Project *Capsule*

Autonomous Vehicle Regulatory Landscape Review

PROBLEM

The integration of autonomous vehicle (AV) technology into modern transportation systems represents a transformative shift in the automobile industry, offering unprecedented opportunities and benefits to society. These benefits include improved safety by reducing crashes attributable to human factors, enhanced mobility for disadvantaged groups, increased efficiency, significant cost savings by eliminating the human driver, reduced emissions, and lower operational costs, among others. Despite these potential benefits, the absence of a standardized regulatory framework and technical requirements for AV implementation across the United States is a challenge. This gap creates significant obstacles for industry stakeholders, public safety officials, and policymakers working to ensure safe and efficient AV integration. NHTSA note that "a manufacturer should be able to focus on developing a single highly automated vehicle fleet, rather than 50 different versions to meet individual state requirements."

The lack of federal regulations, along with dissimilar state AV laws, could complicate the development, testing, and deployment of AVs. The challenge of regulating AVs is providing a uniform framework that encourages innovation and regulation in a way that maximizes potential benefits while minimizing potential risks. Research is needed to highlight factors that significantly impact AVs from the disparate legislative frameworks. A detailed study of the variation in state AV regulations, guidelines, and policies is needed to provide an understanding of effective practices to regulate AVs.

Figure 1. Waymo autonomous vehicle (Source: www.assemblymag.com)

This study seeks to research the AV regulatory landscape to make proposals that will enhance Louisiana's AV laws by making them comprehensive and consistent with national guidelines, thereby promoting the safe and efficient deployment of AVs in Louisiana. AV laws in Louisiana will be compared to other federal and state laws to identify gaps in the current Louisiana state law. This research will also seek to expand AV laws to include other vehicles in addition to commercial vehicles. Requirements for AV deployment will be researched with regard to their relevance in Louisiana. Importantly, the opinions of stakeholders and AV advocacy groups in the state will be collected as part of this study. Once complete, the study will provide information and recommendations on regulations and minimum requirements to support AV deployment in the state.

OBJECTIVE

The objectives of this research are to:

- Examine federal and state laws to identify key gaps in Louisiana HB 455 (Act 232);
- Identify stakeholders and document the regulations they recommend to enhance AV adoption and deployment;
- Review the requirements for deploying AVs and examine how policy may influence impacts; and
- Make recommendations on requirements and regulations to facilitate the safe and efficient deployment of AVs.

METHODOLOGY

The methodology will be structured around the six key tasks listed below:

- Task 1 – Review Autonomous Vehicle Regulations
- Task 2 – Identify Stakeholders Advocating for AVs
- Task 3 – Determine Key AV Requirements
- Task 4 – Review Impacts of AVs in Louisiana
- Task 5 – Make Recommendations on AV Requirements and Regulations
- Task 6 – Prepare Final Report

IMPLEMENTATION POTENTIAL

The proposed research approach is to identify regulations and requirements that promote the testing and deployment of AVs in Louisiana. These regulations and requirements will be documented to form a basis to advocate for the enactment of these laws. Ultimately, the passage of AV-friendly laws could help Louisiana to realize the full benefit associated with AVs while mitigating any adverse impacts of the technology.

Figure 2. Zoox autonomous vehicle (Source: www.qz.com)