



Minnesota

**Shared Mobility
Collaborative**

PROGRESS REPORT ON TWIN CITIES SHARED MOBILITY ACTION PLAN

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In 2017, more than 75 stakeholders from around the Twin Cities Region came together to say “we need better shared mobility;” and to help set goals for shared mobility in a Shared Mobility Action Plan. Many people then came together as the Shared Mobility Collaborative to help achieve those goals.

Just as the Action Plan and the Collaborative have been the work of many hands, so too is this Progress Report.

We especially thank the staff at the University of Minnesota’s Center for Transportation Studies and researchers from the Humphrey School of Public Affairs, who worked with a remarkably broad set of institutions and data to develop insightful and helpful conclusions.

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Finally, thanks to everyone who uses shared mobility to get around. There is broad acknowledgement that a transportation system that requires everyone to own, insure, maintain, and operate their own vehicle is not good enough. Such a system cuts us off from opportunity and from each other. This evaluation describes how we’ve made a lot of progress; and, how we have not yet created the shared mobility options we need. Thanks to you who use options before they are perfect.

- Meredith Klekotka
Shared Mobility Coordinator, Metro Transit

- Will Schroeer
Chair, Shared Mobility Collaborative

List of Acronyms

ACS	American Community Survey
AMI	Area Median Income
API	Application Programming Interface
BIPOC	Black, Indigenous, and People of Color
BRT	Bus Rapid Transit
CMAQ	Congestion Mitigation and Air Quality
CTS	Center for Transportation Studies
EV	Electric Vehicle
IURIF	Institute for Urban and Regional Infrastructure Finance
MaaS	Mobility as a Service
MnDOT	Minnesota Department of Transportation
MVTA	Minnesota Valley Transit Authority
MVST	Motor Vehicle Sales Tax
PPP	Private Public Partnership
SMC	Shared Mobility Collaborative
SOV	Single-Occupancy Vehicle
SUMC	Shared-Use Mobility Center
TAB	Transportation Advisory Board
TNC	Transportation Network Company
TDM	Transportation Demand Management
VMT	Vehicle Miles Traveled

EXECUTIVE SUMMARY

This report assesses progress on the [Twin Cities Shared Mobility Action Plan](#) (Action Plan). Released in 2017, the Action Plan identifies a set of goals and strategies for improving shared mobility in the Twin Cities region. In early 2022, the Shared Mobility Collaborative (SMC) – a group formed to help the Action Plan’s goals and strategies – commissioned researchers at the Institute for Urban and Regional Infrastructure Finance (IURIF) and the Center for Transportation Studies (CTS) at the University of Minnesota to assess progress made to date on the Action Plan.

IURIF researchers used multiple methods and data sources to assess progress on the Action Plan, including publicly available data from the Federal Transportation Administration, Minnesota Department of Transportation, Metropolitan Council, Metro Transit, the City of Minneapolis, and shared mobility providers, and a broad array of qualitative sources including annual reports, presentations, documentation from transportation and shared mobility operators, legislative and municipal records, transportation plans and Transportation Demand Management (TDM) plans, and newspaper articles.

The analysis produced four high-level findings.

1. Most important, the region has produced notable successes over the past five years. The region has expanded bikesharing, scootersharing, carsharing, and microtransit; the region has focused shared mobility efforts around integrated mobility hubs; and providers have engaged with a broad range of communities to pursue equitable processes and outcomes.

The region also faces challenges as it seeks to grow shared mobility and its benefits.

2. Differences in conceptualization and measurement across providers limit the assessment of regional progress in meeting some of the Action Plan’s goals and strategies.
3. Changes in the shared mobility landscape suggest changes to the Action Plan’s original goals and strategies.
4. Immediate and long-term impacts of the COVID-19 pandemic on shared mobility remain unclear.

Key findings related to each goal and strategy are included in the table below.

Table 1. Key Findings for Action Plan Goals and Strategies

Action Plan Goals & Strategies	Key Findings
<i>Goals</i>	
Goal 1. Shift households away from single-occupant vehicles and toward transit and shared mobility as the region grows.	Average daily vehicle miles traveled (VMT) per capita is used to assess progress on Goal 1. Before 2020, VMT per capita in the Twin Cities was decreasing at an average rate of 1.32 percent. In 2020, VMT per capita dropped by approximately 20 percent due to the COVID-19 pandemic

	restrictions. Despite recovering somewhat, 2021 VMT levels remain lower than before the pandemic.
Goal 2. Ensure that shared mobility programs are adapted to serve the same broad user base that makes up public transportation ridership.	Providers are prioritizing community engagement and are tracking measures that will allow assessment of whether and to what extent they are meeting equity-related goals. However, differences with respect to provider activities, measurement, and reporting make it difficult to assess regional progress on the Action Plan’s second goal.
<i>Strategies</i>	
Strategy 1. Grow shared mobility in support of the transit network	In 2019, Metro Transit prioritized seven activities as part of its strategy for growing shared mobility in support of transit. The organization had made progress in varying degrees on each of the activities. The region has made considerable progress with respect to mobility hubs and locating shared mobility infrastructure in proximity to transit.
Strategy 2. Pilot flexible transit that focuses on reverse commute challenges	During the 2017-2022 period, there were several projects aimed at expanding flexible transit options, including SW Prime Expansion, Metro Transit micro, and Metro Mobility’s Premium On Demand program. An example of transit expansion focusing on reverse commute challenges is Minnesota Valley Transit Authority’s Route 495.
Strategy 3. Leverage the metro transit app to establish a data clearinghouse	Despite widespread interest in a data clearinghouse, the Metro Transit app was not used to establish a data clearinghouse between 2017 and 2022. However, there are examples of advances in data sharing and transparency – both foundational to a data clearinghouse.
Strategy 4. Stabilize and grow carsharing	Between 2017 and 2022, the region increased the total number of vehicles in carsharing programs to over 300. The total number of vehicles available is less than the Action Plan’s goal of 600 vehicles by 2022.
Strategy 5. Expand and evolve bikesharing	<p>The region made progress towards meeting the Action Plan’s goal of increasing the number of Nice Ride Minnesota bikes to 2,500 by 2022. According to data provided by stakeholders, there were a minimum of 1,800 bikes licensed in the City of Minneapolis and zero in the City of Saint Paul in 2022.</p> <p>In addition, although the region did not have shared scooters in 2017, the SUMC estimates that there were just under 2,300 scooters in 2022.</p> <p>Additional efforts to expand bikesharing and scootersharing include pilot programs in several suburban cities as well as innovative partnerships to expand such programs across jurisdictions.</p>
Strategy 6. Elevate vanpooling as a viable option for commuters	The region was largely unsuccessful in achieving the Action Plan’s goal of adding 1,000 daily vanpool users. Even before the pandemic, total ridership

	<p>in Metro Transit’s vanpool program was declining, decreasing by 29 percent between 2017 and 2019.</p> <p>In 2022, the Met Council initiated an evaluation of the vanpool program. The evaluation findings (released in August 2022) include 28 recommendations for improving the vanpool program. The Met Council is currently reviewing the recommendations to determine which changes to incorporate into the program and how those can be accomplished. Program changes should occur in 2023 and 2024 and staff hope that streamlining the program and improving outreach will increase utilization.</p>
<p>Strategy 7. Develop and implement new carpooling and ride-splitting solutions</p>	<p>Carpooling patterns in Minneapolis, Saint Paul, and the Twin Cities region remained relatively stable prior to the onset of the pandemic, after which levels of carpool decreased considerably in Saint Paul and slightly less so in Minneapolis and in the region. Few initiatives focused on this strategy between 2017 and 2022.</p>
<p>Strategy 8. Concentrate efforts around integrated mobility hubs</p>	<p>There is regional progress in the implementation of integrated mobility hubs including the Mobility Hub Planning Guide, the Minneapolis mobility hub pilot project, and funding through the 2022 Regional Solicitation.</p> <p>By 2022, mobility hubs with features supporting shared mobility existed at or within several blocks of five of the six sites identified in the Action Plan.</p>
<p>Strategy 9. Realign CMAQ funding and improve TDM outcomes</p>	<p>The 2022 Regional Solicitation contained a new funding category called “Unique Projects,” with the following six evaluation criteria: innovation, environmental impacts, racial equity, multimodal communities, regional impact/scalability, and partnerships.</p> <p>Across the Twin Cities region, there is considerable interest in improving TDM outcomes. However, a lack of TDM goals and objectives at a regional level limits coordination in reporting or evaluating progress across organizations or the region.</p>
<p>Strategy 10. Optimize parking and street space to prioritize shared mobility</p>	<p>Between 2017 and 2022, there are several examples of municipal reforms to optimize parking and street space to prioritize shared mobility. The Minnesota Department of Transportation (MnDOT) has also funded several research projects that consider programs, policies, and goals for the ABC Ramps.</p>

2.1 OVERVIEW

In 2017, the Twin Cities Shared Mobility Action Plan (Action Plan) documented a need to improve shared mobility in the Twin Cities region:

“The Minneapolis-St. Paul region is expected to gain more than 800,000 new residents by 2040, outpacing the growth rates of larger metropolitan areas such as Los Angeles, Boston and New York City. This expansion will have many significant impacts for the Twin Cities—including on the region’s transportation network.

At current household vehicle ownership rates, this level of growth could add more than 675,000 personal vehicles to the road, leading to increased traffic congestion, greater CO2 emissions, and reductions in productivity and quality of life. Meanwhile, residents who don’t have access to reliable transportation options will continue to be isolated from jobs, opportunity and vital community resources. [...]

For the Twin Cities to compete for the jobs, workers and economic opportunities of tomorrow—and expand affordable, environmentally sound transportation options for all—the region must invest in innovative solutions, pursue new policies and claim its position as a national leader in shared mobility.”

The Action Plan was created by the Shared-Use Mobility Center (SUMC) to help Twin Cities leaders address challenges and realize opportunities for growing shared mobility across the region. To develop the plan, the SUMC worked with regional stakeholders to assess needs and identify actions to respond to those needs. The Action Plan, drawing on input from more than 75 regional stakeholders, identified a set of goals and strategies for improving shared mobility in the Twin Cities region over a ten-year period (2017-2027).

Following the release of the Action Plan, regional stakeholders formed the Shared Mobility Collaborative (SMC) to help implement the recommended actions. In 2022, the SMC commissioned researchers at the Institute for Urban and Regional Infrastructure Finance (IURIF) and the Center for Transportation Studies (CTS) at the University of Minnesota (UMN) to evaluate progress made on the Action Plan.

This report assesses progress in meeting the Action Plan’s goals and strategies over the past five years. The aim of this work is to provide an opportunity for SMC stakeholders to understand progress made on implementing the plan, identify early outcomes associated with the plan’s primary goals, and reflect on priorities and next steps in growing shared mobility across the region.

Twin Cities Shared Mobility Action Plan: Goals and Strategies

The Action Plan set two broad two goals:

1. Shift households away from single-occupant vehicles and toward transit and shared mobility as the region grows. As described in the Action Plan:

“At the core of the plan is a mode shift goal that recommends taking advantage of rapidly changing travel behaviors, demand, and technology to remove 50,000 private cars from the road in the Twin Cities over the next 10 years, and thereby help to maintain the region’s

livability, affordability and freedom of movement. The plan also features a first-of-its-kind objective to ensure that shared mobility programs serve the same broad user base that makes up public transportation ridership region-wide.”

The Action Plan conceptualizes the first goal as a reduction in 20,000 cars on the road by 2022 and 50,000 cars off the road by 2027 in the cities of Minneapolis and Saint Paul. Subgoals for the Twin Cities region include:

- Subgoal 1: Attract 30,000 new daily transit riders through new capital rail projects and improvements to Bus Rapid Transit (BRT) and rapid bus lines
 - Subgoal 2: Sustain 600 total vehicles in car sharing programs (one-way model)
 - Subgoal 3: Add 800 bikeshare bikes to expand Nice Ride MN to 2,500 bikes
 - Subgoal 4: Add 1,000 daily vanpool users
 - Subgoal 5: Add 2,000 microtransit and ride-splitting users through new pilot projects
2. Ensure that shared mobility programs are adapted to serve the same broad user base that makes up public transportation ridership.

The Action Plan gives less specificity around the second goal. The plan states that over a ten-year period, objectives could include ensuring that 40 percent of commute trips using Metropolitan Council (Met Council), county, or city-supported programs serve jobs in industries with a high proportion of low-wage jobs (such as food services or construction) or moving towards a more representative membership base in shared mobility programs, with at least 30 percent of active members coming from Twin Cities households that earn below 80 percent of the area median income (AMI).

To achieve these goals, the Action Plan outlines ten strategies. These strategies include:

1. Grow shared mobility in support of the transit network
2. Pilot flexible transit that focuses on reverse commute challenges
3. Leverage the metro transit app to establish a data clearinghouse
4. Stabilize and grow carsharing
5. Expand and evolve bikesharing
6. Elevate vanpooling as a viable option for commuters
7. Develop and implement new carpooling and ride-splitting solutions
8. Concentrate efforts around integrated mobility hubs
9. Realign CMAQ funding and improve TDM outcomes
10. Optimize parking and street space to prioritize shared mobility

Finally, the plan identifies ten cities as having strong potential for supporting new or expanded shared mobility services, including: Minneapolis, Saint Paul, Bloomington, Brooklyn Park, Eden Prairie, St. Louis Park, Maplewood, Richfield, Brooklyn Center, South Saint Paul, West Saint Paul, Hopkins. Within this

ten-city area, the plan designates areas as downtown core, targeted expansion, or transit investment areas. Each of the three focus areas supports a different type of shared mobility expansion.

Data and Methods used to Assess Action Plan Progress

The goals and strategies described in the Action Plan are complex, touching multiple sectors and levels of government. The Action Plan also describes a range of outcome metrics and implementation measures for each goal and strategy. To refine the analysis plan, researchers worked with members of the SMC to identify specific data items and sources for each goal and strategy.

In June 2022, the UMN team hosted a workshop for SMC members to identify outcome metrics and implementation measures. Approximately 16 SMC members, representing a broad range of organizations including state and local governments, regional transit providers, private shared mobility providers, and nonprofit organizations, attended the workshop.

In preparation for this workshop, IURIF researchers created a list of metrics identified by the Action Plan for each goal and strategy. During the workshop, SMC members discussed progress over the past five years, reviewed metrics from the Action Plan, and refined the final list of outcome metrics and data sources. Workshop participants identified between three and nine outcome metrics or implementation measures for each goal and strategy.

IURIF researchers used the list of metrics to collect quantitative and qualitative data. SMC members were contacted via email by CTS to provide data identified during the workshop. Because few members submitted the requested data, IURIF researchers collected most of the data from publicly available sources such as data dashboards, organizational reports, and newspaper articles.

Multiple methods and data sources were used to assess progress on the Action Plan. To examine trends in outcome metrics over the five-year period, the research team relied on publicly available data from the Federal Transportation Administration, Minnesota Department of Transportation, Met Council, Metro Transit, the City of Minneapolis, and several shared mobility providers. When detailed trend data were unavailable, researchers used point-in-time counts compiled from sources such as annual reports and presentations, as well as websites and documentation from shared mobility providers and the Shared-Use Mobility Center, to assess progress over time. A list of the data sources used is available in Appendix A.

To assess implementation, IURIF researchers drew upon a broad array of data sources including annual reports, presentations, and other documentation from transportation and shared mobility operators, legislative and municipal records (session overviews and meeting minutes, for example), transportation plans and Transportation Demand Management (TDM) plans, and newspaper articles.

In October 2022, IURIF researchers conducted an online survey of SMC members to fill gaps in data collection. The survey contained questions on the priority of the Action Plan's original goals and strategies, challenges caused by the pandemic, non-pandemic-related successes and challenges over the past five years, data sharing and transparency, and the ideal role for SMC. The questionnaire used in the

survey is available in Appendix B. The survey was distributed to 30 members of the SMC over a two-week period in October. Twelve individuals responded to the survey, with 8 providing detailed responses to all questions.

SMC members also had the opportunity to comment on the preliminary findings during a second workshop, held in December 2022. IURIF researchers incorporated insights and comments from the workshop.

Limitations of the Analysis

While the data permit an analysis of progress on the Action Plan, there are several limitations worth noting.

First, the analysis is limited to a broad assessment of progress and should not be seen as a full evaluation of implementation or outcomes associated with each goal and strategy in the Action Plan. The analysis prioritizes a set of metrics – identified in collaboration with SMC members, examines trends in those metrics, and offers examples of implementation that align with the Action Plan’s strategies. There are almost certainly examples of progress that are not captured in this report – particularly from suburban cities and non-metro transit providers. In addition, the reliance on publicly available data means that many internal activities pertaining to shared mobility were unobservable. The report therefore likely understates progress in growing shared mobility across the region over the past five years.

Second, data limitations prevent a complete assessment of progress for some strategies. For example, at the time of this writing, transit ridership data was available only through the first half of 2022. The Met Council’s Transit On-Board Survey, a survey administered to riders on all weekday fixed transit routes in the Twin Cities, was in the field in late 2022. The lag in data is noteworthy because 2022 is the first year that outcome metrics began to approximate pre-COVID levels - at least for some metrics. Data from these and other sources will offer a more robust assessment of progress in meeting shared mobility goals moving forward.

Overview of the Report

The report proceeds as follows. The next section describes high-level findings from the analysis. The third section reports findings related to the Action Plan’s two goals, and the fourth section reports findings related to the Action 10 strategies.

2.2 HIGH-LEVEL FINDINGS

This section describes high-level findings related to progress on the Twin Cities Shared Mobility Action Plan (Action Plan) and the growth of shared mobility in the Twin Cities region from 2017 to 2022.

First, there have been notable successes over the past five years, including expansion in bikesharing, scootersharing, carsharing, and microtransit; concentration of shared mobility efforts around integrated mobility hubs; and engagement with a broad range of communities to ensure a diverse user base.

Between 2017 and 2022, the region increased the total number of vehicles in carsharing programs from just under 100 to over 300. This expansion includes over 120 electric vehicles added as part of Evie Carshare's one-way carsharing program as well as vehicles available through HOURCAR, ZipCar, and Turo. The region was successful in meeting the Action Plan's goal of increasing the number of Nice Ride Minnesota bikes to 2,500 by 2022.

During the 2017-2022 period, efforts to expand microtransit include SW Prime Expansion and Metro Transit micro. SW Prime is a microtransit service operated by SouthWest Transit, a regional transit provider. The service began operating in 2015 and provides shared rides in Eden Prairie, Chaska, Chanhassen, Carver, Victoria, and Normandale Community College. Routes serving locations including the MSP Airport and Mall of America were added during the early years of the pandemic. In 2022, the Met Council and Metro Transit introduced Metro Transit micro, a type of multi-passenger public transit service, that delivers app-based on-demand services to improve connections to existing transit services in parts of north Minneapolis.

In 2018, both Minneapolis and Saint Paul received funding from a variety of sources to launch the EV Spot Network, which includes both the Evie Carshare vehicles, and EV Spot Charging, which at build-out will include 70 charging locations. While the EV Spots are not known as mobility hubs, the cities located them when possible near transit lines to facilitate shared-mobility connections.

In 2022 Minneapolis had over 30 mobility hubs and continues to test new mobility hub locations and features, including new types of infrastructure, updated signage, and adjustments to the ambassador structure and focus. Also in 2022, the Met Council and Metro Transit created a planning guide to support local and regional stakeholders to plan and implement mobility hubs (Met Council, 2023).

Finally, although it is difficult to assess regional progress, it is clear that many providers are prioritizing engagement with a broad range of communities and are tracking measures that will allow assessments of whether and to what extent they are meeting equity-related goals over a longer term.

Second, despite successes, differences in conceptualization and measurement across SMC members limit an assessment of regional progress in meeting the Action Plan's goals and strategies.

For example, HOURCAR has equity goals related to the race/ethnicity and income of members, the City of Minneapolis has equity goals related to the placement of bikes and scooters in underserved areas,

and NiceRide has equity goals related to its NiceRide for All program. Such differences make it difficult to assess progress across the region and across providers.

The SMC represents a diverse group of transportation leaders, public organizations, private companies, city officials, and nonprofit organizations. Although there are several notable exceptions, across SMC's diverse membership, there is variation with respect to the ideal role of SMC; methods and metrics for assessing progress; and capacity and willingness to collect, analyze, and share data. Variation in data capacity, measurement, and reporting limit a clear analysis of regional progress. Rather, progress is assessed by provider, with a range of data and measures used to assess progress across different providers and geographic areas.

Third, changes in the shared mobility landscape may necessitate changes to the Action Plan's original goals and strategies.

The shared mobility landscape has evolved considerably since the Action Plan's release in 2017. In less than five years, dockless bikes and e-bikes, shared scooters, and one-way electric vehicle carsharing services were introduced in the Twin Cities. Technological advancements contributed to innovation in shared data platforms, mobile ticketing, and Mobility as a Service (MaaS) offerings. In addition, shared mobility became a statewide priority. While the Action Plan focused on the Twin Cities metro region, the Shared Mobility Collaborative (SMC) now works and has membership statewide.

Goals and strategies for growing shared mobility have also evolved. Survey data collected for this project show that while the Action Plan's original goals remain important to SMC members, additional goals have emerged, including connecting metro and rural providers and building out sustainable systems to support marginalized populations and seamless transitions between shared mobility and transit.

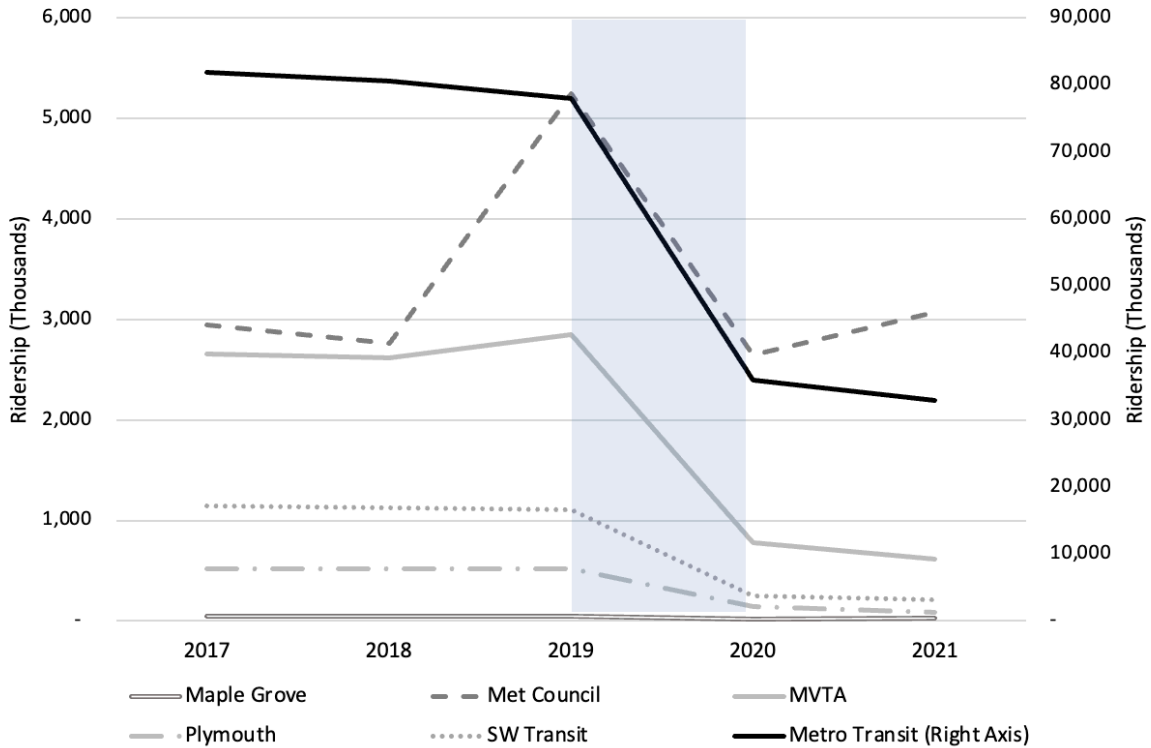
Survey data also show that strategies involving carpooling, vanpooling, and reverse-commute challenges are not as highly prioritized as they once were. New strategies include using hubs to connect metro and rural systems, developing mobility-as-a-service frameworks, investing in shared charging infrastructure, focusing on statewide policy change, and working with developers to build shared mobility into design.

Fourth, the immediate impacts of the COVID-19 pandemic are apparent, the long-term implications for shared mobility are not yet clear.

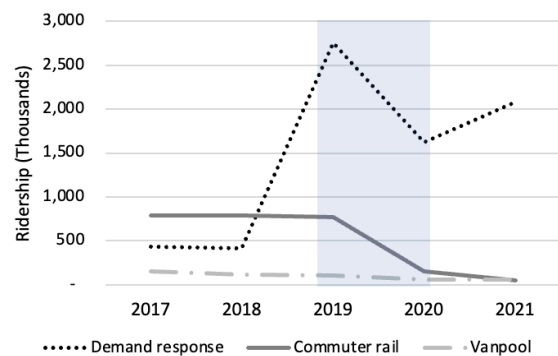
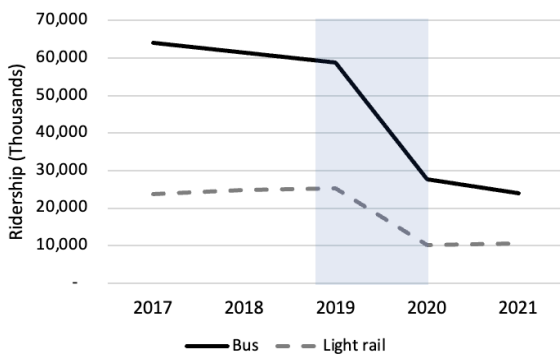
The onset of the pandemic led to steep decreases in the use of public transit and personal vehicles. Figure 1 shows that annual ridership in the region decreased across all providers (Panel A) and transit modes (Panel B). Panel A shows that while ridership continues to recover, it remains below pre-pandemic levels. By mode, commuter rail and light rail experienced the highest declines (-80% and -59% between 2019-2020, respectively), while demand response experienced the lowest decline (-41%). Among all modes, demand response and light rail experienced positive growth between 2020-2021, with demand response rapidly coming closest to reaching pre-pandemic levels.

Survey data suggest additional impacts on both transit and shared mobility. A decline in volunteer drivers and operator shortages forced reductions in transit networks. Changes to office work

arrangements and tourism shifted the ridership base for shared mobility. The pandemic also led to radical changes in commuting patterns, some of which are not well understood. Finally, the pandemic and associated changes in service and ridership coincided with increases in crime on transit. Evaluating the drivers of that increase, and any relationship to ridership, is a topic for other research; and, it was one more challenge for transit use.



Panel A: Ridership by Transit Provider



Panel B: Ridership by Transportation Mode

Notes: The gray columns indicate the first year of the COVID-19 pandemic.

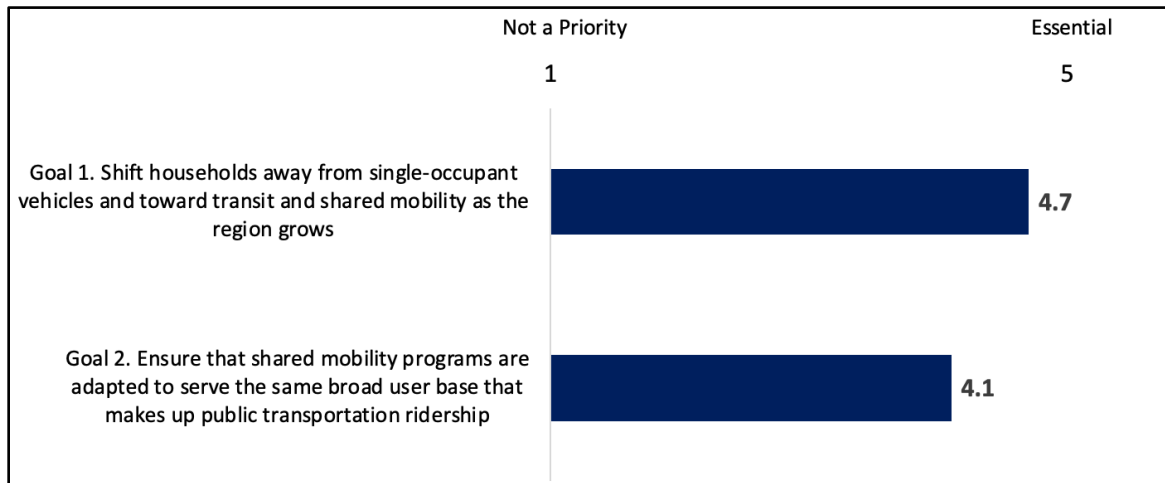
Source: Federal Transit Administration (2022)

Figure 1. Total Annual Ridership in the Twin Cities Region (2017-2021)

2.2 ACTION PLAN GOALS

The Twin Cities Shared Mobility Action Plan (Action Plan) identifies two goals: shifting households away from single occupant vehicles and toward transit and shared mobility (Goal 1) and ensuring that shared mobility programs serve a broad user base (Goal 2). Members of the Shared Mobility Collaborative (SMC) were asked to prioritize these goals on a scale from 1 to 5, where 1 is not a priority and 5 is essential.

Figure 2 shows the average rating for each goal for the ten SMC members who completed the survey. Survey responses indicate that the two goals remain a top priority for SMC partners, with respondents rating each with grades above 4.



Notes: Goal priority for SMC members on a scale from 1 to 5, where 1 is not a priority and 5 is essential. The total number of respondents is 10.

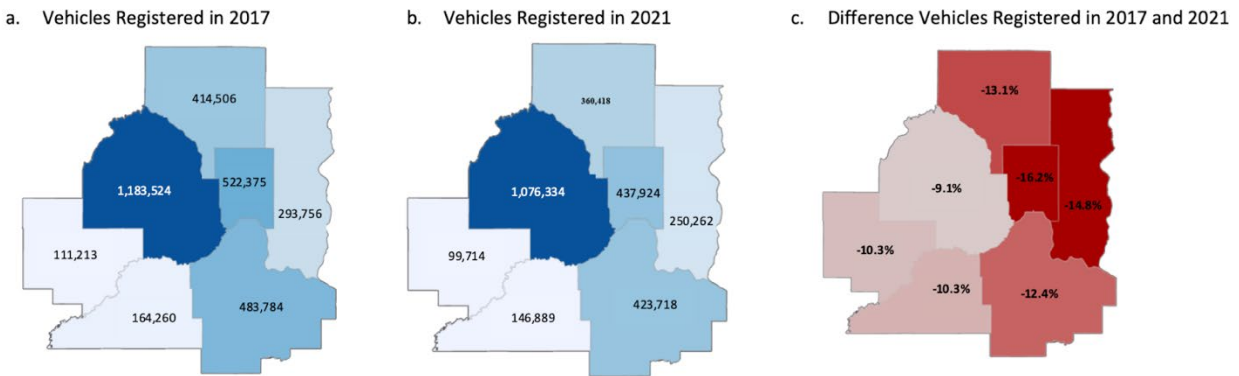
Figure 2: Survey results on average priority placed on Action Plan goals

Goal 1. Shift households away from single-occupant vehicles and toward transit and shared mobility as the region grows

The first goal of the Twin Cities Shared Mobility Action Plan is to shift households away from single-occupant vehicles and toward shared mobility and transit. The Action Plan set a goal of reducing the number of personal vehicles in Minneapolis and Saint Paul by 20,000 in 2022. As noted above, the pandemic resulted in steep declines in many modes of transportation – including use of personal vehicles. Although some indicators are approaching pre-pandemic levels, it is difficult to separate the impact of the pandemic from other factors including growth of the shared mobility industry or other changes in travel behavior.

A potential metric to assess progress in this goal is the number of vehicles registered in each city. A publicly available dataset with this information is the DPS-DVS Motor Vehicle Annual County Report, however, the information is available at the county level. Figure 3 presents all vehicles registered in the seven-metro county area in 2017 and 2021. Overall, the number of registered vehicles in the seven-

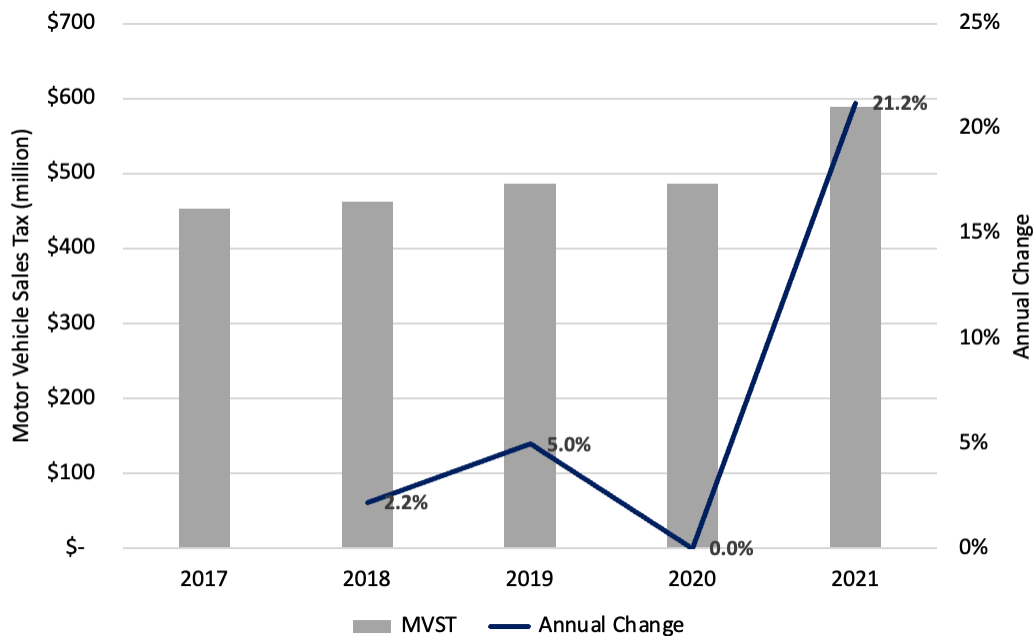
metro county area has been decreasing, with the highest drops in Ramsey (16.2%) and Washington (14.8%).



Source: Data from the Department of Public Safety.

Figure 3. Vehicles registered in the seven-metro county area in 2017 and 2021

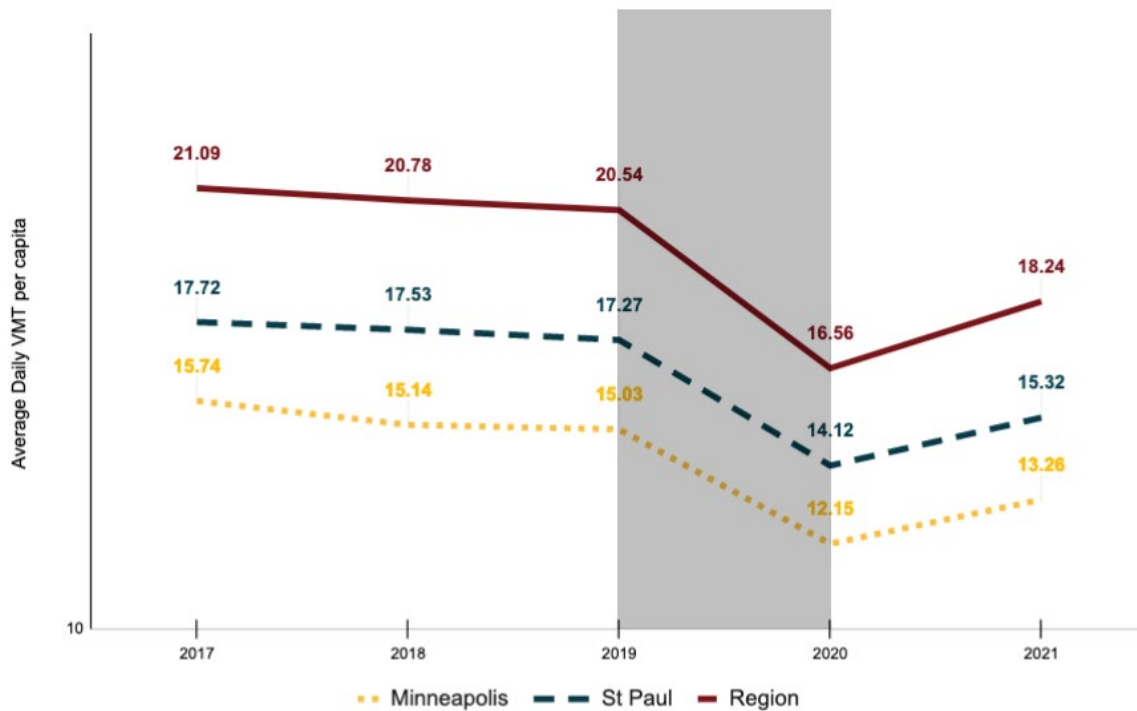
Similarly, it is important to track new vehicles added into the system. This could be measured by tracking changes in the revenues from the motor vehicles sales tax (MVST), however, this data is available at the state level. Figure 4 presents VMST revenues from 2017 to 2021 at the state level.



Source: Data from the Minnesota Department of Transportation Financial Snapshot.

Figure 4. Trends of Revenues from the Motor Vehicle Sales Tax in Minnesota

To assess progress on the first goal at the city level, researchers examined trends in average daily vehicle miles traveled per person (VMT) in the Minneapolis, Saint Paul, and the Twin Cities region between 2017 and 2021 (**Outcome Metric 1**). VMT data is available through the MnDOT's Roadway data up to 2021. It is important to note that this is an imperfect measure, as it assesses the use of a vehicle rather than the number of personal vehicles on the road. Figure 4 shows that before 2020, the average per capita VMT in the Twin Cities was decreasing at an average rate of 1.32 percent, with Minneapolis having a lower per capita VMT relative to Saint Paul. In 2020, VMT dropped from 20.5 to 16.5 per capita, approximately 20 percent, due to the COVID-19 pandemic restrictions. Though the region experienced a slight recovery in 2021, VMT levels remained lower than before the pandemic.



Source: MnDOT (2022); MN Demographic Center (2021).

Figure 5. Average Daily Vehicle Miles Traveled (VMT) in the Twin Cities (2017-2021)

Subgoals

The Action Plan identifies a series of subgoals that would let households shift away from single-occupant vehicles and toward shared mobility. These subgoals and key findings are included in Table 2 and described below. In general, the data suggest that the region was successful in meeting subgoals related to bikesharing and, prior to the pandemic, expanded ridership on BRT and rail lines. The region experienced some success in stabilizing and growing carsharing programs but was unsuccessful in expanding vanpool ridership. Due to a lack of data, the report is unable to assess progress on adding users through microtransit and ride-splitting pilot projects.

Table 2. Subgoals and key findings

Subgoals	Progress	Key Findings
<p><u>Subgoal 1.</u> Attract 30,000 new daily transit riders through new capital rail projects and improvements to BRT and rapid bus lines</p>	<p>Partially Achieved</p>	<p>Data capturing new daily transit riders are unavailable. Total ridership increased through improvements to BRT and new rail projects. BRT ridership increased considerably in the years preceding the pandemic, from approximately 1 million rides in 2017 to over 3 million rides in 2019. Between 2017 and 2019, total annual light rail ridership increased 6.25 percent.</p>
<p><u>Subgoal 2.</u> Sustain 600 vehicles in one-way carsharing programs</p>	<p>In Progress</p>	<p>In 2017, the region had just under 100 vehicles available in two-way (roundtrip) carsharing programs. In 2022, there were approximately 300 cars available via multiple carsharing operators, including one-way programs.</p>
<p><u>Subgoal 3.</u> Add 800 bikeshare bikes to NiceRide MN, for a total of 2,500 bikes</p>	<p>Achieved</p>	<p>In 2017, Nice Ride had approximately 1,850 “classic” bikes, or bikes that are docked in stations. According to data provided by stakeholders, there were a minimum of 1,800 bikes licensed in the City of Minneapolis and zero in the City of Saint Paul in 2022.</p>
<p><u>Subgoal 4.</u> Add 1,000 vanpool users</p>	<p>Incomplete</p>	<p>The region was largely unsuccessful in achieving this subgoal, as total ridership in Metro Transit’s vanpool program was declining even prior to the pandemic. A 2022 evaluation of the vanpool program identifies a series of recommendations for changing and growing the vanpool program.</p>
<p><u>Subgoal 5.</u> Add 2,000 microtransit and ride-splitting users through pilot projects</p>	<p>In Progress</p>	<p>Data capturing new microtransit and ride-splitting users are unavailable. However, the region initiated or expanded several microtransit projects during this period, including SW Prime and Metro Transit micro.</p>

Subgoal #1: Ridership on BRT and rail lines. Prior to the onset of the pandemic, the region was largely successful in expanding ridership through the addition of new BRT lines and on existing rail lines. The outcome metrics associated with this strategy are the total annual ridership on new Bus Rapid Transit (BRT) (**Outcome Metric 2**) and light rail lines (**Outcome Metric 3**).

Table 3 shows the total annual ridership on BRT lines between 2017 and 2022. In 2017, two BRT lines were in operation: the A Line (operated by Metro Transit, opened in June 2016) and the Red Line (operated by MVTA from 2013-2020 until Metro Transit took over operations in December 2020). The C

Line opened in June 2019 and the Orange Line opened in December 2021. The next BRT line, the METRO D Line, opened on December 3, 2022 (Mass Transit, 2022).

Table 3. Total annual ridership on Bus Rapid Transit (BRT) Lines (2016-2022)

2016	2017	2018	2019	2020	2021	2022 (Jan-Jun)
1,084,840	1,850,070	1,872,327	3,135,436	2,375,860	2,350,304	1,417,961 (+34%)

Source: Met Council, Quarterly and Year End Ridership Reports (various years)

BRT ridership increased considerably in the years preceding the pandemic, from approximately 1 million rides in 2017 to over 3 million rides in 2019. The increase in ridership between 2016 and 2017 reflects the opening of the A Line and the increase in 2019 reflects the opening of the C Line.

Ridership fell by approximately 24 percent during the pandemic, a more moderate decrease than in other forms of transit. Ridership continued to recover in early 2022, with total ridership during the first half of the year increasing by approximately 34 percent over 2021.

The Minnesota Legislature has funded new BRT lines which will likely produce similar ridership increases. The bonding bill passed in the October 2020 Special Session included \$55 million for the METRO D and B Lines. In 2021, the Legislature appropriated \$57.5 million for the E and F BRT lines.

With respect to light rail, the Blue Line and the Green Line¹ were operational in 2017 and no new capital rail lines opened between 2017 and 2022. The next addition to the light rail network, an extension to the Green Line, is scheduled to open in 2027.

Table 4 shows the total annual ridership on the light rail between 2017 and 2022. Between 2017 and 2019, total annual light rail ridership increased 6.25 percent. During the pandemic, ridership fell by over 50 percent. Since June 2020, average weekday ridership has increased slightly, though numbers remain far below pre-pandemic numbers. In July 2019, for example, average weekday ridership was approximately 32,000 on the Blue Line and 45,000 on the Green Line. In July 2022, average weekday ridership was approximately 15,000 and 18,000, respectively (Metro Transit, 2022).

¹ The Blue Line connects downtown Minneapolis and the Mall of America and was opened in June 2004. The Green Line connects downtown Minneapolis with downtown Saint Paul and was opened in June 2014.

Table 4. Total Annual Ridership on Light Rail (2016-2022)

2016	2017	2018	2019	2020	2021
22,963,629	23,810,995	24,955,617	25,299,442	10,225,520	10,673,554

Source: Federal Transit Administration (2022).

Subgoal #2: Number of vehicles in carsharing programs. Between 2017 and 2022, the region increased the total number of vehicles in carsharing programs, though the total number of vehicles available in 2022 is less than the Action Plan’s goal of 600 vehicles. In 2017, the region had just under 100 vehicles available in two-way (roundtrip) carsharing programs. In 2022, there were over 300 cars available via carsharing operators, including a one-way program. However, the approximate number of vehicles varies somewhat by source. The Shared-Use Mobility Center (SUMC, 2022) reports:

- Turo operated 184 vehicles (142 in Minneapolis and 42 in Saint Paul)
- The ZipCar fleet included 6 “Round trip/return to hub”
- The HOURCAR fleet included 42 “Round trip/return to hub” cars
- The Evie Carshare fleet included over 120 semi-floating electric vehicles (EVs). This fleet began with 100 cars; Evie Carshare has continued to add vehicles as they are delivered.

Subgoal #3: Number of bikes in NiceRide program. The region was also successful in meeting the Action Plan’s goal of increasing the number of Nice Ride Minnesota bikes to 2,500 by 2022. Nice Ride, the region’s primary bikeshare provider, began operating in Minneapolis in 2010 and Saint Paul in 2011. In 2017, Nice Ride had approximately 1,850 “classic” bikes, or bikes that are docked in stations. Dockless bikes were introduced by Nice Ride in 2018 and replaced by electric bikes (or e-bikes) in 2020. According to data provided by stakeholders, there were a minimum of 1,800 bikes licensed in the City of Minneapolis and zero in the City of Saint Paul in 2022 (data from Danielle Elkins and David Peterson provided during the second workshop).

Subgoal #4. Ridership in vanpool program. The region was largely unsuccessful in achieving the Action Plan’s goal of adding 1,000 daily vanpool users. Even before the pandemic, total ridership in Metro Transit’s vanpool program was declining, decreasing by 29 percent between 2017 and 2019. Ridership continued to decline in the first and second years of the pandemic, with a slight increase in the first half of 2022.

Subgoal #5. Subgoal 5: Microtransit and ride-splitting users through pilot projects. Between 2017 and 2022, there were several successful efforts to expand microtransit. SW Prime, which began operating in 2015, is a microtransit service operated by SouthWest Transit, a regional transit provider. The service provides shared rides in Eden Prairie, Chaska, Chanhassen, Carver, Victoria, and Normandale Community College. Routes serving locations including the MSP Airport and Mall of America were added during the early years of the pandemic. In 2022, the Met Council and Metro Transit introduced Metro

Transit micro, a type of multi-passenger public transit service, that delivers app-based on-demand services to improve connections to existing transit services in parts of north Minneapolis.

There were limited initiatives that focused on ride-splitting solutions. As a result, outcome metrics related to the number of new providers, pilot projects, or new users added through such solutions are unavailable.

Goal 2. Ensure that shared mobility programs are adapted to serve the same broad user base that makes up public transportation ridership

The second goal of the Action Plan is to ensure that shared mobility programs serve a user base that is similar to the broad user base served by public transportation. Commitments to ensuring a broad user base are typically captured in the ‘equity goals’ of municipalities, transit providers, and shared mobility operators.

Analyzing the overall regional progress of the Action Plan on this goal is complicated by the fact that organizations conceptualize and measure these goals in different ways. While some organizations have goals related to the demographic characteristics of all users (typically, race/ethnicity and income), others have goals related to the location of transit and shared mobility services. Still, others have goals for programs that target specific communities or locations. For example, HOURCAR has equity goals related to the race/ethnicity and income of members, the City of Minneapolis has equity goals related to the placement of bikes and scooters in underserved areas, and NiceRide has equity goals related to its NiceRide for All program.

Organizations that have similar types of goals often use different metrics for assessing progress toward these goals. For example, the Met Council and HOURCAR each report on the income distribution of riders but use different scales to measure income.

While such differences make it difficult to assess regional progress toward the broader goal of ensuring a broad user base for shared mobility programs, it is clear that many providers are prioritizing engagement with a broad range of communities and are tracking measures that will allow assessments of whether and to what extent they are meeting equity-related goals over a longer term.

Characteristics of Transit and Shared Mobility Users

Providers have several tools for understanding the characteristics of transit and shared mobility users in the Twin Cities region. Table 5 presents a summary of demographic characteristics of transit and shared mobility riders from a subset of providers. Racial diversity, household income level, and disability status are three characteristics that providers monitor to ensure that transit and shared mobility are serving a broad range of users.

Table 5. Summary of demographic characteristics

Member/Source	Racial Diversity	Low-Income	Disability
2021 Transit On-Board Survey Pilot	55% BIPOC	80% with an annual HHI below \$60,000	18.3%
2021 HOURCAR Census Survey	22% BIPOC	42% with an annual HHI below \$50,000	N/A
2022 Nice Ride Equity Data	46% members of racial and/or ethnic minority groups	\$38,000 is the median household income	N/A

Data from the 2021 Transit On-Board Survey pilot,² shown in the first row of Table 5, indicate that 55 percent of Twin Cities public transportation trips were taken by riders who identify as Black, Indigenous, and People of Color (BIPOC), representing an increase of 5 percentage points over 2016. The vast majority of transit users report incomes below \$60,000 per year (Asmus & Lind, 2022).³

Characteristics of HOURCAR riders are shown in the second row. HOURCAR conducted its first “Census” – a survey of all current HOURCAR members in 2021. The Census survey was distributed to 1,986 active members and completed by 747 individuals. According to this data, 22 percent of the respondents identified as BIPOC and 42 percent have an annual household income below \$50,000.⁴ By 2026, HOURCAR’s equity goals include: 50 percent use by BIPOC members, 40 percent use by very-low-income members, and 20 percent use by very-low-income BIPOC members (HOURCAR, 2022b).

Characteristics of NiceRide riders are shown in the third row. Of the Nice Ride riders, 46 percent identify as members of racial and/or ethnic minority groups (17% identified as Black, African American, or Afro-Caribbean; 22% as Hispanic or Latin American; and 4% as Asian). In addition, 32 percent are women and 24 percent identified as members of the LGBTQ+ community (data not shown). The average age of riders is 29 years and the median household income is \$38,000. According to these data, 68 percent of the members are active through the Nice Ride for All program (data not shown).

While this table highlights the priority that providers are placing on measuring and tracking demographic characteristics, particularly related to racial and income diversity, it also illustrates differences in measurement across different types of providers.

Activities to Ensure a Broad User Base

To ensure that they serve a broad user base for shared mobility, providers prioritize outreach to specific communities as well as placement of shared mobility services in traditionally underserved areas and targeted programmatic activities. Between 2017 and 2022, providers engaged in a wide range of activities to ensure a broad user base.

With respect to community outreach:

² The Transit On-Board Survey is conducted every five years and captures data on the demographic characteristics of a sample of riders.

³ The Travel Behavior Inventory, a household survey administered every other year, also tracks demographic data, as well as information on travel behavior and use of shared mobility, for a random sample of Twin Cities households (MetCouncil, 2022b).

⁴ Of the respondents, 25 percent reported an annual household income below \$29,999 and 17 percent with an annual household income between \$30,000 and \$49,999.

- In 2019, to raise awareness of its NiceRide for All program, NiceRide connected with over 50 neighborhood associations, churches, and community groups and participated in more than 60 community events, more than 40 of which were in targeted low-income areas (NiceRide 2019).
- To support the development of the in 2019 and 2020, partners HOURCAR, the Cities of Minneapolis and Saint Paul, Excel Energy, East Metro Strong, and the American Lung Association engaged in extensive community outreach and engagement. This work included the creation of a Core Partner Council of community organizations, outreach to public housing residents and charging hub adjacent neighbors, a survey, website, libraries, and city-wide open houses for the general public (HOURCAR, 2021).
- Metro Transit led extensive outreach and engagement around the Gold Line BRT, including a station design engagement initiative in spring 2019. In addition, [30% design](#) and [60% design](#) engagement summaries from 2020 included station access surveys and materials that focused on feedback on station site plans.

Providers also located shared mobility services in traditionally underserved areas. For example:

- In September 2022, the Met Council and Metro Transit introduced Metro Transit micro to improve connections to existing transit services in parts of north Minneapolis. Of the population in the pilot area, 72 percent identify as BIPOC, 53 percent report an annual household income below \$60,000,⁵ 19 percent are not working, and 17 percent have no vehicle (M. Klekotka, personal communication, January 26, 2023).
- In 2021, Lime initiated an Equity Zone Pricing initiative that offers 30 percent off all rides to select areas of Saint Paul, including Frogtown, Payne Phalen, North End, Dayton's Bluff, and West Side neighborhoods.

With respect to placement of shared mobility services, the City of Minneapolis requires that bikeshare and scootershare providers no more than 40 percent of the fleet in downtown, at least 13 percent in northern areas of the city and 17 percent in southern areas, and the remaining 30 percent throughout the rest of the city. In 2021, the city created a public-facing dashboard to promote compliance with these equity goals. The city's Bike and Scooter Compliance Dashboard, which presents monthly averages for the distribution of bikes and scooters, shows that Lyft, NiceRide, and Spin have been most successful in meeting equity requirements for the northern and southern equity distribution areas of the city.

Finally, providers developed programs targeting underserved populations.

- HOURCAR's Access PLUS program for HOURCAR and Evie Carshare offers members with household incomes less than 50 percent of Area Median Income offers reduced rates and

⁵ Of the households, 38 percent report an annual household income of less than \$35,000 and 18 percent an annual household income between \$35,000 and \$59,999.

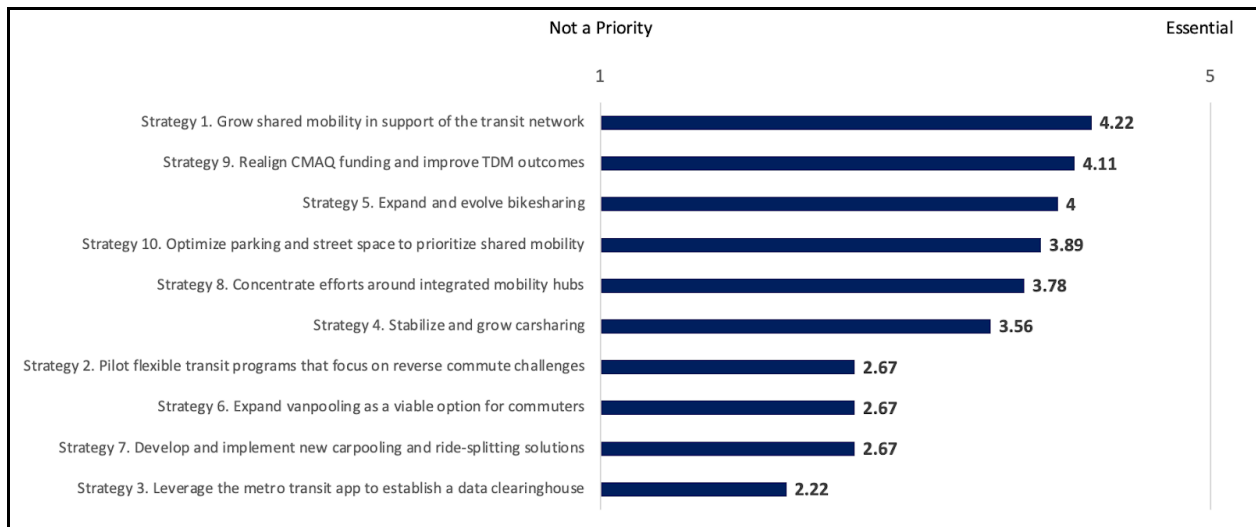
extended mileage. Members are allowed to self-certify, thereby reducing the administrative burden of applying for the program (HOURCAR, 2022a).

- NiceRide’s Nice Ride for All program offers reduced rates for adults that qualify for a state or federal assistance program, as well as students who are receiving federal financial aid. The program offers a \$5 annual membership that includes waived fees to unlock bikes, unlimited 45-minute rides on classic bikes, and discounted e-bike and scooter rides.
- In 2022, HOURCAR launched its Multifamily EV Carshare Pilot Project, an expansion of its two-way carsharing service. The pilot adds 50 all-electric vehicles to HOURCAR’s fleet, as well as new hubs with EV chargers at 25 multifamily complexes in the Twin Cities metro. The pilot project is divided into two parts. The first part involves the selection of 5 sites, with priority given to qualified affordable sites where at least two-thirds of residential units are affordable at 60 percent of AMI or below. This part began in 2021 with the selection of sites and will extend from 2022 to 2024. The second part of the pilot involves the selection of an additional 20 sites, which will be in operation by early 2023 (HOURCAR, 2022d).
- The City of Minneapolis recently secured funding from the Met Council for a 2022-2025 Mobility as a Service (MaaS) project to streamline low-income access eligibility, one of the biggest barriers to MaaS in the region for low-income service recipients.

2.3 ACTION PLAN STRATEGIES

The Twin Cities Shared Mobility Action Plan (Action Plan) identifies 10 strategies to support the growth of shared mobility and reduction in personal vehicles in the Twin Cities region. Members of the Shared Mobility Collaborative (SMC) were asked to prioritize the original strategies on a scale from 1 to 5, where 1 is not a priority and 5 is essential.

Figure 6 shows the average rating for each strategy for the 12 SMC members who completed the survey. Strategies are listed in order of priority. This figure shows that survey respondents placed the highest priority on growing shared mobility in support of the transit network (Strategy 1; 4.22) and realigning CMAQ funding and improving TDM outcomes (Strategy 9; 4.11).



Notes: Strategy priority for SMC members on a scale from 1 to 5, where 1 is not a priority and 5 is essential. The total number of respondents is 12.

Figure 6. Survey results on average priority placed on Action Plan strategies

On average, survey respondents placed a lower priority on leveraging the Metro Transit app to support a data clearinghouse (Strategy 3; 2.22), piloting flexible transit programs focused on reverse commute challenges (Strategy 2; 2.67), expanding vanpooling (Strategy 6; 2.67), and developing carpooling and ride-splitting solutions (Strategy 7; 2.67).

The remaining sections elaborate on progress on each strategy between 2017 and 2022.

Strategy 1. Grow shared mobility in support of transit network

The Action Plan identifies multiple possibilities for measuring efforts to grow shared mobility in support of the transit network, including locating shared mobility infrastructure near transit, investing in public-private partnerships, conducting cross-marketing campaigns, and funding shared mobility programs as part of the Regional Solicitation Process. Mobility hub planning, development, and implementation, also a key component of regional efforts to grow shared mobility in support of the transit network, is discussed in greater detail in Strategy 8.

In 2019, Metro Transit developed a strategy for growing shared mobility in support of transit. The overall goal of its Shared Mobility Strategy was to enable more people to travel without the need for a personal automobile. To help meet this goal, Metro Transit prioritized seven activities including implementing a microtransit pilot, engaging with communities and stakeholders, investing in mobility hubs, maximizing travel options through shared mobility and transportation demand management, establishing data privacy and sharing standards, developing long-range plans for fare collection and customer information tools, and ongoing education and collaboration (Metro Transit, 2021).

Metro Transit had made progress, in varying degrees, on each of the seven activities. For example, the North Minneapolis Microtransit Pilot, which emphasizes a first-mile/last-mile service design and covers a 2.5 mile area in North Minneapolis, was launched in 2022. Also in 2022, Metro Transit completed a Mobility Hub Planning and Implementation Guidebook for local and regional stakeholders to support mobility hub development. In the years since it developed the Shared Mobility Strategy, the organization has also hosted listening and learning sessions with community stakeholders and invested in evaluating and redeveloping the vanpool program. Each of these activities are discussed in greater detail in other parts of the report.

Shared mobility providers have also supported transit options via siting decisions. For example, one of the siting requirements for Twin Cities Electric Vehicle Mobility Network (EV Spot Network), a network of electric car charging hubs in Minneapolis and Saint Paul, is location near a transit station (City of Saint Paul, 2022).

According to data from the Intermodal Passenger Connectivity Database, there are 235 passenger transportation terminals in the Minneapolis-Saint Paul area providing bus, rail, and bike-share mode services. In 61.3 percent of the terminals two modes are provided, while in 32.8 percent of the terminals only mode is provided. Overall, 67.2 percent of the terminals provide bus services, 20.8 percent provide rail services, and 83.4 provide bike-share services (USDOT, 2022).

Strategy 2. Pilot flexible transit that focuses on reverse commute challenges

Although the Action Plan's second strategy specifies flexible transit options *that focus on reverse commute challenges*, there were few such programs in the Twin Cities metropolitan region between 2017 and 2022. Researchers therefore separated the analysis to focus on (a) the growth of flexible transit options and (b) expansion of reverse commute transit options.

During the 2017-2022 period, there were several projects aimed at expanding flexible transit options, including SW Prime Expansion, Metro Transit micro, and Metro Mobility's Premium On Demand program. An example of transit expansion focusing on reverse commute challenges is Minnesota Valley Transit Authority's Route 495.

While there are examples of successful expansion of both flexible transit and transit focused on reverse commute challenges, SMC members expressed uncertainty about the regional need for reverse commute options, particularly post-pandemic. Workshop participants noted that to date, reverse commute options appear to be driven by small pockets of employers in suburban communities seeking solutions to labor shortages, rather than an overarching regional need to support reverse commute transit options.

SW Prime Expansion. SW Prime is a microtransit service operated by SouthWest Transit, a regional transit provider. The service began operating in 2015 and was the first microtransit service of its kind in the state. SW Prime provides shared rides in Eden Prairie, Chaska, Chanhassen, Carver, Victoria, and Normandale Community College. Additional routes, added during the early years of the pandemic, serve MSP Airport (SW Prime MSP Airport); Shakopee, Mystic Lake Casino, the 494 corridor, Edina, and Mall of America (SW Prime Edge); and trips to access groceries/pharmacy (SW Prime Essential) and non-emergency medical needs (SW Prime MD) (SouthWest Transit, 2022).

Prior to the pandemic, SW Prime had an average of 378 daily SW Prime riders. Though the pandemic caused an immediate 75 percent drop in ridership, SW Prime introduced additional services including SW Prime MSP Airport and SW Prime Edge during the early years of the pandemic. Ridership on SW Prime has grown back faster than fixed route ridership and is currently at 80 percent of pre-pandemic levels. SouthWest Transit plans to continue SW Prime expansion with the introduction of electric vehicles, autonomous demonstrations, and mobility as service options (SouthWest Transit, 2021).

Metro Transit micro. In September 2022, the Met Council and Metro Transit introduced Metro Transit micro, a type of multi-passenger public transit service, that delivers app-based on-demand services to improve connections to existing transit services in parts of north Minneapolis. The service relies on minibuses to transport passengers within a 2.5 square mile area that includes parts of the Near North, Bryn Mawr, and Harrison neighborhoods in north Minneapolis and the edge of downtown Minneapolis (Mass Transit, 2022). This is a one-year transit program running from September 2022 through September 2023 (Brundidge, 2022).

Premium On Demand (POD) program. Metro Mobility offers a subsidized single-seat, on demand ride through the POD program. Under this program, a Metro Mobility certified customer pays the first \$5 of

a taxi or Transportation Network Company (TNC) fare. The Council then pays up to the next \$15. The customer is responsible for any remaining balance. POD hours in a community match Metro Mobility's hours in that community.

Metro Mobility has contracted with a local taxi provider for over 20 years to provide this service. The Council makes attempts with every contract renewal to attract other transportation providers to respond to the RFP. Insurance needs and the number of communities with unique service hours within the Metro Mobility service area have posed challenges to attracting suitable responses. Metro Mobility recently attempted to partner with a TNC to perform this service, but the TNC was unable to meet the needs outlined in the scope of work (A. Streasick, personal communication, January 19, 2023).

Minnesota Valley Transit Authority's (MVTA) Route 495. In 2016, Amazon opened a fulfillment center southeast of Minneapolis in the neighboring suburb of Shakopee. To help transport workers to the facility, the company partnered with the Confederation of Somali Community in Minnesota to run four coach buses a day out of the Cedar-Riverside neighborhood of Minneapolis. These coaches, which ran from late 2016 through late 2017, were largely replaced by MVTA Route 495, a suburban route connecting Shakopee, Burnsville, and the Mall of America, with stops in Savage, Mystic Lake Casino, and Amazon in Shakopee (Roper, 2017).

Route 495 opened in August 2016 with funding from MVTA, the state legislature, and Amazon. MVTA worked closely with area businesses to design the route. Amazon provides additional funding for a last-mile solution providing direct service to its fulfillment center and coordinated to work schedules. Select trips also provide access to Mystic Lake Casino (MVTA, 2018).

Ridership on MVTA Route 495 increased steadily between 2016 and 2019. Just under 18,000 riders took Route 495 in 2016, compared to over 114,000 riders in 2019. While the pandemic resulted in decreased ridership, the route had returned to 75 percent of pre-pandemic ridership by late 2021 (H. J. Pan, 2021).

Strategy 3. Leverage the Metro Transit app to establish a data clearinghouse

The Action Plan's third strategy focuses on leveraging the Metro Transit app to establish a data clearinghouse. This strategy was based in part on the planned integration of the Metro Transit app with several shared mobility platforms. It is important to note that not all stakeholders felt this strategy should be included in the Action Plan. While Metro Transit launched its mobile app in 2016 (Harlow, 2016), the app was not used to establish a data clearinghouse. This was due in part to the fact that the app was intended to function as a ticketing platform rather than a data clearinghouse.

Of the Action Plan's 10 strategies, Strategy 3 received the lowest rating in terms of priority (2.22 on a scale of 1-5, where 1 is not a priority and 5 is essential). However, the strategy is premised on the idea that an intermodal open data platform can offer benefits including improved rider experience and data to inform service provision and public policy. SMC stakeholders were therefore asked to consider progress toward such a platform between 2017 and 2022.

SMC stakeholders identified several factors that have limited progress toward an open regional data platform, including the following:

- Competition between private shared mobility providers creates a disincentive to share data.
- A lack of clarity about whether trip data are defined as private data under Minnesota statute slows data sharing across organizations.
- Different capabilities to collect and share data among providers, with Metro Transit and the City of Minneapolis among the few entities able to do so.

While progress towards an open regional data platform has been limited, survey respondents offered examples of advances in data sharing and transparency – both foundational to such a platform. Examples include the creation of a Shared Mobility Collaborative Data Sharing subcommittee, efforts to gain clarity about data sharing in state law, a requirement that some licensed providers agree to open application programming interface (API) usage by mobility as a service (MaaS) vendors in the market, and new data sharing efforts, such as the data sharing agreement between the Cities of Minneapolis and Saint Paul, Metro Transit, the MPRB, and the University of Minnesota in the 2022-2026 shared bike and scooter license agreements.

There is limited agreement across SMC stakeholders about the appropriate location of an open data platform. Just over half of survey respondents felt that the SMC should build the capacity to track and aggregate data, due to its role and relative independence in the shared mobility space. The remaining survey respondents felt that the SMC should *not* build this capacity, in large part because each entity would still need to prioritize and staff data collection and sharing activities internally.

Strategy 4. Stabilize and grow carsharing

Though Minnesota was an early adopter in carsharing, growth in the Twin Cities’ carsharing industry had stagnated by 2017. The Action Plan’s fourth strategy, therefore, focuses on the stabilization and growth of carsharing in the Twin Cities region.

Growth of Carsharing in the Twin Cities

The data show that despite challenges, the total number of vehicles in carsharing programs in the Twin Cities region increased between 2017 and 2022 (**Outcome Metric 4**). In 2017, carshare operators included HOURCAR with a fleet of approximately 60 cars, and Zipcar with a fleet of 30 cars (SUMC, 2017). In 2022, the Twin Cities region was served by three carsharing companies: HOURCAR, Turo, and ZipCar. HOURCAR also operates Evie Carshare, an all-electric shared mobility service providing one-way service between Minneapolis and Saint Paul.

In 2017, the region had just under 100 vehicles available. In 2022, the Twin Cities region had over 300 cars available via carsharing operators, though the approximate number of vehicles varies somewhat by source. The Shared-Use Mobility Center reports that in 2022, Turo operated 184 cars (142 in Minneapolis and 42 in Saint Paul); ZipCar’s fleet included 6 “round trip/return to hub” cars; and HOURCAR’s fleet included 42 “round trip/return to hub” cars (SUMC, 2022).

Evie Carshare’s fleet included over 120 semi-floating EVs as of December 2022 (HOURCAR, 2022c). The EV Spot Network, which currently includes 70 charging stations, is also expected to grow in the coming years. Table 6 presents metrics used to assess carshare growth.

Table 6. Growth of Carsharing in the Twin Cities

Metric	2017	2022
Number of vehicles	90	352
Number of operators	2 (HOURCAR and ZipCar)	4 (HOURCAR, ZipCar, Turo, Evie)
Type of services	Round trip	Round trip and one-way trip
Users	N/A	N/A

Innovation in Carsharing Services and Programs: Evie Community Carshare

Evie Carshare is perhaps the most prominent example of innovation and growth in carsharing in the Twin Cities between 2017 and 2022. The all-electric, one-way carsharing service, which launched in February 2022, is operated by HOURCAR under contract with the cities of Minneapolis and Saint Paul.

Evie Carshare is supported by a network of charging stations, planned and implemented through a public-private partnership involving the cities of Minneapolis and Saint Paul, HOURCAR, Xcel Energy, East Metro Strong, and the American Lung Association.

During Evie Carshare's first six months of operation, nearly 1,500 individuals used Evie's 101 cars to drive over 240,000 miles. HOURCAR estimates that Evie reduced 741 metric tons of greenhouse gas over this period (HOURCAR, 2022c).

Evie was developed to address environmental and transportation equity issues (Eldred, 2022). During its first six months, usage by members earning less than 50 percent of area median income accounted for 33 percent of total Evie usage. In addition, Evie trips qualify for reimbursement through Guaranteed Ride Home, a Metro Transit program that provides eligible commuters with reimbursement for transportation costs stemming from an emergency or unplanned change in work schedule.

State Tax Reform

A challenge to carsharing continues to be the high rental car tax rate in the Twin Cities. In 2021, Minnesota had the highest effective car rental excise tax rate in the country (Watson, 2021). Although some nonprofit carsharing providers are exempt from the motor vehicle rental fee paid by rental car companies (MnDOR, 2022), such providers are still subject to a 9.2 percent motor vehicle rental tax. Companion bills were introduced into the Minnesota House and Senate in 2019 to exempt carshare providers from the rental tax (Hubbard, 2019), but the bills did not pass.

Strategy 5. Expand and evolve bikesharing

The micro-mobility industry evolved considerably between 2017 and 2022. Station-based bikes were replaced by dockless bicycles and later e-bicycles, and the market for scooters increased dramatically. In 2017, no shared scooter operators existed in the Twin Cities region. By 2022, scooters were available in Minneapolis, Saint Paul, and many surrounding suburbs. Operators include Lyft, Lime, Spin, Veo, and Bird.

Thus, while the Action Plan’s fifth strategy calls for expanding and evolving bikesharing in the Twin Cities region, this section focuses on the expansion and evolution of micromobility in Minneapolis, Saint Paul, and across the Twin Cities region.

Expansion in Bikesharing in Minneapolis and Saint Paul

The data indicate that the region made progress towards in meeting the Action Plan’s goal of increasing the number of Nice Ride Minnesota bikes to 2,500 by 2022. Nice Ride, the region’s primary bikeshare provider, began operating in Minneapolis in 2010 and Saint Paul in 2011.

In 2017, Nice Ride had approximately 1,850 “classic” bikes, or bikes that are docked in stations (see Table 7) (**Outcome Metric 5**). Dockless bikes were introduced by Nice Ride in 2018 and replaced by electric bikes (or e-bikes) in 2020. According to data provided by stakeholders, there were a minimum of 1,800 bikes licensed in the City of Minneapolis and zero in the City of Saint Paul in 2022 (data from Danielle Elkins and David Peterson provided during the second workshop).⁶

Table 7. Statistics for Nice Ride Minnesota’s Bikesharing Network

Metric	2017	2018	2019	2020	2021	2022
No. of terminals	201	204	178	172	190	410
No. of bikes in a year	1,850	2,936	2,969			
No. of trips	460,295	412,423	358,707	229,077	267,653	262,830

Notes: Electric bikes were added to the fleet in 2020. Changes in data reporting in 2018 and 2020 affect available statistics across years. **Sources:** (Lyft NiceRide, 2021; NiceRide Minnesota, 2017)

Nice Ride operated bikesharing in Saint Paul from 2011-2018, leaving after the city declined to enter into an exclusive agreement in 2018 (H. Pan, 2021). The city then entered into an agreement with Lime, which was contracted to provide a minimum of 500 bicycles within a month of launching. However, the agreement ended after Lime shifted to exclusively providing scooters in 2019 (Roper, 2019).

⁶ In the City of Minneapolis, the largest number of E-bikes and Classic bikes deployed and available in a given month in 2022 was 1,108 and 969, respectively (Email from Max Gonzalez, Feb16, 2023). Detailed information on the location of the start of bike trips and the end of bike trips is available in Appendix D.

Expansion in Scootersharing in Minneapolis and Saint Paul

The expansion of scootersharing represents a success of shared mobility between 2017 and 2022. While no scootersharing services existed in 2017, the Twin Cities had just under 2,300 scooters in 2022.

Both Minneapolis and Saint Paul were active in expanding scootersharing. The City of Minneapolis launched a series of scootersharing pilots beginning in 2018. The city’s first pilot, which ran from July to November, involved 400 shared scooters from Bird and Lime and established licensing agreements with providers for sharing data and ensuring data privacy.

In 2019 and 2020, scootershare providers in Minneapolis were approved to deploy 2,500 total scooters each year. Providers in 2019 included Lime, Lyft, and Spin, while providers in 2020 included Lyft and Bird. City activities focused on the analysis of scooter data – particularly following the onset of the COVID-19 pandemic in 2020 (City of Minneapolis, 2022b). In 2021, the city developed a public-facing scooter dashboard to monitor compliance with the program’s equity goals. During this year, the pilot included 2,500 shared scooters from providers Lyft and Bird.

Table 8 provides statistics on ridership in Minneapolis’ scootershare pilots from 2018 to 2021. Between 2018 and 2019, ridership expanded considerably: total number of scooters grew to 2,500, total number of trips grew from 225,543 trips in 2018 to 1,040,551 in 2019, and total trip duration increased from approximately 4.2 million minutes to over 14 million minutes. Ridership fell during 2020, in part due to a shortened season during the first year of the pandemic. Providers Lyft and Bird deployed approximately 1,000 over the season, despite being approved to deploy 2,500.⁷ While ridership in 2021 remained below 2019 levels, the expansion is significant given no shared scooters existed in the Twin Cities region in 2017.

Table 8. Motorized Foot Scooter Trips in Minneapolis (2018-2022)

Metric	2018	2019	2020	2021	2022
Max No. of scooters licensed	400	2,500	2,500	2,500	3,000
No. of scooters deployed			1,000	1,000	2,500
No. Trips	225,543	1,040,551	143,975	441,724	600,000
Total Trip Duration (min)	4,234,623	14,367,903	2,876,473	6,847,107	
Total Trip Distance (miles)	302,327	1,154,607	320,319	745,865	

Source: Motorized Foot Scooter Trips in 2018, 2019, 2020, and 2021. Data for 2022 and the number of scooters deployed were provided by the City of Minneapolis.

⁷ Detailed information on the location of the start of scooter trips and the end of scooter trips is available in Appendix D.

The City of Saint Paul operated its first scootersharing pilot in 2018. Providers Lime and Bird were each permitted to deploy 150 scooters between late July and November. In 2019, three providers – Lime, Bird, and Spin – were permitted to operate under new regulations that capped the number of downtown scooters at 450, or 150 per provider, and required 30 percent of each fleet to be placed in racially-concentrated areas of poverty. During this year, scooters were also placed in the Minnesota Capitol Complex for the first time (Allen, 2019).

Other Efforts to Expand Bikesharing and Scootersharing

Additional efforts to expand bikesharing and scootersharing include pilot programs in several suburban cities as well as innovative partnerships to expand such programs across jurisdictions.

New pilot programs. With regards to bikesharing, both Edina and Golden Valley launched a dockless bikesharing pilot program operated by Lime in 2018. In Edina, the company deployed 134 unique dockless bikes (654 riders, 1.93 trips/rider) and 272 unique scooters (922 riders, 2.02 trips/rider) in 2018. Following a national trend in the popularity of e-scooters, Lime discontinued bikesharing services in 2019. In Edina, concerns related to regulation, infrastructure, complaints, and safety led the city to discontinue authorizing micro-mobility services after the conclusion of the 2-year pilot (City of Edina, 2022).

Several cities identified as opportunity growth areas in the Action Plan have begun piloting shared scooter programs. Bird, a provider that has prioritized growth in suburban areas, began operating in Bloomington, Brooklyn Park, Hopkins, and St. Louis Park in 2022 (H. Pan, 2022).

Innovative partnerships. In 2021, Minneapolis and Saint Paul worked collaboratively with the Minneapolis Park and Recreation Board and the University of Minnesota to issue a joint solicitation for bike and scooter programs (Nguyen, 2021). The regional approach was designed to reduce duplicative efforts and promote cohesive travel across jurisdictions (Harlow, 2021). Partners developed a joint Memorandum of Understanding and collaborated in the review and scoring of proposals, which covered 15 topic areas including vendor profile; user compliance; workforce, hiring, and labor plan; data; and equity.

Each partner developed their own contracts and program management. This RFP resulted in the City of Minneapolis licensing Lyft, Lime, Veo, Bird, and Spin to provide electric scooters, for a maximum of 3,000 scooters for 2022. The City of Saint Paul licensed two vendors - Lime and Spin - for the 2022 season. New programs in 2022 also included adaptive vehicle programs and electric cargo bike pilots (City of Minneapolis, 2022a).

Strategy 6. Elevate vanpooling as a viable option for commuters

The sixth Action Plan strategy focuses on elevating vanpooling as a viable option for commuters. In 2017, vanpooling commuters were served by Metro Vanpool, a regional program that is administered by Metro Transit and subsidized by the Metropolitan Council. At the time, the vanpool program included approximately 500 participants and 70 vehicles (SUMC, 2017).

Table 9 shows the total annual vanpool ridership statistics (**Outcome Metric 6**). This table shows that total ridership in Metro Transit’s vanpool program was declining prior to the pandemic, decreasing by 29 percent between 2017 and 2019. Ridership continued to decline in the first and second years of the pandemic, with a slight increase in the first half of 2022. The decline in ridership is attributed in part to (i) a lack of awareness and available information about the program, (ii) high costs, and (iii) complex registration procedures and participation guidelines that led to confusion for riders (ICF, 2022b).

Table 9. Total Ridership Statistics (2017-2022)

Metric	2017	2018	2019	2020	2021	2022 (Jan – Jun)
Average no. of vans	72	68	58	40		
Annual passenger trips	149,904	114,833	106,608	53,224	51,888	28,854 (+9%)
Vehicle revenue miles	1494,790	1,216,650	1,122,862	746,278		
Annual passenger miles	5,408,430	4,260,369	3,927,483	2,089,280		

Source: Metropolitan Council National Transportation Database Vanpool Ridership Data. Data after 2020 comes from Metropolitan Council Annual Year End & Quarterly Ridership Reports

In 2022, the Met Council initiated an evaluation of Metro Vanpool to understand gaps in the program, identify areas of improvement, and develop strategies to increase vanpool ridership across the region (ICF, 2022b). The evaluation resulted in 28 recommendations in areas including program administration, employer relations, software, equity, and marketing that will be crucial for the future of vanpools in the region. The Met Council is currently reviewing the evaluation recommendations to determine which changes to incorporate into the program and how those can be accomplished. Program changes should occur in 2023 and 2024 and staff hope that streamlining the program and improving outreach will increase utilization.

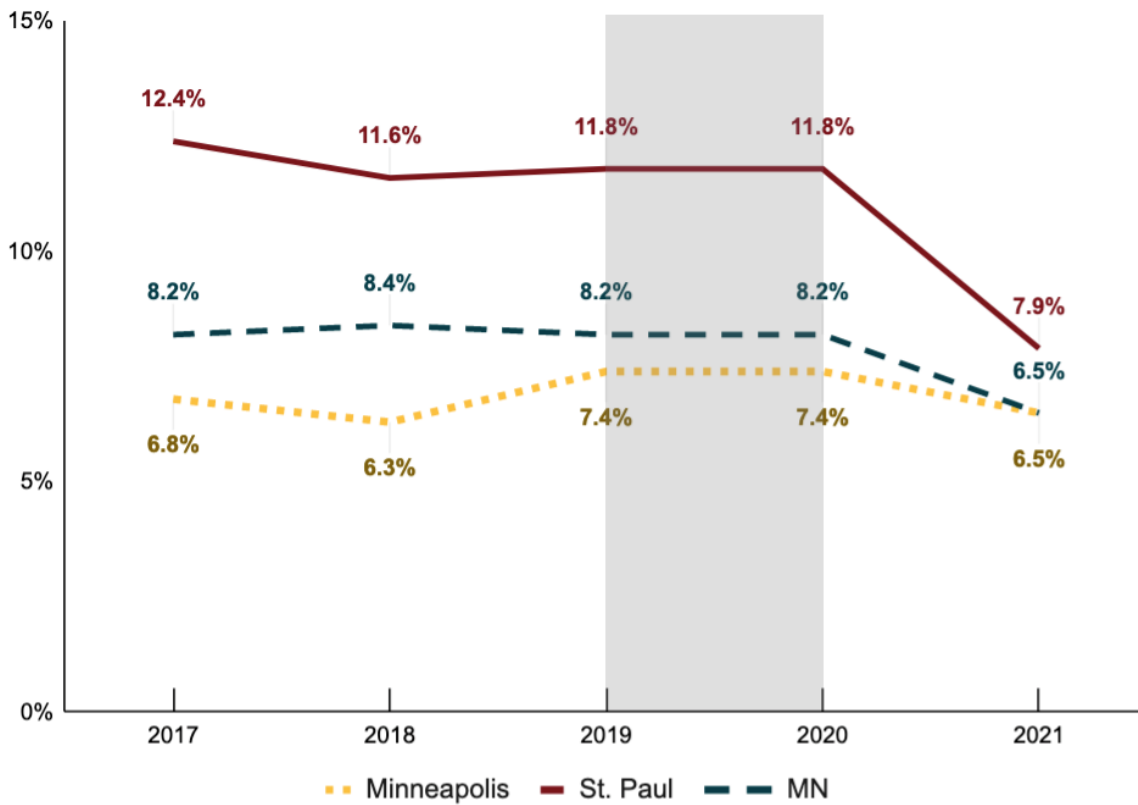
Strategy 7. Develop and implement new carpooling and ride-splitting solutions

The Action Plan's seventh strategy involves developing and implementing new solutions for carpooling and ride-splitting by leveraging new app-based technologies. Between 2017 and 2012, there were limited initiatives that focused on this strategy. As a result, outcome metrics related to the number of new providers, pilot projects, or new users added through new carpooling or ride-splitting solutions are difficult to obtain.

One exception is a Dakota County pilot with Lyft. In March 2019, Dakota County Social Services began a pilot with Lyft to transport individuals with Medicare and Medicaid Services home- and community-based services waivers to employment and community-based programs. The pilot began with 23 riders and grew to 435 riders by May 2020 (Minnesota Council on Transportation Access, 2020).

While limited data are available, annual data on individual commuting behaviors in Minneapolis, Saint Paul, and the Twin Cities region are available via the American Community Survey (**Outcome Metric 7**). Figure 7 shows the percentage of workers in Minneapolis, Saint Paul, and the Twin Cities region who report carpooling to work in the week prior to the survey. The data show that carpooling patterns remained relatively stable prior to the onset of the pandemic, after which levels of carpool decreased considerably in Saint Paul and slightly less so in Minneapolis and in the region as a whole.⁸

⁸ Notably, ACS 1-year estimates are similar to those obtained in the Met Council's 2018-2019 Travel Behavior Inventory. These data show that 6.7 percent of Minneapolis respondents carpool to work, 12.1 percent of Saint Paul residents carpool to work, and 8.9 percent of regional respondents carpool to work (MetCouncil, 2022c).



Source: American Community Survey 1-year estimates for 2017, 2018, 2019, and 2021. At the time of this writing, 2020 data were not yet available.

Figure 7. Percent of Workers Carpooling to Work (2017-2021)

Strategy 8. Concentrate efforts around integrated mobility hubs

The Action Plan recommends the implementation of mobility hubs at six sites with high-quality transit services and underutilized surface parking. These sites include Saint Paul's Union Depot and Capitol/Rice stations along the Green Line and the Warehouse District, Target Field, and Nicollet Mall stations that serve both the Blue and Green Lines as well as at the Minneapolis' Chicago-Lake Transit Center. By 2022, mobility hubs with features supporting shared mobility existed at or within several blocks of five of the six sites identified in the Action Plan (**Outcome Metric 8**).

While not calling them 'mobility hubs', Minneapolis and Saint Paul located their EV Spot Charging hubs on or near transit lines, where possible, to facilitate shared-use mobility connections. The EV Spot Charging hubs have two charging heads reserved for Evie Carshare EVs and two charging heads for use by the public (see Strategy 1).

As of 2022, EV Spot electric-vehicle charging stations exist near four of the six light-rail stations identified in the Action Plan (Union Depot, Capitol/Rice, Chicago-Lake, and Target Field) and within several blocks of the remaining two light-rail stations (Warehouse District and Nicollet Mall).⁹

Implementation or Progress on Implementing Integrated Mobility Hubs

There is regional progress in the implementation of integrated mobility hubs including the Mobility Hub Planning Guide, the Minneapolis mobility hub pilot project, and funding through the 2022 Regional Solicitation.

Mobility Hub Planning Guide. The Met Council and Metro Transit created a planning guide to support local and regional stakeholders to plan and implement mobility hubs (Met Council, 2023). The guide was developed in 2021 and 2022, and involved 20 regional stakeholders including cities, counties, regional transit and shared mobility providers, and state agencies among others. The plan encourages a strategic and coordinated system of mobility hubs, documents various mobility hub design and implementation options, and provides guidance for stakeholders at every stage of the project (planning, designing, implementing, and managing). Lastly, the guide also identifies 50 regionally significant hubs that are crucial for achieving regional goals.

Minneapolis mobility hub pilot project. Starting in 2019, Minneapolis pursued a formal Mobility Hub pilot project across the city starting with 12 locations in North Minneapolis, South Minneapolis, and Northeast Minneapolis. In 2020, the City doubled the number of mobility hub locations and also introduced community ambassadors at select mobility hubs to help create more welcoming spaces, engage mobility users, and enhance perceptions of safety (Minneapolis Public Works, 2020; Minneapolis Public Works & The Musicant Group, 2021).

⁹ Evie Spot Charging station data available at:

<https://www.arcgis.com/home/webmap/viewer.html?webmap=79a5a12972c14177ab1320262dba251b&extent=-93.3922,44.8929,-92.9706,45.0362>

By fall of 2022, Minneapolis had over 30 mobility hubs in North Minneapolis (N=8), Northeast Minneapolis (N=4), Downtown (N=8), Cedar-Riverside (N=5), and South Minneapolis (N=7). The city continues to test new mobility hub locations and features, including new types of infrastructure and technologies, updated signage and wayfinding, and refine the ambassador program's structure and focus (City of Minneapolis, 2022a). This year, Minneapolis was also selected to receive an AARP Community Challenge Grant to increase accessibility, comfort, and engage with older adults around new mobility services at mobility hubs throughout the city (City of Minneapolis, 2022c). There are Nice Ride docks and dedicated shared scooter parking at every mobility hub location and there are EV Spot Charging hubs within a block and a half of ten mobility hub locations. The City plans to continue expanding its mobility hub program and adding new locations in 2023 and 2024.

Future funding for mobility hubs. The 2022 Regional Solicitation includes funding for regional mobility hubs as part of the Unique Projects category. In particular, it includes an award of \$1.6 million for Metro Transit as part of a project that will cost \$2 million. Metro Transit (project lead) and the City of Minneapolis (key subrecipient) will work in close coordination in this project to support the development of regional mobility hubs through multimodal infrastructure improvements, technologies, resilience infrastructure, and placemaking/placekeeping elements. Project locations include (1) Brooklyn Center Transit Center, (2) Sun Ray Transit Center, (3) Maplewood Mall Transit Center, (4) Penn Ave N and Lowry Ave N - Mpls, (5) 26th Ave NE and NE Central Ave - Mpls, (6) Lake Street Corridor - Mpls,¹⁰ and (7) Cedar/Riverside - Mpls.

¹⁰ Either Hiawatha/Lake, I-35 and Lake, or Chicago/Lake.

Strategy 9. Realign CMAQ funding and improve TDM outcomes

The Action Plan’s ninth strategy calls for realigning the Regional Solicitation Process and use of CMAQ funds to better support shared mobility and improving Transportation Demand Management (TDM) outcomes.

Changes to Regional Solicitation Process

The 2022 Regional Solicitation included an application category for transit and TDM projects. This category includes BRT projects, transit expansion and modernization projects, and TDM projects (Met Council, 2022).

The 2022 Regional Solicitation also contained a new funding category called “Unique Projects.” A Policy Work Group, responsible for making recommendations for implementation, developed a category purpose, goals and outcomes, evaluation criteria, measures, and weighting, funding levels, and a timeline for the application process. This category better suits shared mobility and has a shorter timeframe (two instead of four years). The category was adopted to recognize new types of transportation that do not fit within the traditional funding, viewing them as a complement to the current transit system rather than competitors. The Unique Projects category was adopted with the following six evaluation criteria: innovation, environmental impacts, racial equity, multimodal communities, regional impact/scalability, and partnerships. Submittals were evaluated by the Policy Work Group to submit a funding recommendation to the Transportation Advisory Board (TAB) as part of the Regional Solicitation project selection process. Projects were approved at the end of 2022.

Progress on Improving TDM Outcomes

Across the Twin Cities region, there is considerable interest in improving TDM outcomes and many cities and counties have implemented TDM-related strategies and policies (ICF, 2022a). A recent study of existing ordinances, policies, and practices that affect the implementation of TDM strategies in the region finds that as of 2022, four cities in the Twin Cities region have formal ordinances that require new developments to implement TDM strategies or offer TDM services (**Outcome Metric 9**).

Both Minneapolis and Saint Paul approved new TDM ordinances in 2021. The ordinances require large residential developments and some smaller nonresidential developments to produce TDM plans. Tiered point systems are used in both cities to differentiate requirements across uses and development sizes (Bernard & Wittenberg, 2021; ICF, 2022a).

Two other cities – both identified as regional opportunity areas in the Action Plan – have adopted TDM ordinances for nonresidential development. The City of Bloomington’s ordinance, first drafted in 2009 and revised in 2015, requires the owners of new, nonresidential developments or additions over 1,000 square feet to develop a Traffic Demand Management Plan for their proposed development. The City of Eden Prairie’s ordinance requires that any development application for office or light industrial uses in the city’s transit-oriented development or in town center districts must include a TDM plan (ICF, 2022a).

The Metropolitan Council is currently leading a Regional Travel Demand Management Study, which will generate a set of TDM strategies for the 2050 Transportation Policy Plan. This study aims to help the region better understand how TDM can support regional goals, identify opportunities and challenges, and help stakeholders like the Met Council determine how best to support TDM (MetCouncil, 2022a).

Despite widespread interest in improving TDM outcomes, there are a lack of TDM goals and objectives at a regional level. As a result, there has been limited coordination in reporting or evaluating progress across organizations or the region. Organizations track and monitor progress using different indicators, making it difficult to assess regional progress toward improving TDM outcomes (ICF, 2022a).

Strategy 10. Optimize parking and street space to prioritize shared mobility

The final strategy described in the Action Plan involves optimizing parking and street space in support of shared mobility. The requested metrics for this strategy, including the parking revenue dedicated to supporting shared mobility and the number of employers participating in shared mobility programs, are unavailable. This section, therefore, describes activities that align with this strategy.

There are several examples of municipal reforms to optimize parking and street space to prioritize shared mobility. In 2022, the City of Hopkins issued a draft of its revised zoning regulations (City of Hopkins, 2022). Among other changes, these regulations prioritize shared mobility by updating motor vehicle parking ratios, reducing required vehicle parking spaces for parking spaces used by car-share vehicles or bike-share program facilities, and setting standards for bike parking.

In 2018, the Saint Paul Planning Commission initiated a study to update parking provisions in the zoning code. This study examined parking minimums, which had previously been calculated to ensure empty parking spaces and did not account for non-vehicle travel. In 2021, Saint Paul updated its TDM ordinance to eliminate minimum parking requirements and required properties with more than 25 residential units or 20,000 square feet to engage in activities to encourage non-vehicular travel (Saint Paul, 2022).

There have been multiple changes in the City of Minneapolis to optimize parking and street space in support of shared mobility. In addition to updates to its TDM ordinance, in 2020 the city began developing a Street Design Guide to inform the planning and design of all future street projects. This guide contains a mode shift goal of having three of every five trips taken by walking, biking, or transit by 2030 (City of Minneapolis, 2021).

The Minnesota Department of Transportation (MnDOT) has also funded several research projects that consider programs, policies, and goals for the ABC Ramps - three large parking ramps located in downtown Minneapolis, managed by the City of Minneapolis, and owned by MnDOT. In 2019, the ABC Ramps instituted a new carpool parking rate structure and added “Mobility Hub” to its name to reflect the various transportation options, which include e-charging stations, as well as bike lockers, racks, and showers (MnDOT, 2019).

2.4 RECOMMENDATIONS AND NEXT STEPS

Over the past five years, transit and shared mobility providers have made considerable - though uneven - progress growing shared mobility in the Twin Cities region. The analysis yields several recommendations for the Action Plan over the next five years.

First, because the landscape for shared mobility services has changed dramatically over the past five years, one recommendation is for SMC members to revisit the strategies identified in the Action Plan to determine the importance of each strategy for the next five years.

During a second workshop to review findings from the analysis, SMC members were therefore asked whether to keep each strategy, keep each strategy with changes, or drop the strategy. Figure 8 shows survey results for the 10 SMC members who participated in the survey. This figure shows that all respondents felt that concentrating efforts around mobility hubs remains an important strategy for growing shared mobility. Respondents generally supported keeping Strategy 1 (growing shared mobility in support of the transit network), Strategy 4 (stabilize and grow carsharing), Strategy 5 (expand and evolve bikesharing), Strategy 9 (realign CMAQ fundings and improve TDM outcomes), and Strategy 10 (optimize parking and street space).

There was less agreement about whether to keep or drop strategies related to carpooling/ride-splitting, piloting flexible transit that focuses on reverse commute challenges, and vanpooling. All participants felt that the Action Plan should drop the strategy focused on establishing a data clearinghouse via the Metro Transit app.

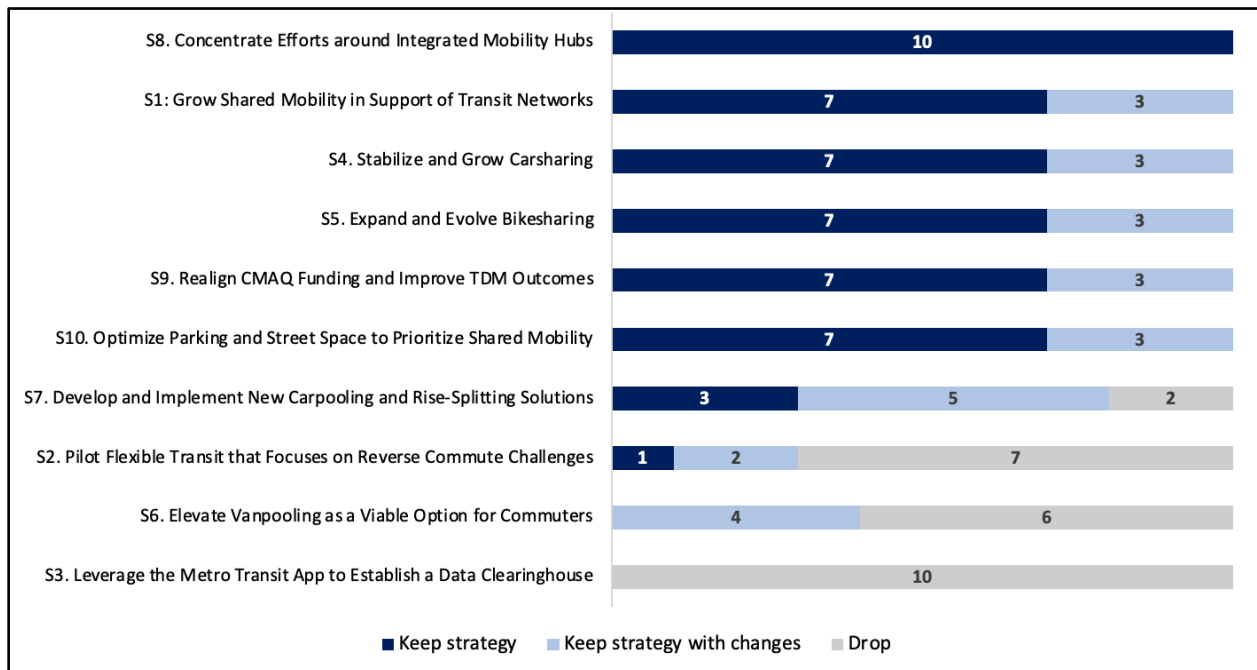


Figure 8. Results of survey conducted in the second workshop

Second, variation in how providers measure outcomes, as well as the varying capacity to collect and analyze outcome data, hinders assessments of regional progress. This is perhaps best illustrated by Goal 2 (Ensuring the shared mobility has the same broad user base as transit). It is clear that providers have engaged in a wide range of activities to track the characteristics of users, develop equity goals and metrics, engage a wide range of communities in developing and implementing transit and shared mobility programs, and target programs to traditionally underserved areas and populations. The breadth of activity in support of this goal suggests considerable progress in meeting the goal. However, few providers are measuring or tracking outcomes in the same way, making it difficult to assess whether or how the region has met the goal of ensuring a broad user base for shared mobility.

A second recommendation is for SMC to identify a standard core set of metrics involving shared mobility that can be tracked over the next five years. This might involve identifying and implementing new data collection efforts for particular metrics, or standardizing the measures used in existing data collection efforts.

Third, although some providers have a strong capacity to collect and analyze data, and/or have prioritized such efforts, others have not. The result is gaps in knowledge about whether and how some providers are meeting the goals and strategies of the Action Plan. A final recommendation is for SMC to either support new data collection and increased capacity for providers who have not prioritized and/or lack capacity in data collection, or expand upon existing data collection efforts. For example, Metro Transit might be able to provide additional information on shared mobility efforts by embedding new questions into existing surveys or reporting efforts from municipalities.

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APPENDIX A: OURCOME METRICS AND DATA SOURCES

Metric	Description	Data Source
1	Average per capita daily vehicles miles traveled in Minneapolis, Saint Paul, and Twin Cities region	MnDOT, Office of Transportation System Management. Vehicle Miles Traveled Reports. VMT by Route System in each City, within each County (2017-2021). MN Demographic Center, Historical estimates of Minnesota and its cities' and townships' population and households, 2000-2021 file (2017-2021).
2	Total Annual Ridership on New BRT Lines	Met Council, Quarterly and Year End Ridership Reports (2017-2022)
3	Total Annual Ridership on Light Rail Lines	Federal Transit Administration, Federal Transit Database (2017-2021). Met Council, Quarterly and Year End Ridership Reports (2017-2022).
4	Total number of vehicles in carsharing programs in the Twin Cities region	SUMC. (2022). Metro Area Profiles: Minneapolis-St. Paul-Bloomington, MN-WI. Shared-Use Mobility Center.
5	Total number of bikes in NiceRide program in City of Minneapolis	Lyft NiceRide. (2021). System Data SUMC. (2022). Metro Area Profiles: Minneapolis-St. Paul-Bloomington, MN-WI. Shared-Use Mobility Center.
6	Total number of scooters in the City of Minneapolis	City of Minneapolis. (2022). Scooter data.
7	Total annual vanpool ridership in the Metro Transit vanpool program	Metropolitan Council National Transportation Database Vanpool Ridership Data. Met Council, Quarterly and Year End Ridership Reports (2021-2022).
8	Percent of workers who carpool to work in Minneapolis, Saint Paul, and Twin Cities region	American Community Survey 1-year estimates for 2017, 2018, 2019, and 2021.
9	Mobility hubs with features supporting shared mobility at six sites identified in the Action Plan	Mobility Hub Planning Guide Minneapolis mobility hubs pilot project 2022 Regional Solicitation - List of approved projects
10	Number of cities with formal ordinances that require new developments to implement TDM strategies or offer TDM services	Met Council Regional Travel Demand Management Study ICF (2022)

APPENDIX B. SURVEY QUESTIONNAIRE

Assessing Progress on the Twin Cities Shared Mobility Action Plan

In 2017, the Shared-Use Mobility Center worked alongside more than seventy regional stakeholders to develop the Twin Cities Shared Mobility Action Plan. Many of those stakeholders then formed the Twin Cities Shared Mobility Collaborative (SMC) to implement the goals and strategies in the Action Plan.

The SMC, which is now state-wide, recently commissioned the University of Minnesota's Center for Transportation Studies and Humphrey School of Public Affairs to evaluate progress during the first five years of the Action Plan (2017-2022). Just as stakeholder input was vital to developing the Action Plan, it will be similarly critical in helping the SMC understand what has been accomplished and what must be done in future years to grow shared mobility across the region and the state.

The information you provide is being collected by researchers at the Humphrey School and will remain anonymous. The findings will be used to help the SMC better understand progress to date, identify next steps, and provide support to guide future actions.

General Questions

Please let us know what organization you represent: _____

The first set of questions is about the goals and strategies outlined in the Twin Cities Shared Mobility Action Plan.

Question 1. On a scale from 1-5, where 1 = not a priority and 5 = essential, what priority would you place on the following goals? (1 = not a priority; 2 = low priority; 3 = medium priority; 4 = high priority; 5 = essential)

1. Goal 1: Shifting households away from single-occupant vehicles and toward transit and shared mobility as the region grows
2. Goal 2: Ensuring that shared mobility programs are adapted to serve the same broad user base that makes up public transportation ridership

Question 2. Are there any additional high-level goals that the Twin Cities Shared Mobility Collaborative should adopt and prioritize? If so, please describe those goals.

Question 3. On a scale from 1-5, where 1 = not a priority and 5 = essential, what priority would you place on the following strategies? (1 = not a priority; 2 = low priority; 3 = medium priority; 4 = high priority; 5 = essential)

1. Strategy 1: Grow shared mobility in support of the transit network
2. Strategy 2: Pilot flexible transit pilot programs that focus on reverse commute challenges
3. Strategy 3: Leverage the metro transit app to establish a data clearinghouse
4. Strategy 4: Stabilize and grow carsharing
5. Strategy 5: Expand and evolve bikesharing
6. Strategy 6: Expand vanpooling as a viable option for commuters
7. Strategy 7: Develop and implement new carpooling and ride-splitting solutions
8. Strategy 8: Concentrate efforts around integrated mobility hubs
9. Strategy 9: Realign CMAQ funding and improve of TDM outcomes
10. Strategy 10: Optimize parking and street space to prioritize shared mobility

Question 4. Are there additional strategies that the Twin Cities Shared Mobility Collaborative should adopt and prioritize? If so, please describe those strategies here.

The second set of questions is about the successes and challenges in attaining the SMC Action Plan goals over the past five years (2017-2022)

Question 5. How has the pandemic affected your organization's ability to pursue or meet transit and shared mobility goals?

Question 5a. Are you changing the way your organization is pursuing or meeting transit and shared mobility goals for the post-pandemic future? If so, how are you changing those methods?

Question 6. What have been your organization's **greatest successes in shifting households toward transit and shared mobility** over the past five years?

Question 7. What have been the **biggest non-pandemic-related challenges to shifting households toward transit and shared mobility** for your organization over the past five years?

Question 8. What have been your organization's **greatest successes in ensuring that shared mobility programs are adapted to serve a broad user base** over the past five years?

Question 9. What have been the **biggest non-pandemic-related challenges in ensuring that shared mobility programs are adapted to serve a broad user base** for your organization over the past five years?

The third set of questions is about data sharing and data transparency.

Question 10. What barriers to data sharing or data transparency have emerged over the past 5 years?

Question 11. Has your organization participated in any activities to promote data sharing or data transparency in the past five years? (For example, a new data sharing agreement with another agency or incorporating an open API on a new mobility app). If so, please describe the activities here.

Question 12. Currently, the Shared Mobility Collaborative does not track or aggregate data about transit or shared mobility in the Twin Cities region. Should the SMC prioritize building this capacity internally? [Yes/No]

Why or why not?

[If yes] What would your organization need from SMC in order to provide shared mobility data on a regular basis?

The final set of questions is about the role of the Shared Mobility Collaborative in implementing the Twin Cities Shared Mobility Action Plan.

Question 13. What are the current strengths of the Shared Mobility Collaborative?

Question 14. What should the Shared Mobility Collaborative do differently over the next five years?

Question 15. Is there anything else you would like to share about your organization's work on shared mobility over the past five years, the Shared Mobility Collaborative, or the Twin Cities Shared Mobility Action Plan?

APPENDIX C. PROPOSED AND FINAL METRICS

GOAL 1. Shift households away from single-occupant vehicles and toward transit and shared mobility as the region grows

Proposed Metric or Implementation Measure	Metric or Implementation Measure used in Progress Report
Total number of cars on the road in Twin Cities Region, in City of Minneapolis, and in City of Saint Paul (Annual measure, 2017-2022)	All vehicles registered in the seven-metro county area in 2017 and 2021, by county.
	Annual trends in revenues from the motor vehicle sales tax (MVST) from 2017 to 2021, at the state level.
	Average daily vehicle miles traveled per person in Minneapolis, Saint Paul, and the Twin Cities region (Annual measure, 2017-2022) (Outcome Metric 1)
Number of new daily transit riders added through new capital rail projects and improvements to BRT and rapid buslines (Annual measure, 2017-2022)	Total annual BRT ridership (Annual measure, 2017-2022) (Outcome Metric 2) Total annual ridership on light rail lines (Annual measure, 2017-2021) (Outcome Metric 3)
Number of total vehicles available in one-way carsharing programs in the 10-city area (Annual measure, 2017-2022)	Number of total vehicles in carsharing programs in the Twin Cities region (2017 and 2022) (Outcome Metric 4)
Number of bikeshare bikes (total potential) available in Nice Ride MN (Annual measure, 2017-2022)	Number of bikeshare bikes available in Nice Ride MN (Annual measure, 2017-2022) (Outcome Metric 5)
Number of scooter-share scooters available (Annual measure, 2017-2022)	Number of scootershare bikes available in Minneapolis and Saint Paul (Annual measure, 2018-2022) (Outcome Metric 6)
Number of daily vanpool users (Annual measure, 2017-2022)	Total annual vanpool ridership in the Metro Transit vanpool program (Outcome Metric 7)
Number of microtransit and ride-splitting users added through new pilot projects (Annual measure, 2017-2022)	Unavailable

GOAL 2. Ensure that shared mobility programs are adapted to serve the same broad user base that makes up public transportation ridership

Proposed Metric	Metric used in Progress Report
Percent of shared-mobility commute trips using MetCouncil, city, or county-programs within 10-city area that serve jobs that employ a large number of low-wage workers	Metrics vary, and include: % BIPOC riders or members, % riders of racial and/or ethnic minority groups, % with disability.
Percent of active users in shared mobility programs from households earning less than 80% of AMI	Metrics vary, and include: % with annual HH income below \$60,000, \$50,000, and median income of riders
	Metrics vary and include location of shared mobility services in traditionally underserved areas.

Strategy 1. Grow shared mobility in support of transit network

Proposed Metric	Metric used in Progress Report
Average number of daily transit riders using new capital rail lines and Bus Rapid Transit/rapid bus lines (Annual measure, 2017-2022)	Total Annual Ridership, by Transit Provider (2017-2022) Total Annual Ridership on BRT Lines (2017-2021)
	% of transportation terminals providing two or more modes in Minneapolis/Saint Paul area
Monetary amount invested by Metro Transit in support of growing shared mobility	
Piloting program targeting Metro Mobility users to examine cost savings	
Proactively establishing autonomous vehicle policies and demonstration programs to ensure they align w/transit investments	

Strategy 2. Pilot flexible transit that focuses on reverse commute challenges

Proposed Metric or Implementation Measure	Metric or Implementation Measure used in Progress Report
Number of, and monetary amount allocated to, city pilot programs in focused on flexible transit and reverse commute challenges (2017-2022)	Qualitative description of pilot projects focused on flexible transit and/or reverse commute options
Number of, and monetary amount allocated to, pilot programs through Metro Transit or other regional transit providers focused on flexible transit and reverse commute challenges (2017-2022)	
Number of employers engaged independently or via Metro Transit/regional transit provider in reverse-commute ridesharing program, Twin Cities Region	
Monetary amount invested by Metro Transit in support of flexible transit focusing on reverse commute challenges, including: Monitoring or encouraging reverse-commute ride-sharing programs; Integrating corporate shuttle/rideshare service with public transit routes and schedules; Encouraging electrification of vehicles for reverse-commute rideshare programs.	
Monetary amount invested by municipalities in pilots, programs, or other funding to support suburban demand-responsive transit and first/last mile connections between 2017-2022, for 10 cities	

Strategy 3. Leverage the metro transit app to establish a data clearinghouse

Proposed Metric or Implementation Measure	Metric or Implementation Measure used in Progress Report
Integration of Metro Transit app with shared mobility platforms between 2017-2022 (qualitative)	Qualitative analysis of barriers to a regional data clearinghouse, assessed via workshop and survey responses
Number of new data sharing efforts, as measured by new partnerships between municipalities and TNCs related to data sharing/data use, or the adoption of MOUs related to data sharing across agencies	Examples of new data sharing efforts
Qualitative description of efforts (such as monetary resources devoted, programs initiated, activities conducted) by Metro Transit to support a data clearinghouse	Examples of efforts by Metro Transit to support data sharing
Qualitative description of efforts by 10 cities to support a data clearinghouse	Examples of efforts by cities to support data sharing
Qualitative description of efforts by regional providers or municipalities to: Adopt Memos of Understanding related to data sharing; Exploring 'data collaborative' and 'trusted broker' models of Columbus, Ohio and Seattle, Washington; or Continued convening of Smart Cities working group	

Strategy 4. Stabilize and grow carsharing

Proposed Metric or Implementation Measure	Metric or Implementation Measure used in Progress Report
Total number of vehicles in carsharing programs in Twin Cities Region (Annual measure; 2017-2022) (HourCar, Zipcar)	Total number of vehicles in carsharing programs in Twin Cities Region (Annual measure; 2017-2022) (Approximate numbers via SUMC)
Average number of trips/vehicle for each provider (Annual measure; 2017-2022)	
Number of cities implementing municipal reforms or number of municipal reforms related to carsharing between 2017-2022 (descriptive)	
Usage fee revenue invested to support growth of shared mobility	
Number of on-street parking spaces for carsharing (annual measure; 2017-2022)	
Qualitative analysis of municipal reforms related to carsharing between 2017-2022 within the 10-city area, including: tax reforms, support for on-street carshare parking, carsharing w/city-owned vehicles	Qualitative analysis of state tax reforms related to carsharing between 2017-2022
Public and private-sector innovations related to carsharing in the Twin Cities metro region between 2017-2022, such as: RFP/RFQ to support carsharing in disadvantaged communities, use of Volkswagen Settlement funds to support EV carsharing in disadvantaged communities, public/private-sector led pilot programs involving one-way carshare solutions, private sector innovations.	Public and private-sector innovations related to carsharing in the Twin Cities metro region between 2017-2022: public/private-sector pilot programs involving one-way carshare solutions and/or support for carsharing in disadvantaged communities.
Development and implementation of annual survey by Metro Transit to assess where carshare services are being provided and to whom (zip code, income, race of members)	

Strategy 5. Expand and evolve bikesharing

Proposed Metric or Implementation Measure	Metric or Implementation Measure used in Progress Report
Number of bikes in NiceRide bikesharing program (Annual measure; 2017-2022)	Annual number of bikes (2017-2019) in NiceRide bikesharing program in Minneapolis; Annual number of NiceRide bikesharing terminals in Minneapolis (2017-2022); Annual number of NiceRide trips in Minneapolis (2017-2022)
Number of bikes in other bikesharing programs in Twin Cities region (Annual measure; 2017-2022)	
Number of trips/bike for each provider (Annual measure; 2017-2022)	
	Number of scooters in scooter-sharing programs in Minneapolis and Saint Paul (2017-2022)
	Annual scootersharing statistics for Minneapolis: <ul style="list-style-type: none"> ● Maximum number of scooters licensed ● Number of scooters deployed ● Number of trips ● Total trip duration ● Total trip distance
Percentage of bikesharing sites/bikes serving Census tracts with average income less than 80% of AMI (Annual measure; 2017-2022)	
Qualitative description of bikeshare provider activities between 2017-2022 in Transit Investment Areas, especially related to expansion alongside Southwest and Bottineau expansion	
Qualitative description of bikeshare provider activities between 2017-2022, especially related to new innovations to address ongoing challenges (such as station removal in the winter) and expansion to disadvantaged areas.	
Qualitative description of municipal reforms related to bikesharing between 2017-2022 in 10-city opportunity area	Examples of municipal reforms related to bikesharing and scootersharing between 2017-2022 in 10-city opportunity area
Monetary amount invested by MetCouncil in exploring the possibility of expansion of geographic coverage for Nice Ride Neighborhood, flexible bikesharing, and the role of public investment in these efforts.	
Qualitative description of other efforts by MetCouncil,	

Proposed Metric or Implementation Measure	Metric or Implementation Measure used in Progress Report
Metro Transit, other regional transit providers, or 10 municipalities to expand/evolve bikesharing (assessed via survey)	

Strategy 6. Elevate vanpooling as a viable option for commuters

Proposed Metric or Implementation Measure	Metric or Implementation Measure used in Progress Report
Average number of daily vanpool users in Twin Cities Region (Annual measure, 2017-2022)	Annual ridership statistics for Metro Vanpool, including average number of vans (2017-2020), number of passenger trips (2017-2022), vehicle revenue miles (2017-2020), and annual passenger miles (2017-2020)
Qualitative description of efforts by regional transit operators and 10 municipalities to elevate and expand vanpool options	Qualitative description of efforts by the Met Council and Metro Transit to understand gaps in the vanpool program and identify areas for improvement.

Strategy 7. Develop and implement new carpooling and ride-splitting solutions

Proposed Metric or Implementation Measure	Metric or Implementation Measure used in Progress Report
Number of new providers with capacity to enable carpooling and ride-splitting between 2017-2022, or number of new carpooling or ride-splitting services within existing providers (Uber and Lyft, for example)	
Number of new pilot projects focused on microtransit and ride-splitting (2017-2022)	Examples of pilot programs focused on ride-splitting solutions
Number of users engaged in new pilot projects	
	Percent of workers in Minneapolis, Saint Paul, and the Twin Cities region who report carpooling to work (Annual measure; 2017-2022)

Strategy 8. Concentrate efforts around integrated mobility hubs

Proposed Metric or Implementation Measure	Metric or Implementation Measure used in Progress Report
Presence of integrated mobility hubs with features that support shared mobility, at six identified sites (Union Depot and Capitol/Rice Green Line Station in Saint Paul and the Warehouse District Station, Target Field Station, Nicollet Mall, and Chicago-Lake Transit Center in Minneapolis)	Present of integrated mobility hubs with features that supports shared mobility at or adjacent to six identified sites (Union Depot and Capitol/Rice Green Line Station in Saint Paul and the Warehouse District Station, Target Field Station, Nicollet Mall, and Chicago-Lake Transit Center in Minneapolis)
Description of features that support shared mobility within integrated mobility hubs	Qualitative description of new features to support shared mobility at hubs in Minneapolis and Saint Paul
Addition of ‘micro’ hub enhancements to existing BRT or Rapid Bus Line stations or shelters	
Implementation (or movement forward in implementation) integrated mobility hubs in six identified sites	Implementation (or movement forward in implementation) integrated mobility hubs at six identified sites
Qualitative description of “micro” hub enhancements	

Strategy 9. Realign CMAQ funding and improve TDM outcomes

Proposed Metric or Implementation Measure	Metric or Implementation Measure used in Progress Report
CMAQ funding used by cities to support shared mobility (in shared mobility programs; in promoting shared mobility initiatives; in evaluation; in data tracking)	
Number of cities adopting TDM ordinances since 2017	Number of cities in the Twin Cities region with TDM ordinances (Outcome Metric 10)
TDM outcomes (# discounted transit and shared mobility passes; # Organization with TDM programs -or individuals participating in these programs)	
Qualitative change in configuration of TDM program and use of CMAQ funds/Regional Solicitation process to support shared mobility between 2017-2022	Examples of qualitative changes in Regional Solicitation process to support shared mobility between 2017-2022
Integration of shared mobility goals and/or implementation of shared mobility pilots/tests in MnDOT/ABC ramps	
Description of municipal reforms aimed at encouraging employers and developers to participate in TDM programs and coordinate w/TMOs, especially in Minneapolis and Saint Paul.	
Metro Transit’s progress in integrating bikesharing, carsharing, and ride-hailing services in the MetroTransit App	

Strategy 10. Optimize parking and street space to prioritize shared mobility

Proposed Metric or Implementation Measure	Metric or Implementation Measure used in Progress Report
Total % or amount of parking revenue in Minneapolis and Saint Paul to support shared mobility (2017 and 2022)	
Number of employers participating in shared mobility programs in Minneapolis and Saint Paul, such as a parking cash-out program (2017 and 2022)	
Qualitative description of municipal reforms related to disincentivizing parking and/or prioritizing shared mobility (especially in Minneapolis) between 2017-2022	
Qualitative description of efforts by Metro Transit and other regional transit providers to disincentivize parking and/or prioritize shared mobility	Qualitative description of efforts by Metro Transit, other regional transit providers, and the MN Department of Transportation to disincentivize parking and/or prioritize shared mobility

APPENDIX D. ANNUAL INFORMATION ON THE START/END OF BIKE AND SCOOTER TRIPS

Table D1. Location of Start of Scooter Trips, 2018-2021

City	2018	2019	2020	2021
Edina	9	2	1	2
Falcon Heights	386	700	1	312
Fort Snelling (unorg.)	1	13	9	7
Golden Valley	16	60	10	253
Lauderdale	7	4	2	5
Lilydale	2	10	125	176
Maplewood	20	48	7	63
Mendota			3	1
Mendota Heights		6	6	9
Minneapolis	225,452	1,167,244	117,302	360,941
Oakdale	3	2		
Richfield	6	12	10	
Robbinsdale	9	6	9	6
Roseville	21	108	6	91
Saint Anthony	9	16	12	8
Saint Louis Park	9	94	7	41
Saint Paul	63,759	337,007	67,229	284,127
South Saint Paul	4	1	5	4
West Saint Paul	90	58	38	97
Woodbury	2			
Total	289,805	1,505,391	184,782	646,143

Source: Metro Transit Scooter & Bike Map (2023)

Table D2. Location of End of Scooter Trips, 2018-2021

City	2018	2019	2020	2021
Apple Valley		4		
Arden Hills		5		
Bloomington	3	11		2
Brooklyn Center	1	4		
Brooklyn Park		2		
Burnsville		1		
Champlin		1		
Columbia Heights	1	4		
Cottage Grove		1		
Credit River Twp.		1		
Eagan		7		8
Edina	21	38	1	3
Falcon Heights	357	1,262	2	501
Fort Snelling (unorg.)	35	72	8	21
Fridley				1
Golden Valley	79	302	21	274
Hastings	1			
Hopkins		2		
Inver Grove Heights	13	30	1	15
Lauderdale	25	42	2	19
Lilydale	8	50	179	388
Little Canada	3	15	6	29
Maple Grove	1	2		
Maplewood	67	187	18	214
Mendota	3	5	6	19
Mendota Heights	7	64	13	64
Minneapolis	225,487	903,300	118,759	367,756
Mounds View		1		
New Brighton	1	6		
Newport	1	3		1
North Oaks				1
North Saint Paul	5	20	1	5
Northfield			1	
Oakdale	7	24	3	15
Plymouth	1	1		
Richfield	133	88	14	18
Robbinsdale	39	193	15	40

Rosemount		2		
Roseville	50	314	21	255
Saint Anthony	26	104	17	26
Saint Louis Park	54	217	10	67
Saint Paul	63,023	329,049	66,896	281,962
Saint Paul Park		7		
Savage		1		
Shoreview	1	1		2
South Saint Paul	49	127	14	146
Spring Lake Park	1			
Stacy		1		
Sunfish Lake		1		1
Vadnais Heights	1	2		1
West Saint Paul	269	781	101	962
White Bear Lake		2		9
Woodbury	10	6		4
Total	289,783	1,236,363	186,109	652,829

Source: Metro Transit Scooter & Bike Map (2023)

Table D3. Location of Start of Bike Trips, 2018-2022

City	2018	2019	2020	2021	2022
Arden Hills		3			
Bloomington		35			
Brooklyn Center		11	4	5	
Brooklyn Park		15	1		
Columbia Heights		5	16	36	2
Crystal		4	3		
Edina	1	13	84	241	9
Falcon Heights	872	956	664	616	68
Fort Snelling (unorg.)	2,464	1,907	1,223	623	15
Fridley		31	41	126	3
Golden Valley	670	861	885	732	76
Hilltop		1			
Lauderdale		4	2		
Mendota Heights		1			
Minneapolis	380,394	354,198	225,687	264,666	29,113
Minnnetonka		1			
Mounds View			1		
New Brighton		7			
Richfield		16	186	137	23
Robbinsdale		16	50	42	1
Roseville	3	9	4		
Saint Anthony		9		43	
Saint Louis Park		125	94	95	6
Saint Paul	28,019	479	132	291	6
Total	412,423	358,707	229,077	267,653	29,322

Source: Metro Transit Scooter & Bike Map (2023)

Table D4. Location of End of Bike Trips, 2018-2022

City	2018	2019	2020	2021	2022
Apple Valley		1			
Arden Hills		4			
Bloomington		47	31	7	
Brooklyn Center		15	45	26	5
Brooklyn Park		22	6	6	
Columbia Heights	2	10	29	59	4
Coon Rapids			2		
Crystal		8	12	4	
Eagan				3	
Eden Prairie		1	2		
Edina	1	22	126	311	16
Falcon Heights	957	859	675	708	71
Fort Snelling (unorg.)	2,503	1,830	1,203	638	18
Fridley		46	64	178	3
Golden Valley	659	871	929	738	85
Hilltop		2	9	9	
Hopkins			1		
Lauderdale		7	14	6	2
Maple Grove		1			
Mendota			1	1	
Mendota Heights		2			
Minneapolis	380,175	353,771	224,637	263,387	28,976
Minnetonka		2		2	
Mounds View			2		1
New Brighton		9	2		
New Hope		1		3	
Orono				1	
Plymouth		2	3	1	
Ramsey				1	
Richfield	1	18	251	178	28
Robbinsdale		20	95	87	3
Roseville	3	13	14	16	2
Saint Anthony		8	16	56	2
Saint Louis Park	3	175	179	187	17
Saint Paul	28,118	940	411	579	33
Savage	1				
South Saint Paul			1		
Wayzata				1	
Total	412,423	358,707	228,760	267,193	29,266

Source: Metro Transit Scooter & Bike Map (2023)