

# Breakout Room Notes

## [Example](#)

[Aggregate data from across the country to develop data products for the National Transportation Atlas Database \(NTAD\).](#)

[Other Use Cases Noted in Situation Assessment](#)

[Bicycle Infrastructure Data](#)

[Template \(copy and paste this below\)](#)

[Pedestrian Infrastructure Data](#)

[Template \(copy and paste this below\)](#)

[Accessibility Infrastructure Data](#)

[Template \(copy and paste this below\)](#)

## Example

**Aggregate data from across the country to develop data products for the National Transportation Atlas Database (NTAD).**

*Provide a description of the use case.*

BTS wants to be able to aggregate data to publish national, geospatial bike, pedestrian, and accessibility infrastructure data products through NTAD. These products would support BTS' mission:

- Statistical products
  - Basic statistics (Is the network growing or shrinking? How many Americans live within x distance of this type of infrastructure?)
  - Derivative products (What level of access to destinations do these networks provide?)
- Decision-support for policymakers
  - Policy research (What is the role of this infrastructure in crashes? How do these networks affect economic development?)
  - Focus investment (What is the coverage of these networks across the country? Where does the infrastructure condition need to be improved?)
- Support to NTAD users
  - Other Federal agencies: Integrate data into other tools or develop derivative products
  - Private companies: Integrate data into software applications (e.g., planning or modeling products)
  - Researchers: Use data to research transportation, equity, health, climate, economic, etc., impacts.
  - Nonprofit organizations: Analyze and visualize data to advocate for their interests.
  - Citizens: Use data to advocate for themselves and their communities.

*What are the needs around data content, structure, format, licensing, etc., associated with this use case?*

- Data must be a connected network (or easily created) in order to support network analysis.
- Data needs to have objective and consistent attribution in order to support condition assessment.
- Data must have permissive licensing to enable publishing on NTAD in the public domain.
- Data must meet a standard of authoritativeness

*What is the level of spatial or temporal specificity or granularity required for this use case?*

- Data must provide the geographic location of the actual infrastructure
- Data can have a pretty low update rate; between quarterly and annually would be sufficient.

*Provide a list of stakeholders in your group who have this use case.*

- BTS and its customers, for example:
  - Congress
  - USDOT and Federal partner agencies
  - Academic researchers
  - Private sector companies
  - Nonprofits
  - Public

*Are there any existing datasets that fulfill this use case? Provide URLs below.*

- -

*Are the needs associated with this use case in conflict with other use cases?*

- Authoritativeness
- Public domain licensing conflicts with commercialization of these data
- Connected network versus just a digital representation

*Relative to other use cases in your discussion, what level of priority is this use case?*

- High/Medium/Low

## Other Use Cases Noted in Situation Assessment

[20231201 Output 2.2 - Discussion Themes.pdf](#) (p.22)

- ADA Compliance and Physical Accessibility
- Safety
- Disaster Management
- Planning
- Navigation
- Research and Analysis
- Motivating Policy Change

## Bicycle Infrastructure Data

League of American Bicyclists
<i>Provide a description of the use case.</i>
The League of American Bicyclists uses bicycle infrastructure data to compare and award communities that participate in the Bicycle Friendly Community program. The League would also use comparative data or nationwide data to understand local, state, and federal funding needs.
<i>What are the needs around data content, structure, format, etc., associated with this use case?</i>
<ul style="list-style-type: none"><li>• CSV, Excel</li><li>• Shapefiles</li><li>• Aerials</li><li>• Type of infrastructure</li></ul>
<i>What is the level of data specificity or granularity required for this use case?</i>
<ul style="list-style-type: none"><li>• If possible, the type of infrastructure: bike lane, buffered bike lane, protected bike lane, multi-use trail. Sidewalks, crosswalks, etc.</li><li>• For multi-use trails, data on the setback from the roadway, frequency of access points, and grade separated crossings would be great.</li><li>• Facility length and width (I'd be ok with typical width for a facility rather than as measured for every foot of length)</li><li>• Data over time, reported in a regular manner to provide longitudinal comparisons, comparisons based on progress/effort</li><li>• Suitability data (e.g. speed and volume of the roadway/adjacent roadway so that a matrix of suitability like FHWA's Bikeway Selection Guide could be applied)</li><li>• High quality bicycle boulevard features (e.g. traffic diverters, neighborhood roundabouts, bioswales, curb extensions)</li><li>• It could be good to have data specifically on road crossings, e.g. are bike lanes marked through intersections, or does a trail crossing mid-block get a sign, signal, RRFB, or grade</li></ul>

separated bridge/underpass?
<i>Provide a list of stakeholders in your group who have this use case.</i>
<ul style="list-style-type: none"> <li>The League has roughly 500 participating Bicycle Friendly Communities, over 350 state and local bicycle advocacy organization members, and over 600 bicycle club members.</li> </ul>
<i>Are there any existing datasets that fulfill this use case? Provide URLs below.</i>
<ul style="list-style-type: none"> <li>OpenStreetsMap kinda sorta does this, but is not an official data source for governments</li> <li>The Model Inventory of Roadway Elements could conceivably include this information but its adoption is weak and the federal government doesn't include relevant bike/ped/speed limit data in the Fundamental Data Elements that states are encouraged to use</li> </ul>
<i>Are the needs associated with this use case in conflict with other use cases?</i>
<ul style="list-style-type: none"> <li>Not that interested in pavement or paint quality or other issues related to maintenance. I would be comfortable using data on the year of installation as a proxy for those issues.</li> <li>I don't think this is a real answer, but aerial-based estimates of "goat paths" carved by people walking/biking through grass would be kinda fun/sad for advocacy uses</li> </ul>
<i>Relative to other use cases in your discussion, what level of priority is this use case?</i>
<ul style="list-style-type: none"> <li></li> </ul>

<b>FHWA Central Federal Lands</b>
<i>Provide a description of the use case.</i>
<p>My use case is an upcoming funded project titled: 'Enhancing Complete Streets Access to Federal Lands with an Equity Focus'</p> <p>&gt;the project will collect Federal Lands boundary data, gateway communities within 5 miles of the Federal Land that have underserved communities based on Title IX Census data, as well as existing (or lack thereof) bicycle, pedestrian, accessibility infrastructure data to start to look at high level planning type corridor studies to enhance access to Federal Lands to underserved communities</p>
<i>What are the needs around data content, structure, format, etc., associated with this use case?</i>
<ul style="list-style-type: none"> <li>Shapefiles</li> <li>Aerials and images</li> <li>CSV Excel Sheets</li> </ul>

<i>What is the level of data specificity or granularity required for this use case?</i>
<ul style="list-style-type: none"> <li>• If possible, the type of infrastructure: bike lane, protected bike lane, multi-use trail. Sidewalks, crosswalks, etc.</li> <li>• The quality of the infrastructure</li> <li>• Gaps in the network</li> <li>• Crash data</li> <li>• Average daily traffic for adjacent roadways</li> </ul>
<i>Provide a list of stakeholders in your group who have this use case.</i>
<ul style="list-style-type: none"> <li>• FHWA Central Fed Lands Planning Team</li> <li>• After all data is collected, then my team will develop scoring criteria on which Federal Land to gateway community we will use for the initial pilot study. So after this is done: <ul style="list-style-type: none"> <li>◦ The gateway community</li> <li>◦ The Federal Land</li> </ul> </li> </ul>
<i>Are there any existing datasets that fulfill this use case? Provide URLs below.</i>
<ul style="list-style-type: none"> <li>• As far as bike/ped/accessibility data maybe, but I will spending a lot of time trying to collect this data soon. Hopefully being in this group can inform my data collection 😊</li> </ul>
<i>Are the needs associated with this use case in conflict with other use cases?</i>
<ul style="list-style-type: none"> <li>• No</li> </ul>
<i>Relative to other use cases in your discussion, what level of priority is this use case?</i>
<ul style="list-style-type: none"> <li>• High</li> </ul>

<b>Delaware DOT - Active Transportation Section program prioritization</b>
<i>Provide a description of the use case.</i>
Modeling bicycle network conditions statewide (using Level of Traffic Stress (LTS) methodology on roadway segments and shared-use pathways), to develop connectivity metrics and scenario modeling for project proposals to the DelDOT Bicycle/ Pedestrian Program.
<i>What are the needs around data content, structure, format, etc., associated with this use case?</i>

<ul style="list-style-type: none"> <li>• “Routeable”! Directional roadway inventory data comes from LRS event tables (loooottss of event tables), but must still maintain routing topology. Shared-use pathway data must integrate with DelDOT’s sidewalk network (also routeable and tied to LRS) and ADA accessibility data. DelDOT + developers build lots of shared-use pathways - challenging to maintain.</li> </ul>
<i>What is the level of data specificity or granularity required for this use case?</i>
<ul style="list-style-type: none"> <li>• High enough resolution to model auxiliary lanes for determining intersection LTS and flagging “pinch points” in the network. It’s about accurate to 20 ft at the moment.</li> </ul>
<i>Provide a list of stakeholders in your group who have this use case.</i>
<ul style="list-style-type: none"> <li>•</li> </ul>
<i>Are there any existing datasets that fulfill this use case? Provide URLs below.</i>
<ul style="list-style-type: none"> <li>• Not really. This is mostly all Delaware DOT roadway inventory data + sidewalk data. You can generate an LTS estimate from Open Streets Map data, but most algorithms I’ve used are meh + not great data coverage.</li> </ul>
<i>Are the needs associated with this use case in conflict with other use cases?</i>
<ul style="list-style-type: none"> <li>•</li> </ul>
<i>Relative to other use cases in your discussion, what level of priority is this use case?</i>
<ul style="list-style-type: none"> <li>• High/Medium/Low</li> </ul>

<h2>Bicycle routing - Volpe</h2>
<i>Provide a description of the use case.</i>
<p>A routable network that provides link impedances that consider both the travel time and comfort level of biking (level of traffic stress) on a link. Use for access to destinations routing, and determination of critical links.</p>

*What are the needs around data content, structure, format, etc., associated with this use case?*

- Type and condition of bicycle facilities
  - Details matter, e.g., bike and parking lane widths
- Connecting short pedestrian facilities (to fill in gaps via walking)
- Traffic volumes, speeds and turning conflicts
- Must handle intersections well

*What is the level of data specificity or granularity required for this use case?*

- All streets network
- Plus, shared use paths
- Application at the city or regional level (looking at 1 - 10 mile trips)

*Provide a list of stakeholders in your group who have this use case.*

## Bicycle lane facility type and geometric details for safety analysis (FHWA)

*Provide a description of the use case.*

Safety performance analysis and development of crash modification factors. Both of these tasks require detailed description of the road environment. Most current crash records include the presence of bicycling facilities but do not include information on the actual type.

*What are the needs around data content, structure, format, etc., associated with this use case?*

- Detailed bicycle lane form of separation and intersection traffic control (lane markings) geometry.

*What is the level of data specificity or granularity required for this use case?*

- Subsection level. Perhaps separating the section into three segments, entrance, mid section, exit (~100 feet upstream of stopline).

*Provide a list of stakeholders in your group who have this use case.*

- State and federal safety engineers

*Are there any existing datasets that fulfill this use case? Provide URLs below.*

- Some jurisdictions have detailed records but in most cases people resort to Google Streetview. On a local case by case level the above are manageable but on cases involving jurisdiction/state wide safety assessment something more GIS layer like is more appropriate.

*Are the needs associated with this use case in conflict with other use cases?*

- Most likely complimentary

*Relative to other use cases in your discussion, what level of priority is this use case?*

- High

## Advocacy - PeopleForBikes

*Provide a description of the use case.*



PeopleForBikes manages software called the [Bicycle Network Analysis](#) that measures bike network quality and connectivity for cities across the city (approximately 2300 U.S. cities currently). The software rates every street in the city as high or low stress using a two-class LTS rating, then calculates whether people can bike from where they live to nearby destinations using only low-stress routes, using census blocks as the starting and ending points. The data is primarily used for advocacy but occasionally for planning and research.

*What are the needs around data content, structure, format, etc., associated with this use case?*

- National coverage
- Street network
  - Distinct details for each travel direction of the street
- Spatial data files that can be used freely and transformed into new data products (with attribution)
- Frequently updated - For OSM this is continuous

*What is the level of data specificity or granularity required for this use case?*

- Dedicated bike infrastructure
  - Protected or painted
    - Buffer - if painted
  - On-street (follows a road for motor vehicles) or off-street (does not follow a road for motor vehicles)
  - Width of the facility
- Intersection characteristics
  - Traffic lights
  - Stop signs
  - Crossing islands
  - Flashing signals
- Street characteristics
  - Functional class (our tool uses the OpenStreetMap classification)
  - Speed limits
  - # of lanes of motor vehicle travel
  - Direction of motor vehicle travel lanes
  - Presence of on-street parking
  - Width of lanes
- Destinations
  - Location of common destinations like schools, grocery stores, parks, etc.
- Access
  - Public, private
  - Bikes prohibited (e.g. pedestrian only paths)
- Data we'd like to have, but don't
  - Type of bike lane protection
  - Traffic calming characteristics - Many of these can be captured in OpenStreetMap but are sparsely mapped
  - Motor vehicle volume, particularly on residential or other smaller streets where it will determine whether more separation is needed
  - Electric bicycle access (yes, no, by class)

<i>Provide a list of stakeholders in your group who have this use case.</i>
<ul style="list-style-type: none"> <li>•</li> </ul>
<i>Are there any existing datasets that fulfill this use case? Provide URLs below.</i>
<ul style="list-style-type: none"> <li>• <a href="#">OpenStreetMap</a> - Our challenge is trying to update OSM using local datasets, which can be difficult to interpret and conflict with data sets from other jurisdictions.</li> <li>• U.S. Census - Used to identify the distribution of jobs and population, and for base analysis units (census blocks)</li> </ul>
<i>Are the needs associated with this use case in conflict with other use cases?</i>
<ul style="list-style-type: none"> <li>•</li> </ul>
<i>Relative to other use cases in your discussion, what level of priority is this use case?</i>
<ul style="list-style-type: none"> <li>• High/Medium/Low</li> </ul>

<b>FHWA Performance Management for infrastructure delivery</b>
<i>Provide a description of the use case.</i>
<ul style="list-style-type: none"> <li>• FHWA has an open performance audit finding from GAO-21-405 that calls for greater use of performance management principles in delivering safer and more connected pedestrian and bicycle networks.             <ul style="list-style-type: none"> <li>○ This report highlighted the lack of infrastructure data as a basic necessity in quantifying what the Federal Aid Highway Program has delivered in walking and bicycling infrastructure</li> <li>○ A comprehensive look at national geodata that provides a longitudinal look at infrastructure would help answer this need</li> </ul> </li> </ul>
<i>What are the needs around data content, structure, format, etc., associated with this use case?</i>
<ul style="list-style-type: none"> <li>• Simple geodata, no need for routable or connected network</li> </ul>
<i>What is the level of data specificity or granularity required for this use case?</i>

<ul style="list-style-type: none"> <li>•</li> </ul>
<i>Provide a list of stakeholders in your group who have this use case.</i>
<ul style="list-style-type: none"> <li>• Policymakers assessing the outcomes of the Fed Aid Highway Program</li> <li>• Partners, such as State DOTs, in the Fed Aid Highway Program</li> </ul>
<i>Are there any existing datasets that fulfill this use case? Provide URLs below.</i>
<ul style="list-style-type: none"> <li>•</li> </ul>
<i>Are the needs associated with this use case in conflict with other use cases?</i>
<ul style="list-style-type: none"> <li>•</li> </ul>
<i>Relative to other use cases in your discussion, what level of priority is this use case?</i>
<ul style="list-style-type: none"> <li>• High/Medium/Low</li> </ul>

<b>Regional and Local Inventory of Existing Conditions</b>
<i>Provide a description of the use case.</i>
<p>In order to convey the presence of existing and planned bicycle facilities to the general public, allow for consistent use of bicycle facilities datasets in planning and analysis, and coordinate the development of new planned facilities across jurisdictional boundaries, a consistent data standard is needed so that existing and planned bike facility data can be created consistently and aggregated across geographic boundaries.</p>
<i>What are the needs around data content, structure, format, etc., associated with this use case?</i>
<ul style="list-style-type: none"> <li>• Classification of existing and planned facilities by types and status. Optionally, inclusion of attributes for on-street bicycle facilities so that Level of Traffic Stress indicators can be calculated</li> </ul>
<i>What is the level of data specificity or granularity required for this use case?</i>
<ul style="list-style-type: none"> <li>• Polyline data for off street bicycle pathway facilities, broken at least at intersections of the bicycle and street network and optionally at jurisdictional boundaries.</li> <li>• Street network polylines with attributes encoding for existing and planned on-street bike facilities (bike lanes etc.) by type of bike facility, likely as L/R side attributes of the polyline (or</li> </ul>

NorthOrEastSide/SouthOrWestSide attributes that relate to the primary cardinal direction of the road)
<i>Provide a list of stakeholders in your group who have this use case.</i>
<ul style="list-style-type: none"> <li>All local and regional government, as well as those hoping to aggregate this data into larger larger geographic areas.</li> </ul>
<i>Are there any existing datasets that fulfill this use case? Provide URLs below.</i>
<ul style="list-style-type: none"> <li>Various implementations at various levels but no recognized standard</li> </ul>
<i>Are the needs associated with this use case in conflict with other use cases?</i>
<ul style="list-style-type: none"> <li>They should not be.</li> </ul>
<i>Relative to other use cases in your discussion, what level of priority is this use case?</i>
<ul style="list-style-type: none"> <li>Highest</li> </ul>

## Accessibility Infrastructure Data

<b>ADA Transition Planning</b>
<i>Provide a description of the use case.</i>
<ul style="list-style-type: none"> <li>Section 2b of the ADA - specifies how to metricize barriers in public right of way             <ul style="list-style-type: none"> <li>Asset-based - plans required to account for changes made + impact; count something, develop plan to ameliorate, periodically measure / report what you counted and get the delta                 <ul style="list-style-type: none"> <li>Most ramps non-compliant - important context - need data that helps fix the real problem. Red crayon results - everything/90% of corners are red, auditing costs a lot. Wasted resources that don't translate into action.</li> <li>Prioritization methods? Some scoring tools re: connectivity / network based analysis - how does reach by this mode compare to car, for example, or are we forcing people into road infrastructure? Are we providing equitable infrastructure – rollers have as much access as walkers? Goal is to measure walksheds of varying size. Challenge is lack of data, methods are there.</li> </ul> </li> <li>Connectivity would be better...</li> <li>Ex. collected 20K corners with missing curb ramps, now how do you prioritize?</li> </ul> </li> </ul>

- Routable graph where we can compute walksheds or bean-counting of curb ramps?
  - Aim for best possible tool, pair w/investment data
  -

*What are the needs around data content, structure, format, etc., associated with this use case?*

- Routable network
- Level 1, 2, 3 perspective - having pedestrian graph is 75% of the way. DeepWalk is Level 3. WashDOT assessing Level 2 data - need routable network ++ (traffic stress, surface disruptions, what's at the bus stop and is it accessible). Joining Level 2 to Level 1 (graph) is where many get stuck.
  - All levels important - depends who's consuming the data. DeepWalk focuses on contractor, public works, maintenance staff. Many in Level 1 & Level 2 don't know where networks are, what connects.
- Aerial data has national coverage - depends on resolution, frequency. Can be leveraged for Level 1, sometimes Level 2 at relatively low cost. Mobilize is example - camera-based assisted driving. AI-derived attributes from image frames - street view where you can get additional attributes that don't show in aerial. Level 1 is addressable with good frequency but further detail harder. Smaller cities walkable, can do without imagery. Many states, cities just at point of getting an inventory - point and polyline data.
- Standard can help set level of coverage we want nationally, what features and attributes we're looking for and need. Level 1.

*What is the level of data specificity or granularity required for this use case?*

- 

*Provide a list of stakeholders in your group who have this use case.*

- Value to end user? Can cities do better planning?
- Level 1 - cities with more than 50 employees required to do ADA transition planning, public works directors use for questions about how much sidewalk we have + where (less than half of cities can answer these questions, using to give data to policymakers), USDOT, DOJ, Access Board
  - What does Level 1 mean?
    - Linework / center line, links between sidewalk and crossings, crossings - connected graph w/nodes annotated with their connectivity (ex. Curb ramp) - is it potentially navigable with wheels? Type of surface - concrete, asphalt...
    - Connected network that is topologically correct. Not even sidewalks polyline - sometimes a road attribute (sidewalk presence L / R).
- Level 2
  - What does Level 2 mean?
    - Crossing connections, routing and networks.
    - Routable graph with common attributes (e.g major barriers in path; important surface qualities, precise grade and cross grade);
- Level 3
  - full digital 'imagery' of assets, incorporated into connected network.

*Are there any existing datasets that fulfill this use case? Provide URLs below.*

- 

*Are the needs associated with this use case in conflict with other use cases?*

- 

*Relative to other use cases in your discussion, what level of priority is this use case?*

- **High**/Medium/Low

# Pedestrian Infrastructure Data

Overall: aim for the most granular data possible, because that makes a bunch of other use cases possible

All uses cases we can think of:

- Public health planning
  - Using high quality routable bike network for safety and health analysis in Oregon-  
<https://www.oregon.gov/ODOT/Programs/ResearchDocuments/Bicycle%20Count%20Data%20What%20is%20it%20Good%20For%20-%20Research%20Note.pdf>
- Safety
  - MIRE: Treat the roadway as a complete street: data on the entire right of way
    - See the data itself as an asset in itself
    - Data driven safety analysis - integrate crash/incident data, nonmotorist travel, VMT, AADT
    - Screen network, select countermeasures, evaluate the effectiveness of countermeasures
- Climate
- Travel monitoring
- ADA Transition Plan inventories
  - Understanding PROWAG compliance
- Asset management system linked to navigation/routing system
- Real time vs static data
- Curb management/commercial use → includes safety and accessibility issues
  - Sidewalk cafes
  - Sidewalk robots
  - Curb management policies, attached to the infrastructure - who is prioritized in areas that are or could be shared between uses (e.g., riding on the sidewalk)?
- Journey planning/routing
  - [Interaction of Pedestrian Network with Other Transportation Modes](#): linking data from data sources from public transit or other transportation modes
  - Physical accessibility of routes
- Accessibility of destinations
  - [Interaction of Pedestrian Network with Other Transportation Modes](#)
  - Walkability metrics (e.g., walkscore, pedestrian friendliness index) → improve assessments of walkability
    - Secondary uses from
  - Transit walksheds
- Transportation Planning
  - Complete streets
  - Financing
  - Prioritization
- Disaster relief planning / Emergency response planning
  - Connecting indoor GIS with routing

- Developing a wayfinding plan for a city
- Equity Analysis
  - At network and zonal level measure sidewalk completeness, crossing density, and other measures of lower stress pedestrian infrastructure
  - Accessibility to destinations
  - Integrate with other datasets (e.g., Social Vulnerability Index)
  - Disparity analysis
- Condition/level of service for both bike and ped infra

## Safety (Crash Analysis)

*Provide a description of the use case.*

- Study crashes (especially pedestrian and bicyclists crashes (usually with motor vehicles), including other micromobility modes) based on infrastructure and other variables to understand what variables are associated with crashes for the purposes of identifying countermeasures

*What are the needs around data content, structure, format, etc., associated with this use case?*

- Data are generally organized by either
  - road segment (center line), or
  - intersection (either by the intersection as a node, or by intersection approach, or by pedestrian crosswalk at the intersection)
- Attribution
  - presence/absence at a segment level
  - Street lighting
  - Type of crossings at intersection, midblock
- Temporal presence. For each infrastructure feature, we need to know when it was installed or removed so we can match up presence with crash data. We usually do this by year, but if we know the date of installation (and/or removal), that's perfect.

*What is the level of data specificity or granularity required for this use case?*

- Variables that have been used for past analysis (as examples) Each study usually develops its own infrastructure data, so there isn't a lot of consistency.
  - Sidewalk: % of road segment with sidewalk (on one side, on both sides)
  - Sidewalk: Total miles of sidewalk divide by length of road segment
  - Number of transit stops on a road segment
  - Presence of marked crosswalk
  - Presence of street lighting

*Provide a list of stakeholders in your group who have this use case.*



- Oregon DOT
- UNC Highway Safety Research Center

*Are there any existing datasets that fulfill this use case? Provide URLs below.*

- 

*Are the needs associated with this use case in conflict with other use cases?*

- Since we need data at the segment level, we would have to aggregate to the centerline level.
- Need data aggregated to the centerline (e.g., sidewalk is x% of the centerline), rather than disaggregated - need less granularity than other use cases

*Relative to other use cases in your discussion, what level of priority is this use case?*

- High/Medium/Low

## Travel monitoring

*Provide a description of the use case.*

- Use pedestrian infrastructure data in the travel models
- Combine with origins and destinations
  - Transit
  - Land uses

*What are the needs around data content, structure, format, etc., associated with this use case?*

- 

*What is the level of data specificity or granularity required for this use case?*

- 

*Provide a list of stakeholders in your group who have this use case.*

-

<i>Are there any existing datasets that fulfill this use case? Provide URLs below.</i>
<ul style="list-style-type: none"> <li>Currently use NHTS + Smart Location Database as inputs into the climate modeling</li> </ul>
<i>Are the needs associated with this use case in conflict with other use cases?</i>
<ul style="list-style-type: none"> <li></li> </ul>
<i>Relative to other use cases in your discussion, what level of priority is this use case?</i>
<ul style="list-style-type: none"> <li>High/Medium/Low</li> </ul>

<b>Climate</b>
<i>Provide a description of the use case.</i>
<ul style="list-style-type: none"> <li>climate modeling - relationship between the pedestrian and transit networks and the amount of driving that people do <ul style="list-style-type: none"> <li>Measure access, density of the network → daily traffic, amount of greenhouse gas emissions</li> </ul> </li> </ul>
<i>What are the needs around data content, structure, format, etc., associated with this use case?</i>
<ul style="list-style-type: none"> <li></li> </ul>
<i>What is the level of data specificity or granularity required for this use case?</i>
<ul style="list-style-type: none"> <li></li> </ul>
<i>Provide a list of stakeholders in your group who have this use case.</i>
<ul style="list-style-type: none"> <li>Public health practitioners would be interested in this to help make a case for pedestrian infrastructure (co-benefits analyses)</li> </ul>
<i>Are there any existing datasets that fulfill this use case? Provide URLs below.</i>
<ul style="list-style-type: none"> <li></li> </ul>
<i>Are the needs associated with this use case in conflict with other use cases?</i>

- 

*Relative to other use cases in your discussion, what level of priority is this use case?*

- High/Medium/Low

## Public health planning

*Provide a description of the use case.*

- CDC funds state, local agencies to do physical activity, nutrition, obesity work
- Walkable infrastructure - routes can improve population levels of physical activity
- In order to prioritize funding, where does pedestrian infrastructure already exist and where does it not?

*What are the needs around data content, structure, format, etc., associated with this use case?*

- Need to know where the infrastructure is - example: funding to fill gaps in the network
- Given geospatial data of the network, CDC can summarize at any geographic level
- Attribution
  - Essential: presence/absence
  - Nice to have
    - Width
    - Surface material
  -

*What is the level of data specificity or granularity required for this use case?*

- Point locations of the infrastructure

*Provide a list of stakeholders in your group who have this use case.*

Others in the group:

- Please add!

I may have misinterpreted the prompt. Below are some sectors that would be potential stakeholders in this use case.

- Public health (governmental and NGO)
- Public works
- City/county DOT or MPO
- Would be especially useful for smaller, under-resourced communities/cities

<i>Are there any existing datasets that fulfill this use case? Provide URLs below.</i>
<ul style="list-style-type: none"> <li>Some larger cities make their sidewalk data public, often as a GIS layer..</li> </ul>
<i>Are the needs associated with this use case in conflict with other use cases?</i>
<ul style="list-style-type: none"> <li>Not to my knowledge. It might be that public health researchers and practitioners could make do with less detail than, say, engineers.</li> </ul>
<i>Relative to other use cases in your discussion, what level of priority is this use case?</i>
<ul style="list-style-type: none"> <li>High/Medium/Low</li> </ul>

<b>Safety analysis (crash analysis)</b>
<i>Provide a description of the use case.</i>
<ul style="list-style-type: none"> <li>Study crashes (especially pedestrian and bicyclists crashes) based on infrastructure</li> </ul>
<i>What are the needs around data content, structure, format, etc., associated with this use case?</i>
<ul style="list-style-type: none"> <li>Data are generally organized by             <ul style="list-style-type: none"> <li>road segment (center line), or</li> <li>Intersection by                 <ul style="list-style-type: none"> <li>intersection as a node, or</li> <li>intersection approach, or</li> <li>pedestrian crosswalk at the intersection</li> </ul> </li> </ul> </li> <li>Attribution             <ul style="list-style-type: none"> <li>presence/absence at a segment level</li> <li>Street lighting</li> <li>Type of crossings at intersection, midblock</li> </ul> </li> </ul>
<i>What is the level of data specificity or granularity required for this use case?</i>
<ul style="list-style-type: none"> <li>Variables that have been used for past analysis (as examples)             <ul style="list-style-type: none"> <li>Sidewalk: % of road segment with sidewalk (on one side, on both sides)</li> <li>Sidewalk: Total miles of sidewalk divide by length of road segment</li> <li>Number of transit stops on a road segment</li> <li>Presence of marked crosswalk</li> <li>Presence of street lighting</li> </ul> </li> </ul>

<i>Provide a list of stakeholders in your group who have this use case.</i>
<ul style="list-style-type: none"> <li>• Oregon DOT</li> <li>• UNC Highway Safety Research Center</li> <li>• A collaborator with the National Center for Injury Prevention and Control at CDC</li> </ul>
<i>Are there any existing datasets that fulfill this use case? Provide URLs below.</i>
<ul style="list-style-type: none"> <li>•</li> </ul>
<i>Are the needs associated with this use case in conflict with other use cases?</i>
<ul style="list-style-type: none"> <li>• Since we need data at the segment level, we would have to aggregate to the centerline level. For example, ideally we need the sidewalk associated with the centerline segment even if the sidewalk is in the GIS as a separate line feature.</li> <li>• Need data aggregated to the centerline (e.g., sidewalk is x% of the centerline), rather than disaggregated - need less granularity than other use cases</li> </ul>
<i>Relative to other use cases in your discussion, what level of priority is this use case?</i>
<ul style="list-style-type: none"> <li>• High/Medium/Low</li> </ul>

<b>Journey-planning</b>
<i>Provide a description of the use case.</i>
<ul style="list-style-type: none"> <li>• Provide the most appropriate path to destinations for journeys that use pedestrian infrastructure (including transit!) in trip planners based on key characteristics/preferences.</li> </ul>
<i>What are the needs around data content, structure, format, etc., associated with this use case?</i>
<ul style="list-style-type: none"> <li>• connectivity/correct topology</li> <li>• Points of interest datasets for routing to the correct location/address/entry</li> <li>• Needs to be relatively stable and not broken if using it for live journey-planning.</li> <li>• Data should be reliable so that you aren't sending people places that aren't there.</li> </ul>
<i>What is the level of data specificity or granularity required for this use case?</i>
<ul style="list-style-type: none"> <li>• including sides of street/street crossings, accessibility, etc = the more detail the better but it needs to be accurate/up to date. Lighting and other things that impact people's</li> </ul>

preferences/feelings about a path would be nice to have.
<i>Provide a list of stakeholders in your group who have this use case.</i>
<ul style="list-style-type: none"> <li>• (added by UrbanLabs)</li> <li>• ...many others i'm sure - please add to list and to this table!</li> </ul>
<i>Are there any existing datasets that fulfill this use case? Provide URLs below.</i>
<ul style="list-style-type: none"> <li>• OSM has some but is inconsistent in coding and is not an efficient topological representation</li> </ul>
<i>Are the needs associated with this use case in conflict with other use cases?</i>
<ul style="list-style-type: none"> <li>• ?</li> </ul>
<i>Relative to other use cases in your discussion, what level of priority is this use case?</i>
<ul style="list-style-type: none"> <li>• High/Medium/Low</li> </ul>

<b>Wayfinding Maps</b>
<i>Provide a description of the use case.</i>
<ul style="list-style-type: none"> <li>• Similar to journey-planning but supports the static or dynamic maps for travelers to use when navigating in a neighborhood or transit station area.</li> </ul>
<i>What are the needs around data content, structure, format, etc., associated with this use case?</i>
<ul style="list-style-type: none"> <li>• Visually consistent</li> <li>• Accurate / semi-authoritative</li> </ul>
<i>What is the level of data specificity or granularity required for this use case?</i>
<ul style="list-style-type: none"> <li>• Widths and polygons for walkable areas so that they can be accurately represented on a map.</li> </ul>
<i>Provide a list of stakeholders in your group who have this use case.</i>
<ul style="list-style-type: none"> <li>• MTC (bay area MPO)</li> <li>• (added by UrbanLabs)</li> </ul>

<i>Are there any existing datasets that fulfill this use case? Provide URLs below.</i>
<ul style="list-style-type: none"> <li>• MTC currently using OSM with a bunch of hand manipulations.</li> <li>• A/B street has good interface to show what OSM currently “looks like”. Most of the actual geometric data is maintained in DPW and CAD drawings but could be gathered from LIDAR and image analysis.</li> </ul>
<i>Are the needs associated with this use case in conflict with other use cases?</i>
<ul style="list-style-type: none"> <li>• ?</li> </ul>
<i>Relative to other use cases in your discussion, what level of priority is this use case?</i>
<ul style="list-style-type: none"> <li>• High/Medium/Low</li> </ul>

<b>Interaction of Pedestrian Network with Other Transportation Modes</b>
<i>Provide a description of the use case.</i>
<ul style="list-style-type: none"> <li>• As a traveler completing a multimodal trip, I would like to know how to walk to and where to transition from the pedestrian network to another mode of transportation, so that I can appropriately travel to and from the transition point</li> </ul>
<i>What are the needs around data content, structure, format, etc., associated with this use case?</i>
<ul style="list-style-type: none"> <li>• Pathways that go from sidewalks to a transit facility.</li> <li>• Pathways within a transit station including to/from platforms and building entrances/exits.</li> <li>• Explicit linkage to other datasets containing the transition point between the other mode and the pedestrian network <ul style="list-style-type: none"> <li>○ Within public transit data. (ie this node in the street network is the same node/stop/platform within a public transit network)</li> <li>○ Within shared mobility data. (ie this bike/car/scootershare station/free-floating bike/car/scooter/etc is at this specific node within the pedestrian network)</li> <li>○ Within airports? (ie this airport gate is the same as this node on the pedestrian network)</li> </ul> </li> </ul>
<i>What is the level of data specificity or granularity required for this use case?</i>
<ul style="list-style-type: none"> <li>• Highly granular so that turn-by-turn directions can be provided in a trip planner.</li> </ul>
<i>Provide a list of stakeholders in your group who have this use case.</i>

- Added by Caltrans

*Are there any existing datasets that fulfill this use case? Provide URLs below.*

- OpenStreetMap, GTFS Pathways

*Are the needs associated with this use case in conflict with other use cases?*

- 

*Relative to other use cases in your discussion, what level of priority is this use case?*

- High/Medium/Low