



How recovery from
COVID-19 is accelerating the
digitalization of mobility

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In 2018, emissions and climate change were the dominant challenges of the automotive industry, and Canada was poised to be a leader in the zero-emission mobility ecosystem. We wrote at the time about the decarbonization of transportation, the pace of adoption of electric vehicles, and the effects of these trends on the internal combustion engine automotive value chain.¹ Fast forward to 2020, and COVID-19 is the overriding concern, having a significant impact on, among many other things, the way we get around. However, it may not be all bad news for the automotive industry. Because people have health concerns about using public transportation, efforts to digitalize mobility, already underway, may be accelerated.

As consumer behaviour continues to evolve in response to the pandemic, it seems less and less likely that we will return to the way we lived before. Considering Canada's current vector and momentum—the development of zero-emission cars and improvements to public transit options—we are likely to continue to make progress in these areas while still adapting to the current situation and the very real health concerns that have emerged. Rather than rethinking whether we should use these services, we need to rethink how best we should resume using them. That means we need to think about the ways digitalization can be employed to ensure consumers have mobility and transportation options that are not only safe, but also reflect Canadians' growing concerns about the impact on climate.

The acceleration of digitalization in the transportation and mobility industry is happening in several key areas:

Digitalization of individual carbon footprints – As concern about climate change continues to grow and people look for ways to mitigate environmental harm, Canadians are increasingly embracing the notion that individuals are responsible for their own carbon footprints and that their actions amount to more than a drop in the ocean: they can change the world. As this conviction becomes more widespread, it's likely the adoption of electric vehicles will increase in coming years. This would have an impact on infrastructure budgets, which are currently funded largely through taxes on fuel sales. To replace those funds, governments will need to look for ways to digitally trace transportation usage and electricity consumption in order to generate tax revenue from them.

Digitalization of the ride-sharing experience – Deloitte [research](#) shows that due to health concerns, 57 percent of Canadians plan to limit their use of ride-hailing services, while 62 percent expect to make less use of public transit. For the latter, the use of standardized fare-payment systems makes contact tracing a straightforward process; finding a comparable solution for ride-sharing platforms may be more complicated. While peer-to-peer ride hailing and sharing services prevalent in the current mobility landscape have already digitalized parts of the mobility experience, addressing the COVID-19-related health concerns of prospective riders may result in measures such as providing digital certification that drivers have tested negative for COVID-19, employing contact tracing for all passengers as a way to ensure effective communication and the safety of both drivers and other passengers, even installing infrared cameras that verify and record passenger temperatures. It's not yet clear, however, how many consumers will trust that shared mobility is a safe option.

Digitalization of the driving experience – For people who need to drive but don't own a car, car-sharing platforms could provide digital proof that cars have been disinfected between trips and/or apply contact-tracing measures to all users. Additional solutions may eventually include supplemental safety measures, such as ventilation cleaning



systems that use UV light exposure to kill pathogens. The extensive development and testing needed before such solutions can be considered reliable, however, could make the time and investment prohibitive for all but the most resilient players in this vertical. In the short term, these concerns may drive some consumers back toward car ownership.

Digitalization of human interactions – We’ve already seen how COVID-19 has reduced consumer willingness to use public transit and ride-sharing mobility options, a development that has also contributed to revised expectations about whether a physical presence is necessary for productive business meetings. Soon, the real competition for the internal combustion engine may not be electric vehicles (although these will still be important) but rather augmented reality or virtual reality technologies that give people a realistic virtual physical presence. Our assumption that most work will continue to take place in offices may well change; these digital technologies are the natural next step.

A glimpse into the future: The opportunities of digitalization

Digitalization will also play a role in how we buy everything from apparel and footwear to books and groceries. In fact, we’re already seeing a small but significant shift away from in-store grocery purchases. ²As of mid-June 2020, the Deloitte [State of the Consumer Tracker](#) shows that one in 10 Canadians prefers to bypass the supermarket altogether in favour of online grocery apps. A further 12 percent of people are using apps and delivery services to accomplish at least some of their regular grocery-shopping needs. Moreover, the number of Canadians using online grocery purchase and delivery services increases from 22 percent overall to 32 percent among consumers in the 18-34 age group.

Solidifying this digitally enabled behaviour among younger consumers will almost certainly result in significant growth opportunities for these services. It could also lead to a very different future for the last-mile movement of goods, as one electric delivery truck following an optimized route could eliminate the need for dozens of individual trips by consumers to the store.

One unexpected benefit of the pandemic is that it’s given us a stark demonstration of how exponential growth rates work. Many people have struggled to understand this concept but now that we’re seeing it firsthand, watching how quickly the virus is spreading, exponential growth is no longer an abstract concept. These same exponential forces are at work in improving electric vehicles, solar panels, computer technology, and digitalization. We used to think about these transitions in the context of decades. Now, following COVID-19, we may be able to adjust our timeframes for the adoption of all these technologies down to years, maybe a decade.

As a result, we need to try to pre-empt the unintended consequences for some of the things we believe are going to be beneficial. We’ve already seen, for example, that zero-emission cars will result in lower tax sources for infrastructure projects—but that digital tools could track when and how people are charging their batteries, thus creating a potential revenue stream. Tomorrow’s electric vehicles will also give drivers an option to sell power back into the grid.

Look at how digital technologies make it possible for people to connect, attend meetings, find a ride, get their food delivered: it lets us do nearly all the things we want to do that are related to mobility. And if we examine through the lens of digitalization all the new and different ways people are now doing these things, it becomes clear that the



coronavirus pandemic is accelerating the evolution not just of digitalization but of mobility as well.

We don't have to go backwards. The unprecedented circumstances we find ourselves in today may have altered our direction, but the digitalization of mobility will continue. The future of transportation is rich with uncertainty, but also with opportunity. As we focus on the immediate situation and develop contingencies for the short term, we should also look ahead to the next 10 to 20 years and start to create real options that will take the industry forward into the future.

Contacts:

Jelle Donga

Automotive & Future of
Mobility Leader

jdonga@deloitte.ca

Acknowledgements:

Adriaan Davidse

Director, Consulting

adavidse@deloitte.ca

Ryan Robinson

Automotive Research Lead

ryanrobinson@deloitte.ca

Matt Larmond

Senior Manager, Tax Gi³

malarmond@deloitte.ca



Deloitte LLP
Bay Adelaide Centre, East Tower
8 Adelaide Street West, Suite 200
Toronto ON M5H 0A9
Canada

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NOTES:

¹ "Rapid Transformation to Zero Emissions: Myth or Reality?" *Lead Reach and Connect*, Winter 2018. <http://flip.matrixgroupinc.net/apmb/2018/winter/#/article/16/page/1-1>

² Deloitte state of the consumer tracker, June 23-27, <https://www2.deloitte.com/us/en/insights/industry/retail-distribution/consumer-behavior-trends-stateof-the-consumer-tracker.html>, accessed on July 9, 2020.