

JANUARY 22, 2020

GOVERNOR'S ADVISORY COUNCIL ON CONNECTED & AUTOMATED VEHICLES

Building an Alliance:
Lessons Learned from Other States

WELCOME & INTRODUCTIONS

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



1

REVIEW COUNCIL'S VISION, MISSION & PRIORITIES



2

COUNCIL'S VISION



Building a future of transportation that is
safe, equitable, accessible, efficient, healthy, and sustainable.



COUNCIL'S GOALS



Safety

Equity

Innovation

Reliability

Livability

COUNCIL'S MISSION

CAV
ADVISORY
COUNCIL

Through **collaboration, partnership, and engagement** Minnesota's Council on CAV will work with **government, industry and communities** to deploy CAV to promote a transportation system for all users by **engaging** with stakeholders, **partnering** with industry, developing a **clear regulatory environment**, working with other levels of government, and **investing** in a system that **inclusively meets the needs of all multi-modal users.**

3-YEAR PRIORITIES

1. Equity, mobility, accessibility, public health and environment
2. Industry and research partnerships
3. Infrastructure investment
4. Law for safe testing and deployment
5. Education, outreach, engagement and demonstrations
6. Economic and workforce development
7. Data privacy and cyber security
8. Insurance and liability
9. Alignment with other states/federal government
10. Human factors research of CAV impacts on users

CAV
ADVISORY
COUNCIL

2020 PRIORITIES



Industry &
Research
Partnerships

Education
Outreach
Engagement
Demonstrations
Pilots

Equity
Mobility
Accessibility
Public health
Environment

DISCUSSION



IOWA AND TEXAS PERSPECTIVES



3



— IOWA ADVISORY COUNCIL ON AUTOMATED TRANSPORTATION & RESEARCH PARTNERSHIPS

ADAM SHELL, AUTOMATED TRANSPORTATION PROGRAM MANAGER, IOWA DOT

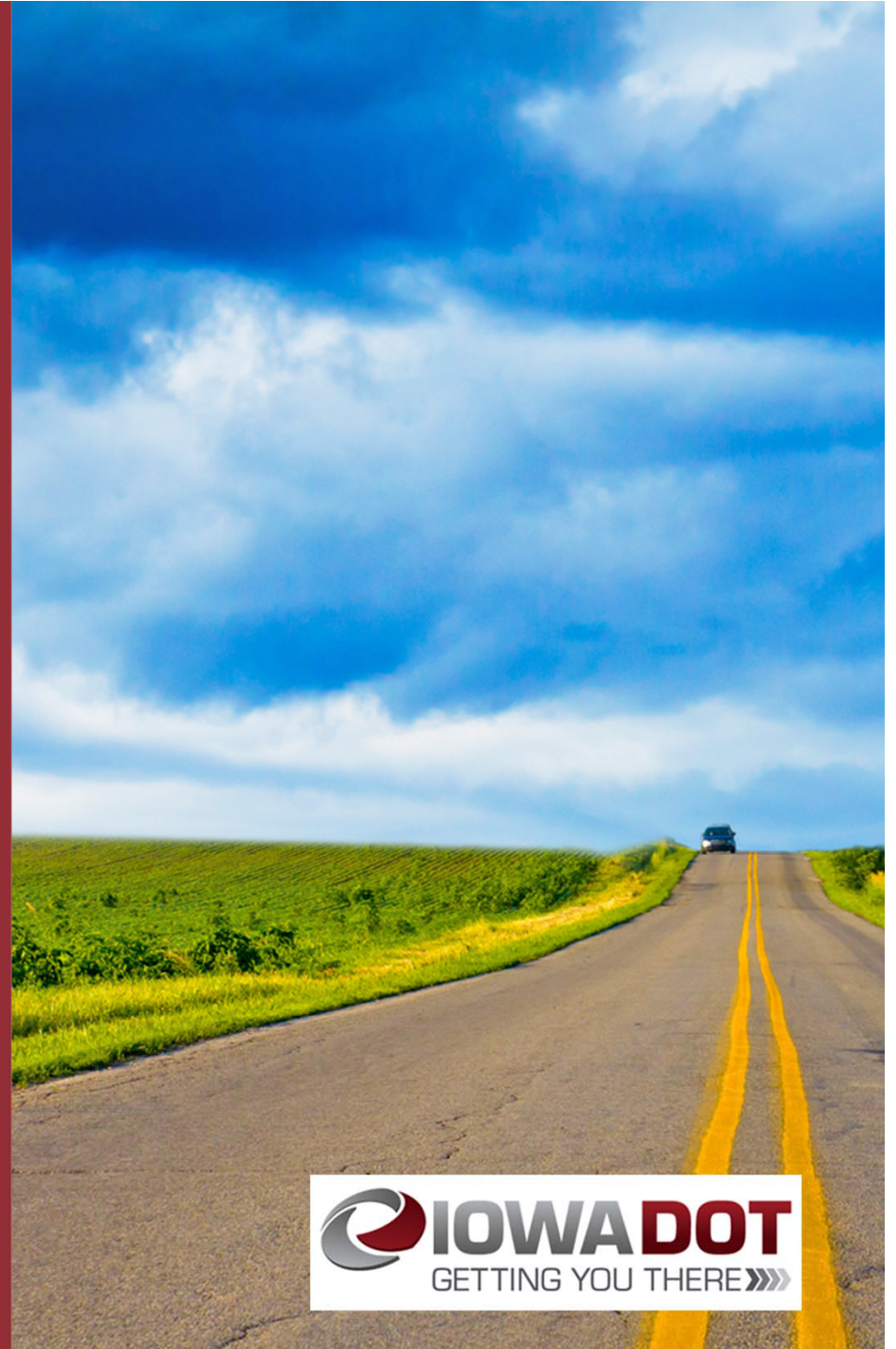
DONNA MATULAC, ASSISTANT DIRECTOR OF TRAFFIC OPERATIONS, IOWA DOT

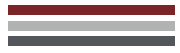


Preparing for an AV-Ready Iowa

January, 22 2020

State Level Readiness





Legislation

House File 387

An act relating to distance requirements for certain motor vehicles

Senate File 302 ("AV Framework" Bill)

An act relating to motor vehicles operated by an automated driving system and making penalties applicable





Legislation

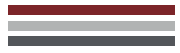
- Senate File 302

- New Sections

- Definitions
- Operation
- Insurance
- Accidents
- On-demand driverless-capable vehicle network
- Authority

Next Steps with SF302 Legislation

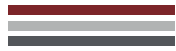
- Iowa DOT AV Legislation Working Group
- Recommendations to Iowa DOT management team
- Two general recommendation themes (monitoring and identification)



Iowa Advisory Council on Automated Transportation

- Informally the AT Council or ATC
- Began July 2018 by the Iowa DOT
- Vision
 - To create an AV-ready driving environment in Iowa for the safe movement of people and freight for a thriving Iowa economy
- Mission
 - Lead, coordinate, and enable the advancement of automated transportation systems in Iowa



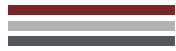


Preparing for an AV-Ready Iowa

Iowa Advisory Council on Automated Transportation

- Variety of public and private members
- Four Subcommittees
 - Infrastructure Readiness
 - Economic Development
 - Policy & Legislation
 - Public Safety & Enforcement
- Council and Subcommittees meet quarterly

Stakeholder	Role(s)
Associated General Contractors of Iowa	ATC member, transportation infrastructure
Federal Highway Administration (FHWA), Iowa Division	ATC <i>ex officio</i> member, infrastructure, policy, Stewardship / Oversight Agreement
Federal Motor Carrier Safety Administration	ATC <i>ex officio</i> member, freight movement safety and policy
Freight Advisory Council	ATC member, freight and commerce
Iowa City Area Chamber of Commerce	ATC member, economic development
Iowa Department of Agriculture and Land Stewardship	ATC member, agriculture and rural transportation
Iowa Department of Public Safety (DPS)	ATC member, public safety
Iowa Department of Transportation (DOT)	ATC member, lead agency and chair of the ATC
Iowa DOT Motor Vehicle Division	ATC member, licensing, regulation, and enforcement
Iowa DOT Research and Analytics Bureau	Implications of AT on assets and data
Iowa DOT Strategic Communications and Policy Bureau	ATC member, communications
Iowa DOT Systems Planning Bureau	Planning for advanced mobility
Iowa DOT Traffic Operations Bureau	Lead Bureau for AT
Iowa Economic Development Authority	ATC member, economic development
Iowa Insurance Division	ATC member, liability and insurance
Iowa League of Cities	ATC member, local governance
Iowa Legislature, House of Representatives	ATC <i>ex officio</i> member
Iowa Legislature, Senate	ATC <i>ex officio</i> member
Iowa Motor Truck Association	ATC member, freight and commerce
Iowa State Association of Counties	ATC member, local governance
Iowa State Patrol	ATC member, enforcement and public safety
Iowa State University	Expertise in AT, AV, infrastructure, and operations
Iowa Transportation Commission	Policy, program determinations, administrative rules
Iowa Transportation System Users	All system users, e.g., motorists, freight movers, transit riders, bicyclists, pedestrians
Metropolitan Planning Organizations	Responsible for a range of transportation and land use issues
National Highway Traffic Safety Administration (NHTSA)	ATC <i>ex officio</i> member, policy and vehicle regulation
Technology Association of Iowa (TAI)	ATC member, economic and workforce development
University of Iowa	ATC co-chair for management and logistics, AV expertise



Preparing for an AV-Ready Iowa

IOWA ADVISORY COUNCIL
ON **AUTOMATED TRANSPORTATION**

[HOME](#) | [AT COUNCIL DOCUMENTS & RESOURCES](#) | [AT SUBCOMMITTEES](#) | [CONTACT US](#)



IOWA ADVISORY COUNCIL ON AUTOMATED TRANSPORTATION

The Iowa Advisory Council on Automated Transportation is intended to increase roadway safety, personal mobility, and freight movement within the state of Iowa by advancing highly automated vehicle technologies. The Council shall provide guidance, recommendations, and strategic oversight of automated transportation activities in the state.

VISION STATEMENT

To create an AV-ready driving environment in Iowa for the safe movement of people and freight for a thriving Iowa economy.

MISSION STATEMENT

Lead, coordinate, and enable the advancement of automated transportation systems in Iowa.

MEETINGS

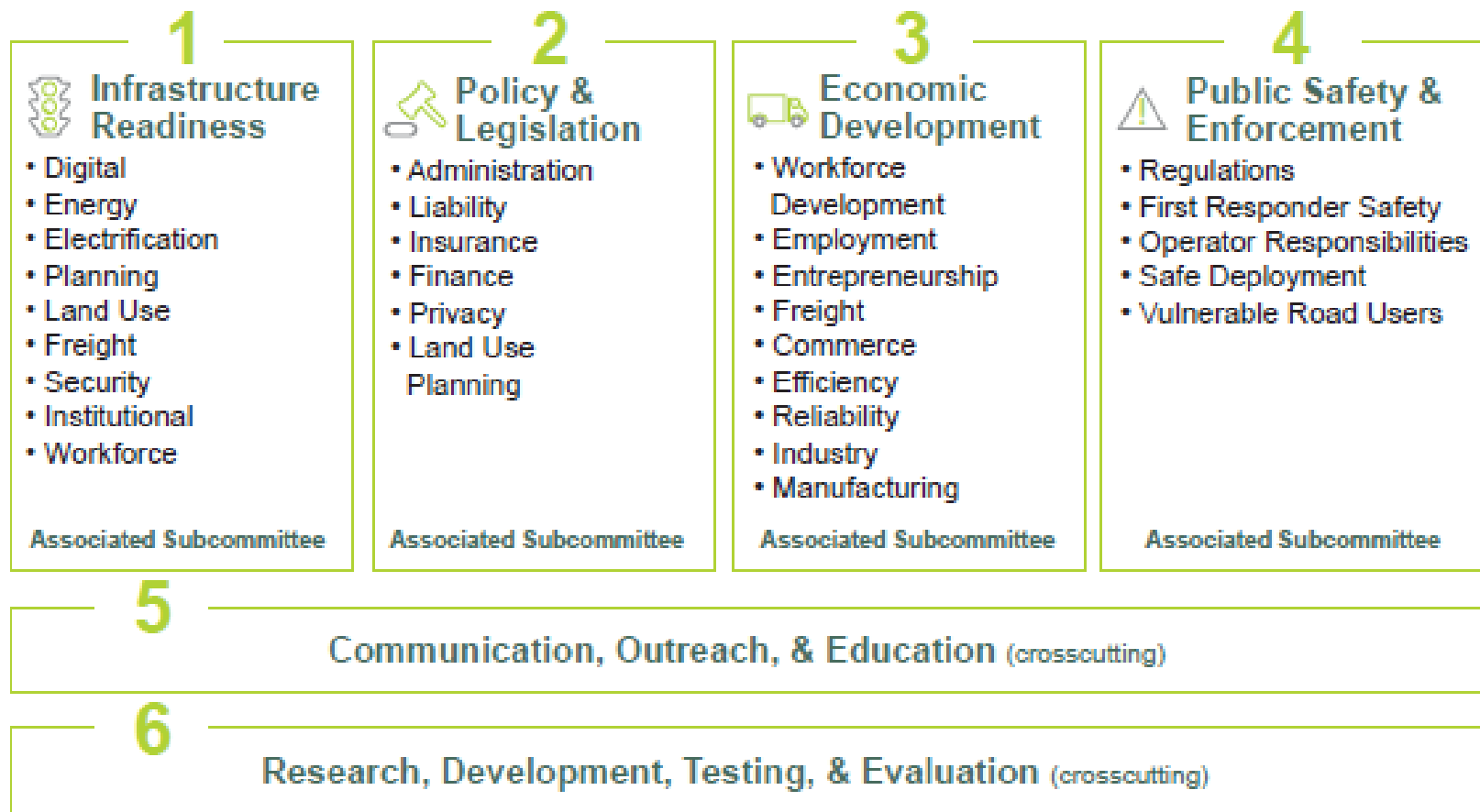
Meetings will be held once per quarter. Additional meetings may be scheduled upon request of the Council members. The Council Chair will lead the quarterly meetings. The University of Iowa will support all efforts of the meetings, including development of the agenda and minutes. Meetings will be convened at mutually agreeable locations determined by the Chair and members.

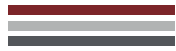
MEMBERSHIP (AS OF MARCH 2019)

Associated General Contractors of Iowa
 Federal Highway Administration, Iowa Division
 Federal Motor Carrier Safety Administration
 Freight Advisory Council
 Iowa City Area Chamber of Commerce

<https://iowadrivingav.org/>

How is the ATC supporting AV-readiness?





Preparing for an AV-Ready Iowa

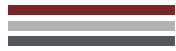
ATC Vision

- Vision Document
 - 6 Objective Areas
 - 20 Outcomes
 - 23 Tactics
- Completed Jan/Feb 2020
- Next Steps
 - Develop Work Plans

Table 2. Summary of Objectives and Tactics

Objective Areas	Outcomes	Tactics
Infrastructure Readiness	A. Accelerate Infrastructure Readiness B. Implement National Guidance C. Improve Traffic Control Assets D. Leverage Communications Infrastructure E. Develop Agency Workforce	1. Assess & Advance AT Readiness 2. Improve Pavement Marking 3. Build Out Fiber Backbone 4. Implement Pilot Program* 5. Define Data Systems Architecture
Policy & Legislation	A. Evolve Administrative Rules B. Address Liability & Insurance C. Advise on Legislation D. Policymaker Outreach E. Community Readiness	1. Bolster State Leadership 2. Monitor Legislation 3. Modify Administrative Rules 4. Ensure CAT in Planning 5. Improve Equity & Accessibility 6. Implement Pilot Program*
Economic Development	A. Outreach to Business B. Foster Business Growth C. Improve Freight Movement D. Workforce Development	1. Assess Platooning Corridors 2. Initiate Platooning Study 3. Engage with Iowa Businesses 4. Engage with Iowa Community Colleges 5. Implement Pilot Program*
Public Safety & Enforcement	A. Adapt to Changing Laws B. Explore Vehicle Automation Indications C. Promote Crash Data & Investigation D. Ensure Safe Incident Management	1. Develop Following Distance Guidelines 2. Explore Vehicle Automation Indicators 3. Capture AV Crash Data 4. Inform TIM & Safety Community
Communications, Outreach, & Education	Crosscutting	1. Active Coordination 2. Public Outreach 3. Response Planning
Research, Development, Testing, & Evaluation	Crosscutting	1. RDT&E Coordination 2. RDT&E Engagement

* the pilot program is intentionally repeated in three areas



ATC Lessons Learned

- Subcommittees (“less is more”)
- Midwest Reality
- Engagement isn’t easy
- Meeting Frequency





THANK YOU FOR YOUR TIME AND ATTENTION



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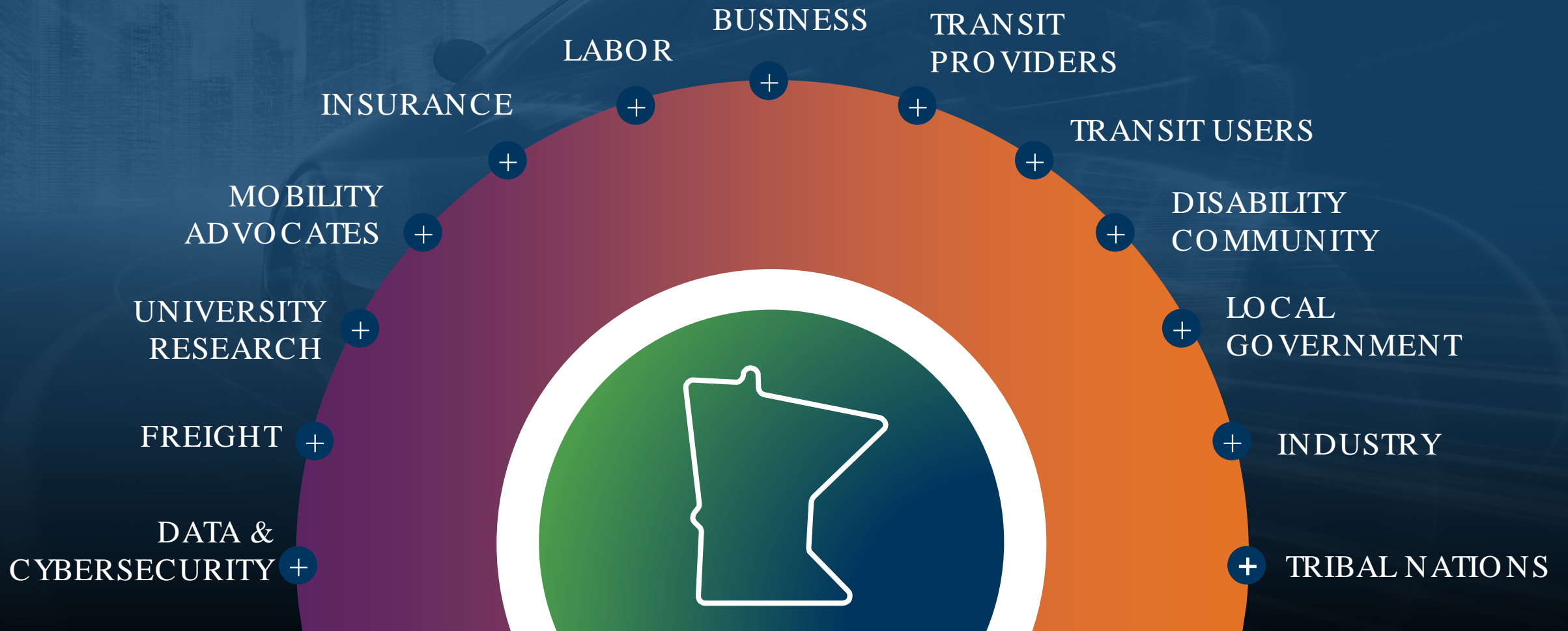
Adam Shell
Automated Transportation Program Manager
Traffic Operations Bureau
adam.shell@iowadot.us



TEXAS INNOVATION ALLIANCE

DARRAN ANDERSON, DIRECTOR OF STRATEGY & INNOVATION, TEXAS DOT

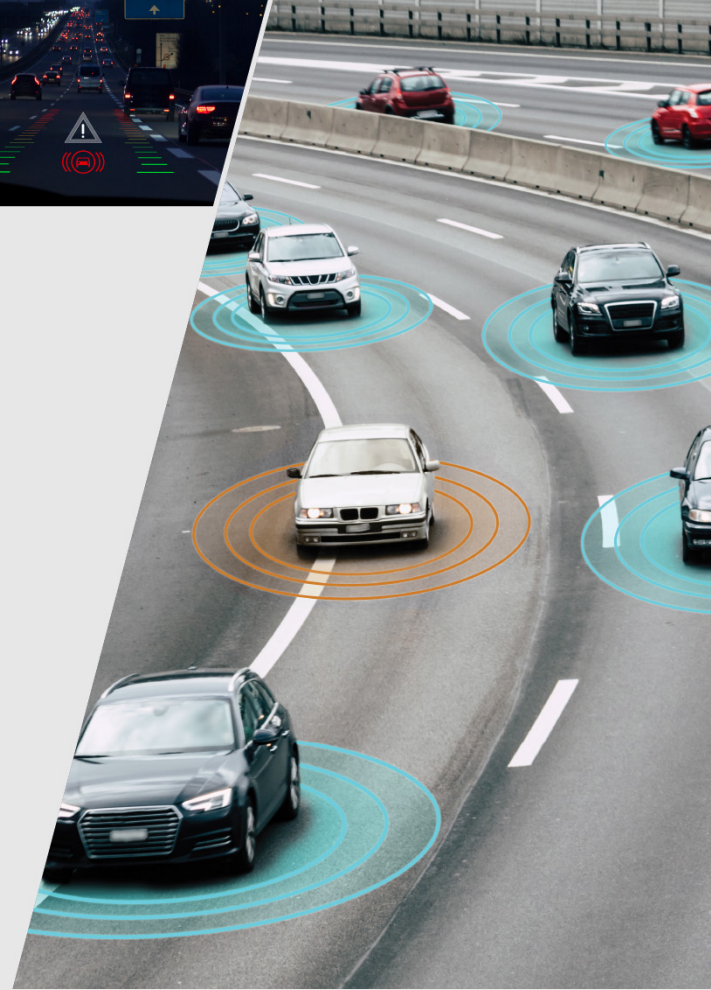
GOVERNOR'S ADVISORY COUNCIL





Transportation Innovation in Texas

Texas Department of Transportation



January 22, 2020





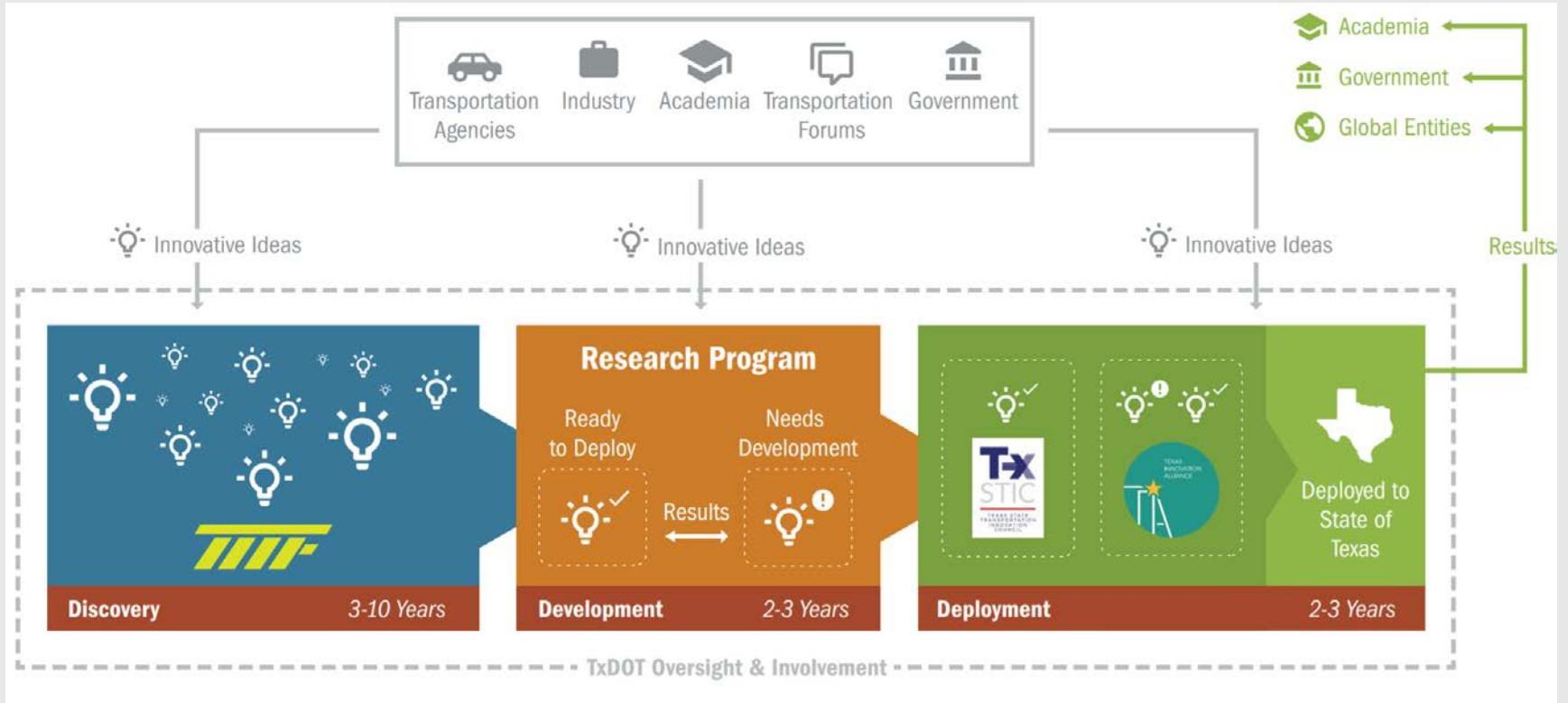
November 7, 2000





- Highways
- Jet airlines, Supersonic jets
- Rockets, Space Shuttle
- Light Rail
- High speed rail
- Hybrid and alternate fuel vehicles
- Electric vehicles
- Advanced Traffic Management
- Connected Vehicles
- Smart Cities
- Early Autonomous Vehicles
- Advanced freight and shipping
- Shared mobility
- Automation in Agriculture
- Internet, 5G, WiFi
- Global positioning
- Smart phones
- Internet of Things, Big Data
- Unmanned Aerial Systems
- Hyperloop

TxDOT Innovation Program





- Est 2013 - 83rd Texas Legislature
- Advancing the development of a high-performance transportation system to position Texas as the leading nexus of economic activity and technological innovation
- Continuously identifying emerging technologies 3-15 years out, that may impact transportation
- Support TxDOT by outlining clear, actionable strategies





Next Generation Vehicles

- Automated Vehicles
- Connected Vehicles
- Electric Vehicles
- Unmanned Aerial Vehicles
- Scooters, E-bikes
- Personal Delivery Devices

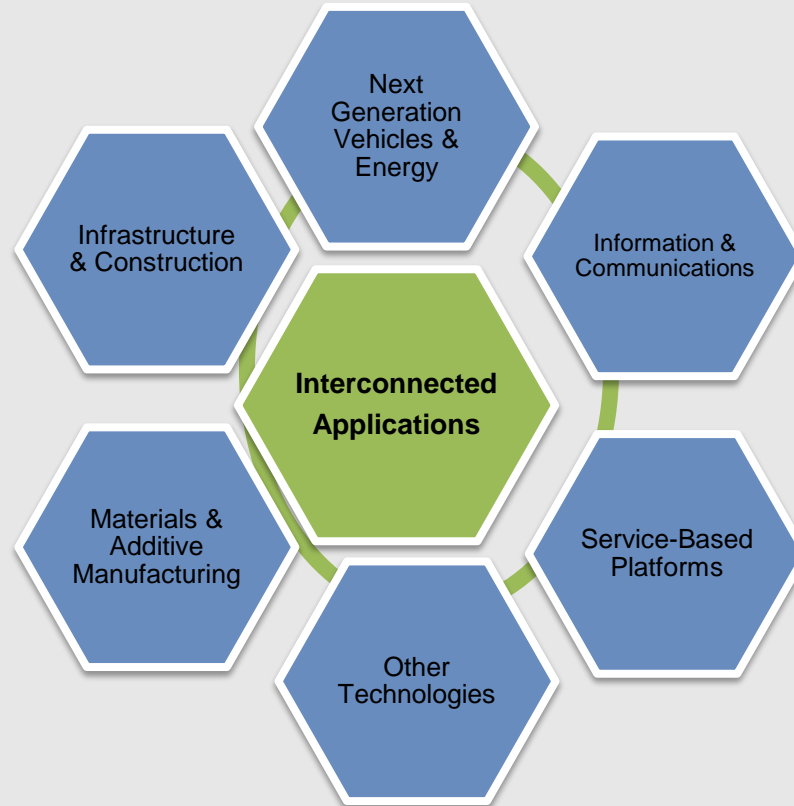
Infrastructure & Construction

- Infrastructure Enhancements
- Intelligent Transportation Systems
- Construction Techniques
- Equipment
- Alternative energy options
- Resilience improvements

Materials & Additive Manufacturing

- Self-Healing Pavements
- Nanotechnologies
- Piezoelectrics
- 3D Printing
- Solar Roadways

Smart Cities and Smart State



Information & Communications

- Cybersecurity
- Cloud Computing
- Flexible work
- Big Data and AI Augmented Analytics
- Open Data Portals
- Crowdsourcing
- Artificial Intelligence and Robotics
- RFID
- Blockchain
- Collaborative telepresence
- Advanced networks
- Real-time Language Translation

Service-Based Platforms

- Location-Based Services
- Transportation Network Services
- Mobility as a Service

Other Technologies

- Augmented Vision / Reality
- Virtual Reality / Holography
- Wearables
- Machine Robotics
- Exo-skeletons
- Brain – Machine interfaces



**Research
Projects**



**Implementation
Projects**



**Product
Evaluation**

**Local and Technical
Assistance Program**

<https://ctr.utexas.edu/library/>



Action network of local, regional, and state agencies and research institutions who are committed to addressing community mobility challenges by creating a platform for innovation

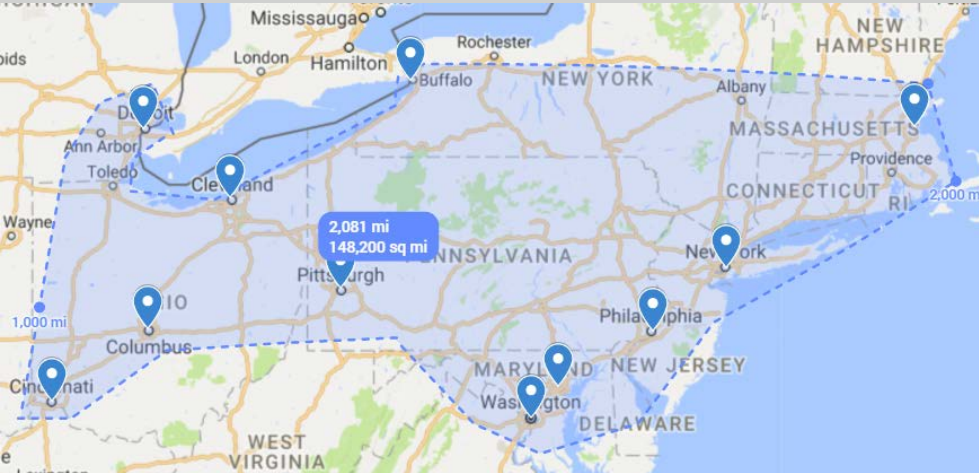
From a Smart City to a Smart State

- Mobility summit 2016 in Austin, TX, 2017 in Houston 2018 in Arlington, **17-19 November 2019 in San Antonio**
- Teams representing 11 Texas cities/regions and 3 research institutions
- Over 30 different transportation agencies
- Industry sponsors (data, OEMs, AEP firms, others)
- Use cases identified by each team
- Combined approach to grants and programs: AV Proving grounds, ATCMTD
- Shared expertise and solutions
- New mobility, real-time data, common TMS, seamless mobility, freight and logistics, energy, resiliency, equity



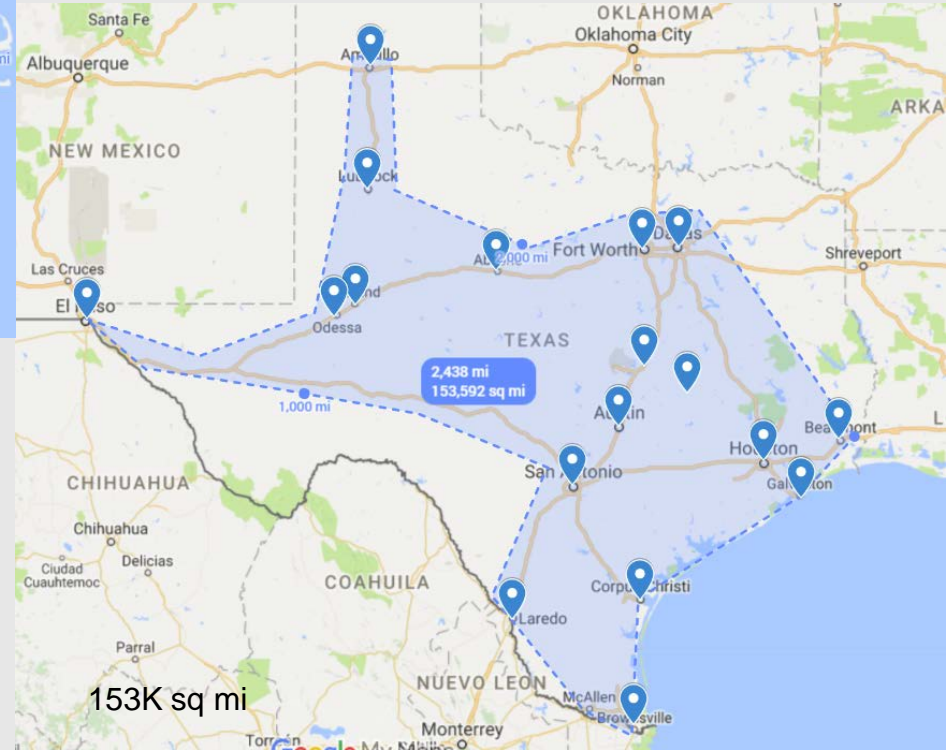
<http://txinnovationalliance.org/>

Texas Innovation Opportunities (just some rough comparisons)



148K sq mi

- Growing population
- Diversity
- Workforce
- Research and Education Base
- Test Environment
- Common regulatory framework
- Multimodal Freight
- Economics engine and business climate
- Variety of business models
- Geography



153K sq mi



ARLINGTON | AUSTIN | BRYAN / COLLEGE STATION | CORPUS CHRISTI | COLUMBUS | DALLAS
DENVER | DETROIT | EL PASO | FRISCO | FT WORTH | HOUSTON | KANSAS CITY | OMAHA
PITTSBURGH | PORTLAND | SAN ANTONIO | SAN FRANCISCO | SEATTLE | SOUTH BEND



Equity & Access

Tackle the challenge of providing affordable and reliable mobility service to enable the elderly and disabled to access healthcare services.



Real-Time Data

Develop a standard for construction/lane closures/ incidents and prioritize readiness investments for CAV infrastructure.



MONTHLY DEEP-DIVES



Automated Vehicles for Aging & Disability Populations



Dockless Mobility



Single Payment Platform



Mobility Data Lakes



- USDOT:
 - [Comprehensive Management Plan for Automated Vehicle Initiatives](#)
 - [Preparing for the Future of Transportation: Automated Vehicles 3.0](#)
 - [Automated Driving Systems: A Vision for Safety 2.0](#)
- FHWA National Dialog on Highway Automation
- AASHTO Committee on Transportation System Operation (CTSO)
 - Cooperative and Automated Transportation (CAT) Coalition
 - AASHTO Connected & Automated Vehicle Working Group
 - Soon to be formed Task Force on Highway Automation (develop a National Strategy on Highway Automation, through forming a Pooled-fund study to do this (led by Tennessee DOT)) (vision, business case, goals, benefits, ROI, legislative strategy, etc.)
- State Automated Vehicle Task Forces Community of Practice
- Multi-state Coalition on Highway Automation Readiness (MCHAR)
- AAMVA: [Guidelines for Testing Drivers in Vehicles with Advanced Driver Assistance Systems](#)
- Comments to FHWA and NHTSA; Congressional Testimony



- National Operations Center of Excellence (NOCoe)
- Connected Vehicle Pooled Fund Study
- National Cooperative Highway Research Program (NCHRP) Projects
 - “Impacts of CVs and AVs on State and Local Transportation Agencies”
 - “Framework for Managing Data from Emerging Transportation Technologies to Support Decision-Making”
 - “Connected Road Classification System (CRCS) Development”
 - “Algorithms to Convert Basic Safety Messages into Traffic Measures”
- Cooperative Automation Research Mobility Applications (CARMA)
 - An open source software platform initiated by FHWA to enable the testing and evaluation of cooperative automation concepts for improving safety and increasing infrastructure efficiency.
 - Vision of cooperative automation as an extension of TSMO
- Intelligent Transportation Society of America (ITSA) and Transportation Research Board (TRB) committees



- Both the US House and Senate have produced legislation to address issues related to bringing HAVs to market.
 - The House bill, H.R. 3388, the SELF DRIVE Act (or Safely Ensuring Lives Future Deployment and Research in Vehicle Evolution Act) passed the House by voice vote on September 6, 2017.
 - The Senate bill, S. 1885, the AV START Act (or American Vision Through Safer Transportation through Advancement of Revolutionary Technologies Act) was reported out of the Senate Committee on Commerce, Science, and Transportation, and was pending consideration by the Senate.
 - Neither of these bills addressed vehicles weighing more than 10,000 pounds (trucks or buses).
 - Heavy vehicles were expected to be considered in separate legislation.
 - The bills didn't progress, they're starting all over with the new Congress, seeking a bi-partisan bill in staff before the houses consider.



SB 2205, 85th Legislature (2017)

- SB 2205 creates a legal framework for the operation of automated motor vehicles in Texas and explicitly allows an automated motor vehicle to operate on highways in the state, with or without a human operator, under certain circumstances.

HB 1791, 85th Legislature (2017)

- HB 1791 authorizes an operator of a vehicle equipped with a connected braking system that is following another vehicle equipped with that system to be assisted by the connected braking system to maintain a clear distance or “sufficient space.”

SB 969, 86th Legislature (2019)

- SB 969 governs the operation of a personal delivery or mobile carrying device in a pedestrian area or on the side or shoulder of a highway

Policy Brief: How Does Texas Law Change the Legal Landscape for Automated Vehicles?

<https://static.tti.tamu.edu/tti.tamu.edu/documents/PRC-2017-5.pdf>

What are some examples I can use?



- The City of Frisco *Transportation Strategic Plan* (2018), addresses CV applications like automated traffic signal performance management, adaptive traffic signal control, work zone connectivity, DSRC infrastructure. and vertical takeoff and landing (VTOL) aircraft services.
- The City of Austin's *Smart Mobility Roadmap* (2017) lays out an approach to CAV technology, shared mobility, and electric vehicles. The document includes implementation recommendations related to engaging/educating stakeholders, hiring an executive level electric vehicle/CAV officer, developing a master plan for emerging technologies, testing 5G and DSRC technology for V2I reciprocal safety messages, and creating interdisciplinary work groups for CAVs, technology commercialization, and economic development.
- Many cities have created Climate Action Plans (Austin, Houston)

What are some examples I can use?



- Several of our 25 MPOs Metropolitan Transportation Plans (MTPs) discuss CAVs, their anticipated effects on the system, and recommendations for preparing for CAVs:
 - passive (i.e., monitoring technological advancement)
 - active (i.e., incorporating changes in plan updates, implementing higher roadway maintenance standards to support AV travel)
 - key metrics such as: emissions, vehicle miles traveled (VMT), parking spaces per vehicle, vehicle occupancy, crash rates and severity, average trip length, vehicle ownership, transportation costs, highway maintenance costs, and transit ridership.
- The Waco MPO, Subcommittee on Connected and Automated Vehicles, is actively planning for CAVs. The subcommittee has been tasked with understanding timing, opportunities, benefits, and risks; and estimating how CAVs will affect travel behavior, land use, congestion
- Maricopa Association of Governments (MAG) in the Phoenix region

What are some examples I can use?



- North Central Texas Council of Government (NCTCOG):
 - Autonomous Vehicles 1.0 program, supported the development of AV deployments in Arlington and Frisco; directed other grants to help cities improve traffic signal connectivity; and encouraged cities to provide traffic information to the Waze navigation system.
 - Autonomous Vehicles 2.0, \$1.5 million planning assistance per jurisdiction to deploy AVs and autonomous freight delivery.
 - Use of the Tom Landry Highway (I-30 between Dallas and Fort Worth) as a national test bed for automation and connectivity.
 - \$1 million in seed funding to support pilot AV projects in the corridor, focus on increasing the capacity, speed, reliability, and safety of managed lanes.
 - It features contraflow express lanes isolated from general traffic that can be used for testing at off-peak hours without affecting toll revenue.



- Prepare the state for Connected and Autonomous (CAV) advancements (good with the bad)
 - The primary coordination and information source for CAV tech use and testing in Texas;
 - Exploring and becoming the source to inform the public and leaders on current and future CAV advancements and what they mean in Texas. Report on current status, future concerns and how these technologies are changing future quality of life and well-being;
 - A champion making Texas a leader in knowing how to best prepare and wisely integrate these technologies in a positive way. Promote positive development and experiences for the state.
- Scope: Surface and Air transportation connected and autonomous vehicle technology and enablers such as telecoms, and future infrastructure.



- Data
- Education and Communication
- Future Workforce
- Liability and Responsibility
- Equity and Access
- Licensing and Registration
- Government and Private Sector Cooperation (& Research?)
- Connectivity
- Freight and Delivery
- Multimodal (Rail, UAS, Maritime)
- Infrastructure Needs
- Emergency and Disaster Response



Security

Safety

Privacy

Communications

Equipment

Technical experts

Software

Electrical power

Storage

Compute Power

Big Data

Testing

Integration

Standards

Architecture

Certification/Validation



Security

Safety

Privacy

Reliability

Freedom

Access / Equity

Ownership

Liability

Resiliency

Costs

Value

Environment

Education/Skill change

Job/Market change

Ease of Use

Comfort

Understanding

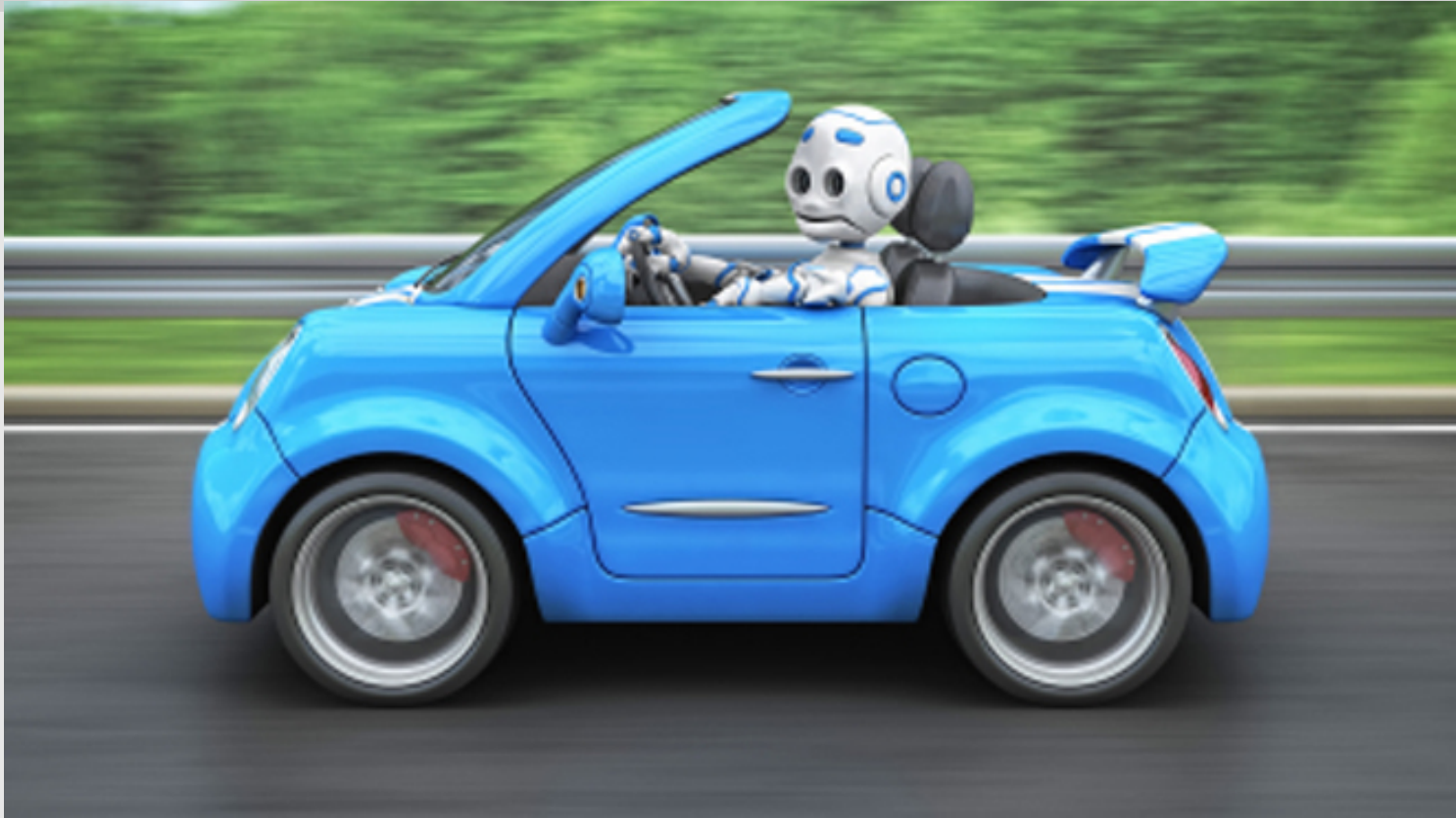
Adoption

What's happening around the state?

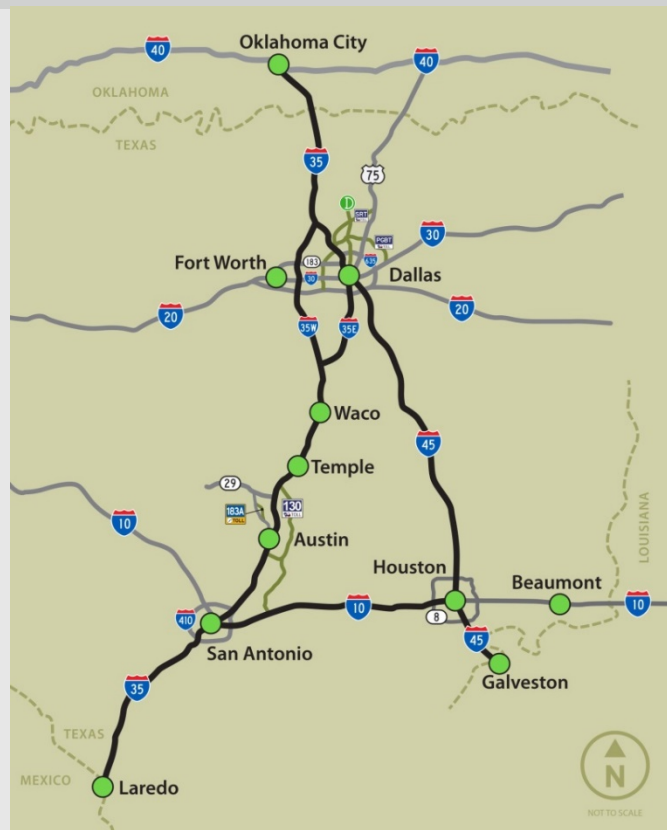


Pilot or Company Name	Location	Details
drive.ai	Arlington and Frisco	2018-2019; on-street passenger shuttle deployment
Applied Information	Arlington	Test deployment of CV applications including pedestrian proximity, school zones, and approaching emergency vehicles
EasyMile	Arlington	2017-2018; off-street passenger shuttle deployment
Marble		2018-present; mapping of sidewalks as route for delivery robots underway per City Council resolution
Trafficast		Test deployment of DSRC roadside units to evaluate red light violation warning application
Uber		Test deployment of DSRC roadside units to evaluate red light violation warning application
Uber	Dallas	Air taxis (Uber Elevate)
INRIX AV Road Rules	Austin	First/last mile autonomy tied with DART, mapping
Autonomous Deliveries		Development of a platform to assign, validate, and manage traffic rules and restrictions for AVs
DSRC Deployment		2017 Austin City Council resolution to authorize a pilot of autonomous, personal delivery devices
Ford		Deployment of DSRC technology at five intersections in downtown and East Austin
Volans-i		AV deployment mapping for passenger, delivery use cases
		Long-range (100-mile) drones test business-to-business delivery demonstration

Name		
Make Every Day a Game Day	Bryan/College Station	Proposed TTI autonomous passenger shuttle deployment building on previous work on signal integration and other connectivity improvements
Audi Real-Time Data Sharing	Frisco	Provision of V2I technology to Audi vehicles at traffic signals in partnership with Traffic Technology Services
DSRC Deployment		Installation of DSRC radios throughout the city to share SPaT data with AVs and test V2X applications
Houston METRO /TSU Shuttle		2019-present; autonomous shuttle pilot at Texas Southern University, expansion to METRO stations
ConnectSmart	Houston	ACTMTD grant supporting travel demand activities using app-based incentives and integrating with TxDOT's TranStar control system in order to coordinate routing (i.e., Google/Waze)
Nuro/Kroger		2019-present; pilot autonomous grocery delivery
AV RFI		RFI for AV pilots
Udelv/H-E-B	San Antonio	2019-present; pilot autonomous grocery delivery
TuSimple		Autonomous USPS trailer pilot between Phoenix and Dallas
(Unnamed)	I-45, I-10, I-20, I-30	Several AV freight companies conducting initial tests along corridors with intent to expand in 1-5 years



Texas Connected Vehicle Vision

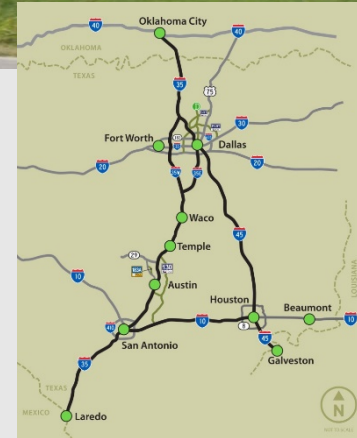


- The Texas vision is to create a sustainable connected vehicle environment covering the 865-mile Texas Triangle (including extension to Laredo) to support V2V and V2I safety and mobility applications
- Then extend along east-west interstates, starting with I-10
- TxDOT and its partners believe on-going success and support will be achieved by:
 - Promoting economic efficiency and safety of commercial vehicles and freight first, followed by passenger cars and other users
 - Creating Day One benefits through use of aftermarket devices and integration with existing on-board technologies
 - Minimizing infrastructure costs to state and local agencies

Texas Connected Freight Corridors Project



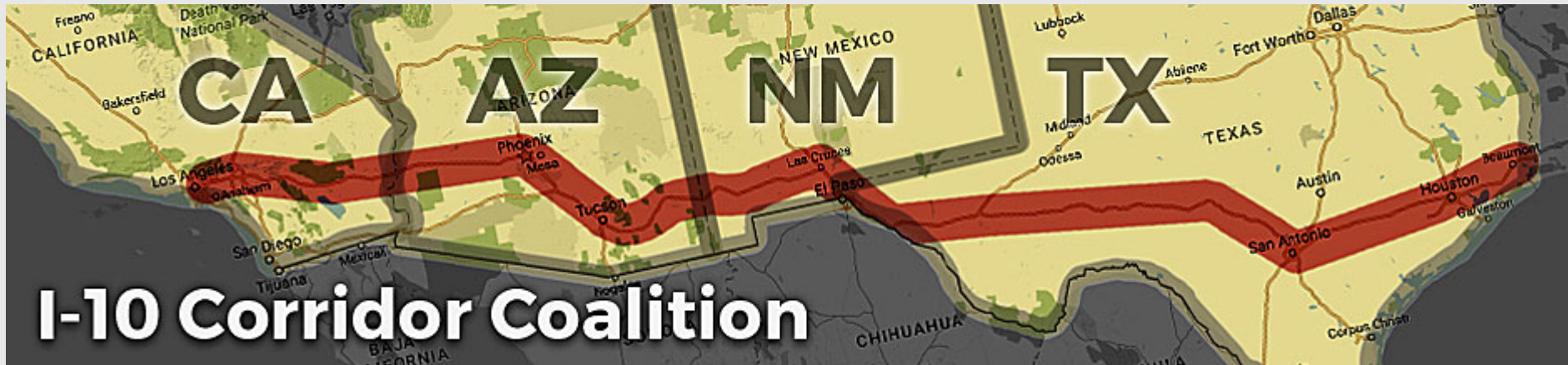
- Texas Proposal: Equip “Texas Triangle” with connected infrastructure technology (I-35, I-10, I-45)
- Equip 1,000 trucks with on-board technology
 - HEB flagship partner, approaching others for proposal
- Provide freight operators and drivers with info and warnings to improve safety and mobility:
 - Warnings for traffic queues, work zones, low bridge heights, weather (heavy rain, ice, fog), wrong-way drivers
 - Equipped truck will get braking warnings from other equipped trucks
 - Info on traffic conditions, route guidance, border wait times
- Partnering with Cities of Austin, Laredo, San Antonio, Richardson, Harris County and NCTCOG



I-10 Connected Freight Corridor Coalition



- Includes Texas, California, Arizona and New Mexico
- Runs from ports in California to Houston, Texas
- TxDOT's role is to share resources with participating states to ensure efforts are not duplicated and to freely share information with participating states





- Freight Stakeholders have identified the following freight programs to be considered for the Corridor ConOps:



Interstate credentialing and permitting for regular and oversize/overweight movements.

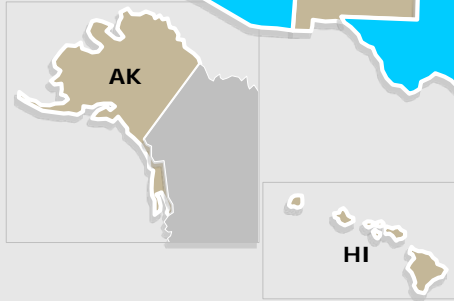
Truck parking and reservation systems.

Transponder and roadside detection technology for safety and weight enforcement.

Truck platooning and other commercial motor vehicle automation.

Corridor-wide information on incidents, work zones and weather.

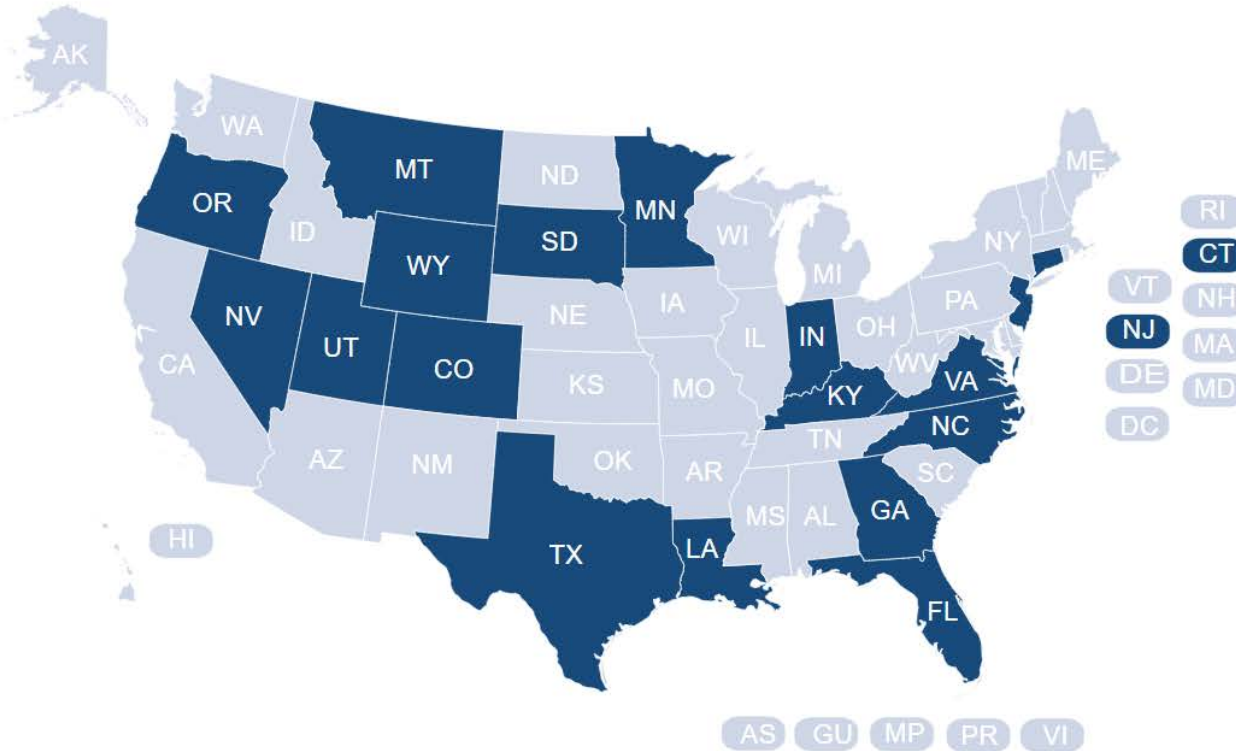




Transportation Innovation in Texas

January 22, 2020

2017 UAS Enacted Legislation

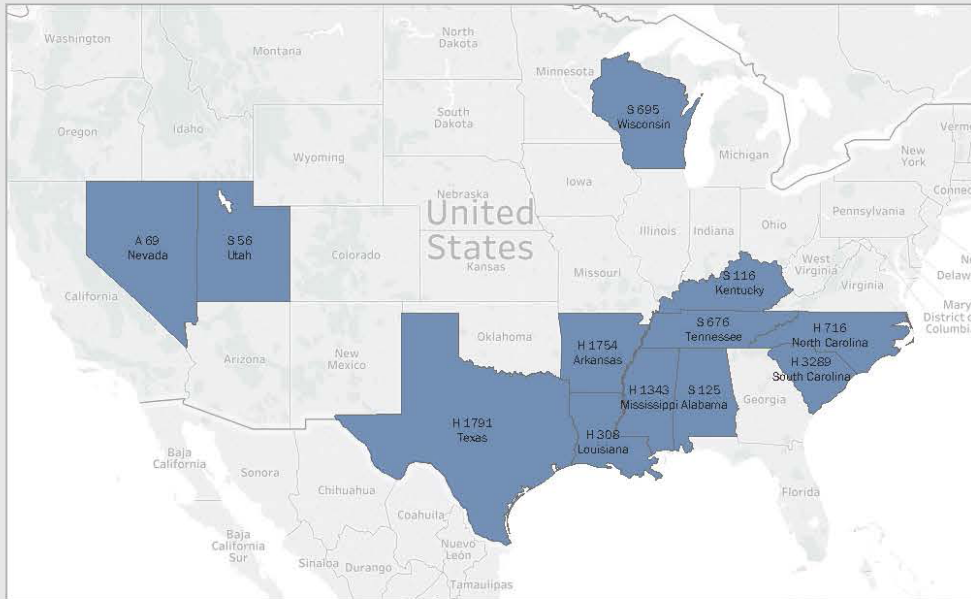


LEGEND:

■ States with enacted UAS legislation in 2017

Source: NCSL
Accessed 23 October 2019

Truck Platooning Legislation in Other States



State	Bill Number (Year)	Following Distance in Legislation
Alabama	S 125 (2018)	"Closer than would be reasonable and prudent without the electronic coordination"
Arkansas	H 1754 (2017)	Closer than what is reasonable and prudent/200 feet
Kentucky	S 116 (2018)	Closer than 250 feet
Louisiana	H 308 (2018)	No new language regarding distance while platooning
Mississippi	H 1343 (2018)	Closer than would be reasonable and prudent without... coordination
North Carolina	H 716 (2017)	Close following distances
Nevada	A 69 (2017)	Closer than would be reasonable and prudent without the use of the technology
South Carolina	H 3289 (2017)	Sufficient space
Tennessee	S 676 (2017)	No following distance referenced
Texas	H 1791 (2017)	Clear distance or sufficient space
Utah	S 56 (2018)	Exempts a platooning system from the two second following distance required in statute
Wisconsin	S 695 (2017)	Exempts a platooning system from the statutory requirement to follow not less than 500 feet to the rear of the proceeding vehicle



BREAK

DEVELOPING A MN MOBILITY ALLIANCE

- How do we form a strong statewide CAV alliance?
- What is the best committee structure?
- Who should our strategic advisors be?
- How do ensure collaboration across all Minnesota CAV programs and stakeholders?



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STATE AS CONVENER AND LEADER



ADVISORY COUNCIL

INTERAGENCY
CAV TEAM

POLICY
SUBCOMMITTEES

2018 COMMITTEES

INFRASTRUCTURE

CYBER
SECURITY &
DATA PRIVACY

PLANNING
AND
LAND USE

ACCESSIBILITY

INSURANCE &
LIABILITY

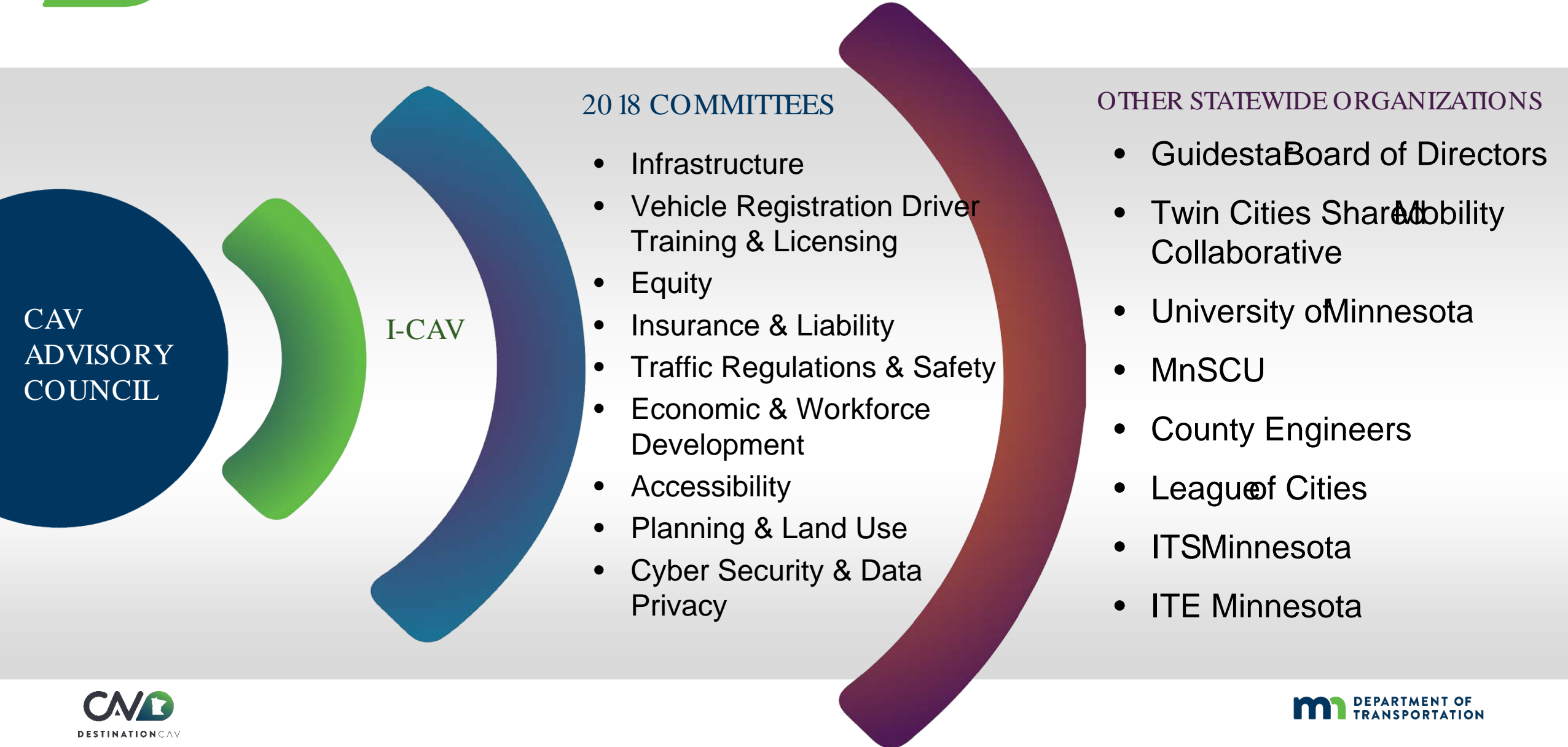
EQUITY

VEHICLE
REGISTRATION,
LICENSING AND
TRAINING

ECONOMIC &
WORKFORCE
DEVELOPMENT

TRAFFIC
REGULATIONS

OTHER STATEWIDE ORGANIZATIONS





BREAK OUT

REPORT OUT



CAV ANNUAL REPORT

DUE TO GOVERNOR FEBRUARY 1ST



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REPORTING REQUIREMENTS

CAV
ADVISORY
COUNCIL

- The Council must prepare a written annual report to the Governor by February 1st each year.
- The report must include an **update on the Council's activities and actions needed to ensure Minnesota is advancing CAV**, intelligent transportation, and emerging technologies.

DRAFT REPORT TOPICS

Note from
Council
chairs

Background
on CAV

Council's
mission, vision
and goals

GOVERNOR'S COUNCIL ON CONNECTED & AUTOMATED VEHICLES

ANNUAL REPORT
February 2020

State and
National
Policy

Minnesota
CAV
activities

Preview of
2020
activities

DISCUSSION



PUBLIC COMMENT



6

CLOSING



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NEXT MEETINGS

TUESDAY, FEBRUARY 18TH – 9:00 AM – 12:00 PM

TUESDAY, MAY 26TH – 9:00 AM – 12:00 PM IN ROCHESTER, MN

THANK YOU

GOVERNOR'S COUNCIL ON CONNECTED AND AUTOMATED VEHICLES

MARGARET ANDERSON-KELLIHER
Co-Chair

PHIL MAGNEY
Co-Chair

