
CCMTA | CCATM
Canadian Council of Motor Transport Administrators
Conseil canadien des administrateurs en transport motorisé
BIENVENUE ASSEMBLÉE ANNUELLE 2018 DU CCATM
WELCOME TO THE 2018 CCMTA ANNUAL MEETING
QUÉBEC

Canadian Jurisdictional Guidelines for the Safe Testing and Deployment of Highly Automated Vehicles

CCMTA AV Working Group Co-Chairs

Mark Francis, Manager, Provincial Vehicle Registration and Licensing

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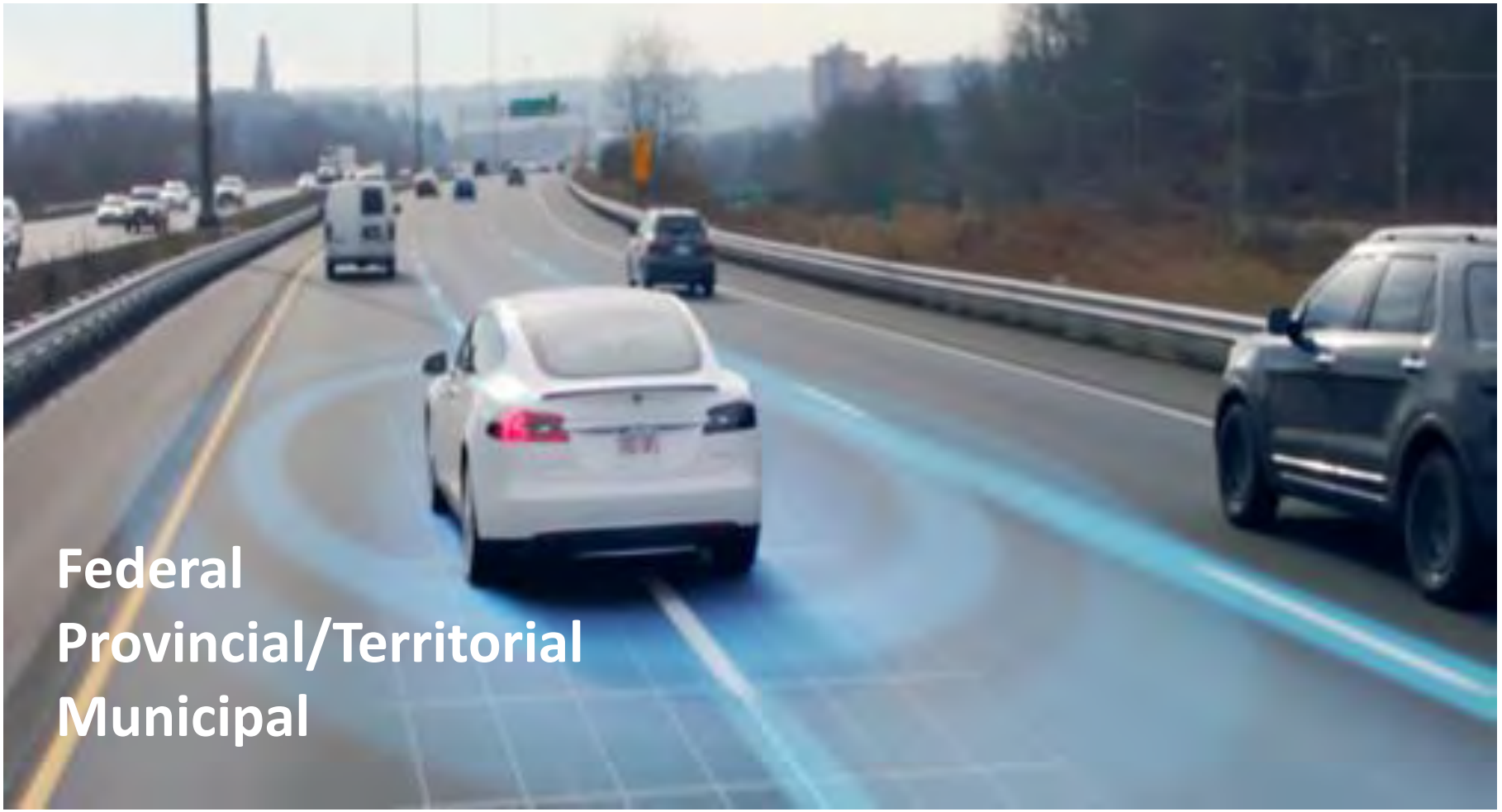
Overview

- History of Work
- Elements of Report
- Examples of Guidelines Recommendations
- Next Steps
- Conclusion

CCMTA AV Work

2014	CCMTA AV Working Group established
2015	CCMTA AV Workshop for government and industry
2016	CCMTA AV Checklist for Jurisdictions and White Paper
2017	AAMVA AV Work Group develop AV guidelines
2018	CCMTA AV Guidelines developed

AVs in Canada – a shared responsibility



CCMTA AV Guidelines

Two complementary documents:

- *Canadian Jurisdictional Guidelines for the Safe Testing and Deployment of Highly Automated Vehicles*

- *Testing Highly Automated Vehicles In Canada: Guidelines For Trial Organizations*

	Jurisdictional Guidelines for the Safe Testing and Deployment of Highly Automated Vehicles	Testing Highly Automated Vehicles In Canada: Guidelines For Trial Organizations
Audience	Motor vehicle administrators, as well as law enforcement with respect to the administration, regulation and control of AVs.	Organizations that may be interested in conducting trials of CV/AVs on public roads in Canada.
Scope	Develop a set of voluntary guidelines and recommendations for those Canadian jurisdictions choosing to regulate testing and deployment of Automated Driving Systems (ADS).	• Canada-wide guidelines for the safe conduct of connected and automated vehicle trials. • Clarify roles and responsibilities of federal, provincial and territorial levels of government involved in facilitating trials for trial organizations

CCMTA Guidelines – Key Elements

- Automated Vehicle Taxonomy, Definitions, Terms and Technologies
- Roles and Responsibilities
- Considerations for the Governance of Testing and Deployment of ADS Vehicles
- Guidelines for the Testing of ADS Vehicles
- Guidelines for the Deployment of ADS Vehicles
- Law Enforcement and Transportation Safety Considerations

Background – Setting the Stage

Discusses the need for common, clear and consistent language for Automated Driving Systems (ADS) in Canada.

Provides definitions within a Canadian context

Highlights the SAE International's *Surface Vehicle Recommended Practice: Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles*, J3016 (2016)

Guiding Principles

The purpose and rationale for the guidelines is based on these key principles:

1. Create a pathway to consistency across jurisdictions
2. Encourage and enable the earliest safe introduction of the technology
3. Confirm and clarify roles and responsibilities of each level of government
4. Demonstrate jurisdictional awareness and understanding of the technology and promote public acceptance, confidence, and adoption
5. Create common language and terms
6. Work towards interoperability

Roles and Responsibilities

Federal Areas of Responsibility	Provincial/Territorial Areas of Responsibility
Transport Canada: • Setting and enforcing compliance with safety standards for manufactured and imported vehicles (including the import of trial vehicles) as well as motor vehicle equipment (tires and child car seats); • Investigating and managing the recall and remedy of non-compliances and safety-related motor vehicle defects; • Motor vehicle safety research; and • Public education on motor vehicle safety issues. **Innovation, Science and Economic Development Canada:** • Setting and enforcing compliance with technical standards and licensing requirements related to wireless technologies integrated in vehicles and road side infrastructure (for trials involving the testing of connectivity technologies)	• Driver Licensing; • Vehicle Registration; • Enacting and enforcing traffic laws and regulations (including trials); • Conducting safety inspections; • Regulating motor vehicle insurance and liability; • Public education on motor vehicle safety issues; and • Adapting infrastructure to support AV deployment **Municipalities** • Enacting and enforcing bylaws for local roadways and parking • Enforcing traffic laws and regulations • Advocating for and accommodating testing; • Adapting infrastructure to support AV deployment • Managing passenger transportation (including public transit and taxi cabs); • Parking • Traffic control; and • Public education and motor vehicle safety issues.

How the report will be used

- Contains a series of recommendations for:
  - Jurisdictions
  - Other Manufacturers and Entities (MOE)

- Focuses on governance and the disciplines of vehicle registration, driver licensing and law enforcement

- Provides **a point-in-time set of voluntary recommendations** to use in developing testing programs (if desired) and preparing for the deployment

Example Recommendations for Governance

Recommendations for Jurisdictions

- Establish an ADS Committee to address ADS testing and deployment. The Committee should include members from a broad range of governmental and private sector stakeholders having interest in and/or responsibilities related to ADS.

- Identify a lead agency to manage the ADS Committee and its work.

- The ADS Committee should develop strategies for addressing testing and deployment of ADS in their jurisdiction, balancing the protection of road safety with enabling technological innovation.

Example Recommendations for Governance

Recommendations for Manufacturers and Other Entities (MOE)

- Manufacturers and other entities should interact cooperatively with and respond to jurisdictional ADS Committee questions and requests.

Examples Recommendations for Testing

Recommendations for jurisdictions

- Develop an internal process that includes an application for manufacturers to test on public roadways within the jurisdiction and include provisions for suspension or revocation of any permit to test on public roads should permit holders violate permit conditions
- Hold test users responsible for violations of existing traffic laws subject to existing legal processes.
- Require all manufacturers and other entities testing all ADS vehicles to apply for and be issued vehicle specific permits prior to testing on public roadways.

Example Recommendations for Deployment

Recommendations for jurisdictions

- Establish uniform language which will benefit law enforcement, the MTA and other stakeholders for testing ADS vehicles. This uniform language should include the use of the acronyms and terms such as “ADS” for “*Automated Driving System*”, and “ADS vehicle”.
- Place a notation on the registration and electronic record by means of an ADS flag and an additional corresponding ADS level field for vehicles that have the capability to operate at Levels 3, 4, or 5.
- Place an “Altered” or “A” status on vehicles not equipped with automated technologies by the OEM but have aftermarket automated technologies.

Example Recommendations for Deployment

Recommendations to MOE

- Manufacturers and other entities should notify the jurisdiction of any change in the ADS level of the vehicles.

Example Recommendations for Law Enforcement and Transportation Safety

Recommendations for jurisdictions

- Jurisdictions should develop and standardize the reporting process to document ADS crashes/incidents beyond the Provincial Highway Traffic Act and Motor Vehicle Accident Report. The ADS crash/incident report should identify if the ADS vehicle is being operated in autonomous mode or non-autonomous mode.
- Transport Canada and jurisdictions should explore additional options to collect and/or link the NCDB collision data with other data sources that may contain the ADS Level vehicle information, including working together to build such data sources where they do not already exist.

Example Recommendations for Law Enforcement and Transportation Safety

Recommendations for MOE

- The manufacturer or other entities should require the designated test users to pass a background check, including, but not limited to, a driver history review and a criminal history check, prior to being authorized to operate a test vehicle.
- Manufacturers and other entities should ensure ADS leave an electronic fingerprint that can allow tracing of input data to whoever initiated them.

Key Points to Take Away

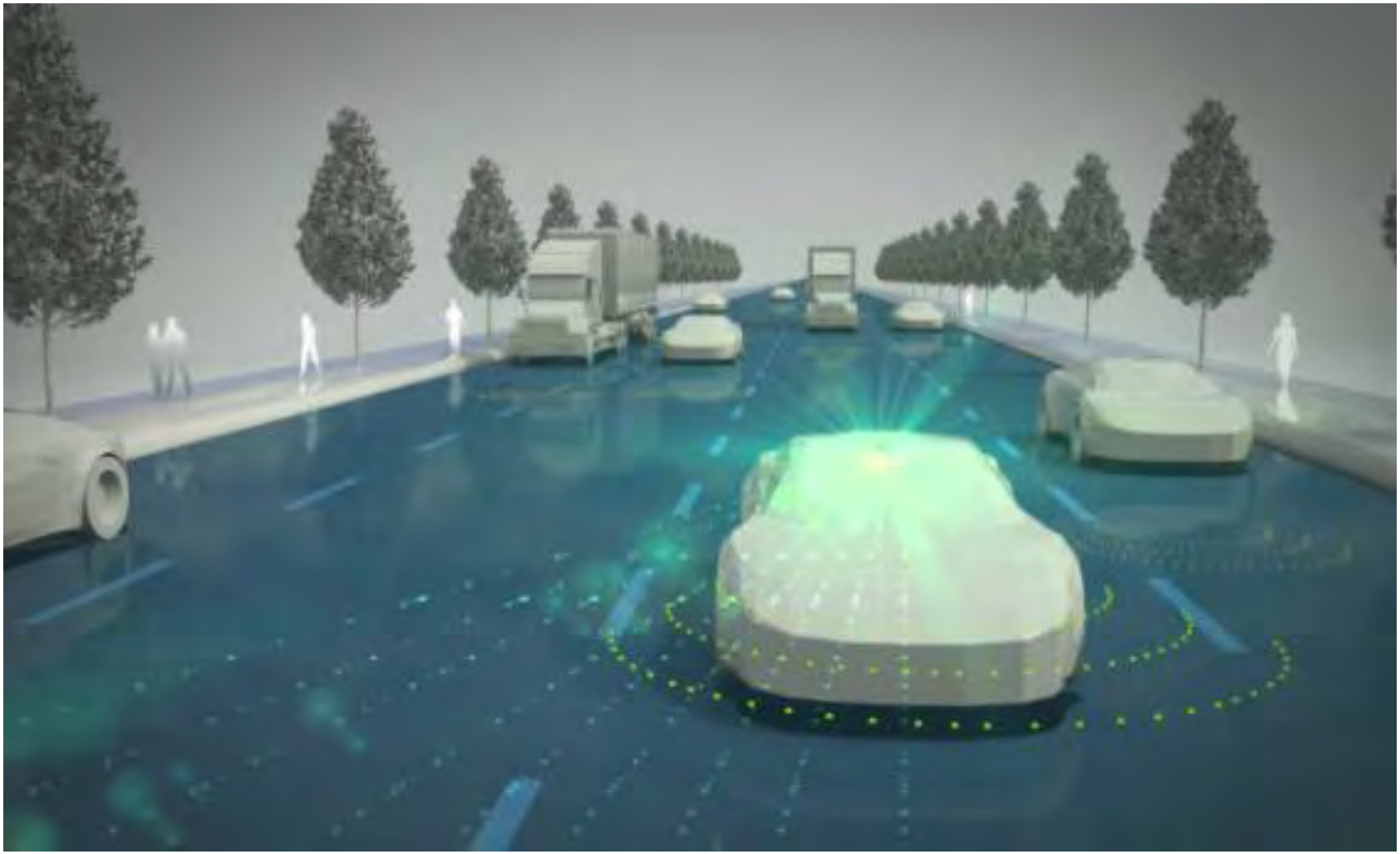
Jurisdictions should consider the recommendations within their legislative process, which may result in changes to laws, regulations and policies.

Manufacturers are encouraged to consider the recommendations when considering testing or deployment to leverage an optimal relationship with their government partners to achieve the most safe and robust testing/deployment conditions.

Next Steps

- Continue consultation with key industry stakeholders
- Seek approval of Guidelines from CCMTA Board
- Provide Guidelines to Council of Deputy Ministers in July 2018
  - Publish Guidelines on CCMTA Website
- Participate and contribute to other organizational efforts to prepare for the testing and deployment of AVs/CVs (i.e. Transportation Association of Canada, AAMVA, PPSC, etc.)
  - Attend conferences, seminars and other forums focused on the technology as well as public policy to advance and share their expertise.
- Update report periodically as the technology advances and address areas such as commercial vehicles, ride share ownership models etc.

Conclusion



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Questions?

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