



Autonomous vehicles

An accessibility game-changer

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Much has been written about autonomous vehicles (AV) and how they will reduce traffic congestion, lessen road deaths (and drunk driving), free up city parking space, 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 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, and specifically for persons with disabilities.

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

Not all transit stations, buses, light rail transit 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 is often seen as exclusionary.

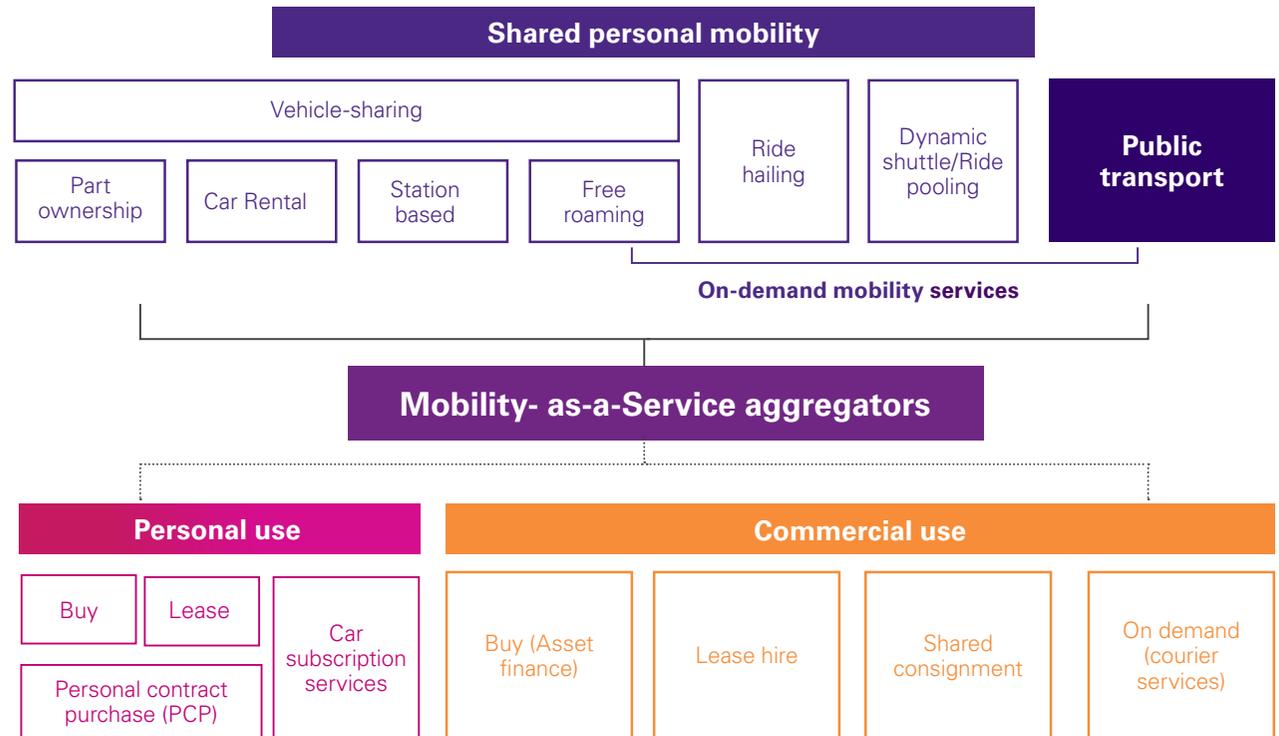
A number of recurring questions have emerged, including:

- **How will customers respond** to potentially radical changes to our daily lives and environments enabled by technology? What will their future behaviours be? How will people with disabilities influence the future of mobility?
- **Where will value be created** across the future mobility ecosystem? How big will the ‘value pools’ be and how will they evolve?
- **What will the new ecosystem look like** and how will the various players’ roles change? Who are the emerging customers for EVs, AVs and MaaS? What will these customers value?
- **What are the potential participation strategy options**, given existing asset bases and capabilities? Who are the key players across the value chain? Which organizations – or countries – are set to lead the way?
- **What are the implications for financial, business and operating models?** How should financial ambitions change? Where and when should car companies, energy providers, etc. participate? How can they evolve to participate effectively?

The rise of on-demand mobility and MaaS

Mobility as a Service (MaaS) is an evolving concept of how consumers, businesses, and service providers move away from vehicle ownership towards service-based transport. In this sense, MaaS includes multi-modal aggregation of transport modes as well as on-demand mobility which is a driving force behind social equity in transport.”

The emerging mobility services landscape





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 per cent of the total funding for the program, while demand for these services continues to increase with an ageing 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?

AVs and the 'new tomorrow'

In a new world in which AVs 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 AVs 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 anywhere 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 AVs for people with disabilities were made available in adequate supply, then the impact on quality of life could be enormous. What is more, there would be other knock-on benefits, including:

- Significantly reduced unemployment due to wider geographic mobility
- 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

Got a question?

Learn more about KPMG's vision for Mobility 2030 by visiting home.kpmg/ca/Mobility2030 or contact **Martin Joyce**

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 the communities begin to think about how this new and exciting technology can be integrated and modified to provide even greater accessibility and flexibility.

The big idea: As with so many areas of today's economy, 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 and become the standard-bearer for social inclusion.

What is Mobility 2030? Mobility 2030 is our vision for the future of mobility. It is the convergence of new transportation technologies (e.g. electric and autonomous vehicles), 'smart' infrastructure, and on-demand transportation services. Mobility 2030 defines the new era of mobility that is reshaping roads and cities, driving massive societal changes, and inspiring cross-industry collaborations – all of which is giving rise to a multi-trillion dollar industry¹.

1. <https://assets.kpmg/content/dam/kpmg/xx/pdf/2019/02/mobility-2030-transforming-the-mobility-landscape.pdf>

