Automated Mass Transit On Its Way
MnDOT pilot project brings autonomous shuttle bus to Minnesota

Automated vehicles continue to be a popular topic in the world of TZD and traffic safety. Currently, many mid- to high-end personal vehicles already have some level of automated and connected features, but little research has been done with mass transit vehicles such as buses. MnDOT is working to change that.

MnDOT has recently partnered with 3M, EasyMile and First Transit on an autonomous shuttle bus project. “We know the technology is coming really fast, but a lot of the testing is happening in the warm weather climates,” MnDOT Connected and Automated Vehicle Director and former TZD Co-Chair Jay Hietpas says. “So we decided to bring a vehicle here to Minnesota and see how it operates in our winter weather conditions.”

Manufactured by Easy Mile, the bus is a driverless electric shuttle that can transport up to 12 passengers (six seated and six standing). There is no steering wheel. Instead the shuttle operates on pre-mapped routes.

Minnesota presents some unique climate challenges that are very different from others testing this technology. “We’ll have snow testing... We’ll have ice conditions. We’ll also have salt conditions and this vehicle will experience those same winter conditions that a normal vehicle will experience in Minnesota,” says Hietpas, who is a strong advocate for autonomous technology.

MnDOT has been testing the vehicle at its MnROAD facility and other locations around the state since last December. The closed loop at the MnROAD facility allows for safe testing in snow, ice, cold weather and salt conditions and also represents the shuttle’s first use in Minnesota and its first official test in a harsh winter weather environment.

These winter driving tests have proven successful in highlighting some unexpected navigation issue as the vehicle made a few unplanned starts and stops during a test last winter. Joseph Holmes, a representative of EasyMile, the company that supplies the driverless software, says snowfall was likely to blame.

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A Familiar Face for TZD’s New Co-Chair

TZD’s new co-chair is no stranger to TZD or traffic safety

Mike Hanson is TZD’s newest state co-chair and the new Director for Public Safety for the Office of Traffic Safety. If that name sounds familiar, it is probably because Hanson is no stranger to traffic safety or TZD. In fact, for the past 32 years, he has been with the Minnesota State Patrol serving in regions throughout Minnesota. Prior to joining the state patrol, Hanson served as a part-time peace officer in college, was a busboy at Embers, and worked at a full service Amoco gas station.

Hanson started working with TZD when the program was referred to as Safe and Sober. He served as a supervisor with Patrol and the District project coordinator in Detroit Lakes, where the annual WE Fest Country Music festival was the big event to catch impaired drivers.

The enforcement “E” is obviously a big draw for Hanson, but he stresses that we cannot enforce our way out of the traffic safety situation. Educational efforts and changing Minnesota’s traffic safety culture also play a large part in reducing fatalities and injuries.

He does admit that he is also fascinated by the engineering aspect of TZD, in particular how a roadway can be designed to compensate for driving mistakes, and he tries to attend engineering sessions at various traffic safety conferences whenever possible. His personal fascination with engineering does not take away from the importance of the remaining “Es.” “We need EMS for when crashes do happen and the fifth ‘E’ of everyone is also important,” he says.

During the past 15 years of TZD, Hanson says that he feels incredibly blessed to have worked with people who have the same passion about traffic safety. They want to make a difference and save lives. He also feels that it is this passion that will help TZD move forward through the next 15 years. “TZD work is definitely challenging,” states Hanson, “you need to have passion for this work. It is this passion that lights the fire. Crashes are preventable and if we can throw enough passion and effort at the problem, we will solve it.”

As for the future, Hanson would like to see TZD to keep moving toward zero and feels that innovation, commitment, dedication, passion and hard work is how to get there. “The next 15 years will bring harder work and a wider variety of approaches.” He further says that he is looking for the next “big idea” that will propel Minnesota off its current plateau for traffic fatalities. “There is not one magic silver bullet to get us to zero; it will take multiple solutions.”

Born in Minnesota’s Iron Range, Hanson has been married for 31 years and has two children. When not working on traffic safety efforts, Hanson enjoys outdoor activities such as hunting and fishing. These hobbies have even taken him to places such as Africa and Alaska.

When asked for any final comments on TZD or traffic safety, Hanson responds, “It’s about the cause, not about me. It’s about the great people I get to work with every day. My job is a privilege. I appreciate and watch people do good work.”
Autonomous transit continued from pg. 1

"We've seen the snow definitely present some challenges," he says, "but that is exactly why we're here. That is why it's so exciting to be a part of this project."

The shuttle also made an appearance at the Super Bowl last February when MnDOT offered free rides at Nicollet Mall. More than 1,300 people who a free ride in the shuttle and the feedback received showed that Minnesotans like the idea of a driverless bus.

The shuttle remains in Minnesota for now in Hennepin County, who is studying how this emerging technology can complement other forms of transportation and enhance connections to major transitways. Another demonstration took place on Earth Day weekend, April 20-22, when the county offered free public rides in the self-driving vehicle along a two-to-three block stretch of the Midtown greenway, running on one lane of the existing bicycle and pedestrian trail. A human operator was on board to take over, if needed. The shuttle traveled no more than 12 miles per hour.

Looking into the possibly not-so-distant future, MnDOT’s autonomous shuttle pilot project puts Minnesota in a better position to influence national policy and prepare Minnesota transportation owners and stakeholders for the future. “We think this technology is going to be great for Minnesota when it comes,” says Hietpas. “Each year more than 300 people die on our roadways. Using technology like this is really going to help us minimize those crashes that have human elements in them. A vehicle like this does not drive distracted. It does not drive impaired. So we think that it is really the future for safety in Minnesota.”

New Advisory Council on Automated & Connected Vehicles

Former TZD co-chair, heads up new MnDOT office

Through a recent Executive Order, Governor Mark Dayton has established an advisory council to study the opportunities that widespread adoption of automated and connected vehicles could bring to Minnesota. “Automated vehicle technology is rapidly advancing in Minnesota and around the world,” said Governor Dayton. “This new advisory council will help ensure that Minnesota is well-positioned to put this technology to work for the best interests of Minnesotans.”

Minnesota Department of Transportation Commissioner Charles Zelle will co-chair the advisory council with Christopher Clark, president of Xcel Energy-Minnesota, North Dakota and South Dakota. Zelle said the council will recommend policy changes in such areas as transportation infrastructure and network, cyber security and data privacy standards and vehicle registration, driver training, licensing, insurance and traffic regulation. The council will also look at promotion of economic development, business opportunities and workforce preparation and accessibility and equity for all Minnesotans.

Governor Dayton has also directed MnDOT, the Department of Public Safety and other agencies to establish pilot programs for development and testing of automated and connected vehicle technology and to support safe and effective testing as well as use in real-life situations to meet industry needs. “The world of automated and connected vehicles is closer than many people might think,” said Mona Dohman, Commissioner of the Minnesota Department of Public Safety. “We need to make sure that these vehicles are safe—and operated safely—on the roads we share. That’s why the Governor’s advisory council is needed to study the opportunities and challenges automated and connected vehicles will present.”

The executive order also formally establishes an Interagency Automated and Connected Vehicles Team to ensure interagency coordination, develop cross-agency policies and programs, and prepare the state for safe testing and adoption of automated vehicles. Former State TZD Co-Chair Jay Hietpas will be heading up the new office. We wish Jay good luck in his new endeavors!
TZD Regional Workshops Tackle the Teenage Brain

Connect the dots of the teenage brain with featured speaker Erin Walsh

Erin Walsh, Mind Positive Parenting, was the keynote speaker at four of the TZD regional workshops this spring. Walsh discussed the latest in brain science and risk-taking behaviors in adolescence as it relates to traffic-safety. She explored the role of “emotional accelerators” in the brain, impacts of technology on the developing brain and practical strategies for engaging young people in risk reduction. Using stories and humor, Erin presented the latest science in an engaging way, making it easy to apply this information with youth and families.

Erin Walsh, M.A., is a dynamic speaker who has addressed a wide range of audiences on topics related to brain development and digital media. Erin was instrumental to the development of the MediaWise movement and enjoyed working with her father for 10 years at the National Institute on Media and the Family before creating Mind Positive Parenting in 2010. She has consulted with transportation agencies, schools and parent groups throughout North America on issues related to digital media, children and youth.

Erin has presented during the last two years at six regional workshops. If you missed her at one of these, you may be able to see her at the South Central and Southwest workshop in April 2019.

“We are excited to feature Erin at our workshops next year,” says Annette Larson, Southwest and South Central TZD regional coordinator. “Her expertise on teen brain development, in particular how it relates to risk taking behind the wheel, will be a great addition to our workshop programming and to our efforts with teen drivers throughout the regions.”

Erin speaking at the TZD West Central Regional Workshop in April.

Erin was a featured speaker at two 2017 workshops and was brought back in 2018 to speak at four other regional workshops.
Minnesota’s 2018 distracted driving campaign produced some alarming results. From a motorist texting with both hands while driving with his knees to a driver reading a book at every stop light, law enforcement found drivers not getting the message that distractions are putting lives at risk on Minnesota roads.

*Just the facts please:*
1,576 motorists cited for texting and driving (an increase from 1,017 cited during 2017 campaign)
1,883 seat belt citations (up from 1,517 in 2017)
300+ law enforcement agencies participated during the campaign

_Distracted driving violations included:_
- Shopping on Amazon in a snowstorm—while behind the wheel.
- A 42-year-old male was cited for playing poker on his phone while driving.
- A 52-year-old male playing Pokémon Go while driving.
- A 24-year-old male checking his bank statement while driving. When he stopped the man, the officer took time to tell the motorist about Andrea Boeve, a mother of two who was killed by a distracted driver doing the exact same thing.

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**TZD Toolkit—All Systems Go!**

200+ *activation links distributed*

The TZD toolkit is up and running! More than 200 links have been emailed giving TZD stakeholders access to the toolkit. *Reminder: The links to access the toolkit are on a timed basis and need to be activated.* If your status is not activated, the link will expire. Please activate your toolkit status link if you have not done so already.

The toolkit contains presentations, materials to distribute and other related materials from across the state and beyond to address traffic safety from your “E perspective” (Engineering, Education, Enforcement, and Emergency Medical and Trauma Services). Stakeholders can also download materials from the toolkit, and once downloaded, many resources can be modified (dates, locations, etc.) to match events in your own communities.

TZD program staff have worked to incorporate your latest suggestions into the toolkit and also thank you for your patience with the recent “technical difficulties.” If you are interested in getting access to the TZD toolkit, or if you have materials that you would like uploaded to the toolkit, please contact your regional coordinator.
TZD Regions Tackle Distracted Driving
Teen drivers the focus of local safety campaigns

At the local level, TZD reached out to teen drivers regarding the dangers of driving distracted. In TZD’s Southeast Region, Olmsted County Sheriff Kevin Torgerson presented local teens with a Traffic Safety Champion Award for Outstanding Teen Leadership at a recent TZD news conference. Torgerson told news reporters there is a need to change the mindset of motorists who feel social planning is more important than safety on the road while driving.

Lap Nguyen is a high school student who said all teens should care about distracted driving campaign. “As teenagers, it is a real prevalent issue for all of us, so this is why we're happy to take part in this,” he said.

The teens recently partnered with the Olmsted County Sheriff’s Office to participate in a video highlighting the dangers of distracted driving and why it's so important for teens to speak up for their own safety and the safety of their peers. Click on the following link to view the video. https://www.youtube.com/watch?v=2lObgOo5e-w.

Students in TZD’s South Central Region learned about the consequences of distracted driving by trying it out. As part of the “Save a Life” tour, students at Windom Middle High School got the chance to get behind the wheel of a driving simulator.

The simulation gives the students a safe learning environment to see the impact of their choices. "We want these students to make good decisions about when they get behind the wheel, that they're not distracted and they're not impaired in any way to save their life and the lives of others," Probation Career Agent Jenny Quade said.

Many students said they are taking away this message.

"Sometimes you forget, you think more, so think about if you're texting and driving, killing myself, only affecting myself, but it affects others more than you," student Lindsay Muller said.

"It may not seem like it at the moment, it may not seem like it would happen ever to you, but you never know what’s going to happen until it actually happens," student Daniel Green said.
Worker Memorial Day
by Sue Roe, MnDOT Communications Office

Keeping those who build and maintain Minnesota roadways safe is an important goal for TZD, but unfortunately, not all workers have made it home from their shifts. Worker Memorial Day is an annual event that honors the 35 MnDOT workers and 15 contractors who died since 1960 while working on Minnesota highways. This year, Governor Dayton proclaimed April 28 as Worker Memorial Day and the I-35W bridge in Minneapolis was lit orange from April 28-30.

Also a new name was added to the Worker Memorial monument at MnDOT’s Central Office in St. Paul. John Biever was hit by a pickup truck and killed in 1962 while working on a bridge in Houston County, but his name was never added to the Worker Memorial when it was created. Anne Meyer, MnDOT District 6 public affairs coordinator, found information about the crash from a story in the Minnesota Highway Department newsletter and contacted Biever’s family, who consented to his name being added to the monument. Dr. Dawn Lowery, Biever’s granddaughter, was among his family members who attended the observation in Rochester. She recalled stories of her grandfather and encouraged motorists to do their part to keep workers safe.

In Mankato, the event was hosted by AFSCME Local 280. Mike Hanley, transportation generalist, spoke about his experience when the MnDOT vehicle he was in was hit by a minivan. A poem written by Dale Plemmons, former MnDOT safety administrator, was read before the reading of the names of fallen workers. Families of Mike Struck and Darrell Blackwell, employees who died on the job, also attended.

The Metro District stressed safety at their event. Speakers included Scott McBride, district engineer, and Bryan Dodds, director, Office of Operations and Maintenance. “We honor the memory of our fallen co-workers by sharing our commitment to safety in our workplace,” said McBride. Dodds presented a Metro District work zone safety award to Michael Bolander, Golden Valley survey chief, for his contributions. “Michael’s dedication to safety means that he does not take any shortcuts on the job and always stresses getting the job done in an efficient and safe manner,” said co-worker Brett Fischer in his nomination for Bolander. Several pieces of construction safety equipment were also displayed at the event.

At MnDOT’s Central Office, an empty chair, vest and hardhat were displayed on each floor. A recorded audio message from Deputy Commissioner of Transportation Sue Mulvihill was also broadcasted. “Over the years, we have said goodbye to too many co-workers and friends who were killed in Minnesota work zones. We must work harder than ever to ensure that no one else is killed or seriously injured in a work zone,” she said.
Holiday 2017 Impaired Driving Enforcement Campaign Recap

**DUI arrests on the rise**

During the holiday DWI campaign, officers, deputies and troopers arrested 2,656 drivers for driving impaired compared with 2,407 DWI arrests during the same period in 2016.

**The drunk driving arrests include:**

- *Fairmont Police Department:* A driver arrested for DWI on Christmas Eve was arrested again on New Year’s Eve for DWI. Both times she was driving on the wrong side of the road.
- *Minnesota State Patrol (Mankato):* More than two hours after a driver was arrested for DWI, his passenger was arrested for DWI in the same vehicle. He was driving to the St. James Police Department to pick up his friend.
- *Minnesota State Patrol (Thief River Falls):* One drunk driver was arrested while trying to pull another drunk driver out of a snowbank.
- *Olmsted County Sheriff’s Office:* A driver was arrested after entering the Olmsted County Parks fishing area, hitting some rocks near the lake's edge and going airborne into the lake.
- *Onamia Police Department:* A driver was stopped for DWI while traveling with children ages 4 and 7 in the vehicle.
- *Onamia Police Department:* A woman who was going more than 100 mph and sideswiped another vehicle was arrested for DWI after a preliminary breath test of .36.
- *St. Cloud Police Department:* A driver who refused a breath test recorded a .24 Blood Alcohol Content (BAC) the following day as he was about to appear before a judge.

Want to be part of the TZD team? Contact your regional TZD coordinator to find out how.

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