

The Role of Metropolitan Planning Organizations in Planning for Equitable Shared Mobility

A Federal Highway Administration Peer Exchange Event

Location:	Virtual
Date:	July 11 & 12, 2022
Sponsoring/Host Agencies:	Federal Highway Administration (FHWA) and U.S. Department of Transportation (U.S. DOT) Volpe Center
Participating U.S. DOT Offices	<ul style="list-style-type: none">• U.S. DOT Intelligent Transportation Systems Joint Program Office• FHWA Office of Chief Counsel• FHWA Office of Planning, Environment, and Realty• FHWA Office of Transportation Management• FHWA Office of Transportation Policy Studies• Federal Transit Administration (FTA) Office of Mobility Innovation• FTA Office of Planning• Office of the Secretary (OST) Office of Policy Coordination and Development• OST Office of Technical Assistance and Community Solutions <ul style="list-style-type: none">• FHWA California Division Office• FHWA Colorado Division Office• FHWA Georgia Division Office• FHWA Louisiana Division Office• FHWA Texas Division Office• FHWA Washington Division Office
Panel of Peer Metropolitan Planning Organizations:	<ul style="list-style-type: none">• Boston Region Metropolitan Planning Organization (BRMPO)• Capital Area Metropolitan Planning Organization (CAMPO)• Denver Regional Council of Governments (DRCOG)• Mid-America Regional Council (MARC)• Puget Sound Regional Council (PSRC)• San Diego Association of Governments (SANDAG)• Southwestern Pennsylvania Commission (SPC)
Other Participating Organizations:	<ul style="list-style-type: none">• Lawrence-Douglas County Metropolitan Planning Organization (LDCMPO)• North Front Range Metropolitan Planning Organization (NFRMPO)• Ozarks Metropolitan Planning Organization (Ozarks MPO)• Yakima Valley Conference of Governments (YVCG)

Prepared for:
U.S. Department of Transportation
Federal Highway Administration
Office of Planning, Environment, and Realty
[FHWA-HEP-24-005]



U.S. Department
of Transportation
**Federal Highway
Administration**

Notice

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The U.S. Government assumes no liability for the use of the information contained in this document.

The U.S. Government does not endorse products or manufacturers. Trademarks or manufacturers' names appear in this report only because they are considered essential to the objective of the document. They are included for informational purposes only and are not intended to reflect a preference, approval, or endorsement of any one product or entity.

REPORT DOCUMENTATION PAGE			<i>Form Approved</i> <i>OMB No. 0704-0188</i>
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.			
1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE August 18, 2023	3. REPORT TYPE AND DATES COVERED July 2022 – August 2023	
4. TITLE AND SUBTITLE The Role of Metropolitan Planning Organizations in Planning for Equitable Shared Mobility: A Federal Highway Administration Peer Exchange Event		5a. FUNDING NUMBERS HW2LA621/VQ815	
6. AUTHOR(S) Tran, Hoamy; McCoy, Kevin; Patronella, Amy		5b. CONTRACT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Department of Transportation John A. Volpe National Transportation Systems Center 55 Broadway Cambridge, MA 02142-1093		8. PERFORMING ORGANIZATION REPORT NUMBER DOT-VNTSC-FHWA-23-18	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Department of Transportation Federal Highway Administration Office of Planning, Environment, and Realty 1200 New Jersey Avenue, SE Washington, DC 20590		10. SPONSORING/MONITORING AGENCY REPORT NUMBER FHWA-HEP-24-005	
11. SUPPLEMENTARY NOTES FHWA Project Contact: Corbin Davis			
12a. DISTRIBUTION/AVAILABILITY STATEMENT		12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) This report summarizes the presentations, discussions, and key takeaways from a virtual peer exchange on equitable shared mobility with metropolitan planning organizations (MPOs) from across the country led by the Federal Highway Administration. The peer exchange examined the roles that MPOs play in planning for the integration of shared mobility services into local multimodal transportation systems to advance regional planning goals. Participants discussed challenges and noteworthy practices for supporting equitable shared mobility, addressing topics such as long-range and strategic planning, project programming, data collection and analysis, coordination with stakeholders, public involvement, funding opportunities, and more. The discussions also identified ideas for future research on shared mobility related to partnership models, metrics for evaluating equity outcomes, resources and practices for data sharing, and economic impacts.			
14. SUBJECT TERMS Keywords: Shared mobility, metropolitan planning organization, MPO, regional planning, equity, equitable, barriers, data, transportation technologies, multimodal, network connectivity, bicycle, pedestrian, transit		15. NUMBER OF PAGES 33	
		16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT Unlimited

Table of Contents

Peer Exchange Overview	1
Day 1 Summary	2
Opening Remarks.....	2
MPO Lightning Round Introductions and Discussion.....	3
Panel Presentations and Discussion 1: What MPOs can do to reduce mobility barriers and improve equity through shared mobility	6
Day 2 Summary	8
Panel Discussion 2: MPO roles in implementing policies and projects to advance equity in shared mobility	8
Breakout Groups and Discussion [01:12:50].....	9
Setting an Agenda for MPO’s Role in Shared Mobility Planning for Equitable Outcomes [02:58:10]....	11
Conclusion and Key Themes	13
Appendix A. Peer Exchange Participants	16
Appendix B. Summary of MPOs’ Equitable Shared Mobility Planning Efforts	17
Boston Region Metropolitan Planning Organization (Boston, Massachusetts)	17
Capital Area Metropolitan Planning Organization (Austin, Texas)	19
Denver Regional Council of Governments (Denver, Colorado)	20
Mid-America Regional Council (Kansas City, Missouri)	23
Puget Sound Regional Council (Seattle, Washington)	24
San Diego Association of Governments (San Diego, California)	26
Southwestern Pennsylvania Commission (Pittsburgh, Pennsylvania)	28

Peer Exchange Overview

This report highlights the presentations, discussions, and key takeaways from the “The Role of Metropolitan Planning Organizations in Planning for Equitable Shared Mobility” virtual peer exchange, held over two half-days on July 11 and 12, 2022. The virtual peer exchange examined the roles that metropolitan planning organizations (MPOs) play in planning for the integration of shared mobility services into local multimodal transportation systems to advance the region’s planning goals. The Federal Highway Administration (FHWA) Office of Planning, Environment, and Realty and the U.S. DOT Volpe National Transportation Systems Center (Volpe) sponsored and organized the event.

As part of the event planning, FHWA and Volpe coordinated with several offices across U.S. DOT to gather ideas for the event agenda, potential participants, and priority discussion topics. Then, FHWA and Volpe reached out to seven nationally recognized MPOs that have demonstrated a range of planning experiences and practices on equitable shared mobility. Prior to the event, the workshop organizers coordinated with those seven MPOs to identify topics they were interested in presenting on and learning about. The MPOs met during two planning sessions to develop and finalize the event agenda, and Volpe coordinated with the MPOs to develop a summary of each agency’s shared mobility activities that



Figure 1. Micromobility users with electric scooters (Source: Getty Images)

could be shared with all participants ahead of the event. The workshop organizers also encouraged the seven participating agencies to extend invitations to smaller MPOs and other agencies in their network that would be interested in joining the event and learning from peers. Appendix A. Peer Exchange Participants includes the list of agencies and offices that participated in the event, and Appendix B. **Summary of MPOs’ Equitable Shared Mobility Planning Efforts** contains the MPO profiles.

The peer exchange featured two main sessions focusing on topics pertaining to the spatial, temporal, economic, physiological, and social barriers related to equitable shared mobility planning. The workshop organizers administered poll questions throughout the exchange using the polling platform, Poll Everywhere, to gather input from participants, in addition to group discussion. The first day included a lightning round presentation from the seven nationally recognized MPOs, followed by a roundtable panel discussion. The second day included a peer presentation session and roundtable panel discussion, followed by a breakout group session. The second day concluded with a facilitated discussion on setting an agenda for an MPO’s role in equitable shared mobility planning.

Recordings of the peer exchange are available for both days ([day one](#) and [day two](#)). Time stamps from the recordings are noted in each section of this report.

Day 1 Summary

Opening Remarks

The Volpe Center welcomed participants to the first day of the exchange [00:00:44] and the FHWA Office of Planning, Environment, and Realty provided an orientation to the topic, presenting on [FHWA research on shared mobility](#) and U.S. DOT key priorities for transportation equity. The presentation [00:07:49] outlined the concept of equity in transportation planning, how it relates to shared mobility, and goals for the peer exchange.

The presentation incorporated six poll questions. The questions are listed below with a summary of notable takeaways:

- **How has your agency incorporated shared mobility into its planning process?**
 - Integrating shared mobility in corridor plans, Long Range Transportation Plans (L RTPs), and Coordinated Public Transit-Human Services Transportation Plans
 - Transportation Improvement Program (TIP) investments for shared mobility projects
 - Increased staff capacity to address emerging mobility and transportation technologies
 - Established advanced mobility partnership in region

- **What challenges have your agency encountered in planning for shared mobility?**
 - Limited data availability and data privacy
 - Limited staff capacity
 - Securing funds for pilot projects
 - Land use changes and market demands
 - Wide range of local needs across region

- **How has your agency incorporated transportation equity into its planning process?**
 - TIP scoring criteria and evaluation
 - Data collection and tools
 - Environmental Justice analysis
 - Metropolitan Transportation Plans (MTPs) and L RTPs
 - Partnering with community-based organizations
 - Establishing an advisory committee

- **What challenges have your agency encountered in planning for transportation equity?**
 - Establishing agreements in short timeframes
 - Varying methodologies and definitions
 - Limited staff and financial resources
 - Incorporating equity from the outset rather than reactively
 - Existing structures for transportation planning
 - Lack of common definition of equity

- **What does equitable shared mobility look like to you?**
 - Expanded access in non-urban areas
 - Affordable trips for everyone who needs them

- Not a one-size-fits all approach
- Mobility that provides equitable economic opportunities, incorporating new voices, and perspectives in decision making
- **How can MPOs advance equitable shared mobility in their regions?**
 - Engage traditionally underserved communities throughout planning process
 - Promote regional coordination
 - Incorporate in project evaluation and selection process
 - Pilot projects

MPO Lightning Round Introductions and Discussion

The first day of the exchange included a “lightning round” introduction session where representatives from the seven nationally recognized MPOs provided a brief overview of their MPO, experiences with shared mobility planning, and how equity factors into their planning approach.

Boston Region Metropolitan Planning Organization (BRMPO) [01:14:41]

The BRMPO aims to institutionalize equity by coordinating with other departments. The organization has a [Transportation Equity Program](#) and takes an equity-in-all policies approach, integrating equity in every policy, process, and decision at the MPO. The Transportation Equity Program is focused on measuring disparities in outcomes and how projects can move the needle on outcomes.

- [Community Connections](#) is a shared mobility program funded through the TIP. Community Connections funds small scale projects such as transit signal prioritization and the regional bikeshare program (Blue Bikes).

Capital Area Metropolitan Planning Organization (CAMPO) [01:19:27]

The primary transit provider in the region serves the city of Austin and some surrounding cities, but many communities in the region are served by the rural transit provider, contract with one or both of those providers for service, or do not have service at all. This is an important consideration in shared mobility planning for the region.

The range of computer ownership and broadband service across the region can present challenges in conducting public engagement virtually. To address this, CAMPO expanded its public involvement approaches as part of the LRTP planning process to include more in-person engagement in addition to online public engagement.

CAMPO’s [2045 LRTP](#) incorporates shared mobility throughout the plan.

- As part of the plan, there was a [Regional Transit Study](#) and a [Regional Transportation Demand Management Study](#).
- CAMPO developed the region’s first [Active Transportation Plan](#) which used a context sensitive approach to evaluate transportation needs and identify areas where shared mobility options may be best suited for implementation.
- A [Regional Arterials Concept Inventory](#) incorporated transit in the plan.

Denver Regional Council of Governments (DRCOG) [01:26:11]

Shared mobility planning is incorporated in several of DRCOG's core activities:

- Mobility analytics and transportation operations
- Long range planning
- Project programming and delivery
- Active and emerging mobility

DRCOG has an ad-hoc multidivisional working group focused on making equity analysis more meaningful as well as including stakeholder and public engagement methods to increase input from traditionally underserved communities. The working group is tasked with using equity analysis to guide project funding in the TIP and Regional Transportation Plan (RTP).

- Equity and shared mobility are incorporated in the project selection process. DRCOG has developed a new TIP data project tool to inform project evaluation and selection.
- DRCOG has a [micromobility working group](#) and data collaborative.
 - The micromobility work group convenes representatives from local governments, transportation management associations, and regional, state, and Federal agencies.
 - The data collaborative facilitates shared micromobility data sharing and analytics in the Denver region.

DRCOG partnered with the Colorado Department of Transportation (CDOT), Regional Transportation District (RTD), and the Denver Metro Chamber of Commerce, to publish the [Mobility Choice Blueprint](#) which established a vision and identified tactical actions to plan for transportation technology.

Mid-America Regional Council (MARC) [01:31:35]

The MARC service area is evenly split between Kansas and Missouri which can at times lead to challenges in regional planning. RideKC is the region's primary transit provider, which aims to improve transit connectivity in the Kansas City region.

Shared mobility options are managed at different levels across the region; for example, [RideKC Bike](#) manages a bikeshare program while local jurisdictions operate the scooter programs separately.

MARC's [Connected KC 2050](#) LRTP outlines several strategies to address shared mobility:

- [Electric vehicle carshare](#) programs in areas with lower access to personal vehicles (planned)
- [Smart Moves Plan](#)
- [RideshareKC](#) program – designed for workforce transportation and funded with Congestion Mitigation and Air Quality Improvement (CMAQ) Program funds
- Green Commute Challenge – ride matching software

Access to technology was a focus in updates to transportation plans to help ensure that transportation access is available to people without mobile phones and credit cards.

Puget Sound Regional Council (PSRC) [01:39:30]

PSRC does not have a direct role in operating shared mobility programs but has dedicated work programs and advisory activities for each mode of transportation.

PSRC's [2050 LRTP](#) uses a racial equity lens throughout the plan and includes Mobility on Demand (MOD) strategies. The LRTP also includes a standalone [Regional Equity Strategy](#) that addresses the impacts of transportation investments.

PSRC conducted online research to create a draft inventory of shared mobility programs in the region. This research found that many programs were not highly profitable in the greater Seattle area and that there is limited data available to address the benefits of these programs.

San Diego Association of Governments (SANDAG) [01:44:01]

SANDAG is an MPO and a state designated regional transportation planning agency for the San Diego region, as well as a tax authority. SANDAG collects a transportation sales tax and operates two priced managed lanes and a toll road. The MPO also acts in an advisory role with jurisdictions to share noteworthy practices.

Some examples of SANDAG's shared mobility planning work include:

- Partnered with transit operators to launch shared mobility pilots, such as microtransit and a neighborhood electric vehicle shuttle.
- Working with cities and universities to deploy micromobility programs.
- Formed an informal data sharing working group to exchange micromobility data across the region.
- Conducted workshops with community-based organizations that have demonstrated the need for first-/last-mile connections, which shared mobility services may be able to address.
- Developing a strategic plan to identify areas that are suitable for shared mobility projects in the region.

SANDAG has a standing social equity working group, which developed a [Youth Opportunity Pass Pilot Program](#) to provide free public transportation for youth ages 18 and under in the San Diego region through June 2023.

Southwestern Pennsylvania Commission (Pittsburgh, PA) [01:51:38]

The Southwestern Pennsylvania Commission (SPC) has a longstanding Transit Operators Committee (TOC) which includes Pittsburgh Regional Transit along with 10 other transit operators in the region.

As part of its [2045 LRTP](#), SPC developed [SmartMoves Connections](#) — a plan to locate mobility hubs to improve transportation operations. The plan involves an analysis of travel patterns through Streetlight

data, identification of corridors to locate mobility hubs, and strategies for funding mechanisms to support the projects.

Identifying Opportunities to Advance Equity in Shared Mobility Planning

Following the lightning round introductions, the Volpe Center facilitated a group discussion that identified topics for further exploration later in the peer exchange, drawing on key points from the participating agencies' introductions.

This discussion focused primarily on how to build the consideration of equity into the project selection and programming process. Highlights from the discussion include:

- **Ideas for institutionalizing equity in the evaluation of projects**
 - Building capacity for equity analysis and consideration in the project selection process
 - Creating new project scoring criteria to prioritize projects that advance equity
 - Small changes, such as tweaking a scoring criterion, allow an MPO to change the point scale to reflect a new priority
 - Helpful to frame changes as what is being gained from adding a new criterion as opposed something being taken away

- **Topics for future exploration and research**
 - Pricing and how to develop sustainable, equitable pilots within respective regions
 - Important to consider what level of the MPO is doing equity work; for example, equity efforts can happen on the staff level, board level, etc.
 - Metrics used to evaluate equity

Panel Presentations and Discussion 1: What MPOs can do to reduce mobility barriers and improve equity through shared mobility

The panel discussion on Day 1 featured presentations from PSRC, MARC, and CAMPO about their approach to shared mobility planning and how equity factors into the process. Notable takeaways from each presentation are summarized below.

PSRC: Human Services Transportation Plan Equity Approach [02:55:00]

PSRC's [Coordinated Mobility Plan](#) (Coordinated Transit-Human Services Transportation Plan) uses a Regional Equity Strategy with key work programs:

- Equity analysis supporting regional planning
- Opportunity and displacement risk mapping
- Existing conditions report
- Community engagement
- Equity dashboard
- Equity impact tool

The Coordinated Mobility Plan addresses the transportation needs of people with mobility challenges and is used as a basis for grant programs to fund specialized transportation projects.

PSRC's Vision 2050 LRTP elevates equity throughout the plan. The plan provides resources for project-level analysis and mitigation to advance equity. For example, PSRC's Regional Equity Strategy goes beyond the requirements of an Environmental Justice analysis (which traditionally focuses on low-income communities and minority communities) and includes older adults, youth, people with disabilities, and veterans in its target populations.

PSRC also conducted virtual activities aimed at identifying mobility needs and priorities as part of its community outreach efforts. Public input highlighted the need to improve access to paratransit and medical services. Additionally, input from populations with limited English proficiency (LEP) indicated challenges with distinguishing transit operators due to different branding.

MARC: Planning Sustainable Places/Bi-State Corridor Initiative [03:13:29]

MARC's [2050 LRTP](#) goals of Access to Opportunities and Transportation Choices are carried out through two supporting programs: Smart Moves and RideshareKC.

- Smart Moves is MARC's regional transit vision which includes a network of mobility hubs across the region. The mobility hubs are tailored to their location and offer a range of sizes and services.
- RideshareKC is a commute matching and planning program designed to help individuals and employers find commute solutions that make the most sense for them; funded with CMAQ program funds. As part of the program, there is a "guaranteed ride home," which provides a free taxi/ridehail service for someone who carpooled to work but was unable to use the carpool for the return trip home.

The Bi-State Sustainable Reinvestment Corridor is an initiative to expand and reinforce connectivity along a 24-mile-long corridor that spans two states, connecting traditionally underserved low-income and minority populations with improved transit and internet connectivity.

[Planning Sustainable Places](#) is a MARC initiative to advance integrated local transportation and land use planning and project development to support vibrant places that offer a mix of options for housing, jobs, services, and recreation; connected places with a variety of transportation options; and green places that support healthy living and a healthy natural environment.

An example project from the Planning Sustainable Places initiative is an electric vehicle carshare program for low-income communities. This project locates cars at mobility hubs as well as multi-family residential and public places in low-income areas throughout the region. Mobility hub locations allow for connectivity between carshare and a variety of other modes of transportation.

CAMPO: Mobility Game as a Public Involvement Tool [03:27:42]

To help ensure that they were engaging the broader community in the development of their 2045 LRTP, CAMPO developed a game featuring different avatars to represent varying mobility needs across the region (e.g., a person without a car requiring medical services).

During public involvement events, CAMPO invited members of the public to spin a wheel to select an avatar and think through trip planning from the perspective of that person. The role-playing game demonstrated the diversity of the region and the range of mobility needs for which CAMPO plans.

CAMPO also organized pop-up outreach to reach communities outside of the traditional engagement forums (e.g., at sports events). As part of its [Regional Transit Study](#), CAMPO developed a [Regional Transit Toolkit](#), which displays relevant information on a range of transit options in a user-friendly format.

Discussion

The FHWA Office of Planning, Environment, and Realty facilitated a group discussion after the presentations to address questions. Some key takeaways from the discussion include:

- **Support for projects may come from a range of sources.** Projects may arise from local leaders recognizing a need. For example, MARC's [Bi-State Sustainable Reinvestment Corridor project](#) was led by a congressional effort coordinated by U.S. representatives and local leaders in Kansas and Missouri to improve sustainability, mobility, and economic development through regional strategic investments.
- **Community engagement can be a method to reduce mobility barriers.** Mobility barriers can be mitigated through investing in equitable and inclusive community engagement throughout the entire planning process. MPOs highlighted the importance of designing public involvement approaches in a way that considers public needs and desires. MPOs also suggested including public involvement as a specific task when procuring contractors and assigning public engagement specialists as the leads on projects instead of engineering or design firms.

Day 2 Summary

Panel Discussion 2: MPO roles in implementing policies and projects to advance equity in shared mobility

The panel discussion on Day 2 featured presentations from BRMPO and DRCOG about their approach to shared mobility planning and implementation, and how equity factors into the process.

BRMPO: Incorporating Equity into Project Selection – Community Connections Program [00:10:26]

BRMPO's Community Connections Program funds first-/last-mile solutions, and community transportation projects. The Community Connections Program was created as a response to the need for funding small, nontraditional projects that historically did not compete well against large projects. Eligible projects include bike-supportive infrastructure, bus priority lanes, transit operating expenses, and transit signal priority. The program is funded through CMAQ funds.

The scoring criteria for the Community Connections Program includes:

- Network or connectivity value,
- Coordination between multiple entities,
- Inclusion in local and regional plans,
- Generation of mode shift,
- Demand projection, and
- Transportation equity.

The transportation equity score is calculated by identifying equity populations in the project area, then comparing the share of each equity population to the region's average to calculate an equity index for each population group (higher than average = higher index). The sum of equity indices in the project area is equivalent to the final equity score.

This process builds an explicit consideration of equity impacts into the project selection process for the Community Connections Program.

DRCOG: Equity in project programming and unified call for projects process [00:37:33]

DRCOG is the MPO for the Denver region in Colorado. DRCOG also houses the Area Agency on Aging (AAA) for 8 counties that encompass most of the Denver region and receives dedicated funding as part of the Older Americans Act. DRCOG is the designated recipient of FTA section 5310 funds for the urbanized area as well.

DRCOG combines its Human Service Transportation Set-Aside from CMAQ, with its Older Americans Act funding and FTA section 5310 funds to provide additional funding opportunities for coordinated human services transportation projects.

DRCOG held a "supercall" for transit capital, operating, and mobility management projects in 2022 (please refer to Appendix B. **Summary of MPOs' Equitable Shared Mobility Planning Efforts** for a detailed description of DRCOG'S fund sources). This approach allowed DRCOG to holistically evaluate the mobility and equity-related needs of communities in the region. One example of a funded project was the [Ride Free Lafayette](#) project which aims to improve the mobility of low-income and other vulnerable populations throughout the City of Lafayette with service to the Kestrel community in Louisville.

Within DRCOG's MPO area, every subregional forum, made up of county government and all municipalities within each county, gets to recommend projects in their jurisdiction during the regional TIP call for projects. DRCOG has an independent review panel to evaluate projects. The review panel, which includes community-based organizations, can make recommendations before projects go through a committee process.

DRCOG involves equity communities in the development of the Metro Vision Regional Transportation Plan (MVRTP) as well so there is involvement in major planning efforts in addition to project selection activities.

Breakout Groups and Discussion [01:12:50]

Peer exchange participants engaged in breakout sessions on Day 2. Each breakout group discussed three topics:

- Data needs and opportunities
- Adapting transportation workstreams to integrate equitable shared mobility
- Expanding shared mobility services to improve local and regional network connectivity

The workshop organizers assigned participants to breakout sessions and facilitated each breakout session. Each group assigned a recorder/reporter to take notes during the breakout session and report-out to the larger group at the end of the breakout.

The following summarizes highlights from the full group report-out and discussion.

Topic 1: What data do MPOs need to advance equity in shared mobility, and how can they get it?

Peer exchange participants noted the key role that data plays in advancing equity in shared mobility planning. Data is needed to justify investments as well as to evaluate the effectiveness of investments in advancing equity and other goals. The following takeaways from breakout discussions on this topic were noted by participants:

Barriers to data collection:

- Quantifying and assessing mode shift in a meaningful way can be challenging
- Measuring project outcomes can be difficult
- Vehicle-based metrics are more readily available than other modes
- Data on user demographics for person-based or travel-based data is more challenging to collect (sometimes surveys can fill this gap)
- Challenging to get buy-in from communities on data sharing (e.g., military populations, immigrant populations)

Improving access to data:

- Working with community-based organizations to help translate data/information can help with buy-in
- Emphasizing use cases and transparency can help justify need for data
- Regional mobility data sharing platform as a pilot for public-private collaboration

Conveying or communicating data:

- Use of StoryMaps, bite-sized public facing documents or webpages, and other data visualizations to inform decision making

Incorporating data into the planning process:

- Data can be used to estimate the impact of projects on regional goals, including equity goals
- Measuring the value of shared mobility activities and of advancing equity is key information to incorporate into decision making processes (e.g., LRTP, TIP)

Topic 2: Adapting transportation planning to better address shared mobility (e.g., faster pace, more flexibility, more experimentation, partnerships)

Peer exchange participants discussed strategies to advance shared mobility through regional transportation planning processes, challenges, and the MPO role in shared mobility planning. The following takeaways from breakout discussions on this topic were noted by participants:

Coordinating with other actors in the planning process:

- Engaging economic development corporations or chambers of commerce to address shared mobility can be effective in smaller communities
- Community-based organizations can be valuable partners; engage them early in the process and compensate them for their work
- Coordinate with State DOT and transit providers to share resources and experiment with new technologies or business models for delivering shared mobility services
- Support local governments with technical assistance, procurement, and contracting

Capacity and funding challenges:

- Smaller jurisdictions have resource and funding limitations which restrict opportunities for MPOs to collaborate with local agencies
- The ability to pilot shared mobility approaches and experiment to find what works can depend on the eligible activities of MPO funding sources
- The availability of Federal planning dollars can influence the ability of MPOs to do planning in rural areas and smaller jurisdictions that may not have the capacity to plan and implement shared mobility projects themselves.

MPO role and planning processes:

- MPOs should plan for equitable shared mobility proactively and not reactively
- Capacity building, particularly for smaller jurisdictions, is a key role for MPOs on shared mobility planning and equity
- MPOs can assist local jurisdictions with the procurement of contractors needed to support local planning efforts on shared mobility
- There may be resistance during the planning process when emphasizing equity, but MPOs can be a consistent voice for the importance of emphasizing equity goals

Topic 3: How to advance shared mobility/equity planning in areas that do and don't have shared mobility services (e.g., urban/suburban divide, improving regional connectivity)

Peer exchange participants discussed issues related to regional imbalance in the availability of shared mobility services, and what MPOs can do to address this. The following takeaways from breakout discussions on this topic were noted by participants:

Partnerships and cross-agency collaboration:

- MPOs can explore public funding, pilot projects, and public-private partnership (P3) projects with private sector shared mobility companies – with an explicit goal of filling gaps in mobility services in underserved communities
- Engagement with rural transit providers may be a strategy to address lack of shared mobility services in these areas; encourage local governments to engage in contracts with rural transit providers
- Partnerships can help simplify contracting process and get buy-in

Ensuring basic broadband infrastructure and access to support regional connectivity

- Most mobility services rely on internet access for both customers and service providers; broadly advancing goals to expand high-speed internet and mobile broadband services, particularly in rural and underserved communities, can set up conditions in which shared mobility services are more feasible

Setting an Agenda for MPO's Role in Shared Mobility Planning for Equitable Outcomes [02:58:10]

Building on key takeaways from the panel presentations and breakout sessions, the workshop organizers facilitated a group discussion on the role of MPOs in shared mobility planning, with particular emphasis on equitable outcomes for communities that have historically been marginalized or burdened.

The discussion highlighted noteworthy practices, related barriers, potential topics for further research or pilot projects, and roles for FHWA and U.S. DOT to support these areas.

Roles for MPOs in planning for equitable shared mobility

Facilitating collective regional decision making is a core function of MPOs. When planning shared mobility services, MPOs can help the region plan and implement shared mobility services that support the shared goals of the region, even when the MPO is not the agency implementing a program or service.

MPOs can serve as a regional data coordinator and data hub. Building on another traditional strength, MPOs can leverage their regional scope and existing systems to establish standards and host repositories of shared mobility and equity data for use by all regional partners. Promoting consistency in data can improve the ability of projects or services to be evaluated for their equity impacts.

Promoting consistency and setting priorities for equity in shared mobility is a logical role for MPOs. When shared mobility services are fractured across local jurisdictions, this can create inequities and inefficiencies. MPOs can work to identify and mitigate these inequities through the planning process and by establishing priorities in funding programs to address them.

Leveraging other planning disciplines can improve outcomes. MPOs address a broad range of planning topics including housing, economic development, and environmental planning. Approaching shared mobility from a multidisciplinary perspective may enable a more comprehensive view of equity and lead to projects that better address community needs.

MPOs can serve as a learning lab for the region. The unique regional perspective that MPOs have can be an asset for sharing knowledge about pilots and experimentation in shared mobility. With this perspective, MPOs can help local agencies learn from each other's successes and failures and build a knowledge base to inform future decision making.

Challenges

Peer exchange participants identified several challenges they have experienced in advancing equitable shared mobility, including:

- Funding and procurement limitation
- Lack of political buy-in
- Lack of interest across stakeholder groups
- Unclear roles/responsibilities across a region
- Market-driven service providers
- Inability to collect or acquire data on shared mobility services

Understanding a community's needs and desires and what is most useful for them can also be challenging. For example, locating bikeshare stations in every neighborhood is not necessarily equitable, rather it is about meeting a community's needs and placing stations to best accomplish that. It is important for MPOs and local jurisdictions to provide meaningful public engagement opportunities so that all parties understand how projects could impact equity.

Opportunities

Peer exchange participants identified potential opportunities for advancing shared mobility planning, with an equity emphasis. Participants discussed what FHWA and USDOT can do to support MPOs as well as topics that need further research or guidance.

FHWA and USDOT can support MPOs working to advance equitable shared mobility. Peer exchange participants suggested the following ideas:

- Federal funding programs could be made more flexible and easier to use for pilot programs and experimentation. Participants noted a gap between planning and implementation where it is difficult to make funding work.
- Ease or lift matching funds requirements. Matching funds and operating costs are a particular barrier in funding shared mobility projects. Additional guidance on the flexibilities that currently exist may be helpful.
- Improve interdepartmental coordination at the Federal level, especially regarding funding resources.

Further research for equitable shared mobility planning at the MPO level is needed. Peer exchange participants suggested the following topics for potential future research:

- Shared mobility partnership models
- Noteworthy practices for planning micromobility that serves disadvantaged communities
- Metrics for evaluating equity outcomes in shared mobility plans or projects (and generally)
- Tools and approaches for exchanging shared mobility data
- Equity definitions, measures, and indices (generally)
- Economic impacts of mixed-use/mixed-income housing developments on equity including impacts of transportation and housing costs on underserved communities

Conclusion and Key Themes

This peer exchange, led by FHWA and the Volpe Center, convened MPOs from across the country to discuss how MPOs can plan for shared mobility through an equity lens. Participants shared their experiences, key challenges, and lessons learned during several group discussions and identified opportunities for future engagement and planning efforts. Peers also shared resources and program case studies to help advance capabilities.

Some key themes that emerged from the presentations and discussion include:

Fragmented services and needs pose challenges for equitable shared mobility planning. MPOs serve diverse regions, often consisting of a combination of urban, suburban, and rural communities. Shared mobility services that work well in one part of an MPO region might not be well-suited for other areas. Many shared mobility providers approach service at a local government scale as opposed to a regional scale, and local governments often regulate shared mobility providers differently across a region. This results in a patchwork of different services and rules that travelers must contend with to successfully complete trips. MPOs can take a context-sensitive, equity-focused approach to shared mobility planning, working to help ensure consistency of service and rules, and to see that community needs are being

met. A combination of different shared mobility models may be needed to help ensure that all residents of a metropolitan area benefit from this emerging transportation mode.

Cooperative regional public transit branding and payment systems may be a model for improving shared mobility coordination. Many metropolitan areas have several transit operators that serve the region. This can limit connectivity for users that may need to combine trips across systems. While challenging, some regions have created unified branding and payment systems to address these issues. MPOs often house transit working groups or committees to coordinate transit systems across a region. These concepts may be transferable to shared mobility planning. If MPOs can help shared mobility providers work together and collaborate with public transit providers, human services transportation providers, and with each other, this could reduce barriers for users and improve consistency of coverage and rules across a metropolitan area. Such cooperation could improve equity by simplifying how information about service is delivered, streamlining payments and the delivery of any subsidies to qualifying users, and promoting consistent expectations and rules for riders.

Engaging traditionally underserved communities in planning for shared mobility is critical to advancing equity. MPOs and other transportation agencies use their public engagement processes to understand how shared mobility impacts communities and the barriers to using shared mobility services. However, reaching and understanding the needs of underserved communities in a meaningful way can be challenging when engagement is done on a project-by-project basis, or intermittently when major planning efforts are underway. Virtual Public Involvement (VPI) strategies have been effective in expanding the number of people engaged in planning efforts, but may not be as effective in underserved communities who disproportionately lack the resources needed to participate virtually, or who may be less inclined to participate in this way. For some traditionally underserved groups, in-person engagement as part of a sustained presence in the community may be the most effective. Additionally, community-based organizations can be valuable partners and working with them can be an effective way of engaging traditionally underserved communities as they may already have established relationships with community-based organizations. Community-based organizations can help translate data or information, though it is important that agencies engage them early in the process and compensate them for their work to advance equity.

Staff capacity and financial resources remain a barrier to advancing equitable shared mobility. Financial resources and staff capacity were referenced throughout the peer exchange as limitations in advancing equitable shared mobility. However, flexible funding approaches, such as DRCOG's Human Service Transportation Set-Aside, offer insight into how MPOs can work within program requirements to generate additional funding toward shared mobility projects. Coordinating with other partners and stakeholders in the planning process (e.g., economic development corporations, chambers of commerce, community-based organizations, local governments, state agencies, transit providers) can help address capacity and related financial challenges by sharing resources, exchanging data or information, and leveraging funding opportunities.

Data collection and analysis is critical to advancing equitable shared mobility, however challenges remain in accessing and conveying information in a meaningful way. Data plays a key role in justifying transportation investments and evaluating the impact of investments in advancing equity and other goals. However, MPOs noted that measuring the outcomes of shared mobility projects can be difficult for different reasons. Some data is more challenging to collect and analyze than others, such as travel-

based data (e.g., mode shift) and user demographics. In comparison, vehicle-based metrics are usually more readily available. MPOs identified approaches to address related challenges, such as distributing user surveys to fill information gaps, being transparent about how data will be used, exploring use of data sharing platforms to improve data access, and conveying data through user-friendly online visualizations (e.g., StoryMaps, simple documents, or webpages).

One size does not fit all. Planning for equitable shared mobility in a region means planning to accommodate differences among the people who live, work, and travel in the region. Many shared mobility providers require access to a smartphone, a credit card, and English language proficiency to use their service. Many providers also lack sufficient accommodations for persons with disabilities, children, or older adults. Shared mobility services can become an integral part of the regional transportation system by adapting to the needs of all members of the community. Local governments can include requirements to serve all populations in their regulations or service agreements and help ensure that public subsidies (if provided) are focused on expanding equitable access for traditionally underserved communities. MPOs have an important role to play in keeping this at the forefront of shared mobility planning efforts.

Appendix A. Peer Exchange Participants

MPOs

- Boston Region Metropolitan Planning Organization (BRMPO)
- Capital Area Metropolitan Planning Organization (CAMPO)
- Denver Regional Council of Governments (DRCOG)
- Lawrence-Douglas County Metropolitan Planning Organization (LDCMPO)
- Mid-America Regional Council (MARC)
- North Front Range Metropolitan Planning Organization (NFRMPO)
- Ozarks Metropolitan Planning Organization (Ozarks MPO)
- Puget Sound Regional Council (PSRC)
- San Diego Association of Governments (SANDAG)
- Southwestern Pennsylvania Commission (SPC)
- Yakima Valley Conference of Governments (YVCG)

U.S. DOT Offices

- FHWA California Division Office
- FHWA Colorado Division Office
- FHWA Georgia Division Office
- FHWA Louisiana Division Office
- FHWA Office of Chief Counsel
- FHWA Office of Human Environment
- FHWA Office of Planning, Environment, and Realty
- FHWA Office of Transportation Management
- FHWA Office of Transportation Policy Studies
- FHWA Texas Division Office
- FHWA Washington Division Office
- FTA Office of Mobility Innovation
- FTA Office of Planning
- OST Office of Policy Coordination and Development
- OST Office of Under Secretary for Policy
- U.S. DOT Intelligent Transportation Systems Joint Program Office

Appendix B. Summary of MPOs’ Equitable Shared Mobility Planning Efforts

The following summaries provide an overview of the seven participating MPOs’ planning efforts related to shared mobility and how equity factors into the planning approach.

Boston Region Metropolitan Planning Organization (Boston, Massachusetts)

The Boston Region MPO (BRMPO) has been active in shared mobility planning and research for several years. The MPO plays an important role providing technical assistance to member jurisdictions on shared mobility planning, conducting research, and providing direct technical assistance. The [LRTP, Destination 2040](#), prioritizes transportation projects that address intersection improvements, complete streets development, bicycle network and pedestrian connections, and community connections, the latter of which is a new program designed to address first-/last-mile connections, including shared mobility options. Shared mobility considerations are highlighted in each project category, including bicycle and pedestrian infrastructure improvements and first-/last-mile connections.

In 2021, the BRMPO published a [guide to managing curb space in the Boston Region](#). The guide outlines regional examples, recommendations, and strategies to inform the development of curb management plans and implementation of curb space changes. Earlier relevant studies include a [literature review on shared mobility](#) and an [examination of the Hubway bikeshare system](#) (now BlueBikes) as an existing regional example of shared mobility. BRMPO funded a study on [regional shared mobility planning efforts](#) (through the Metropolitan Area Planning Council) with suburban towns about how to work together on common ordinances or permitting processes related to shared mobility operators and on bikeshare expansions. Additionally, in 2021 BRMPO analyzed the equitable distribution of BlueBikes stations in low-income and minority communities and published the results in a StoryMap, [“A Decade of BlueBikes in the Boston Region: How Access to Bikeshare has Changed for Environmental Justice Communities.”](#)



Figure 2. A bicyclist riding in a park. (Source: BlueBikes)

The BRMPO has an active [Transportation Equity Program](#), which highlights an “equity in all policies” approach to support an equitable transportation system in the region. This approach integrates equity in every policy, process, and decision at the MPO. BRMPO aims to institutionalize equity by coordinating across teams and disciplines and advancing transportation equity through several collaborative workstreams, including destination access analyses, disparate impact and disproportionate burden (DI/DB) policy, and health impacts analyses. Overall, these focus areas aim to evaluate the potential impacts of MPO investments on underserved populations.

The LRTP, Destination 2040, includes a [chapter on Transportation Equity Performance](#) (chapter 6) detailing which parts of the region have concentrations of residents that are low-income or minority populations, including a DI/DB analysis that the MPO conducted for the plan. The DI/DB analysis ultimately led to the development of a [DI/DB Policy](#), which aims to institutionalize equity into project scoring and funding by “identifying potential region-wide future disparate impacts on minority populations and disproportionate burdens on both minority populations and low-income populations” that may result from investment decisions in the LRTP. The LRTP regional needs assessment includes a [Transportation Equity Needs chapter](#) (chapter 8) with explicit goals to prioritize investments that benefit equity populations.

The MPO’s [Unified Planning Work Program](#) includes developing and updating equity criteria in the TIP project selection formula. The BRMPO’s [TIP project selection process](#) adds an equity score for all projects, which comprises 20% of the final score. Other scoring criteria areas include network or connectivity value, coordination between multiple entities, inclusion in local and regional plans, generation of mode shift, demand projection, and budget sheet. Equity scores are calculated by identifying equity populations in a project area including minority population, low-income population, people with limited English proficiency, people with disabilities, people ages 75 and older, and people ages 17 and younger. The agency then evaluates the criteria by comparing the share of each equity population to the region’s average, creating an equity index for each population. The sum of the equity indices is the final equity score. Chapter 6 of each year’s TIP contains an [equity analysis](#) of the projects programmed in the TIP, which includes shared mobility projects.

Under the [Community Connections Program](#), the MPO has funded several shared mobility projects, including BlueBikes stations and microtransit service. The agency established the program in 2019 in response to public input and need for a funding stream for smaller, nontraditional transportation projects. Types of eligible projects include bicycle infrastructure (e.g., bikeshare stations and vehicles, bike parking and shelters, bike lanes), bus priority lanes, transit operating (i.e., new bus or shuttle service), and transit signalization. Eligible applicants include municipalities and regional transit authorities. The MPO provides local jurisdictions with funding and technical planning assistance to advance projects, and the Massachusetts Department of Transportation (MassDOT) administers and supports the implementation of projects.

Capital Area Metropolitan Planning Organization (Austin, Texas)

In 2020, the Capital Area Metropolitan Planning Organization (CAMPO) adopted its [2045 L RTP](#) which strives for equitable multimodal transportation options while staying relevant to the various contexts of the diverse CAMPO region and planning for future needs of some of the fastest growing areas in the country. The 2045 Plan includes the first-ever regional multimodal studies, including the [Regional Active Transportation Plan](#), [Regional Transit Study](#), and [Regional Transportation Demand Management Plan](#). These studies include needs from rural, suburban, and urban areas and provide strategies and transportation options to reduce reliance on single-occupancy vehicle (SOV) travel.

In addition to safety, mobility, and innovation, equity was a guiding consideration for the multimodal plans as well as a goal area in the [2045 L RTP](#). The objectives within this goal are access to opportunity; impact on human environment; and valuing communities. As part of L RTP development, applicants submitted proposed projects for inclusion in the L RTP and a self-assessment on how the project aligns with L RTP goals/objectives.

To demonstrate the diverse needs of transportation users in the region, CAMPO developed avatars with unique stories about their mobility needs (e.g., a senior citizen living in Hays County who needs transportation to medical appointments and the senior center; a student at the Texas School for the Blind and Visually Impaired who enjoys art classes in east Austin). The agency presented the avatars as a public engagement tool during the L RTP planning process. CAMPO also developed a regional transit toolkit with information on different transit options, such as rideshare, vanpool, micromobility, commuter rail, and more. Beyond the L RTP, CAMPO requires that local government sponsors demonstrate thorough community engagement and weighs equity when allocating funding.

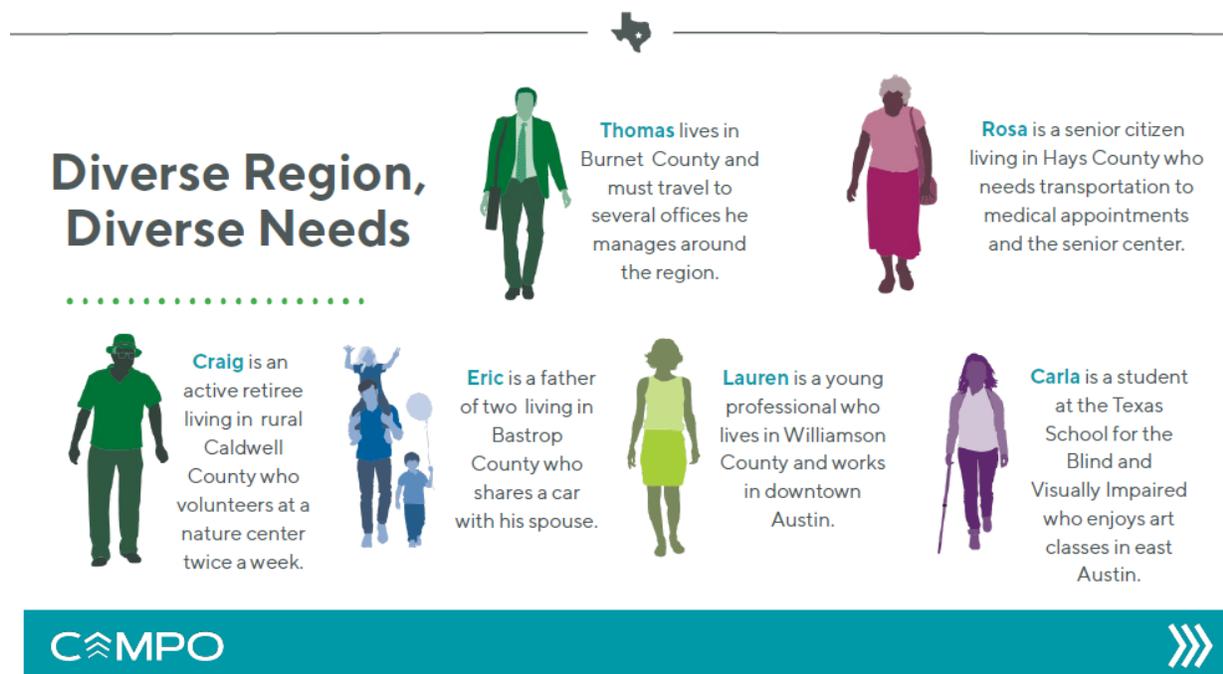


Figure 3. Example avatars with different descriptions of mobility needs used in the L RTP development process. (Source: Capital Area Metropolitan Planning Organization)

Denver Regional Council of Governments (Denver, Colorado)

Shared mobility planning is incorporated in several of the Denver Regional Council of Governments' (DRCOG) operations, including mobility analytics and transportation operations; long-range planning; project programming and delivery; and active and emerging mobility. In 2019, DRCOG, alongside partners including the Colorado Department of Transportation (CDOT), Regional Transportation District (RTD), and the Denver Metro Chamber of Commerce, published the [Mobility Choice Blueprint](#) to "help the metro Denver region identify how to best prepare for and invest in the rapidly changing technology that is revolutionizing transportation mobility." Shared mobility is an objective in the report and a subgoal for partner agencies is to "partner with the private sector to provide transportation in mobility challenged communities." The report highlights several shared mobility programs and pilots, including [The Ditch Your Car program](#), which offers participants \$300 in Lyft shared credit, \$150 in Lyft Scooter credit, a one-month RTD transit pass, and a one-month Zipcar membership in exchange for going car-free for a month. To carry out the Mobility Choice Blueprint, the partner agencies formed the [Advanced Mobility Partnership](#) to implement regional, collaborative projects that advance tactical actions in the Blueprint. Equity is addressed throughout the [Mobility Choice Blueprint](#) report and it specifically notes that if proactive action is taken to improve mobility in the region, 91,000 people who would otherwise face mobility challenges could have access to a range of new mobility options. Additionally, a key theme of the report is modifying funding and finance sources to promote equity. DRCOG adopted its [2050 Metro Vision Regional Transportation Plan \(MVRTP\)](#) in 2021, and the plan includes a section on equity priorities and shared mobility.



Figure 4. Bicyclists riding on a multi-use path in a park. (Source: Denver Regional Council of Governments)

Internally, DRCOG has a multidivisional work group focused on increasing equity in the transportation planning process, including work that guides shared mobility planning. The effort aims to examine and improve DRCOG equity analysis to:

- Make equity analysis more meaningful;
- Continue to evolve stakeholder and public engagement methods to increase input from traditionally underserved communities;
- Use equity analysis to guide project funding for the TIP and LRTP; and
- Incorporate improved equity approaches in other planning processes and products.

DRCOG also established and reconvened a Civic Advisory Group to gather feedback from historically marginalized communities on many of the MPO's planning programs and projects. This includes input for the LRTP, updates to the LRTP to address new state rules on greenhouse gases, and the agency's internal effort to improve equity analysis. Staff intend to continue and expand the group for additional plans and programs.

DRCOG updated its nondiscrimination plans in October 2021. The update included the relatively administrative development of a document accommodation statement. This simple addition to documents resulted in a comprehensive self-assessment of DRCOG's products (written materials, audio and visual materials, and social media) in terms of accessibility and inclusivity. The outcomes of this review included the establishment of an agencywide translation policy and a greater understanding of types of accommodations available. Additionally, an on-going work group of staff across multiple divisions are continuing to develop guides and tools for staff.

In DRCOG's TIP, there is a Human Service Transportation (HST) Set-Aside that was established using an innovative funding approach that considers equity in shared mobility funding. The DRCOG Board of Directors set aside one million dollars a year for the current TIP for projects that improve mobility for populations that are underserved, such as older adults, individuals with disabilities, veterans, and people with low income. The HST Set-Aside combines CMAQ funding with two other adjacent programs: Older Americans Act and Federal Transit Administration (FTA) 5310 Enhanced Mobility of Seniors and Individuals with Disabilities. The HST Set-Aside provides dedicated funding to improve mobility for older adults, low-income individuals, veterans, individuals with disabilities, and other populations with mobility limitations.

Through an agreement between DRCOG, RTD, and CDOT, the Federal funding designated for the HST is swapped for state funding. This is done for two reasons: the state funding is more flexible so it can be used for more project types, and the state funding is counted toward local match requirements. Coordinating the three funding sources reduces local match requirements; making it more affordable for non-profit project sponsors to meet grant requirements. Before the coordination of the three funding sources, FTA 5310 funding was typically undersubscribed not because of any lack of need but due to affordability. Now, more funding is applied for than is available and DRCOG staff have recommended increasing the HST Set-Aside in the next TIP.

DRCOG has an independent review panel to evaluate TIP projects. The review panel, which includes community-based organizations, recommends projects to a committee that approves final projects for TIP inclusion. DRCOG also convenes a [micromobility work group](#) that meets quarterly. The work group consists of representatives from local governments, transportation management associations, and regional, state, and Federal agencies. The work group published a report on [Shared Micromobility in the Denver Region](#) in December 2020, outlining considerations to inform local agency deployment and regional consistency. As part of DRCOG's shared micromobility work, DRCOG manages a regional shared micromobility data collaborative. This data collaborative is made up of DRCOG, CDOT, RTD, and local governments with shared micromobility programs. DRCOG provides data policy support and works with local agencies to help ensure consistent data collection, analysis, and metrics. DRCOG provides a platform for local agencies to manage their shared micromobility programs which is then aggregated and available to regional and state partners, as well as to the public via a [regional open data portal](#). This example of shared mobility data collaboration is an activity DRCOG will continue to consider as regional shared mobility options expand. DRCOG also collaborates with partners around the state through the Colorado Electric Vehicle Coalition Micromobility Subgroup to manage an [inventory of shared micromobility programs in Colorado](#). This inventory tracks features of programs around the state, including whether programs offer adaptive vehicles, options for unbanked populations, and low-income options, to allow agencies to easily compare and share information on what works best in their

communities. Simplified information from the inventory is also available in a viewer-friendly [StoryMap](#) format.

Mid-America Regional Council (Kansas City, Missouri)

The Mid-America Regional Council's (MARC) [2050 LRTP](#) includes a goal to expand access to opportunities by advancing RideshareKC and the Smart Moves regional transit vision. MARC established RideshareKC in 1980 to provide a “commuter-matching service for anyone who lives, works or attends school in the greater Kansas City area or within 75 miles of downtown Kansas City, Missouri.”

RideshareKC is an affordable ridehailing transportation option with high coverage in underserved low-income and minority populations, helping individuals and employers find convenient and reliable commute solutions. The service is part of the state implementation plans to improve air quality in Kansas and Missouri. It is included in the LRTP and funded through the CMAQ Program.

The agency's [Smart Moves 3.0 Plan](#) envisions a region with viable mobility solutions for residents, businesses, and communities. Smart Moves 3.0 includes a discussion of mobility hubs, mobility innovation, and more mode choices to implement accessible mobility services. The vision identifies a network of over 60 mobility hubs, or areas where mobility services and traditional fixed-route transit come together (e.g., bus, streetcar, bike sharing and ride sharing).



Figure 5. Example features of a mobility hub. (Source: Mid-America Regional Council)

In 2015, MARC adopted a [Complete Streets Policy](#) that seeks to achieve the region's vision of a multimodal transportation system. Additionally, in 2018, [MARC received a FHWA grant](#) to pilot concepts outlined in the [FHWA Guidebook for Measuring Multimodal Network Connectivity](#). MARC analyzed 20 mobility hubs to better understand bicycling and pedestrian activities, as well as infrastructure gaps. Staff created one-mile buffers around each mobility hub using a geographic information system and calculated the bicycle and pedestrian level of service and bicycle level of traffic stress.

Social equity is referenced in the LRTP vision statement. MARC works with local partners to promote equity in planning processes and decision making. The MPO's [Planning Sustainable Places](#) program seeks to advance integrated local transportation and land use planning and project development activities by promoting concepts consistent with sustainable communities with meaningful community engagement. The program provides funding to local jurisdictions for smaller planning projects, mixed use development, complete streets, and other project types. The program is funded through Surface Transportation Block Grant funding. All projects must meaningfully engage their community in a collaborative dialogue.

Other envisioned initiatives to expand equitable shared mobility in the region include future LRTP projects such as an electric vehicle carshare program for low-income communities and advancement of the bistate sustainable reinvestment corridor, which seeks to expand connectivity along a 24-mile long bistate corridor through mobility hub development and electric vehicle charging stations, among other strategies.

Puget Sound Regional Council (Seattle, Washington)

In May 2022, the Puget Sound Regional Council (PSRC) adopted the [2050 LRTP](#). Equity is at the forefront of PSRC's LRTP, which notes "PSRC integrated an equity focus during the development of the plan through a series of board engagements and discussions, enhanced public engagement processes, and completion of an equity analysis on the performance of the plan for historically marginalized transportation users." PSRC developed regional maps of areas with displacement risk and economic opportunity disparities in the region, in addition to the Equity Focus Areas maps included in the [Regional Equity Strategy](#) of the plan. The LRTP notes the role of equity in all transportation modes including transit, bicycle and pedestrian, and specialized transportation programs serving people with mobility challenges. As part of their LRTP development, PSRC conducted extensive community engagement to identify transportation network needs and priorities. Community members shared their experiences related to mobility barriers, notably temporal barriers among paratransit riders and people with mobility challenges. Additionally, they found the gap in awareness of service was particularly prevalent for communities that do not speak English.

The plan also includes a section on Mobility on Demand (MOD), which uses technology to aggregate shared mobility transportation options and provide information on the cost and availability of services. This section identifies the opportunity to better connect public transportation with other shared mobility for first-/last-mile connections or to serve low-density areas. The plan details how MOD is currently being used in the region; for example, Kitsap Transit is mobilizing MOD to operate a deviated bus route to allow riders to be picked up close to the fixed route. Initially, riders had to submit a pre-scheduled request for a pickup, but as of July 2021, riders can use an app to request a ride on-demand. Additionally, Ride Pingo and Via to Transit are examples of ridehailing services to transit being provided in various parts of King County. As shared mobility pilots in the region are dynamic and localized, PSRC does not have a direct role in their development but incorporates discussion of emerging shared mobility in the region's forums covering relevant related topics, such as public transportation and active transportation.

The LRTP also includes a future-oriented section that notes the uncertainty the pandemic has caused for the business models of shared mobility companies. It identifies the uniform adoption of standard data – particularly the presence of options on Google Maps – as a strategy to increase users' awareness of the options available when planning trips. Shared Mobility is also addressed in the plan's Emerging Technologies section. The plan suggests better partnerships between private shared mobility service providers and public sector agencies to address community priorities like access to employment and educational opportunities in disadvantaged communities. It also notes the regulatory challenges that shared mobility has created for local governments, including questions on whether shared mobility services positively or negatively affect regional policy goals (e.g., reduction in vehicle miles traveled (VMT)). MOD is also included as a technology-based solution in PSRC's [Coordinated Mobility Plan](#) (the Coordinated Transit-Human Services Transportation Plan) to address the transportation needs of the people with mobility challenges due to their age, income, or ability. PSRC conducted targeted outreach to those underserved communities to identify mobility needs and developed prioritized strategies to address those needs.

In addition to efforts surrounding their LRTP, PSRC produced an equity analysis for the plan. The equity analysis identifies areas with high concentrations of equity focus populations (including people of color,

people with low incomes, older adults, youth, people with disabilities, and people with limited English proficiency) and addresses goals to advance social and racial equity in transportation planning and investments. The equity analysis notes that PSRC will continue to expand on equity in all aspects of regional transportation planning, including the planning for shared mobility.

PSRC’s [Equity Advisory Committee](#) (EAC) is comprised of residents as well as governmental and community-based organizations in the Puget Sound region representing Black, Indigenous, and BIPOC (Black, Indigenous, people of color) communities. The EAC is tasked with coordinating with PSRC to implement its Regional Equity Strategy and to advise PSRC committees and decisionmakers on policies and programs with an equity lens. The Regional Equity Strategy includes a suite of resources co-created with the EAC to help members and staff work towards the region’s equity goals.

Table 1. Overview of PSRC’s Regional Equity Strategy. (Adapted from Puget Sound Regional Council)

Capacity Building	Data and Research	Community Engagement	Best Practices
<ul style="list-style-type: none"> • Learning Opportunities • Prioritizing Equity • Inclusive Procurement • Hiring and Retention 	<ul style="list-style-type: none"> • Equity Tracker • Data and Analysis • Legacy of Structural Racism Interactive Report 	<ul style="list-style-type: none"> • Equity Advisory Committee • Anti-Displacement Organizations • Equitable Engagement Guidance 	<ul style="list-style-type: none"> • Racial Equity Impact Assessment • Equity Planning Resources • PSRC Funding Criteria/Programs

San Diego Association of Governments (San Diego, California)

As part of its [regional planning](#) process, the San Diego Association of Governments (SANDAG) has identified a new transportation vision with a data-driven approach that includes the implementation of five key transportation strategies referred to as the [5 Big Moves](#)—Complete Corridors, Transit Leap, Mobility Hubs, Flexible Fleets, and Next Operating System. Together, these initiatives will help create a fully integrated, world-class transportation system that offers efficient and equitable transportation choices.

SANDAG’s Board of Directors adopted in 2021 a commitment to equity, highlighting its dedication to leveraging its resources, plans, and programs to mitigate historical inequities in the San Diego region and to increase mobility options for communities who have historically been marginalized, underserved, and underrepresented. This commitment is reflected through both equity-focused projects as well as through the integration of an equity lens into all the projects initiated, supported, and led by SANDAG.

SANDAG has engaged a broad and diverse cross-section of the San Diego region by partnering with a regionwide network of [11 community-based organizations](#) (CBOs) to engage communities historically underserved, people with low incomes, communities of color, older adults, and people with disabilities in the planning process. A tribal consultation process was also implemented with the support of the Southern California Tribal Chairmen’s Association to help ensure the region’s 17 sovereign tribal nations were included.



Figure 6. Interactive feedback board at public engagement booth at a community event. (Source: SANDAG)

Several equity-focused Shared Mobility Initiatives include:

- [Flexible Fleets](#) Strategic Plan and Pilot Projects through City partnerships for community deployments to enhance access to opportunities and basic needs in communities historically underserved.
- [Loan-to-Own E-Bike Pilot Program](#) for low-income individuals county-wide through a non-profit partnership with Rider Safety Visibility. Pilot program participants work toward owning an electric bicycle (e-bike) by riding a minimum of 100 miles per month over two years, recording their trips, and sharing regular feedback about their experiences.
- [Specialized Transportation Grant Program](#) to address mobility needs of Seniors and individuals with disabilities. This program also included a Social Equity Analysis to help ensure equitable allocation of funding expenditures and services for low-income and minority areas.
- [Access for All Grant Program](#) provides funding to meet the on-demand mobility needs of individuals with disabilities not adequately served by transit and paratransit.
- Regional micromobility coordination effort that engages municipalities, transit agencies, universities, and military installations to support data sharing guidance and coordination of local policies and regulations, resulting in regional micromobility data sharing requirements.
- [Regional Digital Equity Strategy and Action Plan](#) includes the “Get Connected” campaign to expand awareness of affordable, high-speed internet resources, digital skills classes, and access to devices. SANDAG is forming partnerships with public and private entities to seek federal and state funds to deploy broadband infrastructure and provide high-quality and affordable broadband services to San Diego’s unserved and underserved communities.
- [Youth Opportunity Pass Pilot Program](#) provides free transit for youth to improve transportation access for young people and historically disadvantaged communities.
- SANDAG also serves an advisory role to local jurisdictions who are planning and implementing shared mobility services. SANDAG offers subject matter expertise and guidance to help ensure alignment with the regional goals and strategies for transportation, equity, and climate.

With input from the Social Equity Working Group, SANDAG has taken key steps to advance early action items promoting equity in the region’s public transportation system. Together with partner agencies, SANDAG anticipates innovative future programs and pilots that promote regional equity and integrated transportation networks that comply with climate action plans across the region. These projects will aim to provide accessible, equitable, and user-centric transportation choices.

Southwestern Pennsylvania Commission (Pittsburgh, Pennsylvania)

The Southwestern Pennsylvania Commission's (SPC) [2045 L RTP](#) includes a "Mobility For All" goal which talks extensively about the equity implications of new technologies and the importance of connecting modes in service of regional equity goals. It includes specific strategies in this goal that address equity, including encouraging municipalities to proactively regulate mobility service providers with equity in mind. Additionally, the L RTP discusses forming partnerships with healthcare providers and private mobility providers and integrating with Mobility as a Service (MaaS) technologies. It also includes a goal to facilitate seamless linkages through regional coordination, noting the increasing role of the private sector in mobility services. Lastly, the L RTP includes strategies to offset potential negative consequences of automated vehicles.

In addition to SPC's long-range transportation planning, the Commission formed a Transit Operators Committee (TOC) to provide technical assistance to member counties. The TOC also serves as "the forum for advancing programs and projects providing public transportation options, regional transit coordination, alternatives to fixed-route transit service, and economic opportunities linked to land use and transit-oriented development." The committee members include representatives from the region's public transportation sponsors as well as the regional vanpool sponsor.

SPC's [SmartMoves Connections project](#) seeks to identify the best locations for future investments in Multimodal Hubs connected by multimodal corridors. The SmartMoves Connections project uses travel data, machine learning, and aerial photos to map and analyze the clusters of land with potential to support seamless multimodal connections throughout a trip.

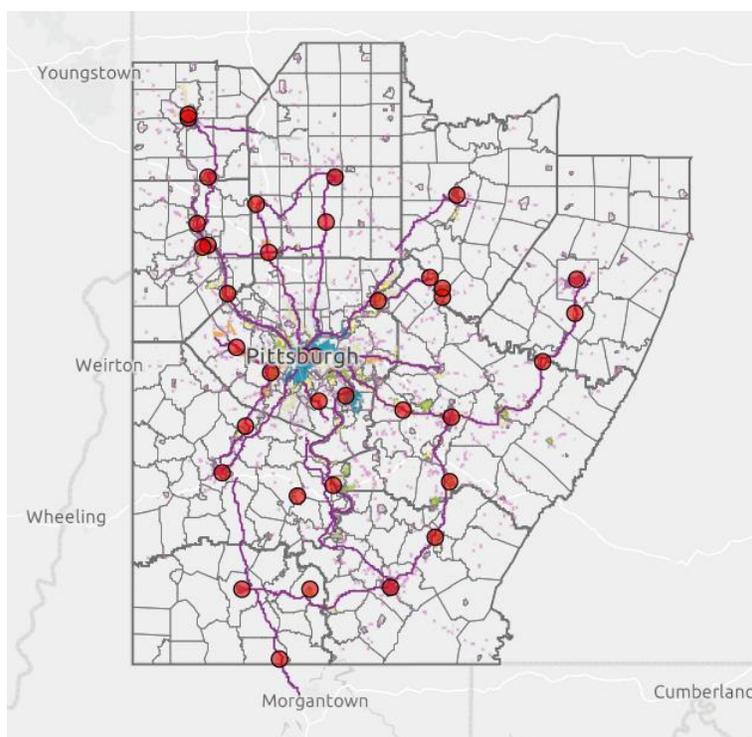


Figure 7. Screenshot of the SmartMoves Connections project interactive mapping application dashboard. (Source: Southwestern Pennsylvania Commission)

U.S. Department of Transportation
Federal Highway Administration
Office of Planning, Environment, and Realty

FHWA-HEP-24-005



U.S. Department
of Transportation

**Federal Highway
Administration**