TORONTO

REPORT FOR ACTION

Developing a Micromobility Strategy and Pilot Projects

Date: July 18, 2023
To: City Council
From: General Manager, Transportation Services
Wards: All

SUMMARY

Micromobility is a term for small, lighter weight, compact, low speed vehicles. They span a range of types, such as bicycles, cargo bikes/trikes, folding bikes, electric two/three/four-wheeled cycles, urban mobility vehicles (enclosed e-trike), e-mopeds, electric kick-scooters (e-scooters) and more. Use of micromobility - if guided by a robust policy framework - holds great potential in helping the city achieve its environmental, social and economic goals, as well as supporting Vision Zero road safety, active transportation and Bike Share Toronto expansion, public transit, TransformTO, and community equity.

As recently as May 2023, the Ministry of Transportation of Ontario (MTO) posted regulatory proposal 23-MTO009 on micromobility to update and expand existing pilots, such as the cargo e-bike pilot and e-scooter pilot, from 2023 to 2028. This posting also requested feedback on the urban mobility vehicle (an enclosed e-trike). In preparation for the expected making of the province's micromobility regulation, Transportation Services staff have begun consulting on, researching and developing a comprehensive Micromobility Strategy to address the opportunities and challenges that these evolving transportation modes present for the city.

Based on initial feedback from accessibility, active transportation and business improvement area (BIA) stakeholders, there is a benefit to having a cohesive Micromobility Strategy that sets out a regulatory framework for where/how these various travel modes might operate, park and interact with others, as opposed to a piecemeal approach to the policy considerations. A range of stakeholders have expressed that it is premature to plan for a rental/shared e-scooter pilot and that it is a priority is to advance the Micromobility Strategy and the supporting city-wide infrastructure, enforcement and maintenance of a safe active transportation network connected with public transit.

Toronto Public Health was also consulted in the development of this report, which recommends the development of a Micromobility Strategy for a report back for end of Q1 of 2024. The Strategy would include consideration of a framework for micromobility pilot projects and the various key issues to be addressed, which would be informed by public and stakeholder consultation, research of best practices from other jurisdictions, and the analysis and work to develop the overarching Strategy.

RECOMMENDATIONS

The General Manager, Transportation Services, recommends that:

1. City Council request the General Manager, Transportation Services, in consultation with relevant divisions, agencies, boards and commissions and key stakeholders, including, but not limited to, members of the public, the Toronto Accessibility Advisory Committee and persons with disabilities, pedestrians, cyclists, transit riders, business improvement areas, and the broad micromobility industry, to report back by end of Q1 of 2024 on a comprehensive Micromobility Strategy, as described in the report entitled "Developing a Micromobility Strategy and Pilot Projects" from the General Manager, Transportation Services, dated July 18, 2023.

2. City Council request Transport Canada to regulate and harmonize micromobility vehicle safety and battery safety, standards, testing and labelling, and conduct robust consultation with key stakeholders on universal accessibility, active transportation, and road safety, given the importance of micromobility for utilitarian transportation and the importance of public health, safety and protection, as well as clarity for businesses that manufacture, import, distribute, retail and provide insurance products for micromobility.

3. City Council request the General Manager, Transportation Services, in consultation with key internal and external stakeholders, including Toronto Public Health, Toronto Police Services, and on-demand delivery-related companies, to develop and implement a public education campaign to support safe active transportation and Vision Zero road safety, as well as request local enforcement efforts to address problem areas for illegal parking in bike lanes and illegal sidewalk riding.

FINANCIAL IMPACT

Transportation Services confirms that there are no financial implications resulting from the recommendations included in this report.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

On June 28, 2023, the Infrastructure and Environment Committee forwarded Item IE5.5 Planning for an E-Scooter Pilot to City Council without recommendations.
https://secure.toronto.ca/council/agenda-item.do?item=2023.IE5.5

On May 5-6, 2021, City Council declined the option to participate in O.Reg 389/19 - Pilot Project - Electric Kick-Scooters, requesting the Ontario Government make helmets mandatory for riders of e-scooters, and requesting Transport Canada to regulate harmonized micromobility vehicle safety, standards, testing and labelling and to consult

key stakeholders. City Council requested the Toronto Police Services Board, the General Manager, Transportation Services and the Executive Director, Municipal Licensing and Standards to consult with accessibility stakeholders on public education and enforcement of the prohibition on use of e-scooters in public spaces. https://secure.toronto.ca/council/agenda-item.do?item=2021.IE21.7

On February 25, 2021, the Toronto Accessibility Advisory Committee affirmed that it does not support the use of e-scooters, including any pilot project, and requested a ban without exception. The Committee also recommended that City Council request Toronto Police Services, Transportation Services and Municipal Licensing and Standards to consult accessibility stakeholders to develop a public education campaign on existing by-laws prohibiting e-scooter use in public spaces and actively scale up enforcement. http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.DI14.1

On July 28-29, 2020, City Council directed the General Manager, Transportation Services, to report back on referral Item 14.10 to address issues identified by the Toronto Accessibility Advisory Committee, including insurance issues. http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.IE14.10

On February 3, 2020, the Toronto Accessibility Advisory Committee recommended City Council prohibit e-scooters for use in public spaces including sidewalks and roads, and directed that any City permission granted to e-scooter companies be guided by public safety, in robust consultation with persons with disabilities and related organizations. http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.DI7.3

COMMENTS

Background

Micromobility is a term for small, lighter weight, compact, low speed vehicles. They span a range of types, such as bicycles, cargo bikes/trikes, folding bikes, electric two/three/four-wheeled cycles, urban mobility vehicles (enclosed e-trike), e-mopeds, electric kick-scooters (e-scooters) and more (see Attachment 1: Photos of Micromobility). Use of micromobility - if guided by a robust policy framework - holds great potential in helping the city achieve its environmental, social and economic goals, as well as supporting Vision Zero road safety, active transportation and Bike Share Toronto expansion, public transit, TransformTO, and community equity.

One example of successful micromobility adoption in the City of Toronto has been through the Cargo E-Bike Pilot, which launched in 2021. This pilot was adopted in order to enable commercial delivery companies to replace trucks with large e-cargo bikes/trikes (see Figure 1); as well as to allow for the legal use of personal e-cargo bikes/trikes for individuals and families, who are increasingly using these micromobility vehicles instead of a car, to transport children and run errands (see Figure 2). The City's Fleet Services Division has also utilized this opportunity to test the use of e-cargo bikes in some fleets, such as for Parks staff.

In addition, the city's pilot for large e-cargo bikes/trikes includes partnerships with industry and researchers. In partnership with clean energy think tank, the Pembina Institute, the City has been conducting surveys with participating courier companies, collecting information about the successes and challenges with adopting e-cargo bikes in Toronto, and will provide this feedback to MTO. The University of Toronto, another project partner in the pilot, has been conducting research into the transportation benefits of using e-cargo bikes for deliveries, studying Purolator's mini logistical distribution hub, 'Urban Quick Stop' (See Figure 3), and have had positive preliminary results regarding the effectiveness of using these vehicles for urban deliveries.

Figure 1 - Photo of an e-Cargo Bike being used in FedEx's Toronto delivery fleet. Photo Credit: Curbside Cycles.

Figure 2 - Photo of Personal Use Cargo E-bike/Trike (credit source: CBC News; Giacomo Panico)

Figure 3 - Photo of Purolator's Mini Logistical Distribution Hub in a layby on St George Street. Photo Credit: City of Toronto

As recently as May 2023, MTO posted regulatory proposal 23-MTO009 on micromobility to update and expand existing pilots, such as the cargo e-bike pilot and e-scooter pilot, from 2023 to 2028. This posting also requested feedback on the urban mobility vehicle (an enclosed e-trike - see Attachment 1: Photos of Micromobility). In preparation for the expected making of the province's micromobility regulation, Transportation Services staff have begun consulting on, researching and developing a comprehensive Micromobility Strategy to address the opportunities and challenges that these evolving transportation modes present for the city.

Based on initial feedback from accessibility, active transportation and BIA stakeholders, there is a benefit to having a cohesive Micromobility Strategy that sets out a regulatory framework for where/how the various travel modes might operate, park and interact with others, as opposed to a piecemeal approach to the policy considerations. A range of stakeholders are concerned about planning for a rental/shared e-scooter pilot, ahead of the Micromobility Strategy and that limited resources would be better spent on prioritizing and advancing the Micromobility Strategy and the supporting city-wide infrastructure, enforcement and maintenance of a safe active transportation network connected with public transit. Toronto Public Health was also consulted in the development of this report which recommends the development of a Micromobility Strategy for a report back by end of Q1 of 2024.

Proposed Micromobility Strategy

The Micromobility Strategy would take a holistic approach in assessing and recommending ways to reach micromobility's full potential while providing for a safe, multi-modal and active transportation network for people of all ages, abilities and backgrounds.

The report back would present a framework for Toronto based on the city's policy goals, public and stakeholder input, research, and review of best practices on micromobility regulations, infrastructure and its maintenance, incentives and disincentives, innovation/latest technologies and approaches, education, enforcement, safety, liability, resourcing and oversight, and evaluation. It would consider established micromobility options, those under current pilot projects, and criteria to evaluate other potential micromobility pilots and options that may emerge in future.

Proposed Considerations including for Frameworks for Pilot Projects

- Comparable jurisdictions for Toronto, including a mix of North American and International jurisdictions for the research and best practices review;

- Regulations on where/how to operate (e.g. what infrastructure, speed and mass), where to park and interactions with others, e.g. making rules intuitive, collaborations on public education and training, and culture change;

- Supportive infrastructure and maintenance of an active transportation network, e.g. continued work on active transportation infrastructure/design projects and consideration of surface maintenance to mitigate safety concerns and liability risks;

- Community equity initiatives, e.g. addressing first/last mile travel options and 'transit deserts', infrastructure/connectivity, and affordability of options;

- Safety interventions and enforcement, e.g. exploration of potential technologies such as automated enforcement of illegal parking in bike lanes and research on innovations in asset condition assessments for the active transportation network (e.g. potholes/cracks, debris/obstructions, etc.);

- Supports the City's climate change emissions reduction targets outlined in the *TransformTO Net-Zero Strategy*, including any considerations associated with actions being implemented as part of the City's TransformTO Short-term Implementation Plan (2022-2025);

- Initiatives and resourcing to operationalize and manage enforcement of new modes, e.g. exploring parking management for mid- to larger-micromobility such as cargo bikes, enclosed e-trikes and large e-cargo bikes, and charging for e-micromobility;

- Pedestrian safety and vibrant walkable streets by mitigating illegal sidewalk riding in particular by faster, heavier powered micromobility, i.e. understanding what is resulting in sidewalk riding, such as lack of bike infrastructure, illegal parking in bike lanes, potholes/debris/snow in bike lanes, lack of protection for the bike lanes, negative "nudges" (on-demand delivery pressures), local enforcement efforts for problem areas with illegal parking in bike lanes or reckless sidewalk riding etc.;

- Support quality services and expansion of Bike Share Toronto and exploration of other safe micromobility options under Toronto Parking Authority, to sustain, grow and integrate with Bike Share citywide and with public transit (e.g. exploring cargo bike options in the fleet with a larger front basket and/or potential rack for panniers/bags for errands/shopping, e-micromobility charging, secure parking, etc.)

- Vision Zero road safety and injury prevention, e.g. address trending issues such as intoxicated riding, underage riding and reckless riding through education and training, technologies, regulations/restrictions, and enforcement. Ensure accountability through requirements for full indemnification and first- and third-party liability insurance;

- Data collection and evaluation, e.g. environmental/modal shift, social and economic; injury data with public health/hospitals and potential data from paramedics, Fire Services, and Toronto Police Services; and collaboration with other researchers;

- Pilot project models and lessons learned from elsewhere, such as but not limited to:
    - Potential requests for information (RFIs)/request for proposals (RFPs), partnerships/collaborations, pilots/tests on private property/campuses, phasing/iterative approaches, docked stations and integration with Bike Share Toronto and public transit, other parking management, device safety (e.g. turn signals, dual braking, wheel/tire characteristics, etc.), appropriate geographic areas, coordinated infrastructure, community/social equity, injury prevention, outreach/training, affordability/pricing, first/last mile and mode shift, fleet/vendor

caps, full indemnification and 1st and 3rd party insurance, helmet provision/compliance, proven technologies/robust pre-pilot testing (e.g. geofencing, sidewalk riding detection and prevention, intoxication/sobriety test, age/ID verification, reckless riding detection/prevention, emergency assistance, complaint response times), permits/vendor contract terms, operations/fleet maintenance, subcontractors, towing/impounding, fees, fines, vandalism/theft, enforcement, resourcing, retrieval/remediation if dumped in lake/rivers/ravines, program cost recovery/subsidies, etc.; and

- Coordination with initiatives from other divisions and ABCs that support and enable micromobility.

The above is a rough list of potential considerations based on initial discussions with stakeholders. Further considerations may emerge as work on the Strategy progresses.

Key Roles of Transport Canada and MTO

Transport Canada plays a key role in establishing vehicle and battery safety standards, testing and labelling for these vehicles imported into the country. The absence of national regulation of micromobility vehicles is resulting in significant challenges:

- Toronto City Council's unanimous decision in 2021 to opt-out of a provincial e-scooter pilot project resulted in part from the lack of adequate safety standards, testing and labelling to protect consumers, and the concerns regarding the safety risks and the subsequent liability and costs to the City.

- The majority of e-scooter products imported do not meet the Ontario Highway Traffic Act's (HTA) regulations under the e-scooter pilot project and are capable of travelling faster than 24 kilometres per hour (kph), i.e. many products have a minimum capable speed of 30 kph. Even if the city were to legalize the use of personal and privately-owned e-scooters on City streets - the majority of them being operated are non-compliant under the Ontario HTA with no set fines established by the province. Without a set fine, law enforcement officers have to lay a Part III offence, which would require a substantially more complex court process and lead to an open-ended, inconsistent and confusing application of penalties by courts across Ontario.

- City staff has also heard from key stakeholders, including large national companies that operate logistics across Canada that the lack of national and international standards for micromobility is hampering e-cargo cycle opportunities. Delivery companies require such standards to help them obtain/import, insure and deploy safe fleets across Canada to meet their corporate environmental and business targets.

- Industry and consumers need, and are demanding, national and international standards and labelling for micromobility vehicles which will boost the safety, quality and reliability of these vehicles. This will enable Canadian residents, businesses and organizations to effectively replace cars and trucks with pedal-assisted bicycles, e-cargo cycles and low speed vehicles when making trips or deliveries, which helps all

Canadian jurisdictions with meeting their climate action and net zero plans and optimizing public infrastructure and transportation networks and hubs.

Furthermore, national regulation is critical to protect the public when it comes to fire safety and to enable enforcement against illegal and dangerous micromobility vehicles with faulty or substandard batteries and charging.

Conclusion

By increasing the proportion of micromobility vehicles on its streets, the City can improve road safety as lighter vehicles have lesser impact in collisions than larger passenger vehicles (like SUVs), use less space and energy, and reduce immediate emissions as most micromobility are electric powered or are pedal-assisted.

Part of the Strategy will investigate opportunities to incentivize active transportation and to support first and last mile connections to public transit. Doing so will help the city reap the greatest benefits from micromobility which is why it is a priority to develop the Micromobility Strategy as a whole before considering specific rental/shared pilot projects for e-scooters. A range of stakeholders support this approach.

Staff recommend that consultation include relevant divisions, agencies, boards and commissions and diverse internal and external stakeholders including, but not limited to, members of the public, the Toronto Accessibility Advisory Committee and persons with disabilities, pedestrians, cyclists, transit riders, business improvement areas, and the broad micromobility industry, and to report back by end of Q1 of 2024 on a comprehensive Micromobility Strategy for the city, as generally described in this report.

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SIGNATURE

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ATTACHMENTS

Attachment 1: Photos of Micromobility

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Examples of micromobility (not an exhaustive list of images).

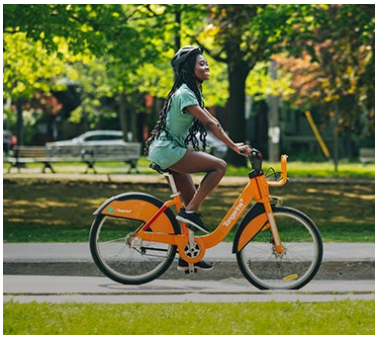

Image: Bike Share Toronto bicycle (source: Bike Share Toronto)

Image: Urban Mobility Vehicle (source: Driving.ca)

Image: E-moped (source: Lexham Insurance.co.uk)

Image: Electric Kick-Scooter (source: Gainesville Sun; J.D. Allred/Deseret News)

Image: E-cargo bike (source: Scooteretti)

Image: E-cargo cycle and low speed vehicle (source: CNW Group: Purolator)

Image: E-cargo cycles (source: Pembina Institute; Jesse Lim)