

MEETING NOTES

Iowa Advisory Council on Automated Transportation (ATC)

Policy & Legislation Subcommittee Meeting

Wednesday, February 5, 2020

2-3pm

Action Items:

- All subcommittee members – review desired outcomes, tactics, and workplan for P&L; volunteers needed to support various tactics
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1. Welcome and introductions – Jacob Heiden, UI National Advanced Driving Simulator
 - Dylan Mullenix (Policy & Legislation Subcommittee Chair) – Des Moines Area MPO
 - Stephan Bayens – Iowa Department of Public Safety
 - MK Anderson – Iowa Clean Cities Coalition
 - Kristen Forret – EMC Insurance Companies
 - Jared Kirby, Travis Grassel – Iowa Insurance Division
 - Mark Peterson – AAA Auto Club Group – Minnesota/Iowa
 - Daniel Yeh, Renee Jerman, Mindi Nguyen, Jeremy Johnson-Miller, Adam Shell, Andrea Henry, Melissa Spiegel – Iowa DOT
 - Dan McGehee, Jacob Heiden – UI National Advanced Driving Simulator
 - Peter Rafferty – Gannett Fleming
 2. Chair Update – Dylan Mullenix, Policy & Legislation Subcommittee Chair
 - a. ATC met on 12/4/2019
 - i. Lego League presentation
 - ii. No feature presenter
 - iii. Adam Shell presented on CAT challenge
 - iv. Peter Rafferty updated on Vision Plan
 - b. Looking Ahead
 - i. At next March meeting, working to secure presentation by Local Motors about their slow speed shuttle
 3. Open discussion on legislative session – All subcommittee members
 - a. Dan McGehee commented on successful legislative session last couple years that helped move us forward on research side – room to refine those bills
 - b. Commissioner Bayens – 3 bills at state legislature
 - i. Hands free bill focusing on “one-touch” tech
 - ii. Bill requiring all occupants to be restrained
 - iii. Bill requiring blood draw from deceased drivers to determine intoxication; only for data, not prosecution
 4. Introduction to AAMVA Automated Vehicle Subcommittee – Daniel Yeh, Iowa DOT

- a. Have [guidelines](#) issued in May 2018 related to:
 - i. Vehicle credentialing
 - ii. Driver licensing
 - iii. Law enforcement
 - b. AAMVA takes “guidelines” approach; different from AASHTO
 - c. Updates to occur in spring 2020:
 - i. Add AV data to vehicle record
 - ii. Consider crash reporting based on ADS
 - iii. Truck tech placards/identifiers
 - 1. This will be part of ongoing rulemaking; Adam noted a lot of issues
 - iv. Emerging issues: personal freight delivery, back seat vehicle control, remote control vehicles
 - d. Showed real-life examples:
 - i. “kill switch” installed on a test vehicle to override autonomous functions
 - ii. Special Nevada license plate for AV
 - iii. Rhode Island DOT partnering with MayMobility offering small vehicle fixed route in Providence
 - iv. Other examples of autonomous shuttles, most with human “safety operators”
 - 1. Example in California of a light freight vehicle without a safety operator
 - 2. Jeremy asked about applicability of ADA/FTA standards; may depend on use for revenue service
 - e. Industry observations:
 - i. Fleet operators focused on remaining within defined operating design domains
 - ii. Fleets understand importance of vehicle maintenance and sensor calibration
 - iii. Issues arise when industry sells transferable tech and individual users
 - f. For Iowa
 - i. New vehicle types – what do we do with them? (title, register, safety operator, where can they operate)
 - ii. Truck tech – remote operation allowable? What restrictions on operators? Visual indicator needs
 - iii. Existing passenger technology – crash reporting consideration, liability issues, driver training
5. Automated Vehicles 4.0 – Adam Shell, IDOT
- a. Skipped this topic due to lack of time.
 - b. <https://www.transportation.gov/sites/dot.gov/files/docs/policy-initiatives/automated-vehicles/360956/ensuringamericanleadershipav4.pdf>
6. ATC Vision and Work Plan: Next Steps – Peter Rafferty, Gannett Fleming
- a. <https://gfnet.sharefile.com/d-s18f510e819b4748b>

- b. Subcommittees will be working on work plans with specific tactics to achieve desired outcomes
 - c. Subcommittees will identify who is tasked with what responsibilities
- 7. Other items from subcommittee members – All subcommittee members (5 minutes)
 - a. Adam Shell commented presentations like Daniel Yeh's will be given at upcoming subcommittee meetings to continue the theme of education to assist in development of workplans.
 - i. PS&E meeting – Dennis Kleen, IDOT, will be providing overview on crash data that aligns with the subcommittee tactic on AV identification in crashes
 - ii. IR meeting – Neal Hawkins will present overview of pavement markings
 - b. Dan McGehee comment NADS at University of Iowa is designated as crash reconstruction site for AVs by NTSB. He will share more information about the designation at upcoming ATC meeting also continuing theme of education.
- 8. Information and key upcoming dates – Jacob Heiden, UI National Advanced Driving Simulator
 - Iowa ATC Meeting: Wednesday, March 11th, 1-3pm, Iowa League of Cities
 - ATC considering moving from 4 meetings per year to 3 meetings per year.

ATC SUBCOMMITTEE MEETING

Policy and
Legislation

February 5, 2020



WELCOME AND INTRODUCTIONS

Jacob Heiden



UPDATE ON THE ATC MEETING HELD DECEMBER 4, 2019

Dylan Mullenix



OPEN DISCUSSION ON LEGISLATIVE SESSION

All Subcommittee
Members



INTRODUCTION TO AAMVA AUTOMATED VEHICLE SUBCOMMITTEE

Daniel Yeh, Iowa DOT





**AAMVA Automated Vehicle
Subcommittee update**
February 2020

The basics

- AAMVA (American Association of Motor Vehicle Administrators) created the Automated Vehicle Subcommittee in 2014. It was initially created as a two-year working group.
- Mission statement
 - Increase awareness of AV technology including the impacts on driver's licenses and vehicle programs, legal aspects and law enforcement, environmental factors, insurance coverage and more;
 - Assist jurisdictions to promote uniform regulations for AV technology as it relates to appropriate vehicle safety, ensuring the safety of vehicle occupants, pedestrians and other road users; and
 - Assist with the development of short and long range plans within the jurisdiction's vehicle and driver programs associated with emerging AV technology for the vehicles, operators, manufacturers and enforcement.

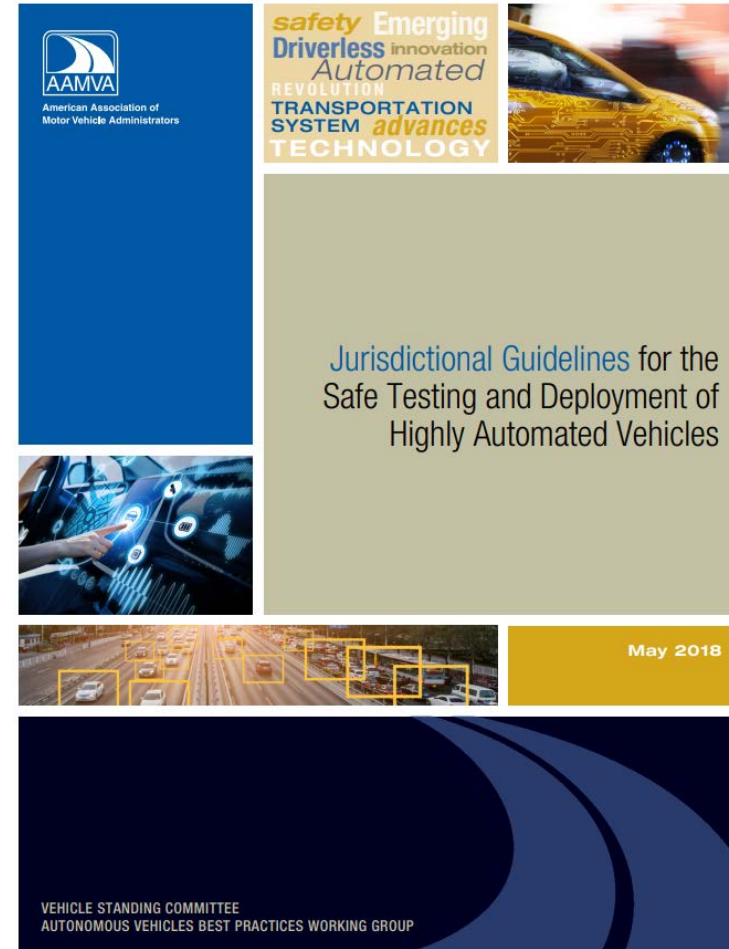
Membership

- Chair – Bernard Soriano, CA
- Vice-Chair – James Fackler, MI
- Law enforcement – CA, CO, MI, NY
- DMV Driver – PA, RI, UT
- DMV Vehicle – IN, IA, NH
- DMV general / other – AB, DC, FL, MA, NV, NC, ON, SC
- Federal agencies – FMCSA, NHTSA



May 2018 guidelines

- Vehicle credentialing
 - Permits, titles, registration and plates
 - AV information on records
 - Federal Motor Vehicle Safety Standards
- Driver licensing
 - Requirements for testing
 - Training for deployed vehicles
 - Skills testing practices
- Law enforcement
 - Crash & incident reporting
 - Operational responsibility
 - AV ability to respond to LEO
 - Adherence to traffic laws



Spring 2020 guideline updates

- Likely additions / enhancements
 - Add AV data to vehicle record
 - Consider crash reporting based on ADS
 - Truck technology placards / identifiers
- Emerging issues for future consideration
 - Personal freight delivery devices
 - Back seat vehicle controls
 - Remote control vehicles
 - Trucks – Starsky Robotics
 - Cars – AutoX



Real-life examples

APTIV partnering with Lyft and has already performed 96,000 autonomous rides in Las Vegas since 2018



Real-life examples

Now also in
Grand Rapids,
Michigan

Rhode Island DOT has partnered with MayMobility to offer free AV small-vehicle service on a fixed route in Providence from May 2019 through May 2020.



Real-life examples

Autonomous shuttle services have been provided in several private venues and on public demonstrations. Michigan Auto Show will feature AV shuttles from hotel to convention center.



Real-life examples

California has issued title and restricted registration to a Nuro light-duty truck (<10,000 lbs) with no seats for light freight.



Real-life examples

PlusAI conducted an automated truck pilot (either level 2 or level 4) with a commercial load from California to Pennsylvania; states had about 4-5 days advance notice for permitting.



Industry observations

- Fleet operators are focusing on remaining within defined operational design domains (ODD):
 - Geofencing
 - Speed
 - Weather
 - Time of day
- Fleet operators understand importance of vehicle maintenance and sensor calibration
- Issues may arise when industry sells transferable technology and individual users operate outside of ODD

APTIV vehicle calibration studio



Vehicle observations

- Technology is becoming smaller and more transferable
 - Uber is fitting all on-board in wheel well of SUV
 - APTIV / Lyft has few visible indicators of on-board sensors
- Manufacturers are beginning to focus on reconfiguring vehicle interiors in anticipation of adoption of ADS features, e.g retractable driving console



New AV vehicle types – register or no?



Bringing it back to Iowa DOT

- Sharing information with our internal rule-making group
 - Office of Traffic Operations
 - MVD Driver & Identification Services
 - MVD Motor Carrier Services
 - MVD Vehicle Services
 - Motor Vehicle Enforcement
 - Iowa DOT Legislative staff
- Internal group is tasked with identifying potential rule-making in response to broad state authorization to allow AV in Iowa

Points to ponder in Iowa

- New vehicles
 - How would Iowa title & register?
 - What would we require for a “safety operator?”
 - Where could it operate (and where could it not)?
- Truck technology
 - Would a remote-operated truck be allowed?
 - What restrictions on the operator(s)?
 - What type of visual indicator?
- Existing passenger technology
 - Crash reporting considerations
 - Liability issues
 - Driver training



Links to resources

AAMVA Jurisdictional Guidelines – 2018

<https://www.aamva.org/GuidelinesTestingDeploymentHAVs-May2018/>

AAMVA Guidelines for Testing Drivers with Advanced Systems – 2019

https://www.aamva.org/GuidelinesforTestingDriversinVehicleswithADAS_Final/

My Car Does What

<https://mycardoeswhat.org/>



QUESTIONS AND DISCUSSION



Daniel Yeh, Manager
Vehicle Services

Daniel.Yeh@iowadot.us

AUTOMATED VEHICLES 4.0

Adam Shell, IDOT





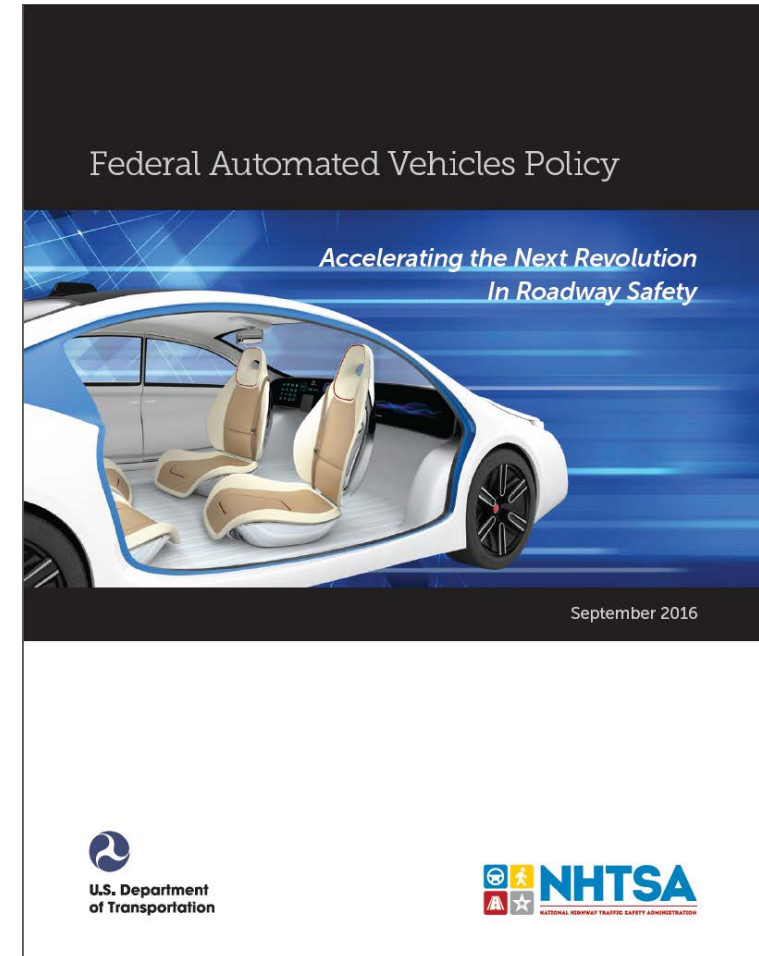
FEDERAL AV POLICY OVERVIEW & UPDATE

Iowa AT Council Policy and
Legislation Subcommittee

February 5, 2020

FEDERAL AUTOMATED VEHICLES POLICY 1.0

- Published: September 20, 2016
- FAVP 1.0:
 - Guidance, not regulations
 - Safe introduction and deployment of HAVs achieved by:
 - Vehicle Performance Guidance for AVs
 - Model State Policy
 - NHTSA's Current Regulatory Tools
 - New Tools and Authorities



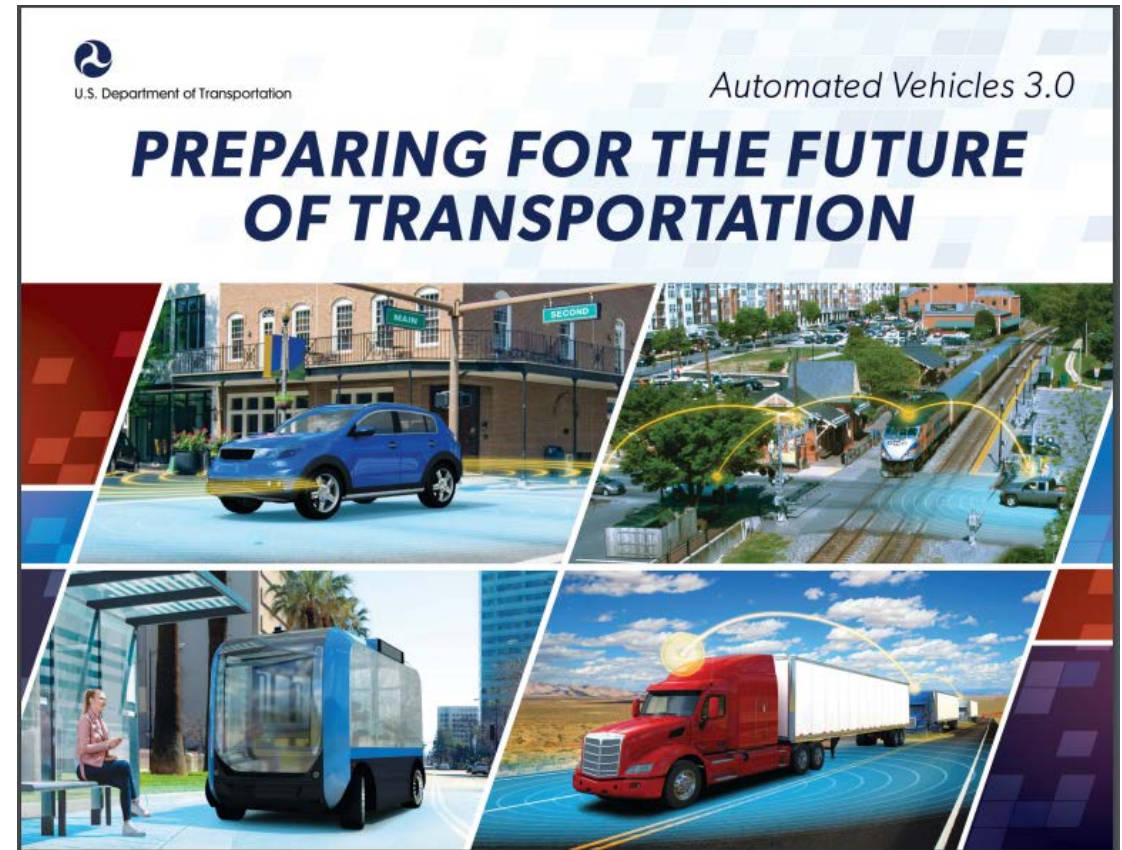
USDOT AUTOMATED VEHICLES 2.0

- Published: September 12, 2017
- *ADS 2.0*:
 - Lay the path for the deployment of automated vehicles and technologies.
 - Builds on the previous policy and incorporates feedback received through public comments and Congressional hearings.
 - Paves the way for the safe deployment of advanced driver assistance technologies by providing voluntary guidance that encourages best practices and prioritizes safety.



PREPARING FOR THE FUTURE OF TRANSPORTATION: AUTOMATED VEHICLES 3.0

- Published: October 4, 2018
- AV 3.0 expands the scope to all surface on-road transportation systems, and was developed through the input from a diverse set of stakeholder engagements, throughout the Nation. AV 3.0 is structured around three key areas:
 - Advancing multi-modal safety,
 - Reducing policy uncertainty, and
 - Outlining a process for working with U.S. DOT



ENSURING AMERICAN LEADERSHIP IN AUTOMATED VEHICLE TECHNOLOGIES: AUTOMATED VEHICLES 4.0

- Published: January 8, 2020

U.S. Government Automated Vehicle Technology Principles

The White House and the U.S. Department of Transportation developed AV 4.0, building upon previous versions of Federal AV guidance, to coordinate efforts across the Federal government and provide high-level guidance to Federal agencies, innovators, and the public on the U.S. posture towards AVs. AV 4.0 establishes Federal principles for the development and integration of automated vehicles, consisting of three core focus areas: Prioritize safety and security, promote innovation, and ensure a consistent regulatory approach.

Protect Users and Communities

- | Prioritize Safety
- | Emphasize Security and Cybersecurity
- | Ensure Privacy and Data Security
- | Enhance Mobility and Accessibility

Promote Efficient Markets

- | Remain Technology Neutral
- | Protect American Innovation and Creativity
- | Modernize Regulations

Facilitate Coordinated Efforts

- | Promote Consistent Standards and Policies
- | Ensure a Consistent Federal Approach
- | Improve Transportation System-Level Effects



Ensuring American Leadership in Automated Vehicle Technologies

Automated Vehicles 4.0

A Report by the
NATIONAL SCIENCE & TECHNOLOGY COUNCIL
and the
UNITED STATES DEPARTMENT OF TRANSPORTATION

January 2020



ATC VISION AND WORK PLAN: NEXT STEPS

Peter Rafferty, Gannett Fleming



IOWA'S AT VISION

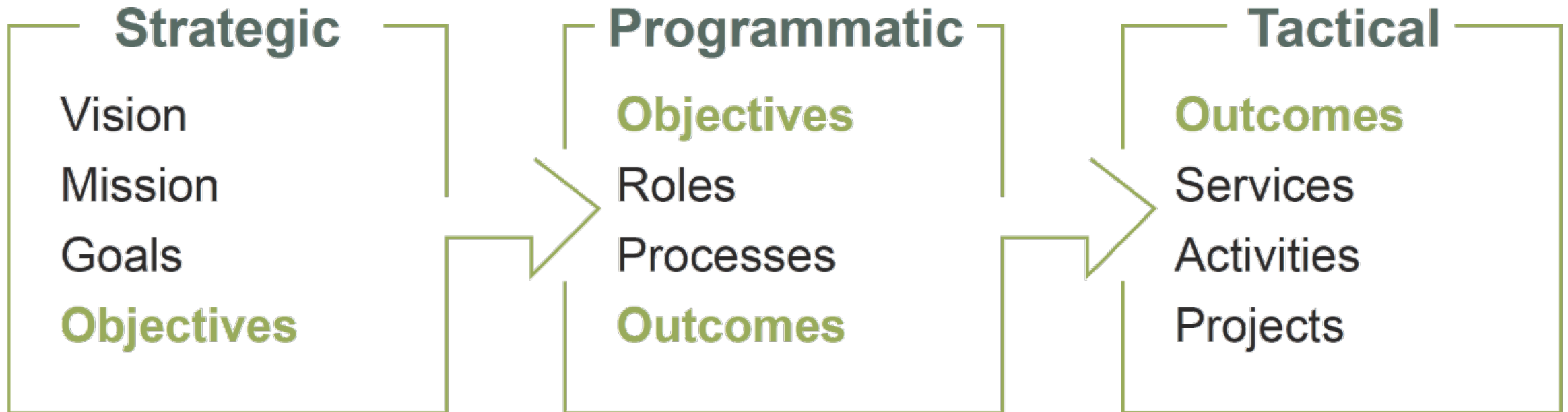
January 2020

Six Sections:

1. Summary
2. Overview & Approach
3. Strategic Foundation
4. Programmatic Approach
5. Tactical Initiatives
6. Summary & Next Steps



THREE-PRONG PLANNING FRAMEWORK



SIX OBJECTIVE AREAS

1



Infrastructure Readiness

- Digital
- Energy
- Electrification
- Planning
- Land Use
- Freight
- Security
- Institutional
- Workforce

Associated Subcommittee

2



Policy & Legislation

- Administration
- Liability
- Insurance
- Finance
- Privacy
- Land Use Planning

Associated Subcommittee

3



Economic Development

- Workforce Development
- Employment
- Entrepreneurship
- Freight
- Commerce
- Efficiency
- Reliability
- Industry
- Manufacturing

Associated Subcommittee

4



Public Safety & Enforcement

- Regulations
- First Responder Safety
- Operator Responsibilities
- Safe Deployment
- Vulnerable Road Users

Associated Subcommittee

5

Communication, Outreach, & Education (crosscutting)

6

Research, Development, Testing, & Evaluation (crosscutting)

ATC DESIRED OUTCOMES

Policy & Legislation

- A. Evolve Administrative Rules** - The ATC will advise the Iowa DOT and others on the development of administrative rules as needed.
- B. Address Liability & Insurance** - The ATC will understand how AT affects insurance and liability, assess practices from other states, and coordinate with lead agencies on changes needed.
- C. Advise on Legislation** - The ATC will suggest legislative changes, assess pending legislation, and offer advice and consultation on AT-related legislation.
- D. Policymaker Outreach** – Policymakers throughout Iowa at all levels of government will be informed about AT and anticipated impacts on Iowa.
- E. Community Readiness** - Local governments in Iowa will know about the ATC, can reach out for guidance on planning for AT, and will be better prepared for AT.

ATC TACTICS IDENTIFIED

Policy & Legislation

In Priority Order:

1. **Monitor Legislation** – maintain awareness, assess needs, provide feedback
2. **Implement Pilot Program** – develop and implement the *Iowa CAT Challenge*
3. **Ensure CAT in Planning** – policy and programming at all levels for all users
4. **Bolster State Leadership** – targeted outreach, information sharing, engagement
5. **Modify Administrative Rules** – with legislation, regulatory changes, and shifting technology
6. **Improve Equity & Accessibility** – community readiness for all users

ATC WORK PLANS

For Each Objective Area

Five Sections:

1. Tactical Priorities
2. Roles and Responsibilities
3. Resourcing
4. Scenario Planning
5. Timelines



ATC WORK PLANS

Policy & Legislation

	Deliverables (<i>what</i>)	Lead(s) (<i>who</i>)	Resources (<i>how</i>)	Scenarios (<i>options</i>)	Timeline (<i>when</i>)
Monitor Legislation					
CAT Challenge					
CAT in Planning					
State Leadership					
Admin Rules					
Equity & Access					

OTHER ITEMS FROM SUBCOMMITTEE MEMBERS

All Subcommittee
Members



INFORMATION AND KEY UPCOMING DATES

N e x t A T C M e e t i n g

- Wednesday, March 11th, 1-3pm
- Iowa League of Cities (subcommittee member attendance option via Skype call-in)



THANK YOU