Building Community by Illustrating Community Durham’s Neighborhood Compass

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City of Durham, NC

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compass.durhamnc.gov
City Strategic Plan Goal 3: Thriving, Livable Neighborhoods

Strengthen the foundation, enhance the value, and improve the quality and sustainability of neighborhoods.

Initiatives

• Develop a Neighborhood Compass model and use the data to improve the quality of neighborhoods
• Use the annually updated data to target resources to areas of need
Project Design

- Local data and Census measurements for neighborhoods
- Annual change – trending and latest data
- Demographics, economy, engagement, environment, health, housing, education, safety, infrastructure & amenities
- Connections to existing services
- Include interactive map, charts
- Reports and interpretation
Project Design

• Local data and Census measurements for neighborhoods
• Demographics, economy, engagement, environment, health, housing, education, safety, infrastructure & amenities
• Annual change – trending and latest data
• Include interactive map, charts
• Reports and interpretation
What It Is Not

- An index that summarizes broad and disparate values for neighborhoods into codes (1, 2, 3: bad, good, best)

- A catch-all “data dump” that publishes everything available
Getting Started

• Use case
• NIS relationship with UNC Charlotte/City of Charlotte/Mecklenburg County
• NIS partnering with Technology Solutions
What are neighborhoods?
What are neighborhoods?

• Homes and people near my house?
What are neighborhoods?

• Homes and people near my house?
• Homes and people near my church or school?
What are neighborhoods?

• Homes and people near my house?
• Homes and people near my church or school?
• Parts of town with similar architecture from a common era?
What are neighborhoods?

• Homes and people near my house?
• Homes and people near my church or school?
• Parts of town with similar architecture from a common era?
• Platted phases of subdivisions?
• Administrative wards or districts?
What are neighborhoods?

• Homes and people near my house?
• Homes and people near my church or school?
• Parts of town with similar architecture from a common era?
• Platted phases of subdivisions?
• Administrative wards or districts?
Yes, yes, yes, and yes – and more....
I Think We Can Agree That...

... all neighborhood definitions include a

—Geographic (place-oriented)

and

—Social (people-oriented)

component

Most neighborhood projects have resorted to Census enumeration areas
Proxy Neighborhoods
Census Enumeration Areas (Blocks, Blockgroups, or Tracts)

- No gaps
- Pre-Defined by a Third Party
  - No bickering about boundaries
- We chose Blockgroups
- Similar in size to traditional neighborhoods
- Summary levels for vital Decennial Census and ACS data
Traditional Neighborhoods

Challenging, but useful
- Huge gaps (many areas remain unclaimed)
- Fickle Boundaries
- New neighborhoods

Useful because...
- Residents identify themselves as members
- Others may recognize them by name
- They already have established communication, mobilization and engagement networks
  - Listservers
  - Meetings
  - Newspapers
It’s Not About the Boundaries

All definitions are important and meaningful.

The key is to agree that all neighborhoods are important – And provide a platform that all stakeholders can use for community building and to advocate for positive changes for all of Durham.

At the largest scale, Durham is our Neighborhood
DURHAM’s Initial APPROACH...

• Organize a committee of motivated City Employees
  • Several department heads
  • Other creative thinkers
  • Well-meaning activists
to plan development steps

• Form sub-committees
  • Data Team
  • Policy Team
  • Implementation Team

• Quarterly Meet, plan, talk sessions
  • Meet, plan, talk,
    • Meet, plan, talk...

had many Great Ideas, but
...had no GIS or Data Stewards on board
Logic Model

Strategy Logic Model

<table>
<thead>
<tr>
<th>NVI Steering Committee</th>
<th>Activities</th>
<th>Data Dimensions</th>
<th>Impact/Strategic Plan</th>
<th>Outputs</th>
<th>Short-Term Outcomes</th>
<th>Long-Term Outcomes</th>
<th>New Trends</th>
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<tbody>
<tr>
<td>Policy Team</td>
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City of Durham, NC
Pared Down Data Matrix

### DATA DIMENSIONS

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<tr>
<th>Data Dimensions</th>
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<th>R</th>
<th>S</th>
<th>EP</th>
<th>ES</th>
<th>TM</th>
<th>NA</th>
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*Data dimensions as set by Data Team*

*While each data dimension is developed to measure existing conditions and progress to meet certain targets, each data dimension also measures conditions and progress in other dimensions and departments*
GIS to the Rescue

• Just do it!
  – Forget the Data matrix (the Data Wish List)
  – Stop focusing on data collection
  – Work with the data we already have
  – Display Census/ACS data using the Census Geography
  – Display local Durham data the same way
Geo-processing Steps for Local Data

– Geocode tabular data to create point features
– Spatially join points to Census polygons
– Summarizing each metric on polygon IDs
  • Frequency count by Census polygon for each measure
– Normalize each metric appropriately
  • Frequency per area (or population, or dwelling unit count, or $1,000,000 assessed value, etc.)
– Join normalized metrics on polygon IDs to prepare attribute table
– Join attribute table to the polygon layer
– Shade polygons using natural breaks for the normalized data
Developing a Proof of Concept

• Crime data map service
  – PD/Sheriff data already geo-coded
  – Blocks, granular to reflect the data
  – Marketing proof of concept to City Manager

Absolute Count of Part 1 Property Crimes by Census Block
Challenges

• Hiring a project lead and content gatekeeper (John)
  – Developing Reliable Datasets and Repeatable Workflow Routines
  • Trust building and relationships
  • MOUs for Sensitive data
    – Durham Public Schools, DSS, Health Data

• Hiring a creative in-house application developer (Tyler)
  – Serve as technical gatekeeper
  – Customize available code to local needs
    • Innovate and create new functionality
    • Stay abreast of new software platforms
Assessment of Presentation Options

• Mecklenburg County Quality of Life Dashboard
  – Tobin Bradley
  – https://github.com/tobinbradley
  – http://fuzzytolerance.info/

• Extensible to Durham’s use case?
• Technical requirements?
• Capabilities gaps (PHP, Leaflet, etc)
Implementation

– Early prototyping (ACS data)
– Stakeholder feedback
– Further developing Durham’s use case through exploring what is possible
– Opening it up to committee: What if it could do this?
– Filtering great ideas for what is immediately functional

• Technical gatekeeper(s)
• Keep it simple
Durham Ownership or Customization

- Multiple target layers
- Time series
- Base maps: aerial, zoning, future land use, streets
- Google Analytics (custom events)
- Enhanced reporting
  - Hash links returning back to application
- Linking other applications to Compass
  - GoMaps
Future improvements

– Python scripting for rapid target layer/metric deployment
  • Open Data consumption
– Advanced data display and content organization
  • D3 library/Scalable Vector Graphics
    – Feature selection by chart(s)/graph(s)
    – Value added coolness
– End user’s imagination
Applications are born and die, but data and culture make projects meaningful
Lessons Learned

– Work with what you’ve got!
– Data stewards and data quality across departments
– Requires a cultural shift to knowing your own data and how to manipulate it
– The Neighborhood Compass is a program
  • Annual updates and expansion of analysis
  • service to departments, nonprofits and community groups...developing capacity
– Longevity is essential
Questions?