

# National Collaboration

Bicycle, Pedestrian, and Accessibility Infrastructure Data

June 27, 2024



U.S. Department of Transportation  
Office of the Secretary of Transportation

**Bureau of Transportation Statistics**

**FGDC.GOV**  
FEDERAL GEOGRAPHIC DATA COMMITTEE

# Facilitators

## Co-Chairs

- **Anat Caspi**, University of Washington
- **Bahar Dadashova**, Texas A&M Transportation Institute
- **Jeff Whitfield**, Centers for Disease Control and Prevention

## Bureau of Transportation Statistics

- **Grace Bowen**, ORISE Fellow
- **Cyrus Chimento**, ORISE Fellow
- **Jay Davis**, Presidential Innovation Fellow
- **Justyna Goworowska**, Spatial Transportation Data Analyst

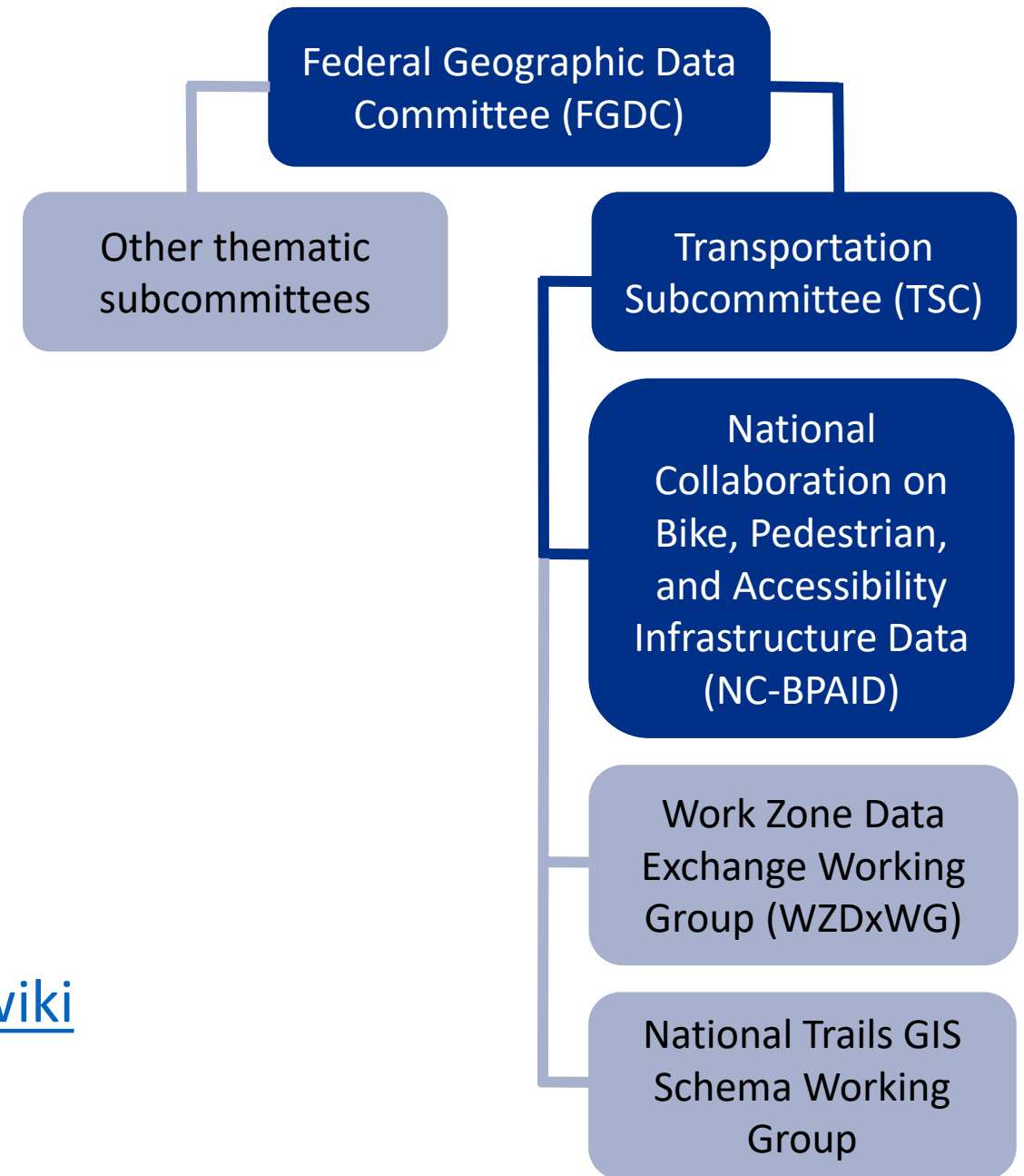
# Housekeeping

- Please stay muted to reduce background noise. If you would like to speak or ask a question, please raise your hand and unmute when acknowledged.
- Type any questions you have into the chat. We will be monitoring the chat and will respond or raise your questions.
- Please type your affiliation in the chat.
- Post-meeting content will be available within about a week at: <https://github.com/dotbts/BPA/wiki>

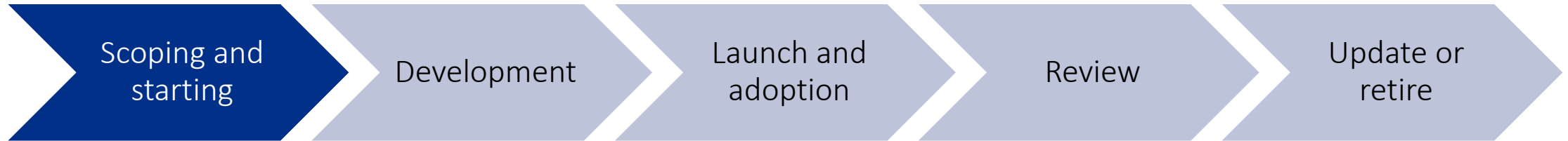
# Context

- Why are we here?
- Why is the Bureau of Transportation Statistics (BTS) facilitating?
- What happened at the last meeting?

Details: <https://github.com/dotbts/BPA/wiki>



# Context



[Open Data Institute](#), [CC BY-SA 4.0](#)

## Tasks

- Decide on the aims and objectives
- Choose the development method
- Plan the development

## (Some) Expected Outputs

- Communications channels
- Scope, features, and use cases
- Governance methods
- Development plan

# Objectives of Today's Meeting

1. Summarize what we've learned about data representations over the last two months.
2. Propose subgroup configurations and process for starting them.

# Agenda

Welcome	5 minutes
NC-BPAID status updates and actions	5 minutes
Open floor for announcements	5 minutes
Data representations summary	15 minutes
Data representations discussion	15 minutes
Subgroups proposal + process	20 minutes
Q&A	25 minutes
Closing	<1min

# NC-BPAID Updates

- The [Collaboration Framework](#) is adopted!
- Designating voting members



Open Floor for Announcements

# Data Representations

# Key Differences

Type	Data Representation	Example
1	<ul style="list-style-type: none"><li>• Location is denoted by measurements along a roadway centerline (i.e., a linearly referenced "event")</li><li>• Attributes presence of infrastructure</li></ul>	
1.5	<ul style="list-style-type: none"><li>• Location is denoted by measurements along a roadway centerline (i.e., a linearly referenced "event")</li><li>• Attributes presence of infrastructure, with unique ID</li><li>• Relates other infrastructure attributes via ID</li></ul>	MDOT's Pedestrian Data Program
2	<ul style="list-style-type: none"><li>• Location is denoted by links and nodes making up a graph network aligned to the infrastructure of interest</li><li>• Relates other infrastructure attributes via tagging links and nodes</li></ul>	OpenSidewalks

# Key Differences

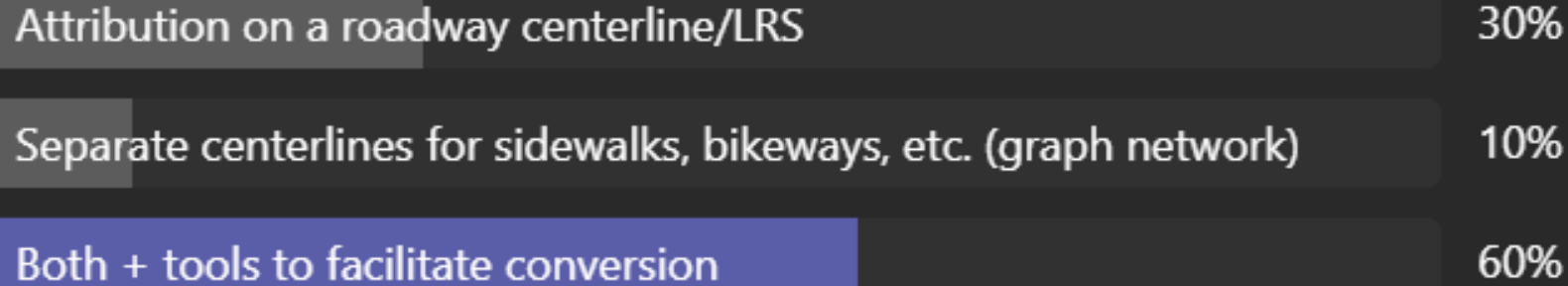
Type	Strengths	Limitations
1	<ul style="list-style-type: none"><li>• Uses existing tools/processes/knowledge related to LRS</li></ul>	<ul style="list-style-type: none"><li>• Location is ambiguous</li><li>• Minimal data</li><li>• Requires centrally-managed LRS</li></ul>
1.5	<ul style="list-style-type: none"><li>• Tiered data schema</li><li>• Uses existing tools/processes/knowledge related to LRS</li></ul>	<ul style="list-style-type: none"><li>• Location is ambiguous</li><li>• Requires centrally-managed LRS</li></ul>
2	<ul style="list-style-type: none"><li>• Location is not ambiguous</li><li>• Extendable data schema</li><li>• Uses existing tools/processes/knowledge related to common trip planning algorithms</li></ul>	<ul style="list-style-type: none"><li>• Requires new tools/processes/knowledge</li><li>• Tagging slices up network</li><li>• Higher storage/computation resource needs</li></ul>

# Key Differences

Type	Fit for Purpose
1	<ul style="list-style-type: none"><li>• ADA inventory (limited) - location inventory only, not full compliance</li><li>• Asset management (limited) - location inventory only, no detail</li><li>• Routing (limited) - ambiguous infrastructure location and connectivity limits routing</li></ul>
1.5	<ul style="list-style-type: none"><li>• ADA inventory – full compliance inventory possible through relational database</li><li>• Asset management – detailed attributes possible through relational database</li><li>• Routing (limited) - ambiguous infrastructure location and connectivity limits routing</li></ul>
2	<ul style="list-style-type: none"><li>• ADA inventory – full compliance inventory possible through extendable tagging schema</li><li>• Asset management (limited) - managing assets built directly into links/nodes difficult</li><li>• Routing – unambiguous infrastructure location allows for use with common routing algorithms</li></ul>

# May Poll Results

**If your organization had to choose a direction for NC-BPAID to pursue (or has already taken a direction), which would it be?**



**10 responses**

# NC-BPAID Subgroups Proposal

Bahar Dadashova

# What Are Subgroups?

*"Co-chairs SHALL establish at least one subgroup, and MAY establish more, to accomplish the objectives and activities. Subgroup proposals SHALL be subject to 'lazy' approval by voting members. By default, subgroups SHALL adopt this collaboration framework for their decision-making procedure... Co-chairs SHALL oversee subgroup activities, and subgroup plans SHALL be subject to co-chair approval."*

## Subgroups:

- Are the major way we will organize and carry out work
- Are created by co-chairs, who oversee activities & approve plans/direction
- Are led by chairs/co-chairs and made up of members from this group
- Use our same collaboration framework to make decisions



# Subgroups Launching Now

	Specification Development	Data Practices
<b>Goals</b>	<ul style="list-style-type: none"> <li>• Create minimum content specification(s) to digitally model routable bicycle and pedestrian infrastructure networks (incl inside transportation terminals)</li> <li>• Prioritize aspects related to physical and universal accessibility</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitate adoption of standards and practices by data producers and consumers</li> <li>• Promote findability, accessibility, interoperability and reusability (FAIR) of datasets</li> </ul>
<b>Activities</b>	<ul style="list-style-type: none"> <li>• Field scan/gap analysis of existing specs</li> <li>• Prioritize spec development</li> <li>• Develop specs based on use cases</li> <li>• Test and collect feedback on proposed specs from subgroups/membership</li> <li>• Integrate feedback to create draft version</li> </ul>	<ul style="list-style-type: none"> <li>• Develop glossary</li> <li>• Catalog methods, tools and practices related to data collection, exchange, portability, refutability, findability, accessibility, interoperability, reusability, and more</li> <li>• Develop recommendations, best practices or case studies</li> </ul>
<b>Timeline</b>	~ 1 year	~ 1 - 1.5 years

# Subgroups Launching in Fall

	Affinity Groups	Outreach
<b>Goals</b>	<ul style="list-style-type: none"> <li>• Provide subject matter review of draft specifications</li> <li>• Help to ensure that use cases are sufficiently satisfied</li> </ul> <p><i>Potential groups: Bicycle; Pedestrian; Accessibility; Trip Planning and Navigation; Safety Analysis; Asset Management; Modeling; Planning and Performance Measurement</i></p>	<ul style="list-style-type: none"> <li>• Work to ensure the specs are the industry standard and increasingly adopted/recognized by producers and consumers</li> </ul>
<b>Activities</b>	<ul style="list-style-type: none"> <li>• Identify topics</li> <li>• Clarify use cases</li> <li>• Help test specs and other materials</li> <li>• Document strengths/weaknesses of draft specs &amp; propose improvements</li> <li>• Raise needs to other subgroups; assist with outreach</li> </ul>	<ul style="list-style-type: none"> <li>• Identify participation gaps by sector, region, level/type of government and expertise, and recruit</li> <li>• Identify gatherings and funding opportunities for working group</li> <li>• Recruit data producers/consumers to test specs</li> <li>• Work to promote adoption</li> </ul>
<b>Timeline</b>	~ 1-2 years	~ 2 years (+)

# What's Missing?

- Members of the working group can propose the formation of subgroups
- To do so, reach out to the co-chairs, who will review
- If accepted, co-chairs will put out a proposal for the subgroup to form



# How to Get Involved

- **Become a chair:**

- Each subgroup will have one or more chairs. *Only voting members may be chairs.*
- Chairs:
  - Ensure the subgroup's work happens, from planning through execution
  - Decide how to organize the work within the subgroup
  - Steer subgroup decision-making processes
  - Coordinate with co-chairs and BTS admin team around the subgroup's work

- **Join a subgroup:**

- *Any working group member can be a subgroup member.*
- Members:
  - Contribute to the subgroup's work
  - If willing, take point on parts of the subgroup's work
  - Participate in voting and decision making
  - Provide subject matter and other expertise



# Next Steps

- For Specification Development and Data Standards:
  - Proposal to form these subgroups goes through lazy approval
  - Via this online [form](#), express your interest in leading and/or joining
  - Co-chairs will review interest, select chairs and recruit if more membership needed
  - Starting resources (ex. Existing specs for field scan) will be gathered and shared
  - Selected chairs convene their group and begin work
- For Specification Review Affinity Groups and Outreach:
  - Stay tuned until fall...
- For other proposed subgroups:
  - Add to GitHub Discussion

# Let's Get Going!



# Thank you!

Next full meeting: Thursday, July 25th @ 3pm ET

Suggestions? Email Cyrus ([cyrus.chimento.ctr@dot.gov](mailto:cyrus.chimento.ctr@dot.gov)) or open an issue on GitHub (<https://github.com/dotbts/BPA/issues>)!



U.S. Department of Transportation  
Office of the Secretary of Transportation

**Bureau of Transportation Statistics**

**FGDC.GOV**  
FEDERAL GEOGRAPHIC DATA COMMITTEE