USDOT Research Plenary Slides

Automation in Road Transportation Symposium 2022 (ARTS22)
Departmental Activities

• Innovation Principles
• Strategic Plan
• Infrastructure Investment and Jobs Act (IIJA) / “Bipartisan Infrastructure Law” (BIL)
USDOT Innovation Principles

• Serve our policy priorities
• Help America win the 21st century
• Support workers
• Allow for experimentation and learn from failure
• Provide opportunities to collaborate
• Be flexible and adapt as technology changes
We envision a people-centered transportation system that provides safe, accessible, reliable, and sustainable transportation for all through purpose-driven research and innovation for this and future generations.
Office of the Assistant Secretary for Research (OST-R) Activities

• University Transportation Centers (UTC) Program
• Strengthening Mobility and Revolutionizing Transportation (SMART)
• Advanced Research Projects Agency–Infrastructure (ARPA-I)
• Highly Automated Systems Safety Center of Excellence (HASS COE)
University Transportation Centers (UTC) Program

Each UTC is a consortium of two- and four-year colleges;

- Appropriations: $500M / 5Y
- Notice of Funding Opportunity

UTC Topic Areas

**Funding Priorities**

- improving mobility of people and goods
- reducing congestion
- promoting safety
- improving the durability and extending the life of transportation infrastructure
- preserving the environment
- preserving the existing transportation system
- reducing transportation cybersecurity risks
SMART Grants Program & Upcoming Webinar

Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program

- Will fund demonstration projects focused on advanced smart city or community technologies and systems.
- Provides $100M annually from FY22 – 26 to eligible projects in States, political subdivisions of a State, Tribal governments, transit agencies, toll authorities, MPOs, and groups of eligible recipients.

Register for the upcoming webinar on July 28th at https://www.transportation.gov/grants/SMART
The Goal of Advanced Research Projects Agency–Infrastructure (ARPA-I)

Develop and Deploy Innovative Infrastructure Technologies and Capabilities

- Physical and Virtual Infrastructure
  - Rail
  - Aviation
  - Maritime
  - Pipelines
  - Roads
  - Highways
  - Bridges

- Next Generation Innovative Technologies
  - Emerging Technologies

- Enabling and Innovative Technologies
  - IoT
  - AI/ML
  - Data
  - Connectivity
  - Networking
  - Computation
  - Cybersecurity
  - AVs
  - Automation
  - Robotics
  - Cost Reduction
  - Economic Development
  - Safety
  - Resilience
  - Equity

To ensure that the United States is a global leader in advanced transportation infrastructure technologies and materials
Highly Automated Systems Safety Center of Excellence (HASS COE)

- We are building **workforce capable of reviewing, assessing, and validating the safety of automated technologies**

We are hiring!
Operating Administration Research Activities Overview

- Federal Highway Administration
- Federal Motor Carrier Safety Administration
- Federal Transit Administration
Goal:

• Developing a proof-of-concept application in support of loading and unloading shipping containers, using Commercial Motor Vehicle (CMV) automation.
FMCSA recently awarded a 48-month research project to the Virginia Tech Transportation Institute (VTTI) to develop empirical CMV ADAS safety effectiveness data from over 44K trucks.
Six Key 2022 AV Projects:
- Electronic inspections
- Human--ADS team driving
- Human factors in ADS-equipped CMVs
- Automated hazard triangle deployment
- Work Zone Safety
- Emergency Response

Ongoing ADS Deployment Grants:
- Trucking Fleet Concept of Operations for Managing Mixed Fleets
- Deploying Automated Technology Anywhere
Integrated Mobility Innovation (IMI) Program

Accelerating Innovative Mobility (AIM) Program

ADS Demonstration Grants

Photo credits: May Mobility and University of Iowa
STAR Plan
• FTA is developing “STAR Plan 2.0” (2023-2027).

Request for Information (RFI)
• The RFI is open from June 2\textsuperscript{nd} to August 1\textsuperscript{st}, 2022.
• It is available at: https://go.usa.gov/xJ9Bz.
National Transportation Research Vision

“We envision a people-centered transportation system that provides safe, accessible, reliable, and sustainable transportation for all through purpose-driven research and innovation for this and future generations”