About Volpe

Background

- Volpe established in 1970
- Part of U.S. Department of Transportation (DOT) Office of Research and Technology
- Named after former DOT Secretary and MA Governor John A. Volpe

Volpe supports DOT goals

- Safety
- State of good repair
- Economic competitiveness
- Livable communities
- Environmental sustainability
Automation and the Transportation System

- Challenges
  - Network impacts of mixed-fleet operation
  - Uncertain VMT changes
  - Urban design and land use

- Opportunities
  - Improved personal mobility
  - Fuel economy improvements
  - Reduced VMT?
  - Urban design and land use?
2016 U.S. DOT Automation Milestones

- Guidance on the safe deployment and operation of automated vehicles
- Model state policy on automated vehicles
- Smart City Challenge
- FAST Act: Advanced transportation and congestion management technologies deployment initiative

Principles for Connecting People to Opportunity

- Recognize that transportation connects people to opportunity and can invigorate communities;
- Establish that while we cannot change the past, future transportation projects must connect and strengthen communities, and;
- Build transportation facilities that best serve the communities impacted by them.
Beyond Traffic: the Smart City Challenge

**Technology Elements (Highest Priority)**

- **Vision Element #1** Urban Automation
- **Vision Element #2** Connected Vehicles
- **Vision Element #3** Intelligent, Sensor-Based Infrastructure

**Innovative Approaches to Urban Transportation Elements (High Priority)**

- **Vision Element #4** User-Focused Mobility Services and Choices
- **Vision Element #5** Urban Analytics
- **Vision Element #6** Urban Delivery and Logistics
- **Vision Element #7** Strategic Business Models & Partnering
- **Vision Element #8** Smart Grid, Roadway Electrification, & EVs
- **Vision Element #9** Connected, Involved Citizens

**Smart City Elements (Priority)**

- **Vision Element #10** Architecture and Standards
- **Vision Element #11** Low-Cost, Efficient, Secure, & Resilient ICT
- **Vision Element #12** Smart Land Use

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Vision Element #12: Smart Land Use
FAST Act: Advanced Transportation and Congestion Management Technologies Deployment Initiative

- The ATCMTD Program makes competitive grants for model deployment sites of advanced transportation technologies to improve safety, efficiency, system performance, and infrastructure return on investment.

- Five year program; $60 million per year

- Eligible technologies include:
  - V2V and V2I
  - Autonomous vehicles and collision avoidance systems

https://www.fhwa.dot.gov/fastact/funding.cfm
USDOT Deployment Opportunities

- Mobility on Demand (MOD) Sandbox
  - Guiding principles
    - System integration;
    - Innovative business models;
    - Equity of service delivery; and
    - Partnerships.

https://www.transit.dot.gov/research-innovation/mobility-demand-mod-sandbox-program
Intelligent Transportation Systems Joint Program Office Automation Program

- Foundational Policy Research
- Stakeholder Collaboration
- Targeted Technical Research
Foundational Policy Research

Federal Motor Vehicle Safety Standards (FMVSS)

FHWA Automated Vehicle Policy Research Needs
Targeted Technical Research

Benefits Evaluation

Cooperative Adaptive Cruise Control
What Should You Do? - Get Smart

- Learn more about the technology
- Find out what's happening locally
- Consider long term impacts
What’s Happening Right Here?

Image: CRA