Stantec

NETC 20-4
Coordinating State Policies, Laws, and Regulations for Automated Driving Systems Across New England

NEW ENGLAND TRANSPORTATION CONSORTIUM

Image Courtesy of VT Agency of Transportation

Today's Focus

- Project Purpose
- Research Approach
- Research Themes and Considerations
- Key Findings and Recommendations
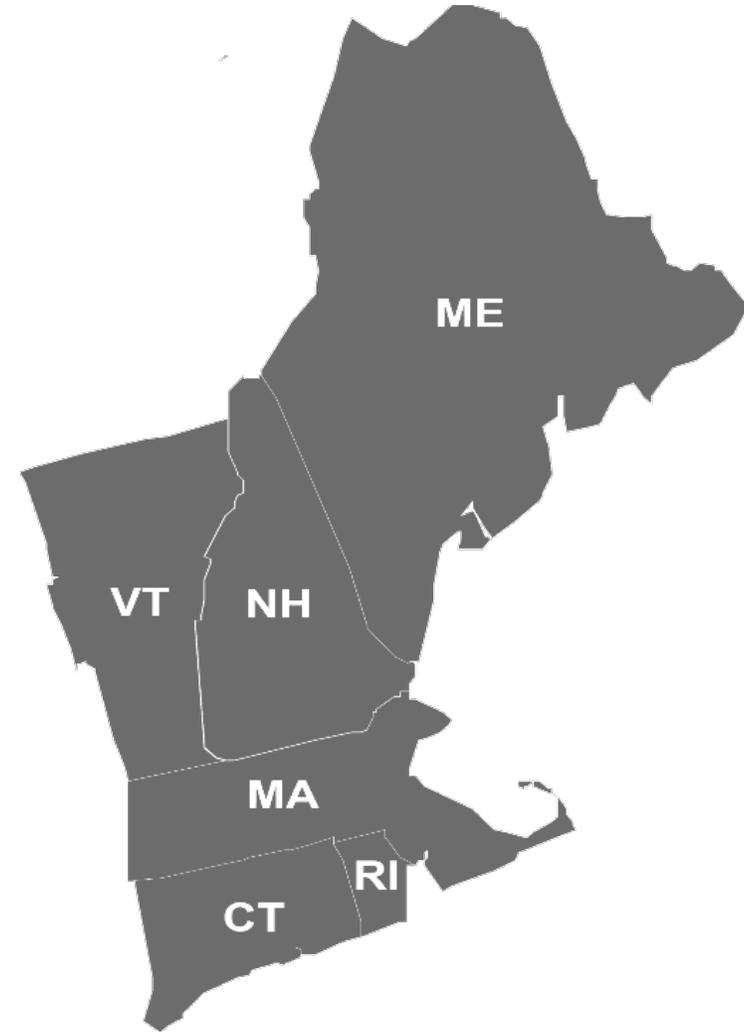- Proposed Tools
- What next?

Overarching Goal & Purpose

Goal:

- Achieve vision of NE states for seamless operation of ADS-equipped vehicles across the region

Project Purpose:

- To develop a consistent approach to the setting of policies, laws, and regulations of ADS-equipped vehicles within New England

Project Objectives to Support Goal

- Develop and identify specific recommendations towards facilitating testing and deployment of ADS-equipped vehicles across state lines within the New England region

- Incentivize regional collaboration for the development of policy, legal, and regulatory approaches to testing and deployment of ADS

- Inform national and other regional conversations around ADS testing and deployment

- Position the New England region as important for supporting national testing and deployment framework in support of positive social benefits of ADS

ADS is being integrated into the transportation system, but not in all parts of the country.
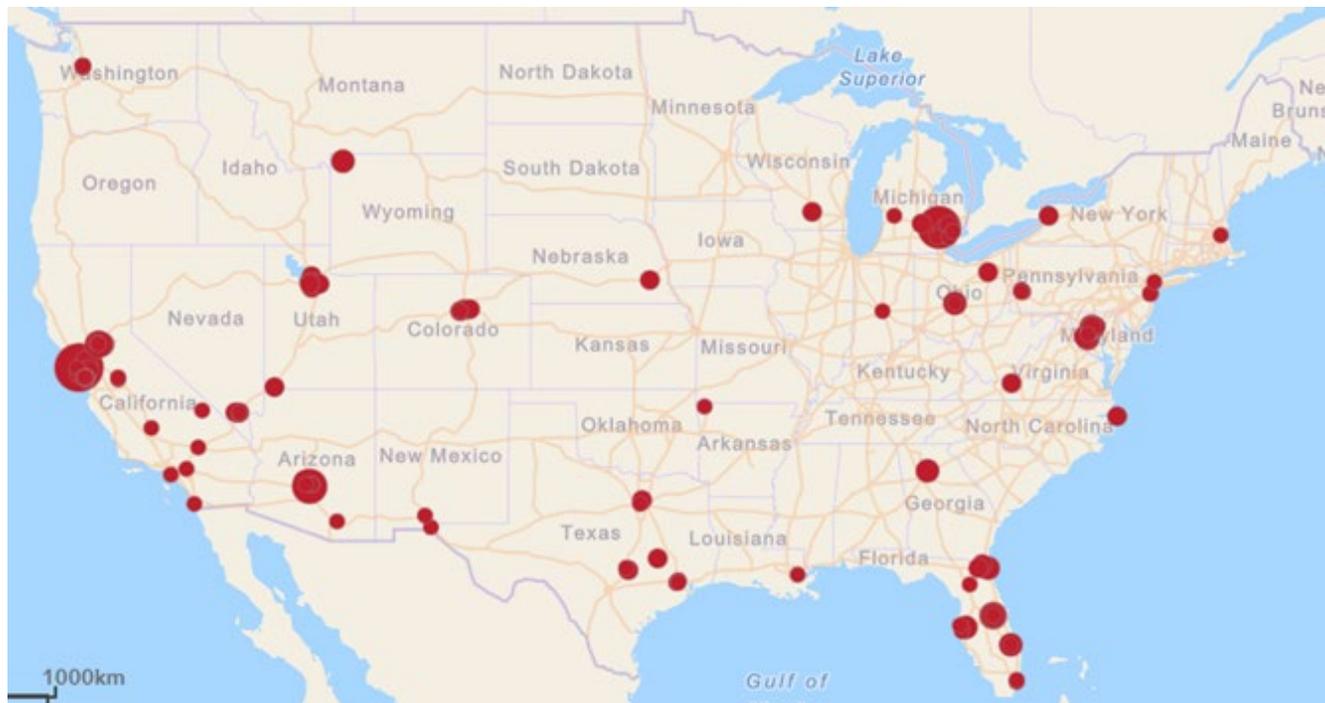

Image Source: Stantec

Image Source: NHSTA
Test Tracking Tool Map

Inflection point around the future of mobility

- What laws and regulations need reengineering, if any?

- What is the timing for technology deployment and how will it be integrated and scaled?

- How do we support achieving positive social benefits of AVs – safety, enhanced mobility, sustainability, and efficiency?

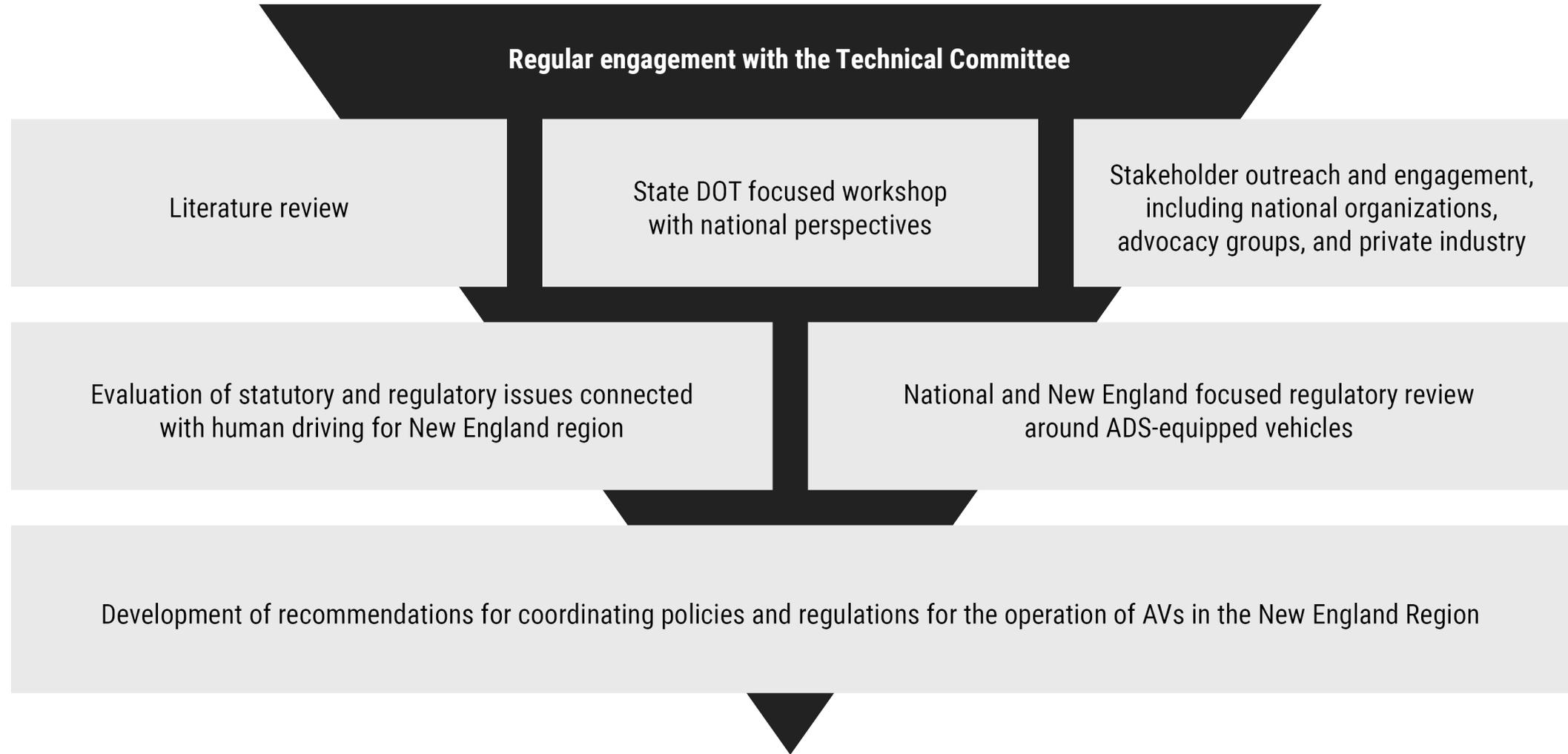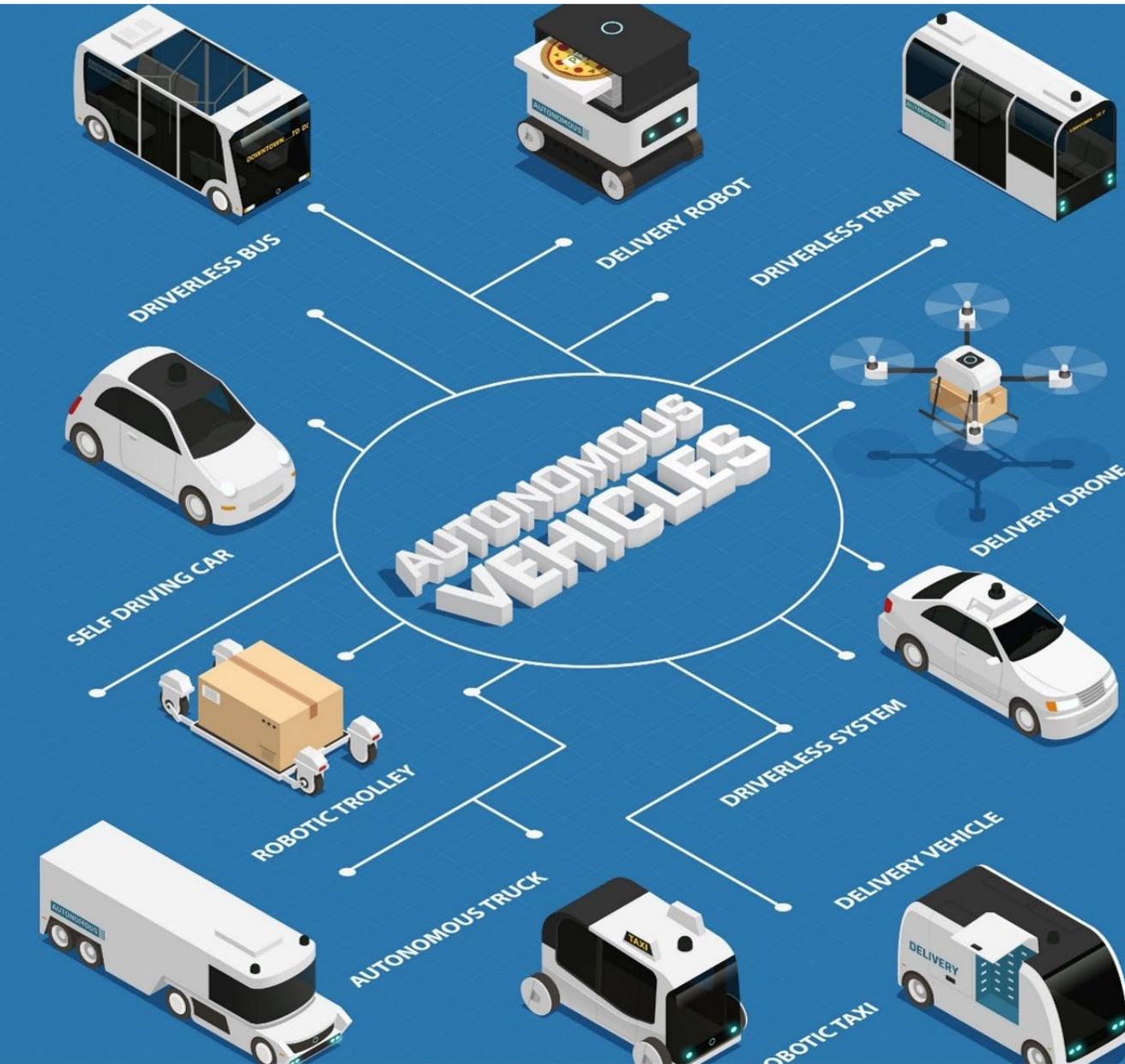- What are next generation infrastructure considerations?
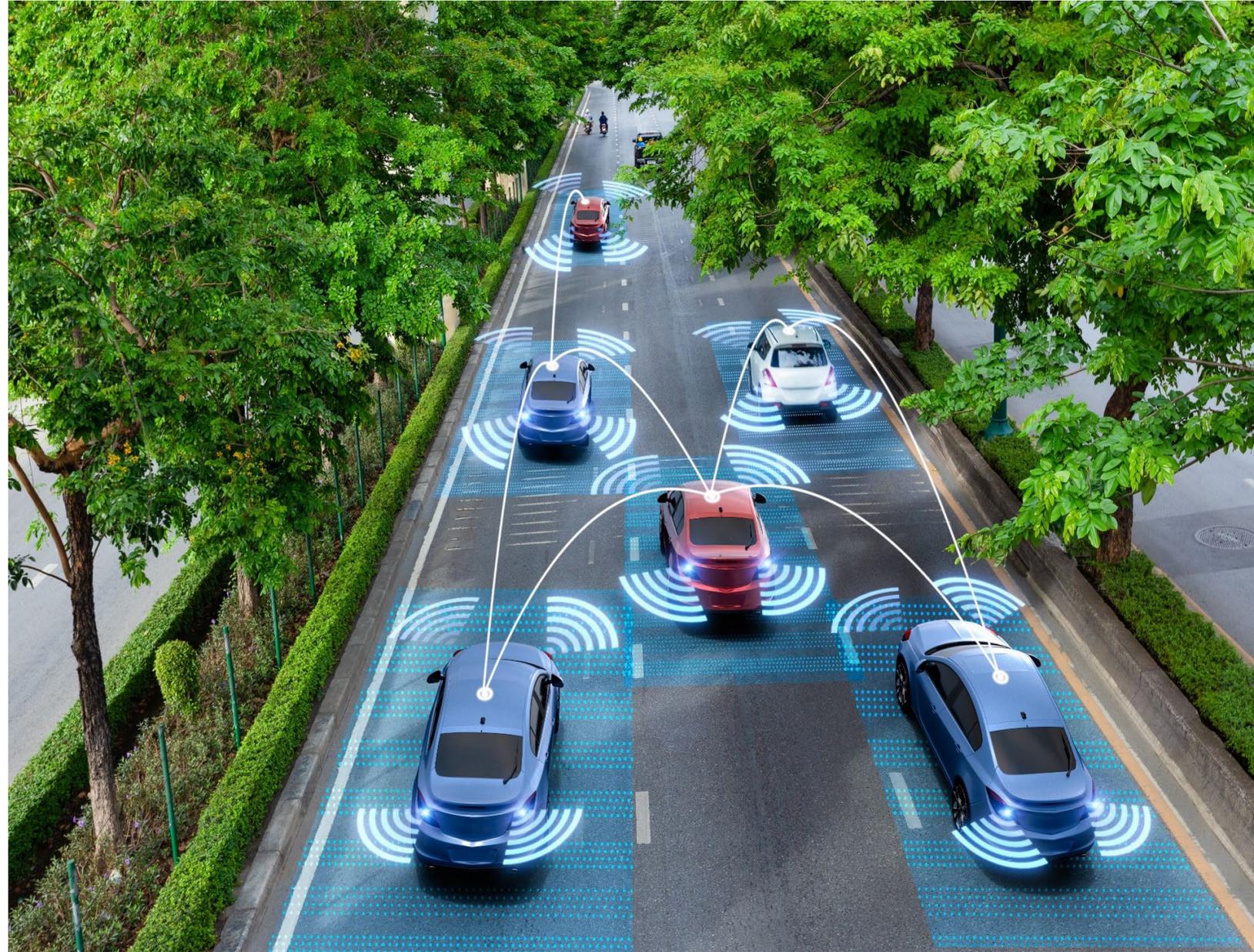
What approaches are states taking?

- **Implementation of state policies, legislation, and/or regulations** directly focused on the testing and/or full-scale commercial operations of ADS

- Implementation of state policies, legislation, and/or regulations **seeking to establish a commission or working group** to study and make recommendations

- Issuance of a **Governor's Executive Order** promoting the testing of ADS-equipped vehicles or establishing a commission or working group

- **Intentionally not implementing** new ADS policies, legislation, and/or regulations as an active and flexible strategy or **following a determination that no policies, legislation, and/or regulations are needed at this time**

- **Intentionally not implementing** new ADS policies, legislation, and/or regulations **as a strategy to remain inactive in this space while ADS technology, use cases, and regulatory issues continue to evolve, and standards continue to evolve from USDOT and industry**

Research Approach

Regular engagement with the Technical Committee

Literature review

State DOT focused workshop
with national perspectives

Stakeholder outreach and engagement,
including national organizations,
advocacy groups, and private industry

Evaluation of statutory and regulatory issues connected
with human driving for New England region

National and New England focused regulatory review
around ADS-equipped vehicles

Development of recommendations for coordinating policies and regulations for the operation of AVs in the New England Region

Themes from Literature Review & Stakeholder Outreach

- State coordination
    - Freight
    - Insurance
    - Safety
    - Data sharing
- ADS terminology
- Liability
- Use case considerations
- User understanding and adoption

Policy, Legal, & Regulatory Considerations

What are the different potential use cases and operational design domains for ADS?

How to understand and mitigate evolving risks for pilot projects and limited deployments without a clear timeline for when ADS will be ready for full scale commercial deployment operations?

How will ADS be available to consumers? For example, will this be a shared fleet subscription format or personal ownership?

How will existing roles and responsibilities change or not change between all levels of government (federal, state, local)?

How can states promote safe and effective ADS testing and deployment opportunities in support of advancing ADS technologies while being mindful of untested liability questions for states as federally adopted safety standards are further developed?

What are the industry standards that exist today for ADS and are they enforceable or do they provide a legally defensible position?

What are specific actionable steps (adoption of policies, laws, regulations, etc.) that can be taken today and in the near-term or mid-term collectively by the NE States to advance ADS development, performance, and adoption? Are any of these steps more important, effective, or essential to take compared to others?

What needs to happen to support a coordinated and collaborative approach around the adoption of policies, laws, and regulations by the NE States?

Key Recommendations – Snapshot

4.1
ESTABLISHING ADS POLICIES, LAWS, AND REGULATIONS

Coordinate around the passage of ADS legislation and consider when legislation is warranted and a productive use of resources to advance the safe testing and deployment of ADS in the region. A priority focus is incorporating the concept that a "person" shall include a non-human in the context of ADS-equipped vehicles.

4.2
DATA

Support the standardization of ADS focused data exchange between the public sector and industry, including a more consistent approach to protecting data that may be considered proprietary, confidential, or trade secrets.

4.3
PILOTS/DEPLOYMENTS

Draft and approve a regionally focused ADS operations permit prioritizing on-demand ride hailing services, commercial freight, and purpose-built vehicles for local goods movement and delivery.

4.4
OUTREACH AND EDUCATION

Proactively educate the public and stakeholders about ADS technology and its potential benefits. Outreach should focus on the capabilities for different types of ADS-equipped vehicles through use cases and expected responsibilities for human monitoring, if any.

4.5
COORDINATION

Develop a multi-state regulatory approach to ADS testing and deployment that is deliberate around different use cases. Proposed tools include a Memorandum of Understanding signed by each state and exploring the creation of an ADS regional entity to coordinate and streamline processes for ADS deployment.

How to Approach Recommendations

- Action-oriented while being aligned with use cases – focus on short and medium term (1 to 5 years)
- Informed by all steps of project, including relevant findings identified
- Focused on nuances that come with ADS, including different levels of automation
- Regional and coordination focused
- For a broad range of audiences: NE states, other regions, academic and research, industry, DOTs, and national/federal

4.1 Establishing ADS Policies, Laws, & Regulations: Recommendations

Short-Term (1-2 Years)	Medium-Term (3-5 Years)
The NE states should **develop a common set of definitions for "operator" and/or "driver"** in the context of ADS-equipped vehicles used for both testing and deployment. **Changes should reflect that an operator or driver can be either a natural person or a non-natural person, including corporate entities**	**Develop a more consistent or uniform vehicle registration regime** that tracks evolving use cases with focus on ADS and considers requirements such as discreet markings signifying use case, operational design domain, whether fleet or individually owned, whether the vehicle is an ADS dedicated vehicle or an ADS dual mode vehicle, and (if applicable), whether or not a human operator at any time may be expected to monitor environment and intervene by taking over ADS operations
With a focus on risk mitigation and to promote testing in the New England region, NE states can **explore pooled insurance mechanisms to support testing and deployment** within the region	The NE states should **consider the development of self-certification requirements** to ensure that ADS-equipped vehicles are able to comply with all applicable traffic and motor vehicle safety laws

4.2 Data: Recommendations

Short-Term (1-2 Years)	Medium-Term (3-5 Years)
Update public records laws to include uniform approach to considerations around data that may be considered proprietary, confidential, or trade secrets when considering ADS information sharing requirements between ADS operators and states	**Align new legislation in each state to address the complex nature of the crash records** reporting around ADS operation and across modes and use cases
Establish an information sharing framework focused on collaboration between public sector and industry that mutually benefits both, including the sharing of information collected from the operation of ADS on public roads and travel data to support modeling and forecasting completed as part of long-range transportation planning	

4.3 Pilots/Deployments: Recommendations

Short-Term (1-2 Years)	Medium-Term (3-5 Years)
Complete analysis to declare regional corridors to be ADS testing and/or deployment ready	**Coordinate legislative updates for the region** focused on the following:
Develop coordinated regulations focused on on-demand ride hailing services with focus on cross-state operations and with consideration of incorporation of ADS ride hailing services	• Vehicles exclusively operated by ADS starting with "purpose-built" vehicles • Traffic violations for ADS-equipped vehicles, including both natural and non-natural persons
Develop regionally focused testing permit	• Potential updates to distracted driving laws when ADS engaged • Vehicle platooning

4.4 Outreach & Education: Recommendations

Short-Term (1-2 Years)	Medium-Term (3-5 Years)
Work with existing regional and national organizations, within which the NE States are engaged, to present the findings and recommendations from this report	**Identify opportunities for technical assistance for states and local governments** around the integration of ADS-equipped vehicles into the transportation, including policy, legal, and regulatory considerations
Identify partner organizations, including academic institutions, within the New England region to develop a workshop focused on legal, operational, and policy issues associated with the deployment of ADS, including the issues discussed in this report	
Plan and host an industry demonstration day with a focus on an identified ADS testing and deployment ready corridor	

4.5 Coordination: Recommendations

Short-Term (1-2 Years)	Medium-Term (3-5 Years)
Develop coordinated testing goals to inform development of a multi-state approach for ADS. This framework needs to differentiate between different use cases, including, but not limited to, commercial freight, local goods delivery, and passenger movement via on-demand fleets and transit	**Review and refine existing fleet regulations** across the New England states
Explore the use of identified interstate compacts to coordinate implementation of laws and recommendations to support the multi-state operation of ADS-equipped vehicles across state lines	
Track mergers and acquisitions of companies developing ADS not only to understand marketplace, but to also understand how such transactions may impact existing or future testing or deployment approvals, including from safety management and risk consideration perspective	

Proposed Coordination Tools

Executing MOU at DOT Executive Level

✓ Opportunity to memorialize vision and coordinated efforts by the region round ADS

✓ Tangible resource that NE states can point to support seeking out ADS testing and deployment partnerships

Regional Entity for ADS Coordination

✓ Coordinate ADS legislation in region

✓ Administer ADS testing and deployment process for region

✓ Coordinate regional partnerships focused on ADS between industry, academic institutions, federal government, and other interested stakeholders

✓ Manage global outreach and coordination around ADS solutions. Provide technical assistance for local governments seeking to test and deploy ADS-equipped vehicles

Important Regional Coordination Considerations

- Resources
- Align interests and goals for use cases and transportation needs
- Considering larger ecosystem needed to support safe and successful integration of ADS into transportation system

Image Courtesy of VT Agency of Transportation

Longer-Term Considerations

- Roles and responsibilities for vehicle regulation between federal and states (i.e. licensing and regulation of software updates)
- Transit and labor
- Coordination with local governments beyond just issues related to law enforcement

What Next?

- Present and discuss report with different forums and audiences

- Take steps to implement resources with focus on regional coordination

- Communicate findings and recommendations to inform national advancement of ADS standards and best practices

- Continue to stay engaged as a region on national developments
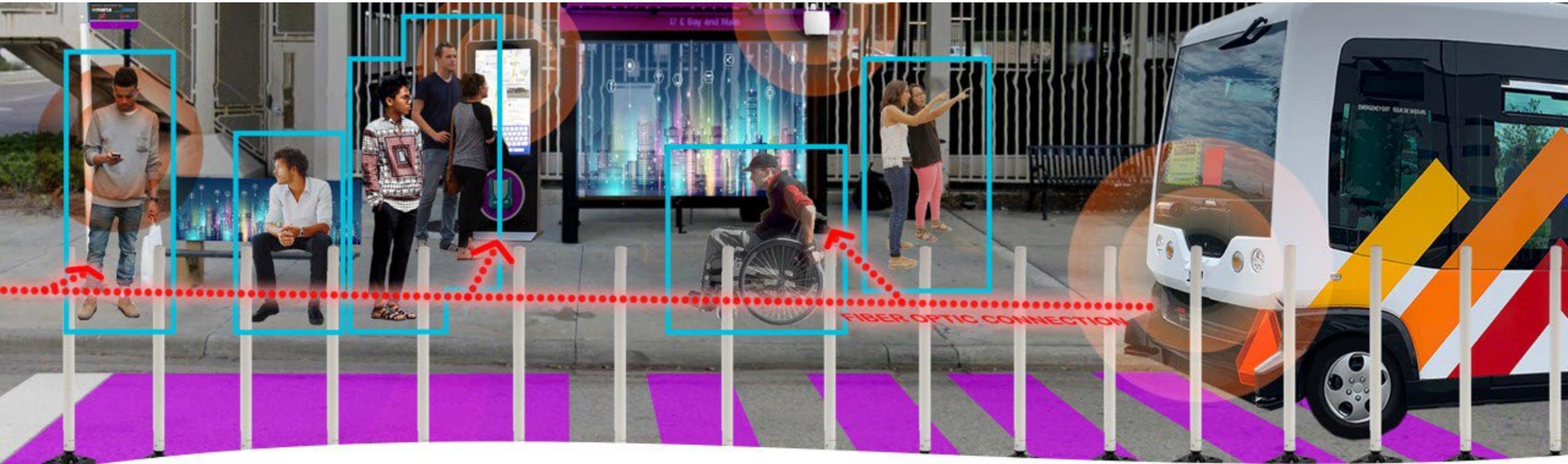
Resources

[20-4 Coordinating State Policies, Laws and Regulations for Automated Driving Systems Across New England (newenglandtransportationconsortium.org)](newenglandtransportationconsortium.org)

Speakers

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