Automated Vehicle Technology Efforts Are Coordinated Across Multiple U.S. DOT Agencies

- Intelligent Transportation Systems Joint Program Office (ITS JPO)
- National Highway Traffic Safety Administration (NHTSA)
- Federal Highway Administration (FHWA)
- Federal Motor Carrier Safety Administration (FMCSA)
- Federal Transit Administration (FTA)
- Maritime Administration (MARAD)
NHTSA Federal Automated Vehicles Policy

- Released September 20, 2016
- Comment Period closed November 22, 2016
- Two public workshops held
- Released Policy FAQs/Clarifications, January 2017
- As noted by Secretary Chao, new guidance coming in next few months that will:
  - **Support industry innovation and encouraging open communication with the public and with stakeholders;**
  - **Make Department processes more nimble to help match the pace of private sector innovation; and**
  - **Encourage new entrants and ideas that deliver safer vehicles.**
NHTSA Driving Automation Research

- Electronic Control Systems Safety
- System Performance
- Human Factors
- Cybersecurity
FHWA is Developing an Agency Wide Vision

- Automated vehicle technologies may impact the planning, design, construction, maintenance and operations of the Nation’s roadway infrastructure.

- FHWA is developing an agency-wide Vision Statement to establish its role in supporting the integration of automated vehicle technologies onto the Nation’s roadways.

- Vision discusses agency wide goals and guiding principles for FHWA with respect to automated vehicle technologies.
FHWA Cooperative Automation Research

Developing cooperative driving automation system applications:

Light Vehicle and Truck Platooning
- Cooperative Adaptive Cruise Control (CACC) via Vehicle-to-Vehicle (V2V)

Signalized Intersection Approach and Departure
- GlidePath via Vehicle-to-Infrastructure (V2I)

Automated Traffic Flow Optimization
- Speed Harmonization via Vehicle-to-Infrastructure (V2I)

Proof-of Concepts
- Lane Change, Merging and Weaving Operations

Evaluating impacts of automated driving technology on the transportation planning process
Developing a FTA Automation Research Plan

Overview: 5-year plan for FTA research and deployment

Lead: FTA Office of Research, Demonstration, and Innovation

Scope: Bus transit automation, defined broadly

Key inputs: VAA program, MOD Sandbox, stakeholder perspectives, use case analysis, benefit-cost analysis

Target: September 2017 (public webinar)
FTA Research Underway

Knowledge Transfer
- Inform internal and external stakeholders about state of the practice and research in progress.

Technology Transferability
- Assess transferability of light-duty and commercial vehicle sensors and technologies to transit applications.

Policy Review
- Identify and analyze federal, state, and local policies relevant to transit automation and provide recommendations for needed revisions and/or development of new policies.
Gathering information on issues relating to design, development, testing, and deployment of highly automated commercial vehicles.

FMCSA seeks information on how to ensure that Federal safety regulations provide appropriate standards for the safe operation of HACVs from design and development through testing and deployment.


Additional Considerations:
- Commercial driver licensing
- Hours of service
- Inspection, repair, and maintenance
MARAD Automation Activities

Low Speed Automated Truck Queue at Ports and Warehouses (joint project with FMSCA and JPO)

- Exploring application of automation to low-speed commercial vehicle operations at port terminals and warehouses
- Review of related studies and papers
- Surveys of industry and technology stakeholders
- Technology scan of existing or near-term enabling technologies
- Cost estimation and safety benefits
ITS JPO Automation Research

Technical Research
- Assessing Applications for Improving System Safety
- Developing Impacts Assessment
- Evaluating New Data Collection & Sharing Models

Program and Policy Support
- Strategic Planning and Roadmap Development
- Modal Policy Support and Coordination

Stakeholder Engagement
- Supporting Professional Capacity Building Efforts
- Facilitating International Coordination
- Low-speed Automated Shuttle Information Sharing Working Group