



## STAFF REPORT ACTION REQUIRED

### Implications of Microtransit for TTC

<b>Date:</b>	September 28, 2016
<b>To:</b>	TTC Board
<b>From:</b>	Chief Executive Officer

### Summary

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At its January 21, 2016 meeting, the TTC Board passed a motion directing TTC staff to report on the benefits and possible risks of microtransit.

Over the past decade, major shifts in demographics, travel behaviour, and technology have changed how people travel in cities, and have made the provision of flexible, on-demand transportation more possible than ever. This has resulted in the proliferation of microtransit operators in many North American cities, including Toronto. Microtransit (or ride-sharing) services are private vehicles that offer rides to several passengers along fixed or variable routes and charge a fare for each passenger carried.

At this time, the best-known provider of microtransit in Toronto is Uber, which uses private vehicles-for-hire and offers a number of different ride-sharing services. On May 3, 2016, City Council adopted the new Vehicle-for-Hire bylaw. The new bylaw authorizes and regulates ride-sharing services such as UberPOOL and UberHOP<sup>1</sup> under a Private Transportation Company (PTC) License.

TTC staff have reviewed reports and research on microtransit (ride-sharing) from other jurisdictions and organizations. This current report outlines potential benefits and downside risks of ride-sharing services with respect to public transit in Toronto. These include:

- microtransit services could transport people in ‘hard-to-serve’ areas, to connect with TTC services;
- microtransit could replace large buses on transit routes with low demand and reduce the fleet requirement for large transit vehicles;

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<sup>1</sup> It's the TTC's understanding that this service is no longer offered by Uber in Toronto. Nevertheless, this report considers the benefits and downside risks of this type of service if it were to be in operation.

- microtransit services could replace private automobiles for some travel;
- microtransit services -- if operated on a large scale -- could increase traffic congestion, thus degrading the performance of Toronto's major arterial roads;
- microtransit vehicles could create operational conflicts with TTC vehicles through actions such as picking-up and dropping-off passengers on busy arterial roads;
- large-scale microtransit operations could attract ridership away and revenue from busy TTC routes which, in turn, could result in the need for increased municipal subsidy to support the continued operation of less-busy TTC routes or the high-frequency of transit service offered in major corridors.

Increasing mobility options in Toronto is, overall, a good thing. It may be possible for microtransit services to co-exist compatibly with public transit, but it's important, for the economic and social viability of Toronto, that microtransit not negatively affect the city's public transit system nor erode the integrity of the TTC's comprehensive city-wide network.

Microtransit is still very new in Toronto, and most other cities have only limited experience with such services. As such, there is no way to know how microtransit will affect transit in Toronto. This will become known only after actual operation and observation. The TTC will work with the City to review the travel data that it will be collecting from ride-sharing providers and, using that information, will determine what, if any, follow-up actions are appropriate for the TTC.

## **Recommendations**

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It is recommended that the Board:

1. Approve forwarding this report to the City of Toronto Municipal Licensing and Standards, Planning, and Transportation Services Departments, to Metrolinx, and to the Ontario Ministry of Transportation, noting the TTC's position that all transportation providers in Toronto should be required to use accessible vehicles designed to serve people who have mobility challenges or who use mobility devices and aids; and
2. Direct TTC staff to conduct a study to determine if there are any suitable areas within the city of Toronto for the implementation of a pilot on-demand ride-sharing service concept.

## **Financial Summary**

There are no financial implications resulting from this report.

## **Accessibility/Equity Matters**

This report, itself, has no accessibility or equity issues. However, the widespread operation of ride-sharing services could affect the viability and availability of accessible

for-hire vehicles unless there are regulations which require that a large percentage of microtransit vehicles be accessible.

## **Decision History**

At its January 21, 2016 meeting, the TTC Board passed a motion directing TTC staff to report on the benefits and possible risks of microtransit.

[http://www.ttc.ca/About\\_the\\_TTC/Commission\\_reports\\_and\\_information/Commission\\_meetings/2016/January\\_21/Reports/Motion\\_Request\\_a\\_Staff\\_Report\\_on\\_the\\_Benefits\\_of\\_Microtransi.pdf](http://www.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2016/January_21/Reports/Motion_Request_a_Staff_Report_on_the_Benefits_of_Microtransi.pdf)

City Council on September 30, October 1 and 2, 2015, adopted the following:

1. City Council amend Toronto Municipal Code, Chapter 545, Licensing to:
  - a. update the definitions of Taxicab Broker and Limousine Service Company to explicitly provide that technology-based brokerages, including Uber, are within the existing regulatory regime;
2. City council request the Executive Director, Municipal Licensing and Standards to report back to the Licensing and Standards Committee in Spring 2016 on a framework to equitably regulate all ground transportation providers and to begin consulting on the appropriate regulations to ensure a level playing field that considers the City of Toronto's accessibility objectives in the ground transportation industry.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.LS6.1>

On April 7, 2016, City staff released their report pertaining to A New Vehicle-for-Hire Bylaw to Regulate Toronto's Ground Transportation Industry.

<http://app.toronto.ca/tmmis/viewPublishedReport.do?function=getAgendaReport&meetingId=10981>

On May 3, 2016 City Council adopted the New Vehicle-for-Hire Bylaw with some amendments.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.LS10.3>

## **Issue Background**

Microtransit (or ride-sharing) services are private vehicles that offer rides to multiple passengers along fixed or variable routes and charge a fare for each passenger carried. Microtransit services fall somewhere between private automobiles and taxis, and large-scale municipal transit systems – their private vehicles typically carry more passengers than single-occupancy vehicles, but far fewer than buses or streetcars.

Over the past decade, major shifts in demographics, travel behaviour, and technology have changed how people travel in cities, giving rise to more and different means of mobility. Microtransit is not a new phenomenon. Informal ride-sharing networks like New York's Dollar Vans and 'Route Taxis' have operated for years. Ever-increasing data on mobility patterns, widespread smartphone access, and innovations in fare payment are now facilitating the proliferation of flexible, on-demand transportation. Ride-sharing companies in the USA include Uber and Lyft, and the number of such companies expands daily. Such companies are also starting to operate in Toronto.

Microtransit services cannot likely replace big public transit systems like the TTC because they cannot provide enough capacity to transport the kind of huge passenger volumes (1.8 million per day) carried by the TTC. However, microtransit services have the potential to help shift some people's travel away from private automobiles.

At this time, the best-known ride-sharing private-vehicles-for-hire company in Toronto is Uber, which offers a number of different services, including:

- **UberX** similar to traditional taxis: fare-paid individualized transportation to and from any destinations;
- **UberPOOL** fare-paid shared transportation carrying several people with matching origins and destinations; and
- **UberWAV** Wheelchair Accessible Vehicles: individualized fare-paid transportation, using accessible vehicles, serving people with accessibility needs;

Uber has also previously offered UberHOP, a service similar to a little bus route: fare-paid transportation carrying several people along a pre-determined point-to-point route, departing at scheduled times. It's the TTC's understanding that this service is no longer available in Toronto. Nevertheless, this report considers the benefits and downside risks of this type of service as well.

All these services are accessed and ordered in advance using a smartphone app that brokers requested rides using available private vehicles.

There is limited information and statistics available regarding the effects of microtransit services on both public transit operations and broader municipal transportation and road systems. This makes it difficult to assess the potential implications for any city, including Toronto.

TTC staff have reviewed reports and research on ride-sharing from other jurisdictions and, based on that information, on the recent City staff report on regulating "ground transportation," and on TTC staff's knowledge of transit operations, TTC staff have assembled the most-important known potential benefits and risks of ride-sharing services as they pertain to transit in Toronto.

## Comments

The size and density of Toronto, and its diverse and large travel needs requires transportation services that can move huge numbers of people. The TTC's extensive network of bus, streetcar, and subway services carries 1.8 million customers every weekday and, yet, this accounts for only about 25% of total daily trips made in Toronto. It is inconceivable that Toronto's economic, social, educational, and cultural networks and institutions could survive without a high-capacity transit system like the TTC. Toronto's road system also has finite capacity and can carry this huge travel demand only if a significant proportion of that travel occurs in high-capacity services and vehicles as provided by the TTC.

Microtransit and ride-sharing services provide people with other means of getting around as an attractive alternative to using private automobiles. On May 3, 2016, City Council adopted the new Vehicle-for-Hire bylaw. The new bylaw authorizes and regulates ride-sharing services such as UberPOOL under a Private Transportation Company License. The bylaw restricts such operations to vehicles with a capacity of seven or fewer passengers, but it does not restrict the total number of drivers, vehicles, or companies which can operate in Toronto. Rides can only be booked through a smartphone application, and PTC vehicles must display a PTC identifier on the back of the vehicle at all times while operating. Only PTC's that have more than 500 registered or affiliated vehicles are required to provide wheelchair accessible service with wait times comparable to those of non-accessible services. Beyond these rules, and ones pertaining to vehicle safety and driver-record checks, there are no substantive restrictions pertaining to the operation of ride-sharing services. The bylaw will require ride-sharing providers to submit comprehensive travel information in order to allow the best-possible understanding of how these services are being used.

Various jurisdictions have tried different approaches to managing ride-sharing or microtransit services. In Denmark, for example, an oversight agency was established for the purpose of coordinating all such services. San Francisco charges microtransit companies for the use of curb space to pick-up and drop-off passengers, as a means of controlling the number of vehicles operating on, and congesting their streets.

With virtually no experience with large-scale ride-sharing services in Toronto, it is not yet possible to state what measures or controls, if any, would be appropriate in the context of transit operations. Based on information from other jurisdictions, TTC staff have identified potential benefits and risks of microtransit services within Toronto. The following are the positives:

- Microtransit services could transport people to connect with TTC services, providing the so-called "first mile" and "last mile" of trips. This might be helpful, for example, in lower-density residential or industrial areas where it is less cost-effective to operate full-size transit buses or high-frequency service.

- Microtransit services that provide “first mile” and “last mile” services may also increase safety for customers who are uncomfortable walking longer distances alone to/from a subway or bus stop.
- The operation of microtransit services, as a complement to the TTC’s transit system, in moderate-to-high density areas, could strengthen the overall attractiveness of travel by means other than private automobiles, and could help accommodate the “peak of the peak” demand which occurs during rush hours.
- Private microtransit companies also have the ability to target niche populations in a way that mass transit cannot. In low demand areas, such as industrial employment areas with shift workers, it is sometimes not cost-effective for mass transit to serve this demand. Microtransit services would be able to serve these areas much more efficiently. This would expand transportation options for these low density areas. The TTC will conduct a study to determine if there are any suitable areas within the City for the implementation of a pilot on-demand ride-sharing service concept.
- A recent survey of seven large American cities conducted by APTA found that the more people use shared modes, the more likely they are to use public transit, own fewer cars, and spend less on transportation overall. “Supersharers” are people who routinely use several shared modes, such as bikesharing, carsharing, and ridesourcing. The study also found that microtransit and ride-sharing services are most frequently used for social trips between 10pm and 4am.

The following are the potential negative effects which microtransit could have on TTC services:

- If a large number of ride-sharing vehicles operate, they could increase traffic congestion, thus worsening this problem on Toronto’s major arterial roads which are already operating at practical capacity during peak periods. Research from San Francisco found that people who use ride-sharing services own fewer vehicles than average households, or none at all. This suggests that ride-sharing services may divert commuters away from higher-capacity, more-efficient transit services, instead of replacing or reducing private automobile trips, resulting in more vehicles carrying the same number of people. Research from New York and other cities shows that ride-sharing services increase congestion, slow-down travel speeds, and reduce the efficiency of traffic operations. Any increases in traffic congestion would reduce TTC operating speeds and decrease service reliability. The TTC has recently invested, and is continuing intensive efforts on making bus and streetcar services more reliable (e.g. - 501 Queen, 504 King, and 29 Dufferin). Anything which would degrade traffic and transit operations would be problematic for the TTC and would work against the City’s efforts to encourage residents to shift to more-sustainable modes of transportation.

- If ride-sharing vehicles stop frequently to pick-up and drop-off passengers along major arterial roads – which also happen to be TTC service corridors – then this would worsen the problem of individual vehicles blocking or slowing-down the movement of all other users of the roads, including TTC buses and streetcars. TTC vehicles (and others) would have to navigate around such stopped vehicles.
- Evidence from other jurisdictions indicates that ride-sharing services operate most successfully in high-density, high-travel-demand corridors, including those with high-capacity transit. If this were to happen in Toronto, it could result in ride-sharing services attracting away ridership and revenue from busy TTC routes. The TTC uses revenues from its busiest routes to cross-subsidize less-busy TTC services in lower-density areas – routes which are integral to the existence of a comprehensive grid of services providing complete coverage of the City. A significant loss of revenue in this way could threaten the integrity or existence of the TTC’s city-wide grid of services.
- If ride-sharing services were eventually allowed to operate larger vehicles -- such as mini-buses -- this could escalate the potential for ridership/revenue losses, as described above, and could result in the need for increased municipal subsidy to support the continued operation of less-busy routes, or the provision of high-frequency of service which is critical in major corridors and which is a foundation of the City’s TOcore initiative.
- If ride-sharing services are not regulated with respect to vehicle accessibility, then there will be little incentive for private operators to use (more-expensive) accessible vehicles. This could lead to the erosion of the City’s long-term objective of a fully-accessible transportation industry in Toronto. It could also affect the TTC’s plan to control costs by increasing the percentage of Wheel-Trans service which is operated by contracted accessible taxis.

## **Conclusion**

Increasing mobility options in Toronto is, overall, a good thing. Evidence suggests that the more choices people have, the less likely they are to rely on private automobiles. It may be possible for microtransit services to co-exist compatibly with public transit, but it’s important, for the economic and social viability of Toronto, that microtransit not significantly negatively affect the city’s public transit system nor erode the integrity of the TTC’s comprehensive city-wide network.

Microtransit is still very new in Toronto, and most other cities have only limited experience with such services, so there is no way to know at this time how microtransit will affect transit in Toronto. This will be better understood after actual operation and observation. The TTC will work with the City to review the travel data which it will be collecting from ride-sharing providers and, using that information, will determine what, if any, follow-up actions are appropriate for the TTC.

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