

## Governor's Advisory Council on Connected and Automated Vehicles

### Agenda

December 16, 2020 - 10:00 am – 12:30 pm

#### *Hearing From Voices Impacted by Automation*

**Attendees:** Amber Backhaus, Dan Chen, Ryan Daniel, Phil Magney, Commissioner Anderson Kelliher, Robin Hutchison, Michael Gorman, John Hauslauden, Laurie McGinnis, Myrna Peterson, Ed Reynoso, Damien Riehl, Vicky Rizzolo, Bret Weiss, Patrick Weldon; Jason Gaad, Tina Folch, Ag Commissioner Thom Peterson, Kevin McKinnon, Emily Smoak, Roy Smith IRRB, Connie Bernardy, Todd Biewen, Charlie Zelle; Alice Roberts Davis; Rep. Torkelson; Steve Elkins; Rohit Tandon; Wayne Sandberg; Adesewa Adesiji; Jon Beck; Bentley Graves; Bryan Nemeth; Fawkes Char; Chelsea Arbury Prorok; Nancy Daubenberger; Gary Dirlam; Craig Gustafson; Mike Hanson; Cathy Huebsch; Sam Loesche; Margaret Donahoe; Jacob Mages; Wendall Meyer; Michael Wenger; Kim Norton; Phil Pumphrey; Renee Raduenz; Mel Reeder; Roy Smith; Erik Rudeen; Sarah Crane; Adam Shell; Skip Foster; Wayne Pisinski.

1. **Welcome** - *Margaret Anderson Kelliher and Phil Magney, Council Co-Chairs welcomed the group to the final meeting of 2020 with a full agenda. Rollcall was held.*
2. **Debrief & Discussion from September 25<sup>th</sup> Council meeting** – *CAV-X provided a recap of the September labor and workforce meeting to foster discussion with Council members as they reflect on lessons learned from Carnegie Mellon, University of Michigan Middle Skills Report, and American Center on Mobility workforce development programs.*

The Michigan Middle Skills report noted 6 key skills including fabrication, electronics, software, and robotics to combine into a “mechatronics” skillset that the CAV industry needs in the next 2-10+ years. DEED shared data that there are many CAV-related occupations but there is no actual CAV occupation tracked by DEED. Of those occupations tracked, there are 893 openings. Workforce Strategy Consultants help facilitate these conversations and DEED has grants opportunities for this work. Most recently DEED submitted a US Department of Labor H1B CAV “Upskilling” grant application to develop a training to pilot in MN.

Council members discussed that there is a lot of value to this work and there are many viable careers and positions in these fields and professions. There are many pathways for people to have successful and well-compensated employment without traditional 4-year degrees. Need to continue to tell the story about the opportunities that exist. The work needs to ensure we’re including 2-year degrees and institutions. The University of Minnesota provided an update on the STEM curriculum environmental scan where it worked with MnDOT, MnSCU and University of Minnesota resources to capture what STEM programs are available statewide. Next step is a more detailed survey.

The Center for Transportation Studies received funding for a 1-week summer CAV camp for high school students to learn about CAV career opportunities. The program is funded through one-time funding from FHWA and is coordinating with White Bear Lake’s career pathways program. The goal is to track

students as they move from high school into CAV careers. This is a pilot, so they want to pursue additional funding for future efforts. Could discuss CAV Camp sponsorships at future meeting.

3. **Labor and Workforce Committee Goals and Workplan** - *Co-chairs of the Labor and Workforce Innovation Alliance committee, Chris Hadfield (Minnesota State Transportation Center of Excellence) and Patrick Weldon (Polaris) overviewed the Committee's goals and work plan.*

Short term goals include kicking off the committee and adding more members every time we meet. With assistance of CAV-X staff we've been able to grow membership and participation from education, industry, auto dealers, trucking, labor, workforce and other work-related groups who have background, knowledge and influence in these areas. Committee members are very passionate about growing Minnesota's workforce and not being left behind. There are going to be tremendous opportunities, especially when we're not requiring 4-year degrees. This committee will eventually report out metrics to the Council so we can start to provide the Governor and elected officials information for future legislation and policy decision-making. Deliverables in the workplan include:

- CAV STEM outreach: MnSCU and University of Minnesota did an environmental scan of ongoing STEM activities.
- Looking at developing curriculum, based on NSF or other resources.
- Conducting a pilot project; plan to measure, report and communicate. Once we communicate data that is information policy makers can use to determine next steps.
- Creating workforce data based off a pilot
- Goal long-term is to have talking points to allow all Minnesotans to recognize what we're doing and provide feedback
- Looking for diversity, inclusion and equity to ensure that all voices can be involved

4. **Voices from Minnesota Panel**– Chairs Hadfield and Weldon moderated a panel with representatives from trucking, labor, mechanics, automobile dealers and transit operators to hear how CAV is impacting various occupations and industries.

- **Ed Reynoso, Minnesota Teamsters and Sam Loesche, Senior Legislative and Policy Representative, International Brotherhood of Teamsters** – Need the government to advance safety standards. Focus on industry veterans who may have more challenges being retrained for another skill or profession, which places pressure on employers. Limitations exist to buying an AV truck. Need to understand the supply chain limitations to AVs and how this technology will fit into long-haul freight. Need to address driver quality of life, including workplace safety and develop comprehensive solutions to address the economic impacts of AVs to drivers. Need to invest in retraining the workforce to ensure no workers are left behind and support, funding and strong transportation policy to address these concerns.
- **Dan Becker, Transport America** – Transport America has been investing in newer technologies, including lane assist and blind spot alert. There is frustration for drivers as they need training to operate these technologies. There are even robots that load these vehicles. This can lead to delays. As a driving instructor, Dan spends 160 hours in training so they can use the driver-assist technology properly. Lane assist technology helps reduce accidents. *How do drivers react to assist technology? Do they embrace it or are they concerned?* Younger generation support the assist technologies. Older drivers must be persuaded to use properly, which requires more training.

- **Wayne Pisinski, Vice President, Fixed Operations, Carousel Motor Group** - Every new vehicle has 60-100 micro-computers (modules), which all work on digital signals and must read each other's signals. One of the benefits of this is vehicles are lighter. Each vehicle has its own "Facebook" network; when one device posts something, the entire network reacts. This creates a new career path for technicians. These are good paying job, from \$42-\$120k a year. Need technicians at all levels. This need is being unanswered. An estimated 40,000 technicians will join the workforce in 2021 to fill the need of 70,000 jobs. The Biggest obstacle includes a lack of interest in joining the field.
- **Phil Pumphrey, General Manager, Duluth Transit Authority** - Many jobs are invested in the transit business, which has been impacted by COVID-19. Buses have up to 8 cameras, Duluth Transit had a project with MnDOT and City to upgrade traffic signals so that they can connect with traffic signals to support signal priority to help maintain schedules. Mobile fair applications are being used, and the "Where's my bus" to push information on arrival and departure times. Duluth Transit is adding mobile app for people with disabilities to schedule trips and remind of upcoming trips. Duluth Transit does not have any AVs. They see concerns about liability and the laws that address operations of AVs when they're in a wreck or malfunctions. Concerned about loss of jobs. The need for technicians and maintenance is becoming harder to find in all markets across the US. Safety of vehicles will have to be addressed, as well as the need to build capacity, trust and acceptance.

5. **Conversation with Council** – Chairs fostered conversation with panelists and Council members.

- It is difficult to take an older individual and transition them to a new role. Need to be realistic and practical of the career transition and capacity for retraining. *Have you seen examples of successful programs that work that retrain people and At what age does that happen?* In the Norwegian oil industry, they've re-trained into greener job technology with an older population. One of the barriers is the lac of interest in retraining as some operators love driving. Teamsters feel when a new job is created the employees should have a right of first refusal, which has worked well with the automated parking attendant technology transition.
- There are challenges with retraining and the unemployment system because often it requires a mass layoff before retraining funding is allocated by policy makers. The state needs a short-term and long-term approach. Need to first attract dislocated workers to the current system and then show them future career opportunities. Need to bring in new resources and adding additional skills to technical and college graduates in electrical and electronics. In the future/long-term we need to introduce new partners to the education system, including DEED, associations, employers, industry. The Minnesota Jobs Partnership allows employers to retool and retain jobs in MN.
- The biggest challenge is funding; Minnesota needs a substantial transportation funding package.
- When this Council was founded, it was named "automated", not "autonomous" because it needs to reflect the technologies of today. Operators are doing so much in addition to operating a vehicle. Metro Mobility may provide a good example of what if we included personal care training, as well as CDL training? Training in transportation may be transitioning into more human side "people care skill training."
- *What about the workers in today's economy who are fearful about what these changes mean for them? How do you encourage folks to go into a field that doesn't yet exist?*
- *Question for Dan: In the day to day life of a truck driver delivering freight, how often do you think about the potential of a fully autonomous commercial truck? I haven't seen any of the test fully*

autonomous trucks over the road yet, but I am a little worried about my future in trucking I see change every year. I may have to see how long I can stay in the industry. I will have to change with the times as well.

- Council member Elkins shared the *CBS 60 Minutes* video – “Driverless trucks could disrupt industry as soon as 2021”.
- Independent contractors are in the most challenging position because while they will not purchase autonomous trucks because it impacts their livelihood. Independent contractors represent 10-15% of the industry and the Teamsters represent 2% of the driver workforce.

## 6. Public comment

Joan Wilshire asked how people with disabilities can be included in all this work, as well as people from other minority groups? Equity and inclusion is a responsibility of all these committees. CAV-X has been working with the Committee Chairs to ensure that membership is reflective of all Minnesotans. We have also addressed the equity lens in committee meetings and can share that framework at upcoming meetings.

## 7. Closing

**Upcoming events** – CAV-X noted several upcoming events for the Council, including:

1. January 13, 2021 next Council meeting. Please check inboxes as invites went out via Microsoft Teams. The Council will hear from the Connectivity and Data Committee.
2. If you want to volunteer to test out the MnDOT Smart Snelling Connected Vehicle Project contact Kristin White.
3. The Statewide CAV Communications & Engagement Plan will be complete in January 2021, as will the Fiber Optic Buildout And Partnership Feasibility Study and MAASTO CAV Summit Report & 10-year Regional Strategy.
4. The Transportation Research Board Annual Meeting - January 21-22, 25-29 - <http://www.trb.org/AnnualMeeting/AnnualMeeting.aspx>
5. The Minnesota Transportation Conference is being held March 9-11th - <https://ccaps.umn.edu/mn-transportation-conference>. VSI and MnDOT are presenting.

The chairs thanked the Committee members, public servants, industry, elected officials and guests who listen in as we cannot gather in person. Wishing everyone and their families stay healthy. It's been a terrific year despite all the challenges we faced to use online meeting tools effectively. These discussions show the importance of taking a 360-degree view of the impact of new technology developments. Happy Holidays!