



Canadian Automated Vehicle Initiative

CAV Update

March 2025

From the Editors

CAVI was launched 12 months ago as a collaborative partnership between government, industry, academia and other associations to champion the implementation of connected and automated vehicles of all kinds in Canada.

CAVI has made remarkable strides as Canada's leading voice for connected and automated vehicles. Together with government, industry, academia, and associations, we've driven collaboration, innovation, and awareness across the nation.

In just one year, we've achieved significant milestones:

- Formed CAVI as a not-for-profit association to be a voice and a champion for the industry, to be a forum for discussion, and to bring a more national focus to Canada's CAV strategy
- Established a 9-person Board of Directors with representatives from 6 provinces from BC to NS
- Built a team of 8 people
- We now have about 50 members, including all three levels of government, corporations, academia and other associations. Their interest includes both the implementation and use of CAVs
- Continued publishing *CAV Update*, our newsletter, which was launched in September 2013.
- A 6-person CAVI Working Group developed and published a White Paper on a *CAV Strategy for Canada*. You can view / download it [here](#).
- Presented a webinar on *The Ever-expanding Use of Autonomous Vehicles*
- Postmedia published a CAVI op-ed on *Self-driving cars will be safer than human drivers — but not perfect*. This is available [here](#).
- Presented a paper on global CAV test sites at a Stuttgart, Germany conference
- Researched and published a directory of about 100 organizations in the Canadian CAV ecosystem
- Provided CAV education to multiple audiences, including media (CBC, CFRA, Auto News Canada, etc.), professional organizations (MITL, OPMMA), students (St. Patrick's HS, AiHT), and via email blasts and LinkedIn
- Liaised with a wide range of stakeholders, including CSA Group, CILTNA, IBC, ITS Canada, MIRA (UK), MITL, MTO, OVIN, PAVE, SINTEF (Norway), TAC, Transport Canada, UQO, Zenzic (UK), etc.

Together, we can lead Canada toward a smarter, safer, and more connected future. The next 12 months will focus on bold initiatives, from shaping Canada's CAV Strategy to expanding education and engagement opportunities.

If you would like to contribute more to the Canadian CAV ecosystem, we invite you to join CAVI. Please go to CAVI's web site [here](#) and click on "Join us". We will be forming additional working groups on key topics and welcome your input.

Canadian CAV News

On February 24, 2025, the **Canadian Broadcasting Corporation** (the CBC) published an 11.5-minute video report titled *Ready to share the road with self-driving 18-wheelers?* The report featured the Toronto-based automated truck developer **Waabi**. Waabi conducts most of its testing on the public roads in Texas. The CBC reporter was invited to Texas to take a ride in one of Waabi's automated trucks for a run on *Interstate 45* between Dallas and Houston. According to the CBC, this is the first time Waabi had allowed a media organization to ride in one of its automated trucks and shoot video from within the vehicle. Waabi's CEO accompanied the CBC on the ride and explained some of the technologies developed by Waabi and incorporated in its software known as the *Waabi Driver*. The CEO predicts Waabi automated trucks will be in commercial service this year and thinks thousands more similar automated trucks will be on the roads within three years. The CBC also interviewed some American truckers to see how they feel about the advent of driverless trucks. Unsurprisingly, they are not big fans stating that the driverless technology will put them out of their jobs. The video report can be viewed at [this link](#).



Barrie Kirk recently spoke at a meeting of the **Ottawa Product Management and Marketing Association** (OPMMA). The audience was very engaged in the presentation and the discussion. The title of the presentation was *CAVs: More Than Just Self-Driving Cars – Are We Ready?* This is a question that we see more and more nowadays.

The answer is that Canada has made some progress, but not enough. There are many excellent areas of expertise in Canada, including work done by government, industry and academia. There have been some good research and studies. But Canada is clearly lagging behind other countries. The UK, for example, has created a roadmap to large-scale deployment by 2025, a very comprehensive AV Act which is now law, and they are testing this year an autonomous bus. Even though the bus was developed by a British subsidiary of NFI of



Winnipeg MB, no Canadian jurisdiction currently permits a pilot project of a bus like this on public roads.

As a country, we need to develop synergies between the various areas of expertise, we need to do more in the CAV ecosystem, and we need to do it faster.

It is no secret that drones are finding new applications all the time. The proliferation of drones has necessitated the development of *Remote Traffic Management* (RTM) technology to coordinate and regulate *Unmanned Aerial Systems* (UAS) operations, especially for *Beyond Visual Line of Sight* (BVLOS) flights in low-altitude airspace. The RTM concept is similar to *Air Traffic Management* (ATM) for traditional aircraft but optimized for the unique needs of drones, such as high-density operations in urban areas. **AIRmarket** is an Edmonton-based company specializing in various forms of RTM. The company states its mission as developing tools and services required to operate UAS fleets safely and efficiently. The company is actively supporting RTM services within the *Alberta RTM Trials* (iART). More information about AIRmarket's products (*FLYsafe*, *SKYLINKrtm* and *FLYvision*) and iART is at the company's site at [this link](#).




Winnipeg-based **NFI Group Inc.** (NFI) - previously known as the *New Flyer Industries*, is a multinational manufacturer of motorcoaches and buses for public transportation. NFI wholly owns Scotland-based **Alexander Dennis Limited** (ADL) which is the United Kingdom's largest bus manufacturer. On January 27, 2025, ADL announced that it has completed the first *Enviro100AEV* autonomous electric bus for a public transportation project in the city of Cambridge, UK. A consortium of four UK companies collaborated with ADL in this project. The autonomous technology known as *CAVStar* has been developed by a company called **Fusion Processing**. ADL received financial backing from two UK government organizations for this project – **Innovate UK** and **Centre for Connected & Autonomous Vehicles** (CCAV). More information is at ADL's site at [this link](#).



International CAV News

Waymo is the leading robotaxi company in the United States by a very wide margin. According to the company data, in 2024, Waymo provided over 4 million autonomous rides to paying customers across Phoenix, San Francisco and Los Angeles. These cities are now fully open to the general public. Waymo has now announced plans to expand its robotaxi business to 10





other cities in the U.S. and to the city of Tokyo in Japan. Las Vegas and San Diego will be the first additional cities where it will be testing its services in 2025. For introducing robotaxi service to a new city, Waymo dispatches a fleet of its autonomous vehicles manned by experienced *safety drivers* to map out the most dense and complex parts of the city. More information is at [this link](#).

Staying with robotaxis, **GM-owned Cruise** was once the only serious robotaxi competition to **Waymo**. Then in a major strategy change in December 2024, GM announced that it will no longer fund this money-losing part of its business. GM's new strategy is to build more automation features in its cars for selling to its customers. Some of these features were developed by Cruise over the past years. On February 4, 2025, GM announced that it now fully owns Cruise. Shortly afterwards, GM announced a 50% cut in Cruise's workforce. This included senior executives such as the CEO, Chief Safety Officer, and the Global Head of Public Policy. In all about 1,000 of Cruise's employees were let go. It is estimated that GM has lost over US\$10 billion in its unsuccessful attempt to create a commercial robotaxi business. More information is at [this link](#).




Brad Templeton is an expert on the topic of autonomous vehicles. On February 5, 2025, he published an article in **Forbes** magazine titled *How To Judge If A Robocar Is Actually Good (Tesla Vs. Waymo)*. The article is centered on the quality of a self-driving system. He asks if it has reached the “bet your life” reliability required to operate without a driver behind the wheel, and passengers in the back seat. Designing and building a self-driving vehicle is a major technical undertaking. After that comes the non-trivial task of winning the trust and confidence of lawyers, the company's Board of Directors, the customers, the governments, and the public. In the early days of self-driving car development, there was always a *safety driver* behind the wheel to deal with situations that the self-driving vehicle could not handle. Once technology advanced and the safety driver was taken out of the car, a host of new problems emerged for the driverless vehicle, things such as interactions with emergency crews and unpredictable and difficult traffic situations. It took **Waymo** over five years from when they first tested with no human on board until they were ready to deploy robotaxis at scale. The article can be viewed at [this link](#) or [this one](#). A related YouTube video can be viewed at the same link.





Florida-based **L3Harris Technologies, Inc.** is a major technology company, defense contractor, and information technology services provider. One of its main business areas is in command-and-control systems (C&C). One such C&C product is its new *Autonomous Multi-*





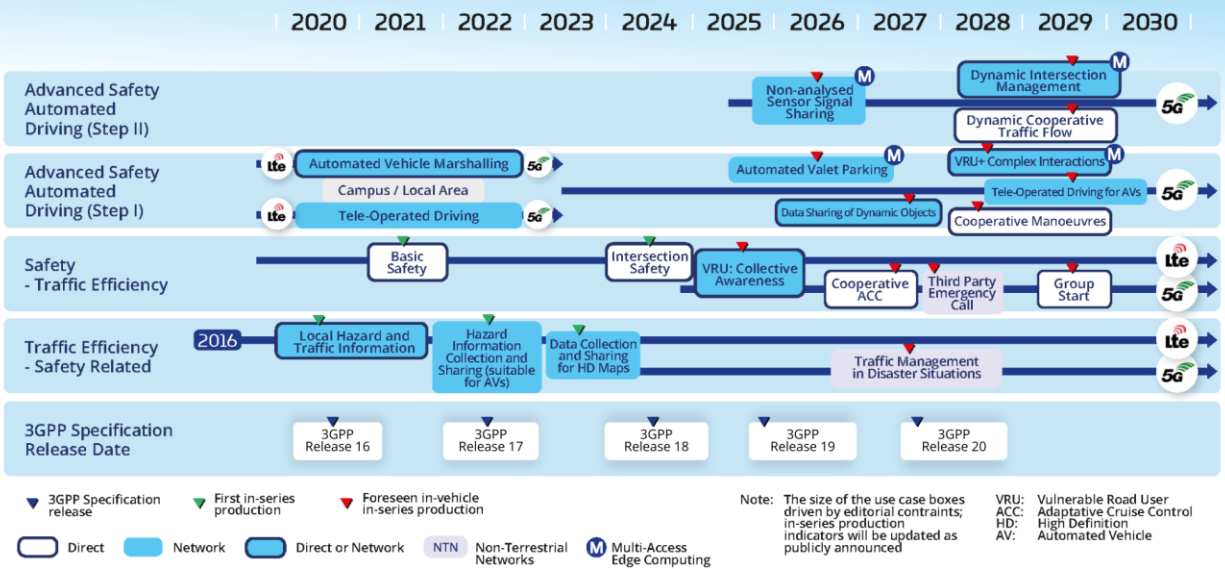
domain Operations Resiliency Platform for Heterogeneous Unmanned Swarms (AMORPHOUS). According to the company, AMORPHOUS is designed with a single user interface to operate thousands of autonomous assets simultaneously. Due to its open architecture, this system enables the United States and allied militaries to control a mix of uncrewed platforms, payloads and systems from different manufacturers. Although primarily designed with the military in mind, the company indicates several non-military application areas such as delivery robots, warehouse robotics, and autonomous farming and mining machinery. More details are at L3 Harris's site at [this link](#).

Billions of dollars have been invested for the development of driverless transport trucks. Companies such as Canada's **Waabi** or America's **Aurora Innovations** paint a rosy picture that driverless trucks are just round the corner, and promise that they will improve safety, address truck driver shortage and save freight companies lots of money. The reality on the ground is very different. A recent article in a website called **Land Line** and titled *Autonomous truck rules discussed in 11 statehouses* gives a snapshot of the driverless truck legislations in 11 U.S. states. The states in the article are proceeding very cautiously with allowing driverless trucks on their public roads. Almost all of them require a qualified human driver to be behind the wheel. This obviously negates the whole point of a driverless truck. Furthermore, the U.S.-based **Owner-Operator Independent Drivers Association** (OOIDA) is strongly against the deployment of driverless trucks, arguing that the technology is not yet ready. OOIDA has published a short article titled *The Trucker's Perspective of Autonomous Trucks* to express their concerns. The Land Line article can be viewed at this [link](#). The two-page article by OOIDA can be viewed/downloaded at [this link](#).



Connected Vehicle (CV) technology has been touted as a lifesaver for many years. It has also been under development for just as long. After some false starts, the de facto technology has emerged as the *Cellular-Vehicle-to Everything* (C-V2X). The organization representing the industry is the **5G Automotive Association** (5GAA). It was created in 2016 and describes its mission as: *Bridging the automotive and telecommunication industries in order to address society's connected mobility needs, bringing inclusive access to smarter, safer and environmentally sustainable services and solutions, integrated into intelligent road transportation and traffic management*. 5GAA has published a roadmap showing its vision for the decade from 2020 to 2030 (see below). More information about 5GAA is at its website at [this link](#).

Globally expected timelines for mass deployment of advanced connected vehicle use cases




Staying with **5GAA**, **India** has the world's highest number of automotive-related fatalities. The toll was 172,000 in 2023. India believes C-V2X technology could help put a dent into this very high number of fatalities. A recent *Memorandum of Understanding (MoU)* signed between 5GAA and **ITS India** aims to promote C-V2X in that country. It is envisioned that C-V2X has the potential to prevent road collisions, for example by sending warning messages to and from vehicles, drivers and infrastructure, thus improving safety. The MoU signing took place at ITS India Forum's Cellular *Connected Vehicles Stakeholders (CVS)* meet, which brought together policymakers, industry leaders, technologists and innovators. More information is at [this link](#)



And finally, a Chinese company called **Mammotion** might have developed the ultimate robotic lawn mower known as *Luba*. This electric robotic lawn mower is designed for both commercial and residential applications. It uses *Real-Time Kinematic (RTK)* technology for precise autonomous navigation, obstacle avoidance, and automatic collection/unloading of grass. The *Luba* is highly programmable through its associated app. The *Luba* was showcased at **CES 2025** and has partnered





with the **United Soccer League** (professional soccer organization based in Tampa, Florida) to provide automated lawn care for soccer fields. The top model of *Luba* is priced at C\$3,499 plus taxes and shipping and can be ordered directly from the company. A YouTube video shows the *Luba* in action. It 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

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|-------------------|---|
| April 2, 2025 | Are we ready for Robotaxis? A networking event organized by the Centre for Connected and Automated Transport. Note: this is an in-person event in Sydney, Australia |
| April 15, 2025 | Executive Update: Preparing your community for robots in public spaces ; webinar from Urban Robotics Foundation |
| April 16-17, 2025 | DiscoveryX , organized by the Ontario Centre of Innovation, Toronto, Ontario |
| May 20-22, 2025 | ADAS and Autonomous Vehicle Technology Expo Europe , Messe Stuttgart, Germany |
| May 21, 2025 | CSA Group and SAE International will host a workshop on the development of a North American Digital Standard aimed at supporting the performance of connected and automated vehicles and infrastructure. To be held in conjunction with the ITS Canada conference – see below |



Upcoming CAV-Related Events

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|--------------------|---|
| May 21-23, 2025 | ITS Canada 2025 Conference & Expo , Ottawa, ON |
| June 3-5, 2025 | AutoTech 2025 , Novi MI |
| June 9-11, 2025 | CCMTA Annual Meeting , Regina SK |
| June 11-12, 2025 | Autonomous Vehicles USA 2025 Exhibition & Conference, Los Angeles CA |
| June 15-18, 2025 | UITP Summit , Hamburg, Germany |
| June 24-26, 2025 | Autonomous Ship Conference , Amsterdam, Netherlands |
| June 25-26, 2025 | Last Mile Delivery Conference & Expo , Las Vegas |
| August 27-28, 2025 | ADAS & Autonomous Vehicle Technology Summit North America , San Jose CA |
| October 5-8, 2025 | TAC Conference & Exhibition , Quebec City |



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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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.

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