MEETING NOTES

Iowa Advisory Council on Automated Transportation (ATC)

Public Safety & Enforcement (PS&E) Subcommittee Meeting

Tuesday, January 25, 2022

1:00-2:00 pm CT

Action Items:

- AV Crash Data and Incident Reporting working group will meet in Spring/Summer 2022
- PS&E subcommittee members should continue to be engaged and informed on AV training and education opportunities

1. **Welcome and introductions** – Col. Nathan Fulk, Public Safety & Enforcement Subcommittee Chair
    a. Attendees – 32 attendees
        i. Col. Nathan Fulk – Iowa State Patrol (PS&E Chair)
        ii. Peggi Knight – Iowa DOT (Research, Development, Testing, & Evaluation Chair)
        iii. Tammy Trimble – Virginia Tech Transportation Institute
        iv. Commissioner Stephen Bayens – Iowa Department of Public Safety
        v. Bruce Anderson – Iowa Automobile Dealers Association
        vi. Mark Wyatt – Iowa Bicycle Coalition
        vii. Shirley McGuire - Federal Motor Carrier Safety Administration
        viii. Rebecca Morris – Bondurant Emergency Services
        ix. Aven Morgan, Peter Rafferty, Todd Szymkowski – Gannett Fleming
        x. Neal Hawkins, Jonathan Wood, Skylar Knickerbocker, Theresa Litteral – Iowa State University, InTrans
        xi. Dan McGehee, Omar Ahmad, Jacob Heiden – University of Iowa, National Advanced Driving Simulator
        xii. Tom Bruun, Josh Halterman, Ashley Hochberger, Alex Jansen, Dennis Kleen, Andy Lewis, Dave Lorenzen, Stefani Meyer, Ryan Ridout, Adam Shell, Toni Smith, Paul Steier, Steven Stonehocker, Sam Sturtz – Iowa DOT

    b. Guests – Iowa Statewide Traffic Incident Management (TIM) Committee members

    c. New Members
        i. Paul Steier – Vehicle Programs Director, American Association of Motor Vehicle Administrators
        ii. Iowa DOT
            1. Jenna Anderson – Records Manager, Systems & Administration Bureau
            2. Renee Jerman – Compliance Officer, Government and Community Relations
            3. Stefani Meyer – Grant Program Manager, Motor Vehicle Enforcement
            4. Toni Smith – Emerging Technology Program Manager, Central Programs Bureau

2. **Law Enforcement, First Responder, and Crash Investigation Preparation for Automated Vehicle Technologies –** Tammy Trimble - Senior Research Associate, Policy and Qualitative Analysis, Division of Data and Analytics, Virginia Tech Transportation Institute (VTTI)
    a. Tammy Trimble, Ph.D., is a Research Scientist with the Virginia Tech Transportation Institute's Division of Data and Analytics. Her experience includes over 19 years in transportation policy research at VTTI where she has worked on several policy-related research efforts related to transportation technologies, including automated vehicles, and associated education efforts. Dr. Trimble holds B.A. in Government and Public Service from Indiana University of Pennsylvania and an M.P.A. and Ph.D. in Public Administration from Virginia Tech's Center for Public Administration and Policy.
    b. The new report from Governor's Highway Safety Association (GHSA) examines how law enforcement officials, other first responders and crash scene investigators can better prepare for automated vehicle

technology and outlines curriculum recommendations to improve training on rapidly changing safety protocols. The report – Law Enforcement, First Responder and Crash Investigation Preparation for Automated Vehicle Technology – was prepared by the Virginia Tech Transportation Institute and made possible by a grant from State Farm®.

c. The scope of this project defined public safety providers as law enforcement, first responders, crash investigators, administrative personnel as well as rank and file officers. The project was conducted in three parts: literature review, discussions with stakeholders including public safety providers and insurance & safety advocates, & synthesis of the findings into a set of curriculum recommendations suited for outreach and education.
d. Training is needed because current understanding of ADAS (advanced driver assistance system) and ADS (automated driving system) technologies is limited. There are many unknowns with first responder interactions with ADS including how to disable an ADS-equipped vehicle, how to determine an ADS-equipped vehicle has detected emergency vehicles, and how to determine the ownership of an ADS-equipped vehicle. Training, combined with first responder interactions plans, will allow public safety personnel to focus on the other job demands.
e. Training can be provided in a variety of ways to ensure all responders have a standard base level of knowledge. Common training opportunities include academy or roll-call training, Traffic Incident Management Systems (TIMS) training, annual crash investigation training, conferences, other annual trainings, and online trainings.
f. Training should be provided as needed and may depend on a public safety responder's geographical location (i.e., a law enforcement officer in Silicon Valley with frequent ADS testing and more market penetration of vehicles with ADAS features will need training sooner than an officer in a rural environment with no current ADS vehicles.) A general basic training can be implemented in the near term, and more advanced training can be implemented as technologies become more prevalent.
g. Entities were identified that could provide training to public safety responders. Those entities include accreditation organizations, membership organizations, state & local precincts and departments, standards organizations, federal government initiatives, and academic institutions. Regardless of who is providing the training, it must meet the needs of the trainees.
h. Training regarding vehicle interactions will be one of the many training requirements of responders. AV training should be provided in an easy-to-understand format that's engaging and relevant with pictures. It will need continuous updates to ensure a flexible curriculum is current with the available technology and should relate to the trainee how the material will make their job easier and/or safer. The training could be provided in a modular approach, blended training as a mix of online and in-person, and experiential training with a developer to see technology first-hand.
i. The project identified six curriculum modules, ranging from basic to more advanced.
    i. Understanding the Differences between ADAS- and ADS-equipped Vehicles
    ii. Identifying ADAS Technologies on the Road
    iii. Understanding Governmental Responsibilities Regarding Vehicle Oversight
    iv. Anticipating ADAS- and ADS-equipped Vehicle Deployment
    v. Interacting with ADS-equipped Vehicles
    vi. Understanding and Accessing Data
j. Unfortunately, barriers to effective training exist including competing training demands, outdated training, non-engaging training, and budgetary constraints. However, two main opportunities were identified moving forward. Organizations can identify a departmental champion rather than ensuring all staff are trained. Public private partnerships can be a valuable role as technologies are developed and deployed to fill knowledge gaps.
k. Related resources below:
    i. Law Enforcement, First Responder and Crash Investigation Preparation for Automated Vehicle Technology: https://www.ghsa.org/sites/default/files/2021-09/Law%20Enforcement%2C%20First%20Responder%20and%20Crash%20Investigation%20Preparation%20for%20Automated%20Vehicle%20Technology%20FINAL.pdf

ii. Automated Vehicle Safety Consortium Best Practice for First Responder Interactions with Fleet-Managed Automated Driving System-Dedicated Vehicles (ADS-DVs): https://avsc.sae-itc.org/principle-5-5471WV-45187C7.html

3. **PS&E Work Plan & Tactical Actions**
    a. AV Crash Data and Incident Reporting (AV Crash Data Working Group) – Col. Nathan Fulk & Adam Shell
        i. Iowa created an AV crash data and incident reporting working group in alignment with the defined PS&E tactic in Iowa's AT Vision. The working group kicked off in September 2021 with individuals from the Iowa State Patrol and the Iowa DOT. The membership will expand and evolve as needed
        ii. This tactic explores data unique to AVs, including near misses, disengagements, and general electronic control unit data. It also explores the Model Minimum Uniform Crash Criteria (MMUCC) recommendation for ADS data capture from crashes.
        iii. The tactic will lead to two things: a revision of Iowa's Traffic and Criminal Software (TraCS) form and database and explore additional data arranged to be shared by companies doing targeted testing or pilot deployments in Iowa.
        iv. This group will continue to stay engaged and informed moving forward. They are looking for coordination activities with the first responder training communities and other stakeholders. This is crucial because Iowa has already seen examples drivers relying too much on their vehicle technology which ultimately leads to crashes:
            1. Police: West Des Moines cop injured by driver drinking and watching a movie on vehicle dashboard - https://www.desmoinesregister.com/story/news/crime-and-courts/2020/11/10/state-patrol-driver-watching-movie-during-crash-struck-officer/6235683002/
        v. Supplemental Updates on National Highway Traffic Safety Administration (NHTSA) Activities:
            1. Standing General Order Requiring Crash Reporting for level 2 to 5 Capable Vehicles - NHTSA is evaluating whether the manufacturers of these vehicles (including manufacturers of prototype vehicles and equipment) are meeting their statutory obligations to ensure that their vehicles and equipment are free of defects that pose an unreasonable risk to motor vehicle safety: https://www.nhtsa.gov/laws-regulations/standing-general-order-crash-reporting-levels-driving-automation-2-5
            2. Partnership for Analytics Research in Traffic Safety (PARTS) - PARTS, short for Partnership for Analytics Research in Traffic Safety, is a partnership between automakers and the U.S. Department of Transportation's National Highway Traffic Safety Administration in which participants voluntarily share safety-related data for collaborative safety analysis. The focus of this research is to assess the effectiveness of advanced driver assistance systems (ADAS) and ADAS market penetration: https://www.nhtsa.gov/parts
    b. AT & Traffic Incident Management (TIM) Alignment and Engagement – Col. Nathan Fulk
        i. A PS&E tactic is to continuously engage and education Iowa's TIM community. Currently, Iowa Law Enforcement Academy Council is working on mandatory training for all law enforcement agencies to complete the four-hour Traffic Incident Management course. An AV supplement is being explored to share with the group moving forward.

4. **Federal Transportation Infrastructure Bill Update** – Adam Shell, Iowa DOT
    a. The Bipartisan Infrastructure Law (BIL), also known as the Infrastructure Investment and Jobs Act (IIJA), is leading to Traffic Safety Management Operations funding, which includes automated transportation, opportunities for the state of Iowa and for other entities through discretionary grants. Some resources on the IIJA are below:
        i. FHWA BIL Update: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/

ii. USDOT BIL Update: https://www.transportation.gov/sites/dot.gov/files/2021-11/Bipartisan_Infrastructure_Law_Iowa.pdf
iii. AASHTO Analysis of BIL: https://policy.transportation.org/wpcontent/uploads/sites/59/2021/09/2021-09-15- AASHTO-Comprehensive-Analysis-of-IIJAFINAL.pdf

5. **Open Discussion** – All subcommittee members

6. **Information and key meeting dates**
   - **a.** **Infrastructure Readiness Subcommittee Meeting** – Monday, December 13 from 1-2 pm
     - *Short Term Road Condition Forecasts: Enabling Practical Trip Modification in Adverse Weather – Tina Greenfield (Iowa DOT)*
   - **b.** **Economic Development Subcommittee Meeting** – Wednesday, January 5 from 1-2 pm
     - *Intelligent Transportation Systems (ITS) Joint Program Office (JPO) Professional Capacity Program (PCB): Workforce Development Efforts – Emily Lawless and Tara Reels (Volpe Center) & Dr. Stephanie Ivey (University of Memphis)*
   - **c.** **Policy & Legislation Subcommittee Meeting** – Wednesday, January 19 from 1-2 pm
     - *Austin, TX PDD Deployment Experience – Alex Payson (City of Austin, TX)*
   - **d.** **AT Council Meeting** – Wednesday, March 16th

ATC SUBCOMMITTEE MEETING

Public Safety & Enforcement
January 25, 2022

MEETING AGENDA

1. **Welcome and introductions** – Col. Nathan Fulk, Public Safety & Enforcement Subcommittee Chair
    a. Guests & New Members
2. **Law Enforcement, First Responders, and Crash Investigation for Automated Vehicle Technologies** - (30 minutes)
    a. Tammy Trimble - Senior Research Associate, Policy and Qualitative Analysis, Division of Data and Analytics, Virginia Tech Transportation Institute
3. **PS&E Subcommittee Work Plan & Tactical Actions** – (20 minutes)
    a. AV Crash Data and Incident Reporting (AV Crash Data Working Group) – Adam Shell & Col. Nathan Fulk
        i. NHTSA Standing General Order Requiring Crash Reporting for level 2 to level 5 capable vehicles
        ii. Partnership for Analytics Research in Traffic Safety (PARTS)
    b. AT & Traffic Incident Management (TIM) Alignment and Engagement – Col. Fulk
4. **Federal Transportation Infrastructure Bill Update** – Adam Shell, Iowa DOT (5 minutes)
5. **Open Discussion** – All subcommittee members (5 minutes)
6. **Information and key upcoming dates**
    a. Infrastructure Readiness Subcommittee Meeting – Monday, December 13 from 1-2 pm
    b. Economic Development Subcommittee Meeting – Wednesday, January 5 from 1-2 pm
    c. Policy & Legislation Subcommittee Meeting – Wednesday, January 19 from 1-2 pm
    d. AT Council Meeting - Wednesday, March 16th

WELCOME AND INTRODUCTIONS

Col. Nathan Fulk –

Public Safety & Enforcement Subcommittee Chair

GUESTS & NEW SUBCOMMITTEE MEMBERS

Guests

- Iowa Statewide Traffic Incident Management (TIM) Committee members

New Members

- Paul Steier – Vehicle Programs Director, American Association of Motor Vehicle Administrators
- Iowa DOT
  - Jenna Anderson – Records Manager, Systems & Administration Bureau
  - Renee Jerman – Compliance Officer, Government and Community Relations
  - Stefani Meyer – Grant Program Manager, Motor Vehicle Enforcement
  - Toni Smith – Emerging Technology Program Manager, Central Programs Bureau
- Iowa State University & CTRE
  - Jonathan Wood – Associate Professor, Civil Engineering and CTRE faculty affiliate

PREPARING LAW ENFORCEMENT, FIRST RESPONDERS, AND CRASH INVESTIGATORS FOR AUTOMATED VEHICLE TECHNOLOGY

Tammy Trimble - Senior Research Associate, Policy and Qualitative Analysis, Division of Data and Analytics, Virginia Tech Transportation Institute

VIRGINIA TECH TRANSPORTATION INSTITUTE
VIRGINIA TECH

Advancing Transportation through Innovation

Law Enforcement, First Responder, and Crash Investigation Preparation for Automated Vehicle Technologies

TAMMY TRIMBLE, PH.D.

RESEARCH SCIENTIST

DIVISION OF DATA AND ANALYTICS

Acknowledgements

- Governors Highway Safety Association (GHSA) with support from State Farm Insurance

OVERVIEW

PROJECT OBJECTIVES AND APPROACH

CURRICULUM DEVELOPMENT CONSIDERATIONS

POTENTIAL CURRICULUM RECOMMENDATIONS

BARRIERS AND OPPORTUNITIES MOVING FORWARD

Project Objectives

- Distill and summarize strategies for integrating Automated Driving System (ADS)-equipped vehicles into the U.S. fleet without significant disruption to the protocols of public safety
- Develop proposed curricula that would provide a knowledge base surrounding Advanced Driver Assistance Systems (ADAS) and ADS deployment for law enforcement officials, first responders, and crash investigators

Public Safety Providers Defined

- Includes law enforcement, first responders, crash investigators
- Includes administrative personnel as well as rank and file officers

Approach

1. Literature review
2. Discussions with government administrators, first responder and law enforcement organizations, automakers, crash reconstruction organizations, and insurance and safety advocates
3. Synthesized findings from the literature review and discussions to develop the curriculum recommendations

CURRICULUM DEVELOPMENT CONSIDERATIONS

- WHY IS TRAINING NEEDED?
- WHERE SHOULD TRAINING BE PROVIDED?
- WHEN SHOULD TRAINING BE PROVIDED?
- WHO SHOULD PROVIDE TRAINING-RELATED INFORMATION?
- HOW SHOULD TRAINING BE PROVIDED?
- WHAT TRAINING SHOULD BE PROVIDED?

Why Is Training Needed?

- Current understanding of ADAS and ADS technologies is limited
- Questions persist
  - How will we disable an ADS-equipped vehicle, investigate an abandoned vehicle or perform stabilization or extrication?
  - How do we know the ADS-equipped vehicle has sensed or detected the presence of an emergency vehicle that is responding to an incident or the presence of a first responder who is conducting traffic direction and control?
  - How do we determine ownership of an ADS-equipped vehicle? How is responsibility assigned at an incident or when conducting a traffic stop?
- Training, combined with first responder interaction plans, will allow public safety personnel to focus on the other job demands

Where Should Training Be Provided?

- Common training opportunities
  - Academy or roll-call trainings
  - Traffic Incident Management Systems (TIMS) training
  - Annual crash investigation training
  - Conferences
  - Other annual trainings
  - Online trainings

When Should Training Be Provided?

- Basic training in the near term
- More advanced training as technologies become more prevalent

Who Should Provide Training?

- Accreditation organizations
- Membership organizations
- State and local precincts and departments
- Standards organizations
- Federal government initiatives
- Academic institutions

How Should Training Be Provided?

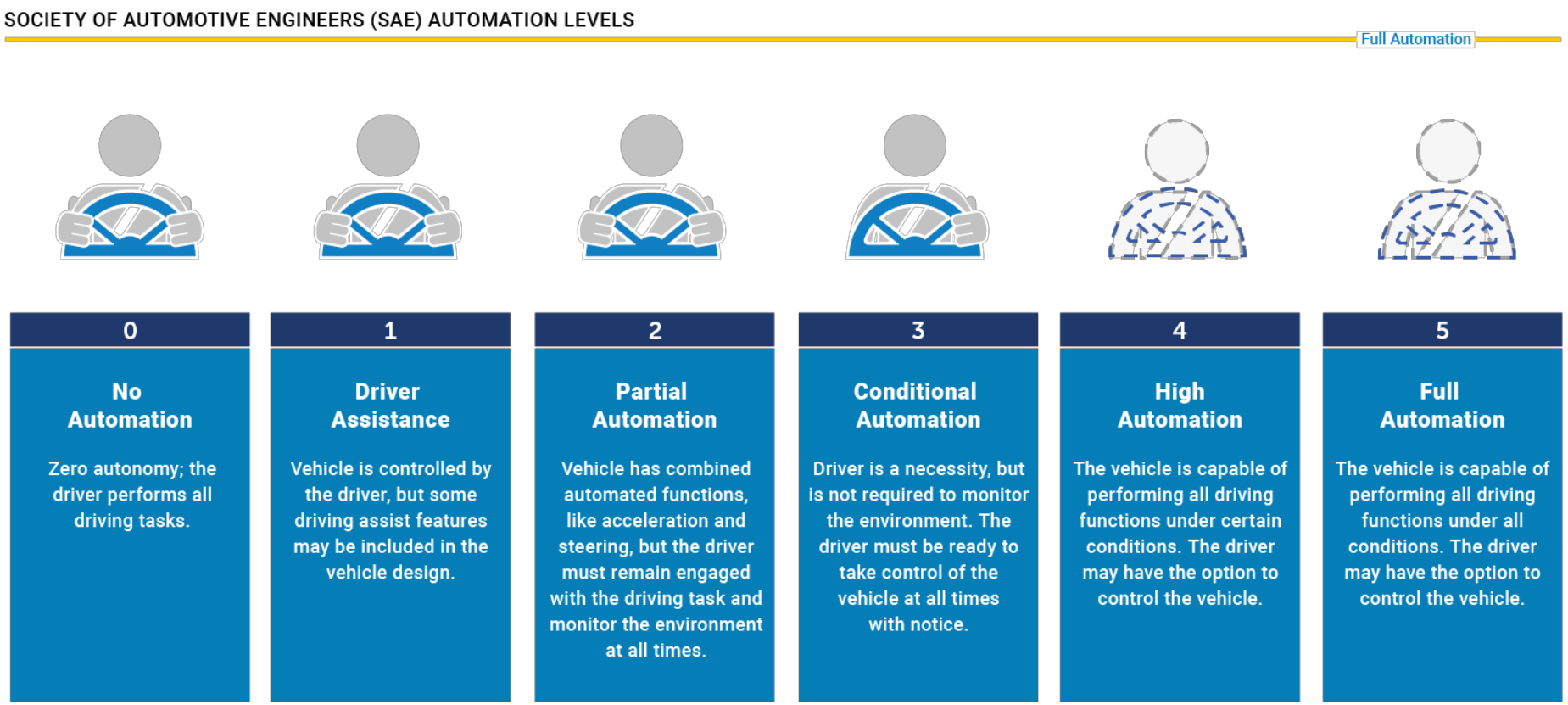
- Format
  - Easy to comprehend
  - Engaging
  - Relevant
  - Continuously updated
- Approach
  - Modular approach
  - Blended training
  - Experiential training

What Training Should Be Provided?

- Identified six curriculum modules, ranging from basic to more advanced
  - Help to reduce uncertainty and misconceptions regarding the technologies and identify how providers may interact with them in the field
- Presented with the understanding that ADAS and ADS technologies are continuously evolving
  - Training materials must be agile to accommodate future changes

1. Understanding the Differences between ADAS- and ADS-equipped Vehicles

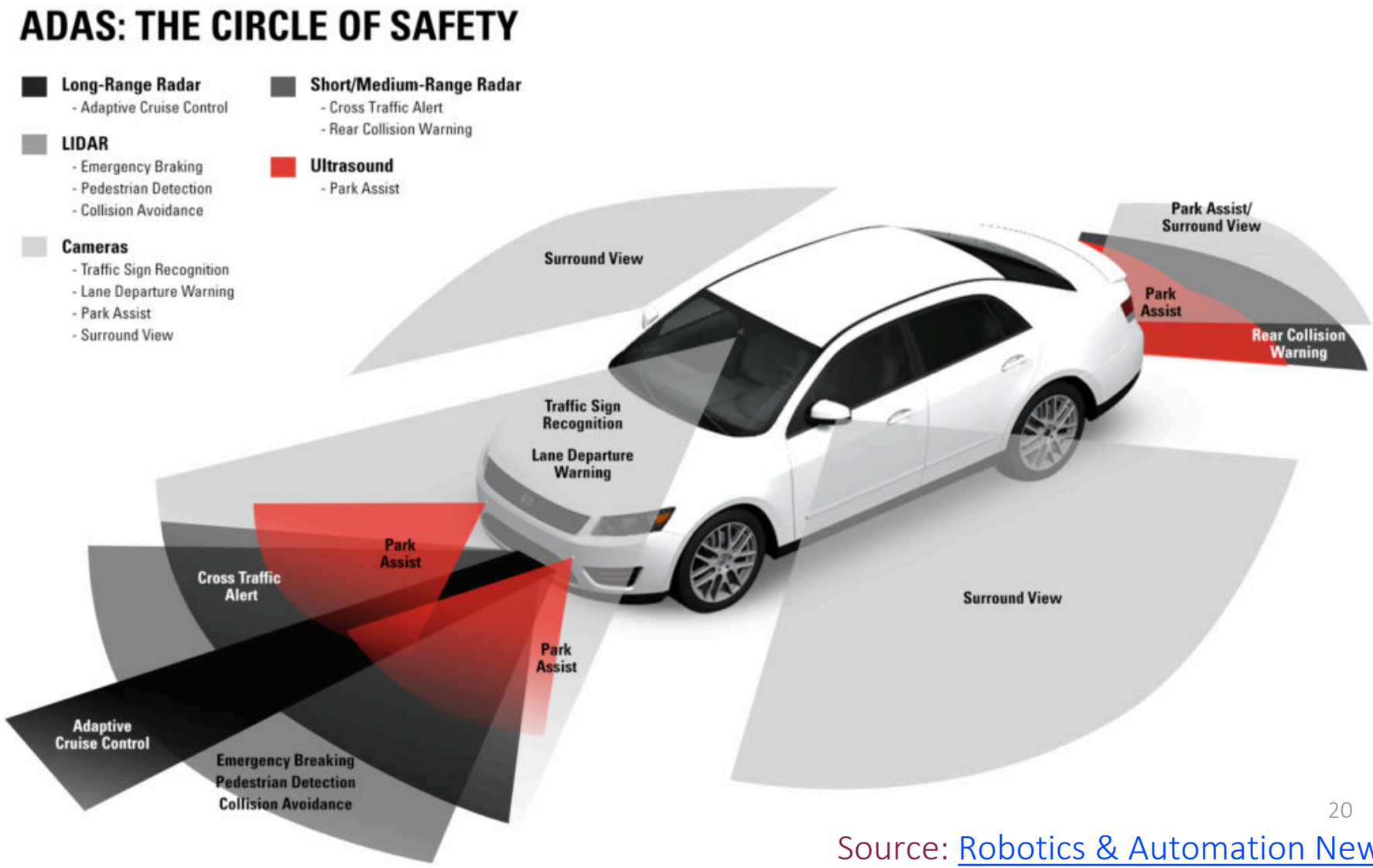
- Provide a common understanding of ADAS and ADS technologies at a foundational level



SAE Automation Levels as described by the National Highway Traffic Safety Administration

2. Identifying ADAS Technologies on the Road Today

- Explore ADAS technologies in greater detail



Source: [Robotics & Automation News]

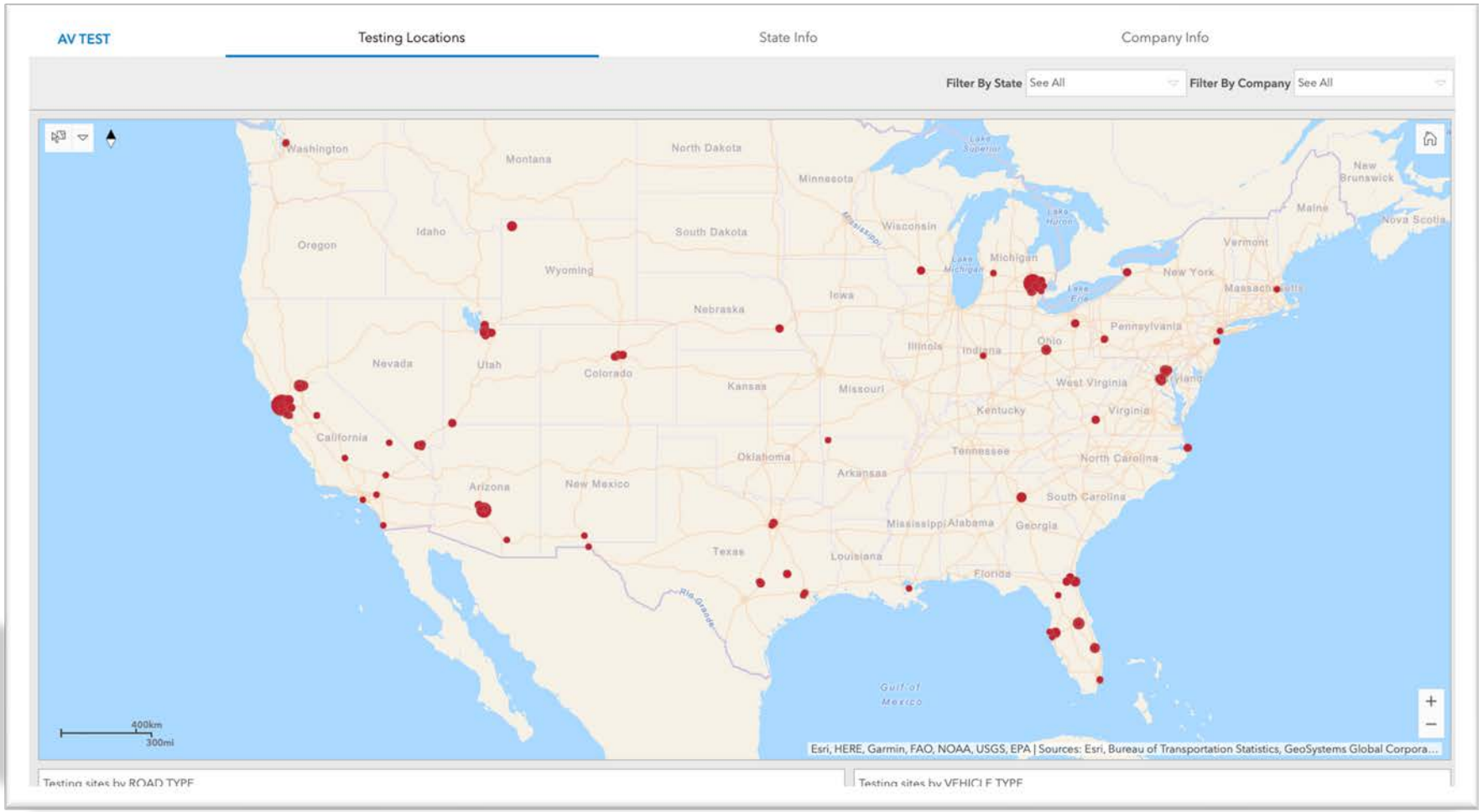
3. Understanding Governmental Responsibilities Regarding Vehicle Oversight

- Provide individuals the ability to list and describe federal and state responsibilities regarding ADAS- and ADS-equipped vehicles

Source: National Conference of State Legislatures

4. Anticipating ADAS- and ADS-equipped Vehicle Deployment

- Provide individuals with the ability to explain the features and associated capabilities included on departmental vehicles
- Identify any potential ADS-equipped vehicle deployments in their region



Source: [AV TEST Initiative]

5. Interacting with ADS-equipped Vehicles

- Provide an overview of the types of interactions that first responders may have with ADS-equipped civilian vehicles and unique deployments

Responding to an Incident	Securing the Scene	Traffic Direction and Control	Traffic Stops and Checkpoints	Abandoned or Unattended Vehicles	Stabilization and Extrication
					
Domains: Law Enforcement Fire and Rescue EMS	**Domains:** Law Enforcement Fire and Rescue EMS	**Domains:** Law Enforcement Fire and Rescue EMS	**Domain:** Law Enforcement	**Domain:** Law Enforcement	**Domain:** Fire and Rescue

Sources: Terry et al., 2018; AVSC, 2020

6. Understanding and Accessing Data

- Provide an overview of the data available and how to access

Subfield 2	Automation System Levels in Vehicle	Select 1-5
00	No Automation	
01	Driver Assistance	
02	Partial Automation	
03	Conditional Automation	
04	High Automation	
05	Full Automation	
06	Automation Level Unknown	
99	Unknown	

Source: MMUCC Excerpt – DMV1. Motor Vehicle Automated Driving System(s) Subfield 3

MOVING FORWARD

BARRIERS TO EFFECTIVE TRAINING

OPPORTUNITIES

Barriers to Effective Training

- Competing training demands
- Outdated training
- Non-engaging training
- Budgetary constraints

Opportunities Moving Forward

- Identification of departmental champions
- Public private partnerships

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Advancing Transportation through Innovation

Thank you!

Tammy Trimble, Ph.D.

Research Scientist

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PUBLIC SAFETY & ENFORCEMENT SUBCOMMITTEE WORK PLAN & TACTICAL ACTIONS

PS&E Subcommittee Tactics Summary

2.2 Tactics Summary Table

	Deliverables	Lead(s)	Resources	Scenarios	Timeline
Capture AV Crash Data	Revised TraCS form and DB Coordinate with the MMUCC update and align with NLETS	AV Crash Data Working Group	Stakeholder engagement, technical staff to revise the TraCS database	TBD (dependent on resources and priorities)	TBD (recurrent agenda item)
Explore Vehicle Automation Indicators	List of potential AV indicators Reconnaissance and recommendations	Dan McGehee	Analysis of existing guidance	Compromise on indicators	TBD
Develop Following Distance Guidelines	Best practice synthesis Guidelines for enforcement	Major Mark Stine & Asst. Chief Tom Bruun	Stakeholder engagement w/ law enforcement, analysis of existing guidance	Dependent on experience with changed law	TBD
Address VRU Safety	Align with the bike and ped community Addressed in SHSP update and other modal plans	Ashley Hochberger & Mark Wyatt	Staff time and dedication to updating SHSP	N/A	On-going
Inform TIM and Safety Community	Presentation	DOT & DPS	Outreach to the Statewide TIM Committee	N/A unless major AV incident occurs	On-going
ODD Compliance	(in development)	DOT	TBD	TBD	TBD
LEP/LEIP Development	Assess / adopt AAMVA and other national guidance recommendations	Col. Nathan Fulk & MVE?	Staff Time and coordination with industry	TBD	TBD

PUBLIC SAFETY & ENFORCEMENT SUBCOMMITTEE WORK PLAN & TACTICAL ACTIONS

AV Crash Data and Incident Reporting (AV Crash Data Working Group) – Adam Shell & Col. Nathan Fulk

- NHTSA Standing General Order Requiring Crash Reporting for level 2 to level 5 capable vehicles
- Partnership for Analytics Research in Traffic Safety (PARTS)

AT & Traffic Incident Management (TIM) Alignment and Engagement – Col. Fulk

PUBLIC SAFETY & ENFORCEMENT SUBCOMMITTEE WORK PLAN & TACTICAL ACTIONS

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- **Partnership for Analytics Research in Traffic Safety (PARTS)**

AT & Traffic Incident Management (TIM) Alignment and Engagement – Col. Fulk

AV CRASH DATA AND INCIDENT REPORTING (AV CRASH DATA WORKING GROUP)

WG Kick-Off (September 2021)

- Introductions
- Purpose & Need
- Review/Updates on National Guidance, Recommendations, & Standard
- Alignment & Coordination (e.g., TraCS/MARS, MMUCC, STRCC, NLETS, GTSB Grant)
- Establish Roles, Priorities, and Timeline
- Review Action Items/Next Steps

WG Membership

Current Working Group Members

- Iowa State Patrol
  - Col. Nathan Fulk
  - Lt. Mike Current
  - Sgt. Chuck McNally
- Iowa DOT
  - Adam Shell
  - Ashley Hochberger
  - Dennis Kleen
  - Jenna Anderson
  - Josh Halterman

AV CRASH DATA AND INCIDENT REPORTING (AV CRASH DATA WORKING GROUP)

Overview

- AV-specific vehicle data is largely proprietary, but agencies are pushing for certain data to be included in crash reports (i.e., the state's Traffic and Criminal Software, or TraCS) or through investigations seeking data from the on-board electronic control unit (ECU), event data recorder (EDR), or other vehicle systems.
- This tactic explores data unique to AVs, including near misses, disengagements, and general electronic control unit data. Additionally, it explores the Model Minimum Uniform Crash Criteria (MMUCC, 5th Ed, 2017) recommendation for ADS data capture from crashes given necessary data systems changes and the need for crash form changes.
- The tactic will lead to two things: first is a revision of Iowa's TraCS form and database, and second is additional data arranged to be shared by companies doing targeted testing or pilot deployments in Iowa.

AV CRASH DATA AND INCIDENT REPORTING (AV CRASH DATA WORKING GROUP)

Crashes Involving ADAS

Police: West Des Moines cop injured by driver drinking and watching a movie on vehicle dashboard

Philip Joens Des Moines Register
Published 2:11 p.m. CT Nov. 10, 2020 | **Updated 7:06 a.m. CT Nov. 11, 2020**

View Comments

A man who seriously injured a West Des Moines police officer in a crash early Sunday admitted to investigators that he had been drinking alcohol and was playing a movie on his dashboard of his vehicle when the accident occurred.

West Des Moines police officer Jon Kaufman was waiting for a tow truck during a traffic stop near Westown Parkway on Interstate Highway 35 whena car driven by crashed into his patrol vehicle, police said.

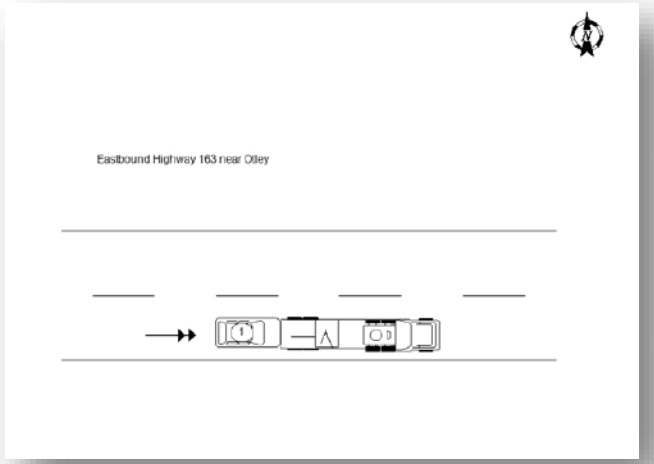
In addition to drinking and watching a movie, admitted to crash investigators that he had the cruise control set and relied too much on vehicle lane assist technology, according to an Iowa State Patrol obtained incident report obtained Tuesday by the Des Moines Register.

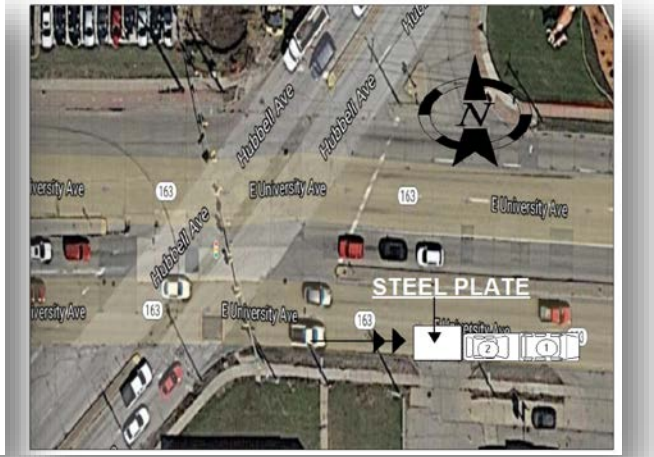
Driver Overreliance

I-80, Near MM153, near Colfax, IA (April 2021)

Work Zone Related

Stationary maintenance truck – IA 163, Marion County, IA - May 2021(left)
Temporary steel plate – IA 163, Polk County, August 2021 (right)





AV CRASH DATA AND INCIDENT REPORTING (AV CRASH DATA WORKING GROUP)

Key Discussion

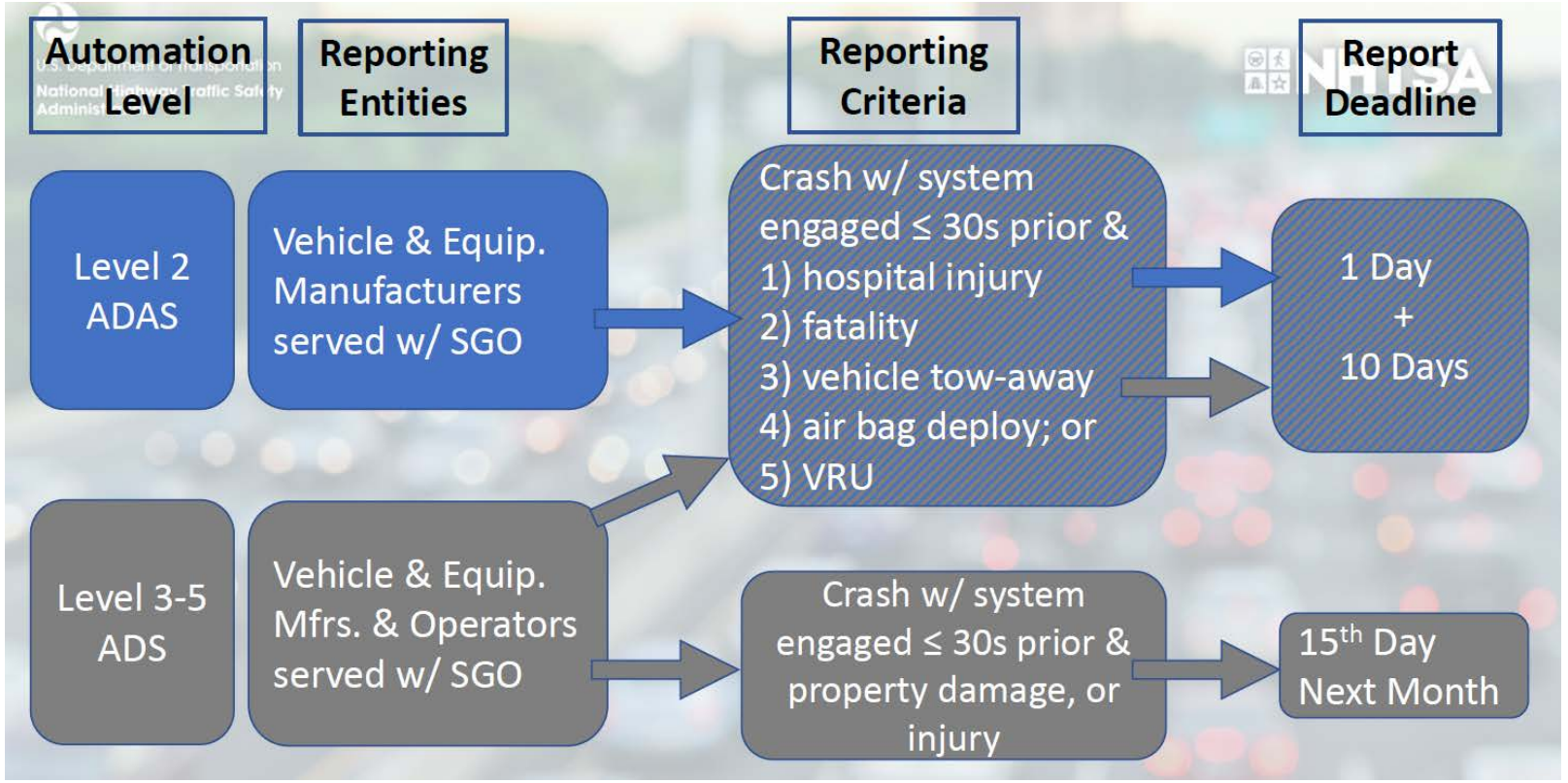
- Crash Reporting Process
- Changes/Challenges to account for automation or driver assistance features
- MMUCC Update Delays
- Identifying ADAS in the VIN (ADAS and crash data integration)
- Enhance & Emphasize law enforcement crash reporting training (GTSB Grant)
- Education & Coordination Opportunities
  - Driver Education
  - TIM Coordination

Next Steps

- Stay engaged and informed
- Coordination on public (NHTSA SGO, PARTS, and MMUCC update) and private activities around this topic
- Update Work Plan (forthcoming)
- Tentative Spring/Summer 2022 meeting

AV CRASH DATA AND INCIDENT REPORTING (AV CRASH DATA WORKING GROUP)

NHTSA Standing General Order (SGO) 2021-01: Requiring crash reporting for ADS and ADAS (Level 2) equipped vehicles



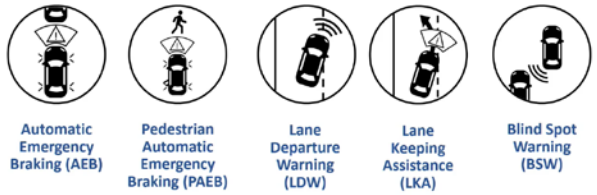
Source: NHTSA

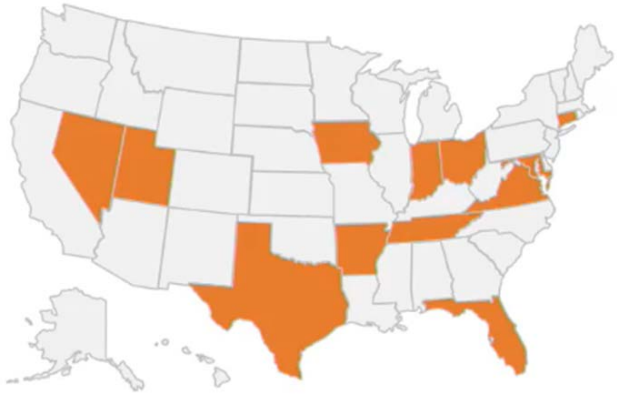
Standing General Order on Crash Reporting for Levels of Driving Automation 2-5

AV CRASH DATA AND INCIDENT REPORTING (AV CRASH DATA WORKING GROUP)

NHTSA Partnership for Analytics Research in Traffic Safety (PARTS)

- NHTSA and automaker partnership Questions to address
  - GM, Toyota, FCA, Honda, Nissan, Subaru, Mazda, Mitsubishi, and MITRE (70% market share)
- Questions to address
  - What is the overall effectiveness of ADAS features in reducing fatalities, injuries and crashes?
  - What factors influence ADAS feature effectiveness and to what extent?
  - What combination of ADAS features contribute to the prevention of fatalities, injuries and crashes?
- 13 States involved (including Iowa)
- Crash & Vehicle Data Summary
  - Police Reported Crash Data
  - 47M passenger vehicles
  - 21.7M vehicles from 12.2M crashes
  - 93 vehicle models (MY2015 to MY2020)
  - 7 vehicle segments
    - Small/midsize/large cars, small/midsize/large SUVs, pickups, and vans
- ADAS Market Penetration Rates





https://www.nhtsa.gov/parts

PUBLIC SAFETY & ENFORCEMENT SUBCOMMITTEE WORK PLAN & TACTICAL ACTIONS

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AT & Traffic Incident Management (TIM) Alignment and Engagement – Col. Fulk

FEDERAL TRANSPORTATION INFRASTRUCTURE BILL UPDATE

Adam Shell – Iowa DOT

Bipartisan Infrastructure Law* TSMO Funding Opportunities

*** also known as Infrastructure Investment and Jobs Act (IIJA)**

IOWA DOT

SMARTER | SIMPLER | CUSTOMER DRIVEN

2021 Infrastructure Investment and Jobs Act (IIJA) HR 3684

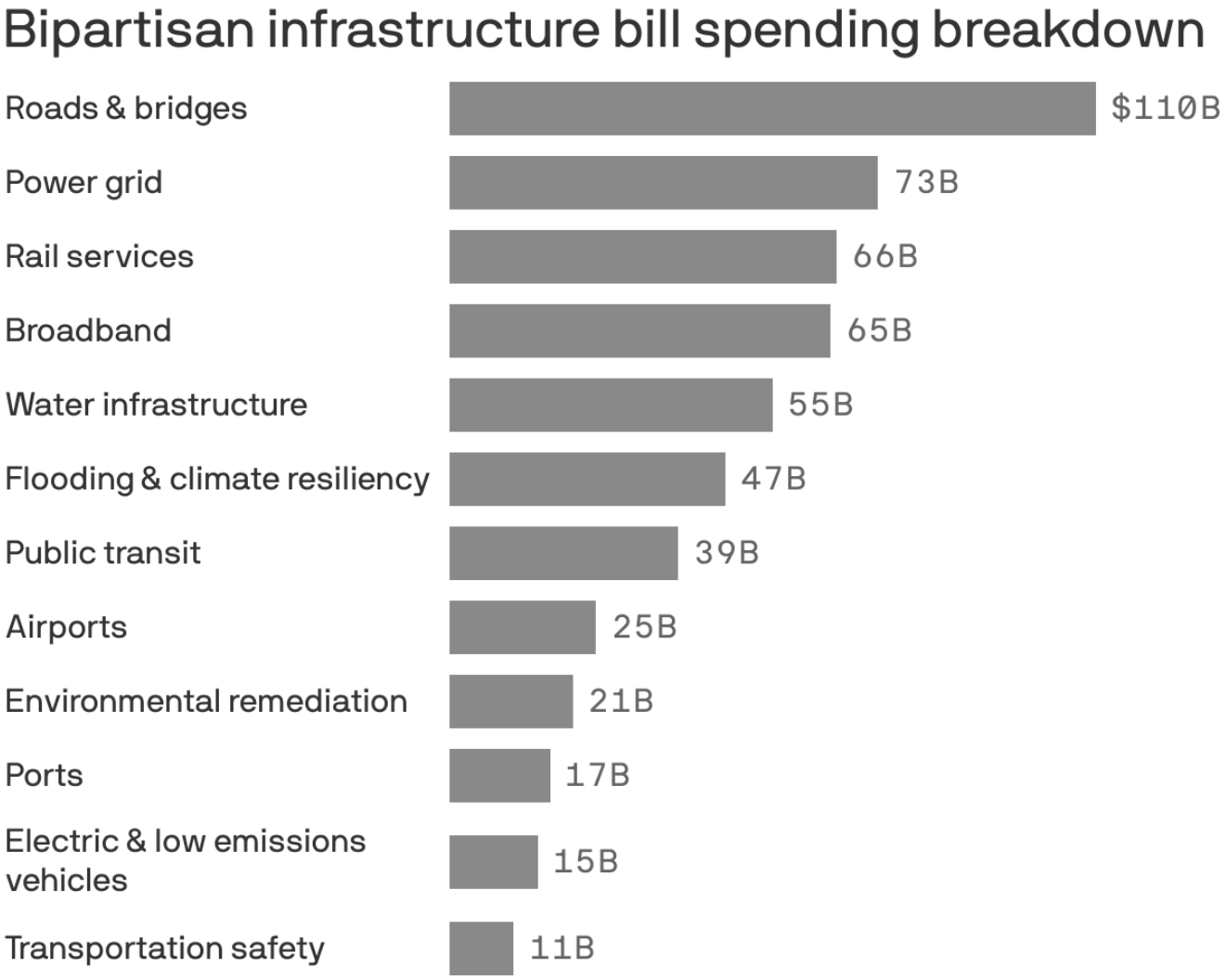
IIJA at a Glance

US Overview

5-Year Bill Signed Nov. 15, 2021

$1.2 Trillion Total

39% of overall funds will be awarded on a competitive basis



IIJA at a Glance

Iowa Overview

- **49% increase** in federal-aid highway and bridge funding
  - $2.6B (2016 – 2020 FAST Act)
  - $3.8B (2022 – 2026 IIJA)
- **$3.4B** for federal-aid highway programs
- **$432M** for bridge replacements & repairs
- **$305M** for public transportation
- **$83M** to reduce emissions
- **$94M** to improve resiliency
- **$26M** in highway safety programs
- **$35.9M** for CMV safety efforts
- **$51M** in EV Charging Infrastructure

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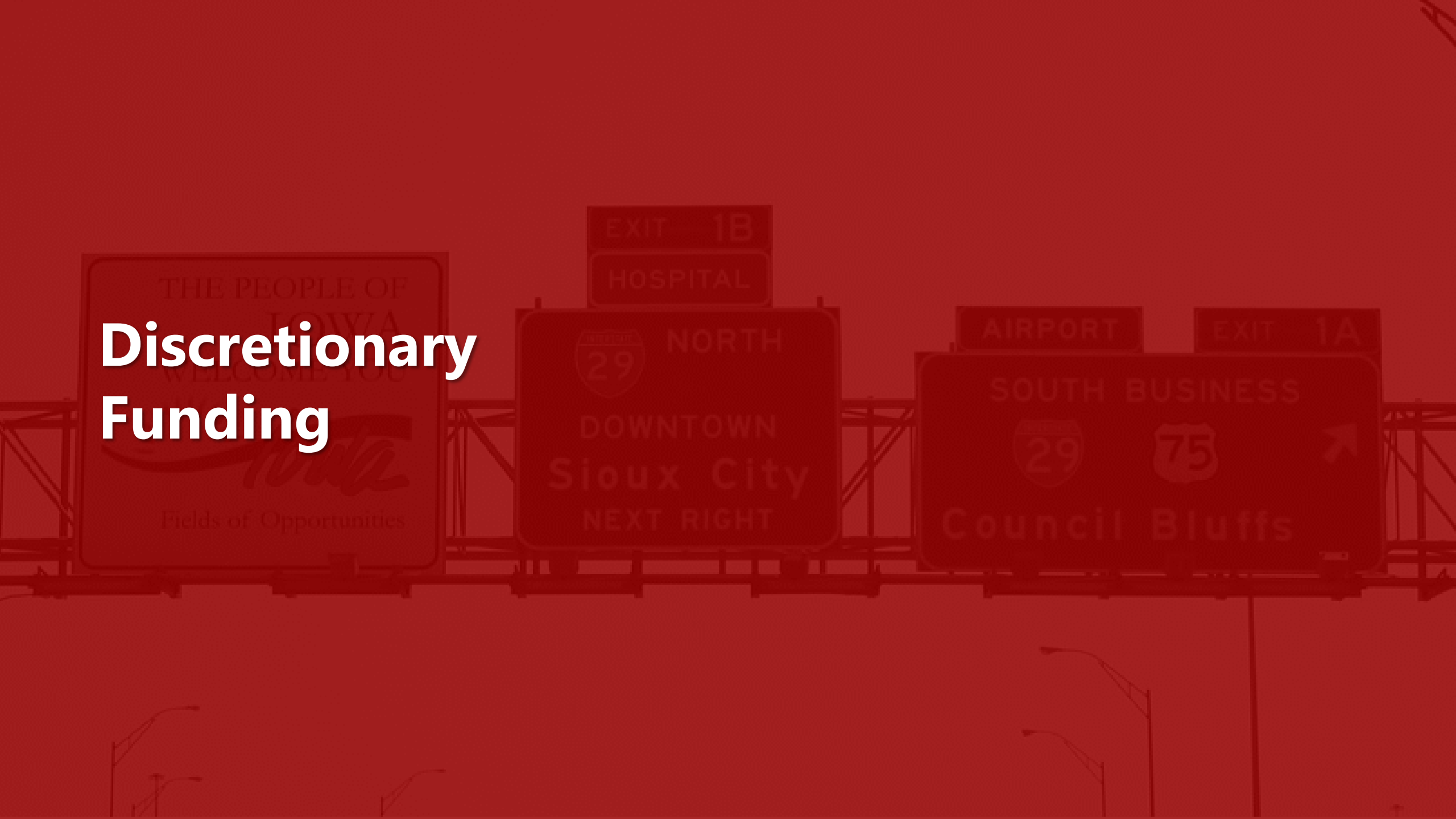

Discretionary Funding

Discretionary Funding Overview

US Overview

$150B in discretionary grant programs

- Railway-Highway Grade Crossings
- **INFRA**
- Bridge Discretionary Grant Program
- Wildlife Crossings Pilot Program
- **Charging and Fueling Infrastructure** Congestion Relief Program
- **PROTECT**
- Healthy Streets
- Reconnecting Communities
- Megaprojects
- **RAISE**
- Culvert Removal, Replacement, and Restoration
- Safe Streets and Roads for All
- **SMART**
- **Advanced Transportation Technologies and Innovative Mobility Deployment Program (ATTIMD)**
- Several Transit related opportunities

INFRA Discretionary Grant Program

- Provides Federal financial assistance to highway and freight projects of national or regional significance
- $8 billion
- Increased cap on multimodal projects to 30% of program funds

TSMO Opportunities
ICM Strategies, especially those that knock down equity barriers, connects all users, and/or reduce green house gases, Freight movement improvements

Primary Selection Criteria

Support for National or Regional Economic Vitality

Climate Change and Env. Justice Impacts

Racial Equity and Barriers to Opportunity

Leveraging of Federal Funding

Potential for Innovation

Performance and Accountability

Secondary Selection Criteria

Includes improvements for multimodal non-motorized users

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Charging and Fueling Infrastructure Program

- Deploy EV charging and hydrogen/propane/natural gas fueling infrastructure along designated alternative fuel corridors and in communities
- $2.5 billion
- Set-aside (50%) to install EV charging and alt. fueling infrastructure on public roads or in other publicly accessible locations, such as parking facilities at public buildings, schools, and parks

TSMO Opportunities

Leverage ITS Maintenance to support 5-years of fed-supported O&M

Primary Selection Criteria

TBD

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PROTECT

- Increase resilience of the transportation system
- $7.3B in formula funding nationally
- $1.4B in competitive planning grants nationally
- Higher Fed. share if State develops a resilience improvement plan and incorporates into its LRTP

TSMO Opportunities

Emergency mgmt., planning for physical and cyber infrastructure hardening, Operational Tech. network hardening & resiliency

Primary Selection Criteria

TBD

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RAISE Discretionary Grant Program

- Invest in national infrastructure projects that result in good-paying jobs, improve safety, apply transformative technology, and explicitly address climate change and racial equity.
- $7.5 billion over 5 years
- Provisions for RAISE have doubled

TSMO Opportunities
ICM Strategies, especially those that introduce new technologies through innovative partnerships

Primary Selection Criteria

Safety

Environmental Sustainability

Quality of Life

Economic Competitiveness

State of Good Repair

Secondary Selection Criteria

Partnership

Innovation

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Strengthening Mobility and Revolutionizing Transportation (SMART)

- Focus on advanced smart city or community technologies and systems to improve transportation safety and efficiency
- $7.3B in formula funding nationally
- $1.4B in competitive planning grants nationally

TSMO Opportunities

Partner with metro area transit agencies to integrate trip planning across modes, work with local agencies for signal system modernization

Primary Selection Criteria

State of public transportation/transit system

Population density and transit need

Use of advanced data, tech, and apps

Secondary Selection Criteria

Scalability/repeatability

Encourages public/private data sharing

Promote skilled workforce

Promote cybersecurity

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Advanced Transportation Technologies and Innovative Mobility Deployment Program (ATTIMD)

- Former Advanced Transportation and Congestion Management Technologies Deployment Program (ATCMTD)
- $300M
- Focuses on deployment and operation of technologies – 20% dedicated to rural projects

Primary Selection Criteria

TBD

TSMO Opportunities

ICM Applications, Rural TIM Data Sharing Pilot, Freight Technology Demonstration

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Notable AT-Readiness Sections of the IIJA

- SEC. 11302. Work zone process reviews
- SEC. 11303. Transportation management plans
- SEC. 11304. Intelligent transportation systems
- SEC. 11135. Updates to Manual on Uniform Traffic Control Devices
- SEC. 11504. Study of impacts on roads from self-driving vehicles
- SEC. 11510. Cybersecurity tool; cyber coordinator
- SEC. 13005. Emerging technology research pilot program
- SEC. 13006. Research and technology development and deployment
- SEC. 24213. New Car Assessment Program
- SEC. 24219. Research on connected vehicle technology
- SEC. 25001. Intelligent Transportation Systems Program Advisory Committee
- SEC. 25002. Smart Community Resource Center
- SEC. 25008. Coordination on emerging transportation technology
- SEC. 25020. Transportation workforce development
- SEC. 60102. Grants for broadband deployment

Resources

- **FHWA BIL website:** https://www.fhwa.dot.gov/bipartisan-infrastructure-law/
- **USDOT BIL Iowa Fact Sheet:** https://www.transportation.gov/sites/dot.gov/files/2021-11/Bipartisan_Infrastructure_Law_Iowa.pdf
- **AASHTO Analysis of BIL:** https://policy.transportation.org/wp-content/uploads/sites/59/2021/09/2021-09-15-AASHTO-Comprehensive-Analysis-of-IIJA-FINAL.pdf

OPEN DISCUSSION

INFORMATION AND KEY MEETING DATES

Infrastructure Readiness Subcommittee Meeting – Monday, December 13 from 1-2 pm

- *Short Term Road Condition Forecasts: Enabling Practical Trip Modification in Adverse Weather – Tina Greenfield (Iowa DOT)*

Economic Development Subcommittee Meeting – Wednesday, January 5 from 1-2 pm

- *Intelligent Transportation Systems (ITS) Joint Program Office (JPO) Professional Capacity Program (PCB): Workforce Development Efforts – Emily Lawless and Tara Reels (Volpe Center) & Dr. Stephanie Ivey (University of Memphis)*

Policy & Legislation Subcommittee Meeting – Wednesday, January 19 from 1-2 pm

- *Austin, TX PDD Deployment Experience – Alex Payson (City of Austin, TX)*

AT Council Meeting – Wednesday, March 16th

THANK YOU