Canadian Automated Vehicle Initiative

# CAV Update September 2025

## From the Editors

**CAVI** is preparing for the next phase of the *Trans-Canada Autonomous Truck Demonstration Project*. There are four key things to report:

- The webinar held on September 4 was a big success. 120 people registered and we had excellent feedback from the attendees.
- *Canadian group sets goal of driverless truck travelling across Canada in 2028* is the title of an excellent article in the **Globe and Mail**, written by Mark Richardson., and published on September 8, 2025. The first two paragraphs are:

  *There's a shortage of truck drivers in Canada and it's increasing: Industry estimates provided by Transport Canada say this country needs more than 25,000 new drivers today and that number could double by 2035. This is where the Canadian Automated Vehicle Initiative (CAVI) believes it can help.*

  *"With the Trump tariffs and all that's happening, there is a renewed focus on inter-provincial trade," says Barrie Kirk, the president of CAVI, a non-profit association for autonomous vehicle stakeholders in government, industry and academia. "Ninety per cent of that trade is done via truck and we have this shortage of long-distance truck drivers and it's getting worse. The answer is automation"*

  The full article is here (there is a paywall)
- The next phase of the project -- starting in October 2025 – includes the detailed project planning. We currently have a vision, a Steering Committee, and stakeholders, including industry, government and academia. We also have a lot of enthusiastic support. In October 2025, we will create seven working groups and invite stakeholders to participate
- The other key part of the next phase is raising financing for this important, nation-building project. We will publish more details next month.

## *Canadian CAV News*

CAVI's **Lahiri Kanipakam** attended **GCXpo** at Ottawa's **Area X.O**, held on September 24, 2025. Here is her article with insights from the event.

GCXpo in Ottawa was a great showcase of how Canada is pushing the boundaries of autonomous technologies in all its many forms. From robotics to smart mobility, agriculture to defense, many institutions and companies are contributing to this rapidly advancing field. Here are some of the highlights:

- **MAE Robotics** demonstrated impactful solutions supporting ADAS applications
- **National Research Council of Canada** (NRC) highlighted its ongoing research into smart mobility and connected vehicle systems
- The **University of Ottawa** and **Carleton University** shared academic contributions in advanced mobility solutions and navigating and sensor Integration
- **ReasonX Lab** focused on the critical safety aspects of autonomous systems, ensuring reliability and trust in deployment through Fault Tree safety case analysis
- **InDro Robotics** showcased aerial and ground robotics tested over private 5G networks, along with rapid prototyping capabilities through **InDro Forge**
- **Haggerty AgRobotics** presented field-tested autonomous agricultural machines designed to address labor shortages and improve efficiency in farming
- **Aurrigo** promoted its work on a shuttle bus pilot project. More information on the project is here

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In a major coup, Toronto-based **Waabi** has hired Lior Ron as its Chief Operating Officer (COO). Mr. Ron was formerly the CEO of Uber Freight before moving to Waabi. Waabi is actively developing its automated truck technology at its home-base in Toronto and on the road in Texas. Waabi describes itself as a *Physical AI* company where its AI technology is built into physical systems such as a truck. For the time being, its focus is on commercializing its automation technology on long-haul trucks. However, the company has robotaxis, warehouse robots, and humanoid robots on its radar for the future. The new COO believes fully driverless trucks will be on Texas highways by the end of 2025. He also predicts that by 2030, driverless trucks will be a common sight across the United States. Waabi has attracted over US$280 million in funding since its inception in 2021. The company states that it is well funded and is not seeking to raise more capital. **Uber**, **Nvidia** and **Volvo** are some of the companies that have invested in Waabi. More information is at this link.

As robotaxis proliferate, the issue of passenger pick-up and drop-off (PUDO) at the kerbside can turn into a major problem for robotaxi companies, and the owners of the kerb infrastructure. Some sort of management system will be required to orchestrate the arrival and departure of so many automated vehicles in the future. This topic was extensively covered in an interview with Mr. Bern Grush - the Executive Director of Toronto-based **Urban Robotics Foundation**. The PUDO problem was likened to arrival/departure of aircraft at an airport where the air traffic control system coordinates such arrivals and departures. The **International Organization for Standardization** (ISO) is actively addressing this issue by developing *ISO 25614*, a standard titled *Kerbside management — Orchestration for loading and unloading*. Bern's interview can be viewed at this link. More information about *ISO 25614* is available at ISO's site at this link.

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In a first for Canadian universities, the **University of British Columbia** (UBC) in partnership with **Rogers Communications Inc.** has launched a four-week pilot project by deploying three **Kiwibot** robots in its Vancouver campus. The project was officially launched on September 2, 2025. According to UBC, the purpose of this project is to tap into Rogers' 5G testbed for communication, study how students interact with the robots, and build a dataset on human-robot interaction, emotion recognition and real-time AI learning for possible future and industry collaborations. More information about the UBC/Rogers project is at this link.

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Oakville-based **Geotab Inc.** is a leading global company specializing in commercial vehicle telematics primarily for fleet management. Using connected vehicle technologies (cellular and satellite-based wireless), Geotab collects analyzes vehicle data through its Geotab *GO* device, which plugs into a vehicle's OBD II port. The company recently reached a major milestone by surpassing five million connected vehicle subscriptions globally. Collectively, these vehicles produce 100 billion data points daily. Applying advanced AI and machine learning to this data, insights are gleaned for fleet operators for reducing vehicle downtime, automated odometer capturing, engine diagnostics, optimizing routes, lowering fuel costs, and minimizing environmental impact. More information is at this link.

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**Potential Motors** is a Fredericton, NB company specializing in off-road vehicles driver assistance and automation. Started in 2018, the company has progressively developed more sophisticated systems to equip off-road vehicles with on-vehicle sensors such as cameras, radar and LiDAR to enhance vehicle

performance and assist the driver to see farther ahead than he/she would see unaided through its *Terrain Intelligence* and *Off-Road OS* technologies. The company is active in the fields of recreational off-road vehicles, general automotive, the mining sector, and the defence industry. More information about the company's products and services at the Potential Motors' website is at this link.

## International CAV News

In 2016, the **Volkswagen Group** created an independent subsidiary called **MOIA** to develop its autonomous vehicle technology. At the largest motor show in Germany (*IAA Mobility 2025*), MOIA announced that it is now offering its automated driving system on a *turnkey basis* to any company wishing to enter the robotaxi industry. The package includes VW's *ID. Buzz AD* autonomous vehicle capable of Level 4 operation, the software ecosystem that controls fleets in real time, passenger support, and monitoring of safety functions. Additionally, MOIA offers what it calls *Operator Enablement*. This includes simulations, training, support for the start of operations, and monitoring during ongoing operations. The system integrates with existing booking apps and includes remote monitoring and the handling of exceptional situations such as emergency operations. MOIA's plan is to help cities and companies deploy autonomous services quickly. More information on MOIA's site is at this link.

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**Waymo**'s popular robotaxi service has so far been available only to adults (18 or older). After doing extensive market research, Waymo has now started offering a *teen account* enabling unaccompanied rides for teens aged 14 to 17. This service is currently only available in Waymo's Phoenix service area. The *teen accounts* are linked to a parent or guardian's account, allowing oversight through features such as real-time location sharing. Furthermore, specially trained remote operators are available during rides, who can provide assistance and even notify parents if necessary. Generally speaking, the current generation of teens are not as motivated as previous generation in getting a drivers licence as soon as they can. They are more likely to use public transportation and ride-hailing services such as Uber and Lyft. Waymo opening its market to teens provide yet another alternative for teens to get around. More information on Waymo's site is at this link.

WAYMO

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Almost all autonomous vehicle developers aim to eliminate the human driver from behind the wheel. The rationale is that the human driver is a major cost factor in operating a taxi or a long-haul truck. A recent report by the London-based **Hongkong and Shanghai Banking Corporation** (HSBC) bank challenges this assumption. According to this report, companies like Waymo or Tesla may require 7 to 8 years after launch to reach consistent break-even cash flow, with profitability not expected till about 2033. Key costs often overlooked include the initial capital cost and ongoing operational costs such as cleaning, maintaining, charging, parking and remote human supervision. More information is at this link.

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Staying on the same theme of business case for the robotaxi industry, on August 20, 2025, **Forbes** magazine published an article titled *What Is The Robotaxi Vision That's Worth Trillions?* The author (Brad Templeton) examines some of the claims of robotaxi industry's speculation that the robotaxi market is worth trillions of dollars in the future. Part of their argument is the worldwide annual spending on ground transportation services. This is estimated to be worth about US$5 trillion. The robotaxi industry aspires to capture some of this huge expenditure by consumers of such services. The author identifies replacement of private car ownership as having the largest economic benefit for robotaxi companies. It is argued that the robotaxi not only defrays the capital cost of purchasing the vehicle but also takes over associated costs of vehicle ownership such as paying for fuel to oil/electric companies, car loan banks, dealerships, cleaning, parking, insurance, service, parts, tires and more. The Forbes article can be viewed at this link or this one.

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In a setback for **Tesla** and its *Automated Driving System* (ADS), on August 1, 2025, the jury at a court in Miami, FL awarded US$242.6 million to the victims of an April 25,2019 crash in Key Largo involving a Tesla Model S while it was under the control of its *Autopilot* ADS. The crash occurred at about 11:30 PM. Whereas Tesla had made numerous claims about the robustness of its ADS, it was revealed that the Model S blew through flashing lights, a stop sign and a T-intersection at 62 Mph (99.7 Km/h) before slamming into a parked vehicle belonging to the victims. A 22-year old female was killed, and a male was severely injured as a result. What is worse is that Tesla denied having the onboard video and data of the moments before the crash. The plaintiffs hired their own experts to get this data. Tesla stated that it made a mistake. This is the first court case of its kind where Tesla had been found liable for its ADS technology. There had been previous incidents where Tesla was successful in dismissing the lawsuit or settling out of court. Tesla has indicated that it will appeal the verdict. More details are at this link.

Robotaxis and other automated vehicles are viewed as bad news for ride-hailing companies such as **Uber** and **Lyft**. Reason is the market share that robotaxi companies like Waymo are slowly and steadily taking from these companies. To quantify this and put it in perspective, Pittsburg-based **Gridwise Analytics** has published a 12-page report after analyzing ride-hailing data in the four cities that Waymo is most active in: Phoenix, San Francisco, Los Angeles and Austin. The analysis covers the one-year period from July 2024 to July 2025. The results are mixed. Whereas the monthly gross pay of ride-hail drivers in Los Angeles dropped by 18.4%, San Francisco drivers saw a 7.8% increase in their earnings. Copy of the Gridwise report can be viewed/downloaded at this link.

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**Bedrock Robotics** is a San Francisco-based startup focused on automating heavy machinery used in the construction industry, e.g. excavators and dump trucks. Bedrock does not sell new machinery, instead the company provides hardware and software that can be installed on existing machines to enable them to operate autonomously. The company founders are veterans of the autonomous vehicle industry. So far, they have raised US$80 million in venture funding to develop their technology. According to the company, there is huge demand for new housing, data centers and factories. All of these require heavy machinery and the skilled workers to operate them. Automation can address these needs. More information is at this link. A short YouTube video about Bedrock Robotics and its automation technology can be viewed at this link.

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And finally, at a recent event, **Malcolm Gladwel**l - the well-known Canadian author and journalist spoke about his own experience with a Waymo robotaxi in Phoenix. He repeatedly made a Waymo robotaxi stop by standing in front of it and going around it several times. The point he was making was that robotaxis designed to be extremely cautious around people may be abused by people aware of this characteristic of a robotaxi. With human-driven vehicles, there is a built-in deterrence disincentive for people to take chances with it such as jumping in front of it or blocking its path. No such deterrence exists in driverless vehicles. A short TikTok video of Mr. Gladwell opining about driverless robotaxis can be viewed at this link.

## CAVI Speakers' Bureau

CAVI provides speakers for many different types of events across Canada, the US and overseas. On the one hand, our keynotes and presentations have core messaging on the status of CAVs, their deployment scenarios, and the impact on business plans, government regulations, and almost all aspects of society. On the other hand, each presentation is customized for the audience and the time available.

To inquire about a speaker for your event, please write to speakers@cavi-icva.ca

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## Upcoming CAV-Related Events

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| October 5-8, 2025 | TAC Conference & Exhibition, Quebec City |
| October 15-16, 2025 | Software Defined Vehicles USA 2025, Detroit, MI |
| October 22, 2025 | Vehicle-to-everything -V2X – Programme Showcase, online webinar, Innovate UK |
| October 21-23, 2025 | Future of Automotive Testing Conference, Novi, Michigan |
| November 4-6, 2025 | Aerial Evolution Association of Canada annual conference and exhibition, Edmonton AB |
| November 18-20, 2025 | Automotive Cyber Security, Connectivity & SDV Week 2025, Berlin, Germany |
| November 24-25, 2025 | Autonomous Vehicles & AI Europe 2025, Frankfurt, Germany |
| January 6-9, 2026 | Consumer Electronics Show (CES), Las Vegas |
| April 29-30, 2026 | Discovery X by Ontario Centre of Innovation, Toronto, ON |
| June 2-4, 2026 | AutoTech 2026, Suburban Collection Showplace, Novi, MI |

## About CAV Update

*CAV Update is a free, monthly summary of news and analysis in the world of connected and automated vehicles, and their impact on the private sector, government, and society.*

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*The Canadian Automated Vehicle Initiative (CAVI) is an association for all stakeholders in industry, government and academia involved in any aspect of the ever-increasing automated vehicles ecosystem.*

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