



# Will autonomous vehicles be a game-changer for people with disabilities in Canada?

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Much has been written about Autonomous Vehicles (AV) and how they will reduce traffic congestion, lessen road deaths, free up city parking spaces, cut pollution, and much more, but how might they potentially change the game for people with disabilities?

Providing accessible public transportation to persons with disabilities is an essential part of creating inclusive, supportive communities. Across the developed world, most major cities offer some form of program for creating greater accessibility within the public transit system.

These programs typically fall within one of two categories: either creating accessibility within the broader public transit system (e.g. buses with floors or ramps that lower) or paratransit programs providing a door-to-door service upon request.

While these services go a long way to supporting the mobility of persons with disabilities, the lower volume and higher cost-per-service mean that the availability and flexibility of these services falls well short of the standards in place for people without disabilities travelling on public transit.



Not all transit stations, buses, LRTs or routes are 100 percent accessible. And paratransit systems often require advance bookings, which means that users have to plan their trips well ahead of time. It is not ideal and could be seen as exclusionary.

## The Canadian lay of the land

In Canada, the cost to taxpayers is significant when providing transport options such as paratransit. Fares for accessible or paratransit services are usually no more than the standard fare for public transit, which means that paratransit travelers end up covering little of the total operating cost. So, the taxpayer picks up the difference.

Take Toronto's WheelTrans program as an example – fares and registration fees cover only four percent of the total funding for the program, while demand for these services continues to increase with an aging general population.

If we are paying more as taxpayers to provide this necessary service, yet receiving less, and demands on the system are increasing annually, how exactly should governments respond?

## Is it now time to change the game?

In Toronto, Canada's most populous city and home to its most popular paratransit program, 45,000 users were registered for Toronto's Wheel-Trans service as of 2016. In 2018, it's estimated that it will provide 4.8 million rides (around 107 per registered user). The total budgeted cost for this service in 2018 is \$152.1 million or \$31.63 per ride. User's fees are projected to cover \$8.6 million or just 6% of the total cost. The service is available 24 hours a day,

seven days a week, but requires at least 4 hours' notice before a ride can be made available<sup>1</sup>.

With all this in mind, imagine what might be achieved if some proportion of that money were put towards operating accessible autonomous vehicles? Consider what \$152.1 million could buy?

It's not to say that we should be advocating for cities everywhere to start preparing to buy and operate accessible autonomous vehicles, but the nature of AV technology and its potential use gives you some sense of what the impact could be.

### AVs and the 'new tomorrow'

In a new world in which autonomous vehicles are widely available to people with disabilities, drivers are no longer required and transport can be summoned via a mobile or internet-enabled device to any potential rider's location.

If autonomous vehicles are widely available for use on-demand, cities could then create a marketplace where anyone, anywhere, could summon a vehicle within minutes to take them within a drivable radius. There would be no restrictions on time or place, and no need to interact with drivers or other passengers when getting to, and from, a destination.

If autonomous vehicles for people with disabilities were made available in adequate supply, then the impact on quality of life could be enormous. What's more, there could be other added benefits, including:

- Significantly reduced unemployment due to wider geographic mobility
- Much better social inclusion and subsequent positive impacts to mental health
- Improved accessibility to businesses, amenities, and other social services
- Improved healthcare thanks to better access to medical services

As with so many areas of the economy today, disruptive technologies could radically transform both the economics and quality of service delivery. AVs, as one such disruptive technology, could be the ultimate game-changer for people with disabilities.

However, ensuring the widespread availability of shared AVs designed to give greater access to people with disabilities is far from being a foregone conclusion. Autonomous vehicles have huge potential to transform cities and people's lives, but let's not forget people with disability and mobility issues. The current system can be vastly improved if governments and communities begin to think about how this new and exciting technology can be integrated and modified to provide even greater accessibility and flexibility.

**Many questions still exist, but let's start thinking about these now, rather than wait until retrofit solutions are urgently needed.**

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<sup>1</sup> Toronto Transit Commission 2018 Operating Budget Overview (pg. 18). <https://www.toronto.ca/wp-content/uploads/2017/12/8bd3-TTC-2018-Op-Budget-Notes-V1.pdf>