

The background of the slide is a composite image. The top portion shows a dark, curved structure, possibly part of a futuristic vehicle or a tunnel, with glowing purple and blue light trails. Below this, a city skyline is visible at night, with numerous illuminated buildings. In the foreground, a road curves through the city, with vibrant, multi-colored light trails (blue, purple, green) suggesting high-speed motion or autonomous vehicle navigation.

Autonomous vehicles:

Canada's existing
regulatory framework

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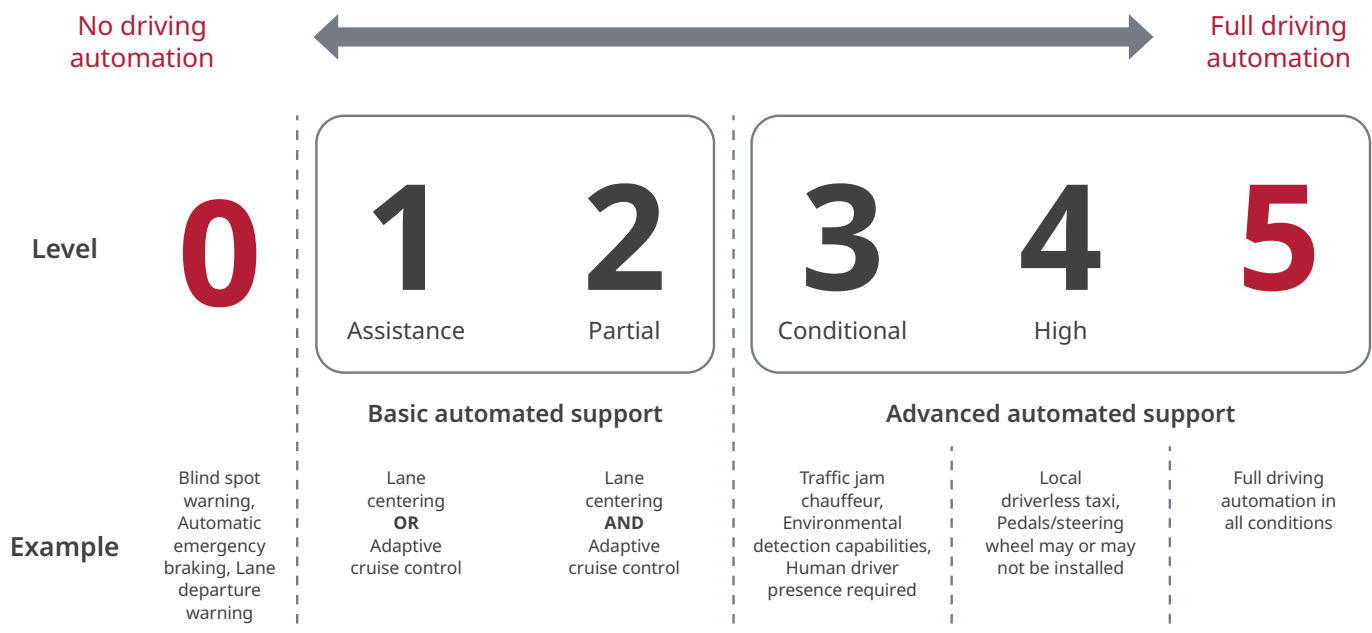
Introduction

Comprehensive regulations must be in place before fully automated, driverless vehicles (AVs) can occupy Canadian roadways. A regulatory framework is beginning to emerge in Canada, with initial federal and provincial guidelines drawing on standards set by the Society of Automotive Engineers (SAE) International.

SAE standards

The SAE has defined six levels of driving automation, ranging from no automation to full automation:

- **Level 0:** no driving automation
- **Level 1:** driver assistance
- **Level 2:** partial driving automation
- **Level 3:** conditional driving automation
- **Level 4:** high driving automation
- **Level 5:** full driving automation



Each level refers to the functions and degree of control the driving automation system can perform. Level 1 includes basic automated support such as adaptive cruise control. Higher levels, such as Level 4, include advanced systems that would be capable of driving without human intervention in most conditions and in limited geographic areas.

As a general point of reference, AVs classified as Levels 0, 1, and 2 always require human oversight and intervention, while Levels 3, 4, and 5 are "self-driving" in varying forms.

Federal framework



The federal government regulates the manufacturing and importation of motor vehicles in Canada through the [Motor Vehicle Safety Act](#) (MVSA). The MVSA sets out specific technical standards and licensing requirements applicable to all motor vehicles.

To promote self-driving technology and safety features, in 2018 the [MVSA was amended](#) to add limited exemptions for AVs meeting certain standards. The federal government (through Transport Canada and the Canadian Council of Motor Transportation Administrators) has also created a set of guidelines, which are linked below.



Transport Canada

- Guidelines for Testing Automated Driving Systems have been released to establish best practices for provincial legislation to adopt. These guidelines apply to research and trials of AVs at SAE levels 3–5.
- [Canada's Safety Framework for Connected and Automated Vehicles 2.0](#) [PDF] ensures the safety of roadways and passengers.
- [Safety Assessment for Automated Driving Systems in Canada](#) [PDF] serves as a policy checklist for the automotive industry to support the deployment of AVs in Canada.



Canadian Council of Motor Transportation Administrators

The [Canadian Council of Motor Transportation Administrators](#) has released its own [guidelines](#) [PDF] that consider the roles and responsibilities of government, testing and deployment of AVs, law enforcement, safety and research.

Provincial frameworks

In contrast to the federal framework (which creates safety regulations for vehicles sold within or imported into Canada), provinces and territories are responsible for regulating drivers, insurance, liability, vehicle maintenance, and traffic laws within their jurisdiction. Although there is not yet a widely adopted approach to regulating AVs across provinces and territories, some provinces have taken steps to encourage innovation by approving pilot programs and trials to test AVs on public roads.

The provinces that have taken formal steps to allow for testing of AVs include Ontario, Québec, Nova Scotia and Manitoba.



Ontario

Ontario's regulation of AVs falls under the scope of *The Highway Traffic Act*, with the Ministry of Transportation's Automated Vehicle Pilot Program serving as the guiding framework.

Ontario was the first province to launch a [pilot program](#) in 2016 (updated in 2019) which allows AVs at SAE levels 3–5 to be tested on Ontario's roads if strict conditions are met. Organizations eligible to apply for this program include:

- auto manufacturers
- other manufacturers of parts, systems, or equipment
- technology companies
- academic institutions

In 2025, Ontario launched a new [Automated Commercial Motor Vehicle Pilot Program](#) which allows for the testing of "specific truck configurations that weigh more than 4,500 kg" and "meet the SAE International standard for Level 3, 4, or 5 autonomy."¹ This program will run until August 1, 2035 and allows for either driver-supervised or driverless testing.²

For participants who start in the driver-supervised stream and want to move to driverless testing, the following conditions must be met:

- completion of a minimum of 100,000 km of testing (in North America) and two years of testing (in Ontario) under the driver-supervised stream and
- demonstration of proof of concept, meeting the above-noted condition within the same testing environments under the driver-supervised stream³

Additionally, all participants in this program are required to work with the Ontario Ministry of Transportation to establish a testing framework that takes a graduated approach, operating first in low-risk environments before advancing to higher-risk environments.⁴

British Columbia

British Columbia (B.C.) has taken a more cautious approach, introducing legislation in 2024 to prohibit vehicles with automation at Level 3 and above from driving on public roads unless specifically authorized.⁵ While there is a carve-out for future pilot projects or regulatory changes to allow AVs at Level 3 and above to operate on B.C. roads, no such plans have been announced.⁶

1 [Automated Commercial Motor Vehicle Pilot Program](#), Ontario.

2 [Automated Commercial Motor Vehicle Pilot Program](#), Ontario.

3 [Automated Commercial Motor Vehicle Pilot Program Conditions](#), Ontario.

4 [Automated Commercial Motor Vehicle Pilot Program Conditions](#), Ontario.

5 [Automated \(self-driving\) vehicles](#), British Columbia.

6 [Automated \(self-driving\) vehicles](#), British Columbia.

Manitoba

Manitoba's Vehicle Technology Testing Act, allows for a "test vehicle" to be operated with or without the engagement of an automatic driving system with a "technology testing permit".

Québec

In Québec, the public is permitted to operate AVs

at SAE Level 3, provided the vehicles are legally authorized for sale and purchase within Canada.

Nova Scotia

In Nova Scotia, the *Traffic Safety Act* is awaiting royal proclamation. Once in force, the amendments will enable insurance mandates to be set out for AVs.

What to expect

We expect there to be further use of AV technologies in Canadian testing and pilot programs as these technologies continue to be developed and refined. In further regulating AV technologies, Canada may look to other jurisdictions for guidance such as the United Kingdom, which is in the process of introducing legislation to regulate the safe use of autonomous vehicles.

Authors



Michael Fekete

Partner, Technology
mfekete@osler.com
tel: 416.862.6792
office: Toronto



Zain Hemani

Associate, Technology
zhemani@osler.com
tel: 416.862.4728
office: Toronto

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