advanced case studies in digital open government

OUR SPEAKERS

Tweet at us!

Christine Symington (@ChristineSyming)
Energy Director, Sustainable Princeton

Anna Lukasiak (@adlukasiak)
Director of Development, Open Data Science

Cassidy Boulan (@DVRPC)
Transportation Planner, Delaware Valley Regional Planning Commission

Randall Solomon (@randallsolomon)
Co-Founder, Sustainable Jersey

christine symington (@ChristineSyming)

- ✓ energy director at Sustainable Princeton (@sustainptn)
- ✓ led the collaboration between Princeton mayor's administration and civic technologists as Sustainable Princeton liaison to Code for Princeton
- ✓ open data evangelist, techie wanna-be, and sustainability apprentice

View Christine's presentation: **http://bit.ly/Symingtonslides**

anna lukasiak (@adlukasiak)

- ✓ director of development for Open Data Science (@OpenDataSci), which organizes conferences, meetups & hackathons to create an ecosystem for data scientists
- ✓ founder of Open JC, a group of civic technologists working with the Jersey City administration to develop useable application out of government data
- ✓ organized several hackathons & data jams throughout NJ
- ✓ an active #opendata & #opensource advocate

View Anna's presentation: **http://bit.ly/AnnaLslides**

cassidy boulan (@DVRPC)

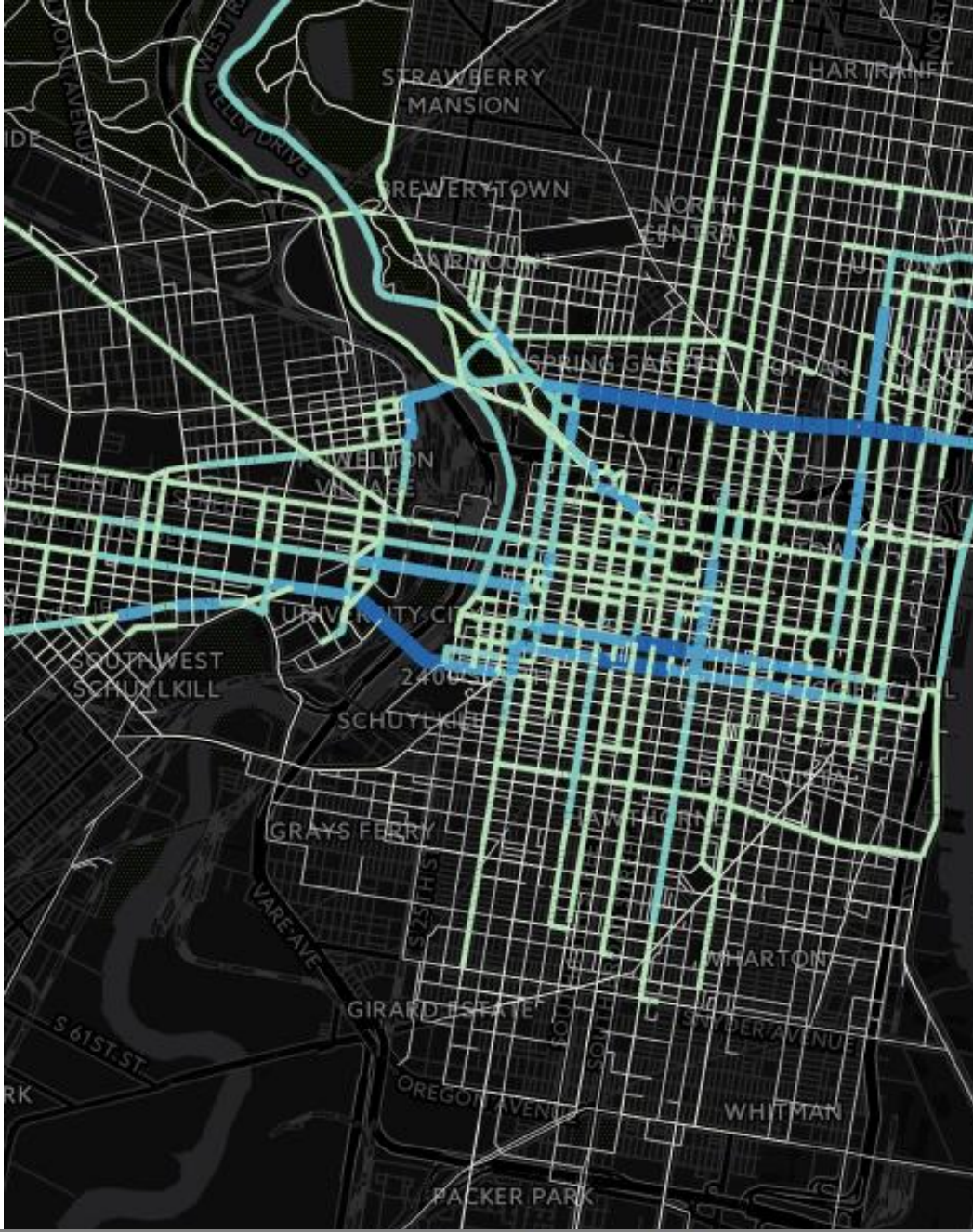
- ✓ transportation planner at Delaware Valley Regional Planning Commission's Office of Transit, Bicycle and Pedestrian Planning (@DVRPC)
- ✓ manages a regional cyclical bicycle count program and developing a bicycle and pedestrian plan for downtown Trenton, NJ.

CyclePhilly:
Development, Deployment, Data, and (future) Directions

Cassidy Boulan, AICP

dvrpc

October 2, 2015



Smarter Phones

reno tracks
renotracks.nevadabike.org

- Austin
- Raleigh
- Minneapolis/St. Paul
- Seattle
- Salt Lake City
- Toronto
- Los Angeles

- 2009-2013
- Understand needs and prioritize infrastructure
- Use to create a bicycle route choice model
- Information about plan implementation

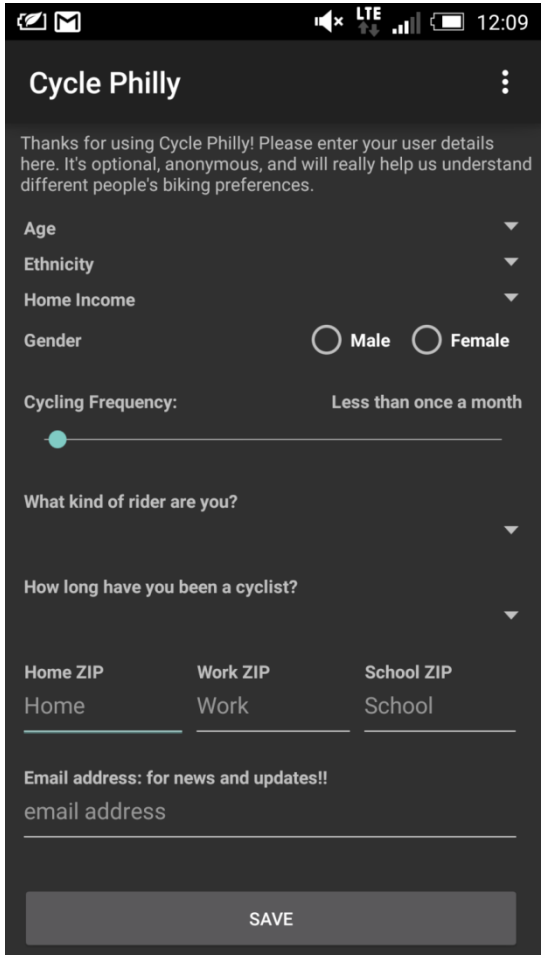
Cycle Atlanta

CODE FOR PHILLY + dvrpc =

Improvements: better anonimization, bike to transit, focus on the entire region

User Demographics

- User Characteristics
  - Age
  - Ethnicity
  - Gender
  - Income (Household)
- Cycling Frequency
- Cyclist Classification
- Cycling History



84% 10:47 AM

Cycle Philly

Start Trip!

Weather Alert:
Clear throughout the day.

41 saved trips:

Exercise	**7/12/14 1:36 PM**
6.9 miles, 42 minutes.	
Errand	**7/12/14 1:26 PM**
0.9 miles, 7 minutes.	
Exercise	**7/6/14 10:38 AM**
2.0 miles, 14 minutes.	
Exercise	**7/6/14 10:02 AM**
0.8 miles. 33 minutes.	

Data Collection Flow

Cycle Philly

User starts recording their trip

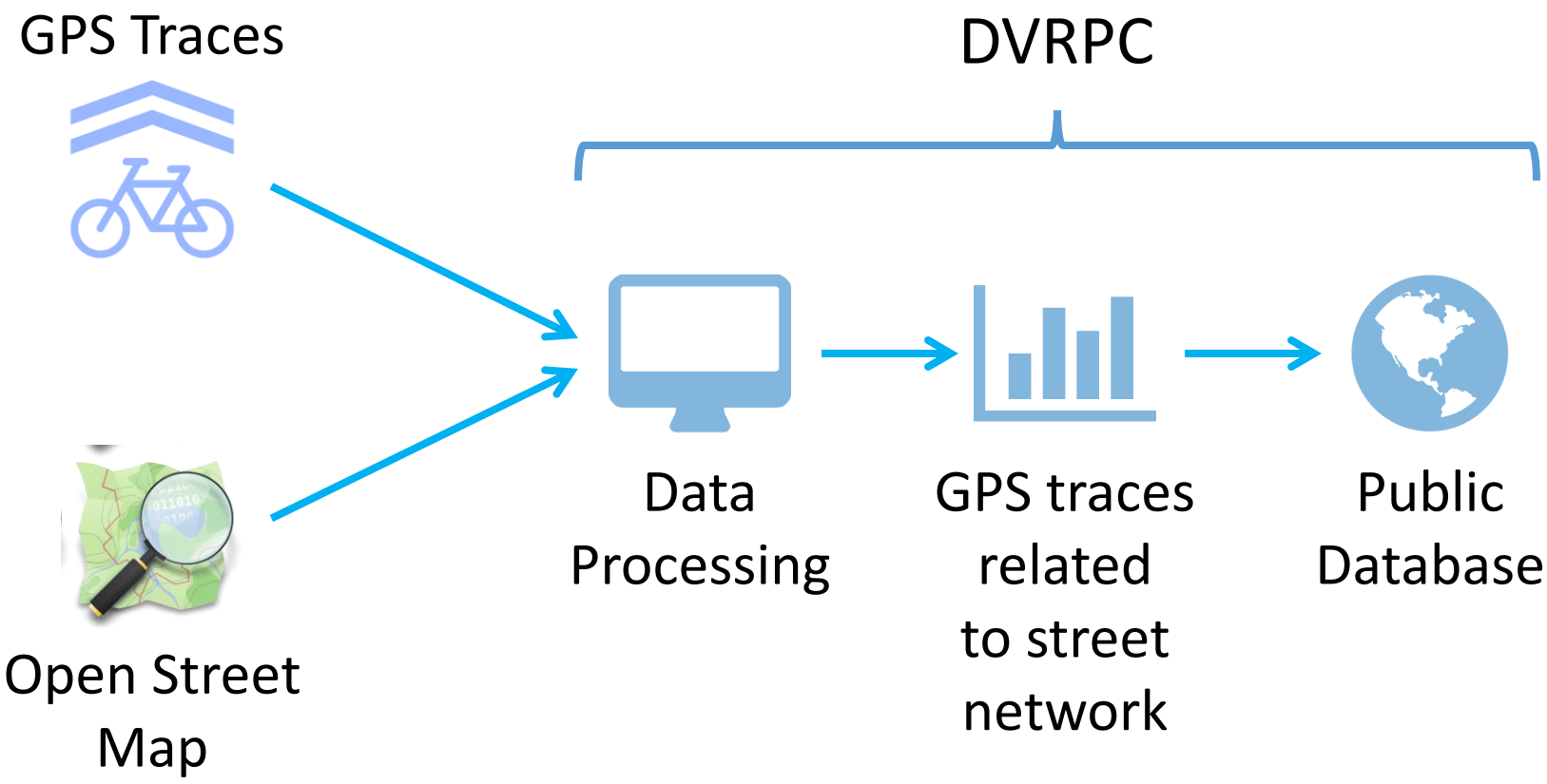
GPS Tracking

App records time-stamped geographic coordinates

Data Upload

Once the trip is completed, recorded data is uploaded

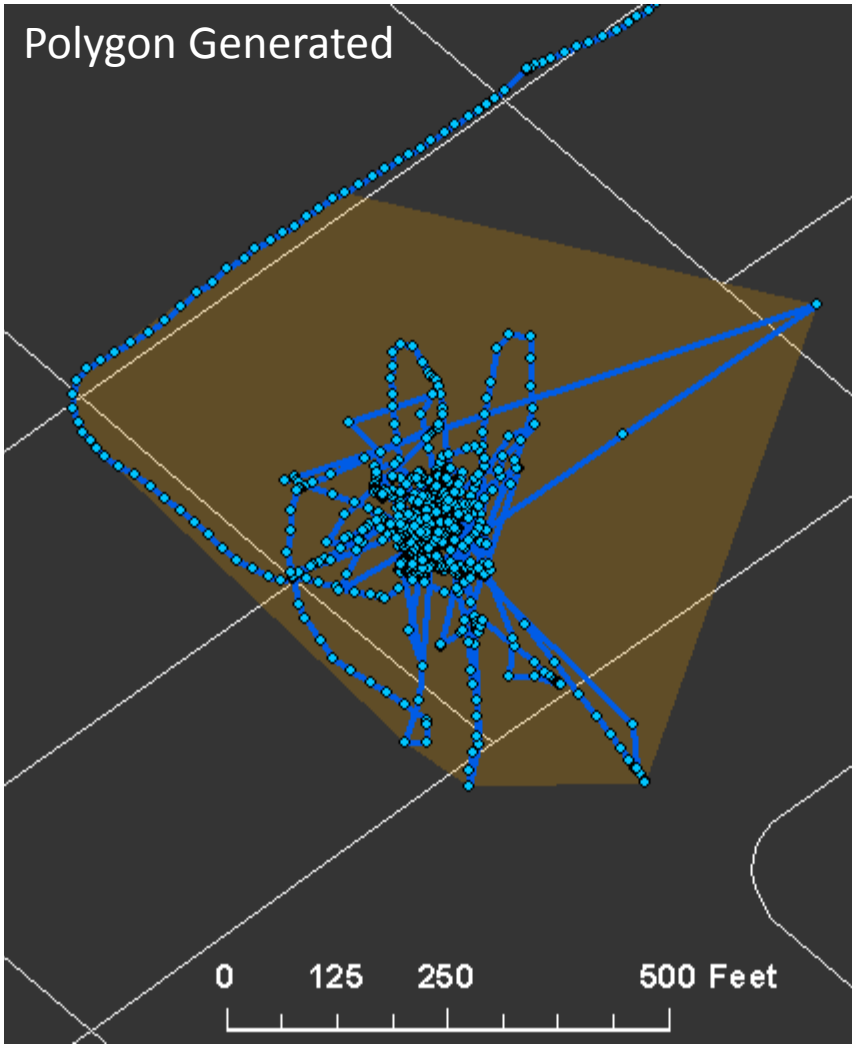
Data Processing Flow

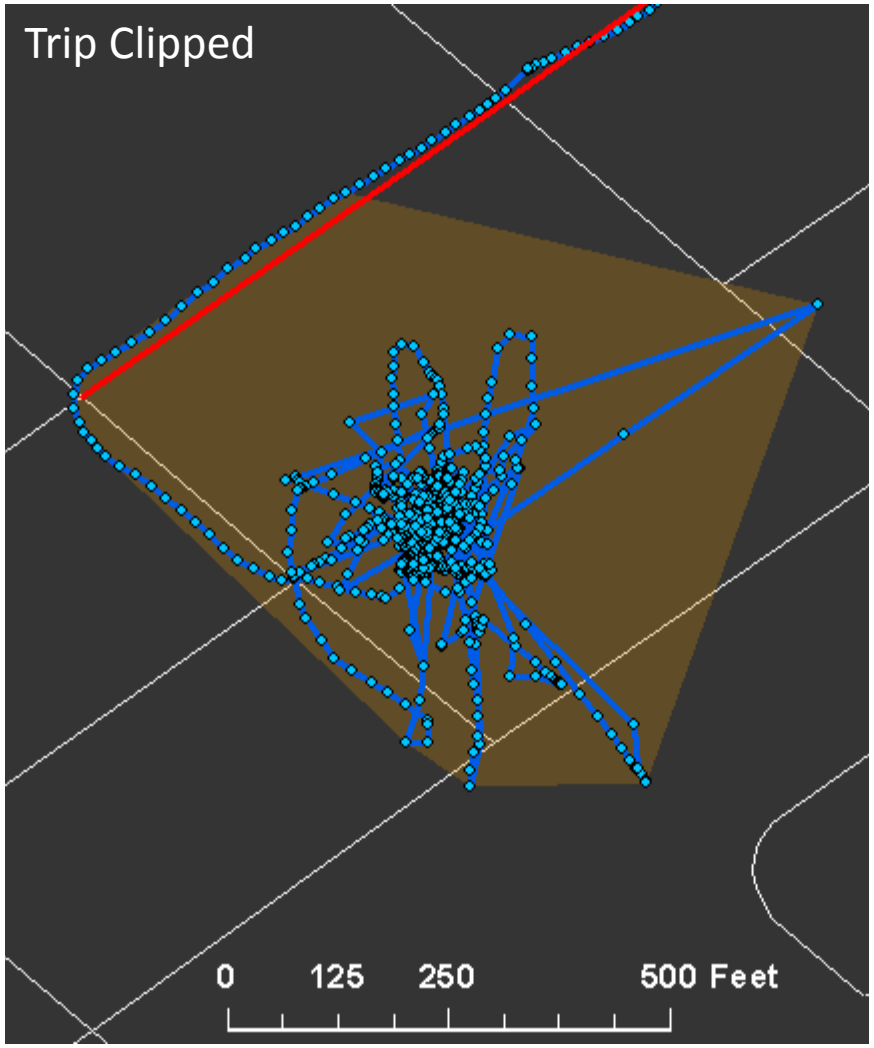


Handling Raw Data

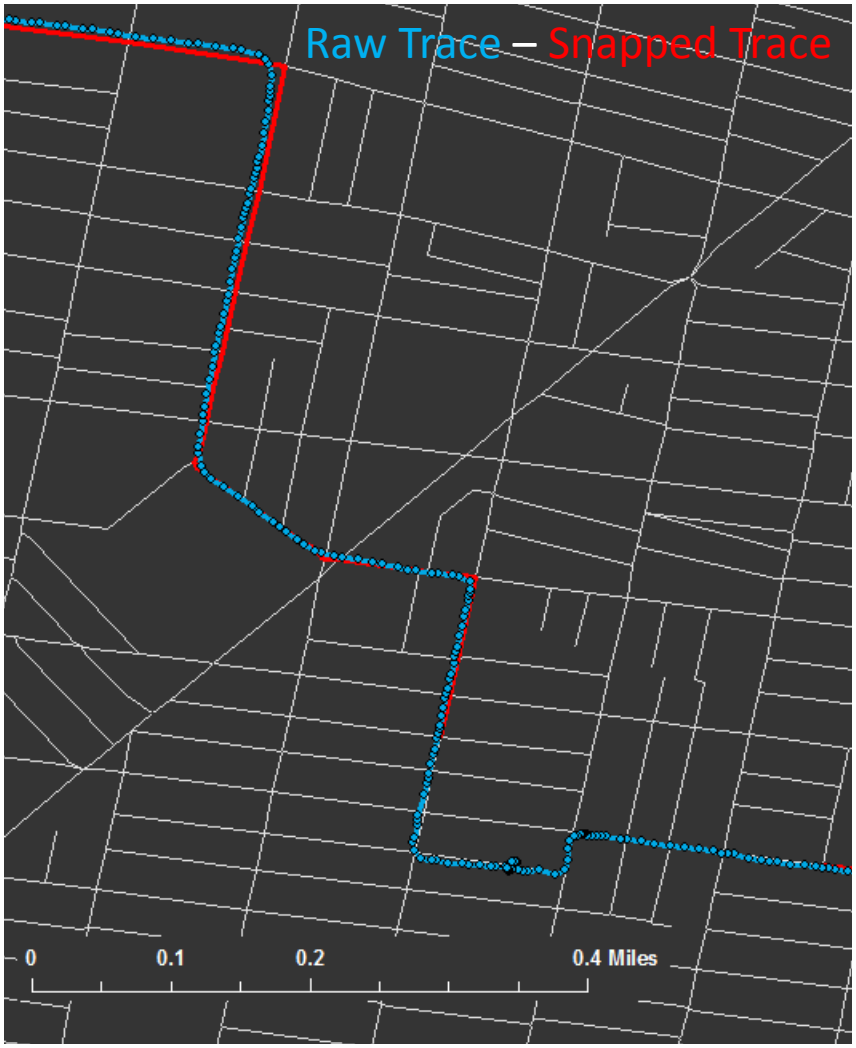
- GPS accuracy variability
  - Urban (Street) Canyon
  - Obscured line of sight
- Anonymization concerns
- Accidental multi-modal trips
- … other unspecified strangeness

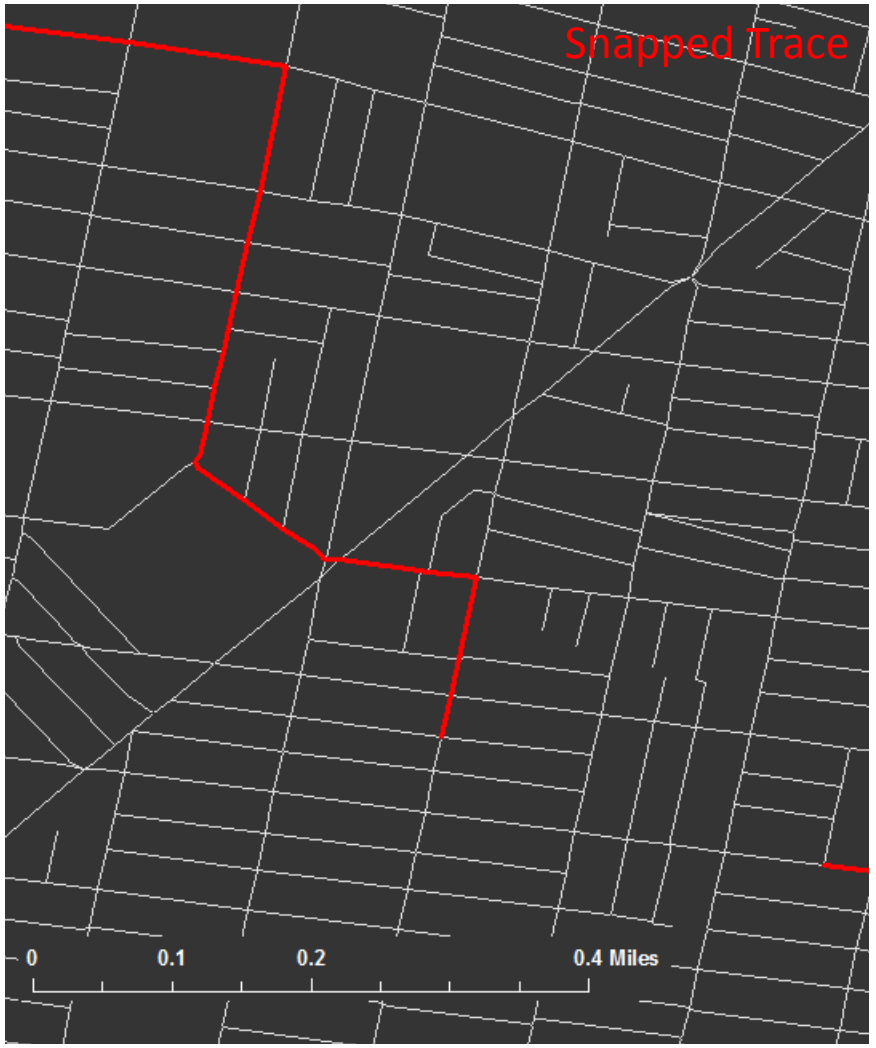
Cleaning & Anonymization

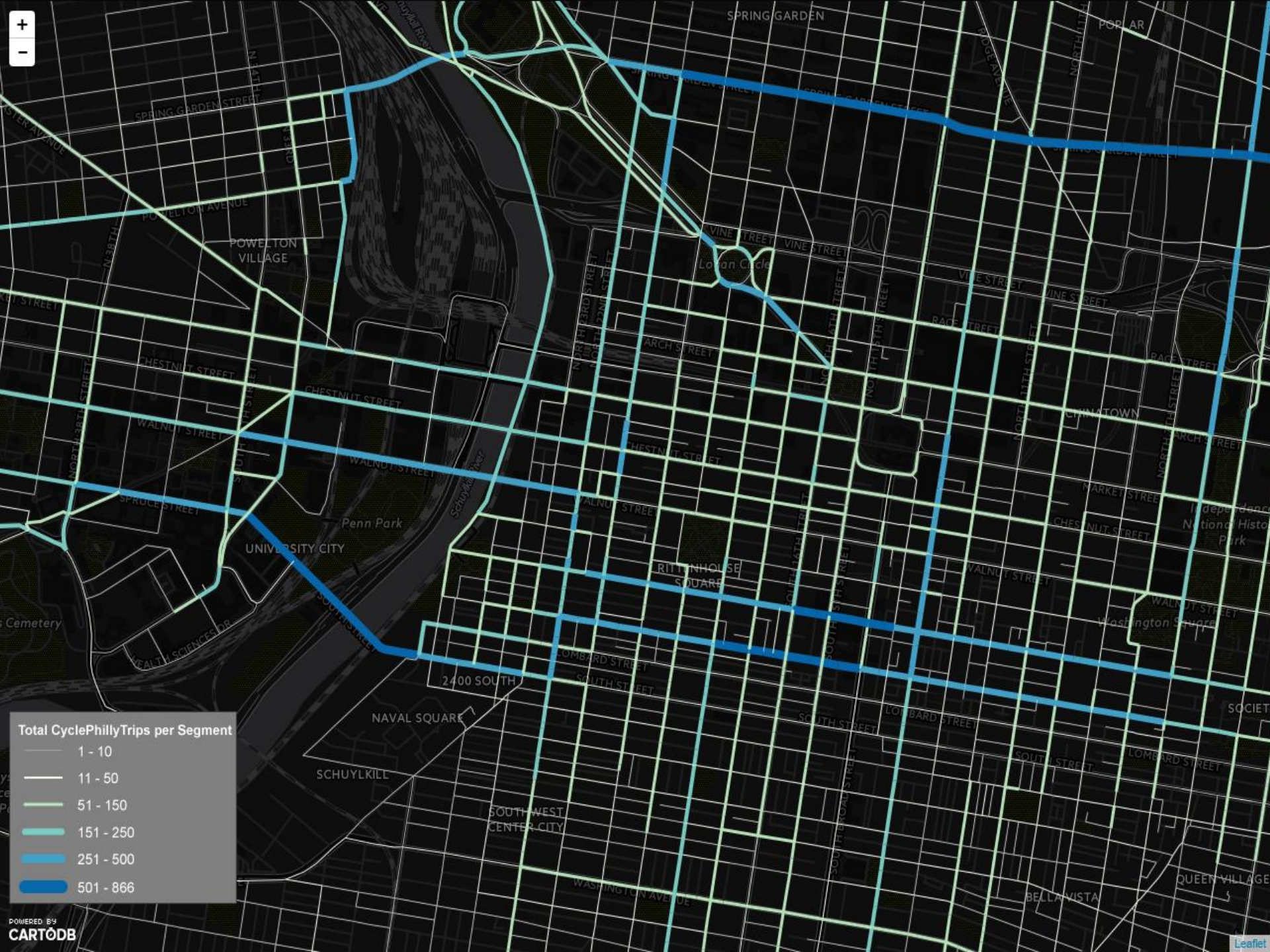


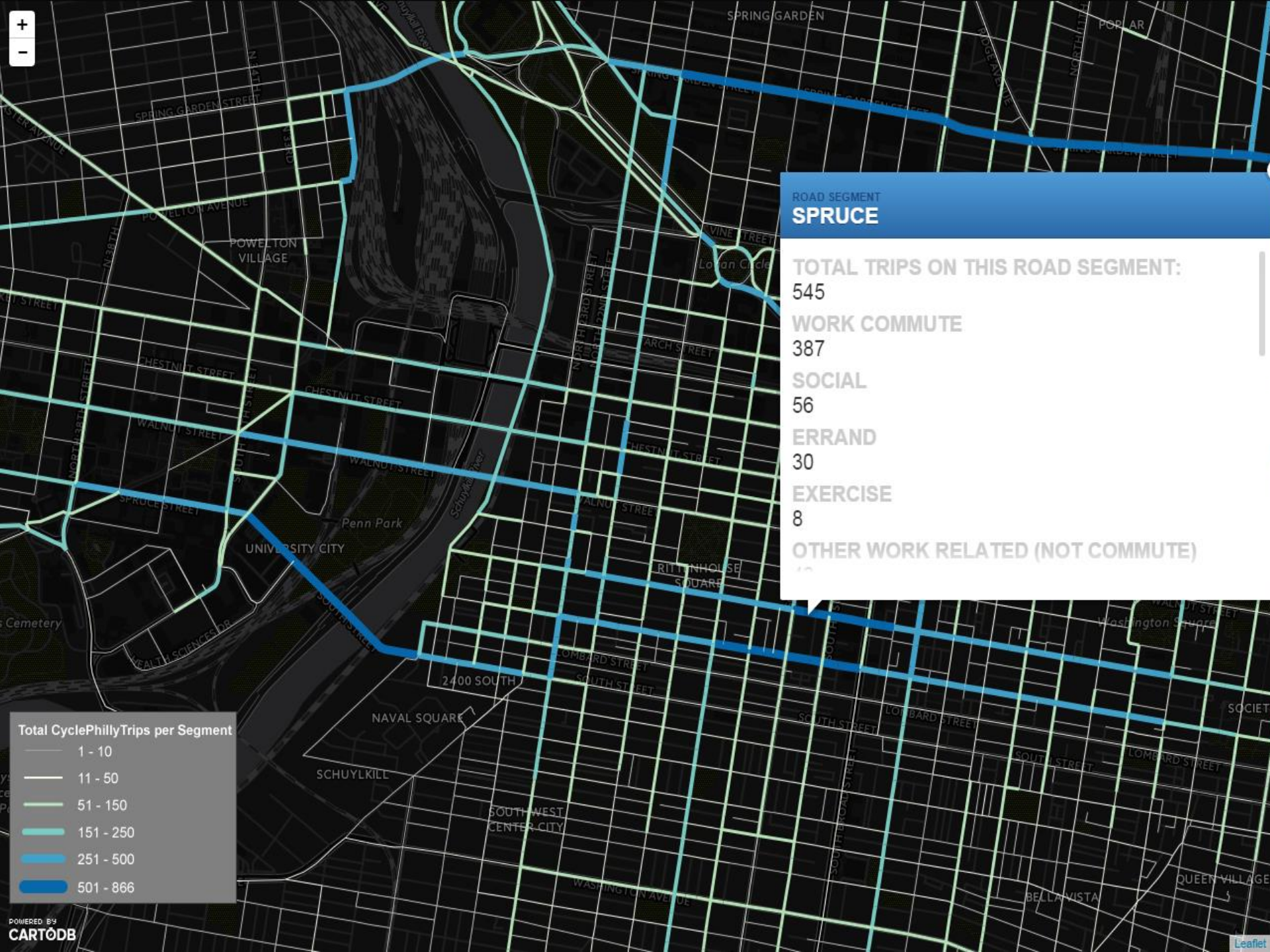


Trip Snapping






Total CyclePhillyTrips per Segment
1 - 10
11 - 50
51 - 150
151 - 250
251 - 500
501 - 866
SPRING GARDEN
POWELTON VILLAGE
Logan Circle
CHINATOWN
Penn Park
UNIVERSITY CITY
RITTENHOUSE SQUARE
2400 SOUTH
NAVAL SQUARE
SCHUYLKILL
SOUTH WEST CENTER CITY
BELLA VISTA
QUEEN VILLAGE
POWERED BY CARTODB
Leaflet


ROAD SEGMENT
SPRUCE
TOTAL TRIPS ON THIS ROAD SEGMENT:
545
WORK COMMUTE
387
SOCIAL
56
ERRAND
30
EXERCISE
8
OTHER WORK RELATED (NOT COMMUTE)
Total CyclePhillyTrips per Segment
1 - 10
11 - 50
51 - 150
151 - 250
251 - 500
501 - 866
SPRING GARDEN
POWELTON VILLAGE
CHESTNUT STREET
WALNUT STREET
SPRUCE STREET
Penn Park
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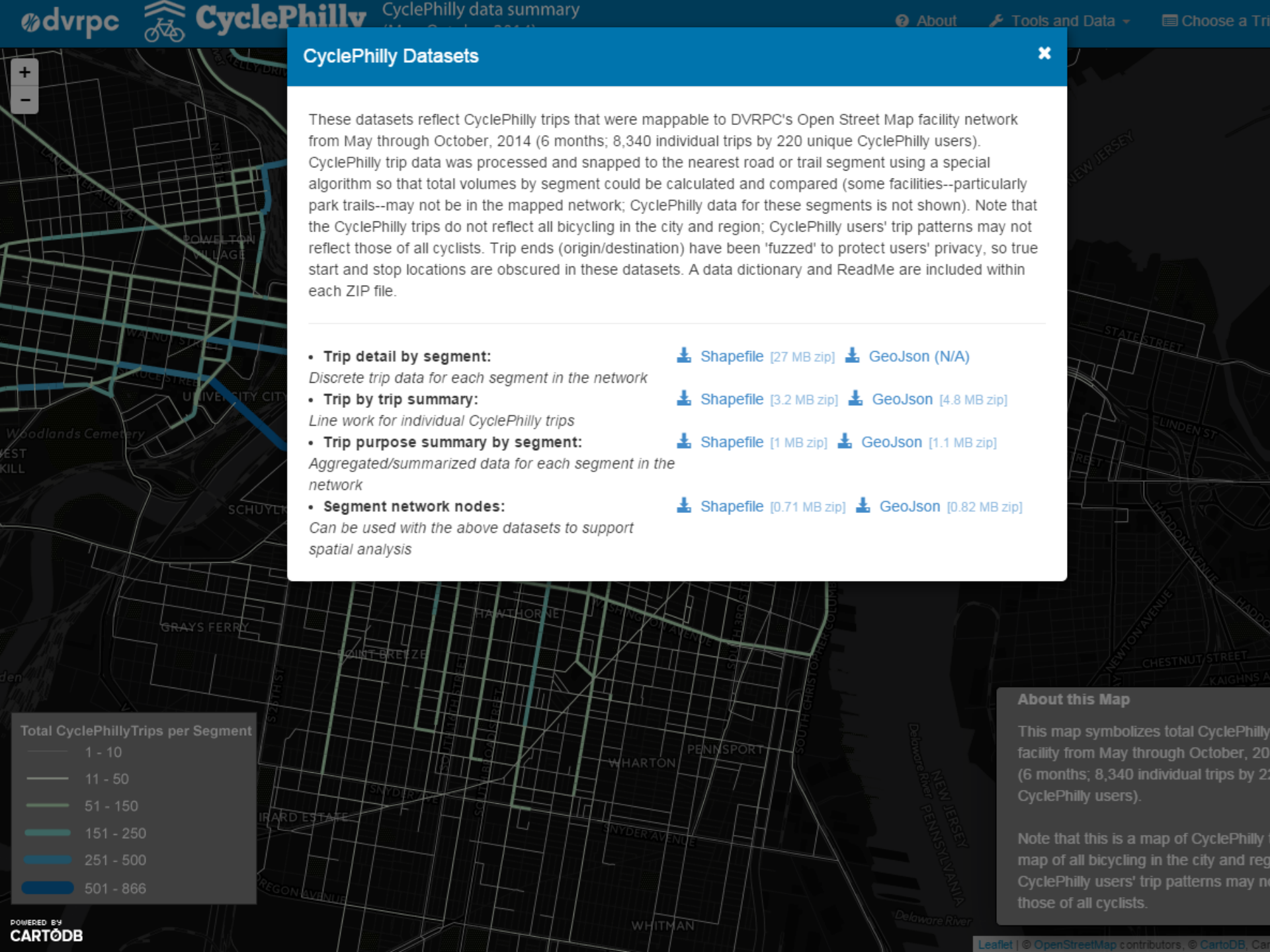
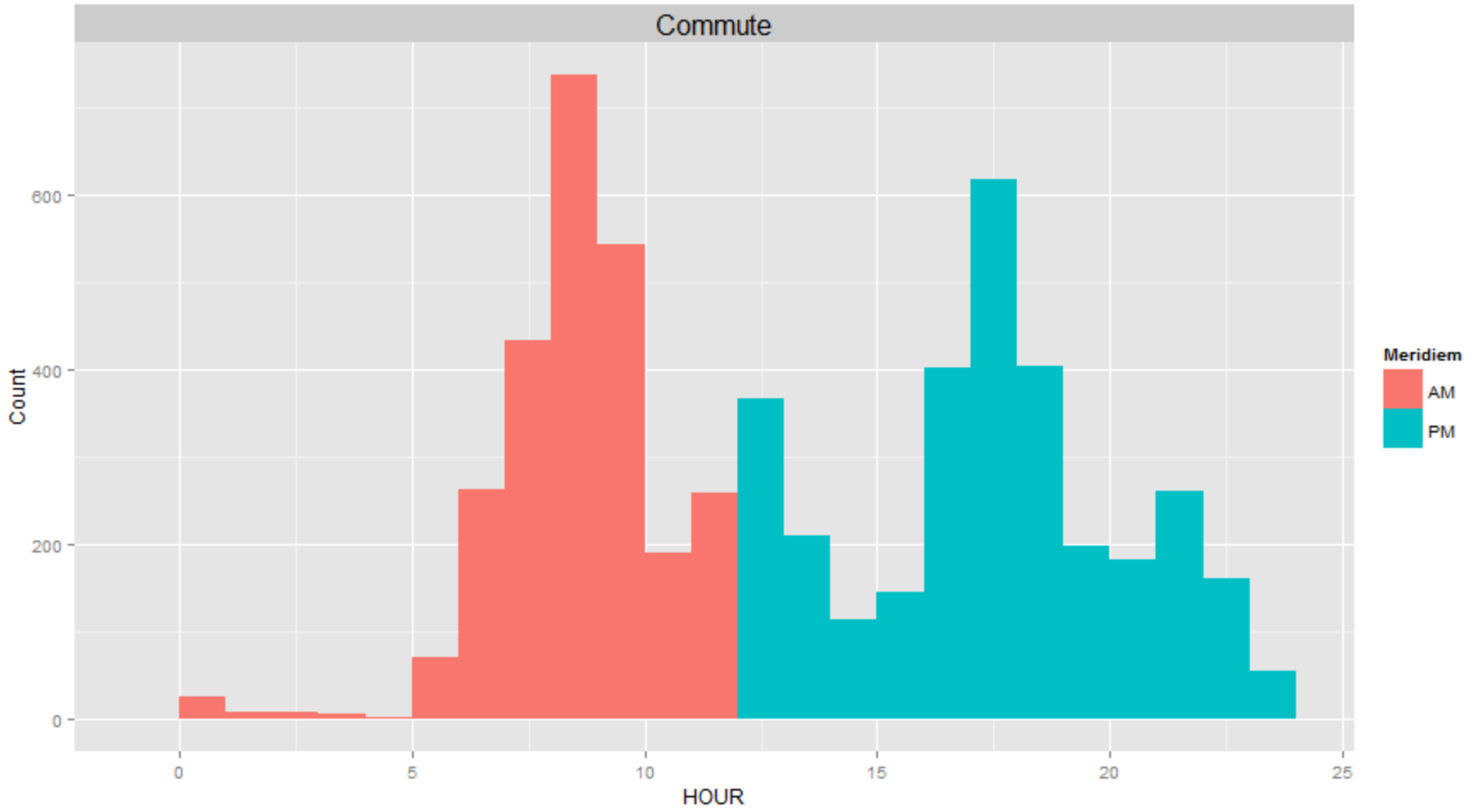
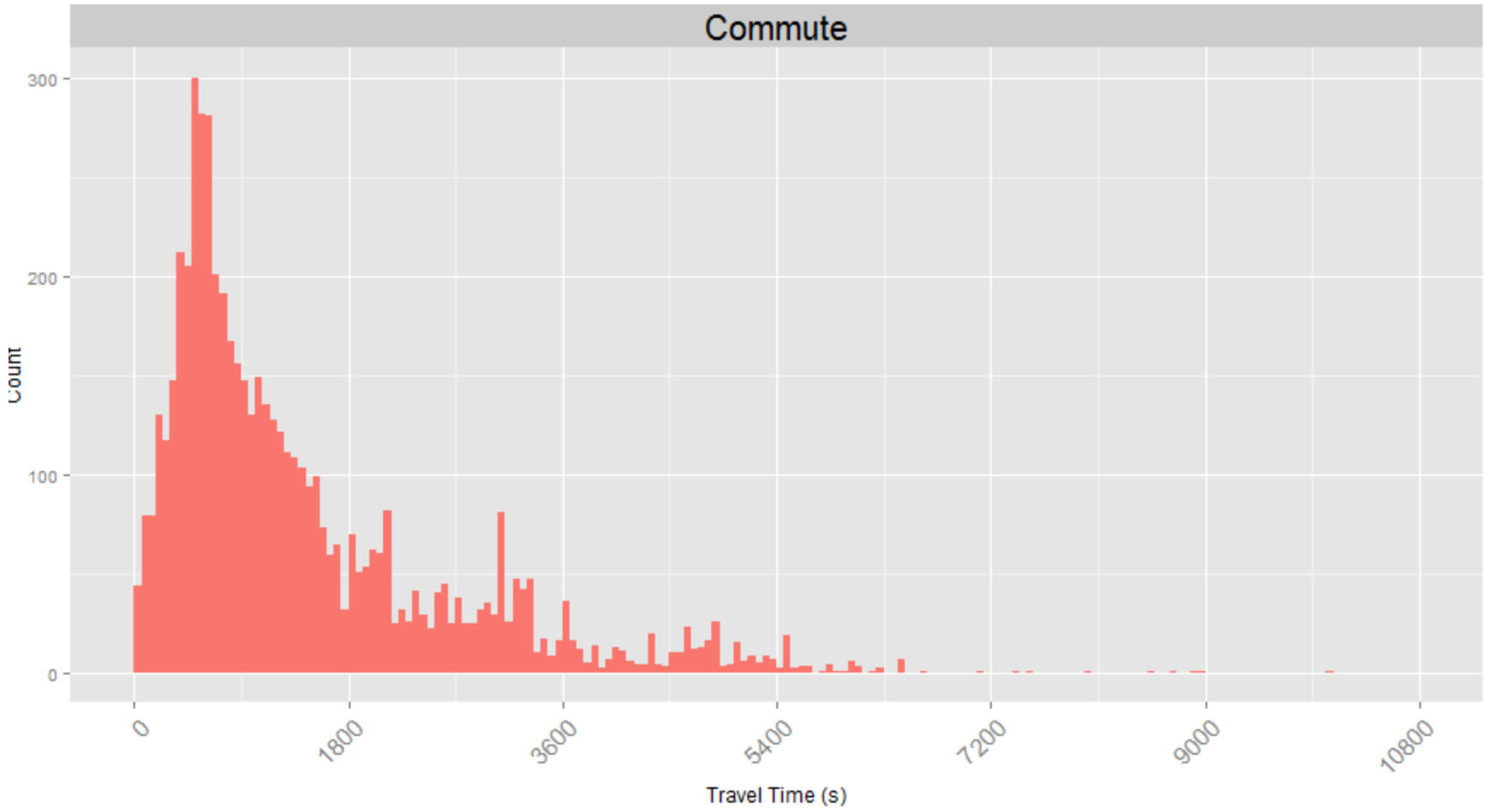

dvrpc
CyclePhilly
CyclePhilly data summary
About
Tools and Data
Choose a Tri
CyclePhilly Datasets
These datasets reflect CyclePhilly trips that were mappable to DVRPC's Open Street Map facility network from May through October, 2014 (6 months; 8,340 individual trips by 220 unique CyclePhilly users). CyclePhilly trip data was processed and snapped to the nearest road or trail segment using a special algorithm so that total volumes by segment could be calculated and compared (some facilities--particularly park trails--may not be in the mapped network; CyclePhilly data for these segments is not shown). Note that the CyclePhilly trips do not reflect all bicycling in the city and region; CyclePhilly users' trip patterns may not reflect those of all cyclists. Trip ends (origin/destination) have been 'fuzzed' to protect users' privacy, so true start and stop locations are obscured in these datasets. A data dictionary and ReadMe are included within each ZIP file.
Trip detail by segment:
Shapefile [27 MB zip]
GeoJson (N/A)
Discrete trip data for each segment in the network
Trip by trip summary:
Shapefile [3.2 MB zip]
GeoJson [4.8 MB zip]
Line work for individual CyclePhilly trips
Trip purpose summary by segment:
Shapefile [1 MB zip]
GeoJson [1.1 MB zip]
Aggregated/summarized data for each segment in the network
Segment network nodes:
Shapefile [0.71 MB zip]
GeoJson [0.82 MB zip]
Can be used with the above datasets to support spatial analysis
Total CyclePhillyTrips per Segment
1 - 10
11 - 50
51 - 150
151 - 250
251 - 500
501 - 866
About this Map
This map symbolizes total CyclePhilly
facility from May through October, 20
(6 months; 8,340 individual trips by 2
CyclePhilly users).
Note that this is a map of CyclePhilly
map of all bicycling in the city and reg
CyclePhilly users' trip patterns may n
those of all cyclists.
POWERED BY CARTODB
Leaflet | © OpenStreetMap contributors, © CartoDB, Ca

Trips by Purpose



Travel Time by Purpose



Data generation and usage

Improvements for 2015:

- Improved and expanded publicity
- Giveaways!!
- User and trip goals promotion
- Analysis of 2014 data

Long-term work:

- Analysis pre- and post-bike share
- Analysis using CyclePhilly and regional bike counts
- Development of a regional bike plan
- On-going improvements to processing

Lessons learned?

Data:

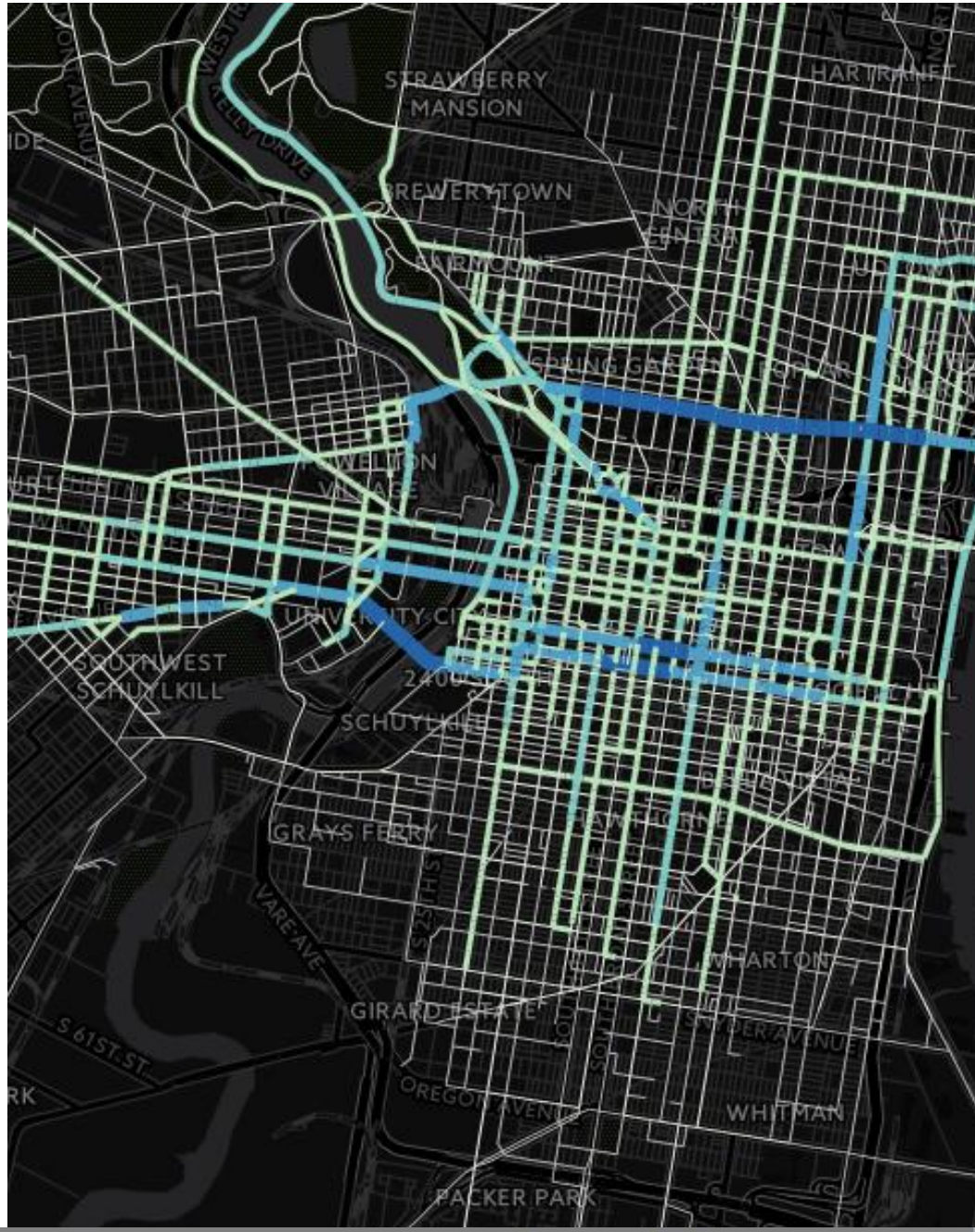
http://www.dvrpc.org/webmaps/cyclephilly

Questions:

cboulan@dvrpc.org

dvrpc

October 2, 2015



new sustainable jersey actions
access to public info

1. **Digitizing Public Information**
   - ✓ Put highly demand information & records online in digital formats

2. **Open Data Inventory & Management** (*coming soon*)
   - ✓ Take stock of data sets that exist in your town
   - ✓ Share them with the public through a repository or links on your website
   - ✓ Engage the public in learning what data is important to them and collaborate with them to create useful applications