Crime Analysis and GIS

Where are the sales taking place?
- Examine drug buy locations
- Further investigation - incident review
- Review of Hot Spots
- Identity Target Areas
- Data analysis

Provides a rationale for the decisions reached
- Data Driven Approach

Crime Mapping - Geospatial Information Systems

Analyzing Drug Markets
40% Minority or Immigrant Population

- Textile and Furniture
- Loss of Manufacturing Jobs
- Changing Economic Base
- Rapid Annexation

- 54 sq miles
- Suburban Development

- 25% Increase in Population in Last 16 Years
- 94,000+ Population

High Point, NC
Crime Analysis and GIS

What does the research literature state?

- Sex/Prostitution Crimes?
- Weapons Crimes?
- Types of CAD Calls?
- Drug Arrests?
- Field Contacts?
- Part I Persons Crime?
- Activity/Markets?

What incidents are indicative of Drug Markets?

What crimes are associated with Drug Markets?
Variation in the structure and organization between the four target areas.
Use of GIS

Identification of target area through mapping

Streets and Census Blocks

Neighborhoods

Drug Arrests

Serious Crimes

Field Contacts

911 Calls
Four Initiative Areas

- Greater East Central
  August 14, 2007

- June 8, 2006
- South Side Neighborhood
- April 5, 2005
- Daniel Brooks Neighborhood
- May 18, 2004
- West End Neighborhood
2003 Serious Offenses

- Part I
- Drug Offenses
- Weapons Offenses
- Sex/Prostitution

[Map of High Point showing crime hotspots]

[High Point Police logo]
Exclude Political Pressure
Neighborhood
Manageable
Small Area
For Initial Project Area

Drug activity
ID if tied directly to
Unpack Reports
Upset Market Activity
Operations
Vice/Narcotics
ID Areas of Recent
County Buildings
ID False Densities
Used to Select Area
2003 Density Data
390 renter occupied
613 housing units, 61 vacant, 162 owner
552 households - average family size 3.26
Median Age 33
342 Hispanic
296 Other
447 Black
669 White
Population 1,490
212 Acres

West End Neighborhood 2000 Census
Local or drive thru market
Animal Movement
Min/Max
Help explain the structure?
Do Economic/Behavioral models
Spatial Extent
Pattern of Crimes
Location of Persons and Property
Crime?

What does the spatial structure of a drug market look like? What is the relationship between dealing locations and associated crimes?
drug houses
highest density and
outer ring outside
Burglaries form an
Houses
Density and Drug
against Combined
Locations Plotted
2003 Burglary
2003 Drug Arrests Plotted against Combined Drug Houses Density and Drug Houses Occur at or near Drug Houses
Activity related to drug gathering information they should in order drug houses - where occur inside ring of Field Contacts Houses Density and Drug Combined Plotted against 2003 Field Contacts
Average Decrease over 3+ Years: 37%

Violent Crime Change West End Neighborhood
Average Decrease over 3+ Years: 31%

Drug Crime Change West End Neighborhood
Average Increase over 900 Days: 26%

Neighborhood Violent Crime Change Daniel Brooks
Drug Crime Change: Daniel Brookes

Average Increase over 900 days: 14%
**Violent Crime Change South Side Neighborhood**

Average Decrease over 500 Days: 21%
Drug Crime Change South Side Neighborhood

Average Decrease over 500 days: 25%
<table>
<thead>
<tr>
<th>Initiativc Area</th>
<th>Charge</th>
<th>Sell &amp; Deliver</th>
<th>Activation of Banked</th>
<th>Any Criminal Sales/Poss</th>
<th># Called-in</th>
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<tbody>
<tr>
<td>East Central</td>
<td>22%</td>
<td>26%</td>
<td>56%</td>
<td>44%</td>
<td>75%</td>
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<tr>
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<td>13%</td>
<td>4%</td>
<td>7%</td>
<td>29%</td>
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<tr>
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<td>41%</td>
<td>66%</td>
<td>19%</td>
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<tr>
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<td>36%</td>
<td>36%</td>
<td>73%</td>
<td>44%</td>
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</table>

Tracking Notified Offenders
months post
compared to 18
West End Call-In
18 months before

Manufacturing

Change in Sale

Charge

High Point
Crime Analyses and GIS

Across LEA, it's data and what common formats exist should learn how each LEA maintains PSN.

- Identity compatible data and sources
- Drives Data Driven Policing
- Support a variety of research questions
- Middle District can use GIS
- GIS used as common platform

Crime Analyses
Interested in Knowing

- Long-term sustainability from police and community perspective
- Why dealers change their behavior
- What happens to users
- How the market gets translated into invisible forms
- The dynamics of market disruption
Gangs

Questions

Thank you for your attention...