Task 2**:** Develop Survey of Transit and Shared Mobility Riders

Survey Goals:

To understand the safety concerns, preferences, perceptions towards existing and potential safety protocols that can be implemented on public transit and other shared mobility.

To conduct analyses of the survey data to understand variations in safety concerns, perceptions, and preferences by urban/rural status, demographic attributes (e.g., gender, age, race, and ethnicity), socio-economic status, and trip types (e.g., distance, duration, and modes such as regular bus, commuter bus, rail, ridesharing, and car sharing).

To make recommendations to transit, shared mobility providers, and TDM organizations on what safety and communications strategies will be the most effective in reducing fears and bringing back users.

Survey Audience:

Greater Minnesota residents that are interested in transit or other shared mobility options. Respondents live outside of the 7-county Metro Area and respond to the survey online.

Criteria:

* Age: 18 or older
* Lives in Greater Minnesota (outside the 7-county Metro)
* Interest in Public Transit or other Shared Mobility; Interest includes past user, current user, potential future user.

Target Sample Demographics

Target Sample Size: 1,000

*Race Targets:*

Asian or Pacific Islander, 10% (100)

American Indian, 10% (100)

Black or African American, 20% (200)

White, 60% (600)

*Ethnicity Targets:*

Hispanic, Latino or Spanish Origin, 20% (200)

Non-Hispanic, 80% (800)

*Geographic Targets:*

Lives in Urban Area, 50% (500)

Lives in Rural Area, 50% (500)

Survey Distribution

The research team with use Qualtrics panel service to collect survey responses. Qualtrics projects that they can obtain 800 responses that meet our Criteria and Target Sample Demographics for $6,000. Qualtrics will independently recruit and compensate participants. The research team will work with Qualtrics throughout survey collection to ensure the procedures meet our requirements. Although Qualtrics quotes 800 respondents, they may be able to deliver 1,000.

The research team can implement additional survey recruitment through social media or targeted to current public transit users if desired. The University could implement a simplified survey to public transit riders through text (e.g., the select multiple questions would not be compatible as written). The University is not able to implement a paper survey.

Key for Reviewers

**Section Heading for reviewers**

1. {Question}

[question type/notes]

* Answer Choices

*Notes to Reviewers/Survey Branching Logic*

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# Question List

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[2. {Consent}: Do you wish to participate in this study? 9](#_Toc83733691)

[3. {El\_Age}: Are you 18 years or older? 9](#_Toc83733692)

[4. {Intro\_location}: Thank you for participating in the study. 10](#_Toc83733693)

[5. {County}: What Minnesota county do you live in? If you do not live in Minnesota, please exit the survey. 10](#_Toc83733694)

[6. {Zipcode} What zip code do you live in? 10](#_Toc83733695)

[7. {Race}: What best describes your race or ethnicity? Select all that apply. 10](#_Toc83733696)

[8. {Intro\_mode }: The following questions ask about what transportation modes you typically use at three different time points: before COVID-19, during COVID-19, and in an ideal future when COVID-19 is not a concern and mode choices are widely available. We ask about the following modes: 10](#_Toc83733697)

[9. {Mode\_pre}: Before the COVID-19 pandemic, how often did you typically use the following modes for any type of trip? 11](#_Toc83733698)

[10. {Mode\_cc}: During the COVID-19 pandemic before vaccines were widely available, how often did you typically use the following modes for any type of trip? 11](#_Toc83733699)

[11. {Drive\_never; If Mode\_CC, Drive alone = “never”}: Why did you not at all use the mode: Drive Alone during the pandemic? (select all that apply) 11](#_Toc83733700)

[12. Repeat {Drive\_never} question format for each mode 11](#_Toc83733701)

[13. {Mode\_post}: If COVID-19 is no longer a threat and the following options are widely available and convenient to use, how often would you like to use the following mode for any type of trip? 11](#_Toc83733702)

[14. {Intro\_Covid}: We will now ask some general questions related to your health and your actions during the COVID-19 pandemic. 12](#_Toc83733703)

[15. {Covid\_test}: To date, have you or any of your household members tested positive for COVID-19? (select all that apply) 12](#_Toc83733704)

[16. {Covid\_threat}: Do you or any of your household members have any underlying health conditions that make you more vulnerable than the average person to get COVID-19? (select all that apply) 12](#_Toc83733705)

[17. {Covid\_vaccine}: Have you received the COVID-19 Vaccine? 12](#_Toc83733706)

[18. {Covid\_perception}: Do you agree with the following statements about your perceptions related to and actions over the past year and a half during the COVID-19 pandemic? (select all that apply) 13](#_Toc83733707)

[19. {Percep\_vac}: Now that over 60 percent of Minnesotans have received one dose of a COVID-19 vaccines, which of the following statements do you agree with? (select all that apply) 13](#_Toc83733708)

[20. {Intro\_ptg}: This next portion will ask questions specific to public transit and other shared mobility. These next nine questions ask you about your perception of public transit in Greater Minnesota. 13](#_Toc83733709)

[21. {Transit\_heard}: Which of the following public transit providers have you heard of? 13](#_Toc83733710)

[22. {Transit\_comfort}: Currently, how concerned are you about the risk of COVID-19 infection when using public transit services? 13](#_Toc83733711)

[23. {Transit\_risk}: Where do you feel at greater risk of contracting COVID-19 compared to using public transit? (select all that apply) 14](#_Toc83733712)

[24. {Transit\_measures}: Which of the following COVID-19 safety measures would increase your interest in using public transit? (select all that apply) 14](#_Toc83733713)

[25. {Transit\_service}: Beside COVID-19 safety measures, which of the following service improvements would increase your interest in using public transit? (select all that apply) 14](#_Toc83733714)

[26. {Transit\_balance}: Overall, do you think COVID-19 safety measures or general service improvements are more important in increasing your interest in using public transit? 14](#_Toc83733715)

[27. {Transit\_facemasks}: How does a face covering requirement affect your decision to use public transit? 15](#_Toc83733716)

[28. {Contactless\_payment}: How does a contactless or mobile payment method affect your decision to use public transit? 15](#_Toc83733717)

[29. {Tripplanning}: How does a trip planning tool that integrates public transit with other shared mobility options such as ride hailing, carsharing, and bike/scooter sharing affect your decision to use public transit? 15](#_Toc83733718)

[30. {Intro\_ptc}: You indicated that you have used public transit during the pandemic, these next 4 questions ask questions about your perceptions of the public transit services that you used over the past year. 15](#_Toc83733719)

[31. {Transit\_use}: Which of the following Public Transit providers do you use? (select all that apply) 15](#_Toc83733720)

[32. {Transit\_satisfaction}: Do you agree with the following statements about your local transit agency during the COVID-19 pandemic? (select all that apply) 15](#_Toc83733721)

[33. {Measures\_sat}: In general, how satisfied are you with your local agency’s safety and health measures during COVID-19? 16](#_Toc83733722)

[34. {Reliable\_sat}: In general, how satisfied are you with your local agency’s transit service quality (e.g., service frequency, reliability, and coverage) during COVID-19? 16](#_Toc83733723)

[35. {Intro\_smg}: We’ll now ask questions about the strategies that other shared mobility companies could implement to attract more riders. We first ask about vehicle-based shared mobility (ride hailing, car share, or taxi services) then shared micro mobility (bike and scooter share). 16](#_Toc83733724)

[36. {Ride\_covid}: Which of the following COVID-19 safety measures would increase your interest in using ride hailing, car share, or taxi services more? (select all that apply) 16](#_Toc83733725)

[37. {Ride\_cleaning; If Ride\_more, “Frequent cleaning and disinfection of vehicles” IS selected}: How frequently would you like the vehicle cleaned? 17](#_Toc83733726)

[38. {Ride\_service}: Beside COVID-19 safety measures, which of the following service improvements would increase your interest in using ride hailing, car share, or taxi services? (select all that apply) 17](#_Toc83733727)

[39. {Ride\_balance}: Overall, do you think COVID-19 safety measures or general service improvements are more important in increasing your interest in using ride hailing, car share, or taxi services more? 17](#_Toc83733728)

[40. {Ride\_facecovering}: How does a face covering requirement affect your decision to use ride hailing, car sharing, or taxi services? 17](#_Toc83733729)

[41. {Micro\_covid}: The questions on this page ask about bike share and scooter share services. Which of the following COVID-19 safety measures would increase your interest in using bike or scooter share more? (select all that apply) 18](#_Toc83733730)

[42. {Micro\_cleaning; If Micro\_covid, “Frequent cleaning and disinfection …” IS selected}: How frequently would you like a bike or scooter cleaned? 18](#_Toc83733731)

[43. {Micro\_service}: Besides COVID-19 safety measures, which of the following service improvements would increase your interest in using bike or scooter share? (select all that apply) 18](#_Toc83733732)

[44. {Micro\_balance}: Overall, do you think COVID-19 safety measures or general service improvements are more important in increasing your interest in using bike or scooter share more? 18](#_Toc83733733)

[45. {SMC\_intro}: You indicated that you have used shared mobility during the pandemic, these next questions will ask about your perceptions of shared mobility over the past year. 19](#_Toc83733734)

[46. {Ride\_comp; If respondent is using Ride Hailing during the pandemic}: What ride hailing services do you use regularly? 19](#_Toc83733735)

[47. {Ride\_measures; If respondent is using Ride Hailing during the pandemic}: Do you agree with the following statements about the ride share service that you used the most frequently during the COVID-19 pandemic. (select all that apply) 19](#_Toc83733736)

[48. {Ride\_sat; If respondent is using Ride Hailing during the pandemic}: In general, how satisfied are you with your ride share service’s safety and health measures during COVID-19? 19](#_Toc83733737)

[49. {Ride\_rely; If respondent is using Ride Hailing during the pandemic}: In general, how satisfied are you with your ride share service’s service quality (e.g., service reliability and coverage) during COVID-19? 19](#_Toc83733738)

[50. {Car\_comp; If respondent is using Carsharing during the pandemic}: What carsharing services do you use regularly? 20](#_Toc83733739)

[51. {Car\_measures; If respondent is using Carsharing during the pandemic}: Do you agree with the following statements about the car share service that you used the most frequently during the COVID-19 pandemic. (select all that apply) 20](#_Toc83733740)

[52. {Car\_sat; If respondent is using Carsharing during the pandemic}: In general, how satisfied are you with your car share service’s safety and health measures during COVID-19? 20](#_Toc83733741)

[53. {Car\_rely; If respondent is using Carsharing during the pandemic}: In general, how satisfied are you with your car share service’s service quality (e.g., service reliability and coverage) during COVID-19? 20](#_Toc83733742)

[54. {Bike\_comp; If respondent is using Bike sharing during the pandemic}: What bike sharing services do you use regularly? 20](#_Toc83733743)

[55. {Bike\_measures; If respondent is using Bike sharing during the pandemic}: Do you agree with the following statements about the bike share service that you used the most frequently during the COVID-19 pandemic. (select all that apply) 21](#_Toc83733744)

[56. {Bike\_sat; If respondent is using Bike sharing during the pandemic}: In general, how satisfied are you with your bike share service’s safety and health measures during COVID-19? 21](#_Toc83733745)

[57. {Bike\_rely; If respondent is using Bike sharing during the pandemic}: In general, how satisfied are you with your bike share service’s service quality (e.g., service reliability and coverage) during COVID-19? 21](#_Toc83733746)

[58. {Scoot\_comp; If respondent is using Scooter sharing during the pandemic}: What scooter sharing services do you use regularly? 21](#_Toc83733747)

[59. {Scoot\_measures; If respondent is using Scooter sharing during the pandemic}: Do you agree with the following statements about the scooter share service that you used the most frequently during the COVID-19 pandemic. (select all that apply) 21](#_Toc83733748)

[60. {Scoot\_sat; If respondent is using Scooter sharing during the pandemic}: In general, how satisfied are you with your scooter share service’s safety and health measures during COVID-19? 22](#_Toc83733749)

[61. {Scoot\_rely; If respondent is using Scooter sharing during the pandemic}: In general, how satisfied are you with your scooter share service’s service quality (e.g., service reliability and coverage) during COVID-19? 22](#_Toc83733750)

[62. {Intro\_AV}: This second to last section asks about your perception of autonomous vehicles. 22](#_Toc83733751)

[Autonomous vehicles (AVs) use technology to steer, accelerate, and brake with little to no human input. Some vehicles still require a human to monitor the roadway, while other vehicles require no human intervention. AVs could pick you up and drop you off where and when you need. You could hail this vehicle on-demand with your smartphone or connect with it in a hub location. Shared autonomous vehicles (SAVs) transport multiple people at once. 22](#_Toc83733752)

[63. {AV\_familiar}: How familiar are you with autonomous vehicles that can self-drive? 22](#_Toc83733753)

[64. {AV\_use}: If autonomous vehicles were available today for you to use, what would be your most preferred way to use them? Current costs of an AV range from $70,000 to $150,000. 22](#_Toc83733754)

[65. {AV\_use}: Which of the following trips are you likely to use AVs for once they become available. 23](#_Toc83733755)

[66. {AV\_change}: How has the COVID-19 pandemic changed your opinion about using emerging transportation technologies such as autonomous vehicles? 23](#_Toc83733756)

[67. {Demo\_Intro}: This is the last section of the survey. We will ask socio-demographic questions about yourself and your household. 23](#_Toc83733757)

[68. {Age}: What is your age? 23](#_Toc83733758)

[69. {Gender}: What is your gender? 23](#_Toc83733759)

[70. {Native\_born}: Were you born in the United States? 23](#_Toc83733760)

[71. {Education}: What is your highest level of education? 23](#_Toc83733761)

[72. {Income} What was your pre-tax annual household income in 2020? 24](#_Toc83733762)

[73. {Income\_change}: How does your household income in 2020 compare to your income in 2019? 24](#_Toc83733763)

[74. {Disability}: Do you have a disability or illness that affects your ability to travel in the region? 24](#_Toc83733764)

[75. {Home\_own}: Do you own or rent your current home? 24](#_Toc83733765)

[76. {Household}: Who lives in your household with you? 24](#_Toc83733766)

[77. {Home\_license}: How many licensed drivers are there in your household? 25](#_Toc83733767)

[78. {Home\_vehicles}: How many working vehicles (including cars, pickup trucks, SUVs, and vans) are there available to your household? 25](#_Toc83733768)

[79. {Home\_Bike}: How many working bicycles are available to your household? 25](#_Toc83733769)

[80. {Employment}: As of today, what is your employment status? 25](#_Toc83733770)

[81. {Essential, If Employment = “Employed…” or “Primarily Self…” or “Unpaid…”}: Do you work in any of the following fields: 25](#_Toc83733771)

[82. {Work\_home; If Employment ≠ “Unemployed…” or “Retired” or “Homemaker…”}: Do you currently work from home? 26](#_Toc83733772)

[83. {Work\_homefrequency; If Work\_home = “Yes”}: How many days do you work from home during a typical week? 26](#_Toc83733773)

[84. {Work\_office}: Do you have a primary work location outside your home? 26](#_Toc83733774)

[85. {Office\_location; If Work\_office = “Yes”}: What is the zip code of your primary work location? 26](#_Toc83733775)

[86. {Office\_frequency; If Work\_office = “Yes”}: How many days do you work at this location during a typical week? 26](#_Toc83733776)

[87. {Teleshop}: In general, how many days do you receive deliveries from online shopping at home during a typical week? 26](#_Toc83733777)

[88. {Trip\_duration}: In general, how much time do you spend travelling to various places during a typical week? 27](#_Toc83733778)

[89. {New\_tech}: When it comes to new technology, what best describes you? 27](#_Toc83733779)

--- Start of Survey ---

# Consent

1. {Consent\_lang}: [Insert short consent form]
2. {Consent}: Do you wish to participate in this study?

[select one]

Yes

No

1. {El\_Age}: Are you 18 years or older?

[select one]

Yes

No

*If {Consent} or {El\_Age} = “No” 🡪 End of Survey*

--- Page Break ---

# Location

1. {Intro\_location}: Thank you for participating in the study.
2. {County}: What Minnesota county do you live in? If you do not live in Minnesota, please exit the survey.

[select one]

* *List of MN Counties*
* I do not live in Minnesota

1. {Zipcode} What zip code do you live in?

[text entry, number validation, or drop-drown/selection based on “county x zip code” database?]

1. {Race}: What best describes your race or ethnicity? Select all that apply.

[select multiple]

American Indian – Dakota or Ojibwe

Other American Indian or Alaska Native

Asian ­– Hmong, Laos, or Vietnamese

Asian – Indian or Chinese

Other Asian or Pacific Islander

Black – Descendant of Slaves

Black – Somali

Other Black or African American

Latinx–Mexican

Other Latinx, Hispanic or Spanish origins

White

Some other race [text entry]

--- Page Break ---

# Mode Use Questions

1. {Intro\_mode }: The following questions ask about what transportation modes you typically use at three different time points: before COVID-19, during COVID-19, and in an ideal future when COVID-19 is not a concern and mode choices are widely available. We ask about the following modes:

* Drive Alone: you drive your own vehicle
* Carpool: you drive or ride with a family member, friend, or co-worker
* Carshare: you rent a vehicle for your personal use
* Ride Hailing: you use on-demand ride services provided by private companies
* Public Transit: you use services provided by public transit companies
* Shared Bike/Scooter: you use a shared bike or scooter for personal use
* Personal Bike/Scooter: you use your own bike or scooter

1. {Mode\_pre}: Before the COVID-19 pandemic, how often did you typically use the following modes for any type of trip?

[multipart question; not at all, less than one day a week, 1–2 days a week, 3–4 days a week, 5 or more days a week]

Drive alone

Carpool

Carshare

Ride Hailing

Public Transit

Shared Bike

Shared Scooter

Personal Bike/scooter

1. {Mode\_cc}: During the COVID-19 pandemic before vaccines were widely available, how often did you typically use the following modes for any type of trip?

[multipart question; not at all, less than one day a week, 1–2 days a week, 3–4 days a week, 5 or more days a week]

* Drive alone
* Carpool
* Carshare
* Ride Hailing
* Public Transit
* Shared Bike
* Shared Scooter
* Personal Bike/scooter

--- Page Break --- (required by display logic)

1. {Drive\_never; If Mode\_CC, Drive alone = “never”}: Why did you not at all use the mode: Drive Alone during the pandemic? (select all that apply)

[select multiple]

I did not have access

I was not interested in using it

I had access to a better alternative

Other [text entry]

None of the above

1. Repeat {Drive\_never} question format for each mode

--- Page Break ---

1. {Mode\_post}: If COVID-19 is no longer a threat and the following options are widely available and convenient to use, how often would you like to use the following mode for any type of trip?

[multipart question; not at all, less than one day a week, 1–2 days a week, 3–4 days a week, 5 or more days a week]

* Drive alone
* Carpool
* Carshare
* Ride Hailing
* Public Transit
* Shared Bike
* Shared Scooter
* Personal Bike/scooter

*There will be some branching or filtering of respondents where {Mode\_pre} ≠ “Carpool, Carshare, Ride Hail, Public Transit, Shared Bike/Scooter” or {Mode\_cc} ≠ “Carpool, Carshare, Ride Hail, Public Transit, Shared Bike/Scooter” or {Mode\_post} ≠ “Carpool, Carshare, Ride Hail, Public Transit, Shared Bike/Scooter”*

--- Page Break ---

# Coronavirus Questions

1. {Intro\_Covid}: We will now ask some general questions related to your health and your actions during the COVID-19 pandemic.
2. {Covid\_test}: To date, have you or any of your household members tested positive for COVID-19? (select all that apply)

[select multiple]

Yes, I have been tested positive

Yes, my household member(s) have been tested positive

No, neither I nor my household member(s) have been tested positive [exclusive]

1. {Covid\_threat}: Do you or any of your household members have any underlying health conditions that make you more vulnerable than the average person to get COVID-19? (select all that apply)

[select multiple]

Yes, I have underlying health conditions

Yes, my household member(s) have underlying health conditions

No [exclusive]

I don’t know [exclusive]

1. {Covid\_vaccine}: Have you received the COVID-19 Vaccine?

[select one]

Yes, I’m partially vaccinated

Yes, I’m fully vaccinated

No, I have scheduled an appointment

No, I have not scheduled an appointment

1. {Covid\_perception}: Do you agree with the following statements about your perceptions related to and actions over the past year and a half during the COVID-19 pandemic? (select all that apply)

[select multiple, randomize]

I wanted to know about and paid a lot of attention to the news related to the pandemic

I thought the probability of transmission of COVID-19 was high

I always wore a face mask when visiting public indoor spaces

I stayed socially distanced in public and avoided group gatherings

I avoided touching items in public that have been previously touched by other people

I frequently washed my hands with soap and water or used hand sanitizer

None of the above [exclusive]

1. {Percep\_vac}: Now that over 70 percent of Minnesotans have received one dose of a COVID-19 vaccines, which of the following statements do you agree with? (select all that apply)

[select multiple, randomize]

I want to know about and pay a lot of attention to the news related to the pandemic

I think the probability of transmission of COVID-19 is high

I always wear a face mask when visiting public indoor spaces

I stay socially distanced in public and avoid group gatherings

I avoid touching items in public that have been previously touched by other people

I frequently wash my hands with soap and water or use hand sanitizer

None of the above [exclusive]

--- Page Break ---

# Public Transit General Questions

1. {Intro\_ptg}: This next portion will ask questions specific to public transit and other shared mobility. These next nine questions ask you about your perception of public transit in Greater Minnesota.
2. {Transit\_heard}: Which of the following public transit providers have you heard of?

[select multiple, randomize]

[Displayed list of transit options dependent on respondent county]

None of the above

1. {Transit\_comfort}: Currently, how concerned are you about the risk of COVID-19 infection when using public transit services?

[select one]

Not concerned at all

Slightly concerned

Concerned

Very concerned

1. {Transit\_risk}: Where do you feel at greater risk of contracting COVID-19 compared to using public transit? (select all that apply)

[select multiple, randomize]

Large gathering

Gym

Market

Small gathering

Retail store

Office

None of these [exclusive]

1. {Transit\_measures}: Which of the following COVID-19 safety measures would increase your interest in using public transit? (select all that apply)

[select multiple, randomize]

Provision of sanitizers at stops and within vehicles

Enforcing a face covering requirement

Frequent cleaning and disinfection of vehicles and stops

Contactless or mobile payment systems

Health screening of passengers before entering facilities/vehicles

Safe physical distancing on transit vehicles

Health screening of bus drivers and conductors before every shift

Increase air ventilation and filtration

Other [text entry]

None of the above [exclusive]

1. {Transit\_service}: Beside COVID-19 safety measures, which of the following service improvements would increase your interest in using public transit? (select all that apply)

[select multiple, randomize]

More pleasant waiting area environment at stops

Real-time info about transit vehicles/routes

Real-time bus occupancy information

More comfortable and safe vehicles

Easier access to transit stops

More frequent and faster routes

Have lower fares

More convenient payment options

Other [text entry]

None of the above [exclusive]

1. {Transit\_balance}: Overall, do you think COVID-19 safety measures or general service improvements are more important in increasing your interest in using public transit?

[select one]

Covid-19 safety measures are more important

General service improvements are more important

There is no difference in importance

1. {Transit\_facemasks}: How does a face covering requirement affect your decision to use public transit?

[select one]

Makes me less likely to use public transit

Does not affect my decision

Makes me more likely to use public transit

1. {Contactless\_payment}: How does a contactless or mobile payment method affect your decision to use public transit?

[select one]

Makes me less likely to use public transit

Does not affect my decision

Makes me more likely to use public transit

1. {Tripplanning}: How does a trip planning tool that integrates public transit with other shared mobility options such as ride hailing, carsharing, and bike/scooter sharing affect your decision to use public transit?

[select one]

Makes me less likely to use public transit

Does not affect my decision

Makes me more likely to use public transit

--- Page Break ---

# Public Transit Current Users

*Respondent views section if {Mode\_cc} = “Public Transit”*

1. {Intro\_ptc}: You indicated that you have used public transit during the pandemic, these next 4 questions ask questions about your perceptions of the public transit services that you used over the past year.
2. {Transit\_use}: Which of the following Public Transit providers do you use? (select all that apply)

[select multiple]

[Displayed selection from {Transit\_heard}]

1. {Transit\_satisfaction}: Do you agree with the following statements about your local transit agency during the COVID-19 pandemic? (select all that apply)

[select multiple]

My local agency has done well enforcing a face covering requirement

My local agency has done well cleaning transit vehicles

My local agency has done well ventilating transit vehicles

My local agency has done well implementing safe physical distancing protocols

My local agency has done well informing me about service changes and disruptions

None of the above [exclusive]

1. {Measures\_sat}: In general, how satisfied are you with your local agency’s safety and health measures during COVID-19?

[select one]

Very satisfied

Satisfied

Dissatisfied

Very dissatisfied

1. {Reliable\_sat}: In general, how satisfied are you with your local agency’s transit service quality (e.g., service frequency, reliability, and coverage) during COVID-19?

[select one]

Very satisfied

Satisfied

Dissatisfied

Very dissatisfied

--- Page Break ---

# Shared Mobility General Questions

1. {Intro\_smg}: We’ll now ask questions about the strategies that other shared mobility companies could implement to attract more riders. We first ask about vehicle-based shared mobility (ride hailing, car share, or taxi services) then shared micro mobility (bike and scooter share).
2. {Ride\_covid}: Which of the following COVID-19 safety measures would increase your interest in using ride hailing, car share, or taxi services more? (select all that apply)

[select multiple, randomize]

Provision of hand sanitizers within vehicles

Enforcing a face covering requirement

Frequent cleaning and disinfection of vehicles

Contactless or mobile payment systems

Health screening of users before entering facilities/vehicles

Safe physical distancing

Health screening of drivers or staff before every shift

Increase air ventilation and filtration

Assurance that companies are concerned about health and safety

Health and safety pledges of other users

Getting detailed information about cleaning and safety procedures via video, detailed guides, or checklists

Understanding how drivers and staff are trained in sanitation and safety procedures

Other [text entry]

None of the above [exclusive]

1. {Ride\_cleaning; If Ride\_more, “Frequent cleaning and disinfection of vehicles” IS selected}: How frequently would you like the vehicle cleaned?

[select one]

Less than once a week

1–2 times a week

3–4 times a week

5–6 times a week

Daily

More than once a day

After every ride

1. {Ride\_service}: Beside COVID-19 safety measures, which of the following service improvements would increase your interest in using ride hailing, car share, or taxi services? (select all that apply)

[select multiple]

Larger service area

Lower fares

More comfortable vehicles

Safer vehicles

Other [text entry]

None of the above [exclusive]

1. {Ride\_balance}: Overall, do you think COVID-19 safety measures or general service improvements are more important in increasing your interest in using ride hailing, car share, or taxi services more?

[select one]

Covid-19 safety measures are more important

General service improvements are more important

There is no difference in importance

1. {Ride\_facecovering}: How does a face covering requirement affect your decision to use ride hailing, car sharing, or taxi services?

[select one]

Makes me less likely to use these services

Does not affect my decision

Makes me more likely to use these services

--- Page Break ---

1. {Micro\_covid}: The questions on this page ask about bike share and scooter share services. Which of the following COVID-19 safety measures would increase your interest in using bike or scooter share more? (select all that apply)

[select multiple]

Hand sanitizer available at bike stations

Enforcing a face covering requirement

Frequent cleaning and disinfection of bikes and bike stations

Contactless or mobile payment systems

Safe physical distancing for other riders

Health screening of staff before every shift

Assurance that companies are concerned about health and safety

Health and safety pledges of other users

Getting detailed information about cleaning and safety procedures via video, detailed guides, or checklists

Understanding how staff are trained in sanitation and safety procedures

Other [text entry]

None of the above [exclusive]

1. {Micro\_cleaning; If Micro\_covid, “Frequent cleaning and disinfection …” IS selected}: How frequently would you like a bike or scooter cleaned?

[select one]

Less than once a week

1–2 times a week

3–4 times a week

5–6 times a week

Daily

More than once a day

After every ride

1. {Micro\_service}: Besides COVID-19 safety measures, which of the following service improvements would increase your interest in using bike or scooter share? (select all that apply)

[select multiple]

Easier access to a bike or scooter

Lower fares

More comfortable equipment

Safer equipment

Other [text entry]

None of the above [exclusive]

1. {Micro\_balance}: Overall, do you think COVID-19 safety measures or general service improvements are more important in increasing your interest in using bike or scooter share more?

[select one]

Covid-19 safety measures are more important

General service improvements are more important

There is no difference in importance

--- Page Break ---

# Shared Mobility Current Users

*Respondent views section if {Mode\_cc} = “Carpool” or “Carshare” or “Ride Hailing” or “Shared Bike/Scooter”*

1. {SMC\_intro}: You indicated that you have used shared mobility during the pandemic, these next questions will ask about your perceptions of shared mobility over the past year.

--- Page Break --- (For Survey Flow Logic)

1. {Ride\_comp; If respondent is using Ride Hailing during the pandemic}: What ride hailing services do you use regularly?

[text entry]

1. {Ride\_measures; If respondent is using Ride Hailing during the pandemic}: Do you agree with the following statements about the ride share service that you used the most frequently during the COVID-19 pandemic. (select all that apply)

[select multiple, randomize]

My ride share agency has done well enforcing a face covering requirement

My ride share agency has done well cleaning vehicles

My ride share agency has done well ventilating vehicles

My ride share agency has done well implementing safe physical distancing protocols

My ride share agency has done well informing me about service changes and disruptions

None of the above [exclusive]

1. {Ride\_sat; If respondent is using Ride Hailing during the pandemic}: In general, how satisfied are you with your ride share service’s safety and health measures during COVID-19?

[select one]

Very satisfied

Satisfied

Dissatisfied

Very dissatisfied

1. {Ride\_rely; If respondent is using Ride Hailing during the pandemic}: In general, how satisfied are you with your ride share service’s service quality (e.g., service reliability and coverage) during COVID-19?

[select one]

Very satisfied

Satisfied

Dissatisfied

Very dissatisfied

--- Page Break --- (For Survey Flow Logic)

1. {Car\_comp; If respondent is using Carsharing during the pandemic}: What carsharing services do you use regularly?

[text entry]

1. {Car\_measures; If respondent is using Carsharing during the pandemic}: Do you agree with the following statements about the car share service that you used the most frequently during the COVID-19 pandemic. (select all that apply)

[select multiple, randomize]

My car share agency has done well enforcing a face covering requirement

My car share agency has done well cleaning vehicles

My car share agency has done well ventilating vehicles

My car share agency has done well implementing safe physical distancing protocols

My car share agency has done well informing me about service changes and disruptions

None of the above [exclusive]

1. {Car\_sat; If respondent is using Carsharing during the pandemic}: In general, how satisfied are you with your car share service’s safety and health measures during COVID-19?

[select one]

Very satisfied

Satisfied

Dissatisfied

Very dissatisfied

1. {Car\_rely; If respondent is using Carsharing during the pandemic}: In general, how satisfied are you with your car share service’s service quality (e.g., service reliability and coverage) during COVID-19?

[select one]

Very satisfied

Satisfied

Dissatisfied

Very dissatisfied

--- Page Break --- (For Survey Flow Logic)

1. {Bike\_comp; If respondent is using Bike sharing during the pandemic}: What bike sharing services do you use regularly?

[text entry]

1. {Bike\_measures; If respondent is using Bike sharing during the pandemic}: Do you agree with the following statements about the bike share service that you used the most frequently during the COVID-19 pandemic. (select all that apply)

[select multiple, randomize]

My bike share agency has done well enforcing a face covering requirement

My bike share agency has done well cleaning equipment

My bike share agency has done well implementing safe physical distancing protocols

My bike share agency has done well informing me about service changes and disruptions

None of the above [exclusive]

1. {Bike\_sat; If respondent is using Bike sharing during the pandemic}: In general, how satisfied are you with your bike share service’s safety and health measures during COVID-19?

[select one]

Very satisfied

Satisfied

Dissatisfied

Very dissatisfied

1. {Bike\_rely; If respondent is using Bike sharing during the pandemic}: In general, how satisfied are you with your bike share service’s service quality (e.g., service reliability and coverage) during COVID-19?

[select one]

Very satisfied

Satisfied

Dissatisfied

Very dissatisfied

--- Page Break --- (For Survey Flow Logic)

1. {Scoot\_comp; If respondent is using Scooter sharing during the pandemic}: What scooter sharing services do you use regularly?

[text entry]

1. {Scoot\_measures; If respondent is using Scooter sharing during the pandemic}: Do you agree with the following statements about the scooter share service that you used the most frequently during the COVID-19 pandemic. (select all that apply)

[select multiple, randomize]

My scooter share agency has done well enforcing a face covering requirement

My scooter share agency has done well cleaning equipment

My scooter share agency has done well implementing safe physical distancing protocols

My scooter share agency has done well informing me about service changes and disruptions

None of the above [exclusive]

1. {Scoot\_sat; If respondent is using Scooter sharing during the pandemic}: In general, how satisfied are you with your scooter share service’s safety and health measures during COVID-19?

[select one]

Very satisfied

Satisfied

Dissatisfied

Very dissatisfied

1. {Scoot\_rely; If respondent is using Scooter sharing during the pandemic}: In general, how satisfied are you with your scooter share service’s service quality (e.g., service reliability and coverage) during COVID-19?

[select one]

Very satisfied

Satisfied

Dissatisfied

Very dissatisfied

# Autonomous Vehicles Questions[[1]](#footnote-2)

1. {Intro\_AV}: This second to last section asks about your perception of autonomous vehicles.

Autonomous vehicles (AVs) use technology to steer, accelerate, and brake with little to no human input. Some vehicles still require a human to monitor the roadway, while other vehicles require no human intervention. AVs could pick you up and drop you off where and when you need. You could hail this vehicle on-demand with your smartphone or connect with it in a hub location. Shared autonomous vehicles (SAVs) transport multiple people at once.

1. {AV\_familiar}: How familiar are you with autonomous vehicles that can self-drive?

[select one]

I have never heard of AVs

I am somewhat familiar with AVs

I am very familiar with AVs

1. {AV\_use}: If autonomous vehicles were available today for you to use, what would be your most preferred way to use them? Current costs of an AV range from $70,000 to $150,000.

[select one]

Own AVs and use them only for personal use

Own an AV and earn extra income on the side by making it available to other users while not used by you.

Own an AV and earn extra income on the side by providing rides to other passengers while you use it

Use an AV as the need arises for personal use

Use AVs for shared transportation operated by a service provider (taxi, public transit, ride-hailing service)

Use AVs for e-commerce and delivery to my home.

1. {AV\_use}: Which of the following trips are you likely to use AVs for once they become available.

[select multiple, r]

Commute trips to work or school

Trips for errands, such as to the grocery store.

Trips for leisure with friends and family

Trips for business

Long distance trips (over 50 miles)

1. {AV\_change}: How has the COVID-19 pandemic changed your opinion about using emerging transportation technologies such as autonomous vehicles?

[select one]

I view them more negatively

My opinion has not changed

I view them more positively

---Page Break---

# Socio-Demographic Questions

1. {Demo\_Intro}: This is the last section of the survey. We will ask socio-demographic questions about yourself and your household.
2. {Age}: What is your age?

[range, 18–100]

1. {Gender}: What is your gender?

[select one]

Woman

Man

Non-binary

Prefer to self-describe (text entry)

1. {Native\_born}: Were you born in the United States?

[select one]

Yes

No

1. {Education}: What is your highest level of education?

[select one]

Less than a high school diploma

Highschool Diploma

Some College

Associate degree

Bachelor’s degree

Graduate/Professional Degree

1. {Income} What was your pre-tax annual household income in 2020?

[select one]

Less than $25,000

$25,000-$49,999

$50,000-$99,999

$100,000-$149,999

$150,000-$249,999

$250,000 or more

1. {Income\_change}: How does your household income in 2020 compare to your income in 2019?

[select one]

Much greater than 2019

About the same

Much less than 2019

1. {Disability}: Do you have a disability or illness that affects your ability to travel in the region?

[select one]

Yes

No

1. {Home\_own}: Do you own or rent your current home?

[select one]

Rent

Own

Other [text entry]

1. {Household}: Who lives in your household with you?

[select multiple]

No One [exclusive option]

Spouse/Partner

Children under 6

Children aged 6 – 17

Children aged 18 or older

Roommate(s)

Parents

Other [text entry]

1. {Home\_license}: How many licensed drivers are there in your household?

[select one]

0

1

2

3 or more

1. {Home\_vehicles}: How many working vehicles (including cars, pickup trucks, SUVs, and vans) are there available to your household?

[select one]

0

1

2

3 or more

1. {Home\_Bike}: How many working bicycles are available to your household?

[select one]

0

1

2

3 or more

1. {Employment}: As of today, what is your employment status?

[select one]

Employed Full Time

Employed Part Time

Unemployed Looking for Work

Unemployed Not Looking for Work

Retired

Primarily Self-Employed

Unpaid Volunteer or Intern

Homemaker or Stay at Home

1. {Essential, If Employment = “Employed…” or “Primarily Self…” or “Unpaid…”}: Do you work in any of the following fields:

Building maintenance and repair (e.g., electrician, plumber)

Defense

Delivery and postal service

Grocery, pharmacy, convenience

Human services (e.g., food bank, homeless shelter)

Manufacturing

Medical and health care

Public safety (e.g., law enforcement, fire, security, EMT)

Sanitation

Transportation and logistics

Utilities (e.g., water, electricity)

Other essential services

[select one]

Yes

No

1. {Work\_home; If Employment ≠ “Unemployed…” or “Retired” or “Homemaker…”}: Do you currently work from home?

[select one]

Yes

No

1. {Work\_homefrequency; If Work\_home = “Yes”}: How many days do you work from home during a typical week?

[select one]

Less than one day a week

1-2 days a week

3-4 days a week

5 or more days a week

1. {Work\_office}: Do you have a primary work location outside your home?

[select one]

Yes

No, I work in various locations outside home

No, I work entirely from home

1. {Office\_location; If Work\_office = “Yes”}: What is the zip code of your primary work location?

[Text entry, number validation]

1. {Office\_frequency; If Work\_office = “Yes”}: How many days do you work at this location during a typical week?

[select one]

Less than one day a week

1–2 days a week

3–4 days a week

5 or more days a week

1. {Teleshop}: In general, how many days do you receive deliveries from online shopping at home during a typical week?

[select one]

Less than one day a week

1–2 days a week

3–4 days a week

5 or more days a week

1. {Trip\_duration}: In general, how much time do you spend travelling to various places during a typical week?

[slider]

Less than 30 minutes per day

30–60 minutes per day

1–2 hours per day

2–4 hours per day

5 or more hours per day

1. {New\_tech}: When it comes to new technology, what best describes you?

[select one]

I am skeptical of new technologies and use them only when I have to

I am usually one of the last people I know to use new technologies

I use new technologies when most of the people I know use them

I like new technologies and use them before most people I know

I love new technologies and am among the first to experiment and use them

1. The questions from this section are from Menon et al\_2020. [↑](#footnote-ref-2)