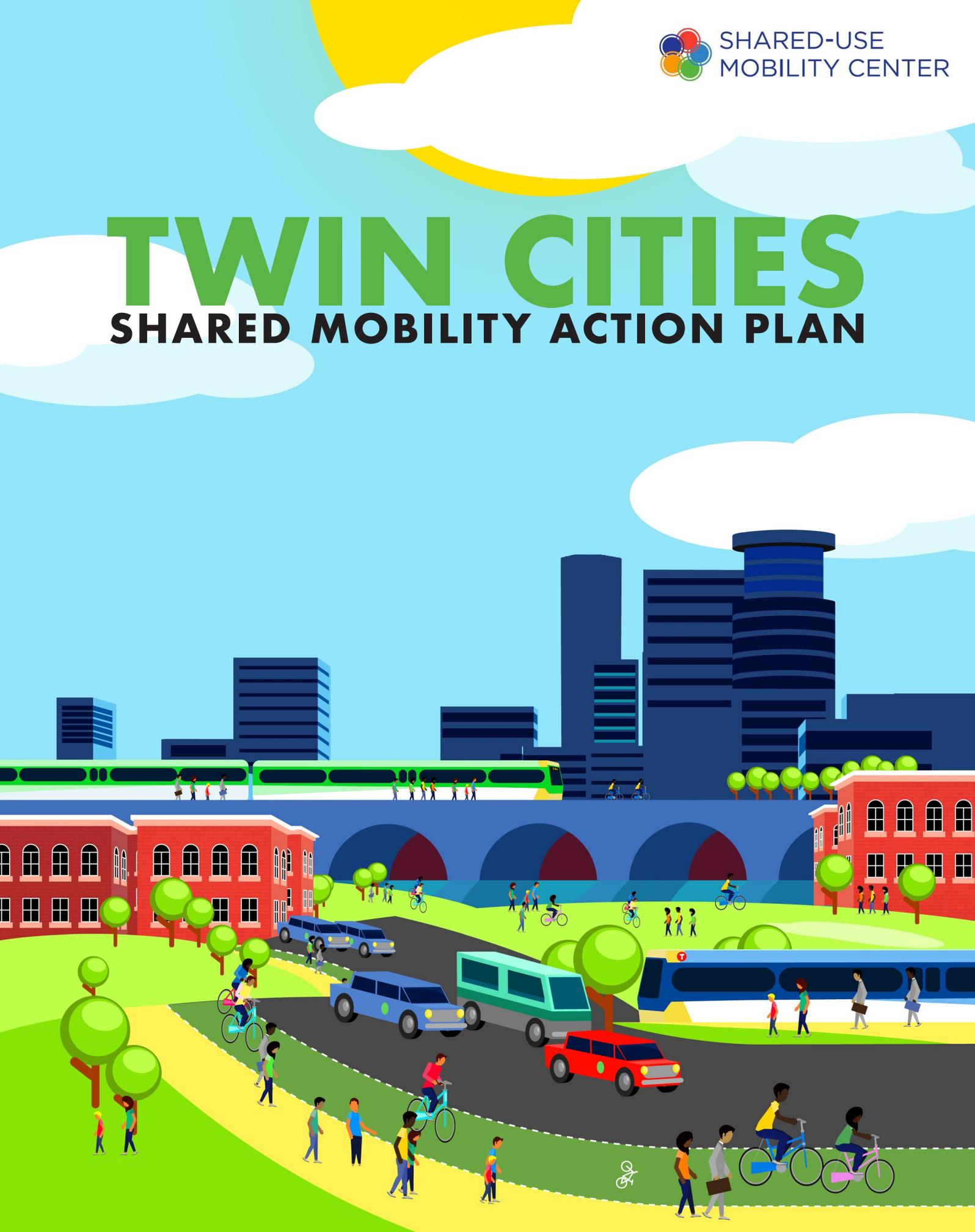


# TWIN CITIES

## SHARED MOBILITY ACTION PLAN



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The Twin Cities benefit from a robust set of nonprofit and community-based champions for public transit, active transportation, social equity, and economic development. Contributions from staff and board members of ST/TLC, Hourcar, East Metro Strong, Nice Ride Minnesota, Move Minneapolis, and the University of Minnesota also helped to inform this report.

This plan was authored by SUMC’s Creighton Randall, with support from Aaron Westling and Colin Murphy, and edited by Tim Frisbie. SUMC Executive Director Sharon Feigon guided this project and provided overall direction for the plan.

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THE MCKNIGHT FOUNDATION



PART I

# INTRODUCTION

Photo: "Transit oriented development near the Raymond Avenue Station on the METRO Green Line" by Eric Wheeler, Metro Transit. Licensed under CC BY 2.0. <https://flic.kr/p/orTK84>

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.

In recent years, the region has made notable improvements to its public transit system, including launching bus rapid transit service and building a new Green Line light rail route that helped to "re-twin" the Twin Cities. It was also an early pioneer in bikesharing, carsharing and other forms of shared mobility. However, it has lost some ground lately, while peer cities such as Seattle and Denver have been scaling shared mobility and transit on a remarkable level—and attracting millennials who are less interested in owning cars than previous generations and more inclined to seek out walkable, amenity-rich urban environments

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.

To be successful, Twin Cities leaders must break down silos and work in a comprehensive manner to transform the region's transportation system. The public right of way is managed by a complex web of local, county, regional and state governments with varied and sometimes overlapping responsibilities, which will make efforts to coordinate this work

difficult but critical. These leaders must also work together to address several deep-seated transportation challenges, including:

- **Disparities in transportation access.** Much of the region—urban, suburban, and rural—has not seen the benefit of recent transit investments. As public transportation evolves, the imperative must be to foster the growth of effective transit service with a focus on social and geographic equity. New shared mobility models can support this goal.
- **The stagnation of shared mobility services.** National one-way carshare operator car2go left the Twin Cities market in December 2016. Long-standing operators Hourcar and Zipcar have seen little growth in recent years. Meanwhile Metro Vanpool participation has also levelled off since launching in 2000, and innovative new forms of ride-splitting and microtransit have not yet launched in the region. Overall, these services need stronger policy and programmatic support to fulfill their promise and serve a broader range of neighborhoods.
- **The ease of driving and parking.** Currently, many residents don't feel compelled to consider other transportation options. Congestion is becoming a growing concern and will get worse as the region's population grows, unless there is a significant change in the way people get around. Owning and operating a car is also expensive, and as a result transportation is the second biggest cost for most families after housing. It has also become the largest source of carbon emissions in the U.S. To increase access to affordable, sustainable forms of transportation, more must be done to reduce reliance on private autos.

With support from The McKnight Foundation, the Shared-Use Mobility Center (SUMC) has created this Shared Mobility Action Plan for the Twin Cities to help local leaders address these challenges, realize emerging opportunities, and establish a new vision for the region. Based on information gleaned from interviews with more than 75 stakeholders, findings from a series of regional shared mobility workshops, and research on best practices, this action plan is designed to help improve regional mobility through a series of recommended policy, programming, and funding strategies.

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.

To realize these goals, the plan recommends 10 strategies:

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 Transportation Demand Management (TDM) Outcomes**
10. **Optimize Parking and Street Space to Prioritize Shared Mobility**

Finally, the plan also includes a summary of anticipated outcomes, suggested funding sources, a prioritized timeline for action, and a summary of next steps toward implementation.

Realizing the benefits detailed within this document will require significant regional collaboration, investment, and commitment. However, with deep engagement from local stakeholders—such as the cities of Minneapolis and St. Paul, Metro Transit, the Metropolitan Council, Transit for Livable Communities, East Metro Strong, and a range of environmental and community-based advocates—the Twin Cities region is well positioned to address the challenges of the future and expand access to sustainable, cost-effective transportation options for all residents.

## PART II

# BACKGROUND AND EXISTING CONDITIONS

"Green Line Train at University of Minnesota" By Dan Reed.  
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Over the past 20 years, the Twin Cities have been lauded as a success story among U.S. metropolitan areas for the progress they have made to strengthen public transit. The construction of the region's Metro Blue Line, championed by a diverse coalition of advocates, was a key accomplishment and early win that helped to set in motion a wave of new light rail investments in cities across the country.

All signs indicate this momentum will continue in the years ahead. Two new light rail transit (LRT) extensions and several arterial and highway bus rapid transit lines<sup>2</sup> (BRT) are scheduled to be completed within the next five years. These developments will more than double the size of the BRT and rail network in the Twin Cities. They will also connect several suburban cities to the two major downtowns, increasing access to public transportation for residents in these communities. Beyond the urban core, suburban transit providers like SouthWest Transit are testing innovative new services like SW Prime that blend features of ridesourcing services like Uber and Lyft with demand-responsive transit.

In addition to public transit, the Twin Cities have also been early leaders in shared mobility. The region's bikeshare system, Nice Ride Minnesota, was one of the first in the nation, debuting in 2010 along with systems in Denver and Washington, DC. It has continued to lead the industry through innovative programs such as Nice Ride Neighborhoods, which promotes cycling in underserved neighborhoods, and collaborations such as its integration with Transit App, a mobile trip planning application.

Nonprofit carshare service Hourcar launched in the Twin Cities in 2005, during the earliest days of the "sharing economy," followed by Zipcar later that same year. Hourcar also became one of the first shared mobility providers in the nation to integrate with public transit when it allowed its customers to use Metro Transit Go-To cards to swipe in to unlock Hourcar carshare vehicles.

Additionally, the Twin Cities have supported the growth of sustainable transportation options by becoming a national leader in bicycling and pedestrian infrastructure and advocacy. In 2005, the region was one of just four areas to be awarded funding under the U.S. Federal Highway Administration's Non-motorized Transportation Pilot Program (NTPP), receiving more than \$25 million in dedicated funding for active transportation and building out 65 miles of new bicycle lanes and 28 miles of bicycle boulevards.

1 Building on the recently launched Snelling Rapid Bus project, the C Line is expected to begin construction in 2018, with service launching in 2019. Construction of the D Line is expected in 2019-20.

2 The Orange Line, which largely leverages existing BRT improvements in Minneapolis, is expected to open in 2020 connecting Richfield, Bloomington, and Burnsville to Downtown Minneapolis. Future BRT projects including the Gateway (Gold Line), Rush Line, and Riverview corridors, may be completed in the 5-10 year timeframe.



Figure 1: Screenshot of Transit App, one of two applications showing transportation options available in the Twin Cities

# Growth Projections and Equity Implications

Despite these advances, the Twin Cities region is heading toward a potential turning point as it continues to experience rapid population growth, a trend that is projected to continue in the next several decades. The Metropolitan Council—the policy-making body, planning agency and main service provider for the seven-county Twin Cities metro area—is projecting the region will add more than 800,000 new residents by 2040, a nearly 30% increase over 2015. These estimates are echoed by several recent national studies.

According to a report from the Urban Institute, for instance, the Twin Cities are expected to grow at a similar pace to Portland and Seattle through 2030, slightly behind the growth rate of Denver, but ahead of larger regions such as Los Angeles and New York City.<sup>3</sup>

This growth represents an opportunity for the region, as well as a challenge. With so many new residents, highway building will not be enough to handle the increased demand on the region’s transportation system in the coming years. As parking demand and traffic congestion increase, it is imperative that population growth is matched by investments in more efficient and sustainable forms of transportation, including public transit and new forms of shared mobility.

Twin Cities leaders must also do their best to ensure investments match the region’s changing demographics. According to the Urban Institute, the vast majority of population growth will come from non-white households, who will represent 40% of the region’s population by 2040. Too often, economic growth that has benefited the Twin Cities has not extended to predominantly minority areas of the region. People of color in the Twin Cities currently earn just half the income of white, non-Latino residents. Only 37% of non-white residents are homeowners—half the rate of white residents. In 2012, this disparity in home ownership was the greatest among the 25 largest metro areas in the U.S.<sup>4</sup>

As growth associated with transit brings more affluent residents, transportation, planning, and land use professionals must work harder to ensure that these services remain accessible to all communities and are built with them in mind.

A recent accounting of developments under construction or in design near LRT stations by the Metropolitan Council shows that \$6.8 billion is invested in transit oriented development,<sup>5</sup> much of it along the Green Line (Figure 2). Some developers are also already beginning to anticipate new rail access around planned stations in suburbs such as Hopkins and Brooklyn Park. Unfortunately, these developments have a dearth of affordable units. And while the Greater Minnesota Housing Fund and others have pursued strategies to protect existing affordable housing, these strategies have not kept up with the region’s growth.

Region	2010 MSA Population	2030 Growth Projection
Twin Cities	3,348,859	20%
Denver	2,543,482	25%
Portland	2,226,009	19%
Seattle	3,439,809	20%

Table 1: High-Growth Metro Areas, Projected MSA Population Growth by Urban Institute

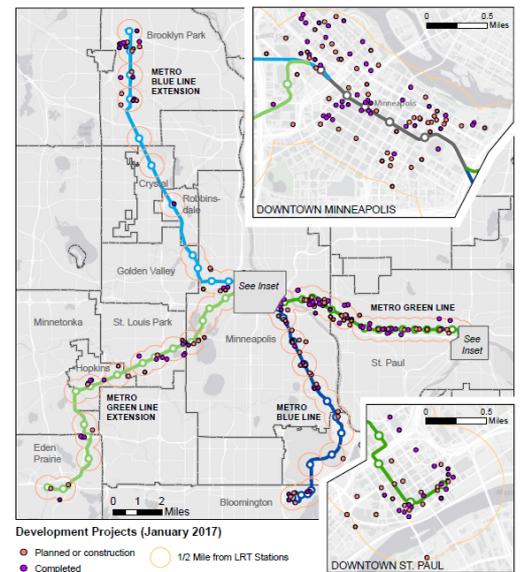


Figure 2: Major development projects near recent or planned Metro rail stations (courtesy of Met Council)

3 Mapping America’s Futures project. <http://apps.urban.org/features/mapping-americas-futures/#map>

4 Thrive MSP 2040. Disparities by Race and Ethnicity in the Twin Cities, 2012. Page 40.

5 This figure is based on staff-compiled data, as of February 2017. The figures included \$5.1 billion in development along the Green Line, half of which occurred outside downtown Minneapolis.



# OVERVIEW OF SHARED MOBILITY BY MODE

## Public Transit

Public transit serves as the backbone that helps to support an efficient and equitable transportation system. The region's public transit system, which has grown significantly over the last 15 years, currently serves nearly 100 million annual riders. Approximately 11% of commute trips in the Minneapolis and St. Paul today are being made by transit, a historic high. In 2016, ridership on the Blue and Green Lines totaled approximately 23 million. With planned LRT, BRT, and Rapid Bus extensions underway, it is likely that number will continue to grow.

These capital expansions are matched by bus service improvements throughout the system and buttressed by a number of innovative new pilot programs. Noteworthy projects include:



### Metro Transit Light Rail Extensions

The region's two planned light rail projects will extend the Blue and Green Lines beyond their current corridors, which run from the airport to Minneapolis and Minneapolis to St. Paul, respectively. The new lines will also extend service to suburban areas located to the northwest (Blue Line Extension/Bottineau Transitway) and southwest (Green Line Extension/Southwest Transitway) of downtown Minneapolis.

The Federal Transit Administration (FTA) cleared the Southwest LRT project to enter the engineering phase in late 2016, meaning that construction on the 14.5-mile, 15-station line is set to begin in 2017, with an anticipated opening in 2021. The Blue Line extension, likewise, entered engineering in January 2017 with construction slated to begin in the 2018 season. The 13-mile, 11-station line is also expected to be complete in 2021.

This expansion will occur in parts of the Twin Cities that have not yet experienced growth in shared mobility (see figure 4), and these capital-intensive efforts, at present, offer fertile ground for both shared mobility and affordable housing.



### Bus Rapid Transit

Metro Transit is planning lower-cost improvements to bus service in a number of key corridors, both on surface streets and in limited-access lanes on interstate highways. The A Line, the region's first arterial rapid bus service, debuted in 2016. Though it operates in mixed traffic rather than dedicated lanes, the service includes a number of BRT features, such as short headways, limited stops, and all-door boarding. The agency is slated to begin construction on a second rapid bus line with similar features, the C Line, along Minneapolis's Penn Avenue corridor in 2018. A number of other corridors have also been identified for eventual improvement, including the Orange Line—a proposed BRT line that would run largely in high-occupancy toll (HOT) lanes on Interstate 35W—and the Gold Line, which would operate along a dedicated guideway in East Metro.



## Operational and Stop Improvements

In recent years, Metro Transit has worked to expand the number of high-frequency bus routes and make shelter improvements to benefit the riders of its 100-plus bus lines. The agency’s Better Bus Stops program is focused on building modern bus shelters and improving existing shelters—through measures such as adding weather protection, heating, and real-time travel information—with an emphasis on improving stops in areas of concentrated poverty and high minority population.

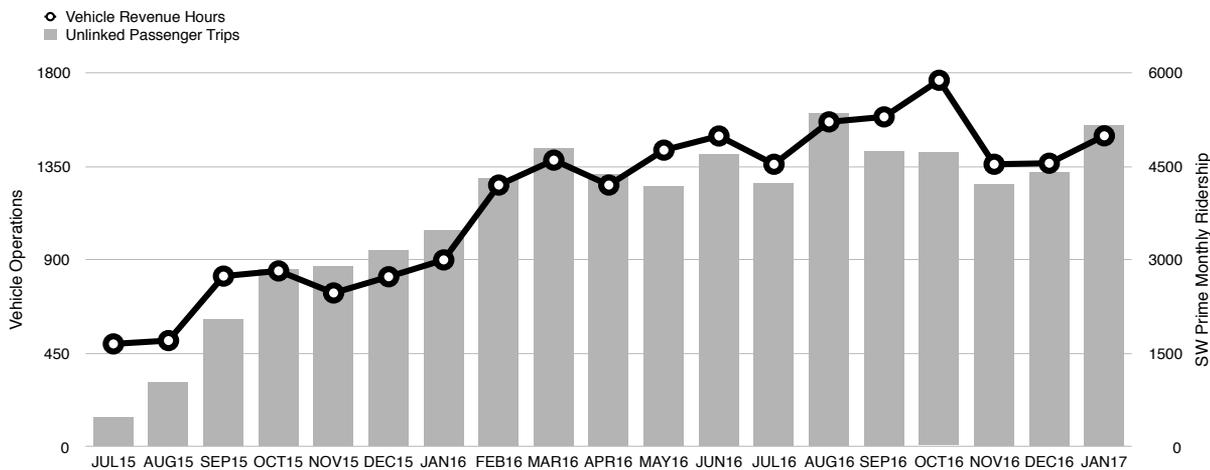


Figure 3: Growth of SW Prime service in first 18 months



## SouthWest Transit “SW Prime” Service

SouthWest Transit, one of several suburban transit agencies, operates in the kind of auto-oriented, low-density areas where public transit is notoriously difficult to provide. However, its new on-demand service SW Prime, which uses 12-person vans and dynamic dispatching and routing technologies, is succeeding in attracting new transit riders and growing the agency’s user base in the southwest suburbs.

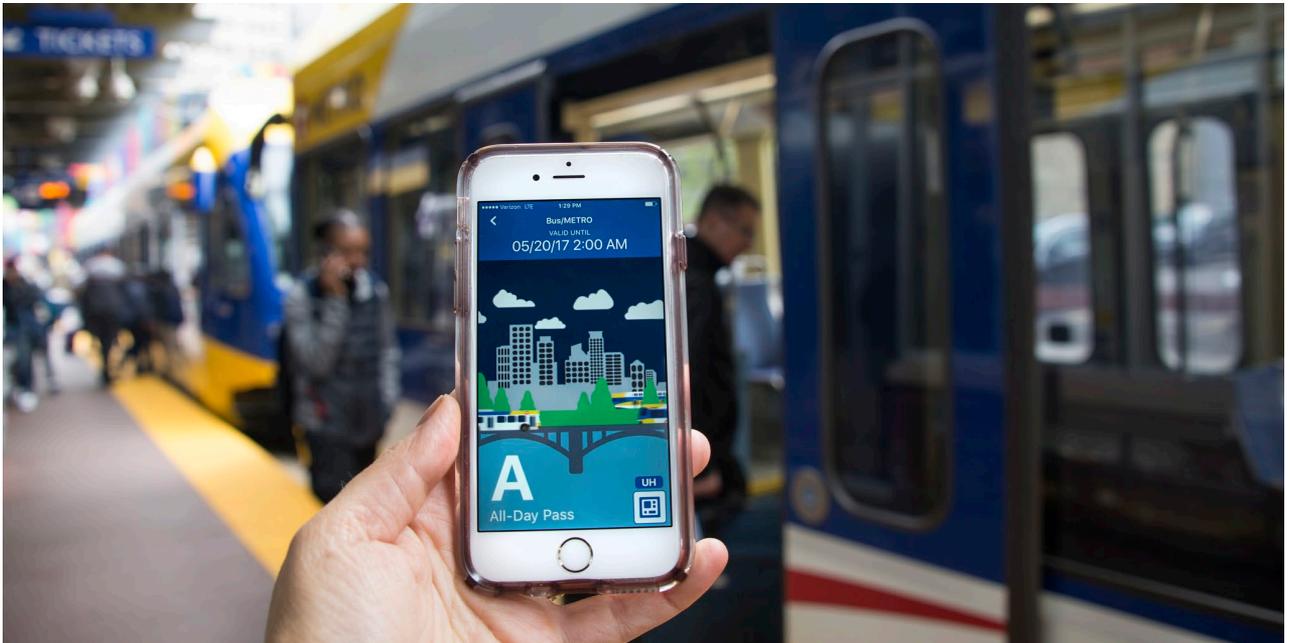
Users pay \$3 for a door-to-door shared ride anywhere within the five-city service area. They can request a ride via a website, smartphone app, or telephone, and can pay with cash or a credit card. SW Prime launched in summer 2015 and saw ridership more than double in its first full year of operation. As of January 2017, monthly ridership was above 5,100 trips (about 270 per day). SW Prime has increased the number of vehicles in service from four to 10 to keep up with demand, while trips per vehicle revenue hour have increased by more than 40% through this growth period. While the service does not fully cover its operational costs with fare revenues (like most public transit) the level of subsidy is much lower than many comparable dial-a-ride services.



## Minnesota Valley Transit Authority Employer Solutions

The Minnesota Valley Transit Authority (MVTA) is a public transportation agency serving seven suburban communities directly south of the Twin Cities. Because the area is home to several large employers such as Amazon, Shutterfly, and Mystic Lake Casino, the MVTA has begun exploring creative solutions to address reverse-commute challenges. Mystic Lake Casino has already partnered with the MVTA to provide employee shuttles between the casino and the Marschall Road Transit Station in the City of Shakopee, offering first/last mile connections for employees who use public transit. The Canterbury Park racetrack offers a similar program, and the MVTA has also piloted an express bus route that connects the Mall of America and Shakopee to help improve commutes for workers travelling to jobs in outlying suburban communities.

Such programs are examples of mutually beneficial public-private partnerships that help connect employees to jobs by filling gaps that cannot be efficiently covered by fixed-route transit. In the future, the MVTA is looking to connect with more employers to expand these types of services, potentially structuring a program where a company pays for part of an MVTA-operated route that brings its employees closer to work.



### **Metro Transit App**

Metro Transit utilized a federally funded Congestion Mitigation and Air Quality (CMAQ) grant to partner with software company moovel to create a mobile app that allows customers to track routes and purchase tickets for bus and light rail rides. While the current iteration of the app only covers public transit, future plans call for the integration of bikesharing, carsharing, and ride-hailing services, creating an efficient and seamless multimodal experience for the user.



### **Metro Vanpool**

Metro Vanpool, the Metropolitan Council's commuter vanpool program, was created to augment fixed-route transit services in the Council's seven-county service area. The program subsidizes about half the van rental cost for participants, with riders picking up the balance and covering the cost of fuel. Vanpools must either originate or end at workplaces within the Council's service area, but may travel beyond the service area boundaries while in transit. The pools need a minimum of five active users who commute together three or more days each week. Approximately 70 vans were enrolled in the program as of January 2017, transporting more than 500 commuters daily and saving nearly 4 million vehicle miles traveled each year. The cost per ride is equivalent to approximately \$3, which is competitive with other transit services the region.

The vanpool program was established in 2000 and grew steadily for several years, but its expansion has slowed as of late despite the continued growth of park-and-ride during the same period. The program may also be limited in part by restrictions on when and where vanpools can operate. For instance, vanpools are not permitted to travel to or from downtown St. Paul or Minneapolis at peak hours. Additionally, leasing requirements may make it difficult to find participants.



### **Metro Mobility Program**

The Metropolitan Council's Metro Mobility program offers complementary paratransit for customers with disabilities or health conditions, as determined by Americans with Disabilities Act (ADA) guidelines, which prevent them from utilizing the fixed-route transit system. The program acts as a traditional paratransit service, often providing shared rides with no preference given to trip type.

Metro Mobility uses a fleet of more than 500 vehicles to provide nearly 2.3 million rides around the Twin Cities annually. Riders must schedule pickups at least one day in advance, and pay a fare that is no more than twice the cost of riding the local fixed-route service. Demand for this service has grown steadily in recent years, and is an area of opportunity for innovation in service delivery through new forms of shared mobility.

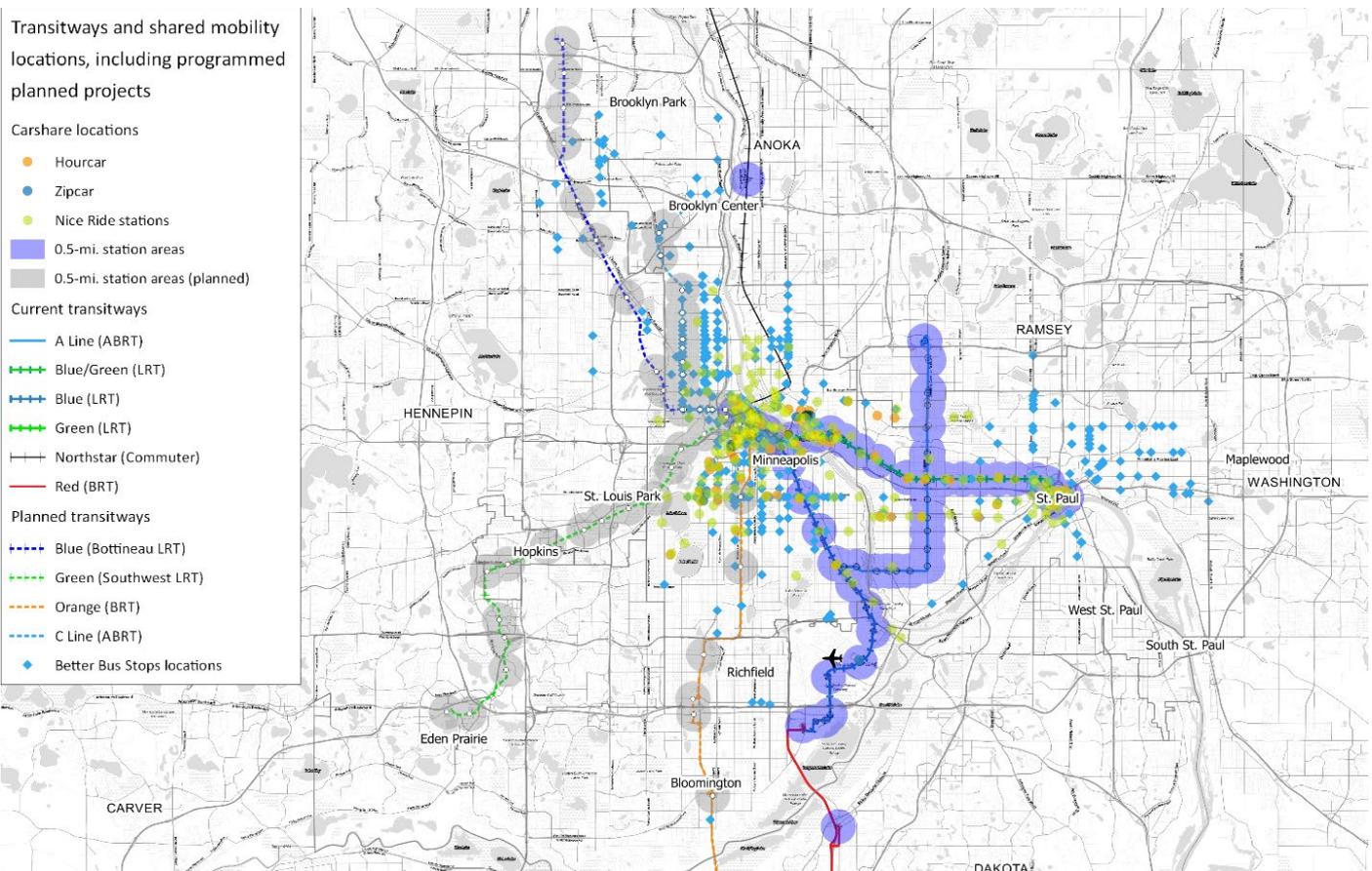


Figure 4: Proximity of carshare and bikeshare locations to transitways (1/2 mile buffer shown for existing and planned stations)

## Carsharing

The Twin Cities were early leaders in carsharing, and the concept has experienced notable success in the region. Hourcar and Zipcar launched with significant fleets here more than a decade ago. Car2go also chose the Minneapolis-St. Paul region as an early test market. However, these services have recently experienced a number of challenges and have yet to expand beyond the urban core. Relevant carshare operators include:



**Hourcar:** Launched in 2005 as a program of the Neighborhood Energy Connection (NEC), a St. Paul-based nonprofit organization dedicated to energy conservation. Hourcar is a reservation-based, roundtrip service that provides around 60 fuel efficient cars for reservations ranging from 30 minutes to three days.



**Zipcar:** First entered the market in 2005 through an exclusive partnership with the University of Minnesota that remained in place until 2013, when the university chose to replace Zipcar with Hourcar. After losing its contract, Zipcar removed all its cars from the campus and also expanded to cover the Twin Cities market with a fleet of around 30 cars.



**Car2go:** Initiated a soft launch of one-way carsharing in September 2013 before expanding to the full Twin Cities market a year later. The original coverage area was 114 square miles (including lakes). In the winter of 2015, car2go reduced its operating area to 50 square miles, nearly 40 of which were in Minneapolis (shown in Figure 5). The company worked with both the City of Minneapolis and the City of St. Paul to draft legislation to support on-street carsharing, which led to a pilot project in Minneapolis in 2013 and eventually a permanent policy in 2016. The Twin Cities also became the first car2go market to implement on-site parking at an airport.

Even with these advancements and a more central focus area, however, car2go chose to leave the market completely in December 2016. A number of factors, including local taxes on carshare operators, led to the company's decision to exit the region. (More details on car2go's exit are provided later in this document).

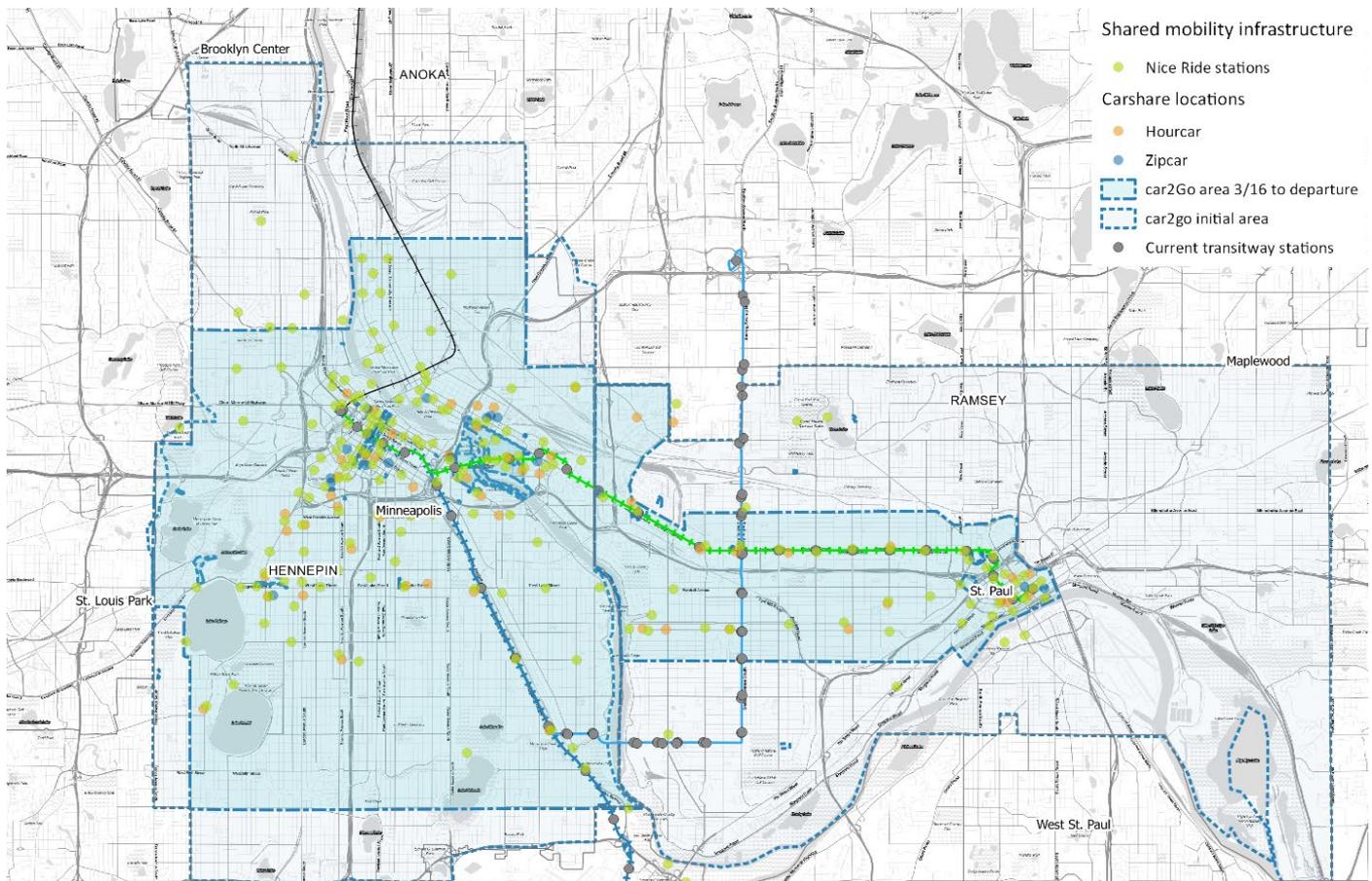


Figure 5: Shared mobility infrastructure in the Twin Cities, 2016-17

### On-Street Carsharing Pilot

Zipcar, car2go and Hourcar all participated in the City of Minneapolis's two year on-street carsharing pilot program, but only a small portion of the Hourcar and Zipcar fleets were involved (as compared to the entire car2go fleet). The pilot provided important data to help local government agencies better understand usage and the barriers to implementing a successful carsharing policy.

Overall, car2go's point-to-point model saw 477,414 trips taken over the course of the pilot, while the round-trip models of Hourcar and Zipcar saw 3,535 and 22,891 trips respectively. Car2go's trips averaged 4.5 miles, while Hourcar and Zipcar trips averaged 27.2 miles and 34 miles respectively. These substantial differences in usage can be attributed in part to the different types of trips taken with each model—one-way carsharing tends to be used more for shorter trips, such as the first or last mile of a commute, than traditional, round-trip carsharing.

Overall, the pilot was seen as a successful, with nearly 25,000 participants reducing their overall personal vehicle usage by 6% over the course of the program.

After the pilot program, in early 2016, the City of Minneapolis established an on-street carsharing policy designed to apply to all operators that wished to have designated access to public, on-street parking spaces. The policy contained requirements for each operator, including sharing data with the city regarding fleet, usage, membership and geographic distributions. After reviewing the policy, the only operator that chose to participate was car2go. Both Hourcar and Zipcar removed their vehicles from public spaces. This reaction suggests that the policy was created in a way that was perhaps beneficial to point-to-point operators like car2go but possibly too restrictive for traditional carshare providers.





### Stagnation in Carsharing

Following the exit of car2go, Hourcar and Zipcar have continued to serve their original membership base. At the time of this writing, it is too early to determine if these services will see growth in demand from former car2go members. Based on interviews and limited available data, SUMC has not identified any major shift in use of these services, which may be largely attributable to the difference in use cases between one-way and round-trip models.

Overall, several issues may be affecting the viability of carsharing in the Twin Cities. Across the country, TNCs are increasingly being used for short trips that may have previously been served by one-way carsharing services. Perhaps more importantly, the Twin Cities also have some of the highest carshare tax rates of any market in the United States. At 22% for Minneapolis and 23% for St. Paul, these taxes are likely inhibiting use and, by driving up costs, putting carsharing out of reach for some low-income residents. The tax has three components: a sales tax (7-8%), a passenger car rental tax (9.3%), and a usage fee (5%). Both the rental tax and usage fee are assessed by the state. While Hourcar has been successful in obtaining exemption from the usage fee as a nonprofit organization, the rental tax was recently increased by the state legislature by 3% (from 6.3% to 9.3%).

### Bikesharing

Nice Ride Minnesota is a nonprofit organization formed in 2008 to operate the Twin Cities’ bikeshare system. The current organization grew from the Twin Cities Bikeshare project, an effort led by former Minneapolis Mayor R.T. Rybak and the City of Lakes Nordic Ski Foundation. With initial funding from Blue Cross and Blue Shield of Minnesota and local support from Bike/Walk Twin Cities, Public Bike System Co. was selected to provide bikesharing equipment for the system, with the original 700 bikes and 56 stations launching in June 2010. The current system, which contains more than 1,700 bikes and nearly 200 stations, saw more than 1.75 million rides during the 2015 season. This is extremely impressive, especially when compared with some other peer cities where bikesharing has been slower to catch on.

Nice Ride also launched the Nice Ride Neighborhood program in 2014 to help encourage cycling in disadvantaged communities. The program provides participants with a helmet, bike lock and bike lights in addition to a long-term bike rental for the duration of the program. To participate, residents need to attend a kick-off orientation, ride at least twice a week, and attend at least four organized group ride events. After successfully completing the program, participants receive a \$200 voucher to a local bike shop to purchase a bike of their own. The program represents a strong partnership with community anchors like the Northpoint Health Center, St. Paul Public Housing Agency and the Major Taylor Bicycling Club of Minnesota. Additionally, this extensive network of local organizations enabled Nice Ride to give out over \$50,000 in annual memberships, resulting in more riders taking more trips in more Twin Cities neighborhoods.



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## Ridesourcing

The nation's two leading ridesourcing companies, Uber and Lyft, both operate in the Twin Cities. These services are also frequently referred to as Transportation Network Companies (TNCs). Currently, only the standard services are available—there are no ride-splitting options such as UberPool and Lyft Line. Prior to 2016, ridesourcing companies were picking up and dropping off passengers at the Minneapolis–St. Paul International Airport freely without regulation. Recently, the Metropolitan Airports Commission passed a new ordinance that treats ridesourcing services the same as traditional taxi companies, assessing a \$3 fee per trip and mandating background checks for all drivers.

Outside the airport, ridesourcing remains largely unregulated in the region. Public agencies consequently do not have a reliable measure of the extent to which Uber and Lyft are operating in the Twin Cities. While neither service has announced concrete plans for launching a ride-splitting feature in the market, Lyft has expressed interest in pursuing public-private partnerships with the region's transit agencies. Pooled on-demand trips (from these operators or others) could potentially help the Twin Cities expand access to on-demand transportation and reduce single occupancy vehicle trips. These types of partnerships have found success in many cities across the country, including Denver and Seattle.

## Transportation Demand Management

Metro Transit oversees the region's Transportation Demand Management (TDM) initiatives, which are funded by the CMAQ program at approximately \$3 million annually. Metro Transit utilizes roughly half of its CMAQ funds for an in-house TDM program that includes rideshare planning, a guaranteed ride home program, transit pass subsidies, and outreach services.

The other half of the funding is distributed to the region's four transportation management organizations (TMOs): St. Paul Smart Trips/ Transit for Livable Communities, Move Minneapolis, Anoka County TMO, and 494 Commuter Services. An additional \$1.2 million is also awarded competitively every two years to a range of projects as part of a regional solicitation process. Metro Transit oversees and administers these programs and evaluates grantees' impacts and results in conjunction with the TMOs.

The last substantial update to TDM policy occurred in 2010, when the Met Council released a Transportation Demand Management Evaluation & Implementation study. In response to the Met Council's directive that funding should focus on areas of dense employment, and to conform to CMAQ guidance, all four TMOs have gradually moved to focus solely on conducting employer outreach.

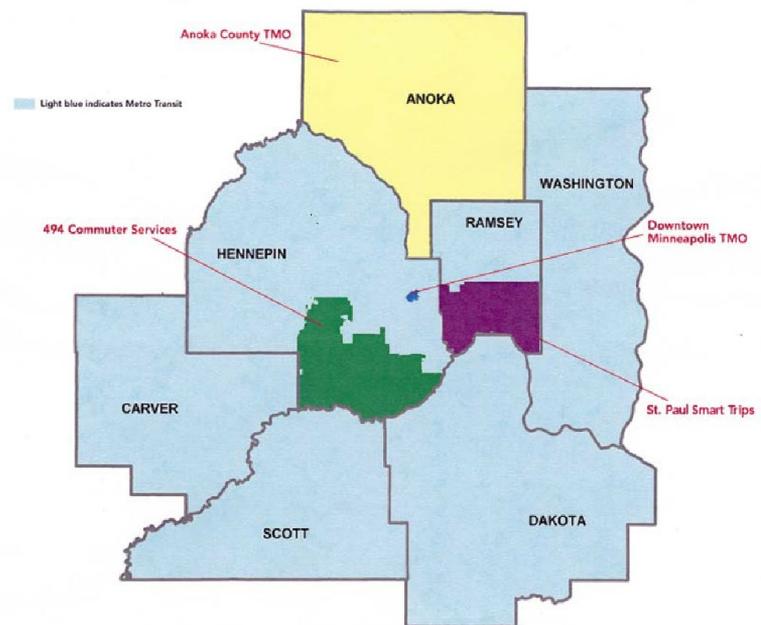


Figure 6: TMO Service Areas in the MSP Region as of 2010

## Taxis

Taxis serve as an integral part of the Twin Cities' shared mobility system. They are a familiar mode that most residents feel comfortable using and, importantly, offer both credit card and cash payment options. While TNCs continue to gain popularity, the Twin Cities will benefit from preserving and expanding the public benefits established by the taxi model.



# PART III OPPORTUNITY ANALYSIS

"Train leaving the station" by Mac H. Licensed BY CC BY-SA 2.0. <https://flic.kr/p/oixcr1>

SUMC’s proprietary opportunity analysis model categorizes areas in terms of their potential to support new or expanded shared mobility services. The model is based on a number of underlying factors including land use, walkability, quality of nearby transit service, jobs access, and local household characteristics. Opportunity areas fall into three categories: High, Medium, and First/Last Mile Connections.<sup>6</sup> The basic opportunity analysis is available in an interactive format online at [maps.sharedusemobilitycenter.org](https://maps.sharedusemobilitycenter.org).

## Regional Opportunity

Based on SUMC’s shared mobility opportunity analysis and review of planned transit investments, the recommendations of this plan largely address potential that SUMC observes in Hennepin and Ramsey Counties, with some potential in portions of northern Dakota County and southern Anoka County. This analysis aligns with communities that the Met Council has identified as either Urban Center, Urban, or Suburban (more information on the Met Council’s Community Designations is available in Appendix A).

City	Population (2015 est.)	Jobs (2014)	% Drive Alone Commute	% Transit Commute	Met Council Community Designation	SUM potential 2017	SUM potential 2022
Minneapolis	410,000	327,500	61%	13%	Urban Center	High	High
Saint Paul	300,000	173,400	69%	9%	Urban Center	High	High
Bloomington	82,000	98,700	79%	5%	Urban	Medium	Medium
Brooklyn Park	80,000	24,400	78%	5%	Suburban	Low	Medium
Eden Prairie	60,000	47,200	82%	3%	Suburban	Medium	Medium
St. Louis Park	45,000	36,000	76%	5%	Urban Center	Medium	High
Maplewood	38,000	33,900	79%	4%	Urban	Medium	Medium
Richfield	35,000	14,700	76%	5%	Urban Center	Medium	High
Brooklyn Center	30,000	12,300	73%	10%	Urban	Low	Medium
South St. Paul	20,000	7,000	80%	4%	Urban Center	Low	Medium
West St. Paul	20,000	7,800	76%	6%	Urban Center	Low	Medium
Hopkins	17,000	13,000	76%	5%	Urban Center	Medium	High

Table 2: Shared Mobility Outlook for Regional Cities

<sup>6</sup> Data sources include carshare and bikeshare counts and locations, ridesourcing and taxi service areas, transit stop data, demographic and employment data from the U.S. Census, and the HUD Location Affordability Index. For a full description of the model underlying this analysis please see SUMC’s opportunity analysis methodology at [maps.sharedusemobilitycenter.org](https://maps.sharedusemobilitycenter.org).

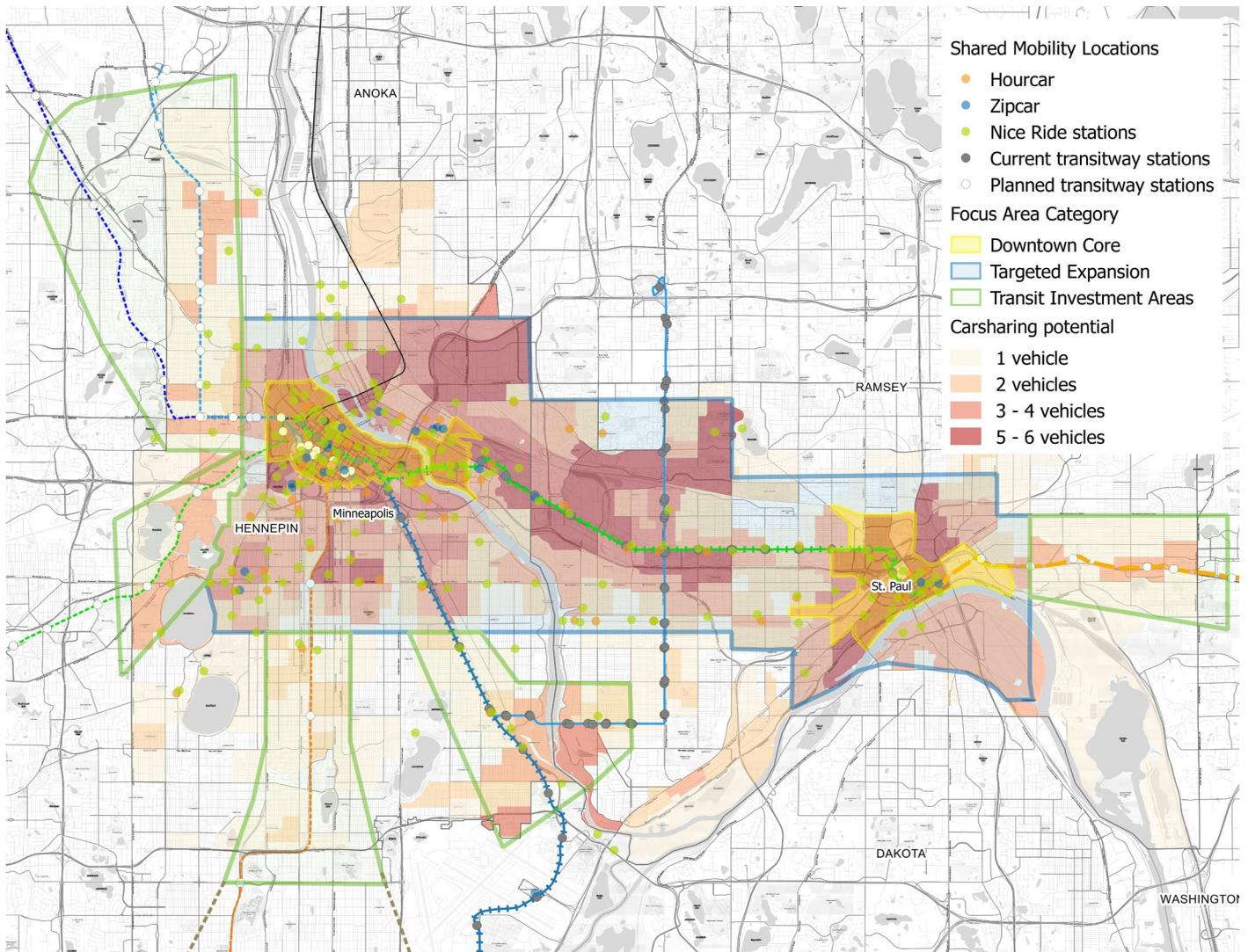


Figure 7: Proposed zones for shared mobility expansion See p. 18 for descriptions of Focus Area Categories

For the sake of illustration, Table 2 (previous page) features information on the potential for shared mobility programming in some of the municipalities within the focus area identified by SUMC. These cities represent 1.1 million total residents—more than one-third of the metropolitan region’s population—and support a high percentage of the area’s jobs.

Within the next 10 years, SUMC projects that the selected cities will have significant potential for shared mobility based on a combination of demographic and land use factors.<sup>7</sup> Because many of these areas also have high employment density, employer participation in TDM programs will be critical to the success of this plan.

<sup>7</sup> Based on expected transit expansion described in Chapter Two and projections for population growth, illustrated as an average based scoring using the Opportunity Analysis Methodology.



"Bike cop directing bike traffic" by Sharyn Morrow.  
Licensed by CC BY-NC-ND 2.0. <https://flic.kr/p/89kQ5y>

## Focus Areas and Division of Approach

Within the cities listed in the previous table, SUMC has further focused analysis in three distinct areas—downtown core, targeted expansion, and transit investment areas. These categories, which are shown on the map in Figure 7, can be used as a method to further target policy and program recommendations.

Focus Area	Land area (sq.mi.)	Population (2015)	Jobs (2014)	Basic Policy and Program Approach
Downtown Core	5.4	695,000	501,000	Elevated TDM investments, parking disincentives, street space utilized for mobility hubs, employer and developer mandates, vanpool programs
Targeted Expansion	38.9	302,000	243,000	Public co-investment in carshare programs, targeted reverse commute pilots, employer and developer incentives for shared mobility investment
Transit Investment Areas	31.7	136,000	52,000	Public co-investment in both bikeshare and carshare programs, targeted first/last-mile pilots, employer and developer incentives for investment

Table 3: Programmatic Recommendations

This approach is based on a few key assumptions about participation in shared mobility programs in each focus area:

**Downtown Core Areas** have a high density of access to shared mobility networks. However, many residents and employees are still choosing to drive a private vehicle for most trips. As incentives and disincentives steer these users toward shared mobility:

- Carshare presence (number of vehicles) will increase significantly in proportion to user growth.
- Bikeshare station availability will remain sufficient without a need for further expansion, following planned bikeshare infill growth during the 2017-18 timeframe.
- Ridesourcing services will continue to grow gradually with most trips involving travel to and from the Downtown Core, largely during evenings and weekends. In other cities, especially those that have ride-splitting services, these trips are increasingly used during daytime hours as well.

**Targeted Expansion Area** service investments will require a combination of private and public resources, with much of the growth coming through carsharing and reverse-commute programs. The scale of this expansion will be proportional to public investment, and most of this growth is not expected to occur until significant funding is in place (2019-2022). However, employer incentives and private market interest also must be encouraged. In addition:

- Many of these communities are economically disadvantaged, and access to job opportunities in the greater metro area is constrained by the limits of the existing transit system. As a result, reverse-commute programs using vanpooling and microtransit may emerge as a high priority.
- Public-private partnerships in carsharing and bikesharing can be structured to concentrate public support and incentives around growth—in service and utilization—on these targeted areas.

**Transit Investment Areas** should roll out shared mobility services in conjunction with new high-capacity or high-frequency transit service such as the Southwest and Bottineau LRT lines (2020-2022). Such rollout is likely to be supported by public and private investments in new mobility hubs and other transit oriented development (TOD) initiatives.

PART IV

# PLAN GOALS

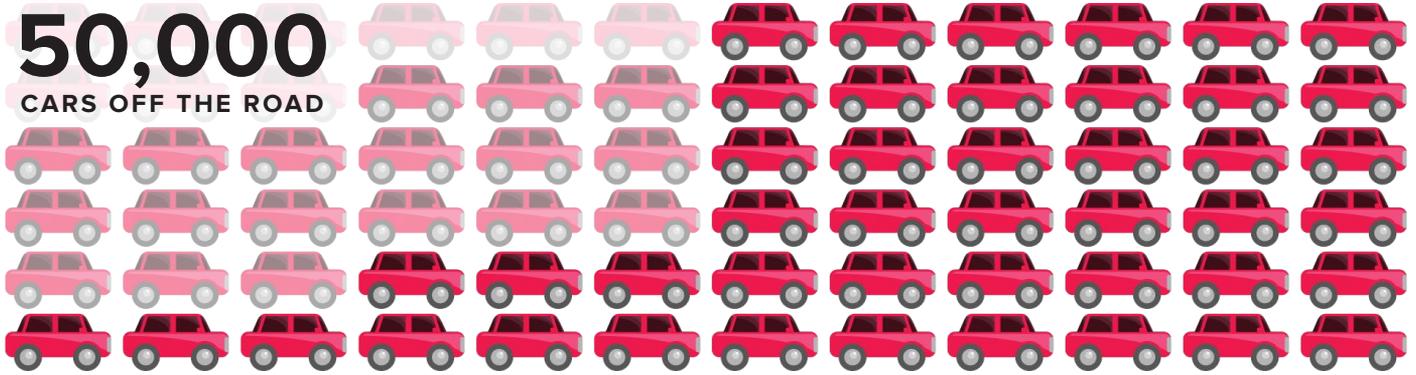
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Based on these assessments for potential system growth and investment, SUMC recommends the following overarching goals:

**GOAL 1**

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



To do that, this plan suggests that Twin Cities aim to:

- Take 20,000 cars off the road in the next five years in the Cities of Minneapolis and St. Paul, measured as a 5% reduction in personal vehicles
- Take 50,000 cars off the road in the next 10 years, representing an 8-10% reduction in personal vehicles in Minneapolis and St. Paul and a 3% reduction for the region

To remove 20,000 cars from the road, the region will need to:

- Attract 30,000 new daily transit riders through a combination of new rail capital projects and improvements to BRT and rapid bus lines
- Sustain 600 total vehicles in carsharing programs, which will require re-introduction of a one-way model, sustained growth for existing operators, and new approaches to public-private partnerships in carsharing
- Add 800 bikeshare bikes to expand the Nice Ride MN network to 2,500 total bikes
- Add 1,000 daily vanpool users, tripling the size of the current program
- Add 2,000 microtransit and ride-splitting users through new pilot projects

Reducing the number of cars on the road by 20,000 could cut annual vehicle miles traveled (VMT) by more than 200 million, avoid nearly 80,000 metric tons of annual greenhouse gas emissions, and save residents more than \$70 million each year in household transportation costs. Once these changes are underway, they can help to grow the ecosystem of options and—when combined with advancements in ride-splitting, policies that support electric, shared, autonomous vehicles, and continued investment in transit and supportive land use—could eventually result in removing more than 50,000 cars from area roadways.

**Removing 50,000 cars from the region’s roadways would have significant benefits, including:**

- Reducing annual vehicle miles traveled (VMT) by 500 million miles
- Avoiding nearly 200,000 metric tons of greenhouse gas emissions annually
- Saving residents \$185 million annually in household transportation costs

**GOAL 2**

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

Until now, no city or region has set comprehensive shared mobility equity goals. While leading cities in this space such as Seattle, Denver, and Buffalo have designed programs to target disadvantaged communities, regional goal setting will need to be more deliberate.

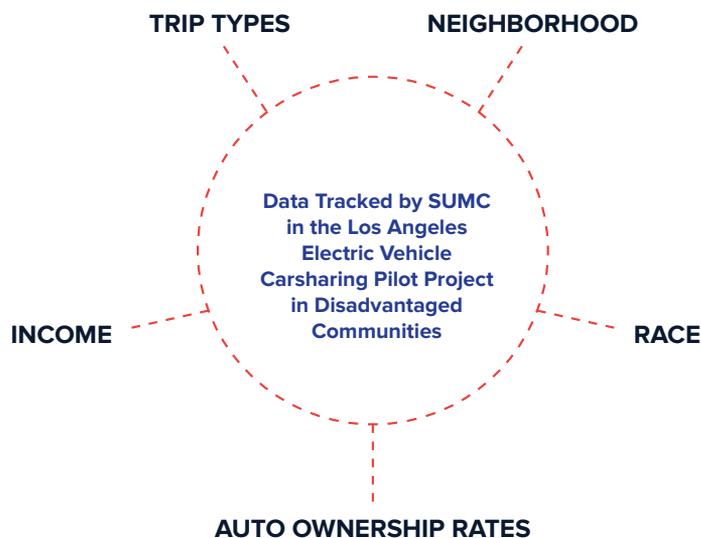
Over a 10-year timeframe, such objectives could include:

- As microtransit and vanpooling programs grow, ensure that 40% of commute trips using Met Council, county, or city-supported programs serve low and median-income jobs, such as those in warehousing, manufacturing, and the service sector. Trips can be tracked by the industrial classification of the employer.
- Move toward a more representative membership base in shared mobility programs, with at least 30% of active members coming from households that earn below 80% of the Area Median Income. While transit will continue to be a core mode of transportation for these riders, increasing access to wider ecosystem of shared mobility options can help to fill gaps in times and places when transit is not available. Currently, more than 40% of public transit riders in the Twin Cities are considered low-income. Potential discounts for shared mobility services can also be tied to this income threshold.

Since information on shared mobility equity is not typically tracked, setting and monitoring progress toward these goals will require significant effort. In order to ensure disadvantaged communities benefit from these services, operators will need to collect data on who uses their services and their impacts on household spending. Success will require buy-in from all stakeholders, bold investments in these programs, and collaboration and cooperation from the public, private and community sectors. Additionally, it will be necessary to track policy changes, longer-term costs and benefits of public-private partnerships, and public spending on shared mobility programs. When tracking progress toward equity goals, all parties must also take precautions to address privacy concerns and protect the data of individual shared mobility users.

### Other Metrics for Success

Beyond mode shift, the success of the plan can be quantitatively measured in terms of changes to jobs access, household financial impacts, and the inclusivity of shared mobility services. As with the equity-focused goals identified above, these impacts are typically not well tracked by shared mobility programs. However, monitoring these outcomes will be critical, and is possible with strong public investment.



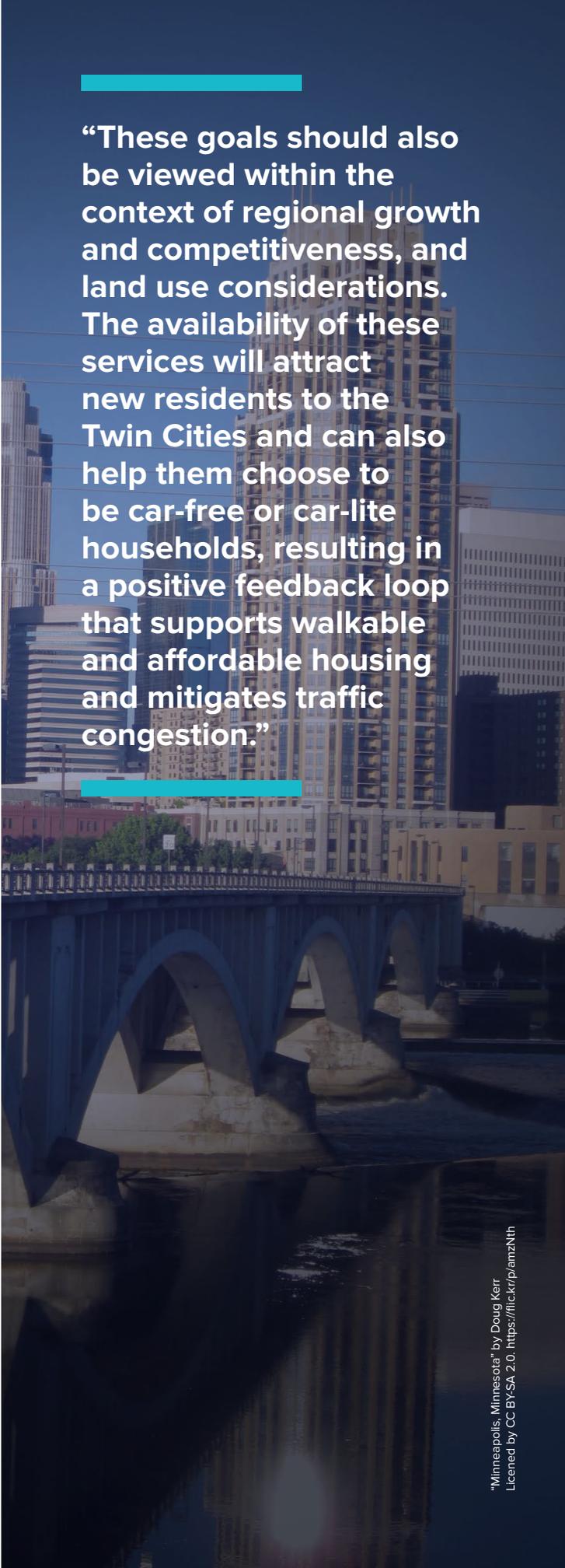
Additional metrics to be tracked (but not tied to discrete goals) could include:

- Jobs accessed as a result of new shared transportation services (particularly reverse commute solutions and, to a lesser extent, carsharing).
- Electrification of the sector as market forces and grant-based opportunities allow for the evolution of the industry.
- Approximation of monthly household spending on transportation before and after introduction of service(s).
- Long-term retention of affordable housing units in developments featuring shared mobility services.
- Participation rates in comparison to demographic background of the region and project area in terms of race, ethnicity, age, and income. This distinction is not often prioritized—as with the more basic data mentioned above.
- Measurements of coverage area (proximity to key populations) and access for new services, to ensure that these services are being distributed equitably throughout the region, and that they can be easily accessed and used by people in these communities following deployment.

In terms of policy guidelines that may impact the region's multimodal transportation network beyond the timeline outlined in this action plan, local implementers should measure success in terms of:

- Adoption of mode-shift goals, in line with the plan, by public-sector agencies and local anchor institutions within their existing planning processes (i.e. city comprehensive plans, transportation elements, and sustainability plans).
- Implementation of shared mobility policies at state and municipal levels.
- Number and quality of public-private partnerships established with private mobility operators or technology providers.
- Funding strategies implemented by public agencies towards realizing mode-shift goals.
- Value of private investment and federal funding for initiatives identified in the plan.
- Feedback received from nonprofits and community-based organizations that work in low-income neighborhoods.
- Overall improvements to the quality of life in targeted neighborhoods. These metrics could include reductions in travel times (congestion), vehicle miles traveled (VMT), household vehicle ownership, and emissions.

These metrics eventually could be tracked by the Met Council or through surveys conducted on behalf of the cities, Metro Transit, or shared mobility operators.



**“These goals should also be viewed within the context of regional growth and competitiveness, and land use considerations. The availability of these services will attract new residents to the Twin Cities and can also help them choose to be car-free or car-lite households, resulting in a positive feedback loop that supports walkable and affordable housing and mitigates traffic congestion.”**

# RECOMMENDED STRATEGIES

To realize the goals outlined in the previous section, SUMC has identified the following 10 strategies to help policy makers and local leaders drive and support change in the Twin Cities.

## 1. Grow Shared Mobility in Support of the Transit Network

New forms of shared mobility such as bikesharing, carsharing, and ride-hailing encourage individuals to reduce their reliance on private autos and increase their use of transit, as established by Transit Cooperative Research Program (TCRP) Report 188 and many other academic studies.

With these benefits in mind, regional transit providers—and Metro Transit in particular—have been considering a more active approach to engaging with private mobility operators in ways that can directly support core transit service. Specific examples are highlighted on the following pages, but as a general strategy, Metro Transit should consider direct investments in groundbreaking shared mobility programs as part of its overall transit network. In particular, the agency could benefit from:

- Funding shared mobility programs as part of the Regional Solicitation process, and holding all projects to a common rubric for performance evaluation. Grants could focus on:
  - Growing the vanpool program, in partnership with cities and employers, so that it is a realistic option for more residents and can help increase the number of non-auto commuters.
  - Prioritizing shared mobility infrastructure that provides relatively low-cost enhancements to significant capital projects. This could include turning transit station areas into mobility hubs by making investments in bikesharing, electric carshare stations, and wayfinding improvements.
  - Utilizing a portion of the Regional Solicitation to issue a request for qualifications (RFQ) for modes or geographies for which a key need has been established (e.g. a reverse-commute flexible transit pilot).
- Investing dedicated staff resources to explore public-private partnerships. Metro Transit personnel could conduct preliminary interviews with shared mobility operators with an eye toward leveraging public funds at higher matching ratios than are typical for transit capital investments.
- Reserving space for shared mobility services in light rail and bus station facilities, and in conjunction with curb space changes taking place as part of rapid bus and BRT improvements.
- Conducting cross-marketing campaigns between transit and shared mobility services that utilize on-street, in-station, and in-vehicle advertising to promote multimodal travel.
- Establishing a pilot project to examine cost savings by making a range of shared mobility services available to Metro Mobility users. This can be done by targeting the approximately 30% of Metro Mobility trips that serve non-ADA users, which could help control costs by decreasing the need for expensive wheel-chair accessible vehicles.
- Being proactive in establishing autonomous vehicle policy and demonstration programs to ensure they support transit investments.

## 2. Pilot Flexible Transit that Focuses on Reverse Commute Challenges

Despite the Twin Cities' strong transit network, like other regions, it could benefit from first/last mile solutions that bring riders to and from buses and trains. Metro Transit has begun an in-depth investigation of these opportunities. Early conclusions drawn from this process, which include a November 2016 workshop, suggest that the Twin Cities should consider pursuing microtransit pilots that address the following issues:



### Suburban First/Last Mile Connections

One possible solution to help address first/last mile issues in suburban areas is zone-based demand responsive transit (DRT), such as the SW Prime model discussed in Chapter 2. DRT is a shared mode of transportation that utilizes small to medium-sized vehicles and flexible routing and scheduling. In low-density areas where the land use does not support frequent fixed-route transit, DRT can be an effective approach to help increase the catchment area around transit hubs and bring dispersed users to higher frequency transit services. DRT has been used successfully in both public and private service configurations in several areas around the country.

Metro Transit, possibly in partnership with nonprofit stakeholders or other regional transit providers, could benefit from releasing a Request for Information (RFI) to solicit feedback on a DRT-like service from a wide range of private operators. The RFI could describe the design question and suburban locations being considered for service, and request specific information about minimum service levels, price points, and peer programs. One example application could be a flexible circulator running between downtown, west, and south St. Paul.

### Reverse Commute

Route-based (i.e. Chariot) and corridor-based (i.e. Via) microtransit innovations have been well-publicized. However, these density-dependent services are not yet proven in suburban areas with first/last mile challenges. Instead, these services are well suited to reverse-commute solutions that bring riders directly from a transit-heavy urban neighborhood to a diffuse but relatively high-density job center. These reverse commute routes offer significant opportunities to attract new transit riders.

Such solutions are heavily dependent on employer participation, and funding, to succeed. But involving the private sector can also help projects to be more precisely scoped and quickly implemented. SUMC recommends issuing an RFQ once an employer partner has been identified. Possible reverse commute pilots could include:

- Flexible service along Energy Park Drive Corridor (perhaps originating in Minneapolis)
- Downtown Minneapolis to Downtown St. Paul to the 3M Campus
- North Minneapolis to the Amazon Campus

### **Corporate Shuttles**

The private sector can also directly create programs to help their employees get to work, especially when the jobs are located in suburban areas. One local example of this comes from Amazon, which opened a fulfillment center in Shakopee, about a half hour drive from downtown Minneapolis. To help get workers from the cities to these newly created jobs, Amazon runs coach buses seven days a week between Shakopee and the Cedar-Riverside neighborhood of Minneapolis. To launch this program, Amazon partnered with the Confederation of Somali Community in Minnesota, which helped connect local workers with well-paying jobs that they may not have been able to reach otherwise. This program can be used as an example for both public and private sector leaders who are looking to connect open positions with a ready and willing workforce.

Metro Transit could benefit from developing a proactive strategy to:

- Monitor and encourage private transit shuttles;
- Integrate shuttle services with public transit routes and schedules where possible; and
- Encourage electrification of vehicles used for these trips.

Early conversations with area employers also indicate that they are interested in seeing whether these shuttles can be facilitated by local TMOs.

## **3. Leverage the Metro Transit App to Establish a Data Clearinghouse**

The Metro Transit app, and its planned integration with various shared mobility platforms, has the potential to offer a myriad of benefits for the region. These include real-time travel information, payment integration, and the ability to offer targeted discounts and other incentives that encourage multimodal travel.

The app can also serve as a catalyst to further explore how shared mobility data can both inform public policy and improve the rider experience. Taking the long view, Metro Transit can build on this application to establish a more extensive data clearinghouse platform that could eventually coordinate, dispatch, and fund collection of data from a range of different modes.

The Twin Cities, like many other regions in the U.S., considered the possibility of creating such an intermodal data platform as part of its application for the U.S. Department of Transportation's Smart Cities Challenge. As Columbus, Seattle, and other cities move forward with similar initiatives, the working group established for this project (and led by the City of Minneapolis) could play a key role in helping advance shared data "building blocks" and best practices.

Several local stakeholders could take actions to assist in this effort, including:

#### **Metro Transit**

- Activate the shared mobility components of the app.
- Establish a deadline for a data policy requiring all participating mobility companies to share data, and recommending types of data to request (i.e. proximity of destinations to transit stations and bus stops, average passenger count per trip).

#### **Cities**

- Examine the opportunity to create a "data first" policy for Transportation Network Companies and other private operators. Work with TNCs to utilize data to better understand new travel patterns and identify new service opportunities for a variety of public and private transportation services.
- Bring TNCs to the table early in discussing these potential new policies.

#### **All Agencies**

- Adopt Memorandum of Understanding regarding data sharing between agencies.
- Explore the "Data Collaborative" and "Trusted Broker" models currently being advanced in Columbus, Seattle, and other cities.
- Continue to convene the Smart Cities working group to discuss these developments.<sup>8</sup>

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<sup>8</sup> SUMC, through research for the Federal Transit Administration and partnerships such as the Smart Cities Collaborative (led by Transportation for America) and the Smart Card Alliance can continue to be a resource for knowledge transfer in this area.



While securing data is often easier said than done, particularly with respect to TNCs, such efforts could offer a number of important benefits to the Twin Cities. These include helping local agencies understand how people are using new shared transportation services, monitoring traffic flows, and identifying locations where changes to transit service or traffic engineering could be beneficial.

## 4. Stabilize and Grow Carsharing

The Twin Cities can take a number of actions to help strengthen the region's remaining carsharing services and lay the groundwork for a more robust marketplace in future years. These recommendations assume a move toward a public-private partnership approach on the part of municipalities:



**Reform local and state carshare taxes** to be competitive with other regions where carsharing is successful. Such measures should include:

- Eliminating the 9.3% passenger car rental tax, as has been recently proposed, which would make carsharing more affordable and better utilized.
- Maintaining the 5% usage fee and capturing these revenues for use in programs and marketing campaigns that support growth of the mobility services in disadvantaged communities. These funds could be granted competitively back to operators, who would then oversee the initiatives.

**Support on-street parking for carsharing.** Policies in Minneapolis and St. Paul should be revisited and coordinated to be consistent across municipal boundaries. City leaders should:

- Consider opportunities to create highly-visible carshare locations in conjunction with recent and planned street infrastructure projects.
- Contemplate waiving Critical Parking Area (CPA) fees for providers in Minneapolis, unless a detrimental impact on local neighborhoods can be proven.
- Further reduce carshare access fees for metered spaces, in coordination with an approach to encourage service in disadvantaged communities (see below).

**Request regional solicitation funds through Metro Transit, Minneapolis and St. Paul for carsharing in disadvantaged communities.** A number of cities, including Denver and Seattle, have used CMAQ funds to support carshare expansion. A similar regional approach, which did not specify operators, was taken by the Metropolitan Transportation Commission, the Metropolitan Planning Organization (MPO) for the San Francisco Bay Area. Subsequent to allocation of funds for carsharing programs, a regional RFP or RFQ could:

- Designate opportunity areas for prioritizing program expansion
- Leverage local matches, utilizing resources such as reductions in parking costs
- Serve as an enforcement mechanism for data collection

**Work with state agencies to position Minnesota competitively for Volkswagen Settlement funds.** In addition to Electric Vehicle (EV) infrastructure funding, Minnesota should make the case for supporting programs such as EV carsharing in disadvantaged communities. Communities in California, Oregon, and Washington are making such appeals at the moment, and California has launched two such programs, including one in Los Angeles that is supported by SUMC. These funds could also be used for electric shuttles and microtransit pilots.

**Consider municipal fleet replacement strategies** that utilize city-owned vehicles for community-based carsharing outside of business hours. Alternatively, these public fleets could be swapped out for city membership in a carsharing program. The City of Minneapolis could act as a first mover on this model, issuing an RFI to evaluate potential cost savings.

**Collect data on all programs consistently.** In order to understand not only where, but to whom these services are being provided, Metro Transit should require an annual survey. This survey would be voluntary and ask about the zip code, income, and race of members.

**Create a custom one-way solution.** Public sector leaders from Minneapolis and St. Paul could work with a private carshare provider to create and pilot a custom one-way carshare solution specifically designed to work in the Twin Cities.

The growth and success of carsharing in the Twin Cities is not solely the responsibility of the public sector. Existing operators and others in the market should consider embracing a number of strategies that have worked elsewhere, but which have not yet been deployed in the Twin Cities, including:

- **Carsharing-ridesourcing hybrid services**, such as GM’s Maven Gig carshare service, which allows TNC drivers to rent vehicles by the week. Zipcar also recently announced a similar program in partnership with Uber in Boston.
- **Peer-to-peer carsharing**, as a standalone service or a supplement to existing fleets.
- **One-way, station-based carsharing**, which could involve an entire fleet such as with the BlueIndy program in Indianapolis or “cherry picked” station locations such as at the airport or at Mall of America.

## 5. Expand and Evolve Bikesharing

While Nice Ride Minnesota continues to stand out as a successful nonprofit bikesharing system, the growth of the Metro Transit light rail network may offer some notable opportunities for long-term expansion. Nice Ride and its regional partners should:

- **Anticipate growth based on the Southwest and Bottineau expansions**, and plan for measured expansion in coordination with the Metro Transit construction schedule, by placing bikeshare near new transit stops to increase accessibility. Employers and developers near these station areas can engage early to support this expansion.
- **Consider ways that recent industry innovations be able to might help address challenges**, such as station removal during the winter months. Nice Ride may also want to consider developing a “blended” model that combines elements of the existing dock-based system with innovations in dockless bikeshare technology, to extend the range of the network and keep system costs down. Nice Ride would continue to lead the bikeshare industry with this evolution.
- **Explore opportunities to expand the Nice Ride Neighborhood program.** In addition, project partners could look to incorporate lessons learned from other cities involved in Better Bikeshare Partnership equity pilots<sup>9</sup>

As the popularity of flexible dockless bikeshare systems continues to rise, it is important that the Twin Cities also consider municipal policy concerning these evolving models. Preparations should include developing new regulations, such as requiring parked bicycles remain within permitted areas and mandating that licensed operators share real-time data necessary for enforcement. The Met Council should also consider conducting a preliminary study to explore the potential for expansion of geographic coverage in conjunction with the Nice Ride Neighborhood program and/or flexible bikesharing, and the role for public investment in these evolving networks.

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<sup>9</sup> This partnership, funded by the JPB Foundation in 2014, has funded efforts in over a dozen networks (including Nice Ride) to address barriers to bike sharing in low income neighborhoods and communities of color.



## 6. Elevate Vanpooling as a Viable Option for Commuters

Met Council's vanpool program, which includes approximately 500 participants and 70 vehicles, provides a vital service to the Twin Cities. However, it has fallen behind other regions that more directly invest in—and benefit from—vanpooling as a commute trip reduction strategy. For instance:

- In the Seattle-Tacoma region, King County Metro has 1,600 vanpools, approximately 20 times the scale of the Twin Cities program, thanks to an aggressive layering of incentives coordinated at regional, city, TMO, and employer levels.
- San Diego, which has relatively modest congestion issues that are comparable to the Twin Cities, offers a similar subsidy (\$400 per vehicle per month) but has established more than 700 vanpools through active promotion.

The Twin Cities can learn a number of lessons from these leading examples, including:

- **Treat vanpool as a core transit program.** Performance should be compared with other transit functions, and the program should be grown accordingly. Like many transit systems, Metro Transit will recognize net revenue gain by expanding vanpooling, since the FTA subsidies reward the growth of these programs.<sup>10</sup>
- **Relax or remove downtown prohibitions on vanpool destinations.** While these prohibitions were put into place to avoid duplication of bus and rail routes in serving downtown destinations, they also limit the ability of vanpooling to more efficiently connect suburban residents with major job centers. Moreover, these prohibitions do not realistically acknowledge differences between vanpooling and scheduled fixed-route service. Given the limited number of participants in vanpooling, any route-level impacts would be limited. And, at a system level, Metro Transit is likely to benefit from having more people arriving in downtown areas without a car.
- **Advertise vanpooling on express buses, and vice versa.** These two programs are complementary from a marketing perspective. Since recruitment of drivers is one of the bottlenecks that also limits vanpool's success, this increased marketing would bring needed attention to the program and reach a larger pool of potential drivers.
- **Make program marketing part of TDM efforts.** The Met Council could contract vanpool marketing to the region's TMOs, with a focus on engaging major employers in downtown Minneapolis and St. Paul, the University of Minnesota, and the Capitol Area. Emphasis should be given to communities with lower rates of car ownership and where residents have difficulty accessing far-flung job centers not well served by transit.
- **Incentivize preferred (and free) vanpool parking on streets and in public ramps.** The cities of Minneapolis and St. Paul and the Minnesota Department of Transportation (MNDOT) could work with private parking owners to provide these discounts.
- **Prioritize outreach efforts to reach reverse-commute destinations,** such as warehouses and other locations with large numbers of entry-level jobs, where need may be high. New routes could possibly be funded through increased subsidies, particularly to serve trips that originate in disadvantaged communities.
- **Review best practices for ways to jumpstart driver recruitment.** Specifically, the Twin Cities should find ways to actively market the benefits that vanpool drivers receive, such as service price reductions and the ability to use the vehicle for personal trips.
- **Explore ways to incorporate new technology to make vanpools more similar to microtransit.** Dynamic routing algorithms, crowd-sourced routes and other emerging approaches could make vanpools a more attractive choice for new riders.

<sup>10</sup> FTA formula grants based on passenger miles travelled are agnostic to mode, so the relatively low-cost, long distance trips made possible with vanpool programs generate an increase in FTA subsidies that more than offset the investments made by the transit agency in the program.

## 7. Develop and Implement New Carpooling and Ride-Splitting Solutions

Carpooling has been a transportation solution in the U.S. for more than half a century, but has never truly scaled to its full potential. That may be beginning to change, as providers enter the market with new technological solutions that can seamlessly combine rides in real time while potentially helping to mitigate traffic congestion and auto emissions.

A wide range of app-based services have emerged in recent years and should be encouraged to expand to the Twin Cities market. These include:

- Scoop and SPLT: Next-generation carpooling apps that monetize casual carpooling
- Green Commuter: Hybrid carsharing and vanpooling platform that uses Tesla EVs
- Maven: Hybrid carsharing and ridesourcing model operated by GM
- Uber and Lyft: Ride-splitting features (UberPool and Lyft Line) not yet available in this market
- Via, Chariot, and Ridecell: Microtransit operators that can “white label” their apps for transit agencies

## 8. Concentrate Efforts around Integrated Mobility Hubs

Integrated mobility hubs combine multiple modes of transportation together in one physical location, often clustered around a high-frequency public transit stop. Typical components include bikeshare stations, carshare cars, bike parking, wayfinding elements, dedicated curb space for ridesourcing and taxis, and improvements to pedestrian and bicycle routes in and around the station area. Mobility hubs can also be used to support community place-making efforts through on-site amenities such as cafés and traveler’s centers with staff who can help less tech-savvy residents with their travel needs.

In the Twin Cities, SUMC has observed several sites that possess high-quality transit service but have underutilized surface parking. Mobility hubs can serve as an impetus to activate these sites, helping to reduce parking needs in the area and allowing for high-density and inclusionary development.

Where possible, the build out of these hubs should dovetail with other recommendations from this plan, such as:

- Coordinating transit capital and service improvements
- Increasing the price of parking in the immediate area
- Encouraging employer and developer contributions or sponsorship of programs
- Implementing TDM ordinances at the city level
- Providing localized marketing and promotions through TMOs

Locations that could serve as mobility hubs include:

### St. Paul

- **Union Depot:** With at least one BRT line being developed in the near future, the area around Union Depot will only continue to grow in profile as a transit hub. The surface lot immediately east of the historic depot would be a prime site for a mobility hub.
- **Capitol/Rice Green Line Station:** A mobility hub could be created as part of a redevelopment of the Sears site and in coordination with efforts to update TDM policy for state employees and visitors to the Capitol.





## Minneapolis

- **Warehouse District Station:** Several surface parking lots still exist in proximity to this station, which could provide the bulk of the footprint needed to draw pedestrian attention to a high-visibility transit hub.
- **Target Field Station:** At the terminus of both LRT lines and the North Star Line, this station is key for first/last mile connections to the greater downtown area. A mobility hub that makes a wide range of options available to commuters could help encourage ridership for both rail systems.
- **Nicollet Mall:** This site already has many of the components in place for a mobility hub, including LRT, multiple bus lines, carshare locations, Nice Ride bikeshare stations, and transportation information. The Move Minneapolis/Meet Minneapolis office, which is located just steps from the Nicollet Mall LRT station, could help provide assistance, information, and onboarding for all services.
- **Chicago-Lake Transit Center:** Located at the nexus between two of south Minneapolis's main commercial corridors, this active transit node will only get busier with two arterial BRT lines planned for completion by 2022. Underutilized parking and nearby access to the Midtown Greenway could also make it an ideal mobility hub.

In the early stages of developing mobility hubs, site acquisition may be necessary. This presents a key opportunity to coordinate with affordable housing developers, such as the Greater Minnesota Housing Fund, to identify opportunities to acquire and invest in inclusionary housing at these sites. Such a strategy could align with the recently created Naturally Occurring Affordable Housing (NOAH) Impact Fund and other land banking efforts.

The Capitol/Rice station area may be particularly well-suited for a mix of affordable and market-rate housing. Redevelopment could be coordinated with community-based development while providing construction and long-term job opportunities.

While we tend to visualize mobility hubs as large plazas with heavy pedestrian traffic, simple coordination of curb space improvements—particularly on blocks where curb bump-outs are called for as part of the project—can make a big difference in promoting shared mobility amenities and drawing additional attention to BRT and Rapid Bus Line routes. Such “micro” hub enhancements could include:

- Using space next to bump-outs as designated loading zones for minibuses, taxis, and TNCs
- Reserving two to three spaces next to bump-outs for designated carshare parking
- Using space provided by expanded and protected sidewalks for bikesharing and bike parking
- Leveraging advertising space in the new BRT shelters to promote shared mobility programs and the Metro Transit app

Lastly, station areas that have been recently built out for the Blue and Green Lines should be examined as locations that could support carshare parking and TNC loading zones. In some cases, staging areas for buses may also be underutilized.

## 9. Realign CMAQ Funding and Improve TDM Outcomes

As shared mobility programs evolve, initiatives such as the Federal Transit Administration’s Mobility on Demand Sandbox are helping to support the integration of emerging services and core transit offerings.<sup>11</sup> As such, transit agencies are increasingly looking to use their own flexible funding resources to support such initiatives, with a focus on core transit users.

One major opportunity for integration in the Twin Cities lies in the Regional Solicitation process and use of CMAQ funds to support shared mobility. Targeted investments—both directly in shared mobility programs, and indirectly to promote these initiatives—have been an effective strategy in other regions, but are underutilized in the Twin Cities. It is likely that many of these programs may also be highly competitive when compared against other uses of CMAQ funds.

One peer city using CMAQ to fund TMOs is the City of Denver and its regional Council of Governments (COG). These agencies manage a similar amount of CMAQ funds for TDM compared with the Twin Cities program. However, both the COG and the City of Denver manage the funds differently:

- Denver’s COG managed \$7.2 million in funds over five years through the most recent Transportation Improvement Program (TIP). Roughly one-third of those funds (\$480,000 annually) is evenly distributed between six TMOs.
- The City of Denver managed \$4.7 million in CMAQ funds during this same period, a 60% increase from the previous TIP cycle.
- The six participating TMOs were allowed to submit funding proposals via a competitive Regional TDM Pool, which includes all of the City’s funds and the remainder of the COG’s funds. Once specific projects are awarded through this competitive process, the TMOs enter into a Memorandum of Understanding to carry out the specifically defined activities.

These examples from Denver can help inform policies in the Twin Cities, specifically as they relate to encouraging TMOs to fund programs that are in line with the region’s overall transportation strategy and are complementary to one another. The Met Council should conduct a thorough re-evaluation of the TDM program with an eye toward restructuring in time for the 2018 solicitation. To do this the Council should assess the impacts of possible strategies, such as:

- Shifting from funding organizations toward funding tangible programs, including discounted transit and shared mobility “passes” for a target population. Most of the Twin Cities’ \$6 million in TDM funds could be repurposed in this way. This strategy allows the region to have a connected transportation strategy with funds dedicated to furthering that long-term goal.
- Setting aside a portion of the program funds for evaluation and data tracking, with only municipalities eligible for such activities. Such evaluation is vital to ensure that projects are efficient and make the best possible use of limited funds. Additionally:

**Concept:** Including shared mobility priorities in the 2018 Regional Solicitation process could help to jumpstart many of the recommendations made in this plan. For instance, an investment of approximately \$10 million—along with significant matching funds from the private sector—could help to support a wide variety of projects, which could all be implemented by 2022 (within the five-year timeframe of this plan). Sample projects include:

- Regional carshare expansion project (30-40 vehicles): \$2 million
- Bikeshare expansion along Blue and Green Line extensions (500-800 bikes): \$3 million
- Vanpool electrification and expansion (100 vehicles): \$3 million
- Expansion of TDM programs in coordination with strengthened (and coordinated) TDM policies in both Minneapolis and St. Paul: \$2 million
- Autonomous circulator pilot: \$2 million

<sup>11</sup> In October 2016, The FTA announced the award of \$7.9 million for 11 Mobility on Demand Sandbox projects, many of which involve mobility service integration and microtransit or ridesourcing pilots. SUMC is advising the FTA and grant recipients around best practices in transit and shared mobility integration.

- Municipalities would then be responsible for serving as a pass-through or coordinator for TDM projects, and manage at least a portion of the funds.
  - TMOs would act as contractors for most, if not all, of these projects.
  - Met Council and participating municipalities would agree on metrics for project evaluation. Projects and their contractors could be scored annually based on performance in these agreed upon criteria.
- Recommending that cities seek matching resources for the above projects and beyond the 20% required federal match (e.g. setting a goal as high as 50%).
  - Making TDM projects eligible for competition with other regional solicitation projects, possibly with an initial “cap” on these programs (e.g. 20%) in the 2018 cycle, so as not to exacerbate the backlog of regional priorities such as transit modernization.

### **MnDOT/ABC Ramps Transportation Options Program Plan**

The ABC Ramps, a set of three parking structures at the terminus of I-394 in downtown Minneapolis, were completed in 1992 as part of the I-394 construction using federal funds. The ramps are owned and managed by the Minnesota Department of Transportation and operated by the City of Minneapolis parking system.

As part of the funding, the ramps’ operators were required to provide programs that support reducing congestion and improving air quality by reducing single-occupancy vehicle trips from the I-394 corridor. At the ramps’ inception, the program mainly provided discounted carpool parking, a goal that aligned with the City of Minneapolis’s parking system goals and the I-394 Corridor Management Plan. Since that time, however, the transportation landscape has changed, as have the travel behaviors of the users—most notably evidenced by the declining number of users who carpool.

As the ramps reach the midpoint of their 50-year design life, MnDOT is conducting a study to examine the programs, policies and goals underpinning the ramps to ensure they address current transportation challenges and continue to align with regional goals. This plan provides an opportunity to make shared modes a more central part of the multimodal travel-demand reduction portfolio marketed through the ramps. As demand for parking increases downtown, the ramps also provide a laboratory to test different TDM and parking management approaches, which should be done in close partnership with the region’s TMOs. For instance, the ramps themselves could be used as sites for vanpool storage and EV charging, and the city may also want to consider creative land-use changes to support transit-oriented development and the creation of community amenities.

## **Making It Work**

Over Halloween weekend in 2016, Minneapolis city officials launched a pilot program aimed at increased safety during one of the busiest bar weekends of the year. From Friday to Sunday nights, traffic control agents ensured that the only vehicles allowed to enter a three-square-block portion of the popular Warehouse District were Uber, Lyft and taxi vehicles. The program was designed to reduce traffic congestion and create an efficient system for patrons to find their drivers. This type of program could be expanded to cover weekend nights and special events across the Twin Cities, creating a system that easily allows residents to find a safe ride home.

### **Supportive TDM Policy**

In addition to realigned funding structures for TDM activities, the region’s cities, and in particular Minneapolis and St. Paul, can enact policies that more strongly encourage employers and developers to participate in TDM programs and coordinate with TMOs. There are many good examples of city policies of this kind, several of which are listed in Appendix E.

Employers are also an important partner in creating an efficient TDM program. As seen in Appendix E, many of the Twin Cities’ peer cities have implemented specific requirements for employers over a certain size. The governments of both Minneapolis and St. Paul should require TDM plans for companies with either more than a set number of employees or whose real estate exceeds a determined square footage. These TDM requirements can include issuing employee surveys, disseminating information on transportation options aside from driving, and assigning a mobility manager to work with the city to ensure compliance.

## 10. Optimize Parking and Street Space to Prioritize Shared Mobility

As long as parking is cheap and abundant, it will be difficult to encourage people to use sustainable modes of travel and build a more balanced transportation network. Minneapolis and St. Paul should use transportation planning processes as an opportunity to re-evaluate parking in areas of the city with mode-shift potential. In concert with pricing changes in some cases, parking revenues can support TDM and shared mobility. Increases in parking rates should go hand-in-hand with increases in travel options (such as using additional parking fees to fund discounted transit passes). This plan recommends the Twin Cities:

- Use parking funds to support the growth of shared mobility. For example, parking revenue can be used to seed funds for TDM programming, on-street carsharing or integrated mobility hubs.
- Increase parking rates where possible and use a percentage of these monies to support sustainable mobility options or a TDM fund.
- Support efforts to grow carsharing to reach a broader range of communities, as previously described, using a TDM fund. Expanded TDM incentives for city employees could also draw from this fund.

Minneapolis in particular can serve as a leading example for utilizing parking policies to support shared mobility. Changes to the administration and operations of the City's parking systems and its funds should be broadly explored and used creatively to invest in shared mobility. With success in Minneapolis, this concept could be replicated in St. Paul and other communities in the region.

### Expand the Use of Parking Cash-Out Programs

Parking cash-out programs, which require that employers offer cash or equivalent transit benefits as an alternative to providing parking benefits to employees, have been successfully implemented throughout the country. Their success has been documented in the Twin Cities as well, including at employers ranging from the University of St. Thomas to American Express and the Department of Commerce in St. Paul. Updating local TDM policies to make participation mandatory for employers, in concert with TMO marketing efforts, could help further promote cash-out programs and encourage alternate forms of commuting.

### Reduce Parking Minimums with Shared Mobility

In the past few years, both Minneapolis and St. Paul have passed ordinance changes that reduce mandatory parking minimums for residential developments located near high-frequency transit lines. Reduced parking requirements give developers the ability to respond to changing demand and lessen housing costs, since developers don't need to build as many expensive off-street parking spaces.

The Twin Cities can further expand the benefits of transit oriented development (TOD) by extending minimum parking ordinances to apply to developments that include on-site carshare vehicles, reduced bikeshare memberships, and other incentives related to shared mobility. The region could also look to related programs such as California's Affordable Housing and Sustainable Communities (AHSC) initiative, which provides funding to support the creation of affordable housing and sustainable transportation infrastructure, with the goal of creating dense, walkable communities. As the Twin Cities region continues to grow, it will be important to continue promoting dense development to help keep housing affordable, mitigate traffic congestion, and reduce greenhouse gas emissions.



# IMPLEMENTATION PROCESS

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This action plan is only the first step toward achieving the mode shift goals described in Section IV. Continued, proactive involvement—such as through creating an Implementation Council and a Shared Mobility Fellowship program—will be needed to drive change and transform the transportation system in the Twin Cities. The implementation process should include a variety of actions, such as:

## **Create an Implementation Council**

In the second half of 2017, SUMC will work with local stakeholders to establish a Shared Mobility Implementation Council, consisting of 8-12 members, who will ultimately work together to carry the action plan forward. The council should include public and private transportation leaders who are actively working on shared mobility issues in the Twin Cities region. These representatives would meet quarterly to discuss challenges, share information and measure progress toward the plan's goals. Council members would also play an ongoing role in helping to implement the strategies featured in the action plan.

## **Establish a Director of Shared Mobility Programs and a Fellowship Program**

SUMC also seeks to work with the Met Council to establish a full-time Director of Shared Mobility Programs who can help shepherd progress toward the region's sustainable transportation goals. Additionally, an embedded Shared Mobility Fellow—managed with technical assistance from SUMC—could help support the Implementation Council and stakeholder agencies.

The Shared Mobility Fellowship will likely involve close coordination with the Cities of Minneapolis and St. Paul in addition to Met Council and Metro Transit, as many of the short-term opportunities highlighted in this plan are at the municipal level. In addition to the fellowship, these organizations should determine the best approach to providing long-term staffing to carry this work forward.

## **Break Down Silos and Serve as Mobility Managers to Coordinate Shared Mobility Efforts**

To be successful, Twin Cities leaders must break down silos and work together in a comprehensive manner to transform the region's transportation system. Agencies should view themselves as mobility managers or brokers that not only provide transportation services but also oversee an increasingly diverse ecosystem of public and private mobility options.

## **Collaborate on Pilot Project Development**

Throughout 2017, SUMC will play both a facilitation and technical assistance role, with ST/TLC working to convene the Implementation Council. As the program ramps up, it is envisioned that SUMC's role will increasingly be limited to technical assistance and guidance.

During 2017 and into 2018, SUMC will:

- Provide ongoing technical assistance related to policy best practices, data analysis, and new public-private partnerships that address transportation equity and first/last-mile issues.
- Assist local leaders in their efforts to implement pilot projects outlined in Section V, especially programs that prioritize low-carbon solutions for disadvantaged communities.
- Work with local agency leaders and shared mobility operators to track and measure the growth of transit and shared mobility services in the region, making use of proprietary tools, such as the online Shared Mobility Toolkit, and producing reports as needed.

## **Funding Sources**

A variety of local, state and federal funds are available to help the Twin Cities expand shared mobility and shift trips to more sustainable forms of transportation. Following is an overview of several possible funding sources for potential pilots and programs.

### **Congestion Mitigation and Air Quality (CMAQ) Funds**

CMAQ funds will constitute the primary source of revenue needed to support a multifaceted and equitable expansion of shared mobility through public-private partnerships. In addition to critical support for outreach, marketing, and customer incentives, SUMC estimates that approximately \$10 million in CMAQ funds over two years could support somewhere between three to five pilot projects.

### **Parking Revenues**

In order to spur the City of Minneapolis toward investment and management of TDM programs and expansion of carsharing to disadvantaged communities, the city may consider establishing a shared mobility division with an initial fund balance in the range of \$500,000 to \$1 million. Ongoing support for this division and its programming should come from portions of:

- Parking revenues from carshare operators
- Parking revenues or parking space taxes and fees
- Recovery of state carsharing fees
- Increase in parking rates
- Reallocating existing parking fees

### **Taxes and Fees**

Currently, Minnesota counties are permitted to increase their Motor Vehicle Fees as a means to fund alternative transportation options. There is precedence for this in the \$20 Transit Excise Tax charged in Hennepin, Ramsey, Anoka, Dakota, and Washington Counties. The State of California assesses a similar fee, which funds a range of pollution mitigation efforts including TDM activities. Counties are also allowed to institute a city-wide sales tax to help fund projects. Such taxes and fees should be considered as a way to increase revenue for projects that is not dependent on decisions at the state level.

### **Volkswagen Settlement Funds and Other Electric Vehicle Funds**

The State of Minnesota and local agencies could follow the example of the Oregon and Washington, who jointly submitted a proposal to Volkswagen (VW) encouraging VW to spend their mandated EV Investment funds in part on zero-emission ridesharing and ride-hailing programs. Although these funds will be spent according to plans ultimately developed by VW, state and local agencies can have an influence on the type of programs pursued.

Furthermore, Minnesota is eligible for \$43.6 million in funds that will be awarded directly to the State from VW through the Environmental Mitigation Trust Fund, which constitutes a separate portion of the Settlement. Up to 15% of these funds, or \$6.5 million, can be spent flexibly on electric vehicle infrastructure and related programs including EV shared mobility. A portion of these funds could support a shared mobility pilot in the Twin Cities.

Lastly, public utilities like Xcel can also play a major role in development of EV shared mobility programs. The VW Settlement provides an opportunity for Twin Cities stakeholders to engage with partners like Xcel in developing a vision for clean and equitable mobility solutions.

# Shared Mobility Implementation Plan (Draft)

	2017-2018	2018-2019	2020-2021	
Programs	Restructure CMAQ Process	Conduct TDM Evaluation and Recommendation Study	Increase Staff, Promote, Let, and Fund New CMAQ Process	Systematically Track and Evaluate Impacts of Projects
	Launch Integrated App Features	Launch App and Pursue MOUs with Cities for Provider Data	Adopt MetCouncil Data Policy for Shared Mobility Providers	Integrate Metro Transit App with Data Exchange (possibly through MaaS pilot)
	Data Clearinghouse and Exchange	Track MOD and Smart Cities Projects for Lessons Learned	Construct Technical Roadmap Towards Data Exchange	
	Expand Carsharing	Revise and align municipal policies (Mpls and St. Paul)	Pilot MetCouncil solicitation (CMAQ) for Carsharing	Bring Other Cities into Met-Council Program
	Expand Vanpooling	Relax program restrictions, evaluate net fiscal impact	In coordination with cities and employers, expand program with additional funding and a variety of incentives	
	Rethink Parking	Seed Shared Mobility efforts through parking surpluses	Develop Long-Term Parking Reduction Strategy which Considers Transition from Parking Assets to Mobility Assets	
Policies	Municipal TDM Policies	Adopt and Strengthen TDM Ordinances for New and Existing Buildings to Include Provisions for Shared Mobility services		Cities: Begin to align, track TDM and TMO programs
	Municipal Data Policies	Establish Voluntarily Data Policies for TNC Providers	Expand Data Policies to all Providers, Shift to Mandatory, Share Data with MetCouncil (move towards data exchange)	
	Municipal on-street Carsharing	Reconvene Carshare Working Group (City of Minneapolis)	Align Amended On-Street Policies (Mpls and St. Paul)	Fund Targeted Program Expansion Using state fee revenue, parking revenue, and on-street incentives
	State Carshare Taxes	Reform State Tax Policy to Facilitate Carsharing Growth	Collect Fees Dedicated to Underserved Communities	
	County funding priorities	Find shared mobility linkages to County TAB priorities	Elevate shared mobility projects as competitive priorities for TAB selection committee, in concert w/new CMAQ process	
	Parking pricing	Find opportunities for garage and on-street price increases	Study and institute parking tax and direct revenues to transit, shared mobility, and TDM programs	
Pilots	Reverse Commute Microtransit	Further refine scope of projects, release RFI, and identify funding sources	Identify projected ridership impacts, release RFP for selected areas of need	<ol style="list-style-type: none"> <li>1. Integrate with Metro Transit App and data exchange</li> <li>2. Consider including in MaaS Pilot</li> <li>3. Track impacts through unified CMAQ project evaluation structure</li> </ol>
	First/Last Mile Microtransit & Ride Splitting			
	EV Shared Mobility	Work with State of Minnesota to create EV mobility strategy	Plan for Cities Investments in EV Mobility	
	Mobility Hubs	Identify 2-3 Priority Mobility Hub Locations	Make long-term capital investments in hubs	
	Autonomous Urban Circulator	Explore projects in planning (i.e. streetcars), early MOD pilots (i.e. Columbus) for suitability to pilot in Twin Cities		
Organizations	Municipal Comp Planning Process	Include Shared Mobility Chapters and Provisions in Transportation Planning Elements of Comprehensive Plans		Pursue CMAQ and Other Funding Based on Plans
	City Transportation Agencies	Minneapolis: Create and Staff Shared Mobility Program	Consider MOU to Coordinate Staffing and a Work Program for Shared Mobility between Cities, Counties, and MetCouncil (initially, MetCouncil, Minneapolis, St. Paul)	
	MetCouncil	Host Shared Mobility Director in partnership w/Mpls, St. Paul		
	TMOs	Work with Cities to Align Offerings/ Expertise with Need	Work with MetCouncil to Align Programs to Outcomes	Run All TDM Activities Through City Contracts

### Federal Transit/Highways Competitive Funds

Larger and more multi-faceted investments that combine shared mobility programs with transit and other infrastructure investments can be considered for future competitive opportunities such as new Smart Cities Challenge rounds or more regular programs such as Transportation Investments Generating Economic Renewal (TIGER) and Transportation Infrastructure Finance and Innovation Act (TIFIA). Investment priorities and pilot projects highlighted in this plan can be dropped into larger opportunities as they present themselves. This has been the case with SUMC's Shared Mobility Action Plan for Los Angeles County, which has been used to provide information to support several large, competitive state and national funding opportunities.



"Crowd Please!" by Dan. Licensed by CC BY 2.0.  
<https://flic.kr/p/ij5tJ>

## Roles of Project Partners

To succeed, this effort must also achieve buy-in and commitments from a wide range of government, private-sector and community stakeholders. Local shared mobility leaders should also look to:

### Engage with Related Affinity Groups

Linking this work with the ongoing efforts of other groups interested in moving specific strategies forward will be critical, particularly in the early stages of this plan. Key stakeholders could include:

- Smart Cities Working Group
- Transportation Forward Equity Caucus
- Sustainable Business Council
- Downtown Council and Capital Area Architecture and Planning Board
- City of Minneapolis Carsharing Working Group
- Electric and autonomous vehicle advocates, researchers, and project partners

### Determine Roles for Regional Stakeholders

Many local stakeholders interviewed by the project research team expressed uncertainty about the roles that different actors should play in the evolving shared mobility landscape. Over the first three years of this plan, SUMC hopes to provide some guidance to better define terms of cooperation between parties, including:

- Met Council
- Metro Transit
- Cities
- Area nonprofits
- Employers, developers and foundations

The following table provides a summarized assessment of these roles.

# Evolving Role of Twin Cities Stakeholder Organizations in Shared Mobility

Organization	2017 Roles	Potential 2020 Roles	Challenges
Met Council	<ul style="list-style-type: none"> <li>Exploring shared mobility</li> </ul>	<ul style="list-style-type: none"> <li>Evaluation, goal setting for shared mobility</li> </ul>	<ul style="list-style-type: none"> <li>Shared Mobility services initially</li> </ul>
Metro Transit	<ul style="list-style-type: none"> <li>Hosting App</li> <li>CMAQ Administrator</li> <li>TMO Administrator</li> </ul>	<ul style="list-style-type: none"> <li>Mobility services platform host</li> <li>Data clearinghouse</li> <li>P3 Partner: Client/Host</li> <li>CMAQ Administrator</li> </ul>	<ul style="list-style-type: none"> <li>Balancing priorities within TDM, marketing</li> <li>Balancing shared mobility priorities against transit tech/modernization</li> <li>Dedicated staff required for expansion of role</li> </ul>
City of Minneapolis	<ul style="list-style-type: none"> <li>Offering rights of way</li> <li>Advocating Equity of Service</li> <li>TMO partner</li> </ul>	<ul style="list-style-type: none"> <li>Leverage rights of way</li> <li>Directing (and funding) equity of service</li> <li>Data recipient</li> <li>TMO Administrator</li> </ul>	<ul style="list-style-type: none"> <li>Initial funding of shared services may be heavy lift</li> <li>Dedicated staff required for expansion of roles</li> </ul>
City of St. Paul			
Other Urban Cities			
Hennepin/Ramsey Counties	<ul style="list-style-type: none"> <li>Interested</li> </ul>	<ul style="list-style-type: none"> <li>Directing Met Council funds (CMAQ) to activities</li> </ul>	<ul style="list-style-type: none"> <li>Countywide service will continue to be difficult</li> </ul>
TMOs	<ul style="list-style-type: none"> <li>Promoter of services</li> </ul>	<ul style="list-style-type: none"> <li>Direct marketer of services</li> </ul>	<ul style="list-style-type: none"> <li>Significant expansion and formalization of role</li> </ul>
Transit Advocates	<ul style="list-style-type: none"> <li>Conveners</li> </ul>	<ul style="list-style-type: none"> <li>Advancing Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Deep engagement around services needed</li> </ul>
Community Based Organizations	<ul style="list-style-type: none"> <li>Tangentially interested</li> </ul>	<ul style="list-style-type: none"> <li>Steering Committee participant for P3s</li> </ul>	<ul style="list-style-type: none"> <li>Hands on engagement not directly tied to work</li> </ul>
Nonprofit Operators	<ul style="list-style-type: none"> <li>Early-stage Public Partnerships</li> </ul>	<ul style="list-style-type: none"> <li>P3 Partner: Operator -or- Intermediaries</li> </ul>	<ul style="list-style-type: none"> <li>Evolving/changing role for matured services</li> </ul>
Private Sector Operators	<ul style="list-style-type: none"> <li>Standalone Operators</li> </ul>	<ul style="list-style-type: none"> <li>P3 Partner: Operator -or- Standalone Operators</li> </ul>	<ul style="list-style-type: none"> <li>P3s still new for some mobility operators</li> </ul>
Employers and Developers	<ul style="list-style-type: none"> <li>Interested</li> </ul>	<ul style="list-style-type: none"> <li>Investors and Clients</li> </ul>	<ul style="list-style-type: none"> <li>Encouraging engagement will be a gradual process</li> </ul>
Foundations	<ul style="list-style-type: none"> <li>Conveners</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Partners</li> </ul>	<ul style="list-style-type: none"> <li>Partnerships and pilots take time to establish</li> </ul>



**"Twin Cities leaders  
must break down  
silos and work to  
transform the region's  
transportation system"**



PART VII

# CONCLUSION

"Capitol Rice Street Station on the METRO Green Line" by Metro Transit.  
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To prepare for tomorrow's opportunities, the Twin Cities must act today to expand access to affordable, environmentally sound transportation options for all.

Leaders from government, the private sector and local communities must work together to support a truly integrated, multi-modal system that can address first/last mile issues, improve connections to suburban employment centers, and reach disadvantaged neighborhoods where access to existing infrastructure is lacking. These actions are vital to preparing the region for impending population growth, and to ensuring that Minneapolis-St. Paul can compete with peer cities across the nation and around the world.

The Twin Cities have relied to this point on innovative private and nonprofit companies working to bring new services to the region. However, without comprehensive support, these services have hit a plateau. If the goals of this plan are to be achieved, its strategies must be framed by:

- An embrace of public private partnerships in shared mobility—and mechanisms to support these partnerships—that focus on serving all residents
- Bold local policymaking that makes it more attractive to use transit and shared mobility to get around the region, especially to jobs which are often far from the urban core, as well as within the downtowns and their immediate environs.
- Reliable local and state funding pathways that leverage private investment and help guide the impact of new services

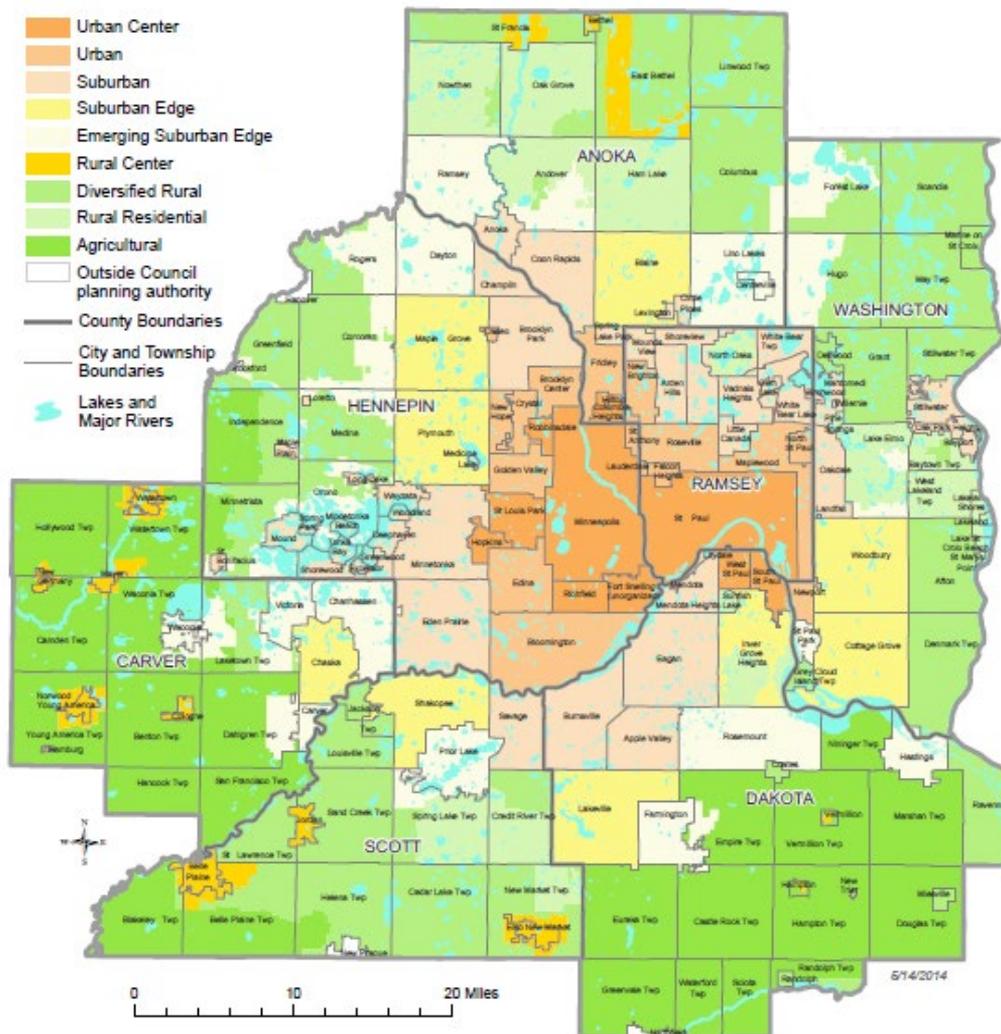
The private sector must also do its part to invest in the region and dedicate the time and energy needed to scale up shared mobility in the Twin Cities.

Realizing the goals set forth in this plan will not be easy. But with the commitment of public and private sector leaders from across the region, along with sufficient resources from state entities and private industry, it is possible to ensure an equitable, sustainable and multimodal future for the Twin Cities.



"Jim Campbell, Scattered Light" by Northern Spark.  
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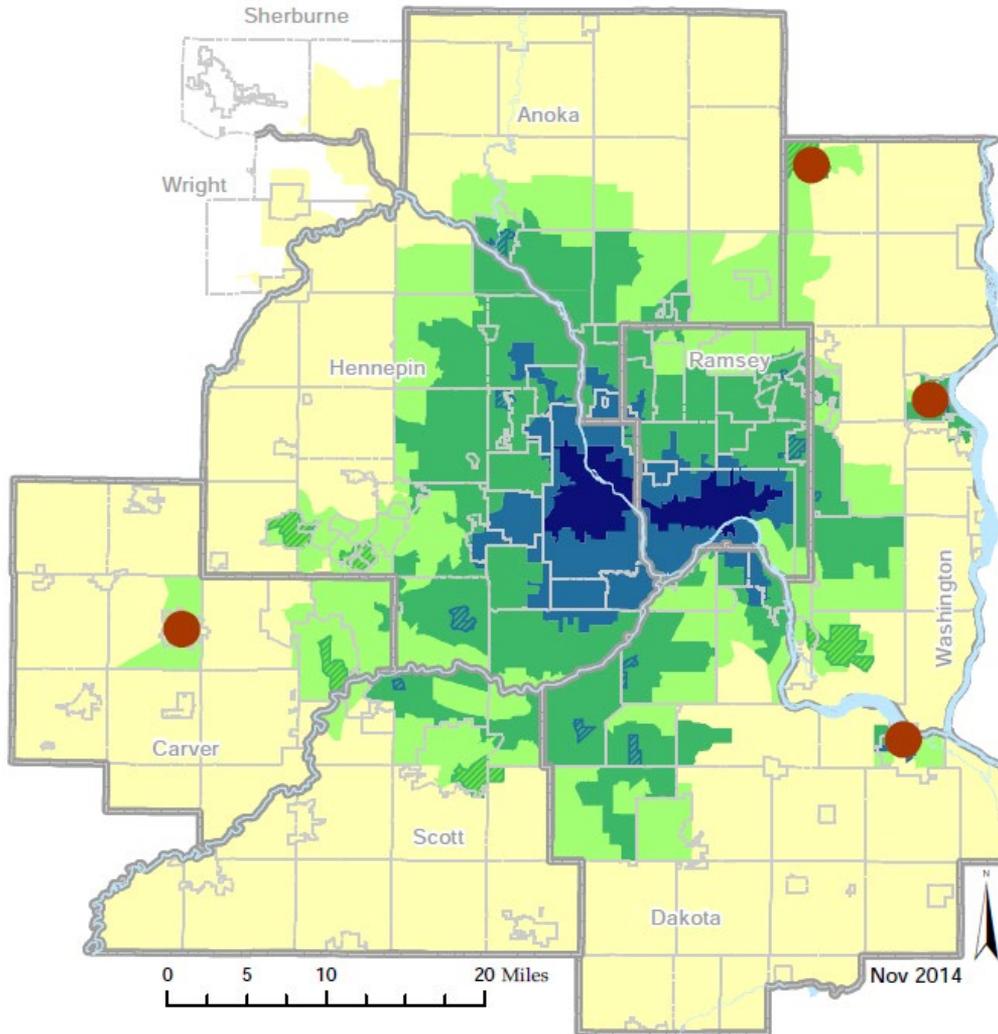
# Appendix A: Metropolitan Council Community Designations (from 2040 Transportation Policy Plan)



Source: Thrive MSP 2040 Transportation Policy Plan (version 1.0)

# Appendix B: Transit Market Areas (from 2040 Transportation Policy Plan)

Transit Market Areas



**From the 2040 Transportation Policy Plan (page 631):**

- Market Area I has the potential transit ridership necessary to support the most intensive fixed-route transit service, typically providing higher frequencies, longer hours, and more options available outside of peak periods.
- Much of Market Area II is also categorized as an Urban Center and it can support many of the same types of fixed-route transit as Market Area I, although usually at lower frequencies or shorter service spans.

## Appendix C: Planning Efforts to Date

While the Met Council recently completed its Thrive MSP 2040 regional plan, most municipalities have not published comprehensive or transportation plans in several years. Communities in the 7-county Twin Cities region have until July 1, 2018 to make any amendments to their 2030 comprehensive plans and until December 31, 2018 to update their 2040 comprehensive plans to be in sync with the Met Council's plan.<sup>1</sup> This time frame offers a significant opportunity for communities to factor recommendations from the Shared Mobility Action Plan into their comprehensive plans.

Plan Name	Jurisdiction or Focus Area	Year	Due for Update
2040 Transportation Policy Plan	Met Council	2015	Every 4 years scheduled for 2018
2030 Park & Ride Plan	Met Council	2010	In Progress
Comp. Plan (Trnsp Chptr)	City of Saint Paul	2010	Yes
Downtown Parking Plan	City of Saint Paul	2015	No
Transportation Systems Plan	Hennepin County	2011	Advisable
2025 Plan	Downtown Council	2011	No
Access Minneapolis	City of Mpls	2005	Yes
Downtown Action Plan	City of Mpls	2007	Yes
Citywide Action Plan	City of Mpls	2009	Yes

Beyond the comprehensive planning cycles and city transportation planning elements, shared mobility has been highlighted in other specific planning documents:

### Carshare

- Requires new developments to include car share stations, based on size of project (Downtown St. Paul Parking Management Strategy)
- Mandates that a minimum number of car share spaces be provided free of charge to car share services, in relation to the amount of parking provided and proximity to transit (Downtown St. Paul Parking Management Strategy)
- Recommends including carsharing spaces near entry or before gated areas (Downtown St. Paul Parking Management Strategy)

### Bikeshare

- Requires new developments to include bikeshare stations, based on size of project (Downtown St. Paul Parking Management Strategy)

### Transportation Demand Management

- Requires existing TDM plans retroactively must include a description of TDM strategies and implementation actions<sup>2</sup> (Downtown St. Paul Parking Management Study)
- The Capital Area Architecture and Planning Board (CAAPB) recently commenced a planning effort around a TDM study. (The 2025 Plan (Published in 2011) and the Comprehensive Plan for the Capitol Area (1998))
- Move Minneapolis is pursuing 501(c)(3) status and Smart Trips has recently merged with Transit for Livable Communities. In the near future, one or both TMOs may be well positioned to more directly assist the City of Minneapolis in expanding TDM initiatives.

<sup>1</sup> <https://metro council.org/Communities/Publications-And-Resources/Comp-Plan-Amendment-Review-Through-2018.aspx>

<sup>2</sup> Actions may include: employer subsidized transit passes; on-site transit facilities; preferential parking for ride sharing, car share spaces, electric vehicles; on-site bicycle facilities; telecommuting and flex scheduling opportunities.

**2030 Park-and-Ride Plan (Metropolitan Council)**

- Encourages continued rapid growth of Park-and-Ride Facilities through 2030, assuming that transit use will double during this period
- Has a nearly comprehensive data set of users' origins (supplemented annually through the Park-and-Ride System Report)
- Does not consider why commuters use park-and-ride, and alternative uses of these facilities that might help commuters avoid SOV commutes (i.e. carpooling, vanpooling, and carsharing)
- Is silent on pricing considerations for these facilities (all park-and-ride locations are free of charge)

**Downtown and Mode-Shift**

- Aggressive 20% mode shifts away from single-occupant auto travel. (Comprehensive Plan for the Capitol Area (1998))
- 20% mode shift towards transit. (The 2025 Plan (Published in 2011))
- Downtown Council goal for residents is impressive but only about 25% of the way toward goal completion at the half-way point

## Appendix D: Comparison with Peer Cities

As the Twin Cities continues to make its transportation system more accessible and efficient, it may be beneficial to look to peer cities that are dealing with some of the same challenges.

	TDM	On-Street Carshare	App Integration	Private Parking	Vanpooling
Seattle	X	X		X	X
Denver	X	X	X		X
Portland	X	X	X	X	X
Twin Cities	X	X	X		X

### Seattle

Seattle has been a leader in implementing programs related to many different shared modes, especially pertaining to carshare. The City of Seattle was one of the first to launch a pilot program allowing city-recognized carsharing services to utilize public on-street parking spaces, making the service more convenient for users. After a successful launch, the pilot program was expanded to cover the entire city, with regulations allowing the city to ensure that carshare operators made their service available to all residents. Additionally, Seattle implemented a program for private developers that allowed them to allocate one parking space—or up to 5% of the total number of spaces, whichever is more—for city-recognized carsharing services. For each space that was leased to a carshare operator, the developer could reduce the number of required parking spaces at the building by one.

### Denver

The City of Denver has also been at the forefront of shared mobility implementation, especially with its successful vanpool program. As with the Twin Cities, driving is a way of life in Denver, with many commuters living outside of the urban core and depending on their personal vehicles to get to work. Denver reduced VMT and congestion by giving a high level of financial support to its vanpooling program, with the regional transportation district helping to underwrite and subsidize the program, making fares competitive. The subsidy corresponds to the users' appropriate monthly pass rate for the length of their commute, either local, express or regional. This funding helps Denver reduce fares, purchase new vehicles and provide incentives for drivers.

### Portland

Portland, Oregon is home to many shared mobility services, including a state-of-the-art bikeshare system and on-street parking policies for carshare operators. However, one of the most successful initiatives has been the city's integrated mobility app. The city partnered with moovel to create a mobility app that allows users to not only plan trips and purchase public transit tickets, but also make reservations for Lyft, car2go, and Biketown bikeshare. Additionally, in partnership with Google, Portland has created a unique open data program that helps to make General Transit Feed Specification (GTFS) transit data more widely available. This data is important for Portland, and is also beneficial to software developers, who can utilize the open source data to create mobility apps.

# Appendix E: CMAQ Details and TDM Best Practices

## CMAQ / Regional Solicitation Funding Assessment (2016 Cycle)

Currently, regionally administered CMAQ funds which have supported a range of shared mobility programs and projects both in the Twin Cities (as described in Chapter 2) and throughout the U.S. are combined along with other funding sources into a Regional Solicitation process, which occurs every two years and selects projects ranging from roadway expansion to transit modernization to bikeway and trail construction. The process is governed by a Transportation Advisory Board (TAB) which scores and ranks proposals based on their impact potential. There is approximately \$65M available every two years for these projects.

As currently structured, Transportation Demand Management (TDM) projects represent a set-aside proportion of approximately 10% of the total Solicitation awards. This ratio was determined as a result of a 2010 TDM study. In the 2016 Solicitation, of \$6.2 million in TDM funds, \$5.0 million were set aside for core support of TMOs, and \$1.2 million was managed in a competitive solicitation. In reviewing the 2010 study and through a series of interviews, SUMC has concluded:

- Although TMOs are generally reported as “strong” performers, and collect information such as employee participation in TDM programs and individual mode shift changes, this performance and data collection doesn’t appear to be evaluated systematically.
- TMOs and others in the region have successfully secured competitive funds for innovative shared mobility programs in the past, but there doesn’t appear to be a structured link between these funded programs and the core TMO support provided by this same fund – which is intended to promote services like the ones launched with the competitive funds.
- In 2016, there was not significant attention to or competition for the competitive-funded portion, despite heightened interest in the need to expand shared mobility services in this same timeframe. Five projects were submitted to Met Council, and all five were awarded funding at the full amount of their application.

It should be noted that within the shared mobility context, the resources and programs available to TMOs and cities have changed drastically, even when considering only the currently available services in the Twin Cities. The scale and range of shared mobility has grown significantly since the 2010 study. For example:

- Ridesourcing services such as Uber and Lyft, unheard of in 2010, are now widely available
- Vanpooling, which was on a growth trajectory until 2010, tapered off without marketing support
- Bikesharing has grown from a new concept to an established institution

## Transportation Demand Management Policy

TDM has become a top priority for cities looking to curb single occupancy vehicle trips. It is imperative that strengthened TDM policies are included in transportation planning in the coming years. The Twin Cities should look to peer cities who have already implemented successful TDM policies:

- Seattle: In the state of Washington, employers with at least 100 employees who commute to work between 6 and 9 a.m. must implement a Commute Trip Reduction strategy. This includes designating an employee transportation coordinator, informing employees about alternatives to driving alone, reporting on performance goals, providing preferential parking for carpools and vanpools and offering financial incentives for shared trips.
- Portland: The City’s ECO program requires employers with more than 100 employees to be responsible for creating a travel reduction plan showing how they intend to provide commute alternatives. Additionally, employers are also required to survey their employees regarding commute patterns and pass that information along to the city.
- Buffalo: The city requires a TDM plan for any new construction development in excess of 5,000 square feet. The plan must include anticipated travel demand for the project, number of provided parking spaces, the building’s objectives regarding modal share, and strategies to reduce single-occupancy vehicles.

- Pasadena: TDM plans are required for any development projects between 25 and 75 thousand square feet, multi-family residential developments with over 100 units, and mixed-use projects with over 50 residential units or 50 thousand square feet of non-residential use. Additionally, the TDM mandates companies annually survey employees about travel behavior and adhere to a plan for the life of a project, regardless of property management or tenant changes.
- San Diego: TDM in San Diego is one of the most regional approaches to the subject in the country. The overall TDM plan is structured by the city but is implemented by San Diego's Regional Planning Agency (SANDAG). SANDAG works with private businesses, public sector departments, as well as institutions such as colleges and schools. Additionally, SANDAG provides a mobility management tool that helps participating organizations create detailed TDM strategies for their specific needs.
- Tacoma, WA: Pierce Transit received a Mobility on Demand Sandbox grant from the Federal Transit Administration to launch a pilot project with Transportation Network Companies (TNCs) to connect users to bus stops, park-and-rides and other mobility centers via on-demand app based rides. The program is aimed at creating greater access to existing public transportation and reducing congestion caused by single occupancy vehicles.
- Redmond, WA: Redmond's TDM plan focuses on partnering with large employers, specifically utilizing their Go Redmond program. Go Redmond is a city resource for both commuters and employers describing different transportation options, subsidies and incentives, regulations, and benefits to introducing multi-modal commuting options. The program also allows individual commuters to set up accounts in which they can find carpool matches, join a vanpool, and find their most efficient bus route to work.

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**"To prepare  
for tomorrow's  
opportunities, the  
Twin Cities must  
act today to expand  
access to affordable,  
environmentally sound  
transportation options  
for all."**

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**The Shared-Use Mobility Center (SUMC)** is a public interest organization working to foster collaboration in shared mobility (including bikesharing, carsharing, ridesharing and more) and help connect the growing industry with transit agencies, cities and communities across the nation. Through piloting programs, conducting new research and providing advice and expertise to cities and regions, SUMC hopes to extend the benefits of shared mobility for all.



[www.sharedusemobilitycenter.org](http://www.sharedusemobilitycenter.org)