Developing Autonomous Vehicle Policy in New Hampshire

Evaluating Policy Options across the United States

Sam Libby ‘17
Neil Kamath ‘17
Paulomi Rao ‘19

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Overview

I. Motivation and Background

II. Methodology

III. Regulatory Dimensions and Statutory Language
   • Definitions, registration, operators, licensing, insurance, vehicles, liability

IV. Conclusion
Background on AVs

- **Six levels of vehicle technology**
- **We focus on Level 4 and 5 vehicles, which have no active human driver**
State AV Legislation (Jan. 17)

Passed the first AV bill in 2011

Introduced legislation in 2017
NH and AVs

NH HB 444 (2013)
- Would have established a study commission
- Found inexpedient to legislate because it was too ahead of the then-new technology

NH HB 314 (2017)
- Defines autonomous vehicles
- Requires a driver with a valid license
- Includes liability and insurance provisions
Methodology

1. Found and read every bill related to autonomous vehicles
2. Classified all 66 bills
3. Excluded bills only addressing studies or state-specific testing
4. Defined key sub-categories, distinguished bills enacted vs. proposed but not enacted
5. Categorized most common, most extensive, and most basic legislative language for each dimension
6. Conducted expert interviews
Uptick in State AV Legislation

- 17 bills enacted last cycle
- 49 bills proposed last cycle

Note: Analysis current as of January 2017. Nevada, Pennsylvania, and Massachusetts have introduced legislation in the past month.
Key Definitions

“Autonomous technology is technology installed on a motor vehicle that has the capability to drive the vehicle on which the technology is installed without the active control or monitoring by a human operator.”
- MA HB 2977 (2016)

- 50 of 66 bills include definitions
- 29 of 50 bills use similar language
- Other bills exclude Level 0-3 technology from definition
Registration Requirements

Approaches vary:

“Each autonomous vehicle operated in the state shall be registered and licensed in the same manner as other motor vehicles.”
-AL S 178 (2016)

“If a highly automated vehicle is registered by the Commonwealth, the highly automated vehicle shall be registered by the department using the code ‘HAV’ in a new data field.”
-PA SB 1412 (2016)

• Addressed in 6 proposed, 1 enacted bill

• Registration generally opposed by stakeholders
Operator Requirements:
Overview

- 4 bills enacted
- Most do not require operator to be in the vehicle
- Experts urge for policies focused on Levels 4 & 5
Operator Requirements: Specifics

“For the purpose of enforcing the traffic laws and other laws applicable to drivers and motor vehicles operated in this state, the person operating the autonomous vehicle in autonomous mode shall be deemed the driver of the autonomous vehicle regardless of whether the person is physically present in the autonomous vehicle while it is engaged.”
– AL SB 178 (2016)

• 3 of the 4 bills enacted utilize similar language

• The operator does not have to be in the vehicle
License Requirements: Overview

- 5 bills enacted
- Most do not create a special license endorsement
- Stakeholders oppose license endorsements
License Requirements:

Specifics

“For testing purposes, a human operator with a valid driver's license shall be present in the autonomous vehicle to monitor the vehicle's performance and intervene, if necessary, unless the vehicle is being tested or demonstrated on a closed course”
– NH HB 314 (2017)

• Requires a valid driver’s license
• Requires the driver to be physically present
• Do not impose additional criteria
Insurance Requirements: Overview

- 7 bills enacted
- Most bills require testers to provide insurance prior to testing
Insurance Requirements: Specifics

“Prior to the start of testing in this state, the entity performing the testing shall submit to the department of safety, division of motor vehicles, a surety bond or documentation of liability insurance coverage of at least $5 million”

– NH HB 314 (2017)

- Requires insurance coverage prior to testing
- Only applies to testing
Vehicle Requirements: Overview

- 6 bills enacted
- 14 bills expand the list of technology required to be present in autonomous vehicles
Vehicle Requirements: Specifics

“(a) The autonomous vehicle has a mechanism to engage and disengage the autonomous system that is easily accessible to the operator; (b) The autonomous vehicle has a visual indicator inside the autonomous vehicle to indicate when the autonomous system is engaged and when the autonomous system is disengaged…”

– OR SB 620 (2015)

• Focus on operator’s ability to regain active control and preserve crash data

• Experts agree that this is federal purview
Liability Rules

“The original manufacturer of a vehicle converted by a third party to an autonomous vehicle shall not be liable in, and shall have a defense to and be dismissed from, any legal action brought against the original manufacturer by any person injured due to an alleged vehicle defect caused by the conversion of the vehicle, unless the manufacturer participated in or facilitated the adaption of the vehicle to autonomous technology or unless the alleged defect was present in the vehicle as originally manufactured.”

– NH HB 314 (2017)

• 10 bills enacted
• Exempts original manufacturers from liability in an autonomous vehicle crash
Conclusions

**NHTSA Guidance**
- NHTSA is the lead regulator, setting vehicle requirements
- States control licensing, insurance, registration, and liability

**Pioneer States**
- MI, FL, NV, and PA have taken the lead
- New England consensus legislation could give clarity to stakeholders

**Stakeholder Opinions**
- Private sector: manufacturers, tech companies
- Public sector: law enforcement, Department of Transportation, universities

**Evolving Technology**
- Technological advancements require revised legislation
- States are hesitant to act given regular marketplace changes