**Briefing Note: Connected and autonomous vehicles (CAVs)and pedestrians who are blind (vulnerable road users)**

# **About CNIB**

Founded in 1918, CNIB is a non-profit organization driven to change what it is to be blind today. We deliver innovative programs and powerful advocacy that empower people impacted by blindness to live their dreams and tear down barriers to inclusion. Our work is powered by a network of volunteers, donors and partners from coast to coast to coast. To learn more or get involved, visit cnib.ca.

# **Connected and autonomous vehicles and pedestrians who are blind**

Connected and autonomous vehicles (CAVs) have the potential to be life-changing for people who are blind or partially sighted. CAVs may allow someone living with sight loss to operate and travel independently by car for the first time, receive navigation information via apps as a pedestrian by using connected traffic infrastructure, and increase pedestrian safety when interacting with vehicles.

Through our advocacy efforts, we have been engaging with CAV stakeholders, including the Ontario Good Roads Association and car manufacturers who are licensed by the Ontario Ministry of Transportation, to test CAVs on our provincial roads. We want to ensure we create technology and regulations that unlock this potential, rather than creating new barriers and safety concerns.

## **Our Asks**

* Disability stakeholders need to be embedded in the design and testing process of all CAVs.
* Industry stakeholders who are licenced to develop test CAVs ensure that people who are blind are consulted as pedestrians and drivers.
* Governments to introduce regulations that ensure CAV data is consistent, so it has the potential to be connected to third-party accessibility apps.

## **Considerations**

### **Safety**

* **Noise Emissions**. Once an electric vehicle starts travelling at less than 30 km/hr, its sounds emissions are exceptionally low. Will Canadians who are blind or partially sighted be able to hear vehicles approaching intersections, and be able to cross safely? When the vehicles are stopped at intersections, how will a pedestrian with sight loss be able to detect their presence and safely navigate past them?
* Transport Canada has set out regulations which require any EV manufactured after July 2021 to have installed an Acoustic Vehicle Alerting System (AVAS). Will AVAS really work? More testing needs to take place as manufactures can deploy either sounds which comply with U.S. regulations or those set out by the European Union.
* **Algorithms and Vulnerable Road Users**. Will the algorithms deployed in CAVs be able to react to a pedestrian who may not be able to detect that an oncoming vehicle is approaching? People who are blind or partially sighted may not be able to anticipate what a CAV is going to do. CAVs algorithms need to incorporate all different types of pedestrian so that they can read pedestrian behaviour and respond accordingly.

### **Data Standards**

* **Uniformity of Data**. CNIB wants to ensure that every municipality across Canada adheres to the same provincial and federal regulations that make CAV data uniformly available. This is an opportunity to reduce danger to vulnerable road users by ensuring all municipalities manage their vehicles in the same way.
* **Data Standards**. Existing mobile applications are instrumental in helping Canadians who are blind or partially sighted navigate safely and independently. CAVs will exchange large amounts of data (e.g. information about road conditions, roadblocks, construction, etc.). If municipalities are required to share the same standard of data, we can ensure it is available in a format that is accessible to all pedestrians, regardless of blindness. This will help ensure everyone is kept abreast of infrastructure maintenance, which may affect their safety.

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