps/welcome.htm
DDACTS Implementation Workshop

- Training and technical assistance using peer to peer facilitated interactive sessions
- Command, supervisors, and analysts attend
- 16 hours, afternoon, full-day, morning
- Defines the 7 Guiding Principles and agency specific roles
- Develop an agency specific implementation operational plan
- No cost to agency, register at DDACTS@dot.gov
Further Information and Resources

- www/DDACTS.com
- http://www.ojp.usdoj.gov
- http://stko.maryland.gov
- www.nhtsa.gov
- Just Google “DDACTS”
Some Final Thoughts

- In times of diminishing resources and increasing public demands, law enforcement agencies must develop and implement effective enforcement strategies that produce multiple benefits and measurable desired outcomes.
- DDACTS simply gives you more bang for your buck; it is highly efficient and effective in reducing social harm.
Questions

Bill Sullivan
Law Enforcement Liaison
NHTSA, Region 7
913-208-5714
bsully@sbcglobal.net

www.nhtsa.gov