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Shared Mobility Policy Guide

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Shared Mobility Policy Guide

The future of transportation that works for all.

Photo Source: Metro Transit

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Table of Contents

Part One: Purpose and Vision

What's in the Plan

This report examines he potential impacts of shared mobility in the seven County Twin Cities Metro area. Much of the content builds on a 2017 report from the Shared Use Mobility Center, the *Shared Mobility Action Plan*. While people define the term shared mobility in many different ways, this report will define shared mobility as transportation options where the cost is shared among users, people do not own personal vehicles, and services provide flexible, short-term, on-demand trips.

Based on interviews with transportation professionals from several government agencies and non-profit organizations in the Twin Cities, as well as a literature review, this report will focus on shared mobility as it relates to three main research questions in the policy areas of equity, labor, and public-private partnerships. The contents of this document are meant to serve as a policy guide to Metro Tran-

sit and the Metropolitan Council as they further develop an action plan around shared mobility in the Twin Cities.

Furthermore, this report will offer a vision for the future and challenges that the Met Council may encounter along the way. A number of case studies offer insight into programs across the country that are in different stages of implementation and have varied degrees of success.

Finally, the report will offer a list of goals for the Met Council to consider based on the research questions and policy areas of equity, labor, and public private partnerships. From this set of goals the report offers short term and long term recommendations. The ultimate end goal of this report is to offer sound policy guidance to the Met Council as they develop shared mobility programs that better serve all Twin Cities' transit riders.

Research Focus

How do we ensure socioeconomic equity in the provision of shared mobility services? What are the implications for the geographic distribution of and access to infrastructure and services?

Equity

What effect will technology and automation have on labor markets? What are the key concerns and opportunities related to changes in jobs in the transportation industry and related sectors?

Labor

How can the public and private sectors work together to create an integrated, efficient transportation network? What partnerships have other municipalities attempted and what are their outcomes?

P3s

Defining Shared Mobility

A commonly understood definition of shared mobility will help frame the scope of the research and policy recommendations within this policy guide. Professionals in the transportation field have been thinking about the idea of 'Shared Mobility' quite a lot in recent years. But what does the term really mean? In simple terms it can be thought of as getting around by using types of transportation that are shared by more than one person. This includes bus and rail transit, bikeshare, carshare, rideshare, ridesourcing, taxis, and a variety of other on-deamnd services. In most cases, shared mobility services are also accessed through smart phone apps. Crafting a detailed description of the term can be quite complex. Most every plan, guide, or report on the subject uses a slightly different defini-tion. The Shared Use Mobility Center defines shared mobility as a term that "describes transportation services that are shared among users including public transit; taxis and limos; bikesharing; carsharing (round-trip, one-way, and personal vehicle sharing); ridesharing (carpooling, vanpooling); ridesourcing/ride-splitting; scooter sharing; shuttle services; neighborhood jitneys; and more "(Shared Mobility Center, nd). Scholars from UC Berkeley treat shared mobility as an innovative transportation strategy such that allows users to access short-term transportation options on an "as-needed" basis (Shaheen et.al, 2015). Interviews with professionals in the Twin Cities region demonstrated the many ways people are thinking about shared mobility.

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Photo Source: Metro Transit

Good Transit

While shared mobility involves a wide variety of transportation options, many professionals believe that good public transit is a key part of our future transportation systems. As new options become available they should connect with public transit.

Shared

While cars are still included in shared mobility systems, they are used to serve multiple people at a time or throughout the day. These services are moving people away from single occupancy vehicle use.

On-Demand

Shared mobility providers often use mobile apps to allow users on-demand access to their services. Ridehailing companies like Uber and Lyft are good examples of this, but bikeshare and microtransit also use this technology.

Connected

Multimodal trips - meaning you use more than one kind of transportation to reach a destination - are an important concept in shared mobility. It is all about offering options to fit diverse needs of all residents and visitors.

Definitions from Professionals

"Some sort of good or service that is for common use and a variety of people. Ideally that variety of people is not limited by income or race or location. There's equal access for all. Reality says something different, especially in Minneapolis. Something that gets you moving like bike, car, transit, flying cars. Something that can be shared by multiple people throughout the day."

EQUAL ACCESS

USED BY MANY

GETS YOU MOVING

PRIVATE AND PUBLIC

SHARE THE ADVANTAGE

"It bridges the gap between private and public transportation. Shared mobility service presents the opportunities to share the advantage. For instance, public transit could share the private infrastructure to expand the service while automobile users have an alternative travel option."

"At it's core shared mobility rests on good transit and last mile connections. It means flexibility, affordability, and an opportunity to address equity if approached correctly."

FLEXIBLE & AFFORDABLE

NO PERSONAL CARS

REAL-TIME

CONNECT BY PHONE

"I think that concept comes back to the idea of individuals not owning cars. I think I start with the core idea that for most of my life, transportation meant grabbing the keys and jump into your car without thinking. Shared use mobility has changed that to I grab my phone I do a real-time trip request or I look for something nearby."

Definition for this Policy Guide

Shared mobility refers to transportation options where the cost is shared among users, people do not own personal vehicles, and services provide flexible, short-term, on-demand trips.

Photo Source: Metro Transit

Crafting a Future for All

Why this matters

Transportation behaviors and options are rapidly shifting with the emergence of new technologies that are changing the way people get around. Transit authorities, municipalities, elected officials and other interested parties across the country are working to proactively respond to these changes and create 21st-century transportation networks. These organizations must balance people's transportation needs with political feasibility and a wide range of other constraints while maximizing accessibility and mobility for as many people as possible. Meanwhile, people need to get around.

The challenge of providing transportation in the Twin Cities region, like all urban centers, is making sure that all people - regardless of age, physical ability, gender, or race - are able to safely and conveniently get where they need to go. This guide aims to identify steps towards this obligation. The following stories, set a few years into the future, show how people from various backgrounds and life circumstances could be positively impacted by the continued emergence and innovation of shared mobility options if thoughtful, proactive steps are taken today.

Geedi's Future

Geedi (Somali for traveler) is a 43 year old Somali taxi driver in the Twin Cities. He immigrated to Minnesota in 1992, at the start of the Somali Civil War, with his parents.

Geedi works for Taxi Services Inc., the parent company of Airport Taxi, Town Taxi and Yellow Cab — a $40 million transportation firm whose roots date to the early 1900s. Taxi Services, Inc. made a strong attempt to combat the likes of Uber and Lyft by creating iHail Taxi, a ridehailing app where you can request a taxi. Geedi's company tried for many years to compete with the likes of Lyft and Uber but ultimately, he saw his income decline steadily.

At the same time entities like the Minneapolis Airport Commission were allowing TNCs to take riders to and from the airport. Several cities in the region started a program to partner with Lyft in a first mile last mile program. Geedi could see the writing on the wall.

Fortunately for Geedi, the Metropolitan Council saw a need to keep the estimated 2000 St. Paul and Minneapolis taxi drivers employed and needed new transit drivers due to high demand for transit services. Transit ridership was booming in the Metropolitan Council's service area due to the new improvements in services related to partnerships with

Photo Source: Metro Transit

ridehailing companies like Uber and Lyft. More people were able to ditch their vehicles and get door to door services from the Metropolitan Council was providing. The citizens of the Twin Cities loved their savings in ditching vehicles and no longer having to pay for parking!

The Metropolitan Council launched a new training program called "the Drive to Drive" which trained former and current taxi drivers to operate buses and worked with ridehailing companies to allow these drivers to also operate first mile, last mile carshare and guaranteed ride home programs. The program also placed displaced taxi workers into other programs with partners such as NiceRide to employ local workers to create

dockless bike stations. Some workers were also able to apply for advanced programs in software development and new pilot programs around autonomous vehicles.

Geedi applied to the program showcasing his skills as a taxi driver for many years. He started in the expanded Transit Link program which made curb to curb trips possible for most transit users due to the partnership with the TNCs. Geedi was able to continue to do what he loved, stay in MN and support his family. He even applied to evening classes to further his skills in coding and software development as he saw autonomous vehicles would soon be a reality and he wanted to be on the cutting edge of this technology wave!

Mary Lou's Future

A Minnesota native, Mary Lou lived in Duluth for the vast majority of her seventy-seven years. Her kids had flown the nest years ago, her daughter Nancy settling down in Tampa while her son James moved a few short hours south to make a home and start a family in the Twin Cities. She had enjoyed the occasional vacation out to the east coast and more-frequent drives to the Cities in order to visit, but as she got older she found it harder and harder to travel. James convinced her to make the move to Saint Paul, where housing was affordable and she could use the light rail and buses to get around without any need to drive.

More recently, she found that even the short walks to transit stations were proving difficult and decided to sign up for Metro Mobility. Mary Lou had relied on the system for months, but she was growing increasingly frustrated with the need to plan out her trips at least a day in advance and call in to request a vehicle; she missed having freedom choosing when to go somewhere. She was thrilled when James told her about Metro Transit's new pilot partnership with Lyft, which would allow her to request a car on-demand and have her ride paid for by Metro Transit. James had heard about the service from a very friendly driver he'd recently had, Geedi.

Of course, James knew that telling her this would mean he'd spend at least a day teaching her how those darn newfangled smartphones work, but he figured it was worth the investment so that she could move around more without feeling like a bother when she needed a last-minute ride.

A few weeks passed after James told his mother about this new service and she realized she had hardly seen him (or her young grandkids) since. She decided she needed to fix that as soon as possible, and a quick look through the pantry confirmed that she could bake up an excuse to head their way. She whipped up a batch of cookies (the kids' favorite) and pulled out the iPhone she had now mastered. Within minutes, a car was there waiting for her.

"Cookies!!" Mary Lou's young granddaughter and grandson squealed with delight when they saw her get out of the car, then looked contrite when they realized their oversight and tried to reenact their initial excitement. "Grandma!!"

"Hey, Mom!" James said, wrapping her in a hug, "What a great surprise!"

"Hi Jim!" She smiled, "It's been too long since we've seen each other. That new system you told me about is just so darn convenient."

He grinned back and said "I know, Mom, it's great. But don't you let it make you forget us."

"I couldn't ever. But I'm so grateful to you for telling me about it and to Metro Transit for helping me get around."

Molly and Jade's Future

Molly and her mom, Jade, never had very much money, but Molly never felt like she had lost out on opportunities. She never got to go to summer camps, but she was an "A" student involved in a myriad of activities. They lived in an affordable first-ring suburb and Jade could pick Molly up from extracurricular activities on her way home from work in a neighboring suburb. The pair relied on Jade's beloved vintage car, a gift from her late-uncle. Molly knew she needed to keep up her involvement if she wanted to get good scholarships for college, which her mom had never been able to afford. She hoped to be able to make enough money one day to provide financial stability for her mother (and go on the road trip they had always dreamed of).

Jade and Molly's transportation arrangement worked well until a series of unfortunate events struck in quick succession. Jade's company moved to an outer suburb on the opposite side of the metro area in search of cheaper office rent. The commute was not ideal, but Jade made it work. That is, until her car gave out suddenly. With no money for a new car, Jade was forced to leave her job in search of closer employment. When Molly heard the news she was crestfallen. Not having a car would inhibit

her plans to take courses at a local community college prior to graduating from high school. Both Jade and Molly were devastated.

A shining light came to Molly after a night of babysitting for her neighbor, James. James had a soft spot for his neighbors. They had been supportive of him through the death of his wife, and he was always looking for ways to pay it forward with them. After seeking out ways to help his aging mother achieve greater mobility, James was something of an expert in shared mobility programs in the Twin Cities. James told Molly about a new program that Metro Transit was rolling out in partnership with local colleges and universities. Molly was able to sign up for a pilot project that connected commuting students for carpooling to campus via an app. Riders paid drivers a fee equivalent to transit fare.

Knowing that Molly would not have to give up her dreams came as a huge relief to Jade. Now she just needed to find a way to get to employment.

The next time Jade saw James, she stopped him to thank him for his kindness toward Molly. He told her to think nothing of it and asked if she had seen the announcement in the Star Tribune that morning about a new reverse commute initiative from the Metropolitan Council. The council had expanded their vanpool program to help those commuting from the core cities or inner suburbs to outer suburbs. Jade immediately went home and looked the program up to find that her former employer was participating! She jumped with excitement and started making calls to get her job back. After a swath of bad news, things were finally looking up thanks to shared mobility programs.

The Future is not Guaranteed

These three stories describe a vision for the future where shared mobility options don't just connect people with their destinations, they also improve their quality of life. Geedi was able to take advantage of a new job opportunity when his previous job was threatened by changing technologies and markets; Mary Lou was able to get around easier and maintain her independence because of an innovative public-private partnership; Molly was able to get to school by using a carpooling app from Metro Transit. Together these stories paint a picture of a world where transportation agencies and local governments have the ability to provide more possibilities for their customers. The onset of these technologies makes it possible to imagine a future of shared mobility various kinds of transportation options are coordinated among public agencies, private companies and residents of the Twin Cities metro region.

However, it is important to recognize that this vision is not a guaranteed reality. The policies, plans and coordination needed to ensure tha tour transportation systems works for people of all ages, abilities and backgrounds must be formed intentionally and with specific goals in mind. The policy plan outlines a few major issues facing the region in the next five to ten years as our transportation system adapts to new opportunities through shared mobility. There are three categories of issues considered in this plan:

- Enhancing the equity of the transportation system
- Addressing key issues related to labor markets
- Effectively and innovatively using public funds to improve mobility

While there are many other important issues related to shared mobility, these three categories provide a solid foundation for understanding the impacts of shared mobility. Focusing on these categories will help the region to collectively make decisions that will bring about a safe, convenient and desirable transportation system for people of all ages, abilities and backgrounds.

Regional Context

Before diving into recommendations to attain the future described in the vision section, regional context must be addressed. Population in the Twin Cities has been growing at higher rates recently, particularly in terms of young professionals (Associated Press, 2018). The region recognizes a need to continue to improve its competitive edge relative to coastal cities in the United States and provide for current residents. In that spirit, Metro Transit seeks to make progressive, flexible policies that will allow them and other shared mobility providers to effectively serve residents of the region while facing rapid technological change and uncertainty around the future of mobility.

2017 Shared Mobility Action Plan

In 2017, the Shared-Use Mobility Center worked with Metro Transit and other partners in the region to develop the Twin Cities Shared Mobility Action Plan. The Shared Mobility Action Plan seeks to identify key questions in order to capitalize on new technologies, prioritize investments, and develop policies that serve people and businesses - all while remaining a competitive market. The Shared Mobility Action Plan presents recommendations for local administrators, non-profit organizations, and private sector groups to better promote mobility services. Metro Transit plans to explore the potential outcomes of these recommendations, barriers to implementation, and how to adapt themselves in this rapidly evolving business. This policy report seeks to identify barriers to shared mobility implementation as identified by stakeholder interviews and research.

In particular, equity, labor issues, and public private partnerships have been identified as areas from which barriers may arise in the region.

Photo Source: Shared-Use Mobility Center
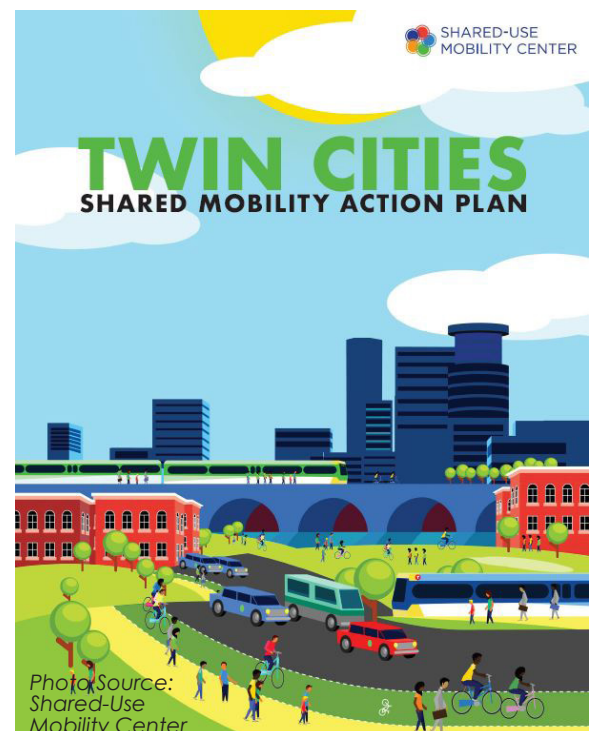
Shared Mobility Services in the Region

The following section defines the kinds of shared mobility options present in the Twin Cities Metro Area, including traditional public transit, microtransit, bikeshare, carshare and ridehailing businesses.

Public Transit

The American Public Transit Association defines public transit as "transportation by a conveyance that provides regular and continuing general or special transportation to the public, but not including school buses, charter or sightseeing service" (APTA, 2018). Several kinds of transportation options fall under this definition, but all uphold the basic idea of a transportation service available to the public that runs on a specific schedule.

The Twin Cities transit system encompasses regular and express bus service, two light rail transit (LRT) lines linking downtown Saint Paul, downtown Minneapolis, and south Minneapolis, and two bus rapid transit (BRT) lines further connecting the two LRT lines to popular destinations. Currently, the public transit system accounts for about 11% of commuter trips and serves roughly 100 million annual riders. The system continues to grow with planned extensions to both LRT lines as well as several proposed BRT lines.

Microtransit

Transit planner Jarrett Walker describes microtransit as a changeable-route service that responds to users' requests via a mobile app. The private sector provides the service with public subsidy (2018). Like traditional transit service, mictrotransit simultaneously serves people coming from independent origins and going to independent destinations. The goal of the service, however, is to be more efficient in terms of users' time by only responding to demand, not staying on a fixed route.

Local micro-transit services exist outside the urban Twin Cities in suburban areas. The SouthWest Transit public transit agency launched a new program called SW Prime in summer 2015, which uses 12-person vans to connect suburban residents to the transit hubs. Another public transportation agency, the Minnesota Valley Transit Authority (MVTA), serves seven suburban communities in the southern metro and several large corporations including Amazon, Shutterfly, and Mystic Lake Casino. To connect

employees to their jobs by transit, MVTA partners with these employers and provides shuttles to cover first/last mile distance from workplaces to transit stations.

Carshare

Carsharing resembles traditional rental car service but serves a local market. Users often pay a subscription fee to have access to vehicles on an as-needed basis. Two main carshare models exist: two-way and one-way. Two-way carshare requires users to pick up and drop off carshare vehicles in the same location, or in a small selection of locations. One-way carshare services allow users to travel anywhere in a carshare vehicle within a defined boundary and not return the vehicle to a specific location. Both types have been tested in the Twin Cities region.

The carsharing business in the Twin Cities region experienced a significant setback in 2016 due to car2go, the only local one-way car share service, withdrawing from the local market. Car2go cited "extremely high" state taxes on one-way, short-term car-sharing business as a primary reason for leaving (Moore, 2017). The Twin Cities region hosts two two-way carsharing services, HourCar and Zipcar. HourCar is a local non-profit organization that aims to minimize car travel and increase transportation accessibility for low-income,

underserved communities (HourCar, 2017). Zipcar provides more variety than HOURCAR with multiple vehicle choices for users such as environmentally-friendly cars, SUVs, and luxury sedans (Minneapolis Happening, 2016).

Ridehailing

Ridehailing allows users to request a ride in a private vehicle from a private individual via an app. The service mimics taxi service but relies on private individuals' willingness to use their own vehicle rather than a company-owned taxi. Users and drivers rate each other in order to regulate the system, ensuring good drivers get more ride requests. During off-peak hours, ridehailing tends to be less expensive than traditional taxi services and provides a level of convenience due to its basis in smart phone apps, especially to younger passengers who have grown up around tech. Recreational trips have higher rates of ridehailing use than commute or errand trips, which have higher rates of transit and carshare use, respectively (Feigon & Murphy, 2016).

Major ridehailing companies Uber and Lyft provide service in the greater Twin Cities metro area. Some local taxi companies have also made attempts to compete with the convenience of ridehailing by creating apps with which users can request rides.

Bikeshare

Bikeshare service allows users to access a bike for a short period of time. Different models of this service exist with traditional and dockless comprising the majority of the market. Traditional bikeshare models require users to lock bikes into physical stations at the end of their trips. The bikeshare operator regulates the system by transferring excess bikes from one station to another. Dockless bikeshare can take a few different forms but differs from traditional with its lack of physical stations in which to lock bikes. Instead, bikes contain GPS tracking devices so they can be located and retrieved if necessary.

Some dockless bikeshare systems allow bikes to be left anywhere while other establish areas, often designated with paint, to which bikes must be returned.

Nice Ride, a local non-profit organization, currently operates a traditional bikeshare system in Minneapolis and Saint Paul. Nice Ride offers a mobile application and a collaboration with a local trip planning application called Transit for convenience. Nice Ride recently announced a move to dockless bicycles to further popularize the service with more flexible trip choices.

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Part Two: Policy Focus Areas

Inside Part Two

In part one, the report presents a basic background of shared mobility and what is happening in the Twin Cities region, followed by visions that are foreseeable in five to ten years. Next, this chapter provides detail into the three policy focus areas that are considered in this guide: Equity, Labor, and Public-Private Partnerships (P3s). Each policy area is discussed individually, with the understanding that there is over lap between them. Background and context are provided for each section to explain trends locally and more broadly, along with case studies and pilot programs from other regions. Following that is a vision section, which includes a hopeful vision for the future as well as a dystopian vision that illustrates potential negative impacts of shared mobility if thoughtful, proactive policy is not put into place. Next key questions and challenges are offered to guide the conversation around these policy areas. The individual sections then finish with a statement of goals to provide more focus and direction for policy-makers that will ultimately help the region achieve a future where our transportation systems work for everyone, regardless of their background and life circumstances.

Policy Areas

- Equity
- Labor
- P3s

Content in Each Area

- Background and Context
- Pilots and Case Studies
- Key Questions and Challenges
- Goals

Policy Area: Equity

Background & Context

According to the *Twin Cities Shared Mobility Action Plan*, one of the three major challenges in local shared mobility development is the disparities of transit accessibility. Recent transit investments have not benefited urban, suburban, and rural residents equally. Therefore, shared mobility should focus its growth on social and geographic equity. New shared mobility models should be expected to promote the overall equity in the region.

Issues such as racial equity, technology access and literacy, lack of credit card or bank account access, and gender equity are of concern for th region and the Metropolitan Council. One of the transportation professionals interviewed for this project is also a mother and noted that there are no shared mobility options beyond transit that serve her adequately when she is with her children. Ubers and Lyfts don't have child seats and NiceRide bikes do not work with trailers or child seats either. Another concern is that many lower income people do not have access to mobile phones or credit cards, making it harder or impossible for them to use certain shared mobility services. Ultimately, a lack of focus on underserved groups will lead to ineffective shared mobility policy.

Although there are many pressing issues around transportation equity, the scope of this policy guide is limited, so recommendations are limited to a few crucial aspects of equity. Research and case studies highlight disparities in existing shared mobility systems and provide insight into policies that can be used to address equity.

Literature

Equity is a major topic in transportation research. However, there is not a consensus regarding equity impacts of shared use modes. For example, bikeshare is growing rapidly as an alternative travel option in many nations. The concept of bikeshare has been discussed since the 1960s, but the service only began slowly in the 1990s and has now expanded to over 800 cities, currently (Fisherman, 2016). As Fisherman points out, demographically, white, male, high income, and high education levels tend to more actively participate in bike-sharing. People also use bikeshare more often if they live near a dock station and have sufficient bike infrastructure on streets.

In contrast to Fisherman's results, Buck et. al found out that bikeshare members or short-term users tended to be female, younger, with lower income and lower car ownership. These results are based on an analysis of Washington D.C.'s bikeshare program's users' socio-economic features and demographics in comparison to regular cyclists in the area. A study of carshare users in London found results similar to those of bike-share in Washington D.C. Researchers found the greatest share of carshare users to be young professionals aged 25-35 who work in dense urban areas without children (Akyelken et. al, 2018). In addition, they also point out that empty-nesters are now more likely to stay in cities than move to suburbs as has been previously done. This elderly group is a target user group because of their limited need for personal, privately-owned vehicles and lack of desire to handle the inconvenience of owning a car in the city.

These three case studies show that social equity issues differ based on the specific circumstance of a place. Different regions usually have their own demographic features and geographic layout which reflect demand of shared mobility service. However, there also exists some similarities amongst these research such as youngsters and lower car ownership is the key part in shared mobility markets. Therefore, based on the current condition in the Twin Cities area, the report proposes some action plans in the following paragraphs.

Case Studies

Transportation Data Collaborative

The University of Washington, in conjunction with Microsoft and the Washington Transportation Center among others, has developed the UW Transportation Data Collaborative (TDC). Inspired by the data repositories of the medical field, TDC aims to streamline processing of data from numerous sources while protecting privacy of both users and companies supplying data. TDC seeks to incorporate traffic flow counts, bus location, transit boardings, crash reports, bike counts, car-sharing trip data, land use, and demographic characteristics. By hosting data at the University in a third party location, encrypted data can be available but not subject to Freedom of Information Act requests that could jeopardize privacy (Transportation Data Collaborative).

Divvy for Everyone

In order to expand bikeshare membership to lower-income markets, the City of Chicago has put together a program to discount bikeshare membership for residents earning 300 percent of federal poverty level or less. Those that participate pay $5 in cash rather than $75 for yearly membership. The discount program coincides with bikeshare station area expansion efforts into underserved areas, and has been paid for with grants from Blue Cross Blue Shield of Illinois and the Better Bike Share Partnership. Many users (80 percent) use bikeshare to connect to transit, showcasing the power of shared mobility initiatives (City of Chicago Office of the Mayor, 2015).

Car Sharing Policy and Pilot Project

In an effort to expand carshare availability in San Francisco, the San Francisco Municipal Transportation Agency (SFMTA) has expanded its on-street carshare program. To participate, carshare providers must fall under SFMTA's definition of a carshare organization, ensuring consistent application of regulation. SFMTA requires all carshare providers to demonstrate outreach efforts quarterly for the first three quarters of operation. After this time period, SFMTA evaluates whether the provider is making adequate effort to engage new users and ensure geographical equity. They also require providers to share a substantial amount of data based on the following logic:

"On-street parking spaces are part of the public right of way, and the SFMTA's on-street parking management policy strives to maximize the utility of this limited public asset. Giving extraordinary privileges to organizations using the public right of way or exemptions to any parking regulations, such as dedicating on-street parking spaces for the exclusive use of car share organizations, can only be justified if it produces substantial public benefits (San Francisco Municipal Transportation Agency, 2013)."

Key Questions and Challenges

Determining equity of a transportation system with any certainty is impossible without knowledge of who is being served by the system, where they are being served, and how they are being served. To that end, having a complete data set of shared modes in use in the area is critically important. However, there are two areas of concern with acquisition of data for private shared mobility providers to combine with existing public data: personal privacy and loss of proprietary information.

Data Needs vs. Private Concerns with Sharing

Certain shared mobility providers, especially transportation network companies, have been unwilling to give up their data, at least partially in fear that their competitors will get access to it. This position does not mean it will be impossible to obtain such data from these companies; it just makes the task a more sensitive matter. Creating a third-party repository like the Transportation Data Collaborative could also help solve this issue. The San Francisco Municipal Transportation Agency spells out very clearly their right to collect data from companies using their public infrastructure (see case study section). One company refusing to cooperate and thus giving up their share of business in the Twin Cities does not mean that all others will do the same.
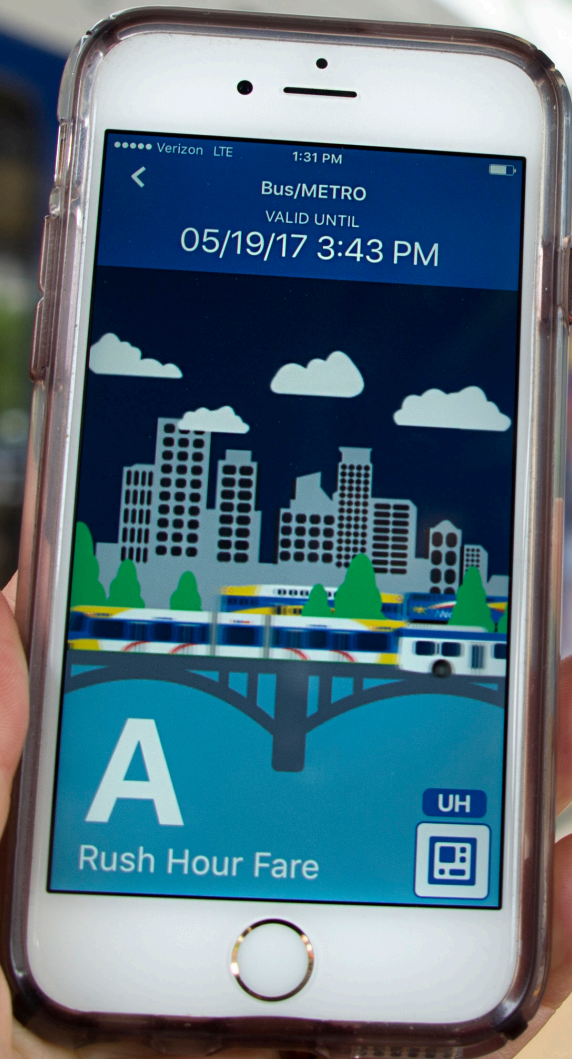
Personal Data Privacy

Data privacy issues are a serious concern. Individuals are relatively easy to identify given their travel patterns, and Freedom of Information Act requests could make individual travel patterns readily available if raw data is stored with a governmental agency (Transportation Data Collaborative). An initiative similar to the University of Washington's Transportation Data Collaborative could work well given the resources available the the Metropolitan Council at the University of Minnesota.

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05/19/17 3:43 PM

A
Rush Hour Fare

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Equity Goals

In order to reach the vision described earlier in this report, and avoid the negative outcomes described in the possible futures section, the Metropolitan Council must keep the following equity-related goals in mind. Recommendations at the end of this report present potential strategies to attaining these goals and others related to labor and public private partnerships.

Goal 1: Make shared mobility service more affordable and convenient for underserved populations that have fewer options.

Shared mobility options must be available to all people regardless of gender, race, ethnicity, ability, or socio-economic status. Transportation can be used as a means to improve people's life outcomes by enabling access to employment and education opportunities. Making targeted improvements to Metro Transit's already robust services will help empower all people.

Goal 2: Improve geographic equity of the transportation system so that all people have options regardless of where they live or work.

Not all areas can feasibly sustain traditional, fixed-route transit. Shared mobility offers potential to provide transportation alternatives to personal vehicles in these situations. In that sense, shared mobility can close geographical gaps in transit service. As new services and technologies emerge, more places and people can be served with new diversity of options.

Policy Area: Labor

Background & Context

Labor markets will be impacted by shared mobility in several ways. Some jobs will disappear due to automation while entirely new jobs and possibly even industries will be created from advancements in technology. Metro Transit currently employs 3,200 people as bus and rail operators, mechanics, administrative and support staff, and police officers[iv]. Conversations with staff at Metro Transit revealed that they have trouble recruiting drivers to fill their need for drivers and other open positions. In fact, this same issue affects many industries in the Twin Cities region. The metro area has increasingly found it difficult to satisfy the demand for new employees. In an article from the Star Tribune it was reported that SEH Inc. is looking for 100 new employees - namely engineers, scientists and architects - but finds it difficult to fill the demand (Star Tribune, 2015). In late 2017 the Twin Cities tied Nashville, TN, for the lowest unemployment rate among the nations largest 51 metro areas at 2.3%.

Despite this fact, labor issues remain a real concern in the area. Professional drivers and other jobs related to the auto industry may see their jobs disappear, forcing them to find new work that may require new skills. It is in the best interest of the Twin Cities metro to make sure that people in jobs that are likely to disappear from technology advancements and automation are prepared with the skills required to transition into new careers.

Literature

Job Loss from Automation and Technology

As technology advances the potential for automation in the transportation industry is increasing rapidly. While this sort of progress brings about many benefits, such as efficiency and greater economic growth, this also means that certain jobs that have provided income and stability for individuals and families will be reduced or disappear altogether. This trend has impacts on a global scale and is not just limited to the shared mobility industry. G20, an international group comprised of 20 countries, sees this as a major issue: "As a result of recent developments in machine learning and mobile robotics, 47 percent of US jobs, 57 percent of jobs across the OECD, and 77 percent of jobs in China, are susceptible to automation over the forthcoming decades, with a substantial share falling into the service sector" (Frey, 2017).

In the transportation industry much of the job loss will occur among the 7 million US auto worker jobs and 4 million professional driver jobs due to shared mobility services and automation (Deloitte, 2017). While some of this is expected to occur from the arrival of autonomous vehicles, there are also many other jobs that will be impacted, such as traffic technicians and inspectors to mechanics.

Another factor contributing to job loss in the transportation industry comes from increasing popularity of TNCs. In New York City, TNC ridership tripled between 2015 and 2016 while the city saw a decrease in subway ridership after years of growth in transit use (Bliss, 2017). These concerns have also been raised in other cities across the nation. A report from the American Public Transit Association (APTA), *Understanding Recent Ridership Changes* (2018), noted that this is happening widely, even in cities that have historically had high demand for transit are noticing ridership declines. As transit ridership declines it puts financial pressure on transit systems and ultimately threatens the jobs of transit workers.

Obviously, the fact that 11 million jobs are at risk in the transportation industry has a lot of policy-makers, unions, employers and employees worried about what the future will bring. The shift to a more digital workforce suggests there could be a real need for policy mechanisms to help smooth that transition, including programs such as retraining and income assistance. As transit becomes more digitized, transit agencies will also need to attract new types of workers that have these skills.

Job Growth from Shared Mobility

Despite the negative outlook presented here, there are many potential benefits associated with advancements in technology and shared mobility options. While research on the subject is still limited, many believe that the shared mobility industry will create more employment opportunities. Some of these opportunities will arise in the short-term, or have already started to appear. One example of this comes from the TNC industry, which has provided part-time and full-time employment to a growing number of people nationwide. This specific example is complex as there are various implications for labor stemming from TNC drivers, such as increased employment but also various positive and negative effects on wages due to independent contractor status (Cohen and Shaheen, 2016).

Another example of short-term job growth will occur due to the aging population and preparation for large amounts of retirees in the upcoming years. These retirees will want to have access to mobility options as they age. A Washington Post article states that an estimated 10,000 people will retire a day for the next 10 years (Kessler, 2014). TNCs are noticing this and focusing on the 65 plus market. Another article demonstrates the need for additional elder care mobility and how TNCs are partnering with healthcare providers to improve mobility (Rieland, 2017). In the long-term, however, there will be opportunities for growth in the information and technology sectors related to app-based services, big data analysis, and a variety of other industries related to on-demand, automated, and virtual services.

Case Study: $1 Billion Google Training Initiative

In fall of 2017 Google announced an initiative, Grow With Google, to train American workers for jobs in technology and committed $1 billion over the following five-year period (paraphrased). This money will be directed to nonprofits in education and professional training. "The company's goal," executives said, "is to allow anyone with an internet connection to become proficient with technology and prepare for a job in areas like information technology support and app development." The program provides access to online training for people that would like to work in the information and technology industry.

"We understand there's uncertainty and even concern about the pace of technological change, but we know that technology will be an engine of America's growth for years to come," said Mr. Pichai, CEO of Google. "The nature of work is fundamentally changing, and that is shifting the link between education, training and opportunity" (Wakabayashi, 2017).

Key Questions and Challenges

While advancements in shared mobility and technology present a lot of opportunities, there will also be some concerns that need to be addressed. These conversations are sometimes abstract, but these issues affect individuals and families in important ways. With that in mind, the four key aspects below should be explored further.

Labor Unions May Object to Automation of Jobs

It is expected that there will be push back from labor unions if Metro Transit begins to automate the responsibilities of current employees. These concerns are valid and should be treated as such, but they should also be weighed against the benefits of shared mobility systems that incorporate automation. Labor unions can point to specific people at-risk to lose their jobs, but there are large amounts of people who will benefit and it is important to be aware of the net benefits and losses.

Place importance on People At-Risk to Lose Their Livelihood

People who work in jobs that are at-risk for automation will likely, and justly, have concerns about their future. It will be important to take these concerns seriously and be proactive about helping people transition out of at-risk jobs and into stable, well-paying new jobs. There will be growing pains with these major changes and some people will be upset. Metro Transit should advertise the positive implications of these technology and systems changes and work to make the benefits of these changes known to and possible for displaced workers, but also for all other residents of the metro area.

Ensure that Benefits Reach All People and All Areas

Private businesses are likely to benefit from automation due to increases in productivity and decreases in cost of labor. While businesses should be encouraged to find new ways to employ their displaced workers, it may be that displaced workers will not have the correct skills for the work, or that those businesses already won't have further need for the displaced employees. Helping Metro Transit employees is one thing, but their will also be a need to help private sector employees transition into new jobs.

Businesses May Not Help Transition People into New Jobs

Private businesses are likely to benefit from automation due to increases in productivity and decreases in cost of labor. While businesses should be encouraged to find new ways to employ their displaced workers, it may be that displaced workers will not have the correct skills for the work, or that those businesses already won't have further need for the displaced employees. Helping Metro Transit employees is one thing, but their will also be a need to help private sector employees transition into new jobs.

Labor Goals

The following are two goals for the Met Council to take into consideration when developing shared mobility policy as it relates to Met Council's labor force and, more broadly, the Twin Cities transit labor force. Shared mobility programs and policies should refer back to these goals. These goals are meant to serve as a guideline for recommendations offered in the report that will advance shared mobility for the Twin Cities but also ease labor transitions.

Goal 3: Create a framework to ease the impacts of transitioning labor markets on individuals at-risk to lose their jobs.

With growth in shared mobility services and technology advancements that lead to automation, there is about loss of jobs in the transportation industry. To minimize the economic and social impact these losses, the Metropolitan Council should use a proactive approach to help transition workers into new fields when their jobs disappear. This goal should be considered early on in the Metropolitan Council's shared mobility policy planning process to ensure adequate time for development of labor transition programs.

Goal 4: Ensure job growth from shared mobility services benefit people from diverse background and life experiences.

As shared mobility services have become more popular, they have contributed to the transformation of jobs in the transportation industry. These benefits should be shared throughout the region and with a diverse set of people to create a better quality of life for a majority of transportation workers in the Twin Cities metro area. Immediate consideration of programming should focus on the population facing imminent job loss due to automation or shared mobility technology.

Policy Area:
Public-Private Partnerships

Background
& Context

Currently, there are a limited number of public-private partnership (P3) programs in the Twin Cities region related to transportation. P3s are arrangements between organizations in the public and private sectors that are meant to be provide value to both groups. These arrangements can be mutually beneficial when all parties involved achieve their individual objectives. There are many examples of successful (and unsuccessful) P3s found across the country, and Metro Transit can incorporate lessons from these models to expand and improve its operations and services.

P3s can be organized to accomplish a wide range of goals, including the efficient and effective delivery of transportation services. Among other objectives, in the Twin Cities it is possible to use P3s for the enhancement of paratransit services, mitigation of the first-mile/last-mile problem, or solicitations for new ideas to improve service generally. The next sections of this report will provide context for these partnerships, profile a number of these models, and explore how Metro Transit can integrate their best practices into its own operations.

Literature

Less Funding for Transportation

Over the past few decades, communities across the United States have been facing budget constraints, forcing them to find new ways to finance public goods and services including transit infrastructure. Federal and state transportation funding has been declining for years as cars have become more efficient and the gasoline tax remains unchanged despite rising transportation construction costs. The solvency of the Highway Trust Fund, a primary source of monies for highway construction and repair, is a good example of this. The fund was expected to run out of money by mid-to-late 2016. Ultimately, this was only prevented by a short-term spending bill that lasts until 2020 (Zanona, 2013). State and local governments have taken some action to mitigate these federal funding issues, with some reallocating monies from the general fund and a number of others introducing new legislation to increase the gas tax (NCSL, 2018).

Public transit faces similar budget challenges across the country. Transit authorities in states with a decentralized approach to funding have worked to secure other streams of funding, such as property taxes and the state vehicle sales tax (Hess and Lombardi, 2005). This isn't always sufficient to cover all the costs of construction, maintenance, and capital improvements. In some cases, transit authorities have looked to the private sector to solicit new sources of money from sources other than government revenue. In response to these monetary hardships, P3s have continued to grow in popularity for governments across the country.

P3s Can Involve Some Risk

As with many large-scale ventures, these partnerships are not without risk. These risks include conflicts of interest among partners, inhospitable political or policy environments, cost overruns, and construction delays (Chan et al., 2011). For example, use of public funds in support of private businesses such as Lyft and Uber could be seen as a conflict of interest because there are arguments that ridehailing services like Uber and Lyft take riders from transit. Such a partnership may also prove to be challenging in terms of the political environment, given that many people may share these same concerns. Furthermore, there are limited existing policy frameworks for such partnerships, so it could be difficult to create effective policy in their early stages.

Using P3s to Supplement Transit

A number of studies have been done to evaluate the impacts of shared-mobility on transit ridership. In particular, studies focus on the impact of ride-hailing services from transportation network companies (TNCs) and carsharing services. In general, studies show that these new mobility options do not have a decided impact on transit.

One study commissioned by the Transit Cooperative Research Program (TCRP) evaluated ridership impacts of TNCs on multiple cities around the United States. Two separate surveys evaluated shared mobility trends in general and combinations of transit and TNCs reveal varied results (Feigon & Murphy, 2016).

Residents in Chicago, Washington, DC, Los Angeles, Nashville, and Seattle participated in a shared mobility survey which included questions about modes used, frequency of use, and demographic characteristics. Results showed differences in modal use by age, city of residence, and frequency. While many people do use a diverse set of modes, use of any shared mode tends to be skewed toward people under the age of forty-five, and transit is by far the top shared mode. In every region, transit is the most-used shared mode, though TNC users surpass Nashville's train and bus users if considered separately. The iden-

tification that more transit users are frequent users than TNC users further supports the importance of transit as a backbone for shared use mobility regardless of age or city of residence (Feigon & Murphy, 2016).

Another survey of customers of Bay Area Rapid Transit (BART), Metropolitan Atlanta Rapid Transit Authority (MARTA), New Jersey Transit (NJT), and Washington Metro Area Transit Authority (WMATA) further investigated intermodal patterns, with a focus on TNCs and transit specifically. The survey asked respondents about their latest TNC trip, not frequency of occurrence. Nearly half of respondents in each jurisdiction had not used TNCs, while eleven, sixteen, seventeen, and thirty-nine percent of BART, MARTA, NJT, and WMATA respondents used their last TNC trip to replace a transit trip. With the exception of BART at sixteen percent, these shares exceeded the share of respondents who used a TNC trip to connect to transit (Feigon & Murphy, 2016).

In addition to research on impacts of TNCs on transit, researchers in the Bay Area have done studies looking into impacts of carsharing on transit. Studies found that those participating in carshare were more likely to use public transit, bike, and walking, however other factors were more influential (Cervero & Tsai, 2004).

Case Studies

Transportation authorities across the country have created a number of P3s with the goal of enhancing their services. Below, we profile three cities' approaches that Metro Transit can replicate or imitate to improve its own operations.

Go Centennial Program

The City of Centennial, Colorado recently ran a pilot program called "Go Centennial" that was created to address issues with connecting to transit at the beginning and end of your transit trip, commonly known as the first-mile/last-mile problem. In this program, residents within four-square-miles of the Dry Creek Light Rail Station area could use Lyft Line for transportation to and from the station and be reimbursed by the city.

The city faced some issues with publicizing the program and confusion around the use of the "Go Denver" integrated transit app. Aside from that they generally received positive feedback from survey respondents. This presents a potential model for promoting the use of multiple kinds of transportation without adding more single-occupancy vehicles or making significant investments in car-oriented infrastructure.

RIDE Paratransit Program

The Massachusetts Bay Transit Authority (MBTA) has partnered with Uber and Lyft to create a pilot program to enhance RIDE, its paratransit service, in the Boston area (MBTA.com, 2018). Through this partnership, RIDE users are able to request UberPOOL, standard Uber rides, and standard Lyft rides and pay only the first $1 for an UberPOOL trip or $2 for a standard trip, as well as any charges exceeding $41 or $42, respectively. The remaining fee, up to $40, is paid by MBTA. The benefits to this service are numerous. The service allows paratransit passengers to book their rides on demand rather than a day in advance, wait as little as five minutes for their ride, and use a smartphone app rather than make a phone call to reserve a ride. The service also accepts ride requests via phone call and Uber provides a limited distribution of smartphone to RIDE passengers to address issues related to the equity of digital access. The popularity of the program led MBTA to extend the pilot period beyond the original timeline. As of the release of this guide the program was still in operation. The photo on page 51 shows Governor Baker of Massachusetts with MBTA Acting General Manager Brian Shortleeve as they celebrate 10,000 rides through the paratransit pilot program with Uber and Lyft.

Los Angeles Office of Extraordinary Innovation

The Los Angeles Metro authority recently established the Office of Extraordinary Innovation (OEI) in part to create a new approach to P3s (metro.net, 2018). Rather than issuing a request for proposals or information with specific requirements, the OEI lays out the goals it has and asks the private sector to develop creative new approaches to design, fund, deliver, or operate Metro services. These submissions can propose new partnerships or simply new actions for Metro to incorporate into its operations. Specialized staff then review these proposals for feasibility and if they are found promising enough, staff will request more details and potentially run a demonstration or implement a pilot program. Successful proposals may even become a part of Metro's permanent operations.

This program is easily reproducible by Metro Transit; all it requires is the assemblage of a framework for creating teams to evaluate such proposals. As mentioned previously, innovation in the public sector can prove difficult, and this is an original approach to maximizing progress without incurring significant costs or reallocating valuable yet limited resources and staff time.
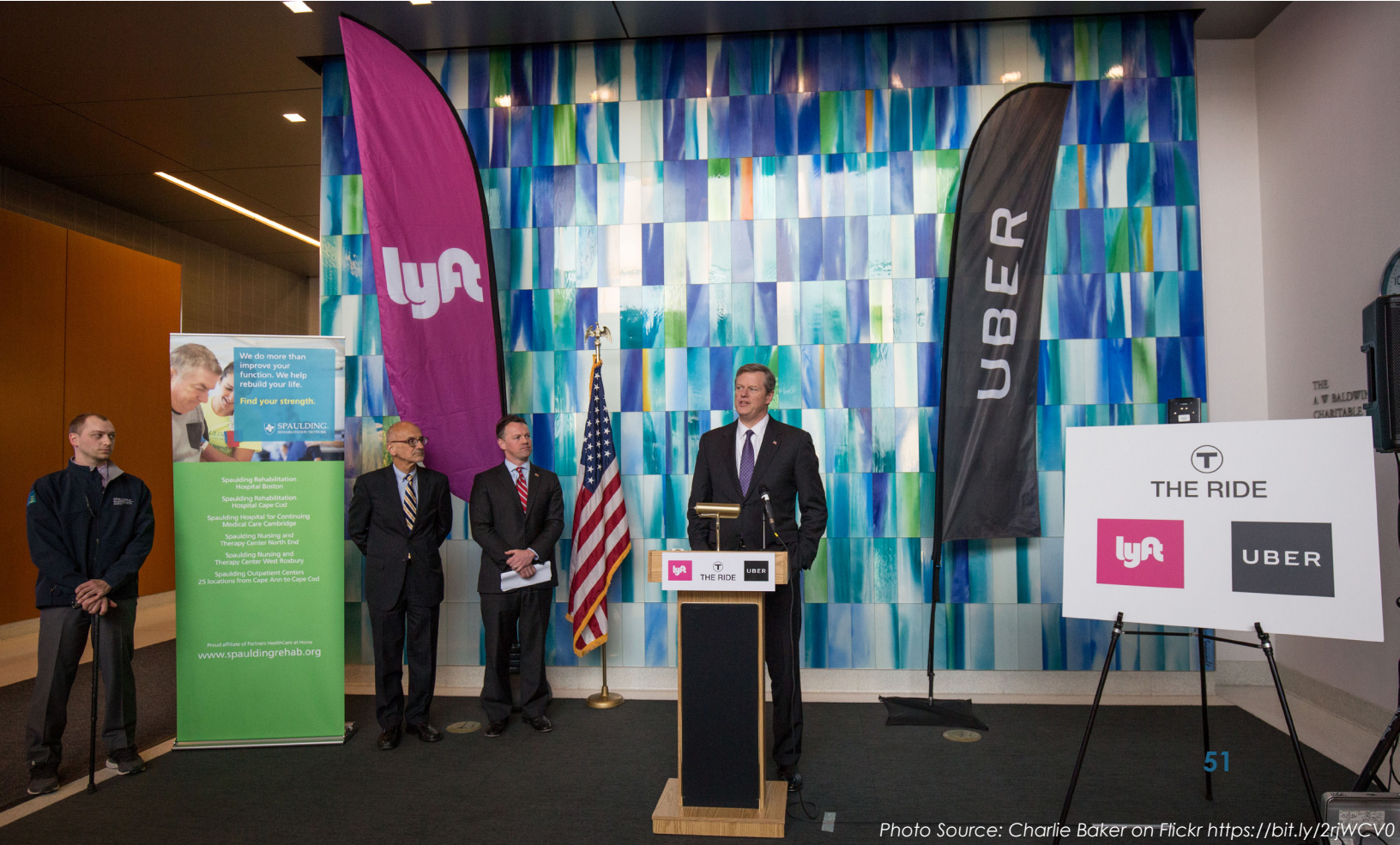
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Key Questions and Challenges

Determining equity of a transportation system with any certainty is impossible without knowledge of who is being served by the system, where they are being served, and how they are being served. To that end, having a complete data set of shared modes in use in the area is critically important. However, there are two areas of concern with acquisition of data for private shared mobility providers to combine with existing public data: personal privacy and loss of proprietary information.

Public-private partnerships are valuable endeavors for achieving both public and private objectives simultaneously, but that does not necessarily mean they can be implemented without significant collaboration and compromise first. Metro Transit must engage in a robust and respectful dialogue with its private counterparts in order to ensure the best, most equitable outcomes possible for all parties in public-private partnerships.

Including TNCs in a Common Mobility App

The Twin Cities Shared Mobility Action Plan recommended the creation of a transportation app that displays information on multiple options for a given trip. An important consideration for the metro area is whether or not to include TNCs such as Uber and Lyft. There is concern that including them in the app would cause public transit riders to take Uber and Lyft instead. This would then contribute to the growing ride-sourcing industry while decreasing public transit ridership. Conversely, there have been some studies that show how TNCs supplement transit use, suggesting a partnership between transit and TNCs would prove beneficial for both parties. Metro Transit should further consider this approach and look to other metro areas for examples of successful and unsuccessful partnership in the coming years.

Fare Collection for Public and Private Services

The primary challenge anticipated in the creation of an integrated shared mobility app is the payment setup. Ideally, this app would allow users to pay a single fare and access Metro Transit and Nice Ride services while also providing route and cost information for other options such as Lyft and Uber. However, allowing a single fare for both Metro Transit and Nice Ride would require a payment scheme agreement that is fair for both entities as well as those who use their service.

Coordination and Maximization of Limited Resources

Coordinating services between Metro Transit and other shared mobility providers is challenging because each entity is working with limited resources. The highest ridership transit lines do not always line up with high ridership areas for other shared mobility options. For planners, policy makers, and stakeholders, the key question that will shape such an undertaking is which shared mobility options should be placed at which stops. Metro Transit's funding is limited, so exploring new services may be too costly. Additionally, public partnerships that benefit private companies may be unpopular with the public and certain stakeholders.

Procurement of Proprietary Data

The Twin Cities Shared Mobility Action Plan recommended the creation of a transportation app that displays information on multiple options for a given trip. An important consideration for the metro area is whether or not to include TNCs such as Uber and Lyft. There is concern that including them in the app would cause public transit riders to take Uber and Lyft instead. This would then contribute to the growing ride-sourcing industry while decreasing public transit ridership. Conversely, there have been some studies that show how TNCs supplement transit use, suggesting a partnership between transit and TNCs would prove beneficial for both parties. Metro Transit should further consider this approach and look to other metro areas for examples of successful and unsuccessful partnership in the coming years.

P3 Goals

The following are two goals for consideration when developing shared mobility policy related to public-private partnerships. Shared mobility programs and policies should focus on reaching these goals, and be evaluated accordingly. These goals are meant to serve as a guideline for recommendations offered in the report that will advance shared mobility for the Twin Cities through public-private partnerships.

Goal 5: Make it easier for people to use multiple types of shared mobility options on a single trip or throughout the day.

A major obstacle faced by many providers of shared mobility is the perception that using shared mobility is less convenient than simply driving a personal vehicle. To eliminate both perceived and real inconvenience in the short term, Metro Transit should work to better integrate different forms of shared mobility.

Goal 6: Improve mobility and accessibility for all through innovative and effective partnerships.

In a few major cities across the country, there is significant concern that TNCs such as Uber and Lyft will draw passengers away from public transit until those transit systems are no longer viable. While stakeholders in the Twin Cities agree that this is an unlikely outcome for the metro area given its newer transit infrastructure and higher proportion of captive riders, they still emphasized the need for Metro Transit to ensure its continued level of operation. This will require a longer-term plan in which Metro Transit focuses on incorporating successful private-sector operational strategies and coordinating with cities to obtain key information from TNCs.

Part Three: Recommendations

Inside Part Three

The following section sets forth twelve recommendations for achieving the goals in the previous section. Although the goals were presented separately for each of the policy focus areas, several of the recommendations in this part make progress towards multi-ple goals at once. The matrix on page [XX] provides and understanding of the goal or goals that each recommendation helps to reach. When considering the recommendations, keep the following six goals in mind.

Goals

Focus Area

| 1 | Increase the affordability and convenience of shared mobility services for underserved populations that have fewer options. |
| 2 | Improve mobility and accessibility for all, and especially for people in areas that are currently served the least. |

Equity

| 3 | Create a framework to ease the impacts of transitioning labor markets on individuals at-risk to lose their jobs. |
| 4 | Ensure that job growth from shared mobility services benefit all people from all backgrounds and life circumstances. |

Labor

| 5 | Make it easier for people to use multiple types of shared mobility options on a single trip or throughout the day. |
| 6 | Improve mobility and accessibility for all through innovative and effective partnerships. |

P3s

After discussing the recommendations they are prioritized into three categories: Start Immediately, Start Soon, and Start Later. While all twelve recommendations will help achieve the six goals, some are more time sensitive and should be focused on first.

Recommendations and Goals

Recommendations	Equity	
	Goal 1: Increase the affordability and convenience of shared mobility services for underserved populations that have fewer options.	Goal 2: Improve mobility and accessibility for all, and especially for people in areas that are currently served the least.
Create a shared mobility educational campaign	●	
Establish uniform objectives for shared mobility providers to ensure they provide equitable service	●	●
Regulate private transportation providers so they do not place an undue burden on infrastructure	●	●
Adapt existing Metropolitan Council mobility services to markets established from shared mobility data		●
Create cross-training program for displaced workers in the transportation industry both internally at Metro Transit and with external businesses		
Reframe the conversation to focus on the overall increase of jobs and not just the loss of some specific jobs		●
Physically integrate shared mobility services	●	●
Enhance the Metro Transit mobile app that provides real-time information on shared mobility services so that people can easily transfer between services.		
Create an unsolicited proposal program		

	Labor Market		Public-Private Partnerships	
	Goal 3: Create a framework to ease the impacts of transitioning labor markets on individuals at risk to lose their jobs.	Goal 4: Ensure that job growth from shared mobility services benefit all people from all backgrounds and life circumstances.	Goal 5: Make it easier for people to use multiple types of shared mobility options on a single trip or throughout the day.	Goal 6: Improve mobility and accessibility for all through innovative and effective partnerships.
		●		
	●			
	●	●		
		●		
			●	
			●	●
			●	●

Recommendations

1

Create a shared mobility educational campaign

Promoting social equity begins with a clear understanding of shared mobility by all groups. Such understanding involves education on shared mobility mode options, payment options, technology awareness, and benefits of using shared mobility. Private shared mobility operators, Metro Transit, and the public will benefit from greater understanding of service options. As such, the public and private sectors must work together on educational initiatives.

Educational initiatives can start with visibility. Simple advertisements on transit vehicles and stations, bike-share stations, and in TNC apps can communicate that each of these modes is shared mobility and help existing users understand that they are benefiting from shared mobility. Visibility must also be expanded to populations not using shared mobility options. Neighborhood organizations can be leveraged to help with this initiative. A set of educational materials

or a workshop can be developed to present to neighborhood organizations and residents to showcase what shared mobility is, how to use it, and who can use it. Disparities in technological literacy and payment options can also be addressed through neighborhood groups.

With an initial base of education established, and presumably a more robust shared mobility system in place after some time, advertising can be targeted at personal vehicle users. Billboards and radio advertisements can reach people dissatisfied with driving. Different approaches can be used with the goal in mind to put the idea of shared mobility on the minds of people outside of the transportation community.

Related Goals and Policy Areas

Putting an educational campaign in place will help begin to address social equity issues described in goal 1. Stakeholders shared that people often felt like shared mobility was not for them. Education will be critical to breaking down this barrier. Flow of information can even be two-way as the public identifies barriers they face to using shared mobility while learning about available services.

Education can also help the public understand benefits of shared mobility beyond transportation services. Shared mobility companies need to employ people to operate their systems be it driving vehicles, redistributing bikeshare bicycles, or maintaining a carshare fleet. The recent introduction of these types of jobs to the market might make identification of their existence by people in search of employment difficult. Educational campaigns will reduce this barrier to employment and address goal 4.

Goal 1: Equity

Increase the affordability and convenience of shared mobility services for underserved populations that have fewer options.

Goal 4: Labor

Ensure that job growth from shared mobility services benefit all people from all backgrounds and life circumstances.

Recommendations

2

Establish uniform objectives for shared mobility providers to ensure they provide equitable service

Shared mobility is an exciting field for entrepreneurs. However, profitability and equity do not always coincide, creating challenges for both private industry and public agencies. Supporting a system that is not working to improve equity would be unacceptable on the part of the Metropolitan Council. The Metropolitan Council must set policy that establishes a set of equity benchmarks. This policy should be applied evenly to all providers, except if evidence is provided to support an exception.

Benchmarks will be associated with service availability and accessibility across different areas, genders, income levels, and races in response to profitability of the shared mobility provider. Initially, while a shared mobility company grows its market share, the Metropolitan Council can offer support such as information about grant opportunities and visibility to make the service as equitable as possible. Grants should be used to expand service to challenging areas, allow for use without a bank account, provide employees with a living wage, or other areas related to equity that the Council identifies. Once a company becomes more self-sustaining, the Council must hold it to equitable standards for geographic coverage and service regardless of race, income, gender, and ability. Private companies must also play a role in community engagement and education. Failure to uphold such standards should result in fines and removal from shared mobility advertising and education.

Related Goals and Policy Areas

Establishment of equity objectives will help the Metropolitan Council meet goals 1 and 2 regarding geographic and social equity. Such objectives can also help meet goal 4 of equitable labor impacts if labor standards are also imposed.

It will be especially important to strive to meet these goals when working with private companies. While many private companies have every intention of providing service that improves quality of life, they are ultimately motivated by profit over public good. It is the responsibility of public agencies to make sure that these goals are met by implementing this recommendation.

Goal 1: Equity

Increase the affordability and convenience of shared mobility services for underserved populations that have fewer options.

Goal 2: Equity

Improve mobility and accessibility for all, and especially for people in areas that are currently served the least.

Goal 3: Labor

Create a framework to ease the impacts of transitioning labor markets on individuals at risk to lose their jobs.

Recommendations

3

Regulate private transportation providers to ensure they do not place an undue burden on public infrastructure

There are two ways to regulate private shared mobility companies: taxation and restrictions on physical use of space. Currently, private transportation providers (particularly TNCs and courier services) use public infrastructure for monetary gain, yet they do not contribute more in taxes to cover the associated costs. This includes the cost from air pollution, construction and maintenance of infrastructure, and increased congestion. The full economic and social impacts of this situation are currently unknown because there is a lack of publicly available data.

Public agencies should impose a tax on transportation providers to offset the public cost of their services and collect data from private companies regarding their infrastructure use. This will help to ensure that the public is not negatively impacted by the costs associated with private transportation companies. The revenue produced by such a tax could be used not only for the maintenance and construction of infrastructure but also to subsidize shared mobility services for users who may not be able to afford them otherwise.

A success story of physical regulation of shared mobility comes from Minneapolis' handling of dockless bikeshare. Dockless bicycles were recently added to the range of shared mobility options in Minneapolis, and many members of the public have expressed concerns that these bicycles will cluster in popular destinations, infringing on public space. The city has addressed these concerns by creating an ordinance requiring bikeshare providers to track their bikes and prevent clustering, and in doing so has set an excellent example for future regulation of shared mobility service.

Cities are responsible for much of their own public infrastructure, though some roadways are controlled at the state or county level. As such, cities must negotiate with other jurisdictions in order to create a feasible and enforceable policies regarding use of physical space. The Metropolitan Council can provide guidance to what is expected of these negotiations (namely data requirements), or even dedicate staff to negotiate on behalf of cities.

Related Goals and Policy Areas

This approach would help Metro Transit make progress towards goals 1 and 2 by addressing concerns about both geographic and socio-economic equity of such services, as higher levels of service would be possible in both lower-demand and lower-income areas.

Goal 1: Equity

Increase the affordability and convenience of shared mobility services for underserved populations that have fewer options.

Goal 2: Equity

Improve mobility and accessibility for all, and especially for people in areas that are currently served the least.

Recommendations

4

Adapt existing Metropolitan Council mobility services to markets established from shared mobility data

Once the Metropolitan Council has access to data from shared mobility providers, analysis into different markets for different systems can be done. Findings might reveal opportunities for existing Metropolitan Council service expansion or areas where service exists but could be better served by private mobility options. The Metropolitan Council might consider expanding the vanpool program or establishing more robust reverse-commute programs to increase access to growing employment centers in suburban areas. Alternatively, low-frequency, low-ridership transit routes could be replaced with an on-demand service like SouthWest Prime, or a partnership with a TNC.

Up to now, the Metropolitan Council and Metro Transit have decided

their best interests do not align with a direct partnership with TNCs. Such a position does not mean Metro Transit cannot learn from TNCs in other ways. Metro Transit can look to these companies and adopt some of their successful practices, such as the flexibility of requesting a ride on-demand rather than making a reservation 24 hours in advance, as is currently the case for Metro Mobility users.

Related Goals and Policy Areas

In general, this recommendation includes any service changes Metro Transit and the Metropolitan Council can make internally to support goal 2 for geographical equity.

Goal 2: Equity

Improve mobility and accessibility for all, and especially for people in areas that are currently served the least.

5

Create cross-training program for displaced workers in the transportation industry both internally at Metro Transit and with external businesses

The use of private vehicles for TNC operations adds wear and tear to an already-burdened transportation infrastructure system. In order to perform the construction and maintenance needed to sustain world-class infrastructure, new and expanded sources of funding are necessary. The revenues from such a tax would pro-vide a reliable source of money that would be appropriately allocated to this maintenance. An extra benefit of such a tax would be an increased cost for the use of ride-hailing pro-grams, which could make people think about using public transit instead of using a ride-hailing service, especially for regular trips.

Related Goals and Policy Areas

This recommendation for action relates to the 2 below policy goals in that it keeps labor at the forefront of all policy decisions and allows for a plan to retrain and employ workers that may have their jobs affected by shared mobility advancements in technology such as automation and potential TNC partnerships. While Met Council currently has a labor shortage this recommendation will need to be considered in the long term planning and will need adequate runway to prepare for potential funding needs and partnerships with educational institutions.

Goal 3: Labor

Create a framework to ease the impacts of transitioning labor markets on individuals at risk to lose their jobs.

Goal 4: Labor

Ensure that job growth from shared mobility services benefit all people from all backgrounds and life circumstances.

Recommendations

6

Reframe the conversation to focus on the overall increase of jobs and not just the loss of some specific jobs

While there will undoubtedly be loss or disappearance of certain jobs, most notably those of professional drivers, there will be an increase in other types of jobs as a result of changes in technology and transportation options. In fact, it is possible that high-skill jobs with better pay will be created to replace those that are lost. For instance, mechanic positions may be replaced by job openings for skilled technicians that maintain and remotely operate autonomous vehicles and systems. Also, like other major technical advancements such as the internet, there will likely be jobs and industries that are created that we can't quite imagine yet.

This recommendation suggests that advertising new technologies as job creators will help to ease concern from the general populace and the political pressure from labor unions that are worried about the loss of specific jobs. Another aspect of this marketing may be that using shared mobility systems will allow people to access more jobs. Streamlining service that involves transit, bikeshare, rideshare and other shared mobility options could make jobs accessible to communities that currently have low mobility and therefore cannot access all the opportunities present in the region.

Related Goals and Policy Areas

This recommendation will focus on where the new jobs are and the opportunity to have an open dialogue with the appropriate labor stakeholders to move shared mobility initiatives forward. With awareness of what new jobs will be created, Met Council can engage the appropriate parties to train and develop the population that both needs employment but also reach a diverse set of individuals with a diverse set of skills.

There is also an equity component to this recommendation. Shared mobility services will make existing jobs more accessible, increasing employment opportunities for everyone, including those in areas that are currently served the least.

Goal 2: Equity

Improve mobility and accessibility for all, and especially for people in areas that are currently served the least.

Goal 4: Labor

Ensure that job growth from shared mobility services benefit all people from all backgrounds and life circumstances.

Recommendations

7

Physically integrate shared mobility services

Many stakeholders identified public-private partnerships as one possible avenue for expanding mobility and accessibility. Many shared mobility providers operate in the same general area of the Twin Cities: Metro Transit's service reaches much of the Twin Cities metro area; Nice Ride has stations near many of the Twin Cities' most popular destinations; HOURCAR's shared vehicles are placed throughout the core of both cities, and Uber and Lyft cover the entire metro when drivers are available.

However, in the case of bikeshare and carshare in particular, vehicles are not always located near easily accessible transit stops. For those who need to take transit to reach a shared car, or who would use a shared bike to complete the first mile or last mile of their trip, this spatial mismatch may prevent them from taking advantage of the mobility options available within the metro. Coordination between Metro Transit and private mobility companies could ensure that shared vehicles are placed so that they are in proximity to transit stops, enhancing accessibility to such services and therefore increasing mobility for Twin Cities residents and visitors.

While voicing potential benefits of public-private partnerships, stakeholders simultaneously reiterated concerns about possible negative impacts of TNCs on transit use. Research has shown that in most study areas, most transit riders do not frequently use TNCs, but that a small proportion of transit users have replaced transit trips with TNC trips. While the practice of replacing transit trips with TNC trips might be concerning on some levels, the practice does still allow people to travel without the use of personal vehicles, thus achieving the overall goal of shared mobility.

Related Goals and Policy Areas

This recommendation addresses goals 1, 2, and 5 by expanding access to a number of mobility options across the metro and making them more convenient, rather than concentrating them in high-demand, often high-income areas as is currently done. It also addresses goal 6 by calling for a new kind of public-private collaboration that has not previously been seen in the Twin Cities.

Goal 1: Equity

Increase the affordability and convenience of shared mobility services for underserved populations that have fewer options.

Goal 2: Equity

Improve mobility and accessibility for all, and especially for people in areas that are currently served the least.

Goal 5: P3s

Make it easier for people to use multiple types of shared mobility options on a single trip or throughout the day.

Recommendations

8

Enhance the Metro Transit mobile app that provides real-time information on shared mobility services so that people can easily transfer between services.

Today, people who use shared mobility services to get around have to switch between multiple mobile apps depending on the service they want to use. These apps allow people to buy tickets, check arrival times buses or trains, find a bikeshare station, reserve a shared car, or hail a ride. While it's convenient to have so many services at one's fingertips, switching among so many apps to find the best transportation option can seem time consuming and therefore be off-putting. Similarly, public transit can feel inconvenient, especially if there's a significant distance between the trip's starting or ending point and the nearest transit stop. This can serve as a barrier to potential transit riders.

To overcome this barrier and improve mobility, Metro Transit could collaborate with other shared mobility providers in the Twin Cities to enhance the existing Metro Transit app by including a number of mobility options. This would give users easily accessible information about all the different ways they can move around town.

Related Goals and Policy Areas

This recommendation aims to achieve goals 5 and 6 by calling for the creation of innovative P3s between Metro Transit and private mobility providers, and by creating an easy way for riders to access a wide range of mobility options at any time.

This recommendation shows the importance of public-private partnerships in the future of mobility. As the public sectors is forced to adopt new technologie, agencies will need to lean on experience and expertise of private partners.

Goal 5: P3s

Make it easier for people to use multiple types of shared mobility options on a single trip or throughout the day.

Goal 6: P3s

Improve mobility and accessibility for all through innovative and effective partnerships.

Recommendations

Create an unsolicited proposal program

As technology and software continue to advance at a fast pace it can be hard for public agencies to keep up with the changes. Compared to the public sector, private companies are often better at responding to these kinds of changes through innovation. Government agencies are less likely to take risks because they have a responsibility to taxpayers that often means they need to be conservative with their money. Because of this, it is challenging to expect public agencies to lead the way on new, potentially risky ventures.

In an effort to be more proactive and flexible, Metro Transit should establish an unsolicited proposal process. This would differ from a traditional request for proposals because rather than setting out specific requirements and expectations, Metro Transit would outline its overarching goals and request that private companies submit new ideas to improve the operation of its services while making progress towards these goals.

By partnering with private companies, Metro Transit and other government agencies can use the expertise of companies in the private sector to help them test out new ideas and services and take a proactive approach

to new technology. Metro Transit should start a program that allows organizations to submit proposals for new services or programs that will complement or expand transit service. If a firm submits an idea that seems feasible and effective, then Metro Transit can explore it further. The incentive for private companies to submit ideas to a program like this would be the possibility of winning a contract to pursue the idea. Of course, a necessary component of any such program would be the creation of evaluation metrics to ensure that proposals are, indeed, helping Metro Transit achieve its goals.

Related Goals and Policy Areas

This recommendation looks to achieve goals 5 and 6 by calling on Metro Transit to create space for new collaborations and partnerships with private companies that ultimately expand mobility for everyone.

Goal 5: P3s

Make it easier for people to use multiple types of shared mobility options on a single trip or throughout the day.

Goal 6: P3s

Improve mobility and accessibility for all through innovative and effective partnerships.

Prioritizing Recommendations

The table below assigns priority levels to each of the nice recommendations in this chapter. While all recommendations should be considered, those with high priority should be put into action immediately.

Medium priority recommendations should be implemented in the next 3 to 5 years, and low priority recommendations should be implemented in 5 to 10 years at the latest.

High priority	• Regulate shared mobility providers to ensure they do not place an undue burden on public infrastructure • Physically integrate shared mobility services • Enhance the Metro Transit mobile app that provides real-time information on shared mobility services so that people can easily transfer between services.
Medium priority	• Create cross-training program for displaced workers in the transportation industry both internally at Metro Transit and with external businesses • Create a shared mobility educational campaign • Reframe the conversation to focus on the overall increase of jobs and not just the loss of some specific jobs • Establish uniform equity objectives for shared mobility providers to ensure they provide equitable service
Low priority	• Establish "unsolicited proposal" process for private companies to suggest ideas for improving the transit system • Adapt existing Metropolitan Council mobility services to markets established from shared mobility data

Conclusions

This report sought to answer three research questions covering some major issues in social equity, the labor market, and public-private partnerships: how to ensure social equity and serve a diverse population; the potential opportunities and key concerns for the labor market as shared mobility options become more popular; and whether public entities should work with private service providers in order to improve service and if so, how to best go about that.

After a comprehensive investigation of the current state of affairs for shared mobility with a concentration on local existing conditions, the report identifies some key elements for Metro Transit to address moving forward. First of all, data sharing and collaboration with service providers will be crucial to enhancing social equity. Public entities like Metro Transit and city councils should utilize their political influence and legislative power to both regulate private companies and encourage them to work together. Second of all, there are anticipated impacts on current labor market in transportation industry such as job loss and funding shortages. Because resistance from organized labor presents the largest obstacle to better implementing and regulating shared mobility, educational campaigns and cross-training programs are two possible strategies to address their concerns. Last but not least, in order to achieve an equitable, labor-friendly shared mobility system, public subsidies can be used to stimulate collaboration from different service providers and integrate them. Metro Transit and other public entities should consider an unsolicited proposal process to encourage the introduction of new ideas for improvements.

The report also points out the negative outcomes that could occur if there is little progress on collaborating with shared mobility providers to enhance transportation services. While Metro Transit will not become obsolete, over the coming years it will be crucial to focus on working with private companies to ensure that the Twin Cities transportation network functions as effectively, efficiently, and equitably as possible. Armed with this information and these recommendations, Metro Transit will be well-equipped to address new technologies and developments in the realm of transportation.

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