Safe Testing of Automated Shuttles in Canada

Transport Canada Discussion Paper
Purpose

• The purpose of this presentation is to provide an overview of Transport Canada’s discussion paper: *Safe Testing of Automated Shuttles in Canada.*
Background

• Automated shuttle trials and demonstrations are being conducted globally in various municipalities across Canada.

• Shuttles present unique safety considerations:
  • Vehicle design
  • Types of organizations conducting testing
  • Testing activities that include members of the public
Objectives of the Paper

• Elicit feedback on safety considerations and potential best practices
• Outline safety considerations specific to automated shuttle testing to complement existing guidance
• Provide stakeholders with an inventory of safety management strategies to consider when planning automated shuttle trials
Existing Automated Vehicle Guidance

- National Testing Guidelines
  June 2018

- Jurisdictional Guidelines for Safe Testing and Deployment of Highly Automated Vehicles
  June 2018

- Safety Assessment for Automated Driving Systems
  February 2019
# Outline of the Automated Shuttle Discussion Paper

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Vehicle and Operating Environment

• Capabilities and Limitations of the shuttle:
  • Operational design domain (ODD)
  • Object event detection and response (OEDR) capabilities
• Pre-testing considerations
  • Infrastructure requirements
• Trial planning and route selection
  • Restricted access environments
  • Mixed traffic test routes
Supervision of Shuttle Operations

• Safety drivers and on-board attendants.
  • Training requirements
• Minimizing safety driver distractions.
  • Automation bias and driver fatigue
• Interaction with the shuttle’s controls by safety driver and passengers.
• Considerations for testing with safety driver in vehicles and remote drivers.
Passenger Safety

• Safety considerations for trials involving members of the public and managing potential safety risks.
• Prototype vehicles tend to have limited ODDs.
• Passenger controls, human-machine interfaces, crashworthiness, occupant protections, public education and awareness and privacy are explored.
Engagement with Government Agencies and Law Enforcement

• Responsibilities of different Canadian jurisdictions regarding oversight and approval of automated shuttle trials in Canada

• Discussion of considerations for engagement with law enforcement and first responders
Thank you!

• We are accepting comments on the discussion paper until September 18, 2020

• Feedback and questions can be sent to:
  
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