

APRIL 14, 2021

# MINNESOTA GOVERNOR'S ADVISORY COUNCIL ON CONNECTED & AUTOMATED VEHICLES

National CAV Policy Priorities and State Updates

# WELCOME

Margaret Anderson Kelliher, Co-Chair  
Commissioner, MnDOT

Phil Magney, Co-Chair  
CEO and Founder, VSI Labs

# AGENDA

1. Welcome
2. Future of Transportation Policy – Perspectives on National and Federal Policy Priorities
3. Discussion
4. Minnesota CAV Guiding Policy Principles
5. Tech Workforce Month
6. CAV Annual Report
7. Public Comment
8. Closing



# Future of Transportation Policy – Perspectives on National and Federal Policy Priorities

- US DOT – *Michael Shapiro, Deputy Assistant Secretary For Economic Policy*
- ITS America – *Tim Drake, Vice President For Public Policy And Regulatory Affairs*
- Alliance for Automotive Innovation – *Josh Fisher, Director of State Affairs*
- Partners For Automated Vehicle Education – *Tara Andringa, Executive Director*





PARTNERS FOR AUTOMATED VEHICLE EDUCATION

Minnesota Governor's Advisory Council on  
Connected and Automated Vehicles  
April 2021

# Our mission

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Through a public education campaign, PAVE is helping to create an automated vehicle future that increases safety, mobility, efficiency and sustainability.

# About PAVE

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- PAVE is a **501(c)(3) nonprofit coalition** that seeks to raise the level of public knowledge of automated vehicle technology and the potential benefits for safety, mobility, equity and congestion.
- PAVE's **diverse membership** includes international corporations, start-ups, consumer advocates, nonprofit groups, and other stakeholders.
- PAVE's **Academic Advisory Council** and **Public Sector Advisory Council** include thought leaders who assist PAVE in its mission to raise public awareness of AV technology.



# Our members



# Belief #1

PAVE members believe that autonomous vehicles offer the potential to improve the **safety, mobility and sustainability** of our transportation system



## Belief #2

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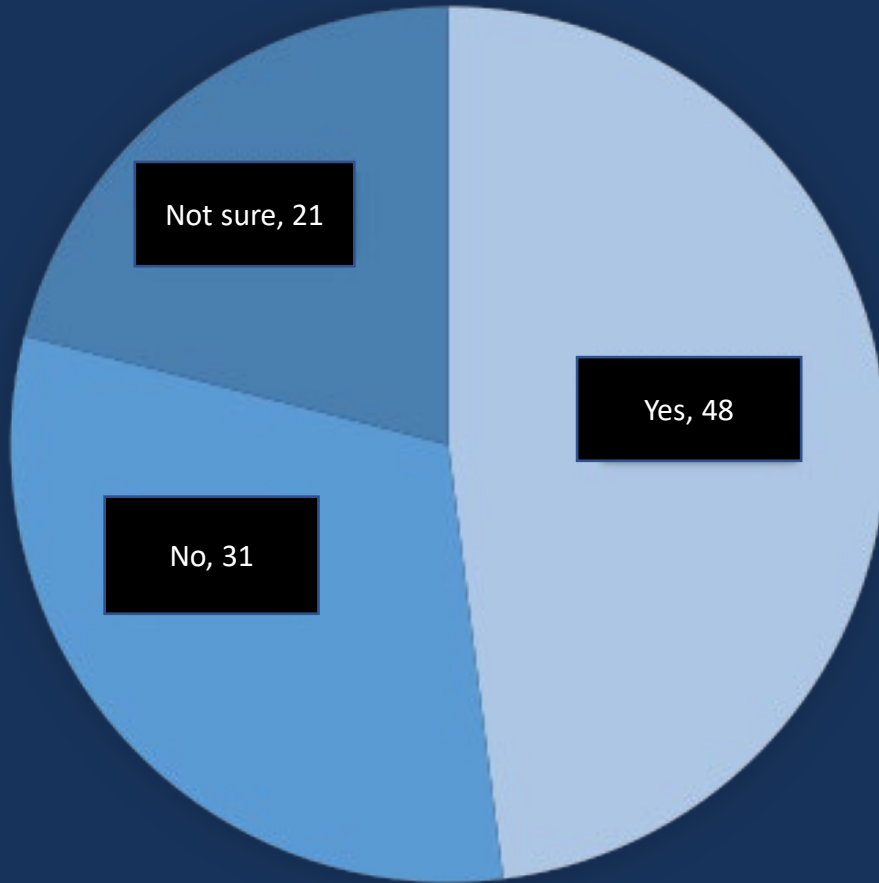
**Public acceptance** is essential for autonomous vehicles to achieve their potential in improving the safety, mobility and sustainability of our roadways.





# Current public attitudes

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A 2020 public opinion poll commissioned by PAVE found that 48% of respondents said they “would never get in a taxi or ride-share vehicle that was being driven autonomously.”

# The Power of Knowledge

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But the poll also found that **greater knowledge and more exposure to technology** are two factors that change attitudes.



60%

Say they would trust AVs more if they understood the technology



58%

Say they would have greater trust in AVs if they could take a ride

# Our conversation with the public

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PAVE provides facts and information to empower every person to join the conversation about the future of transportation.

We seek to demystify technology and highlight different ways AVs may be used.





# The case for public education

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The "Click it or Ticket" campaign drove seat belt laws and usage to **90% levels.**

# How we do it

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Messaging and  
Media



Events



Public Sector  
Engagement

# Public Sector Advisory Council





# Public Sector Workshops

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- Workshops to help public sector entities prepare for AVs:
  - AV 101
  - Regulatory overview
  - First responders and AVs
  - Infrastructure
  - Moving people (transit & passenger vehicles)
  - Moving goods (freight & trucking)
- First workshop with Ohio – May 2021





PARTNERS FOR AUTOMATED VEHICLE EDUCATION

Tara.Andringa@pavecampaign.org  
PAVEcampaign.org

# OPEN DISCUSSION

3

# CAV GUIDING POLICY PRINCIPLES



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# BACKGROUND

- Public, policy makers largely unfamiliar with CAV
- Policy makers need support in developing technology policy
- Principles help ask the right questions when directing public investment in technology
- No one document synthesizes all the above into clear policy statements
- American Job's Plan announced
- Industry and advocacy groups have their own priorities

American Association of State Transportation Officials (AASHTO) Draft Policy Principles

Minnesota Draft Principles

AASHTO CAT/CAV Policy Principles

Background



## Minnesota's CAV Guiding Principles

In 2018 Minnesota established the Governor's Advisory Council on Connected and Automated Vehicles (CAV) and the CAV Office to help the state plan and prepare for emerging transportation technologies. The Council developed the state's CAV vision, mission, and goals. Below are the state's CAV Guiding Principles, developed support from the CAV Innovation Alliance and the Minnesota Office of Connected and Automated Vehicles (CAV-X).

The goal of these Guiding Principles is to help stakeholders ask the right questions when developing CAV policy and programs in directing investment to advance a transportation system that is safe, equitable, accessible, efficient, healthy, and sustainable. These principles have the most potential when working together in synergy.

These principles help advance the U.S. DOT's vision of transportation that as an 'imaginative, bold, forward-thinking engine for equity' that improves quality of life. - Secretary Pete.

## Minnesota CAV Guiding Principles

Below are Minnesota draft CAV Guiding Principles. Each of these principles has general policy statements, followed by key questions to ask policy makers, government, industry, and community when developing new CAV programs or policies. These questions can be asked when developing policy, when scoping and selecting projects, and in evaluating program success and can be shared with local agencies, communities and stakeholders.

1. **Safety:** Continue to work towards a transportation system that has no fatalities, an decrease severe and serious crashes. Provide multi-modal safe systems. Proactively address disproportionately impacted demographics that are overrepresented in traffic safety data.
  - **Questions to ask:** Does this support safety for all communities including people who walk, bike, use transit and other modes? Does this advance the state's SRTS, SHSP and other community health goals? Does this provide appropriate regulatory oversight to ensure compliance with safety goals? Can the CAV safely return control if an error occurs? Can the AV predict other drivers and road users? How does the AV follow traffic laws? Does the AV alert operators when they need to take over, if applicable? How is the safety of the vehicle validated or tested? Is the technology safe from cyber-attack and security risks? How does this policy or program advance *Toward Zero Death* goals and those embodied in *Complete Streets*, *Safe Routes to Schools* and *Highway Safety Plans*? Does this provide a safety benefit to diverse geographical and/or for diverse demographics in the state? Does this create a more welcoming and physically safe environment for people of all modes?
2. **Equity** - Advance policies that promote transportation equity. View our work through an equity lens. Meaningfully engage communities to have a voice in expressing how CAV can advance their goals. Recognize transportation's role in dividing communities and recommit to removing systemic barriers. Improve affordable access to destinations in all areas, improving access from rural communities. Uphold public interest with clarity and transparency.
  - **Questions to ask:** Who was involved in the decision or policy development? Does the policy lead to disparate impacts to any one community? Does this advance the state's racial equity and social

greatly improve the safety and mobility of the nation's (CAT) envisions all stakeholders and elements of the ability, equity, and operations efficiency through enabled by connectivity and information exchange. CAT and focus on enabling a multi-modal transportation technologies to improve safety, mobility, equity,

to significantly improve the safety of transportation advance CAV technology and test and deploy these is ensured.

to inform communities and policy makers. metrics to monitor system performance ation of automated driving systems to ensure the safe

3 (building on NHTSA's AV EST) ports the need for a *National Strategy for Transportation* tegy. The vision and related strategy must be mmunities, local governments, and other transportation ctive transportation systems serve. Various, successful how how independent, collaborative non-governmental

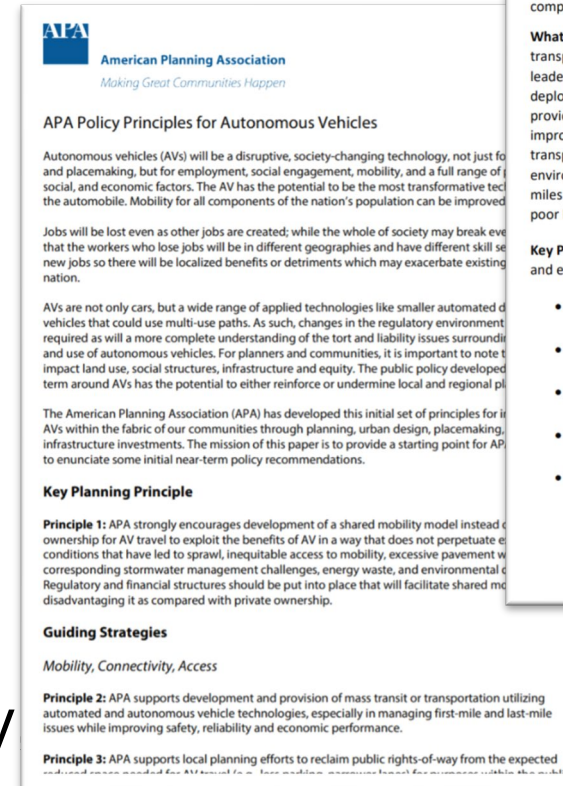
le technology is key to ensuring automated vehicles have SHTO's goals of a safe, mobile, equitable and efficient nce-based outcomes of the technology and avoid ort futureproofing. servation of the 5.9 Gigahertz (GHz) spectrum but is also ntext of the recent decisions to open the spectrum ould remain technology neutral while also planning for

l policy should preserve: (1) traditional federal roles in policy in regulating driver licensing, vehicle registration, ss clear as the operator role and vehicle technology es when developing federal policy. uthorize the safe testing and deployment of CAVs is inconsistencies and patchwork approach of state laws which gies. The Federal government must take a proactive role es must be addressed to accommodate changing trends

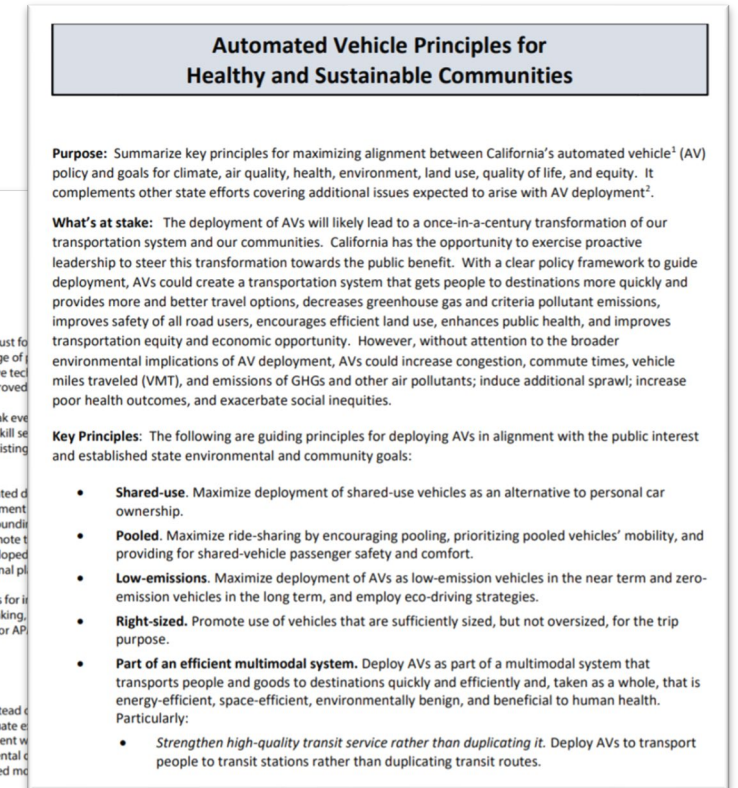


# HOW THESE WERE DEVELOPED

- Reviewed other states, regions and AASHTO principles
- Used an equity lens framework
- Used Governor's Advisory Council vision, goals and values
- Embody MnDOT, public sector leadership and priorities
- Include key questions to ask policy makers and leaders
- Goals: Help stakeholders ask the right questions when developing CAV policy programs and directing investment

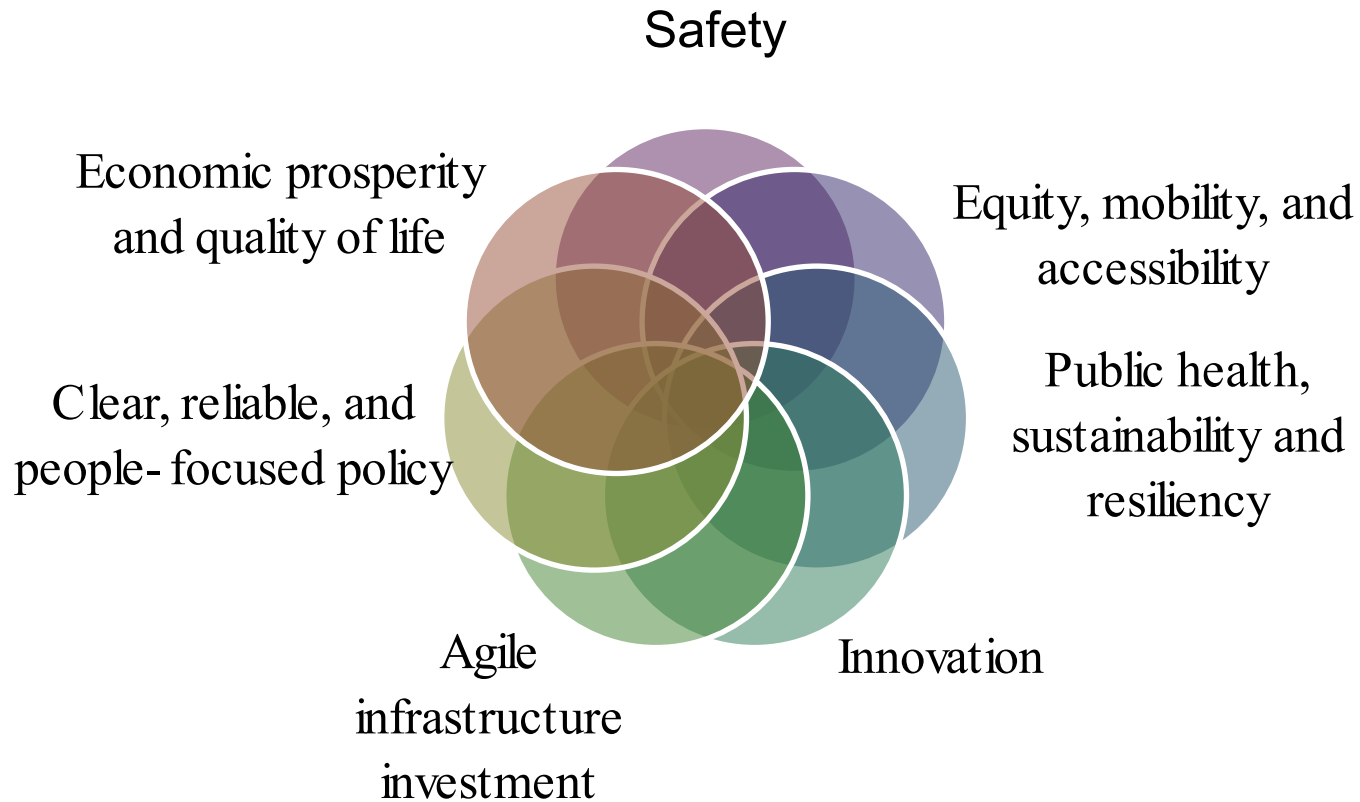


American Planning Association CAV Policy Guiding Principles



CalTrans CAV Policy Guiding Principles

# DRAFT CAV POLICY PRINCIPLES



*Goal: Guide stakeholders and leaders to ask the right questions when developing CAV policy, programs and directing investment.*



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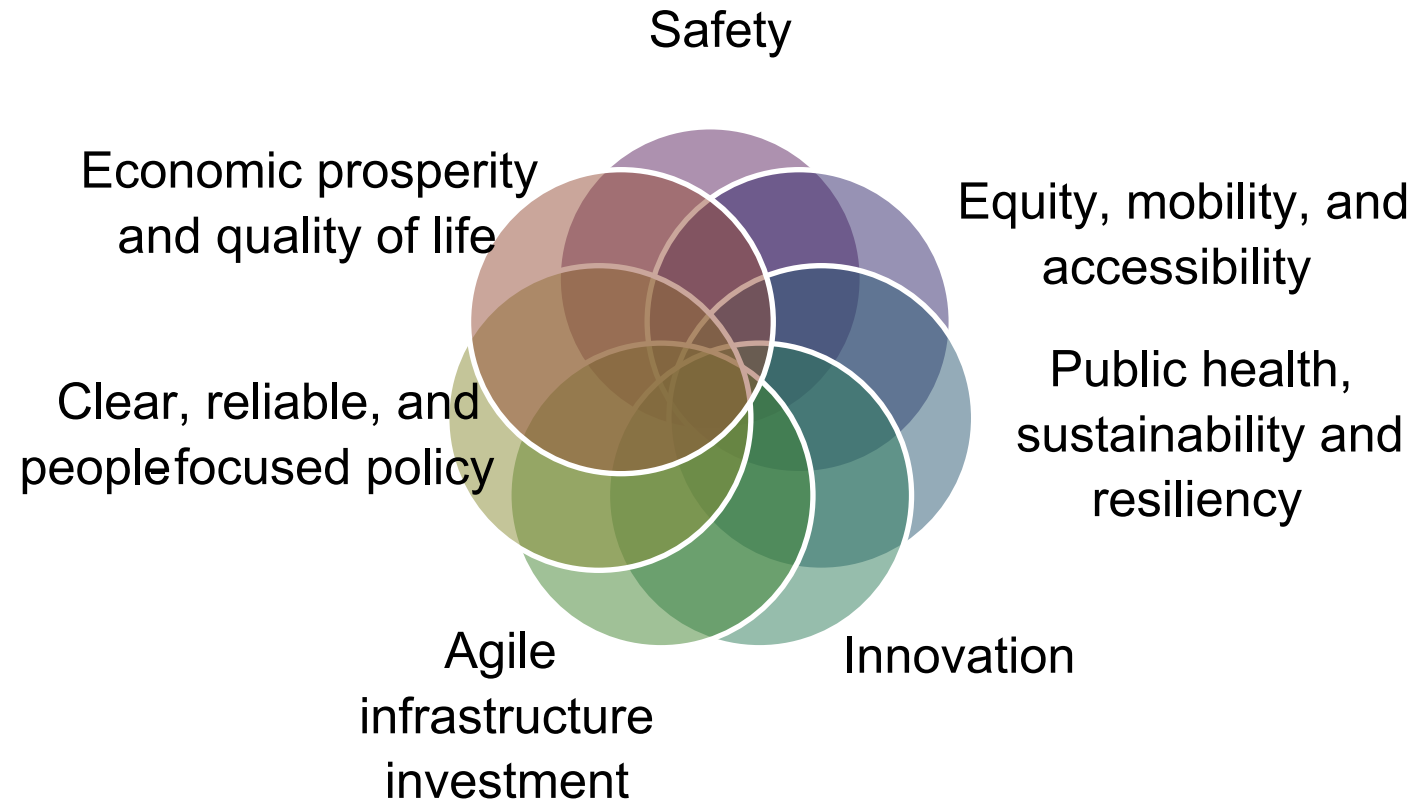
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- 1. Safety:** Continue to work towards a transportation system that has no fatalities and decrease severe and serious crashes. Provide multi-modal safe systems. Proactively address disproportionately impacted demographics that are overrepresented in traffic safety data.
  - Questions to ask:** Does this support safety for all communities including people who walk, bike, use transit and other modes? Does this advance the state's SRTS, SHSP and other community health goals? Does this provide appropriate regulatory oversight to ensure compliance with safety goals? Can the CAV safely return control if an error occurs? Can the AV predict other drivers and road users? How does the AV follow traffic laws? Does the AV alert operators when they need to take over, if applicable? How is the safety of the vehicle validated or tested? Is the technology safe from cyber-attack and security risks? How does this policy or program advance *Toward Zero Death* goals and those embodied in *Complete Streets*, *Safe Routes to Schools* and *Highway Safety Plans*? Does this provide a safety benefit to diverse geographical and/or for diverse demographics in the state? Does this create a more welcoming and physically safe environment for people of all modes?
- 2. Equity, Mobility and Accessibility** - Advance policies that promote transportation equity. View our work through an equity lens. Meaningfully engage communities to have a voice in expressing how CAV can advance their goals. Recognize transportation's role in dividing communities and recommit to removing systemic barriers. Improve affordable access to destinations in all areas, improving access from rural communities. Uphold public interest with clarity and transparency. Promote inclusive policies that meet the needs of all users. Understand that multi-modal mobility is crucial to an integrated transportation system. All transportation options must be accessible and affordable. Connect CAV technology with other modes, including freight, air, ports, rail, and others. Develop intermodal transportation systems that decrease congestion and maximize efficiency. Understand the role systems change plays. Support shared use over single-vehicle travel. Implement strategies that reduce the effects on traffic congestion, including the resulting impacts on road safety, modal choices, emergency vehicle response time, transit performance and reliability

# PROPOSED NEXT STEPS

1. I-CAV and public sector refining concepts now
2. I-CAV presents principles to Advisory Council co-chairs
3. Council reviews draft document
4. Discuss at July Council meeting
5. Adopt principles recommended by Advisory Council



*Goal: Guide stakeholders and leaders to ask the right questions when developing CAV policy, programs and directing investment.*



*Minnesota's Career Resource*



# Minnesota's Technology Workforce Month

April 2021

**Adesewa Adesiji - DEED Workforce Strategy Consultant, Metro Area**

# TECHNOLOGY WORKFORCE MONTH

## ***Goal of Tech Workforce Month:***

- ✓ ***Highlight Minnesota's technology industry***
- ✓ ***Promote activities and career opportunities in the tech industry to Minnesota residents***

## Minnesota's Technology Industry – Snapshot

- Home to 110,000 people working in Information Technology occupations.
- 3.8% of total employment in Minnesota (national average is 3.4%)
- Information Technology work is more concentrated in Minnesota than the nation as a whole.
- Metro Area accounts for the largest share of Minnesota's Information Technology jobs
  - Region accounts for 62.7% of state's total employment, 85.3% of state's IT jobs



# TECHNOLOGY WORKFORCE MONTH - GOVERNOR'S PROCLAMATION

WHEREAS: We need to continue to raise awareness, overcome barriers, and welcome Minnesotans from all backgrounds to explore and succeed in Information Technology careers.

NOW, THEREFORE, I, TIM WALZ, Governor of Minnesota, do hereby proclaim the month of April 2021, as:

## TECHNOLOGY MONTH

in the State of Minnesota.



IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Minnesota to be affixed at the State Capitol this 30<sup>th</sup> day of March.

A handwritten signature in black ink, reading "Tim Walz".

GOVERNOR

A handwritten signature in black ink, reading "Steve Simon".

SECRETARY OF STATE

Filed on March 30, 2021  
Office of the Minnesota  
Secretary of State,  
Steve Simon

# TECHNOLOGY WORKFORCE MONTH: RESOURCES AND EVENTS

## Something for everyone

### Events

- ✓ Panel discussions
- ✓ Weekly blogs
- ✓ Weekly Explore Career Webinars
- ✓ Virtual Metro Area Tech Career Fair
- ✓ Awards ceremony

### Resources

- ✓ Apprenticeship webinars
- ✓ Tech Training Grants for employers
- ✓ Regional DEED team
- ✓ List of short-term trainings
- ✓ Current tech job postings

# TECHNOLOGY MONTH: GETTING INVOLVED

- ✓ #TechMonthSpotlight
- ✓ Hiring and career events
- ✓ Webinars
- ✓ Promote tech trainings & collaborations
- ✓ Blogs



# TECHNOLOGY WORKFORCE MONTH: APRIL CALENDAR

**April 14 9am-10:15am:** *Assistive Technology Webinar for Employers*

**April 14 6:30pm-7:45pm:** *Top-Tier Aspirations in Computing Award*

**April 15 10am-11am:** *DLI Registered Apprenticeships Webinar for employers & technology organizations*

**April 20 2:30pm-3:30pm:** *Explore Tech Careers: Inclusion*

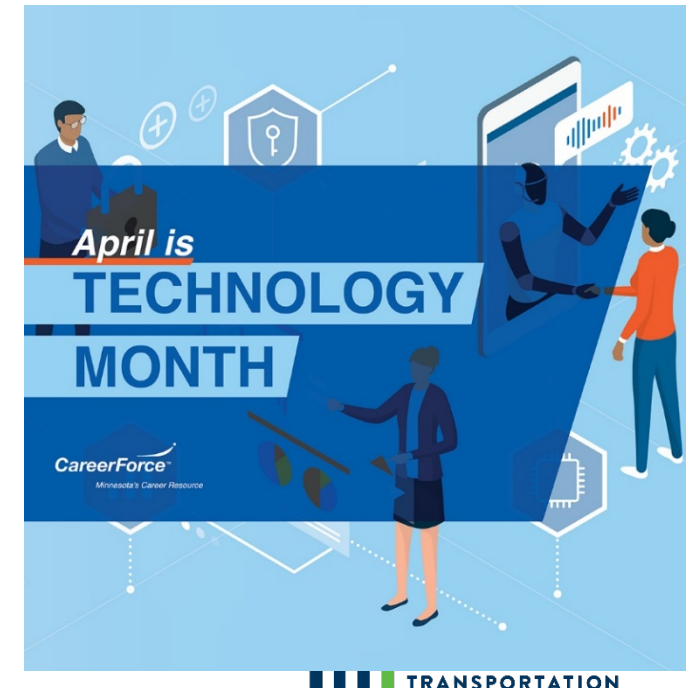
**April 21 11am-noon:** *BIPOC in Tech – Facebook Live Event*

**April 22 11am-noon:** *Metro IT training panel*

**April 22 11am-noon:** *Career Pathways for Women in Tech*

**April 27 7:30am-10am:** *Metrowide Virtual Career Fair: Tech Employment*

**April 27 2:30pm -3:30pm:** *Explore Tech Careers: Future of Tech*



# CAV ANNUAL REPORT

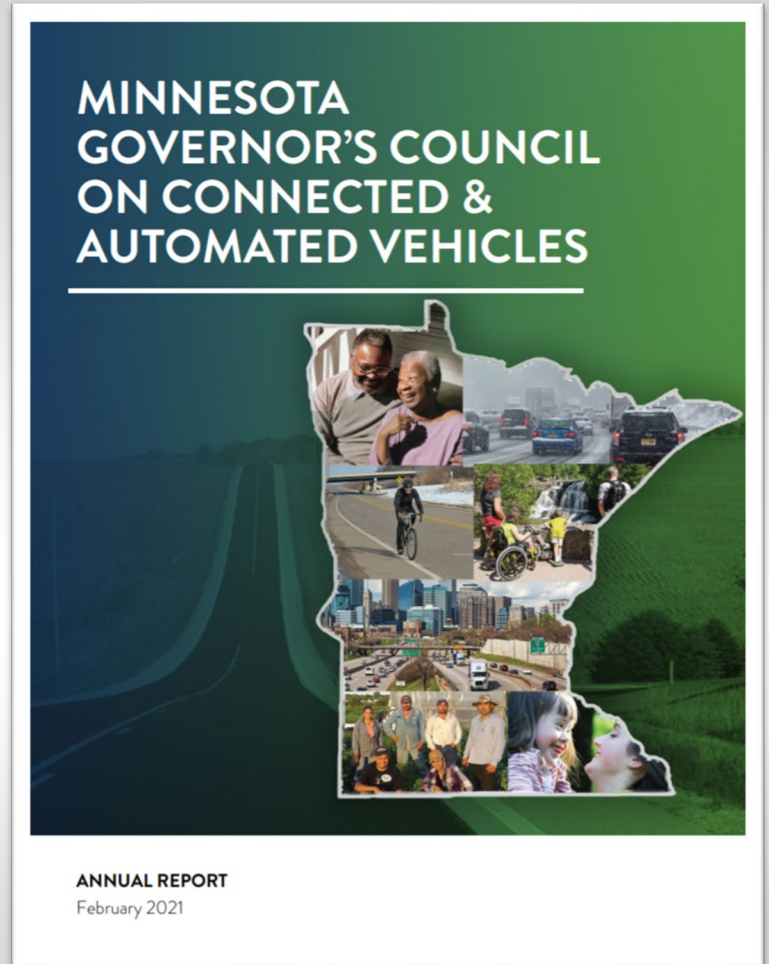




# ANNUAL REPORT HIGHLIGHTS

- Executive Order requires:
  - Council must prepare a written annual report to the Governor by February<sup>st</sup> each year.
- Update on the Council's activities
- Actions needed to ensure Minnesota is advancing CAV, intelligent transportation, and emerging technologies.

CAV  
ADVISING



# OPPORTUNITY FOR PUBLIC COMMENT

Please enter use 'raise hand' feature or type your  
question into the chat box



# CLOSING

Co-chair Margaret Anderson Kelliher, MnDOT Commissioner

Co-chair Phil Magney, VSI Labs

Next Meeting: July 14, 2021





# THANK YOU

GOVERNOR'S COUNCIL ON CONNECTED AND AUTOMATED VEHICLES

MARGARET ANDERSON-KELLIHER  
Co-Chair

PHIL MAGNEY  
Co-Chair

