About the Event

Wisconsin Non-Driver Advisory Committee (WiNDAC) members met virtually on December 11, 2025, 2025. The meeting ran from 9:00am to 12:00pm. This was an open/public meeting; observers could view the proceedings via a YouTube livestream.

The purpose of the meeting was to help WisDOT refine the understanding of how Connected and Autonomous Vehicles (CAVs) can impact non-drivers. WisDOT is creating a stakeholder's resource guide for communities on how CAV technology can address transportation challenges. The guide will also cover how to plan for pilot projects, including partnerships, funding, and community engagement.

Twenty-eight committee members participated in the meeting. See Appendix A for attendance. There were three breakout discussions, during which time committee members were grouped with a WisDOT facilitator and notetaker.

December 11, 2025

Opening Remarks – WisDOT Secretary Kristina Boardman
Secretary Boardman welcomed all the members and invited them to reflect on the previous meeting where they heard about emerging technologies and CAVs. Members were asked to provide their insight as WisDOT develops a CAV stakeholders resource guide that will help local communities plan for CAV technology.

Welcome Back and Preview of the Day – WisDOT Division of Budget & Strategic Initiatives (DBSI) Administrator Lea Collins-Worachek
DBSI Administrator Lea Collins-Worachek thanked all members for their attendance and explained the purpose and framework for the day. She explained the three breakout sessions and questions and invited all members to contribute during these discussions.

Breakout Sessions
The three breakout sessions each focused on one of three questions and the following discussion:

Breakout Session 1: Can I call the car?
- Technology and access needs for calling a vehicle, whether via a smartphone application or a call center.
- Access and privacy.
- Medical equipment or mobility devices that impact access.
- Driver role in meeting needs of riders.
- Caregivers access to an app and ensure vulnerable individuals get to where they need to go.
- Human to human connection.

Breakout Session 2: How to successfully interact with the vehicle?
- Pilots are needed.
- Transition to AVs require trust and clear safety communication.
- Vehicles need to be designed with all users in mind from the start.

- Remote operator support is important for many users.
- Clear communication is a must: from calling/ordering a ride, riding, and exiting, understanding cost, knowing where to get help and even how the vehicle communicates to other road users, non-drivers, and/or vehicles.

Breakout Session 3: What if something unexpectedly happens?
- Infrastructure needs.
- Privacy concerns regarding cameras.
- Awareness of emergency response protocols by riders.
- Legal considerations about accountability and liability.
- Car seats and child safety.

Facilitator Share Out
Facilitators were called on to share something that surprised them or a takeaway from the meeting.
- Drivers are more than drivers to many transportation users.
- There are vulnerable populations that need to be considered including children, those with memory loss and/or dementia, and those with essential equipment.
- AV options should be an add-on option to current transportation options.
- Considerations of vulnerable populations make the system work for everyone.
- Tension between privacy concerns and remote operators being aware of what is occurring in the vehicles.
- In the event of a crash, the rider's abilities may change.
- The human element in transportation continues to matter.

Closing Remarks – WisDOT DBSI Administrator Lea Collins-Worachek
- Administrator Lea Collins-Worachek thanked WiNDAC members for participating in the meeting. She closed the meeting by discussing the importance of the committee's insights.

Members in attendance

Tami Jackson, Public Policy Analyst, Wisconsin Board for People with Developmental Disabilities
Denise Jess, Executive Director, Wisconsin Council of the Blind & Visually Impaired
Lea Collins-Worachek, Administrator, WisDOT Division of Budget and Strategic Initiatives
LaTonya Johnson, Wisconsin State Legislature
Jennifer Jako, Director, Aging and Disability Resource Center of Barron, Rusk, and Washburn County
Chris Hiebert, Southeastern Wisconsin Regional Planning Commission (SEWRPC)
Shannon Zwitter, Mobility Manager, Lutheran Social Services of Wisconsin
Kirsten Finn, Executive Director, Wisconsin Bike Fed
Susan De Vos, Secretary/Treasurer, Wisconsin Transit Riders Alliance
Adam Lorentz, Transit Manager, La Crosse Municipal Transit
Michael Basford, Director, Interagency Council on Homelessness
Nick Musson, Transportation Specialist, Greater Wisconsin Agency on Aging Resources (GWAAR)
Jeremy Lyon, Division Administrator, Wisconsin Department of Veteran Affairs
Iris Jacobson, Education Consultant, Wisconsin Department of Public Instruction
Jen Walker, Community Programs Manager, 1000 Friends of Wisconsin
KJ Hansmann, Assistant Professor, UW Madison School of Medicine and Public Health
Dave Steele, Executive Director, MobiliSE
Jenna Fogarty, Director, Wisconsin Department of Workforce Development
John Tuohy, Executive Director, Wisconsin County Human Service Association
Kevin Coughlin, Policy Initiatives Advisor, Wisconsin Department of Health Services
Claire Enders, Transportation Coordinator, Milwaukee County Division on Aging and Disability Services
Tom Winker, Director for District 6, Wisconsin Towns Association
Jane Penner-Hoppe, Senior Policy Advisor, Wisconsin Department of Children and Families
Kassy Heard, Aging and Disability Director, Great Lakes Inter-Tribal Council (proxy)
LaShawnda Jones, Assistant Project Manager, MobiliSE
Sandi Villiesse, Transportation Specialist, Federal Highway Administration - Wisconsin Division
Jay Tucker, Administrator, Wisconsin Community Services - Community and Reintegration
Lisa Hassenstad, Public Policy Manager, Disability Rights Wisconsin

WisDOT staff in attendance

Tracy Drager Wisconsin DOT Division of State Patrol
Joy Loomis, Wisconsin DOT Division of Budget and Strategic Initiatives
Evelyn Bromberg, Wisconsin DOT Division of Budget and Strategic Initiatives
Carter Angelo, Wisconsin DOT Division of Budget and Strategic Initiatives
Brad Basten, Wisconsin DOT Division of Budget and Strategic Initiatives
Ethan Severson, Wisconsin DOT Division of Budget and Strategic Initiatives
Johanna Schmidt, Wisconsin DOT Division of Budget and Strategic Initiatives
Maryne Taute, Wisconsin DOT Division of Budget and Strategic Initiatives
June Coleman, Wisconsin DOT Division of Budget and Strategic Initiatives
Mike Denruiter, Wisconsin DOT Office of Public Affairs

Addendum

This addendum summarizes the three breakout group sessions. The content of this addendum is based on the notes taken during the breakout group discussions and the facilitator report out.

Breakout Session 1

WiNDAC members responded to the question "Can I call the car?". Group responses are summarized below into themed categories. Some responses may have been mentioned multiple times.

Rider Needs
- Medical appointments – how to tell cars which door at the medical system to do the drop off?
- How much information is needed at the front end of making a ride?
- Some people requesting rides need more assistance.
- There may be limits with older adults or adults with disabilities. Caregivers call to set up rides.
- Wheelchair accessibility, securing wheelchairs and scheduling the ride requires a live person.
- Would parents be able to call a ride for kids? Could underage riders use services?
- Concerns about safety with drivers, navigation to the vehicle?
- How will the vehicle know everyone riding is secured and safe?
- What people need to take with them for loading and unloading – pets, service animals including getting a pet to the vet, loading a car seat, storing a stroller.
- Communal vehicle is not the same as a public transportation vehicle (for example allergy issues).
- Need for bike racks on the vehicle and assistance to use these.
- A thought about accessibility vs. cost. What will the cost be to riders?
- Add a safety feature in the AV that a passenger could hit (panic button) in the event of a significant problem, safety issue, etc.

System (app, call center, website)
- Does this require the rider to use an app on a smartphone?
  - Have own account, require internet connectivity, receive alerts or updates,
  - Don't want to download multiple apps for the same services. Is the app accessible.
  - Does the app require literacy? Is it only in English?
- Another model, such as no-emergency medical transportation might be an approach to use: Use a website, call ahead of time to schedule and family members or helpers can set up rides, too.
- The car could make a sound so riders can locate the vehicle.
- Instructional videos from ride services on how to ride and what to expect.
- Ability to notify the service that visually impaired, need assistance for vehicle to find them.
- Caregivers sometimes book ride, should be functionality for this including dual use account.
- App, call, or kiosk, alternative ways for people without smartphones or credit cards to get a ride. Pre-paid card? Community organization card pass?
- App based riding mechanisms are common and work fairly well for most people.
- Being able to schedule and do real-time rides comes up in many spaces as being important.
- Look at other services, like the nonemergency line, and how they send out reminders.?
- Some are not comfortable with an app and use a cash system with the app pay system.
- Found that smartphones are ubiquitous among the population served in Milwaukee.

Human to Human Connection
- Provide a central dispatch/remote operator that can be accessed to help through process and assist during the ride. Need system with multiple ways to provide assistance or connect.
- Many older adults, in rural areas, more comfortable reaching a real human.
- Most of the tribal systems uses some kind of phone system. There is the need for further counseling when they call in.
- In Wisconsin, many people want the human hand to hand connection.
- Skilled humans providing real-time problem-solving support, like tech support.

Logistics
- Is it reliable? Is it easy to use? How do you confirm if you are in the right pick up spot?
- Does it go anywhere people need to go? Common pick-up locations – like a bus stop – so it's predictable. Need for trip planning? Trend towards regional medical centers.
- With buses, drivers guide riders to get to a transfer or whatever else they need to get to the right location. Will the ride be driveway to door or driveway to central station?
- Are there conversations about how people (example: those who use walkers) can get in and out of the cars?
- What happens if the vehicle leaves with stuff?
- What are the communication options for audio or visually impaired people?
- Will it operate across state lines? Adapt to other state's system? Waiting for federal guidance?
- Help button, like the campus blue light, for assistance.
- Sidewalk clearing for snow, including crosswalks after a plow has been through, and access points.
- Winter roads, with snow or ice makes it hard for AV to assess lines on the roads.
- Rural Wisconsin needs infrastructure changes. Agriculture uses signal out of sky (GPS) instead of lines on the road.
- How long does it take to do the trip especially considering differences between urban and rural locations?
- Gas or electric vehicle? If no driver, how does it get fuel? Cars can take themselves out of service.

Communication and Trust
- Clear communication at every step of the process in multiple formats to accommodate needs.
- Person seeking service needs to know that they are ordering an AV vs. traditional driver.
- Riders need exact time of arrival, estimated time of arrival.
- Some places have specific entrances for passenger pick up (medical complexes, campuses, etc.)
- Vehicles need clear communication to find their rider and the rider can identify the vehicle.
- Memory support for non-drivers with dementia/conditions that impact recall.
- Audible up-to-date destination information, multiple times reassures passengers.
- Verbal descriptions along with what's happening on the screen.
- How do users communicate actions/needs with the AV. Help button/phone, camera at pick-up?
- What are the safety measures? Need to know before using the service.
- Fixed route transit needs to be accessible with audio, easy to determine route/destination.
- Built environment has a huge impact on crashes. When environment makes a crash more likely, we may also see it more with AV, not just with driver-ed cars.
- Issue with some communities regarding trust – not comfortable giving personal information and having a random person pick them up. Try to mitigate with bilingual language drivers and apps.

- Discomfort with no driver is a huge hurdle. Feeling safe in a public space, comfort that someone can intervene when situations arise.
- Even with security cameras on these vehicles, it may not help to mitigate these trust issues.
- Possible pushback from community by taking away jobs from people in the community.

Other Comments
- The vehicle should be designed for us; we should not be designing our built environment for the vehicle.
- Maybe AV is not right for everyone. If going to use for vulnerable populations adapt the design.
- Do all legs of trip need to be organized at one time? Complexity of multi-leg trips is already an issue with non-drivers.
- Retrofitting accommodations for nondrivers into a finished product doesn't always work. Incorporate into the initial design.

Breakout Session 2

WiNDAC members responded to the question "how to successfully interact with the vehicle?". Group responses are summarized below into themed categories. Some responses may have been mentioned multiple times.

Vehicle Design Needs
- Rider needs to know beforehand what can be accepted in the vehicle/service.
- There are different kinds of wheelchairs with different adaptions and power chairs can have different tie-down needs, etc.; real problem already for people who fly.
- Service animals, strollers, car seats, multiple passengers, mobility devices (canes, walkers, etc.). are all variables.
- In terms of the vehicle itself, if there can be wider doors for some people with disabilities, handrails, if there are ways to light up the vehicle a bit more when they are entering.
- Language barriers: are AVs able to recognize different languages? Same for remote assistants.
- Provide screen inside of the vehicle with audible responses.
- If someone gets in who is visually impaired, can there be other acknowledgements.

Human to Human Connection
- A driver is more than a driver. Losing the person-to-person interaction has an impact. Can there be a job shift from driver to attendant? Need a choice between driver or an AV
- How to indicate to AV that rider needs a different drop off location than the map indicates? Help riders find their way from the vehicle to the door? The rider will need remote support.
- Riders need to know they can connect to someone, like a remote operator.
- Working with a vulnerable population; anxiety surrounding this experience.
- Dual access for account for caregivers to assist rider in starting the ride, continued notifications so they can track the ride to its destination.

Vehicle Communication
- Ability to switch languages – limited English issues.
- There needs to be guidance and clear instructions for riders for getting into the vehicle, how to unlock doors, find door handles. Cues for arrival, loading, departure.
- How much time do riders have to load belongings? How does car know when rider is ready?

- Touchscreen is very different than a button. How simple and plain is the language?
- Clear notifications if rider is running out of time to find/load in the car.
- Who do riders communicate with if safety incident or question?
- If the ride was phoned in, being able to talk to a real person is important.
- Standards in place for managing communication, customer service, passenger assistance.
- Concerns with accessing the wrong vehicle, confirmation of the right vehicle and destination.

Change of Plans
- What if the car is stuck in traffic, has an emergency, etc.? What is back-up plan?
- What if rider needs a different drop off location than the mapped drop off point?
- Technology lacks perception to account for certain human factors and random occurrences.
- A call button to alert about different situations (emergency, a spill/mess, second-hand smoke.
- Weather conditions also a factor (heavy rain, snow) for a better pick up/drop off spot.

Safety
- Available and accessible for all users - vehicle cannot assume every user has the same knowledge and abilities.
- Sensor technology can go off. We put trust in technology being right and it isn't always.
- In general, how do humans interact with the vehicle visually? How is AV communicating and receiving communication to keep people safe (lighting, text)?
- Consider infrastructure needs for safe loading and unloading of users.
- Consider bike/ped infrastructure designed with safety considerations for those users.
- Ensure that companies know safety is a top priority when they operate in WI.
- What testing has been done? What are the safety features?

Pilots and Transitioning to Using an AV
- Consider use of bus buddies model when onboarding new riders or trainers to create positive experience. Offer free rides. Pair with education sessions.
- Clear understanding of goals before moving to implementation.
- Need more testing because of our weather conditions.
- Part of the challenge, especially in rural areas, is how to fund in a long-term capacity.
- In the short term, there should be a person behind the wheel. Stepping straight into an AV without a driver can be jarring.
- Community education needs to work with community organizations and in areas with ridership.
- Is this being written/spoken for someone who may struggle with reading or comprehension?
- Maintain a way to reach a human for reassurance or help; need quick response time.

Breakout Session 3
WiNDAC members responded to the question "What if something unexpectedly happens?" for discussion. Group responses are summarized below into themed categories. Some responses may have been mentioned multiple times.

Rider Needs
- People may have conditions that need more processing time. Need ability to repeat. Need plain language. Co-occurring disabilities and/or physical mobility limitations need to be considered
- A user profile can be helpful to fit the needs of the rider.

- Some wheelchair technology is affected by radio interference. How will the vehicle interact with equipment?
- If there is a medical incident in route requiring redirection, how does that work?
- If there is a mess in the vehicle, how is an alert completed, and the vehicle cleaned?
- People may need time to gather items – how to indicate when complete?
- How does the rider indicate if they need medical assistance?
- Rural areas/towns of WI may struggle with AV if they can't get to other communities, which may be longer distances.
- Serving parents and the car seat issue has made things a huge challenge.
- What if you need a car seat? There are different sizes for different kids.

Vehicle Communication
- Confirmation that vehicle has arrived at destination. Am I at a spot where I can get out?
- Accessible "Help" button or audible command for a human to intervene.
- Riders need to know how to access help before the ride starts.
- What happens in the event of a crash? How does the vehicle communicate with the rider?
- Is there a camera in the car? Like a bus, is there a process for stuff left behind.

Emergency Response
- Clearly outline how communication would happen both to the police and to the passengers.
- Are passengers required to stay with the vehicle and wait for the police?
- What does a passenger do if they are injured?
- Does the vehicle know how to pull over safely?
- Will another car be coming?
- Assumption that the vehicle will record crashes, but will the other vehicles leave if they don't see a driver?
- How do we keep the passengers safe? What if it is dark out when something happens?
- Lean on remote system for a human to reassure the passengers when things happen.

Human to Human Connection
- Concerns about isolation with no driver in the vehicle. It might be the passengers only interaction with someone.   Intangibles of human interaction matter.
- The Human element – safety incident, questions about way-finding – is important.
- Have an individual monitoring 10-20 cars simultaneously to recognize an incident and divert to nearest medical facility.
- All interstate trucking/commerce is a huge opportunity in WI and seems closer to adoption than using CAVs as individuals or within a transit system.
- Weighing cost and benefits, a driver may be more efficient. Could be useful for short trips, but issue with long trips, and multi-jurisdictional trips.
- Many people don't have a cellphone, or smartphone so must have something in the vehicle that allows someone to communicate back and forth.

Infrastructure and Community
- In urban areas, trips can be short; in rural areas these are longer. A rural issue is population does not match location of jobs.

- Rural demographics are changing, and we haven't built infrastructure to support aging in place when becoming non-drivers.
- Invest in transit: One of the problems with fixed route transit is the cost. But if more people use it, that off-sets the cost.
- It's not reasonable to build all the infrastructure needed.
- Community focus is on infrastructure: how the public transportation system can be well lit, good signage, safe pickup and drop off locations, etc.
- Door-to-door stuff is tricky when it comes to safety and infrastructure
- Civic groups are more involved in helping to transport in rural Wisconsin.
- There is a need to provide accessibility to everybody – people who want to use a car, people who can't or don't want to use a car.
- There is no single mode system and there is no single solution.
- How do other people around the vehicle interact with the AV?

Policy, Laws, and Accountability
- Can WI hold these tech companies to a transportation organization standard?
- Want AVs to be regulated by the state – oversight of any private companies.
- Strengthen ADA requirements.
- Determine the accountability of the AV industry.
- What would the policies be for children under 18 using these services?
- What is stopping a 12-yearold from using these vehicles if they have access to debit cards? What is the liability? Ultimately it is the parent's responsibility, but it will come back to the car

Privacy
- Real concern about giving up rights/privacy/autonomy to be able to use these systems.
- How can regulations and policies protect people using these services?
- Large trucking firms have cameras in the vehicle focused on the driver 100% of the time.
- Privacy – preference to not download app and provide data.
- Camera footage: Who owns it? Where does it go? Can it be used if a crime was committed?
- Disability advocates get concerned about people watching and judging from afar.
- At what point is there intervention regarding privacy vs. safety of the occupants?

Other Comments
- Concerns about AV navigating road construction and congested areas.
- Don't want funding to be diverted from other critical/specialized transportation services.
- AVs are one option of many, this should not be a replacement to anything.
- Driver labor costs: Vibrant economy includes a good, happy labor force.
- Will these cars know how to navigate Wisconsin weather?