Equity Through Access Map Toolkit: Engaging Stakeholders with a Story Map

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About Me

Manager, Data Coordination

Work to improve:
- Discovery
- Sharing
- Maintenance and management
- Development
- Prioritization
About Equity Through Access

Kicked off in 2016

Update of our Coordinated Human Services Transportation Plan (CHSTP)

Using guidance from USDOT’s Ladders of Opportunity program, we aimed to:

• help identify unmet mobility needs and services gaps;
• recommend new or different kinds of transportation access solutions;
• and enable more people to find social and economic mobility.
Gaps
After interviewing stakeholders around the region a number of “gaps” were identified:

• Infrastructure
• Service and funding
• Data and coordination

Bridges
To address those “gaps,” ETA offers the following “bridges”:

• Create accessible and affordable infrastructure
• Provide infrastructure that feels safe for vulnerable users
• Improve transportation service
• Improve outreach and communication
• Encourage creative, flexible use of existing funding sources and identify new funding partners
• Create data resources
Questions:

1. How can we identify – at a regional scale – where populations in need live, where they need to go, and where gaps in transit service exist?

2. How do we then share this information with our stakeholders?

3. How do we do this within our budget and timeframe?
How do we then share this information with our stakeholders? How do we do this within our budget and timeframe?

Create an online map viewer that is:
- User-friendly
- Helps explain the Priority Score using a narrative
- Provides a mechanism for sharing the data
What Works Well

• Uses common geography (block groups) so that users could add their own data, if desired

• Helps explain the Priority Score using a narrative

• Simple result

• Story Map application is free, easy-to-use, and fun (Try it!)

• Allows users to download the data
Room for Improvement

• Keeping it simple was difficult; complex problem = complex answer

• Not as user-friendly for the audience I was hoping to target; need to do roadshows

• Not all data sources used are public; struggle to find balance

• Large datasets created speed issues with Story Map; GIS department need to get involved

• Methodology used in data analysis may not be the best

• Doesn’t allow users to provide feedback in an easy way
Problems We Encountered with Data

- ACS reliability is not addressed in the application
- Found a better data source too far into the project to turn back
- Data is out of date as soon as you use it (struggle with timing of potential updates vs. future workload)
- There’s more data than we can handle...where do we draw the line?
Thank you!

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http://www.dvrpc.org/eta/
The ETA Map Toolkit:

An Esri Story Map that allows users to easily retrieve information about disparities in access to services and explore the relationships between transportation access, opportunity, and equity throughout the Greater Philadelphia region.
About:

An intro to the application with a brief description of each tab and a quick “howto”
Vulnerable Populations answers the question, “Who lives here?” and highlights populations in need.
Vulnerable Populations

Data used to answer this question:
- Households that Include One or More Disabled Person(s)
- Households In Poverty
- People Aged 65 and Over

Source: American Community Survey, 5year estimates (block group level)
Essential Services answers the question, “Where do people need to go?” and highlights areas with greater opportunities in the region.

DVRPC’s Equity Through Access Map Toolkit

Purpose: To highlight areas of opportunity (essential services)

The ETA project identified essential services as places of employment, grocery stores, schools, medical care facilities, recreation/open space, senior centers, and centers for the developmentally disabled. For those with limited travel options, quality of life can be greatly diminished by lack of access to essential services, as described in USDOT’s Ladders of Opportunity initiative. This map highlights areas with higher and lower opportunity.

Using a variety of sources, essential services were combined by block group and ranked 1 through 10. Lower values were assigned to areas with lower numbers of essential services and higher values were assigned to areas with higher numbers of essential services. Click on an area of interest on the map to view the detailed data related to each of the layers.

Sources: CeSteR, DVRPC, HRSA ACCESS, NPTS

Note: Zoom in to display essential service features.

Essential Services: Tract 171, Block Group 2

<table>
<thead>
<tr>
<th>Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity Centers for Seniors or Disabled</td>
<td>0</td>
</tr>
<tr>
<td>Grocery Stores</td>
<td>0</td>
</tr>
<tr>
<td>Health Care Facility</td>
<td>0</td>
</tr>
<tr>
<td>Number of Educational Institutions</td>
<td>0</td>
</tr>
<tr>
<td>Parks/Open Space Present (1 for yes, 0 for no)</td>
<td>1</td>
</tr>
</tbody>
</table>

Higher number of essential services (10)

Lower number of essential services (1)

*Location of jobs are not shown on map, but are reflected in the Essential Services layer. Click this layer to view number of jobs by block group.
Essential Services

Data used to answer this question:

- Activity Centers for Seniors or Disabled, Jobs – NETS (private)
- Grocery Stores – CoStar (private)
- Health Care Facilities – HRSA (public)
- Schools – NCES (public, manually adjusted by DVRPC)
- Trails and Parks/Open Space – DVRPC (public)
Population Services Mismatch answers the question, “Where is there a gap between areas of need and essential services?” This layer highlights areas where there are higher numbers of vulnerable populations but lower number of essential services and vice versa. Result of vulnerable population rank essential services rank.
Transit Accessibility answers the question, “How is transit service distributed?” and highlights areas in the region with lower transit accessibility.
Transit Accessibility

Data used to answer this question:

- Bus and rail walksheds – DVRPC (public)
- Transit journey time skim matrix – DVRPC (inhouse) with the following data appended:
  - Activity Centers for Seniors or Disabled, Jobs – NETS (private)
  - Grocery Stores – CoStar (private)
  - Health Care Facilities – HRSA (public)
  - Schools – NCES (public, manually adjusted by DVRPC)
  - Trails and Parks/Open Space – DVRPC (public)

The transit skims were available at the TAZ level only. Had to apply TAZ level data to block groups.
Priority Score: The grand finale!
answers the question, “Where can transit service be improved to help vulnerable populations access essential services?” This layer, the result of our analysis, highlights areas with higher numbers of vulnerable populations or essential services, but lower transit accessibility and vice versa.