

Report to Civic Works Committee

To: Chair and Members
Civic Works Committee

From: Kelly Scherr, P. Eng., MBA, FEC
Deputy City Manager, Environment & Infrastructure

Subject: Mobility Master Plan 2050 Mode Share Target

Date: October 24, 2023

Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure, Option 3 as described herein **BE APPROVED** as the 2050 mode share target for the development of the Mobility Master Plan.

Background

Purpose

The purpose of this report is to recommend approval of a final 2050 mode share target for the development of the Mobility Master Plan (MMP). The recommendation is supported by an evaluation of the mode share target options and an overview of the associated feedback received from the community.

Context

The creation of the MMP is in the second of three phases which is focussed on exploring solutions and making connections. The London Plan identifies that a Transportation Master Plan may be prepared and updated regularly to implement the mobility policies of the plan including supporting sustainable land use, mobility choices and safety. This is particularly prudent now with London's rapid growth and in light of the Climate Emergency Action Plan (CEAP).

The Council-approved vision for the MMP is rooted in providing people with more choices for how they move around London. Key considerations are safety, sustainability, equity, efficiency and affordability. The plan is being created using a thorough consultation process, technical analysis, and consideration of The London Plan, Council's Strategic Plan and associated initiatives such as the CEAP.

All mode share options identify a shift towards more walking, cycling and transit mobility to contribute to the project vision. This report recommends Option 3, with the largest mode share change, as the mode share target to inform the recommendations of the MMP.

Linkage to the Corporate Strategic Plan

The completion of the MMP is specifically identified in the new Strategic Plan within the Mobility and Transportation Area of Focus as a strategy to increase access to sustainable mobility options. The completion and implementation of the MMP will advance and support numerous strategies under several Areas of Focus including Wellbeing and Safety, Climate Action and Sustainable Growth, Economic Growth, Culture and Prosperity, Housing and Homelessness and a Safe London for Women, Girls and Gender-Diverse and Trans People.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

- November 2, 2021, Civic Works Committee, Initiation of the Mobility Master Plan Development
- March 1, 2022, Civic Works Committee, Mobility Master Plan Appointment of Consultant
- April 20, 2022, Civic Works Committee, Appointment of Transportation and Mobility Big Data Provider – Irregular Result
- November 29, 2022, Civic Works Committee, Mobility Master Plan Update
- July 18, 2023, Civic Works Committee, Mobility Master Plan Update: Strategies, Mode Share Target Options and Project Evaluations Frameworks

2.0 Discussion and Considerations

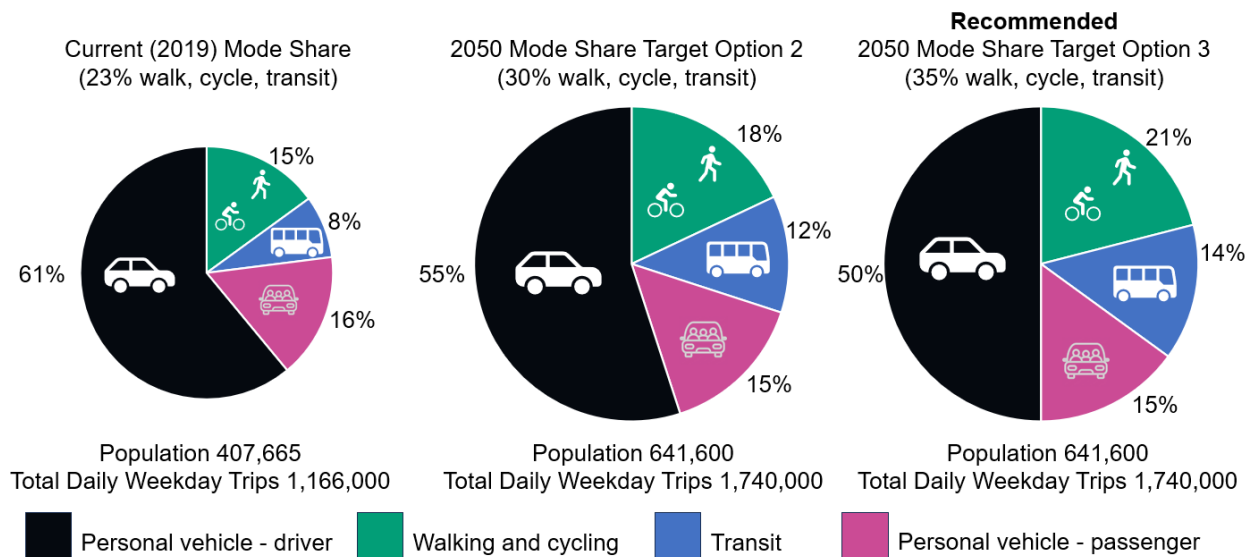
2.1 2050 Mode Share Target Options

Mode share is the percentage of person-trips moving through the city by one mode (i.e. using transit) relative to the total number of person-trips made by all modes (i.e. walking and cycling, using transit, driving, and as a passenger in a personal vehicle). The MMP is proposing to use weekday mode share targets, which means that the targets are based on all trips throughout the entire day, during the week.

Mode share is an important metric which helps inform pressures on the mobility system and how cities should invest in mobility infrastructure and create policies and programs. For future planning, the total number of people trips that the mobility system needs to accommodate will be determined based on forecasted population and employment growth. Mode share determines what percentage of those trips will be by each mode and the capacity needs of each type of mobility infrastructure. The MMP requires a mode share target for London to inform the creation of the plan.

To achieve the vision of the MMP and provide Londoners more viable options for how they move around, a balanced approach to supporting all types of mobility is required, which will be determined by mode share. Three 2050 mode share target options with increasing shares of walking, cycling and transit trips were developed for consideration. The options identified combined mode shares of walking, cycling and transit of 25%, 30% and 35%. On July 26, 2023, Council provided direction to remove Option 1 (25% walk, cycle, transit).

London's current (2019) mode share and 2050 target Options 2 and 3 for weekday trips are illustrated below:



Note that Options 2 and 3 include an increase in the actual number of trips taken as a passenger in a personal vehicle (e.g. carpooling) although the percentage remains similar to 2019.

Both Options 2 and 3 represent a transition towards a more sustainable mode share and will help move London towards achieving the vision of the MMP and of The London Plan. The development of the mode share target options was informed by comparisons of actual mode shares in other communities of varying size and built form, and in consideration of future trends and what level of sustainable mode shift is possible. A comparison of London’s current mode share with other municipalities is summarized in Table 1.

Table 1: Current mode share in London and other municipalities

Mode	Personal vehicle - driver	Personal vehicle - passenger	Transit	Walking and Cycling	Total walk, cycle, transit
London					
Current (2019)	61%	16%	8%	15%	23%
Other municipalities					
Ottawa ON (2011) *	67%		21%	11%	32%
Guelph ON (2016)	80%		9%	11%	20%
Hamilton ON (2018) *	67%**	n/a	7%	5%	12%
Victoria BC (2017) *	56%	16%	8%	19%	27%
Calgary AB (2018)	74%		8%	18%	26%
Halifax Regional Municipality NS (2018) *	74%		6%	16%	22%
Winnipeg MB (2016) *	82%		9%	7%	16%

* Some mode share totals do not add up to 100% due to the inclusion of an “Other” category.

** Referenced as single occupancy vehicle in report

One of the key directions of The London Plan is to place a new emphasis on creating attractive mobility choices. The MMP is rooted in providing more choice and this includes making walking, cycling and transit more viable to support safe, affordable, and healthy communities. Consistent with this focus, many other jurisdictions have set more aspirational walk, cycle and transit mode shares. For example, Ottawa’s Official Plan calls for a 50% walk, cycle, transit and carpool mode share which is consistent with London’s mode share target Option 3.

2.2 Land Use Considerations

Higher intensification results in higher concentrations of people and jobs and helps increase the utilization of each hour of transit service (making a more cost-effective service) and makes travel distances walkable and bikeable for more people. Higher density communities also result in shorter trips that are more adaptable to walking and cycling in combination with transit. Lower density communities require more transit service hours and higher operating costs to achieve the same level of required transit ridership along with bolder incentives to shift to active transportation.

The current intensification target in The London Plan is 45% of new units to be located within the built area boundary. To achieve Option 2, an intensification rate of 50-60% may be required. To achieve Option 3, an intensification rate of 60-70% may be required. The City is currently undertaking a land needs study, which includes a review of The London Plan policies related to land supply, such as the intensification rate. Following selection of a final mode share target for the MMP, a sensitivity analysis will be completed to better understand how land use impacts mobility choices in London. Results of the MMP modelling and analysis will be made available to help inform updates to The London Plan.

2.3 Evaluation based on the Guiding Principles

Council approved the Guiding Principles in December 2022 as the framework for the MMP decision-making process. An evaluation of the 2050 mode share target options based on the Guiding Principles has been prepared.



Environmentally sustainable

Mode share directly impacts London's ability to meet its climate goals. About 43% of London's greenhouse gas (GHG) emissions are generated by transportation including personal vehicles, commercial fleet vehicles, and goods movement. As per CEAP, London is striving for net-zero emission by 2050 as well as an interim target to reduce community-wide emissions by 55% below 2005 levels by 2030. As of 2022, community-wide emissions were 24% below 2005 levels.

Between 2019 and 2050 there is a forecasted 58% increase in population and 49% increase in the number of trips taken in London daily (daily trips are expected to grow slower than population based on an expected continuation of some level of working from home). Compared to 2019, Option 2 will result in approximately 35% more daily trips by personal vehicle (as a driver or as a passenger) and Option 3 will result in a lesser increase of approximately 26%. Fewer personal vehicle trips support a greater reduction in greenhouse gas emissions, air pollution and noise pollution.

The adoption of electric vehicles (EVs) is part of the solution, but not the complete solution. The production of EVs also has an environmental footprint and EVs still represent vehicles on the road that contribute to congestion and parking land use demands, that can have a negative influence on the public space and road safety. An auto-dominated public space particularly hinders the use of walking and cycling due to vulnerable road user safety concerns and a deteriorating experience.

The current pace of EV adoption in London is slower than the overall pace in Ontario and Canada as a whole. This is an important consideration given the need for significant near-term emission reductions needed to reach the 2030 emission reduction targets as well as the net-zero emissions goal for 2050, highlighting the importance of shifting more trips to walking, cycling, taking transit, and carpooling.



Equitable

Option 2 calls for a reliable and connected transit network and Option 3 calls for an even more extensive one. Both options will enable more people to participate in city life including work, school, and recreation regardless of age, income or ability with Option 3 having more equity benefit^a. In London, data from 2016 indicated that about 13% of households currently do not have access to a car^b.

Walking, cycling and transit can be more cost-effective choices for individuals but are less feasible and attractive in a transportation network dominated by personal vehicles. A lack of affordable, safe, reliable, and efficient mobility options is a barrier to many in accessing and maintaining a job, childcare, education, health care, groceries and other everyday needs.



Financially sustainable

To achieve Option 2, the 2050 transit system will need to accommodate twice the number of daily transit trips compared with today. To achieve Option 3 more than twice

^a Litman, T. (2022). *Evaluating Transportation Equity: Guidance for Incorporating Distributional Impacts in Transport Planning*. ITE Journal, Vo. 92/4. Retrieved from https://vtpi.org/Litman_ITEJ_Equity_Apr2022.pdf

^b 2016 Household Travel Survey

the number of daily transit trips will need to be accommodated. Both options will require a significant investment in transit and more so with Option 3.

Compared to current trends, in which London would expect 49% more daily trips by personal vehicle in 2050, Option 2 correlates to approximately 35% more daily trips by personal vehicle and Option 3 a lesser increase of approximately 26%. Investment in road capacity improvements will be required for both options to help manage road congestion with more capital investment required for Option 2.

Investments in cycling and walking infrastructure will also be required for both options with more active transportation investment required for Option 3.

From an individual resident perspective, a more connected cycling and walking network and more frequent and reliable transit provides Londoners with more viable options for how they choose to move around the city. The cost for an individual to own and maintain an average compact car is currently about \$9,500 a year^c. Currently, an unlimited ridership bus pass costs \$95 a month^d which amounts to \$1,140 a year. To own and maintain a bicycle costs approximately \$300 a year^e. Both Option 2 and 3 will make it easier for people to choose to walk, cycle and take transit for more trips which helps make moving around the city more affordable.



Healthy and safe

Attractive neighbourhoods include liveable streets that are safe, welcoming to all ages, comfortable for a variety of travel choices, and supportive of healthier lifestyles. The volume of traffic on neighbourhood streets is one of many factors that influences how liveable a community is. City staff constantly receive concerns from the community about traffic speed and the volume of vehicles. Option 2 helps minimize the growth of additional vehicles on the road compared with today which improves quality of life for residents and safety for all road users. Option 3 helps further minimize the number of additional vehicles in the future.

Being physically active at any age has many physical and mental health benefits. While both options will encourage more walking, cycling and transit use in support of improved physical and mental health, Option 3 will involve more supportive policies, programs and connected active transportation infrastructure.



Integrated, connected and efficient

Within the context of population growth, Option 2 will result in approximately 35% more daily trips by personal vehicle. Option 3 will result in a lesser increase of approximately 26% and therefore require less associated infrastructure investment. Investment in road capacity improvements will be required for both options to help manage road congestion. Road congestion may be relatively similar for both options.

Both options will support London's role as a regional transportation hub by supporting key connections such as the VIA Station, London Airport, regional public transportation systems and goods movement corridors.

Both options will improve transit travel time competitiveness with driving a personal vehicle. Option 3 will improve transit travel time competitiveness for more trips.

Both options will prioritize important goods movement corridors.

^c CAA provides real picture of annual Driving Costs. CAA National. Retrieved from [CAA provides real picture of annual Driving Costs - CAA National](#)

^d London Transit. Fares. Retrieved from [Fares – London Transit Commission](#)

^e Litman, T (2002). *Transportation Cost Estimates*. Victoria Transport Policy Institute. Retrieved from [tce.pdf \(vtpi.org\)](#)

2.4 Community Feedback

Feedback continues to be received from Londoners on a wide variety of issues and opportunities related to how they move around the city.

Between May 2023 and October 2023, staff attended 11 large community events and festivals speaking with Londoners and collecting their feedback. Presentations and discussions about the MMP also continued with the Integrated Transportation Community Advisory Committee and various organizations to collect their comments. These opportunities are continuing into the fall and winter.

As the plan's development continues, the consultation questions staff are asking are also evolving. A new mode share feedback form has begun to be used. It describes a future based on mode share Option 2 and Option 3 and asks people to share their preference. As of October 13, 2023, 219 participants had provided the following responses:

- 11% prefer Option 2 (30% walk, cycle, transit)
- 82% prefer Option 3 (35% walk, cycle, transit)
- 7% were not sure

Participants also provided the following responses with respect to the level of aspiration associated with the Option 2 and 3 mode shift to more walking, cycling and transit:

- 69% felt the mode share target options were not aspirational enough
- 18% felt the mode share target options were the right level of aspiration
- 10% felt the mode share target options were too aspirational
- 3% were not sure

Another feedback form that is being used in Phase 2 includes a question which asks people to share what top three priorities they feel would help improve mobility in London. As of October 13, 2023, 732 participants selected the following as one of their top three priorities for improving mobility in London:

- 65% selected improving the frequency, convenience, reliability, and coverage of public transit services
- 57% selected making walking, rolling, and cycling attractive mobility options to meet daily needs
- 36% selected encouraging mixed-use development to help provide everyday needs closer to home
- 27% selected making travel to and from London and the surrounding area easier
- 25% selected improving the condition of infrastructure (e.g., filling in potholes, repairing sidewalks)
- 23% selected managing traffic congestion by improving roadway capacity for vehicles
- 18% selected improving road safety
- 13% selected encouraging and/or providing more shared mobility options (e.g., bike share, car share, kick-style e-scooter share, carpooling etc.)
- 12% selected "Other" and provided additional comments
- 7% selected managing vehicles making deliveries in denser parts of the city (e.g., providing designated delivery zones by the curb, promoting the use of cargo e-bikes and other small vehicles for deliveries, etc.)

Feedback and responses continue to be collected, and analysis of Phase 2 engagement findings is on-going. It is important to note that on-line feedback should not be viewed as random (survey) sampling. This method of feedback represents an opportunity to categorize input from those that are aware of the opportunity to engage and share their feedback.

2.5 Recommended Mode Share Target for 2050

Considering the criteria associated with the guiding principles and comparing the benefits associated with both options, Option 3 is the recommended mode share target to support achieving the vision of the MMP. This option is also supported through feedback received during the consultation process which identifies a strong desire for more walking, cycling and transit in the future. Option 3 aims for a higher walking, cycling and transit mode share which will reduce greenhouse gas emissions, help manage road congestion, improve physical and mental health for Londoners and provide a more equitable network across the city.

London's ability to achieve either option is most directly influenced by land use and transit investment. A higher intensification rate supports a more sustainable mobility system. The capacity of existing servicing in some key areas of the city such as the downtown is a consideration for future infrastructure planning. Due to the significant population growth forecasted, significant investments are required in transit, as well as walking and cycling infrastructure to achieve a more sustainable mode share. The MMP will support growth and continue to provide infrastructure for all modes, however Option 3 will provide more Londoners with more viable choices for moving around.

There are many factors and assumptions about the future which are incorporated into forecasted travel needs including anticipated population and employment growth. There are also many external factors with the potential to change whether, when, where, why and how people travel. These external factors can be considered 'disruptors' such as Connected and Automated Vehicles (CAVs), micro-mobility (e-bikes and e-scooters), work-from-home trends and home delivery services. Assumptions related to these 'disruptors' are built into the modelling and forecasting, and sensitivity analysis will be completed, however it isn't feasible to account for all possible future scenarios. For this reason and others, the MMP will be reviewed and updated on a regular basis (approximately every 10 years), consistent with The London Plan policy. Progress towards the mode share target and re-evaluation of an appropriate mode share target will be considered at that time.

2.6 Next Steps

Confirmation of the 2050 mode share target will allow the project team to determine the extent of cycling, transit and vehicle infrastructure needs based on forecasted capacity needs by mode. The mode share target will also influence associated programs and policy setting. Potential projects which will then be evaluated based on the project evaluation frameworks. Once projects are identified for each individual mode using the project evaluation frameworks, they will be combined into one integrated multi-modal network. A public engagement event is anticipated in early 2024 to share with the community the proposed plans for each mode.

Consultation is integral to achieving a plan that Londoners can support. Therefore, the project schedule is being adapted to accommodate meaningful consultation in advance of key decisions points. The third and final phase of the project will continue throughout 2024 and will include the development of an implementation plan informed by continued community consultation, project prioritization and project cost estimates.

Conclusion

The MMP final mode share target will guide the development of infrastructure, programs and policy creation. The mode share target options were created considering existing mode shares in London, the city's current mobility systems, built form and growth patterns. All options were created with intent to improve sustainability and contribute to the Council-approved project vision by increasing the share of walk, cycling and transit trips. Comparators from other cities of varying sizes and built form also informed the range of options and the extent to which this sustainable mode shift can be achieved. Option 3, the most aspirational of the developed options in terms of increasing sustainable mode share, is recommended for Council approval. This recommendation aligns with the consultation feedback received.

The project team will continue to progress the development of the MMP using a thorough consultation process, technical analysis, and consideration of The London Plan, Council's Strategic Plan and associated initiatives such as CEAP. Approval of the mode share target will enable the project team to advance the technical modelling for the identification of infrastructure, program and policy needs to support London's rapid growth. Phase 2 consultation will continue with the identification on the recommended modal networks in early 2024.

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cc: Mobility Master Plan Internal Steering Committee
Integrated Transportation Community Advisory Committee