

→ **Task 4: TDM Framework Technical Memorandum**

**21P098: Metropolitan Council Regional Travel
Demand Management Study**

December 2022

Prepared for the Metropolitan Council



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Overview

This technical memorandum summarizes the process for developing the Travel Demand Management (TDM) Framework for the study. The TDM Framework reflects input from a broad set of stakeholders and describes what the Twin Cities region hopes to accomplish through TDM strategies. The outcome of implementing the framework is the development of a list of TDM strategies that meet the region's TDM goals and objectives for the Twin Cities region.

The last TDM Study conducted by the Metropolitan Council was completed more than a decade ago and did not address shared mobility, teleworking, incentives, land use strategies, or new transportation developments such as MnPASS (now E-ZPass) in much detail and included only limited guidance for implementing new TDM strategies. This TDM Framework will lay the groundwork for more detailed guidance about which strategies might have the greatest potential for meeting the region's broader transportation goals. The process for developing the TDM Framework, described in this memorandum, was conducted under Task 4 of this Regional TDM Study; the forthcoming development of a policy-level analysis will be conducted as part of Task 5. Together, the TDM Framework and analysis will inform the selection of strategies that will be advanced to the Action Plan phase (Task 6).

Approach

The study team followed an iterative approach to developing the TDM Framework, including identifying transportation-related challenges and opportunities, and goals and objectives for TDM in the region. The study team began by drafting a set of potential goals and objectives, informed by the Existing Conditions research conducted under Task 2, that were especially focused on Thrive MSP 2040 and the 2040 Transportation Policy Plan to ensure alignment with existing plans and priorities in the region.

These draft goals were refined through subsequent discussions with the Met Council project manager, the Regional TDM Study Project Management Team (PMT), and the Regional TDM Study Technical Advisory Team (TAT). These group discussions included how to integrate mode-shift, supply and demand factors, incentives and disincentives, community-specific approaches, tracking and communicating outcomes, and integrating TDM and transportation systems management and operations (TSMO). The discussions also included the need for demand management on county arterials, interest in social and equity benefits, transit priority on arterials, and the rise in vehicle miles traveled (VMT) to pre-pandemic levels.

Finally, the draft goals and objectives were presented in two stakeholder workshops (August 2022) to solicit feedback and be revised again. On August 9 and 10, 2022, the Met Council and the study team hosted two in-person workshops during which a broad set of stakeholders provided feedback on goals and objectives that TDM should address. The workshop also included a session to solicit input on challenges and opportunities in the region, to inform the policy-level analysis to be conducted in Task 5.

Workshop participants included representatives from the metropolitan planning organization (MPO), county, cities, transit providers, development community, nonprofit community organizations, transportation provider industry, and local employers. Participants were asked to share transportation needs and priorities for TDM goals and provide input on potential TDM

strategies. A key goal of the workshops was to build understanding of transportation-related goals, initiatives, and efforts most consistently valued and important across the region.

A detailed summary of the workshop is included in this memorandum's appendix.

Alignment with Existing Regional Plans

The current long-range transportation plan for the Twin Cities region, the 2040 Transportation Policy Plan, contains many existing priorities related to TDM. These existing priorities were the starting point for the draft goals and objectives that make up this TDM Framework, and include:

- Being efficient and cost-effective with investments;
- Making carpools, transit, bicycling, and walking more available, attractive and reliable so that people use them more and contribute less pollution and greenhouse gas emissions (GHGs);
- Prioritizing historically under-represented populations;
- Investing in transportation that connects people to jobs and attracts and retains residents and businesses; and
- Encouraging future growth and land use designs that support and encourage multimodal travel.

The Regional TDM Study will identify additional priorities for consideration in the upcoming 2050 Transportation Policy Plan, as well as propose implementation strategies for advancing these priorities into action. Table 1 outlines the specific goals and objectives in the 2040 Transportation Policy Plan that relate to TDM.

Table 1. 2040 Transportation Policy Plan Goals and Objectives Related to TDM

TDM-Related Goals	TDM-Related Objectives
Transportation System Stewardship	<ul style="list-style-type: none"> • Operate the regional transportation system to efficiently and cost effectively connect people and freight to destinations.
Safety and Security	None.
Access to Destinations	<ul style="list-style-type: none"> • Increase the availability of multimodal travel options, especially in congested highway corridors. • Increase travel time reliability and predictability for travel on highway and transit systems. • Increase the number and share of trips taken using carpools, transit, bicycling, and walking. • Improve the availability and quality of multimodal travel options for people of all ages and abilities to connect to jobs and other opportunities, particularly for historically under-represented populations.
Competitive Economy	<ul style="list-style-type: none"> • Improve multimodal access to regional job concentrations identified in Thrive MSP 2040. • Invest in a multimodal transportation system to attract and retain businesses and residents.
Healthy and Equitable Communities	<ul style="list-style-type: none"> • Reduce transportation-related air emissions. • Increase the availability and attractiveness of transit, bicycling, and walking to encourage healthy communities through the use of active transportation options.
Leveraging Transportation Investments to Guide Land Use	<ul style="list-style-type: none"> • Focus regional growth in areas that support the full range of multimodal travel. • Encourage local land use design that integrates highways, streets, transit, walking, and bicycling.

Goals and Objectives

The TDM Framework goals and objectives that emerged from this task for the Twin Cities region are outlined in Table 2. A discussion of each of the goals and objectives follows.

Table 2. Final Regional TDM Study Goals and Objectives

Regional TDM Study Goals	Regional TDM Study Objectives
<p>Goal 1: Vehicle miles traveled (VMT) and single-occupant vehicle (SOV) trips are reduced because travelers view alternatives to SOV travel as attractive, reliable, safe, and easy to use.</p>	<ul style="list-style-type: none"> • Alternatives to SOV travel feel inviting and safe for all users. • Trip planning information (including ridesharing/microtransit/paratransit, transfers) is highly visible, easy to access and understand. • Alternatives to SOV travel are coordinated, connected, and easy to navigate. • Alternatives to SOV travel are cost competitive.
<p>Goal 2: Regional and local transportation and land use policies and programs encourage demand for alternatives to SOV travel.</p>	<ul style="list-style-type: none"> • TDM is effectively integrated in transportation and land development planning processes at early stages. • Government plans, policies, and investments prioritize development that is connected to high-quality bicycle, pedestrian, transit networks. • The private sector (employers and developers) is incentivized and equipped to improve the availability, attractiveness, and quality of alternatives to SOV travel. • Partners, including law enforcement agencies, are involved in campaigns to help travelers feel safe and comfortable using alternatives to SOV travel.
<p>Goal 3: TDM programs, policies, and incentives are equitably focused and delivered.</p>	<ul style="list-style-type: none"> • TDM programs and policies address needs of historically under-represented populations and vulnerable populations in an equitable manner. • TDM programs include outreach to underserved communities to understand and address needs. • In addition to addressing the traditional peak-hour commute trip, TDM programs and policies are broadened to include off-peak and non-commute trips (essential trips).
<p>Goal 4: TDM programs and services are coordinated and delivered consistently throughout the region and by all TDM service providers and partners.</p>	<ul style="list-style-type: none"> • TDM Service providers and partners create consistent communications and expectations for TDM service users. • TDM services are streamlined and consistently delivered regionally, but customized locally for different contexts (e.g., rural, suburban, and urban). • TDM programs and service performance are evaluated for effectiveness in meeting TDM goals and regularly monitored during implementation. • TDM program funding is effectively leveraged to reduce the need for investments in additional roadway capacity.

Goal 1. Vehicle miles traveled (VMT) and single-occupant vehicle (SOV) trips are reduced because travelers view alternatives to SOV travel as attractive, reliable, safe, and easy to use.

The transportation sector accounts for the largest portion of all greenhouse gas emissions in the state of Minnesota. Reducing single-occupant vehicle trips and VMT can reduce greenhouse gas emissions, but also yield many other co-benefits. Fewer cars on the road translates to reduced congestion and reduced incidence of crashes. For individual travelers, benefits include less time sitting in traffic and reduced vehicle operating costs. Public health benefits include improved air quality, reduced ambient noise, and opportunities for physical activity through active transportation.

Stakeholders discussed several influences and potential barriers to alternatives to SOV travel, including real or perceived safety, real or perceived independence (and ability to respond to personal emergencies), familiarity with transportation options, ability to understand options or individual routes, and motivation to understand and become comfortable with new modes.

Alternatives to SOV travel feel inviting and safe for all users. Public safety and traffic safety are major factors influencing travelers' mode choice and their willingness to shift modes. During the workshops, stakeholders emphasized the importance of safety across all modes, but especially for transit users, bicyclists, and pedestrians. Stakeholders mentioned that traffic safety and desirability of different modes can change depending on the season; in the winter months, biking and walking is less desirable and less safe due to fewer daylight hours and cold or snowy conditions. Stakeholders stressed that strategies targeting biking and walking should focus on encouraging greater use of these modes during the spring, summer, and fall months and encouraging other modes such as teleworking, transit, or carpooling in the winter months. Stakeholders also mentioned that there are real and perceived concerns for public safety when riding public transportation and/or walking or biking in non-daylight hours, including concerns about equitable policing and enforcement.

Trip planning information (including ridesharing, microtransit, micromobility, paratransit, and transfers) is highly visible, easy to access and understand. Understanding different transportation modes—costs, routes, safety information, and more—can be significant obstacles for travelers considering a different—and less familiar—mode of travel. Trip planning information is a foundational element in encouraging traveler behavior change.

Stakeholders expressed an interest in trip planners to compare the entire trip time across modes, not just the actual travel (moving) time; when trip planners do not account for the time to park and walk to the destination, drive-alone trips can appear much shorter. Transit trips might be much more comparable once those “first and last steps” are included in the calculations.

Alternatives to SOV travel are coordinated, connected, and easy to navigate. Stakeholders indicated that coordination between transportation providers, such as regional transit agencies, is important to provide a clear message to travelers that helps them understand the different providers. Stakeholders cited examples of transit to entertainment destinations (such as transit shuttles to the Minnesota State Fair) are successful because they are easy to understand and navigate. Stakeholders also cited the example of recent mobility hub wayfinding and mode-finding work as successful strategies for improving navigation and suggested this work could be expanded and/or that personalized transit communications could be further explored to provide

similar experiences. Stakeholders have similarly discussed mobility-as-a-service and cross platform coordination, such as combined memberships for transit and shared mobility.

Alternatives to SOV transportation options are cost competitive. Stakeholders expressed the need to implement strategies to make alternatives to SOV travel cost-competitive with the costs of driving. Stakeholders mentioned that for travelers who already have a vehicle, that vehicle is a “sunk-cost” and so alternative modes, such as transit, are perceived as an additional expense to their transportation budget. Stakeholders also stressed that communicating the true costs of car ownership, marketing alternative modes, and implementing pricing strategies that reduce or offset costs for alternatives to SOV travel could lead to greater adoption of the alternatives. Some stakeholders acknowledged that SOV travel is heavily subsidized (e.g., roadways, fuel, vehicles) and that drivers are often not responsible for the real costs of driving vehicles; the need to price SOV travel, including parking and potentially mileage based user fees, according to its impacts on society was discussed.

Goal 2. Regional and local transportation and land use policies and programs encourage demand for alternatives to SOV travel.

Transportation and land use policies and programs are key levers in ensuring location-efficient development and in establishing walkable, bikeable, and transit-oriented communities. They help mitigate the transportation system impacts of development and population growth while increasing the accessibility of jobs, housing, education, amenities, and services by shared and active modes of transportation. Furthermore, land use and transportation policies yield land development patterns that are the primary drivers of travel demand. The private sector also has a role in how they operate their businesses, including how they engage with employees and visitors and develop properties to either incentivize SOV travel or encourage alternatives to SOV travel.

TDM is effectively integrated in transportation and land development planning processes at early stages. Stakeholders recognized the importance of development processes in influencing trip choices because land development that enables or encourages long commutes makes it difficult for transportation systems to connect all types of destinations for different types of trips. Stakeholders mentioned the need to consider TDM early in the development process and accommodate multimodal access to development sites (e.g., transit-oriented access, parking for bicycles and other micromobility devices). Case studies and data from developments in the area should be developed to demonstrate successful outcomes from TDM strategies for developers and lending institutions.

Government plans, policies, and investments prioritize development that is connected to high-quality bicycle, pedestrian, transit networks. The Twin Cities region has made significant investments in infrastructure for bike, pedestrian, and transit systems and development should focus on maximizing the use of these recent and ongoing investments. Stakeholders spoke about the differences in infrastructure for certain modes across the region and stressed that future investments should focus on closing gaps. Some stakeholders expressed a desire for neighborhood-focused transit services, to facilitate shorter trips for essential services and daily errands.

The private sector (employers and developers) is incentivized and equipped to improve the availability, attractiveness, and quality of alternatives to SOV travel. Stakeholders suggested that TDM strategies should be broadened to include non-commute trips; partnering

with residential developers and property managers could expand the reach to residents for trips beyond the commute. Stakeholders also mentioned that developers could be incentivized to support multimodal friendly designs and integrate TDM strategies. Cited examples included reducing parking requirements, increasing education and outreach to tenants, and financial assistance for plan-compliance fees or infrastructure elements. Though public sector employers have also implemented telework policies, the private sector is best equipped to adopt telework policies, as evidenced by the dramatic changes implemented during the COVID-19 pandemic and the ongoing flexibility that some public sector employers and developers have continued to offer. The private sector could benefit from support from the public sector, through incentives, guidance, and/or regulations to implement telework policies equitably.

Partners, including law enforcement agencies, are involved in campaigns to help travelers feel safe and comfortable using alternatives to SOV travel. Stakeholders stressed the importance of a non-police presence on transit, highlighted the success of existing transit ambassador programs, and suggested expansions of these types of programs. Stakeholders also expressed the need to support policies and programs that make roadways safe for all users, especially bicyclists and pedestrians.

Goal 3. TDM programs, policies, and incentives are equitably focused and delivered.

Equity is a pillar by which all TDM strategies should be evaluated, both individually and as a collective, either as a formal program or as a suite of strategies available to travelers offered across multiple organizations and agencies. Due to the sometimes very specific focus of a strategy, an individual strategy might not be able to target all types of travelers equally, but a regional TDM plan or program should aim to balance these strategies with those that are inclusive of or specifically focused on other types of travelers so that within the suite of strategies, all travelers have strategies that support them.

Many TDM strategies are focused on shifting driver behavior, whether by looking to influence the time of day they choose to take trips or by encouraging drivers to take another mode for some trips. These strategies inherently exclude populations that do not drive or own vehicles, such as transit-dependent populations, so strategies that support the use of SOV alternatives for transit-dependent populations was also encouraged.

TDM programs and policies address needs of historically under-represented and vulnerable populations in an equitable manner. Implementation of TDM strategies may require multiple approaches so that they can be personalized to the needs of different populations, especially historically under-represented populations. For example, bikeshare programs should be required to adopt different pricing strategies correlated with income levels, or subsidies could be provided on a scale, as they are in the City of Minneapolis and many other programs.

TDM programs include outreach to underserved communities to understand and address needs. Stakeholders noted the importance of reaching out directly to transit riders to understand needs. Insights and feedback from underserved communities should inform TDM planning.

TDM programs and policies include off-peak and non-commute trips (essential trips). While some stakeholders expressed a desire for TDM strategies to prioritize commute trips,

others emphasized the need for TDM strategies to be inclusive of all types of trips. Reverse commutes and inter-suburb commutes should also be addressed.

Goal 4. TDM programs and services are coordinated and delivered consistently throughout the region and by all TDM service providers and partners.

Currently, there are many organizations and agencies that provide transportation services and implement TDM strategies in the Twin Cities region. Improved coordination will lead to greater traveler understanding of sustainable and efficient transportation options.

TDM service providers and partners create consistent communications and expectations for TDM service users. Stakeholders emphasized the importance of increasing awareness of alternatives to SOV travel and making them more readily available. This can also include information campaigns that highlight the impacts of SOV travel on regional goals and objectives.

TDM services are streamlined and consistently delivered regionally, but customized locally for different contexts (e.g., urban, suburban, rural). A regional TDM program or suite of TDM strategies for the region should be flexible enough to recognize and adjust the implementation, marketing, and communications. Stakeholders commented that TDM strategies should be considered for their possible effectiveness in differing geographic contexts. For example, parking cash-out strategies might not be as effective where parking is plentiful, but they can address parking demand challenges or support organizations that have eliminated parking minimums.

TDM programs and service performance are evaluated for effectiveness in meeting TDM goals and regularly monitored during implementation. Stakeholders noted that each program should have clear definitions of success, including performance metrics to track effectiveness. In establishing performance evaluation methodologies, the Met Council can define what success looks like for ongoing programs versus discrete or pilot projects (e.g., how long participation should be monitored, how to acknowledge that new programs can take time to gain traction).

TDM program funding is effectively leveraged to reduce the need for investments in additional roadway capacity. Generally, stakeholders pointed to a need for more funding, particularly for mobility hubs, active transportation, transit, micromobility, TDM studies, and expansion of staff to administer TDM programs and services. Stakeholders perceived a disconnect between the funding available for TDM projects and eligibility requirements for existing funding sources. Congestion pricing, parking management strategies, and federal funding sources for active transportation infrastructure should be explored. Additionally, development policies could help generate revenues for TDM programs.

Appendix. Workshop Summary

Introduction

On August 9 and 10, 2022, the Met Council and the project team hosted two in-person workshops. The objective of the workshops was to identify issues/topics that are most important and valued across the region to inform the development of travel demand management (TDM) strategies.

Both workshops had the same agenda: the project team reviewed work conducted and insights learned so far throughout the study, facilitated group and breakout discussions about opportunities and challenges in the region, and facilitated discussions about goals and objectives that TDM should address.



Meeting Logistics

TDM Study Project Team

- Cole Hiniker, Metropolitan Council
- Susan Heinrich, ICF
- Kristina Heggedal, ICF
- Ashley Hudson, Bolton & Menk, Inc.
- Scott McBride, Bolton & Menk, Inc.
- Dani Hans, Zan Associates

Workshop Purpose

- To hear what is important and most valued to each group
- To inform TDM strategies

- To build understanding of transportation-related goals, initiatives, and efforts that are most consistently valued and important across the region
- To develop 3–4 succinct goals/prioritization

Table 3. Workshop Agenda

Time	Agenda Item
15 minutes	Welcome and Introductions
20 minutes	Study Background and Purpose
20 minutes	Recap on Task 2 Findings
20 minutes	Recap on Task 3 Findings
30 minutes	Breakout 1 (a) and (b) – Opportunities, Barriers, Challenges, Needs
15 minutes	Break
30 minutes	Breakout Session 1 – Review Breakout 2 – Goals and Objectives
15 minutes	Recap Breakout Sessions
10 minutes	Next Steps: Polling Activity
5 minutes	Next Steps

Workshop Attendees

Table 4. Workshop Attendees on August 9, 2022

Name	Organization Name	Title	Stakeholder Group Affiliation
Deb Barber	Met Council	Council Member	Met Council Transportation Advisory Board Met Council Transportation Committee
John Barobs	Move Minneapolis	Outreach Manager	Transportation Management Organization
David Bergstrom	Wellington Management, Inc.	COO	Developer
Theresa Cain	Metro Transit – Twin Cities	Manager, Commuter Programs	TDM Study Technical Advisory Team
John Dillery	MN350 Transit Justice		Community organization
Danielle Elkins	City of Minneapolis	Mobility Manager	TDM Study Technical Advisory Team
Amity Foster	TAB		Met Council Transportation Advisory Board
Brian Hansen	City of Bloomington	Development Coordinator – Engineering	TDM Study Technical Advisory Team

Name	Organization Name	Title	Stakeholder Group Affiliation
Karl Hedlund	Move Minneapolis	Outreach Specialist	Transportation Management Organization
Andrew Hestness	Redesign, Inc.	Executive Director	Community organization
John Mark Lucas	University Of Minnesota	Transportation programs manager	TDM Study Technical Advisory Team
Meghan Mathson	Anoka County Commute Solutions	TMO Coordinator	Transportation Management Organization
Kate Meredith	Commuter Services	Vice President	Transportation Management Organization
Tiffany Orth	Move Minneapolis/Minneapolis Regional Chamber	Executive Director/Vice President of Mobility	TDM Study Technical Advisory Team Transportation Management Organization
Ben Picone	MVTA	Transit Planner	TDM Study Technical Advisory Team
Chad Ellos	Hennepin County	Transportation Planning Manager	TDM Study Technical Advisory Team

Table 5. Workshop Attendees on August 10, 2022

Name	Organization Name	Title	Stakeholder Group Affiliation
Stephanie Alexander	WeCAB	Executive Director	Met Council Transportation Advisory Board
Ian Buck	MN350	Volunteer	Community organization
Melanie Burns	EZ Air Park	Marketing manager	Employer
Gretchen Camp	ESG Architecture and Design	Principal	Employer
Nicole Campbell	MnDOT Office of Transit and Active Transportation	ABC Ramps Coordinator	Not stated
Hope Donald	Opportunity Partners	Transportation Manager	TDM Study Technical Advisory Team
Matt Ganter	Solhem Companies	Development Associate	Developer
Debbie Goettel	Hennepin County	County Commissioner	Met Council Transportation Advisory Board
Peter Dugan	TAB	Citizen Member	Met Council Transportation Advisory Board

Name	Organization Name	Title	Stakeholder Group Affiliation
Phil Sterner	Council		TAAC, Transportation Committee
Sheila Kauppi	Minnesota DOT	Deputy District Engineer – Metro	Met Council Transportation Advisory Board
Michael Krantz	Metro Transit	Program Manager, Transit-Oriented Development	TDM Study Technical Advisory Team
Randy Maluchnik	TAB	Member	Met Council Transportation Advisory Board
Ben Manibog	City of Richfield	Transportation Engineer	TDM Study Technical Advisory Team
Steven Minn	Lupe Development Partners, LLC	CFO	Developer
Laura Monn Ginsburg	Apparatus GBC	Partner/Principal	Transportation Management Organization/ Employer/ Community organization
Joe Morneau	Dakota County	Senior Project Manager	TDM Study Technical Advisory Team
Paul Morris	SRF Consulting Group	Director	Employer Consultant – delegated by Marie Cote
Ben Shardlow	Minneapolis Downtown Council at Downtown Improvement District		Transportation Management Organization/ Community Organization
Jeff Von Feldt	Duffy Development Company, Inc.	CEO	Developer
Mark Windschitl	City of Chaska	Mayor	Met Council Transportation Advisory Board
Julie Wischnack	City of Minnetonka	Community Development Director	City

Meeting Summary

Welcome and Introductions

After the workshop began, participants joined in a round of introductions at their tables. Participants shared their name, organization, role, and a recent decision they had to make about traveling within the metro area. These discussions were informal and not tracked by the project team.

Study Background and Purpose

The facilitators introduced the study, reviewing the background, purpose, and scope. TDM was defined as “strategies that support the **most sustainable and efficient use** of the transportation system by making personal **travel options more flexible, clear, or convenient.**” The facilitators broke down the definition further:

- **Sustainable and efficient:** in terms of financial, time, effort, and energy
- **Flexible:** there are multiple options so that travelers can choose what they need for *that type of trip at that specific time*
- **Clear:** information about how to use options is easy to understand
- **Convenient:** options are easy to access

Next, the concepts of travel behavior and nudges were explained. Travel supply, travel demand, and land use factors all influence travel decisions. TDM focuses on the demand elements, such as financial costs (gas, parking); travel time costs (real or perceived); time of day; comfort/ease of use; knowledge and information about supply (awareness about options); and passenger and cargo needs. To influence demand, we can:

- Improve information about travel conditions (real-time, personal)
- Provide accurate and timely information about alternative modes
- Manage pricing to encourage use of services that reduce congestion and discourage use services that increase congestion
- Make high-density and sustainable modes more attractive and comfortable (e.g., timely and safe)

The facilitators reviewed the purpose of the study: to provide Council staff and other stakeholders with deeper understanding of the current state of practice for TDM in the region, nation, and internationally; the short-term and long-term opportunities and challenges ahead for TDM; and how TDM can be better supported by the Council, its transportation/land use planning and implementation partners, and the private and nonprofit sector.

The facilitators provided context on Met Council’s role in regional transportation planning and the reasons for doing this study. Shifts in mobility and technology, shifts in telework and travel patterns from COVID-19, new regional focuses on equity and climate, and regional investments in alternatives to SOV travel have all changed the regional context since the last TDM study.

The study includes a review of existing conditions, a review of the state of the practice, development of a TDM framework, an evaluation, and an action plan.

Existing Conditions Summary

The facilitators shared the key takeaways from the Existing Conditions Review. The review incorporated information from local plans, stakeholder group discussions, surveys of practitioners, Traveler Behavior Inventory data, and teleworking/COVID impacts studies. The review showed that many organizations have TDM-related goals and services. The facilitators reviewed gaps in TDM services, mandates and legal requirements, policy challenges to TDM, land use strategies, roadway management strategies, and incentives and communications.

Additionally, facilitators summarized research on congestion and telecommuting during the pandemic.

State of the Practice Summary

The State of the Practice Review was summarized. This review looked at TDM service delivery program structures and funding; policies and legal requirements; roadway management strategies; and incentives, marketing, and communications. The presentation highlighted several noteworthy examples to give participants additional context for identifying opportunities, barriers, challenges, and needs.

Breakout Session #1 – Opportunities, Needs, Barriers, Challenges

The study team introduced the purpose of the first breakout session by explaining that as part of the TDM Framework, a set of potential TDM strategies will be developed. These TDM strategies should address the opportunities, needs, barriers, and challenges for the region. The study team explained that the opportunities, needs, barriers, and challenges will ultimately be organized into two categories—those for travelers and those for organizations—because there will be proposed TDM strategies to encourage travelers to use sustainable transportation (e.g., traveler information services, incentives) as well as proposed TDM strategies that are more programmatic (e.g., coordination, funding).

Opportunities and Needs

Support Strategies that Prioritize Commute Trips

Participants emphasized the need to support job access, including expanding transit pass programs that incentivize employees to commute by transit and employers to encourage employees to ride transit. Job access efforts should support workers beyond the first shift (9 am to 5 pm) workday and downtown destinations, such as east-west connections and between suburbs.

Support Strategies that Prioritize Non-Commute Essential Trips

In addition to serving commutes, participants suggested that it is also important to support other essential trips. To do so, more funding could be directed to smaller organizations that provide services to rural areas, or that support essential trips in other ways. The University of Minnesota already has a Universal Transit Pass, which applies to all students who pay the Transportation and Safety Fee (\$45 per semester); this program could be expanded to faculty and staff and/or the fee could be eliminated. There is also a need for better connections that are not oriented toward downtown, that connect suburbs together, and that serve rural areas. In particular, the Met Council can look for new ways to serve senior populations in rural areas. Additionally, the Met Council can promote increased enforcement of Americans with Disabilities Act (ADA) compliance across the region.

Increase Awareness of Traveler Options

Participants emphasized the importance of increasing awareness of available options, by making information about travel options readily available. Communications approaches could include:

- Sharing travel information to help people make day-to-day decisions, which can include incident information and other real-time updates
- Educating the public about the range of travel options available
- Taking advantage of opportunities to teach and educate about TDM. Educational outreach can help change the way people think about shifting away from driving every day; there could be opportunities to educate students who use transit, as young as elementary school, to establish a strong transit culture
- Communicating to promote safety and address issues such as road rage

Increase Availability of Traveler Options

In addition to communications strategies, participants discussed ways to increase the availability of travel options, including:

- Providing first-and-last-mile solutions, such as on-demand shuttles and electric shared micromobility
- Demonstrating and incentivizing the potential for ridesharing where transit is not as viable
- Exploring a regional bike share program
- Expanding bicycle infrastructure to include:
 - Paths for bikes, e-bikes, scooters, etc.
 - Regional bike lane (dedicated express) system that supports connectivity between micro hub zones and provides alternative to non-dedicated bike lanes that are commonly overtaken by parking and/or delivery services
- Exploring ways to incentive the adoption of electric vehicles
- Providing support for and encouragement of teleworking

Support and Incentivize More Sustainable Development Practices

Participants discussed opportunities for the Met Council and other stakeholders to support more sustainable development practices—practices that increase density along transit corridors, encourage mixed-use developments, and improve livability. Ideas included:

- Placemaking programs that bring people together, such as ambassadors and street performers
- Mentorship programs for cities/counties to learn from each other
- Library for local governments to provide examples of sustainable transportation plans and practices, etc.
- Incentives developers to local near transit, provide transit connections, invest in mixed-use development, and invest in placemaking
- Education to inform developers about transportation options
- Roadway designs that accommodate modes beyond the car

- Encouraging small businesses that can support walkable neighborhoods by facilitating small-business-friendly income and property tax policies

Improve TDM Program Service Delivery

Participants also pointed to opportunities for improving delivery of TDM programs. In the discussion, there was an emphasis on establishing performance evaluation strategies and metrics. As part of a performance evaluation methodology, the Met Council can define what success looks like for ongoing programs versus discrete or pilot projects (e.g., how long should participation be monitored, how to acknowledge that new programs can take time to gain traction). Participants also suggested expanding existing programs across the region instead of administering similar programs in multiple jurisdictions and duplicating administration efforts.

Additionally, participants noted that there is a need/desire for a substantial network of people who train/provide customer service.

TDM Funding

In general, more funding is needed to deliver and expand TDM-related programming and projects, particularly for mobility hubs, e-bikes, active transportation infrastructure, staff capacity expansion, TDM studies, educational programming, and more. One of the few revenue sources is from parking, but that encourages driving; another need is for parking management strategies. Further exploration of congestion pricing strategies should be explored, including the potential for utilizing revenues to financially support TDM programs. Additionally, there is a need for finding ways to access state and federal funding for active transportation infrastructure.

Barriers and Challenges

Inadequate Safety and Security (Perceived and Real)

The perception and reality of safety and security is a major factor influencing mode choice. Participants shared that there are perceived and real concerns that transit is not currently safe physically, citing increased crime rates, drugs, and alcohol on transit, as well as increased safety concerns at night. Safety perceptions have led to some employers reimbursing their employees for parking so they can drive to work.

There are also a variety of safety concerns associated with active transportation. Some travelers mentioned fearing being suspected of illegal activities if traveling on bike/foot. Additionally, active transportation rates decrease in the winter, which can create challenges with keeping awareness and education at top of mind.

Lack of Affordability of Travel Options

Travel options are not affordable to all riders; alternate modes should not be more expensive than driving, which is difficult to achieve in places where parking is free and readily available. Additionally, there is a need to be careful not to overburden employers with requirements to provide transit benefits/amenities, since in many cases they are already currently paying for parking, in addition to transit passes.

Telework Challenges

While telework has helped reduce VMT, it may not be a sustainable long-term strategy. Telework can contribute to sprawl. The education system's shift to hybrid classes may also negatively affect transit ridership and revenues.

Mode-Specific Infrastructure Gaps

Participants spoke about infrastructure gaps that present challenges for different modes. For biking, gaps include maintenance challenges during the winter, lack of access to a variety of e-bike and charging options, and inadequate bicycle environments (e.g., shade and shelter). There is a need for more first-and-last-mile options, such as connected and automated shuttles. A lack of local transit connections (within neighborhoods) results in short SOV trips to and from essential services and daily needs. There is a lack of adequate transit service, particularly in less dense areas. Winter maintenance needs create infrastructure challenges for a variety of modes. Additionally, adoption of electric vehicles may be slow because adequate charging infrastructure is not in place yet.

Lack of Accessibility for Certain User Groups

Participants discussed the need to make transit more accessible in many dimensions:

- **Metro Mobility reliability:** Metro Mobility is not reliable for assisting seniors or persons with disabilities returning to the workforce.
- **Technology barriers:** Many riders do not have access to mobile-based technologies, so access to programs and resources cannot only be provided with technology.
- **Scheduling barriers/inadequate services:** Transit options are inadequate for some shift workers, who may travel late at night or early in the morning; caregivers, who may have caregivers have complicated schedules and needs, requiring modal options that are flexible; and reverse commuters, who have fewer transit service options. Serving small transit rider populations is challenging.

Accessibility Issues Related to Trip Information

Technology access can be a barrier to options/services for some populations. Some riders do not have access to mobile technologies, and others may face challenges switching from app to app to stitch together a complete itinerary and/or pay for multiple services. Encouraging transit for occasional trips or event can be intimidating and time-consuming for the traveler.

Excessive Transit Travel Times

In many cases, transit takes longer than driving. Transit connections add to trip times. Connectivity outside Minneapolis and St. Paul is worse, resulting in long potential trip times. These issues are compounded in off-hours, when reduced demand and more dispersed travel patterns makes it harder to provide adequate service.

Development/Land Use Issues

Land use patterns in the region, particularly sprawling development patterns, do not support travel options. There is a lack of cohesive regional land use vision/policies. There are no rules/allowances for reducing planning fees, density fees, street closure fees in Met Council's

comprehensive plan approval process; no discounts for density sewer and water availability charges (SAC/WAC), only for affordability; and no incentives for utility relocations, which is a significant expense for developers. Regional policies still chase affordable housing “out.” Development incentives to locate in dense corridors are inadequate; participants noted that the 20% density bonus is insufficient. There are zones with inadequate transit connections, which are unattractive to micromobility providers. Stakeholders also commented on the need to retain parking for populations with mobility challenges when considering the elimination of parking minimums.

Breakout Session #2 – TDM Goals and Objectives

The study team introduced the purpose of the second breakout session by explaining that as part of the TDM Framework, a set of goals and objectives that will be developed for TDM in the region.

For context, the study team explained that goals and objectives had already been established for the region as part of the region’s transportation plan (2040 Transportation Policy Plan); the team presented the table below (Table 6) to show the goals and associated objectives that are related to TDM.

Table 6. TDM-Related Goals and Objectives

TDM-Related Goals	TDM-Related Objectives
Transportation System Stewardship	<ul style="list-style-type: none"> Operate the regional transportation system to efficiently and cost-effectively connect people and freight to destinations.
Access to Destinations	<ul style="list-style-type: none"> Increase the availability of multimodal travel options, especially in congested highway corridors. Increase travel time reliability and predictability for travel on highway and transit systems. Increase the number and share of trips taken using carpools, transit, bicycling and walking. Improve the availability and quality of multimodal travel options for people of all ages and abilities to connect to jobs and other opportunities, particularly for historically under-represented populations.
Competitive Economy	<ul style="list-style-type: none"> Improve multimodal access to regional job concentrations identified in Thrive MSP 2040. Invest in a multimodal transportation system to attract and retain businesses and residents.
Healthy and Equitable Communities	<ul style="list-style-type: none"> Reduce transportation-related air emissions. Increase the availability and attractiveness of transit, bicycling, and walking to encourage healthy communities through the use of active transportation options.
Leveraging Transportation Investments to Guide Land Use	<ul style="list-style-type: none"> Focus regional growth in areas that support the full range of multimodal travel. Encourage local land use design that integrates highways, streets, transit, walking, and bicycling.

Next, the study team introduced a list of potential priorities for the region that TDM strategies and efforts could address, to inform the development of goals and objectives for TDM in the

region. The study team explained that the attendees would break into their same breakout groups as in Session #1 and discuss what should be prioritized for advancing as TDM goals and objectives. These potential priorities were provided in a hand-out so that participants could review and discuss the list in the breakout sessions. Potential priorities that are specific to travelers were grouped together, and the remaining three groups of potential priorities are all specific to TDM practitioners and organizations. Table 7 lists the potential priorities.

Table 7. Potential TDM Priorities

Potential Priority	Description
Improving Transportation Options for the Traveler	<ul style="list-style-type: none"> • People find alternatives to single-occupant vehicle (SOV) travel cheaper • People find alternatives to SOV travel easier to navigate and find information • People find alternatives to SOV travel well-coordinated • People find trip planning for all modes easier to conduct • People understand the social value of alternatives to SOV travel • People find alternatives to SOV travel for work • People find alternatives to SOV travel for non-work • People find alternatives to SOV travel during peak periods or congested periods • People find alternatives to SOV travel during off-peak periods
TDM Program Administration and Coordination	<ul style="list-style-type: none"> • TDM programs benefit historically under-represented populations and vulnerable populations in an equitable way • TDM is effectively integrated in all stages of transportation and land development projects • TDM programs assist organizations of all types (developers, property managers, local governments, transit agencies, nonprofit organizations) to offer sustainable travel options to their customers and/or constituents • TDM programs are cost-effective, delivery is coordinated and streamlined
TDM Program Performance Measures and Evaluation	<ul style="list-style-type: none"> • TDM programs demonstrate a change in travel demand (show influence of TDM programs on travel behavior) • TDM programs demonstrate a relationship between the program and transportation system performance measures (show influence of TDM programs on performance)
Land Use and Development Policies	<ul style="list-style-type: none"> • Land use and transportation policies support encouraging alternatives to SOV travel • Land use and development policies consider the impacts of travel on all modes • Land use and development policies consider the impacts of travel on the environment

The study team first asked the participants to suggest other priorities that may not be included in the current list. The study team also asked participants to think about four priorities for travelers and four priorities for TDM practitioners that resonate most with them and/or their organization, to be voted on in a Mentimeter poll, following the breakout discussions.

Discussion Summary

Breakout groups identified the following additional priorities for consideration in the TDM goals and objectives:

Table 8. Discussion Summary of Priorities

Goal/Category*	Priorities
Educate the traveling public, regional leadership, and practitioners about TDM benefits and opportunities	<ul style="list-style-type: none"> Establish short- and long-term strategies for education about TDM (as a business practice) and sustainable options for travelers. Educate regional leadership in government, business, and nonprofit on TDM strategies. Educate the younger generation to create future leaders to change cultures across institutions. Plan trainings to show planners, engineers, and other practitioners how and where TDM strategies can be used.
Establish policies and funding that support TDM	<ul style="list-style-type: none"> Resolve the disconnect between TDM program funding eligibility and TDM projects/services/efforts currently being offered or desired. Establish land use policies that support density and access to goods and services without the need for a SOV. Development policies that generate revenues should be transparent in how the revenues are being used. Encourage increased funding for sustainable modes, such as dedicated transit funding to be able to start new routes. Incentivize individuals to not buy vehicles or remove old vehicles off the roadways; also consider additional tax incentives for high efficiency vehicles and developments. Use incentives rather than penalties. Use both carrot and stick strategies in conjunction with each other. Consider private sector incentivization in land use decisions – both residential and commercial.
Conduct studies to better understand opportunities and gaps	<ul style="list-style-type: none"> An in-depth analysis of how the Metro Transit policies for Transit Link and Metro Mobility create barriers to TDM in suburban areas. An in-depth analysis of how we can coordinate transit service from city to city instead of going into Minneapolis. An analysis of what it's like for the end user/rider and analyze what we can do to improve connectivity for transit service.
Support staff involved in TDM service delivery	<ul style="list-style-type: none"> Assuming ongoing operator shortage, how does that fit in to TDM? Support staff, outreach, person time critical to project adoption. Compensating and supporting transportation operators.
Explore opportunities for aligning TDM and economic goals	<ul style="list-style-type: none"> Could TDM tactics include coordinating with small businesses? This could be a strategy that benefits a lot of people and gets more people onto transit. The relationship between the scale of businesses and travel demand by mode. The effect that income and property tax policy, and also affordable medical care coverage, have on how viable small businesses are in our residential areas. True "cost" of driving SOV.
Quantify and emphasize the environmental benefits of TDM strategies	<ul style="list-style-type: none"> Environmental sustainability can only be achieved via conservation of resources, so putting everyone in an electric car won't get us there. Being able to quantify or display the environmental impacts of implementing TDM strategies for decision-making bodies as well as developers/businesses. Reducing greenhouse gas (GHG) emissions as a top metric.

Goal/Category*	Priorities
<p>Prioritize and improve equity and accessibility</p>	<ul style="list-style-type: none"> • ADA accessibility. • High-tech smart phones can't cover everyone! Low-tech options, like local bus service are essential to TDM. • Improving safety for all riders of transit. • Disability and affordability. • Equity lens should be prioritized and re-defined in light of the past couple of years. • Accessible walking for unpaved walking areas. • Ensuring minimum levels of access and service for vulnerable populations. • Access to food/grocery and medical services. • Assuming that all people need to do a specific thing is not ideal; people need to have what works for them. • Knowing that legal ADA accessibility standards are often not actually accessible. • Building strong communities that have the things people need so they do not have to rely on a transportation mode for basic necessities. • This room is incredibly homogenous, looking forward to hearing how other stakeholders are engaged at similar levels. • Looking at how systemic racism is impacting TDM. • Addressing the stigma of public transit, safety of public transit, attractiveness of buses/trains/waiting areas, using large events as an opportunity to incentivize public transit (free beer at Twins game with transit receipt).
<p>Design TDM strategies to meet area-specific needs (e.g., rural, suburban, urban)</p>	<ul style="list-style-type: none"> • Consider strategies that apply in all types of communities (urban, suburban and rural centers). • Different needs in different parts of the region. • Redefining rural areas. • Always look at the region as a whole and not just the core cities; things are different in both; we are a very large area. • Met Council needs to work better with the Suburban Transit Providers.
<p>Promote multimodal mobility and development</p>	<ul style="list-style-type: none"> • 15-minute city concept – use of hubs. • Creating walkable communities in all parts of region. • Improving travel time for alternatives to SOV travel methods. • Multimodal-oriented development. • Money for physical infrastructure that supports alternatives to SOV trips such as mobility hubs and public spaces; remove barriers to commercial activity in transportation spaces. • Looking for new technologies (e-bikes, Evie car-share, multimodal apps) that can affect behavior change on SOV use. • Lower vehicle miles traveled (VMT) results. • Don't underestimate biking as a major input for TDM—I think it just is an assumed phenomenon. • Regional e-bike strategy. • People find alternatives to SOV travel do not take longer than driving alone and/or save time.

Goal/Category*	Priorities
Leverage marketing and communications to promote TDM	<ul style="list-style-type: none"> • Messaging it is ok to drive; without this it may feel like it is an us vs. them and the outcomes may not be achieved. • Provide more marketing and communication of improvements to the transportation system; inform potential users and include business users and development organizations in those marketing efforts.
Consider other complementary strategies	<ul style="list-style-type: none"> • Can TDM funding be used to create a transit ambassador program? • Differentiating TDM benefits and vehicle electrification. • Safety, environmental, sustainability, equity throughout all goals. • Volunteer driver transportation. • Regional program for robust transportation options for major community events. • Consistent travel throughout the system. Improving relationships and routes with east-west travel, suburban transit providers and bias against St. Paul and East Metro. Hastings, Waconia, Rosemount, and Inver Grove Heights have inadequate transportation options. • Redefining what metrics are being used to determine success. • Focusing on the social and economic benefit of improving travel options. • Consistent travel around metro area.

*Categories were created retroactively.

After about 20 minutes of discussion in the breakout groups, participants returned to the main room to vote on the priorities in a Mentimeter poll. Participants ranked the following traveler-related priorities as follows:

- People find alternatives to SOV travel easier to navigate and find information (28)
- TDM programs benefit historically under-represented populations and vulnerable populations in an equitable way (27)
- TDM is effectively integrated in all stages of transportation and land development projects (25)
- People find alternatives to SOV travel well-coordinated (22)
- Land use and development policies consider the impacts of travel on all modes (21)
- Land use and transportation policies support encouraging alternatives to SOV travel (19)
- People find trip planning for all modes easier to conduct (19)
- TDM programs demonstrate a change in travel demand (show impact of TDM programs on travel behavior) (16)
- People find alternatives to single-occupant vehicle (SOV) travel cheaper (15)
- Land use and development policies consider the impacts of travel on the environment (14)
- People find alternatives to SOV travel for work (13)
- People find alternatives to SOV travel for non-work (13)

- TDM programs assist organizations of all types (developers, property managers, local governments, transit agencies, nonprofit organizations) to offer sustainable travel options to their customers and/or constituents (10)
- TDM programs are cost-effective, delivery is coordinated and streamlined (10)
- People understand the social value of alternatives to SOV travel (8)
- People find alternatives to SOV travel during peak periods or congested periods (7)
- TDM programs demonstrate a relationship between the program and transportation system performance measures (show impact of TDM programs on performance) (6)
- People find alternatives to SOV travel during off-peak periods (6)

Next Steps: Additional Outreach

The Met Council has an additional engagement contract in place with Zan & Associates to support additional outreach efforts for the Regional TDM Study. Zan & Associates explained that they would be reaching out to additional community organizations to get their input and feedback on the topics discussed in the workshops. Zan & Associates requested input from the workshop participants on which types of organizations that they should reach out to by requesting input via a Mentimeter poll.

First, Zan & Associates requested input on different groups they should engage. Participants ranked the groups as follows:

Day 1

1. Large employers with diverse workforces who do shiftwork (hospitals, airports, clinics, etc.)
2. Transportation service providers for people with vulnerabilities such as low income, disabilities (including self-care challenges), mobility concerns
3. Housing Providers and Renter Advocacy Organizations
4. Employment centers based on race/ethnicity (Latino Economic Development Center)
5. Community and technical college students

Day 2

1. Transportation service providers for people with vulnerabilities such as low income, disabilities (including self-care challenges), mobility concerns
2. Large employers with diverse workforces who do shiftwork (hospitals, airports, clinics, etc.)
3. Housing Providers and Renter Advocacy Organizations
4. Employment centers based on race/ethnicity (Latino Economic Development Center)
5. Community and technical college students

Next, Zan & Associates requested input on the different types of organizations they should engage. Participants ranked the organizations as follows:

Day 1

1. Socio-economic support
2. Cultural/ethnic
3. Disability
4. Refugee
5. Women's advocacy or single mother
6. Veteran organizations

Day 2

1. Socio-economic support
2. Disability
3. Cultural/ethnic
4. Women's advocacy or single mother
5. Veteran organizations
6. Refugee

Next Steps: TDM Framework Development

The study team thanked the participants for their time and contributions and explained that their input and feedback would be used to develop the TDM Framework, including goals and objectives and potential TDM strategies for consideration. The study team informed the group that there will be a second set of workshops in the beginning of 2023 to get feedback on the potential TDM strategies for consideration and that they would be contacted again to participate in those subsequent workshops.