

# → **Task 5: Future Mobility Considerations and SWOT Analysis**

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

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## Overview

Task 5 of the Regional TDM Study is to develop potential TDM strategies for consideration and to conduct an evaluation of the potential strategies by considering:

- existing TDM efforts already being implemented in the region (Task 2: Existing Conditions),
- potential TDM efforts being implemented in peer regions that could be considered for the Twin Cities region (Task 3: State of the Practice), and
- how those efforts weigh against goals and objectives for TDM in the Twin Cities region (established under Task 4: TDM Framework).

This first technical memorandum under Task 5 summarizes a review of potential future mobility conditions that could affect travel demand management (TDM) strategies and an analysis of strengths, weaknesses, opportunities, and threats (SWOT) related to TDM in the region, which will inform the development of potential TDM strategies. Strengths, weaknesses, opportunities, threats, and future mobility conditions were derived from the research and findings from previous tasks, including documentation of existing local plans, policies, programs related to TDM (Task 2), a State of the Practice review (Task 3), and the identification of goals and objectives for TDM in the Twin Cities region. The next technical memorandum under Task 5 will summarize the development of potential TDM strategies for the Twin Cities region and the approach for evaluating and selecting strategies that will be advanced to the Action Plan (Task 6).

The second technical memorandum under Task 5 will review TDM strategies with potential for addressing the region's future mobility conditions and existing strengths, weaknesses, opportunities, and threats. It will also outline the selection criteria that will be used to prioritize TDM strategies that ultimately advance to the implementation phase.

## Future Mobility Considerations

Future mobility considerations include potential external forces most likely to affect transportation in the Twin Cities region over the next 20 years, as well as current transportation policies and programs whose evolution is already underway.

## Strengths, Weaknesses, Opportunities, and Threats Analysis

This analysis takes the findings from the Existing Conditions work (Task 2) and characterizes the strengths and weaknesses of current TDM strategies, programs, and policies to meet the goals and objectives established in the TDM Framework (Task 4). It also identifies the opportunities that exist to improve TDM in the region, in part by identifying TDM-related efforts in other regions derived from the State of the Practice (Task 3) that could be implemented in the Twin Cities and the threats that might create obstacles for meeting the TDM goals and objectives from Task 4. The strengths, weaknesses, and opportunities focus on the elements of a TDM program that are within control of the Met Council and its partners, whereas the threats focus on the elements that are most likely beyond the influence of the Met Council and its partners.

## Future Mobility Considerations

This task includes an evaluation of how existing or future TDM strategies may be affected by external forces, such as changes in development or travel patterns, the availability of transportation services, the presence of transportation-related funding, and potential changes in the economic and political environments. Specifically, this analysis considers implications for TDM strategies due to:

- an increase in telework or hybrid/flexible work schedules,
- advancements in transportation technology or increases in ridership of shared-use modes, and
- the effects of changing economic conditions.

Each section of this memorandum outlines potential factors that could affect travel patterns and key considerations for the Met Council regarding transit, land use, marketing, and equity.

### Work Schedules and Telework

#### *Telework and Hybrid Work Increases Across the Region*

Technology and globalization have been drastically transforming jobs, tasks, and skills for the last few decades and will continue to affect the way employees work and how business is performed in the future. The COVID-19 pandemic has accelerated the rate of change in many ways, most notably by increasing the prevalence of telework. The COVID-19 pandemic gave way to the Great Resignation, a societal trend during which large numbers of employees have voluntarily resigned from their jobs, increasing the importance of initiatives to increase employee retention and employee well-being, and making it more important for employers to provide flexibility to employees, which includes telework and hybrid work options. The increase in remote work has allowed more organizations to recruit talent nationwide (and/or worldwide) instead of focusing on talent in the local geographical area, further contributing to reduced commuter trips.

Although organizations and businesses have used telework as an alternative work arrangement for decades, the pandemic forced most entities to move employees to remote work (i.e., telework), regardless of whether they were ready, felt comfortable, or had an existing program in place or not. Now that employees across most industries have experienced teleworking, they have new desires and expectations about the future. While most organizations have transitioned back to the office in some capacity, a significant percentage of employees prefer to continue working from home full time or with a hybrid schedule (i.e., in the office some days; at home some days). Although the percentage of employees commuting to their workplace has increased since the middle of the pandemic, the number of commuting trips is not expected to ever reach pre-pandemic levels due to the continued prevalence of remote work. Further, forced telework during the pandemic has made employees and organizations more comfortable with the technology and use of virtual meetings, which also contributes to a reduction in business travel.

The adjustment to remote and hybrid work capabilities, technical integration, and flexible schedules has significantly affected travel behavior. Before the onset of the pandemic, there were more established standards of in-person work arrangements, with more frequent and

scheduled commutes. The first year of the pandemic showed a drastic shift to remote work for many industries, significantly decreasing traffic congestion each day. After 1 to 2 years of remote work, many organizations are now adopting a more flexible arrangement, which allows hybrid schedules: employees can come in for a select number of days each week, choose the hours they go to the office, or stagger schedules between teams and departments.

Since commuters began returning to offices for in-person or hybrid schedules, the Met Council region has experienced a major uptick in traffic congestion. A variety of factors have contributed to this influx of traffic:

- (1) After social distancing measures were implemented and enforced, many commuters were discouraged from being in crowded spaces, disincentivizing many from using public transit options.
- (2) Flexible work schedules have allowed employees to change their time of commute, making it less convenient to coordinate their schedules to accommodate shared mobility options with fixed schedules.
- (3) Mid-day trips have increased for personal errands as a result of work flexibility.

### *Implications on Future TDM Strategies*

#### **Transit Strategies**

The Met Council could consider the recent decreases in transit use and how to better incentivize transit use for daily commutes. Travel behavior has changed to favor less-crowded mobility modes but with proper incentives and safety measures, commuters can be encouraged to choose more sustainable modes like public transit. Transit agencies in the Twin Cities region have evolved many services to cater to commuters. For example, bus rapid transit routes that connect suburban residents to the urban core with minimal stops along the way. Some services specifically aimed at getting travelers to the urban core may not see as much ridership if those riders were largely commuters who no longer need to get to downtown offices or workplaces. With new flexible and hybrid schedules in place, the Met Council and its partner transit agencies should consider which TDM strategies may help reduce the effects of unpredictable commuter behavior (e.g., which days of the week will see the most ridership/congestion?) and consider how to adapt transit passes to target these irregular commuters. Previously, many commuters purchased and relied on monthly transit passes. With new flexible and hybrid schedules in place, perhaps Met Council and its partner transit agencies can consider offering flexible transit passes that could provide more attractive pricing that accounts for hybrid schedules, making taking transit to work an affordable option again.

#### **Employer-based TDM Strategies**

Changes in the workplace may have long-term impacts on employer-based TDM strategies, as more workers will work from home at least some of the time. Additionally, nontraditional work hours that come with hybrid schedules, telework, and flexible arrangements could affect the demand for transportation options. It will be important to consider new development patterns, including major corridors and changing transit demands, that may form as an outcome of this new flexibility in work arrangements, and consider new approaches for reaching these remote workers, such as residential or community-based strategies.

## **Broadening Target Audiences and Marketing Strategies**

The commuter base on which many TDM programs have historically focused (including TMOs in the Twin Cities) has expanded in recent years. Many workers who commuted during conventional hours (e.g., 9-to-5 commuters) now work remotely full time, some have adopted various hybrid arrangements that combine both in-person and remote work, and some have returned to full-time, in-person arrangements. There is also a renewed recognition of commutes that occur outside of the first-shift hours: those who have multiple jobs or other responsibilities (e.g., caretaking duties, household chores, and errands) that require complex travel schedules. To better meet the needs of all commuters, it is important to refine and personalize TDM-related messaging to meet evolving needs. For example, messaging could be focused on specific corridors or convenient modes for different times of day or flexible schedules. Other questions to ask include: Which commuters could be most easily incentivized to shift to a more sustainable mode (e.g., public transit, bicycling, or walking)? How can we reach those with unconventional work hours?

## **Equity Implications**

While many industries have allowed remote work, flexible hours, and hybrid schedules, it is important to consider jobs that do not fit the typical “9-to-5” model. Retail, service, and manufacturing industries, to name a few examples, require on-site workers and unconventional shift hours, which have unique sets of transportation needs. It is important to understand how transportation options can limit or enhance access to jobs and other essential services, how the availability of transportation options has changed and will change in the future, and how time, household transportation costs, and affordability can affect mode choice for busy families or low-income communities. The Met Council can consider studying (and perhaps altering) transit routes, integrating pricing and incentive strategies that address affordability and jobs access, access to essential services, and incentivizing shared and active transportation modes to meet a broad range of commute and other essential trip types. Additionally, increasing safety concerns associated with public transportation modes may continue to affect ridership, but measures to address these conditions should consider who is being most affected by these conditions and who may be most protected, or still left less protected, by safety efforts.

## **New and Emerging Transportation and Vehicle Technology**

### ***New Technologies and Emerging Transportation Modes***

In the past decade, new technologies have disrupted traditional modes of travel and made it possible for travelers to order a driver and private vehicle direct to their door through an app on their smartphone. At the same time, shared micromobility modes such as scooters and bikes have also grown in popularity. The initial days of venture-capital-backed, subsidized transportation network companies (TNCs) are over, and consumers may continue to see price increases moving forward in light of gas price volatility, increases in the cost of insurance, and driver shortages that are already affecting other sectors of the transportation industry. Aside from the way that transportation services are delivered, the nature of transportation services is also changing. Electric vehicles (EVs) and e-bikes continue to gain market share, and initial pilots of autonomous vehicles (AVs) and even delivery robots have already been launched.

This section will explore the implications of common transportation technologies, including:

- EVs
- E-bikes
- Micromobility vehicles
- Microtransit
- Carshare options
- TNCs

### **Electric Vehicles**

The shift to EVs continues in the United States. In 2020, 330,000 EVs were sold in this country, the world's third largest EV market.<sup>1</sup> At the same time, cities and states have outlined energy and sustainability initiatives, engaged in a range of EV supportive strategies, and expanded EV charging infrastructure. The benefits of EVs include reduced emissions compared with internal combustion engines and elimination of users' reliance on gas to power their vehicles, which is subject to price volatility. Yet, EVs can still be operated as an SOV and therefore do not support reduced traffic congestion. From a TDM perspective, EVs are most influential when operated as carpools or other shared rides. Furthermore, EVs reduce gas tax revenues that have historically been used to fund many transportation projects; transitioning to an alternative to the gas tax is inevitable, and this transition should consider ways to incorporate TDM, such as mileage-based user fees that could encourage reduced driving.

### **E-bikes**

Electric bikes, or e-bikes, have grown in popularity in recent years. In fact, estimated e-bike sales exceeded EV sales in 2021.<sup>2</sup> E-bikes can help facilitate mode shifts away from SOVs, and the recent growth of cargo e-bikes can encourage automobile use for trips requiring storage. Jurisdictions across the United States have leaned into e-bikes to reduce short trips while addressing equity goals. E-bike programs can also be customized to fit local needs.

### **Micromobility Vehicles**

COVID-19 had a significant impact on shared micromobility vehicles such as bikeshare bikes, both traditional and e-bikes, and scootershare e-scooters. As the pandemic expanded, micromobility operators suspended operations as cities implemented stay-at-home orders before some encouraged micromobility to travel while remaining socially distanced. Before the pandemic wreaked havoc on micromobility companies, the market had consolidated with companies acquiring one another and leaving some jurisdictions with no or few micromobility operations. Since the pandemic began, this trend has only intensified. As is the case with TNCs, venture capital funding has largely run out. Most recently, Bird, one of the largest scooter operators, admitted to overestimating fare revenues for the last 2 years.<sup>3</sup> Aside from market concerns, local regulations play a key role in facilitating the success of micromobility services, including parking regulations, supportive infrastructure such as bike lanes and storage corrals,

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<sup>1</sup> The International Council on Clean Transportation. Evaluating electric vehicle market growth across U.S. cities. September 2021. [https://theicct.org/wp-content/uploads/2021/12/ev-us-market-growth-cities-sept21\\_0.pdf](https://theicct.org/wp-content/uploads/2021/12/ev-us-market-growth-cities-sept21_0.pdf)

<sup>2</sup> Boudway, Ira. America's Best-Selling Electric Vehicles Ride on Two Wheels. January 21, 2022. <https://www.bloomberg.com/news/articles/2022-01-21/u-s-e-bike-sales-outpaced-electric-cars-in-2021>

<sup>3</sup> Barr, Kyle. "Bird Says it Over-Reported Scooter Revenue for Two Years." November 14, 2022. <https://gizmodo.com/bird-escooter-electric-scooter-scooter-1849780504>

and contracting requirements. At the same time, micromobility companies that can quickly enter a market by providing an infusion of vehicles can withdraw from a market almost just as quickly, especially in instances where the vehicles are free-floating rather than docked. As of December 2022, Bird, Lime, Lyft, Spin, and Veo are active in Minneapolis and Lime and Spin operate in St. Paul. Minneapolis also has Nice Ride, the city's bikeshare system.

### **Microtransit**

Microtransit is most commonly a shared van or larger vehicle that can provide scheduled or on-demand service. Transportation agencies across the United States have used microtransit to provide first- and last-mile connections to transit and/or supplement fixed-route service. Microtransit vendors also provide detailed data and other usage and analytics data to their customers. Aside from traditional markets like collaboration with public transit agencies, microtransit can also be used at schools and universities and at the campuses of large employers, and to support healthcare appointments and other non-emergency medical transportation. Metro Transit launched Metro Transit Micro in September 2022, which provides on-demand transportation using an app to connect to Metro Transit service and provide point-to-point trips.

### **Carshare Options**

There are a number of carshare options in the Twin Cities, which allow members to rent cars often on an hourly or daily basis. Users can rent and return carshare vehicles to designated parking spaces. In addition, providers like Evie use an all-electric fleet. Aside from individual memberships, students and businesses can also sign up for membership at discounted rates. Car-sharing can help some households live "car-light" lifestyles and either help them delay or avoid purchasing a second vehicle or a vehicle altogether.

### **Transportation Network Companies**

In 2022, TNCs have experienced driver shortages, fluctuating gas prices, continued reductions in previously available venture capital funding, and increasing insurance costs, which have increased costs to consumers. At the same time, TNCs are and will continue to remain part of the transportation fabric for the indefinite future. In the long run, these companies may shift to AVs to provide service, which may affect the availability and price of service.

### ***Implications on Future TDM Strategies***

The Met Council could consider TDM strategies that support the use of emerging transportation and technologies, but only when they do not negate investments already made. A body of research has examined the extent to which TNCs and active transportation such as e-bikes may take riders from or replace trips from transit. Metro Transit's microtransit pilot may provide data about how new technologies can support or supplement transit by extending the network.

### **Land Use Strategies**

The availability of new transportation technologies will continue to influence where people choose to live and work. Potential considerations include the designation of pick-up/drop-off zones (PUDOs) that provide a safe place for drivers to stop so that TNC passengers can exit

vehicles. PUDOs also help remove stopped vehicles from the road, keeping it free for other users. Washington, DC's program provides an illustrative example.<sup>4</sup>

In terms of alternative fuels, the continued proliferation of EVs necessitates a robust charging network. Many jurisdictions across the country already require the provision of charging infrastructure as part of the development review process.

### **Marketing Strategies**

TDM marketing campaigns that involve new technologies can consider factors such as the relative ease with which vendors and providers can enter or exit markets and adapt to changes in the market of available travel options.

### **Equity Implications**

There are many equity considerations for new technologies. One consideration involves access. If new technologies and services require smartphones, they will not reach all potential users. If these services only accept mobile payments, individuals without bank accounts will not have access. Another consideration involves the pricing of potential travel alternatives and their ability to serve low-income populations. Further, the Met Council should consider the extent to which new technologies are distributed equitably across the region. New technologies have the potential to reduce emissions, provide viable alternative modes of travel, and help fill gaps in existing transit networks, but these benefits are only possible if they are equitably distributed and accessible to all potential users.

### **Influence of Economic Conditions on Travel Choices**

Commuters are facing constantly changing market conditions, which necessarily affect their travel choices. Factoring in the cost of transportation has always been important for commuters, but now more than ever, they must consider how to minimize the amount of time and money spent on travel so as to not outweigh the benefits of their choices. Changing economic conditions have contributed to the vastly different job landscape, the proliferation of e-commerce and technology integration, and newly emerging land-use patterns.

The Met Council can consider a continually shifting economic landscape as integral to changing travel patterns. The volatility of gas prices, for example, has affected car use across the country and could influence commuters' travel mode choices moving forward. At the same time, federal, state, and local governments have been planning and implementing strategies to support electric vehicle adoption and the installation of electric vehicle charging infrastructure. As discussed above, workforce transportation needs are rapidly changing with post-pandemic remote and hybrid work arrangements, which continue to alter travel behaviors significantly. These economic factors should be considered when planning transportation systems to effectively meet travel demands across the region.

### ***Reduced Travel Demand and Unpredictable Travel Behavior***

Since the start of the pandemic, traveler destinations have shifted, travel patterns have changed, and demand has become unpredictable. Job access patterns have shifted significantly: Workplaces were once a destination that was confidently used as a barometer for predicting commuter habits. The pandemic initially caused a major shift to remote work, and as

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<sup>4</sup> For more information, see <https://www.parkdc.com/pages/programs>.

a result, less need for transportation. As commuters have begun returning to on-site, hybrid, and flexible work arrangements in the previous year, traffic congestion has increased in the Met Council region. Less willingness to share spaces with others on public transit—or opting for the personal convenience that SOVs allow when accommodating frequently changing schedules—are factors that could be contributing to this congestion. Remote work schedules and the continued option of telework for many workers are also key economic factors contributing to travel behavior change.

It is also important to consider how these travel patterns can affect land-use patterns. Commuters now have more flexibility in where they live in relation to their workplace. It could be beneficial to conduct research on how housing prices have changed to accommodate a more elastic workforce. It is also important to consider whether these changes have fueled suburban sprawl in the region, and whether there are strategies to effectively meet the transportation needs of a sprawling population.

### ***Volatile Energy Markets***

The cost of owning and maintaining a gas-powered vehicle has increased significantly as a result of volatile energy markets and supply chain shortages worldwide. The United States saw record-high gas prices in 2022 and their continued volatility in 2023 could have a strong influence on commuters' travel decisions. During the first half of 2022, the price of regular motor gasoline rose 49 percent.<sup>5</sup> The summer of 2022 showed record-breaking retail gasoline prices. According to the U.S. Energy Information Administration, the average price of gasoline per gallon reached over \$5 for one week in June 2022 (as measured via weekly U.S. retail gasoline prices).<sup>6</sup> This shift is unprecedented for U.S. consumers who use gas-powered vehicles and must prioritize their spending on transportation to access jobs, essential services like medical care, financial services, groceries and food, and general connection with their community.

### ***Changing Consumer Habits***

The consumer market has been consistently following a trend of e-commerce and internet-based consumption and shying away from the traditional brick-and-mortar model of shopping. This pattern mimics the overall shift, for both consumers and workers, to internet-based markets and user interfaces. These web- and app-based mechanisms not only apply to typical online shopping, but expand to include grocery delivery, on-demand food delivery, and much more. Consumers now have easy access to goods from their homes, which has fueled the trend of less in-person consumption and more online ordering. This shift can affect land-use and travel patterns. With less consumption in downtown neighborhoods, businesses are facing the dilemma of whether to renew their leases and continue operating in their traditional models. Similarly, organizations with offices downtown have to reconsider operating through an office space, or whether remote work will retain employees and enable them to effectively conduct their business.

The Met Council should consider how this economic shift affects travel patterns, and the real impact that e-commerce has on emissions in the region. While individuals are traveling less to

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<sup>5</sup> Bureau of Transportation Statistics. August 2022. "Record Breaking Increases in Motor Fuel Prices in 2022." <https://www.bts.gov/data-spotlight/record-breaking-increases-motor-fuel-prices-2022>

<sup>6</sup> U.S. Energy Information Administration. 2022. "Weekly U.S. Regular All Formulations Retail Gasoline Prices."

consume goods, there has been a major uptick in freight transportation. Delivery services are facing high demand from consumers, and new freight corridors may need to be considered to meet these needs more efficiently without creating unnecessary emissions.

### ***Implications on Future TDM Strategies***

When implementing TDM solutions to address changing economic conditions, it is important that the Met Council consider who the key stakeholders are in the process. While changing economic conditions are the result of larger-scale market changes, a number of localized TDM strategies can be implemented to address these conditions. Local and county governments, for example, are often concerned with economic development in their jurisdictions. Transportation initiatives are key to maintaining and increasing economic development, so fostering connections between local governments and their respective MPOs, TMAs, and transit agencies is an important strategy for an informed and effective TDM implementation process. Additionally, identifying those who are specifically in charge of transportation access and curb management is important for TDM implementation, as is identifying management gaps. The Met Council should also consider funding opportunities at state and local levels to ensure that the metro area is maximizing transportation access for its population.

### **Transit Strategies**

With the drastic reduction in transit use during the pandemic, conditions changed for commuters. While some had the option to work from home, adopt a flexible schedule, or use their SOVs to access work, others still needed to rely on public transit options. Low ridership, transit driver shortages, and both perceived and real safety concerns have contributed to a less reliable transit system for commuters. In many cases, low-income populations and people of color are most affected by these changes. It is imperative that the Met Council consider how to remedy transit systems to meet the needs of these populations.

Fare-free transit systems are one example of making public transportation more accessible. Kansas City, for example, voted to adopt a fare-free transit system in 2019. A survey reflected the positive impact this system has had on transit accessibility in the city. About 90 percent of riders surveyed reported riding the bus more as a result of fare-free transit, and 92 percent reported they were able to shop for food more often.<sup>7</sup> Eighty-two percent of riders surveyed reported they could get or keep a job more easily.<sup>8</sup>

### **Land-Use Implications**

The Met Council should consider the land-use implications of each scenario of changing economic conditions. The changes the workforce is experiencing, as discussed above, have had a major effect on transit corridors, travel times, and overall transit usage. Housing patterns can be an indicator in measuring travel patterns and demands and can inform which TDM strategies to implement to continue the efforts to reduce traffic congestion and emissions. E-commerce habits can also influence land use through the decentralization of the urban core, suggesting the need to consider strategies to revitalize the urban core and adapt transportation systems to meet new peak times.

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<sup>7</sup> Urban League of Kansas City. 2021. "2021 State of Black Kansas City." <https://www.ulkc.org/2021-black-kc-1-1>

<sup>8</sup> Ibid

## **Marketing and Communications Strategies**

The Met Council could consider how communication streams have changed to mimic new economic trends. As discussed above, there has been a consistent shift to e-commerce, which could have major implications for transportation demand. When conducting marketing and promotion to support TDM implementation, the Met Council should consider which communication streams are most effective. The proliferation of social media and digital advertising has had an immense impact on consumer behavior, and closely monitoring these trends can improve understanding of where commuters are receiving their information. It is also important to consider how to reach low-income populations, because electronic communication may not be the most effective for those who do not have smartphones or have limited internet access. Additionally, accounting for marketing content itself, and how it can be interpreted by communities with limited English proficiency or cultural backgrounds, is essential for effective marketing.

## **Equity Implications**

The Met Council should consider how changing economic conditions have affected disadvantaged communities. While upper- and middle-income- class communities have a stronger ability to adapt to changing gas prices, work settings and e-commerce, lower-income and disadvantaged communities need additional support. Nonconventional work hours and shift-based jobs, for example, can be a limiting factor for individuals seeking reliable transportation options. If an SOV is too expensive, especially with increasing maintenance costs, it is important to consider how to make alternative transportation modes more accessible. Fixed-route, on-demand, and micromobility options can help to remedy these situations. As discussed above, it is also important to consider where these options are being implemented, and whether they are equally distributed within communities. Additionally, while e-commerce has taken over, and is especially prevalent in app-based transportation modes, consideration must be given to how to make these services accessible to all. One example would be implementing fare systems through physical cards that can load funds using cash.

## Strengths, Weaknesses, Opportunities, and Threats Analysis

This analysis examined current TDM strategies, programs, and policies (derived from the existing conduction work conducted under Task 2) related to TDM in the Twin Cities region, and then subsequently characterized as strengths and weaknesses, in terms of their potential for continuing to serve the region in meeting the goals and objectives established in the TDM Framework (Task 4). This analysis also identifies the opportunities that exist to improve TDM in the region, in part by identifying TDM-related efforts in other regions, derived from the State of the Practice research (Task 3) that could be implemented in the Twin Cities, and the threats that might create obstacles for meeting the TDM goals and objectives developed in Task 4. The Met Council also retained its engagement contractor, Zan & Associates, under a separate contract, to collect additional insights and perspectives from additional stakeholders; these insights and perspectives were also integrated into the strengths, weaknesses, opportunities, and threats. The strengths, weaknesses, and opportunities focus on the elements of a TDM program that are within control of the Met Council and its partners, whereas the threats focus on the elements that are most likely beyond the influence of the Met Council and its partners.

Generally, the Twin Cities region benefits from many programs and policies, services and infrastructure that support TDM principles. Furthermore, there is momentum throughout the region to build on these existing TDM-supportive elements to improve outcomes. The region lacks coordination at the regional level, which has resulted in the lack of TDM goals and objectives, performance measures, and consistent communications or levels of service throughout the region. In this post-pandemic era, there are opportunities to adopt a broader approach to TDM by reaching out to audiences beyond employers and addressing trips beyond the traditional commute. At the same time, there are still pandemic-related disruptions that remain unsettled, including changing workplace schedules. The table below provides a summary of the key strengths, weaknesses, opportunities, and threats, and a detailed discussion follows.

**Table 1. Key Strengths, Weaknesses, Opportunities, and Threats of Existing Conditions**

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> <li>• Existing services, programs, infrastructure, and tools that support TDM</li> <li>• Regional momentum, including through TDM-related goals, policies, and planning practices</li> <li>• Innovative performance measurement targets at MnDOT</li> <li>• Transit agency programs focused on accessibility</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of regional coordination, including outreach approach, marketing strategy, performance monitoring, and implementation/ prioritization of cohesive land-use vision</li> <li>• Public transportation is mostly viable within urban areas/for short-distance commutes</li> <li>• Barriers to non-SOV modes: cost, time, technology access, negative perceptions of/experiences with safety</li> <li>• Policy challenges implementing/enforcing TDM strategies</li> <li>• Lack of shared understanding of TDM concept, strategies, and benefits among key stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Broader TDM approach, addressing all trip types and leverage changing workplace environments</li> <li>• Leveraging existing services to reach new audiences</li> <li>• New funding opportunities for a regional program</li> <li>• Coordination with local partners</li> <li>• New policies, incentives, and requirements focused on development, employment, and pricing</li> <li>• Data enhancements, including a clearinghouse</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of TDM-supportive policies and barriers to policy implementation</li> <li>• Continued disruption from COVID-19</li> <li>• Funding challenges</li> <li>• Disruptions from emerging transportation modes and technology</li> <li>• Resistance to change</li> </ul>

## Strengths

**The Twin Cities region has services, programs, infrastructure, and tools in place that support TDM strategies.** These resources support and complement TDM strategies by making alternatives to SOV travel options more accessible, affordable, attractive, and safe. There are also several organizations and agencies dedicated to providing TDM services to employers, commuters, and residents. These include:

- An **established regional public transit system** that includes Metro Transit bus and light rail lines, bus rapid transit, and microtransit services. The City of Minneapolis developed a mobility hub strategy program to maximize the placement of micromobility (bikes and scooters) near transit stops. High occupancy vehicle (HOV) lanes that are also bus rapid transit lanes, park-and-ride lots, and carshare and vanpool options also encourage transit usage and provide connectivity to transit.
- A robust, expanding **bike infrastructure network**, including bike lanes, protected bike lanes, and trails, provides connectivity across the region, and especially in urban core and inner suburbs. These, paired with bike storage and bike locker facilities for the public and employees at certain workplaces, encourage bike travel.
- Investments in **emerging transportation modes** that serve as alternatives to driving or owning a personal vehicle, including Evie Carshare, the nation's first fully electric vehicle car-sharing fleet; Nice Ride Minnesota, which includes traditional pedal and electric bikes (e-bikes); and micromobility permits for scooter companies to provide scooters in urban core areas.
- **Metro Transit's Commute Programs department and four transportation management organizations (TMOs)** provide TDM services to commuters by working with their employers and residents to implement benefits and amenities that will encourage employees to make sustainable choices. Metro Transit's Commuter Programs and the four TMOs engage in a variety of other outreach activities, including tabling events and campaigns, and hosting or supporting annual promotions (commuter challenges, Bike to Work Week, Try Transit, and Twin Cities Telework).
- The region has tools that support TDM initiatives, including the rideshare matching system, several transit trip planners and mobile apps for different transit providers, and system navigation maps for transit and bicycling. The Twin Cities region developed its own regional rideshare matching system. Owning the rideshare matching system has provided stability (because it is not dependent on private sector) and flexibility to design and implement changes in accordance with program priorities and user needs.
- The region has several **incentives, subsidies, and pricing strategies** that make TDM-supportive infrastructure and services more affordable and attractive. Examples include MnDOT-provided carpool parking pricing in the downtown ABC Parking Ramps (carpoolers pay \$20 per month to park at ABC Ramps, compared with \$140–\$160), free access to Minnesota E-ZPass® lanes for vehicles with two or more people, Met Council's vanpool subsidies (mentioned above), and Metro Transit discounted transit pass programs (lower-income Transit Assistance Program, Student Pass, College Pass, residential pass, and employee pass programs like the Metropass).
- The region has a **guaranteed ride home service** that is available region-wide, for commuters who use public transportation, carpooling, vanpooling, or bicycling at least 3 days

per week. The program is comparable with many TDM programs around the country and supports the use of non-SOV modes.

- The region has a long-standing **vanpool program** that offers stable and low-cost transportation options. The program is comparable with other peer vanpool programs around the country, but administrators have a more hands-on approach than many other programs, which has led to a successful subsidy program that offsets approximately 50 percent of vanpool costs.

**The region has already shown commitment to supporting alternatives to SOV travel through the adoption of regional goals and objectives related to TDM and there is regional momentum for TDM because many organizations already have their own TDM-related goals and objectives integrated into their planning procedures.** According to responses to the surveys conducted earlier in this study, Task 2: Existing Conditions, many organizations and communities in the region are already considering the relationships between land use and transportation, and have developed comprehensive plans, policies, and guidance documents to reinforce these connections. Some local governments and organizations have identified TDM-related goals and TDM strategies in their local transportation and/or climate plans to help them meet overall community goals and objectives.

- **Agency processes:** The region has prioritized funding for TDM through the Met Council's Regional Solicitation. The TDM Regional Solicitation provides a valuable structure within the greater Twin Cities TDM/Congestion management process to address specific gaps in the regional network by providing opportunities for small, agile organizations who would otherwise be constrained by a lack of resources.
- **Regional coordination:** MnDOT and the Met Council have begun to have conversations about how to make funding more flexible to support TDM. The Met Council has a Transit Oriented Development (TOD) Policy, which provides a framework for planning and implementation of TOD throughout the region. The Met Council and Metro Transit are finalizing a planning guide for local and regional stakeholders involved in developing mobility hubs.

**Many local governments have shown their commitment to TDM through policy changes and planning efforts:**

- The cities of Minneapolis, St. Paul, Bloomington, and Eden Prairie have TDM ordinances that require the adoption of a TDM plan for new developments to encourage the use of sustainable transportation and reduce traffic generated by the site after development and based on size (square footage), number of occupants or residents, or location within specific zoning districts.
- The Twin Cities metropolitan area has seen positive policy changes in support of TDM, including the removal of **parking minimums** by a number of municipalities.
- Several cities in the region have **traffic impact analysis (TIA) requirements** in place for developments, TDM plans or density bonuses for new developments, and parking maximums or at least no parking minimums.
- Many cities indicated having **complete streets policies** in place. Many of these cities indicated they have incorporated complete streets design elements into capital improvement program criteria that elevate multimodal designs. Those cities that do not already have such policies in place have indicated these policies are of high priority to enact.

- Many cities indicated they have requirements for **bicycle parking**.
- Most city respondents indicated their **comprehensive plans prioritize land-use patterns** that support connections to transit and sustainable travel modes, such as sidewalks and bicycle infrastructure.

**Minnesota Department of Transportation (MnDOT) is pursuing innovative performance measurement targets.** MnDOT plans to adopt a preliminary statewide and per capita VMT target as part of the Statewide Multimodal Transportation Plan update process. Additionally, MnDOT already has plans to expand its network of MnPASS lanes, bus-only shoulders, and transit advantage programs. MnDOT has started a pilot with the State Smart Transportation Initiative to test new means of measuring accessibility and multimodal access to community destinations and for transportation projects. MnDOT's TDM programming includes performance measures related to emissions and VMT reductions, rather than congestion, mode shift, or delay reductions typical of urban TDM programs. MnDOT currently supports TDM by including parallel pedestrian and bicycle infrastructure along trunk highway projects, Safe Routes to School (SRTS) programming, the E-ZPass system, partnerships with regional transit agencies (i.e., park-and-rides along MnDOT ROW, and center-running transit lanes/stations along trunk highways).

**Regional transit operators have implemented targeted programs to increase ridership and make transit more accessible for different populations.** Metro Transit's Revenue and Fare Operations program has developed several different pass programs, including reduced fares for seniors, youth, and Medicare card holders, as well as pass programs for employers and their employees. With respect to microtransit, Metro Transit is focusing on making rider programs more accessible with streamlined applications and removal of employee minimums to participate. Priority investment decisions are heavily guided by public feedback to ensure stakeholder support. With respect to mobility hubs, Metro Transit has coordinated with cities and communities to identify priority areas for investments; shared mobility hubs have been focused in underserved areas and alongside planned major capital investments. Metro Transit's Shared Mobility program team coordinates with the growing industry of shared mobility providers and other emerging trends in transportation.

**Other local partners and stakeholders throughout the region also provide TDM incentives and services, including:**

- Property managers in the region offer a variety of TDM incentives and amenities. All six property managers surveyed offered on-site bike parking, and half offered on-site electric vehicle charging and on-site showers.
- Of the 48 employers surveyed in Task 2, at least 21 provide commuter tax benefits, 25 provide employer-paid or discounted transit passes, 33 provide on-site bike parking/storage, 20 provide showers/locker rooms, 25 have formal telework policies, and 22 provide information about commuting options.
- Suburban transit agencies focus on TDM strategies that incentivize and reduce barriers to using transit, such as free transfers to microtransit and guaranteed ride home programs. Communications strategies include outreach to transit-dependent communities and developing materials in multiple languages. Many suburban transit agencies are investing in modernizing their stations with mobility hubs, real-time information, and electric vehicle charging stations. The agencies are also trying to get more involved in the early stages of

new developments to plan for transit facilities and promote developer investment in pedestrian connections.

## Weaknesses

**There is no independent regional program or defined structure identifying roles for organizations to deliver coordinated TDM.** While the Twin Cities region has many individual elements of a TDM program, they are implemented by different organizations, and as such, are fragmented. Furthermore, there is no regional approach or program to coordinate information and services to ensure consistent levels of service throughout the region. There is no single program, web page, organization, or “one-stop-shop” that exists for commuters, employers, developers, and others to learn about and have access to available traveler options, programs, and services.

- There is no unified regional outreach approach or strategy. Instead, many organizations conduct outreach but target a variety of markets and provide differing levels of service. Because there are so many organizations providing different TDM programs/services, prospective employers and others are unsure of who to contact or do not have time to coordinate with multiple entities. Given the noted lack of awareness about TDM programming, it is possible that there are insufficient resources and staff dedicated to TDM outreach.
- There is no unified regional marketing approach, plan, or coordinated promotions to raise awareness of TDM programs/services. Furthermore, there is no specific, targeted advertising and outreach to underserved communities about affordable transportation options. As a result, some commuters or communities may not be aware of services, promotions, incentives, and rewards available to them. For example, there is no regional marketing of the ridematching tool, which limits public awareness of it.
- The region lacks a regional brand, which could serve to provide consistent communications about TDM programs, services, and tools. Some implementors of TDM do so under the context of agencies that do other work, such as Metro Transit. These brands can overshadow the regional and multimodal role of TDM in their respective agencies.

**Consistent implementation or prioritization of a cohesive regional land-use vision/policies is lacking.** Land-use patterns in the region, particularly sprawling development patterns, encourage car travel and make it difficult for all areas to support alternatives to SOV travel options. Large parts of the region are not dense or not near destinations, or dense areas are isolated and not very accessible except for by car. These development patterns intensified during the COVID-19 pandemic, which spurred migration from urban areas to suburban and rural areas. Particularly in less dense areas, there is a lack of adequate transit service and a lack of local transit connections within neighborhoods. More first- and last-mile options are needed. Transit options are inadequate for some shift workers who may travel late at night or early in the morning; caregivers, who may have complicated schedules and needs and require modal options that are flexible; and reverse commuters, who have fewer transit service options.

Many travelers are unable or uninterested in changing their travel behavior. Travelers may be unable or unwilling to try transportation modes because of perceived or real obstacles, including:

- **Public transportation is not considered a convenient or viable option outside of urban areas or beyond short-distance commutes;** commuters say it takes too long or does not provide service close enough to their final destination. In many cases, transit takes longer than driving. For trips that require transit connections, trip times are increased because of long or missed connections. These issues are compounded during off-peak hours, when reduced demand and more dispersed travel patterns make it harder to provide adequate service.
- **Technology access can be a barrier** to transit options and 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.
- Travel costs present obstacles to some riders.
- Focus group respondents noted that it is **challenging to navigate transit with children** and while carrying items such as shopping bags. Additionally, language barriers can make transit more difficult.
- First-hand **experiences and perceptions about safety and crime** prevent commuters from considering public transit, especially in urbanized areas. Nearly one-third of survey respondents chose “I don’t feel comfortable/safe” as a challenge when traveling. Focus group participants noted that barriers to taking transit included having to wait for long periods in the dark; the lack of heated, enclosed transit shelters; and inadequate cleanliness at bus stops.
- **Inadequate services/infrastructure:** alternative transportation options are not always convenient or viable enough for travelers to switch to non-SOV modes. Focus group participants noted that transit delays, reliability concerns, and infrequent transit service impact their transportation decisions.
- Active transportation infrastructure suffers **winter maintenance inconsistencies**, including challenges in clearing bike lanes and sidewalks, leading to unpredictability for travelers. Travelers often defer to other modes in the winter due to the weather.
- There are many **barriers to vanpooling**, despite it being an option for long-distance commuters, including coordination of participants’ work schedules and complicated vanpool approval guidelines.
- In situations where parking is available for free or at low rates, **driving is sometimes cheaper** than alternate modes.
- Metro Mobility is not reliable for assisting seniors or persons with disabilities returning to the workforce.

The absence of TDM-specific goals and objectives at the regional level combined with a lack of coordinated performance monitoring, evaluation, or reporting for TDM at the regional level, results in confusion and a lack of understanding of outcomes for stakeholders that implement TDM strategies. Strategies should have measurable goals and understand the funding and resources needed to implement them. Lack of a centralized data system and inconsistent reporting requirements have made it difficult for the Met Council to measure strategy effectiveness. These deficits also create an obstacle to overcoming the issues of minimal enforcement and lack of incentives for stakeholders in the region toward prioritizing TDM strategies because the responsibility of the different actors is not clear. Contributing factors include:

- The Regional Solicitation Process has exacerbated the inconsistency of TDM services across the region and the contributed to the lack of a regional structure or program, despite having dedicated systems for administering and granting TDM funding. There is no specific guidance on the scope of TDM services desired or required, so each applicant develops a unique scope of services. As a result, a wide range of services are funded and delivered, and there is little oversight throughout each grant period to ensure coordination. There is no scoring prioritization for coordination or requirement for coordinated planning. Additionally, there are gaps in the Regional Solicitation Process for measuring project success.
- Commuter Programs is housed under the marketing department at Metro Transit, and as such, does not achieve the autonomy it deserves because the **Metro Transit marketing department prioritizes the marketing and promotion of transit (particularly transit pass sales) over the promotion of other non-transit options that reduce SOV travel.** As a result, decisions about TDM program funding that flows through the marketing department are not as transparent or wide-ranging as they could be and do not garner the appropriate focus for implementing a broad, regional TDM vision. Anecdotally, having regional TDM program staff branded under Metro Transit may also serve as a barrier for some potential partners that do not identify with transit as an opportunity for them.

**A shared understanding of the TDM concept, strategies, and benefits is lacking among local agencies, partners, employers, and elected officials.** This lack of awareness may speak to larger issues than branding, such as a need for a more comprehensive outreach approach. TDM program efforts may have been too narrowly focused on specific markets, partnerships, and stakeholders, thus limiting the potential for supporting future additional strategies.

- In particular, there is a **lack of understanding of the potential role of different regional partners in implementing TDM.** A shared understanding of what it means for an organization to implement TDM practices is also lacking. Many regional transportation partners implement strategies that go against the goals and objectives of TDM even when their plans support the concept. Current outreach about TDM strategies may not be reaching key partners and markets as evidenced by some planners, engineers, and elected officials not being familiar with TDM, or do not know what TDM strategies look like, etc.
- **Awareness and familiarity with TDM is inconsistent among employers,** which extends to an inconsistent awareness/familiarity with existing programs that offer TDM services (e.g., TMAs). Some employers are familiar with individual specific TDM strategies they can offer to assist employees with commutes or reduce commute trips, but it varies from employer to employer. For example, in the employer survey, of 29 employers who responded about what information they offer for transportation-related services or amenities, just three said they provide information about bike lanes and maps. Furthermore, the Met Council vanpool study found that employer partners are unsure of who to contact about vanpooling or are not familiar with vanpooling as a strategy to help their employees with their commutes.

**Regional leaders,** including Met Council and MnDOT, experience policy challenges to enforce or implement TDM:

- There are **no specific guidelines or requirements for including TDM in cities' and counties' comprehensive plans.** As a result, many communities' comprehensive plans include supportive language for TDM strategies and the use of sustainable transportation, but

do not include specific strategies for how to advance those ideals or which strategies might be needed. In the Task 2 TDM Existing Conditions survey, many city/county respondents stated they would welcome additional guidance for the inclusion of TDM in comprehensive plans. For example, respondents indicated they are open to parking management strategies and have support from elected officials and agency leadership. Parking management strategies to explore include parking cash-out and discounted parking rates at public and private parking ramps for non-SOV users. Respondents also indicated the need for Complete Streets implementation assistance, including roadway engineering and design support, and assistance with expanding these practices.

- Some **pricing and/or incentive programs**, such as road pricing or toll pricing structures that would encourage a reduction in SOV travel, **will require approval from the state legislature**.
- Policy challenges to TDM identified by Metro Transit staff include **lack of means to enforce TDM strategies among employers, cities, and others**; bank loan requirements that mandate minimum parking; lack of prioritization in the state legislature; and rules restricting revenue generation activities on transit property funded by state bonds.
- Transit agency staff report a **disconnect between real estate developments' desire for transit service at new developments and sparse development patterns**; a lag between community growth and transit taxing district boundaries; legal uncertainty about borders of service for microtransit; lack of legislative mandate for pedestrian and transit infrastructure with new developments; and issues with procurement, especially with electric buses.
- **Engagement with the private sector on TDM implementation is limited**. As a result, some employers, property owners, and developers will be averse to TDM because of perceived costs, risk or liability/insurance limitations, and resistance to additional rules/ordinances with which they need to comply. These private sector stakeholders also have inherent conflicts with TDM: In development planning, car parking is viewed as a default/non-negotiable, while infrastructure to support active transportation and other non-SOV modes is considered an amenity.
- State-level planning processes do not create space for considering innovations.
- State transportation funding has historically focused on capital investments, such as implementing the E-ZPass program and building out the bus-only shoulder network. The potential for more investments in non-capital efforts, specifically TDM strategies, are currently limited because of limited funding sources, funding restrictions within those available funding sources, laws, or historical practices. Historical allocations of state funding are tied to trunk highway use, limiting flexibility, and revenue opportunities. As a result, city- and county-level agencies tend to focus on capital investments. Finally, there is a state restriction on generating revenue (beyond direct services) for properties funded by the state, making many creative funding strategies impossible (e.g., creating and selling advertising space and other strategies that could yield private sector contributions).

## Opportunities

**The Twin Cities region may want to consider a broad TDM approach to address all trip types, especially as the workplace and commutes are changing.** Traditional TDM programs often focus on commute travel and especially on strategies targeting those travelers who

commute during peak periods. The pandemic has changed travel behavior and telework and flexible work schedules have enabled travelers to make more trips throughout the day. There is a significant opportunity for TDM to focus on short trips—those under three miles—to make alternatives to SOV travel more attractive for these types of trips. For example, Met Council’s most recent Travel Behavior Survey found that errands/shopping trips via transit increased from 11 percent (pre-pandemic) to 25 percent (post-pandemic); those who work from home may find transit a viable option for these types of trips throughout the day.

The private sector has an important role to play in providing and supporting alternatives to SOV travel. Employers are eager to have more information and commute solutions to provide to their employees; there is significant opportunity for employer-based TDM services. Property managers expect demand for TDM-related amenities to be higher in the next 5 years; there is significant opportunity for development-based and/or site-level TDM services (residential and commercial).

**Met Council and regional partners can leverage existing resources and services** to reach new riders and overcome built environment challenges:

- Vanpooling could address challenges for commuters who cannot viably take public transportation (e.g., long-distance commuters and/or commuters in rural areas).
- Microtransit or on-demand shuttles might be able to serve transit routes with lower ridership.
- Suburban transit agencies have identified microtransit and on-demand services as strategies for overcoming built environment challenges. There is an opportunity to find an effective balance between on-demand and fixed routes, as well as transfers between them. On-demand can help complete the last-mile gaps that exist throughout the region.
- Development of incentive programs and technology to administer them (some commuters struggle to afford transportation expenses). With increasing hybrid and remote work, incentives that target travel outside of the commute can help reach more travelers.
- Some survey respondents and focus group participants noted that understanding how to navigate transit systems can be a challenge. More riders could be reached by providing informational sessions, videos, and public service announcements in multiple languages and by increasing awareness that Metro Transit’s hotline can accommodate languages.
- More riders could be reached by elevating awareness of transit subsidy programs.
- Bike safety education programs and maps that show protected bike lanes can help boost active transportation mode share.
- Communications about TDM can emphasize the safety benefits of other modes compared with SOV driving. Focus group participants noted that there are also safety concerns associated with driving alone, such as adverse weather and traffic conditions.
- Focus group participants expressed valuing flexibility and were not aware of TDM programs that allow for leaving from destinations on their personal schedules; efforts to expand and increase awareness of existing programs could help reduce this barrier.

There may be **new funding opportunities for implementation of TDM strategies**, such as state funding through MnDOT, or new federal funding sources dedicated to improving the climate (e.g., the Infrastructure Investment and Jobs Act (IIJA) Carbon Reduction Program, federal grant programs, and different allocations of Congestion Mitigation and Air Quality Improvement (CMAQ)/Regional Solicitation funding).

- The Shared-Use Mobility Center’s report on the region recommended that CMAQ funding be retooled to better align with TDM outcomes and that the Twin Cities explore utilizing parking revenue, the motor vehicle fee, transit excise tax, and funds from the Volkswagen Settlement Fund to subsidize and fund TDM initiatives.

Opportunities to **enhance TDM through coordination** with community partners, private stakeholders, and local agencies include:

- The Met Council can look to opportunities to connect and collaborate with a broader range of partners, such as additional advocacy groups, neighborhood groups, and elected officials. For instance, Met Council can work with city employees to increase their participation in TDM (à la Baden-Württemberg, which offers transit and e-bikes to state staff).
- There is an opportunity to identify a regional organization, such as the Met Council, to establish a regional TDM program and coordinate implementation at the local level. The Met Council is well-positioned to coordinate TDM services across the region and provide TDM services. It is in a strong coordinating position because it serves as a sponsor for some of the grant recipients of the Regional Solicitation funds, provides shared tools and services (e.g., rideshare matching system, employer outreach database), and implements TDM services in areas not covered by TMO grant recipients.
- For suburban transit agencies, establishing greater transparency and coordination between the transit providers can help facilitate sharing resources and successes to effectively address the needs of the region.
- The Minneapolis Transportation Action Plan notes that one action could include working with community and agency partners to enhance communication practices about the importance of walking, biking, and using transit for citywide events.
- The Minneapolis Transportation Action Plan notes another action could include working with Move Minneapolis to recruit downtown employers and property owners to increase walking, biking, and transit use among employees and residents.
- Centralized administration of grants would allow TDM practitioners to focus on program delivery.

**TDM could be integrated into many policies, plans, incentives, and other regulations:**

- More cities and counties adopting TDM ordinances would expand the implementation of TDM strategies, but some level of consistency and continuity between cities and counties is needed. The Minneapolis Transportation Action Plan notes that one action could include updating the TDM plan requirements in the zoning code to apply to more developments than they currently do, to address mode-split goals and traffic growth rates, Metropass participation, and mandatory self-reporting audits that occur every two years, as well as any additional monitoring needed to improve safety.
- Sustainable Transportation Advisory Council recommends that MnDOT incorporate VMT-reduction goals into the Purpose and Need section of every major transportation project.
- The Twin Cities Shared Mobility Collaborative Report states that the Twin Cities has underutilized its ability to legislate employers to establish their own TDM plans. Specific program requirements could include requiring organizations to appoint a program coordinator to oversee development, implementation, promotion, and monitoring; requiring affected employers and developers to develop and submit a TDM plan that outlines program-

implementation plans and TDM targets; and requiring affected employers and developers to implement specific measures that help meet the TDM program goals.

- More flexibility, such as affordable daily rates, should be integrated into pricing and rates to encourage the use of sustainable modes by those who now have more flexible work arrangements (e.g., transit passes, vanpool leases, parking passes, etc.) so that commuters do not need to commit to purchasing more than they will use, but can still use sustainable modes affordably when they do commute.

**Data can be leveraged** to enhance TDM services:

- As stated in the Shared-Use Mobility Center (SUMC) report, a data clearinghouse established and maintained by the Met Council could reduce the administrative burden around data collection enough to make it feasible to ask more of the TMOs in terms of collecting program data.
- TDM programs in the region could use findings from MnDOT's/University of Minnesota's teleworking survey to inform their discussions with employers and to help frame more flexible policies for remote and hybrid work schedules. Specifically, TDM programs could assist employers with specific policies that could reduce vehicle trips, such as working remotely part-time, or policies that alleviate traffic congestion, such as enabling flexible start times to spread peak-hour commutes over a longer period of time. Furthermore, TDM programs in the Twin Cities could use these findings to encourage employers to refine their workplace transportation benefits in a way that encourages workers to take sustainable transportation modes on the days they commute to work, such as providing free transit passes in lieu of free parking.

New **organizational structures and strategies** can help enhance collaboration and TDM programming:

- A **TDM advisory committee** that includes a mix of participants, including TDM practitioners, employers, developers, and travelers could be used to inform TDM activities and provide feedback on program offerings.
- An **entity could be designated to lead establishment and ongoing coordination/administration** of regional TDM program that broadens it beyond the current structure and identifies roles and responsibilities for TDM practitioners, indicating which organizations are responsible for which strategies.
- Other organizational changes, recommended by SUMC, could include establishing a **director of shared mobility** programs and creating a shared mobility **fellowship program** that could support implementation efforts and coordinate with stakeholder agencies.

**Outreach can be coordinated** at the regional level to reach more travelers and create a more seamless user experience:

- Establishing a **regional TDM brand** can help with outreach. Additionally, a unified **regional outreach strategy** can be developed by identifying and prioritizing TDM target markets (e.g., employers, developers, property managers, local governments) and creating a tailored TDM response according to the market potential.
- A regional TDM program could provide a **one-stop shop** for travelers, including seamless user-facing "account" that provides access to all programs and services, no matter which organization offers it, coordinated on the back end.

- The region can **continue to learn about successful TDM projects** across the country by participating in industry organizations and/or conducting regular case studies of other programs. Case studies that show mode shift as a result of TDM strategies can help inform Met Council and partner efforts.

**Coordinated and standardized performance monitoring and reporting** can help develop a regional picture of all TDM efforts being implemented:

- Coordinated performance measurement could enable a **methodology for quantifying results and impacts** on the overall transportation network from local efforts (at the various jurisdictional/local levels). A regional performance tracking system that all TDM program/service providers could be used to more consistently track efforts and outcomes, resulting in an improved shared regional understanding.
- There is an opportunity to establish a more **robust data collection practice** through emerging technologies, strategic partnerships with TNCs, and existing assets like the Metro Transit app, as well as by leveraging the Metro Transit app into a data clearinghouse, which would involve integration with various shared mobility platforms.
- There is an opportunity to integrate TDM programs and services into the regional MaaS/MOD system (e.g., integrated payment for transit and vanpooling).

## Threats

**COVID-19 and potential future surges** continue to cause disruption at all levels of transportation management, including the planning level, operations level, and more.

- The pandemic has prevented TMOs from making long-term plans, commitments, or investments.
- The COVID-19 pandemic and increasingly urgent effects of climate change have underscored the degree to which complex future unknowns will impact the transportation system.
- Transit ridership has still not returned to pre-COVID levels; specifically, social/community and commute trips on transit both declined post-pandemic.
- The dramatic increase in remote work and hybrid work schedules due to COVID (54 percent teleworking post-COVID, up from 5 percent pre-COVID) could lead to an increase in SOV trips spread throughout the day, as workers run errands. This shift, as well as the shift to hybrid education, could also inhibit the ability of public transit to return to pre-COVID ridership levels. In the long term, telework can contribute to sprawl.
- Transit service was reduced during the pandemic and is slow to return to pre-pandemic levels. Commuters have since discovered other transportation options and it will be difficult to convince them to switch back to transit, especially when many commuters are now also working hybrid schedules (part-time remote, part-time in-person).

**Funding** for TDM and non-capital investments is **limited and difficult to access**:

- Federal **reporting requirements are cumbersome** and put smaller organizations at a disadvantage. Additionally, administering federal grants with smaller TDM partners can use significant resources.

- There are limited funds available to support TDM-specific goals. Available funding sources do not always align with TDM needs. For instance, federal funds are less flexible and mostly support capital projects, rather than operations or marketing. Aging infrastructure needs and other priorities to fund expansion across the region threaten funding availability for effective regional TDM opportunities. There is also a lack of understanding of the benefit of TDM programs as compared with capital investments; TDM impacts are less visible than capital improvements, especially on a dollar-to-dollar basis.
- Fluctuations in the economy can impact government funding and employer engagement.

**TDM-supportive policies are lacking** creating barriers to policy implementation:

- TMOs have faced challenges getting policy buy-in in suburban areas.
- The abundance of inexpensive and free parking makes TDM strategies less effective.
- The business and developer community is not effectively engaged in regional policy discussions, particularly around TDM, climate change, and equity.

There is a **lack of strong coordination** between key stakeholders and **barriers to coordination**:

- For suburban transit agencies, a lack of awareness about private developments underway/being one of the “last invited to the table” has been a barrier to collaboration.
- Existing TDM programs may be reluctant to coordinate due to fear of losing autonomy or ability to implement unique programs needed in their respective areas.
- Meaningful, coordinated TDM programs/services will require leadership approval and buy-in, as well as time commitment.
- Placing requirements on intergovernmental coordination can sometimes backfire; differing views or priorities can slow progress on projects.

**Emerging transportation modes and technology** can be major disruptions in the short term, as travelers adapt and transportation providers find the need to adjust services:

- On-demand transportation options, such as ridehailing companies, may lead to reduced cost-effectiveness and accessibility of transit services. On-demand services can be used to fill first/last mile gaps to/from public transportation, or offer much needed flexibility for some users, but they could ultimately lead to reduced ridership and diminish cost-effectiveness of some fixed routes, leaving some users with fewer options or reduced service.
- Lack of access to technology, such as cell phones, can present barriers to accessing on-demand and other emerging transportation options.

**Resistance to change** will always be a barrier among some travelers and stakeholders:

- Private sector will be slow to adapt to changing expectations for sustainable transportation options and amenities. This will require persistent coordination and communications over time.
- Single occupant vehicle trips will continue to be faster and cheaper, at least in the short-term, and it is inherently difficult to change perceptions and habits. Nearly 80 percent of survey respondents indicated that time was a factor in their travel decision-making and focus group participants voiced that taking transit is typically slower than SOV travel.

## Summary and Next Steps

Understanding the current strengths, weaknesses, opportunities, and threats in the region, as well as how these current conditions will potentially change, are key to the development of TDM strategies. Future mobility conditions and the SWOT analysis outlined in this memorandum will inform the development of potential TDM strategies.

Next, the study team will finalize a list of TDM strategies with potential for addressing the region's strengths, weaknesses, opportunities, threats, and future mobility conditions. The study team will also develop selection criteria that will be used to identify the strategies likely to result in the most significant impacts and make recommendations to advance those strategies to implementation. An action plan will be subsequently developed to guide the implementation.