U.S. DOT Research, Development and Technology Strategic Plan (FY 2017 – 2021)

January 2017
Overview

• Presents U.S. DOT’s research priorities for the next five years
• Provides a five-year action plan for addressing the trends affecting the current and future performance of the Nation’s transportation system
• Meets the statutory requirements mandated in the FAST Act
• Plan development process lead by OST-R relying heavily on input for the Department’s Operating Administrations (agencies)
• Plan includes feedback obtained from external stakeholders
Alignment of Strategic Plan Topics with FAST Act Primary Purposes

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<th>FAST Act’s Primary Purposes</th>
<th>Critical Transportation Topic Areas</th>
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<td>Promoting Safety</td>
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<td>Improving mobility of people and goods</td>
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<td>Reducing congestion</td>
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<td>Promoting safety</td>
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<td>Improving infrastructure durability</td>
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<td>Preserving the environment</td>
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<td>Preserving the transportation system</td>
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U.S. Department of Transportation
Office of the Assistant Secretary for Research and Technology
Goals

- **Promoting Safety**: U.S. DOT’s goal is to improve public health and safety by reducing transportation-related fatalities and injuries.

- **Improving Mobility**: U.S. DOT’s goal is to improve the mobility of people and goods, reduce congestion, and increase access to opportunities for all.

- **Improving Infrastructure**: U.S. DOT’s goal is to improve the durability and extend the life of the transportation infrastructure, preserve the existing transportation system, and ensure that the U.S. proactively maintains the critical transportation infrastructure in a state of good repair.

- **Preserving the Environment**: U.S. DOT’s goal is to advance environmentally sustainable policies and investments that reduce carbon and other harmful emissions from transportation sources.
Overarching Themes

Figure 2. Critical Transportation Topics and Overarching Themes

OVERARCHING THEMES

Policy Research
Emerging Technology
Research Coordination
Big Data

CRITICAL TRANSPORTATION TOPICS

Promoting Safety
Improving Mobility
Improving Infrastructure
Preserving the Environment
U.S. DOT Research Programs

- Presents an overview of each U.S.DOT agency, describing how each agency’s research programs support the agency mission and goals
- Describes which critical transportation topic areas are addressed by each agency
- Presents RD&T funding levels and funding types
- Describes major agency stakeholders and stakeholder engagement processes

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<th>Agency</th>
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<td>Federal Aviation Administration</td>
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<td>Federal Highway Administration</td>
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<td>Federal Motor Carrier Safety Administration</td>
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<td>National Highway Traffic Safety Administration</td>
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<td>Federal Transit Administration</td>
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<td>Federal Railroad Administration</td>
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<td>Pipeline and Hazardous Materials Safety Administration</td>
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<td>Maritime Administration</td>
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<td>Intelligent Transportation Systems – Joint Program Office</td>
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Research and Development Strategies

- Mobility on Demand (MOD)
- Smart City Challenge
- Human Factors in Transportation
- Cyber Security
- Accessible Transportation Technologies Research Initiative (ATTRI)
- Infrastructure Resilience
- Climate Change Mitigation
Technology Deployment

- Technology deployment is the act of preparing and demonstrating the results of R&D so that they can be moved to an adoption-ready state.
- U.S. DOT typically allocates around 30% of its RD&T budget to Technology Deployment activities.
- This section describes the U.S. DOT Technology Transfer program and the Technology Deployment activities of each U.S. DOT agency.
Implementation

• Plan to be implemented on two levels:
  1) The Plan lies at the core of a range of FAST Act requirements that direct USDOT’s RD&T activities over the next five years – to be coordinated by OST-R:
     • *USDOT Research Hub* to be used to address the various “Consolidated Research Database” requirements
     • Annual Modal Research Plans submitted by each agency and reviewed by OST-R
     • Annual Funding Report to Congress
     • Annual Performance Plan and Report
     • Interim Report to be developed by USDOT after 2 ½ years
  2) Each USDOT agency is responsible for implementing their RD&T strategies and tracking their performance.
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