Canadian Automated Vehicle Initiative

CAV Update June 2025

From the Editors

CAVI has made very good progress on the Trans-Canada Autonomous Truck Demonstration project.

First, the project Steering Committee is coming together very well. CAVI is pleased to announce that the confirmed members are:

Barrie Kirk, CAVI (Chair)
Andrew Miller, Paladin Consulting (Deputy Chair)
Marie-France Laurin, MFL Consulting
Mary Yazdani, reasonX
Nikko Wang, Alberta Motor Transport Association (AMTA)
Raghavender Sahdev, NuPort Robotics
Simon Diemert, Critical Systems Labs
Tasha Truant, Goss Gilroy Inc.
Tony Jenkins, National Research Council (NRC)

In addition, several others have been invited to join the Steering Committee.

Second, we are very pleased to announce that CAVI and SINTEF have signed a Memorandum of Understanding.

SINTEF is one of Europe's largest independent research organizations, offering services, projects, publications, and expertise in various technology areas. SINTEF's Department of Mobility works with different projects including connected and autonomous mobility for passengers and freight applications. One of their projects is MODI, a €28 Million multi-country autonomous truck demonstration project stretching from Amsterdam to Moss, Norway, a distance of about 1200 km.

We are pleased that SINTEF will be an advisor to the proposed Trans-Canada Autonomous Truck Demonstration project.

Finally, a description of the vision for the project is available here.

Canadian CAV News

In April 2024, the B.C. Provincial Government banned the operation of all Level 3, 4 and 5 self-driving vehicles on B.C.'s public roads. Despite this ban, the **Prince Rupert Port Authority** (PRPA) has been testing automated trucks at its facility in anticipation of significantly higher cargo volumes in the next few years, and the ongoing shortage of qualified truck drivers. According to PRPA, at present 150 drayage moves are performed each day at the Port of Prince Rupert. This is expected to increase to 1,100 by 2030. The reason is the expansion of the port facilities for increased exports (agriculture, forestry, and plastic resin products), and imports from overseas. The **Teamsters Union** representing the truck drivers at this port is strongly opposed to automated truck introduction. The union cites potential job losses for its members as well as safety concerns. The automated truck initiative is part of a larger one called *Heavy Duty Zero Emission Trucking*. Toronto-based **NuPort Robotics** is one of the partners in this pilot project. More information is at this link. A related short YouTube video can be viewed at this link.

Food delivery company **Skip** (formerly SkipTheDishes) has partnered with Waterloo-based startup **Real Life Robotics** to launch a 3-month food delivery pilot project in the city of Markham, Ontario. This is likely the first municipality-approved project of its kind in Canada. Customers ordering food on the Skip app have the option to choose delivery by robot if they are located within the robot's delivery area. At present, a human overseer accompanies the delivery robot to ensure safe operation and to observe its interactions with other vehicles, pedestrians, crossing roads, picking up of the food from participating local restaurants, and the final delivery to customers. More information is at this link. A short video showing the delivery robot in action can be viewed at this link.

Ottawa-based **QNX** is a division of **BlackBerry Limited**. Its industrial software products have wide applications including automotive, where it powers digital dashboards, infotainment systems and other systems. Major companies such as BMW, Honda, Mercedes-Benz, Toyota, Volkswagen and Volvo are among its customers. Now, China's **WeRide Inc.** has selected QNX as its partner for the development of its *Advanced Driver Assist Systems* (ADAS) and its L2++ autonomous vehicles under its *WePilot* initiative. The L2++ level of automation allows limited hands-off driving, automated lane changes, predictive behavior, where the vehicle adjusts its speed for curves or merging traffic, and achieves more accurate object recognition through advanced sensors such as radar, lidar, and AI. Under the umbrella of *WePilot*, the company is also developing a *RoboTaxi*, a *RoboBus*, a

RoboVan, and a *RoboSweeper*. QNX technology could be incorporated in all of these too. More information is at this link.

FPInnovations is a private not-for-profit R&D organization that specializes in the creation of solutions that accelerate the growth of the Canadian forest sector and its affiliated industries to enhance their global competitiveness. The truck driver labour shortage is a growing problem, especially in the forest sector. FPInnovations believes that autonomous transportation solutions can serve as a viable option to this challenge. After having completed several proof-of-concept tests and demonstrations on resource roads in Québec with various technology suppliers, FPInnovations now aims to take the next steps in making autonomous transportation a real-world solution. Working with regulators, industry partners and technology suppliers, FPInnovations aims to create automated vehicle corridors on specific forest operational routes throughout Canada. More information is here.

CAVI was honored to organize a recent panel on CAVs for a University of Ottawa workshop. The panel was moderated by Barrie Kirk and featured Christopher Hynes (Transport Canada), Hamid Mammeri (National Research Council), Marie-France Laurin (MFL Consulting), Mark Aruja (Aerial Evolution Canada), and Walter Knitl (AIoT Canada).
The topics addressed included Transport Canada's guidelines for transitioning from pilot projects to deployment; transitioning from summertime CAV deployments to winter ones; surprises incurred with CAV pilot projects; and various other topics.

International CAV News

China claims to have deployed the world's largest fleet of automated electric haul trucks at the Yimin open-pit coal mine in inner Mongolia. The purpose-built trucks are designed without the traditional driver cab and are capable of carrying up to 90 metric tons and operate continually in extreme cold of –40°C. The automated trucks can travel 60 kilometres on a single charge. Equipped with technology from **Huawei**, the vehicles feature full self-driving capability, 5G connectivity, intelligent battery-swapping technology (taking only 6-minutes for a battery swap), and real-time safety monitoring. The mine plans to increase the number of its automated trucks to 300 within 3-years. More information is on Huawei's site at this link. A short YouTube video of the automated trucks in action can be viewed at this link.

On June 4, 2025, **Reuters** published a report titled *Robotaxis go from hype to maybe, possibly, profit*. The report takes a deep dive into the cost structure of robotaxi companies in the United States and China. The capital cost of a robotaxi is high due to the numerous sensors that are required; as well as the *fly-by-wire* systems for steering, braking, acceleration, and other functions under the vehicle's computer control system. According to the article, a typical **Waymo** robotaxi capital cost is US$120,000 at present. This cost is expected to fall to US$85,000 for Waymo's next generation of robotaxis and could be as low as US$50,000 by 2030. Another cost component is robotaxi employees at the control centre keeping an eye on the robotaxi fleet. The cost of this is under 5% of Waymo's per-mile costs according to analysis by an investment bank. The Reuters article can be viewed at this link.

In a recent announcement, the new U.S. Secretary of Transportation outlined plans to eliminate regulatory barriers and reduce red tape to accelerate the development of autonomous vehicles (AVs) across the United States. A key example is the current disparity in how the **Federal Motor Vehicle Safety Standards** (FMVSS) handles exemption requests: while foreign AV developers often navigate a relatively straightforward process, U.S. developers face significantly stricter requirements—placing them at a competitive disadvantage. To address this, FMVSS will streamline its exemption procedures to level the playing field for domestic companies. Framing AV development as a global race—particularly with China—the Secretary emphasized the urgency of innovation and announced the creation of a new *Autonomous Vehicle Framework* aimed at securing U.S. leadership in the industry. The 34-page amended *Standing*

General Order concerning this matter can be viewed/downloaded at this link. A brief video of the Secretary's remarks and policy outline is available on YouTube at this link.

A recent article in UK's **Daily Mail** newspaper titled *Driverless taxis are beginning to react like humans on San Francisco streets and the results could be terrifying*, described how **Waymo** robotaxis are now exhibiting certain human-like behaviors such as impatience or annoyance. As a rule, driverless vehicles had been programmed/trained to strictly observe all traffic laws and rules such as not exceeding posted speed limits, slowing down in playground zone, stopping at pedestrian crossings if someone was in the crosswalk, cautiously making left turns against oncoming traffic, etc. Other motorists often find the overly cautious style of driving by robotaxis frustrating. According to the article, Waymo has now introduced rolling starts once a pedestrian is close to crossing the road (suggesting impatience) and will beep a vehicle that unexpectedly swerves into its travel lane (a sign of annoyance). Waymo believes that being an assertive driver means that you are more predictable, that you blend into the environment, that you do things that you expect other humans on the road to do. The Daily Mail article can be viewed at this link.

Pittsburgh-based **Aurora Innovation Inc.** is likely the best-known company developing autonomous long-haul trucks (Class 8,18 wheelers) in the United States. Aurora has announced that it will deploy driverless trucks in Texas on a commercial basis this year. The trucks will be hauling freight for various customers in the Dallas-Houston corridor. Prior to this deployment, Aurora published a 75-page document titled *Aurora Driverless Safety Report 2025*. This document details Aurora's methodology for safely operating these trucks on Texas' public roads. The company says the report is part of Aurora's commitment to safety transparency, and details when, where, why and how the company's (software) product - the *Aurora Driver*, functions safely. It explains how Aurora's safety approach affects every part of the organization and how best practices from other safety-critical industries inform internal processes. The Aurora report can be viewed/downloaded at this link

---

Staying with automated trucks, California-based **Kodiak Robotics Inc.** is a competitor to Aurora. It was founded in 2018. Kodiak recently announced getting acquired by a *Special Purpose Acquisition Company* (SPAC) at a valuation of US$2.5 billion. SPAC was the route that three other high-profile automated truck companies financed their R&D and growth. Notable companies previously going the SPAC route were **Aurora**, **TuSimple** and **Embark Trucks**. TuSimple and Embark are no longer in business. Investors and SPAC

companies backing them collectively lost about US$13 billion betting on these companies. Hopefully, Kodiak will fare better than them. More information on the Kodiak site is at this link.

Los Angeles highways are famed for their clogged traffic and gridlock. The organizers of 2028 summer Olympic games are keenly aware of this and are planning alternative means of public transportation for their expected 15 million visitors for the games. One such alternative is passenger drones. The organizing committee is working with **Archer Aviation** to deploy up to 50 of its airtaxis for transporting people and VIPs quickly from one venue to another. Archer will offer 10- to 20-minute flights using a network of vertiports throughout the city. This includes SoFi Stadium, LAX and other hubs from Santa Monica to Orange County. The company's CEO predicts that the cost will be comparable to Uber's premium service known as *Lux*. The company website states that Archer is targeting 20-50 mile (32-80 Km) routes that take over an hour in traffic. More information is at this link.

A lot of autonomous tech has been developed in **California**. Numerous autonomous vehicles are operating on California's public roads on a commercial basis or undergoing tests. One noticeable anomaly in vehicle automation is in California's farming industry, where a 50-year old regulation prohibits labour-saving autonomous farming equipment, such as driverless tractors and robotic harvesters being deployed by farmers on their fields. The regulation's original intent was safety concerns, and the requirement for a human operator to be physically present when operating agricultural equipment. Farmers argue the prohibition puts California at a competitive disadvantage versus other states that are embracing ag-tech automation amid labour shortages. This has sparked renewed calls to modernize the rules to allow autonomous farming machinery in California. More information is at this link.

And finally, a recent article in the **Wall Street Journal** titled *Drone delivery picks up pace*, puts the spotlight on three leading U.S. drone delivery companies - **Zipline**, **Wing** (part of **Google**) and **Amazon**. Similar to autonomous trucking companies, Texas appears to be the hotbed for deliveries by drone. According to the article, Zipline is currently in lead with Wing and Amazon running second and third in this nascent industry. Zipline and Wing have partnered with **Walmart** and make deliveries in the Dallas-Fort Worth area, and near Walmart

headquarters in Bentonville, Arkansas. The delivery methods of each company are different. Zipline lowers the package from a 91.5 metre (300 feet) tether. Wing does the same from a 7 metre (22 feet) tether, and Amazon drops the package from a height of 3.9 metres (13 feet). The **Federal Aviation Administration** (FAA) has certified Zipline's 55-pound (25 Kg) drone. The drone is 6 feet wide and 7 feet long (1.8m by 2.1m) and is certified for fully autonomous flight. Zipline has also raised US$500 million in funding since its inception in San Francisco in 2014. The article 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

Upcoming CAV-Related Events

July 23, 2025	Developing a Regulatory Roadmap for Urban Robotics, a virtual workshop by Urban Robotics Foundation (URF)
August 24-28, 2025	ITS World Congress, Atlanta, Georgia
August 27-28, 2025	ADAS & Autonomous Vehicle Technology Summit North America, San Jose CA
September 8-9, 2025	Automotive Cybersecurity Summit 2025, Orange County, California
October 5-8, 2025	TAC Conference & Exhibition, Quebec City
October 15-16, 2025	Software Defined Vehicles USA 2025, Detroit, MI
October 21-23, 2025	Future of Automotive Testing Conference, Novi, Michigan
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

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.

Chief Editor: Ahmad Radmanesh
Contributors to this issue: Barrie Kirk, Keith Fagan, and Donna Elliott

To subscribe, click here. To unsubscribe, click here.
We welcome all comments; please send them here

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.

300 Earl Grey Drive, Suite 222, Ottawa ON K2T 1C1, Canada.
info@cavi-icva.ca www.cavi-icva.ca