DATA DRIVEN APPROACHES TO CRIME AND TRAFFIC SAFETY

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WHAT IS DATA DRIVEN APPROACHES TO CRIME AND TRAFFIC SAFETY?

DDACTS

TEMPORAL ANALYSIS

HIGHLY VISIBLE TRAFFIC ENFORCEMENT = CONTACTS *NOT* CITATIONS

SPATIAL ANALYSIS

MOST CRIMES INVOLVE THE USE OF A MOTOR VEHICLE
DATA DRIVEN APPROACHES TO CRIME AND TRAFFIC SAFETY

SEVEN GUIDING PRINCIPLES

AGENCIES FIND SUCCESS WHEN FOLLOWING THESE PRINCIPLES
Improve Quality of Life

90% of Novi residents believe their quality of life is ‘Excellent’

Based on Objective Data Analysis
Using data to drive decision making

Location Based Vs Person Based
Where not Who

Timely & Accurate Data
Weekly COMPSTAT meetings

Increased Perceived Risk of Apprehension
High visibility deters criminals

Efficient Deployment of Limited Resources
Random Patrol = Random Results
DDACTS SUCCESS STORIES

OVER 600 AGENCIES UTILIZING DDACTS

SIZE OF DEPARTMENT DOES NOT EQUAL RATE OF SUCCESS
DDACTS SUPPORTERS

NATIONAL SUPPORT FOR DDACTS

National Institute of Justice

Federal Highway Administration

U.S. Department of Justice

National Highway Traffic Safety Administration
DDACTS SUPPORTERS

LOCAL SUPPORT FOR DDACTS

NOVI CITY COUNCIL

NOVI DPS

NOVI FIRE DEPARTMENT

LOCAL MEDIA
HOW DOES IT ALL WORK?

TEMPORAL ANALYSIS vs SPATIAL ANALYSIS

• USE DATA FROM CLEMIS TO ANALYZE WHERE OUR CRIMES AND TRAFFIC CRASHES ARE OCCURRING THE MOST

• DETERMINE A TIMEFRAME FOR WHEN THEY ARE HAPPENING

• IDENTIFY HOT SPOTS WITHIN THE CITY OF NOVI

• DEPLOY DEPARTMENT RESOURCES TO THESE AREAS
TARGETED CRIMES:
JANUARY 1, 2010 - DECEMBER 31, 2012

Targeted Crimes
~ Larceny
~ Burglary
~ Vehicle Theft
Began with one zone to garner full support/buy-in from within the police department.

**First identified zone(s):**
- Crime: Haggerty & Nine Mile
  - Targeting residential area at this location for specific crimes
  - Temporal Analysis: Tuesday – Thursday – 12A-3A
- Traffic Crashes: Haggerty & Eight Mile
  - Targeting major thoroughfares/intersection at this location for traffic related violations
  - Temporal Analysis: Monday – Friday – 4P-6P

**Second identified zone:**
- Crime: Beck & Pontiac Trail
  - Targeting multiple residential areas at this location for specific crimes
  - Temporal Analysis: Friday - Monday – 12A-3A

- Traffic Crashes: Beck & Pontiac Trail
  - Targeting major thoroughfares/intersection at this location for traffic related violations
  - Temporal Analysis: Monday – Friday – 2P – 5P
BY THE NUMBERS

2. TARGETED LOCATIONS PATROLLED

3. ZONES IDENTIFIED WITHIN CITY OF NOVI

4. TARGETED LOCATIONS
## By the Numbers

### Zone 1: Haggerty & Nine Mile

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
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<tbody>
<tr>
<td>Weeks Patrolled</td>
<td>72</td>
</tr>
<tr>
<td>Citations Written</td>
<td>83</td>
</tr>
<tr>
<td>Miles Traveled</td>
<td>3,483</td>
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<tr>
<td>Reduction in Crimes</td>
<td>68%</td>
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<tr>
<td>Arrests Made</td>
<td>70</td>
</tr>
<tr>
<td>Police Contacts</td>
<td>123</td>
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<tr>
<td>Weeks Patrolled in</td>
<td>31</td>
</tr>
<tr>
<td>Citations Written in</td>
<td>22</td>
</tr>
<tr>
<td>Miles Traveled in</td>
<td>15,651</td>
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<tr>
<td>Reduction in Crimes in</td>
<td>561</td>
</tr>
<tr>
<td>Police Contacts in</td>
<td>1</td>
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</table>
ILLUSTRATING SUCCESS FROM DDACTS ENFORCEMENT

SEVEN MONTH COMPARISON

PRE DDACTS ENFORCEMENT

DDACTS ENFORCEMENT

Map Legend
Targeted Crime
Hot Spot Density

Low

High
## By the Numbers

### Zone 2: Haggerty & Eight Mile

<table>
<thead>
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<th>Metric</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Weeks Patrolled in Zone</td>
<td>65</td>
</tr>
<tr>
<td>Citations Written in Zone</td>
<td>38</td>
</tr>
<tr>
<td>Hours Spent in Zone</td>
<td>278</td>
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<tr>
<td>Miles Traveled in the Zone</td>
<td>3,032</td>
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<tr>
<td>Reduction in Traffic Crashes</td>
<td>41%</td>
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<tr>
<td>Police Contacts</td>
<td>440</td>
</tr>
<tr>
<td>10/109</td>
<td>666</td>
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</tbody>
</table>
BY THE NUMBERS

ZONE 3: BECK RD & PONTIAC TRL

46 WEEKS PATROLLED IN THIS ZONE

5,616 MILES TRAVELED IN THE ZONE

51% REDUCTION IN TARGETED CRIMES

687 CITATIONS WRITTEN IN THIS ZONE

111 POLICE CONTACTS

490 ARRESTS MADE IN THIS ZONE

6 PATROLLED IN THIS ZONE
BY THE NUMBERS

ZONE 4: BECK RD & PONTIAC TRL

- **46 weeks patrolled in this zone**
- **458 citations written in this zone**
- **146 hours spent in this zone**
- **1,335 police contacts**
- **905 miles traveled in the zone**
- **6,697 miles traveled in the zone**
- **7% reduction in traffic crashes**
- **63**
Software Programs
DATA DRIVEN DECISION MAKING

RANDOM PATROL = RANDOM RESULTS

THINK OUTSIDE THE BOX

LONG TERM PHILOSOPHY CHANGE

CRIME FIGHTING NEEDS TO BE INTENTIONAL

DEVELOP AN ACTION PLAN

“If you always do what you’ve always done, you’ll always get what you’ve always got.”
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QUESTIONS?

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CRIMEVIEW WIDGETS

- Organizes complex data from multiple databases into visualizations.
- Customize dashboard widgets based on geography, crime type, or policing unit.
- Analyze emerging crime trends through exclusive Briefing Books or Widgets.

- DDACTS zones can be monitored on a daily basis through CrimeView.
- Used daily at Shift Briefings.
- Provides Command Staff with the tools they need to deploy their resources effectively.

Temporal Analysis
ESRI ARCGIS ARCMAP

CUSTOMIZED CRIME MAPPING
WHAT ARE THEY DOING?

- How long were they in the zone?
- Where were they while they were in the zone?
- Did they simply sit in their vehicle?
- Where they proactive with their time?

Analyze officer activity within DDACTS zones
Ability to look deeper into DDACTS activity using case reports

Drill down the data for a more detailed look at incidents

Identify key facts that can link suspects, crime patterns, and officer activity