



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

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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 led by OST-R relying heavily on input from the Department's Operating Administrations (agencies)
- Plan includes feedback obtained from external stakeholders



*One Hundred Fourteenth Congress
of the
United States of America*

AT THE FIRST SESSION

*Began and held at the City of Washington on Tuesday,
the sixth day of January, two thousand and fifteen*

An Act

To authorize funds for Federal-aid highways, highway safety programs, and transit programs, and for other purposes.

*Be it enacted by the Senate and House of Representatives of
the United States of America in Congress assembled,*

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) **SHORT TITLE.**—This Act may be cited as the “Fixing America’s Surface Transportation Act” or the “FAST Act”.

(b) **TABLE OF CONTENTS.**—The table of contents for this Act is as follows:

Sec. 1. Short title.



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Alignment of Strategic Plan Topics with FAST Act Primary Purposes

	Critical Transportation Topic Areas			
FAST Act's Primary Purposes	Promoting Safety	Improving Mobility	Improving Infrastructure	Preserving the Environment
Improving mobility of people and goods		X		
Reducing congestion		X		
Promoting safety	X			
Improving infrastructure durability			X	
Preserving the environment				X
Preserving the transportation system			X	



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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.



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Plan Structure

1: Introduction

2: Overarching Themes

3: U.S. DOT Research Programs

4: Research & Development Strategies

- Promoting Safety
- Improving Mobility
- Improving Infrastructure
- Preserving the Environment

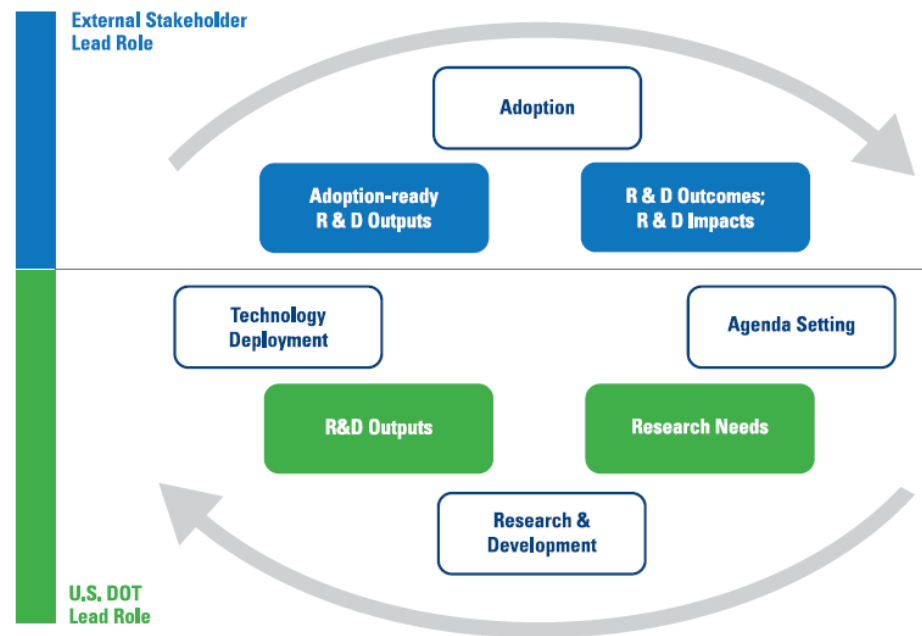
5: Technology Deployment

6: Implementation

Appendix A: Expected Findings

Appendix B: Anticipated Funding Levels

Figure 1. Research Lifecycle

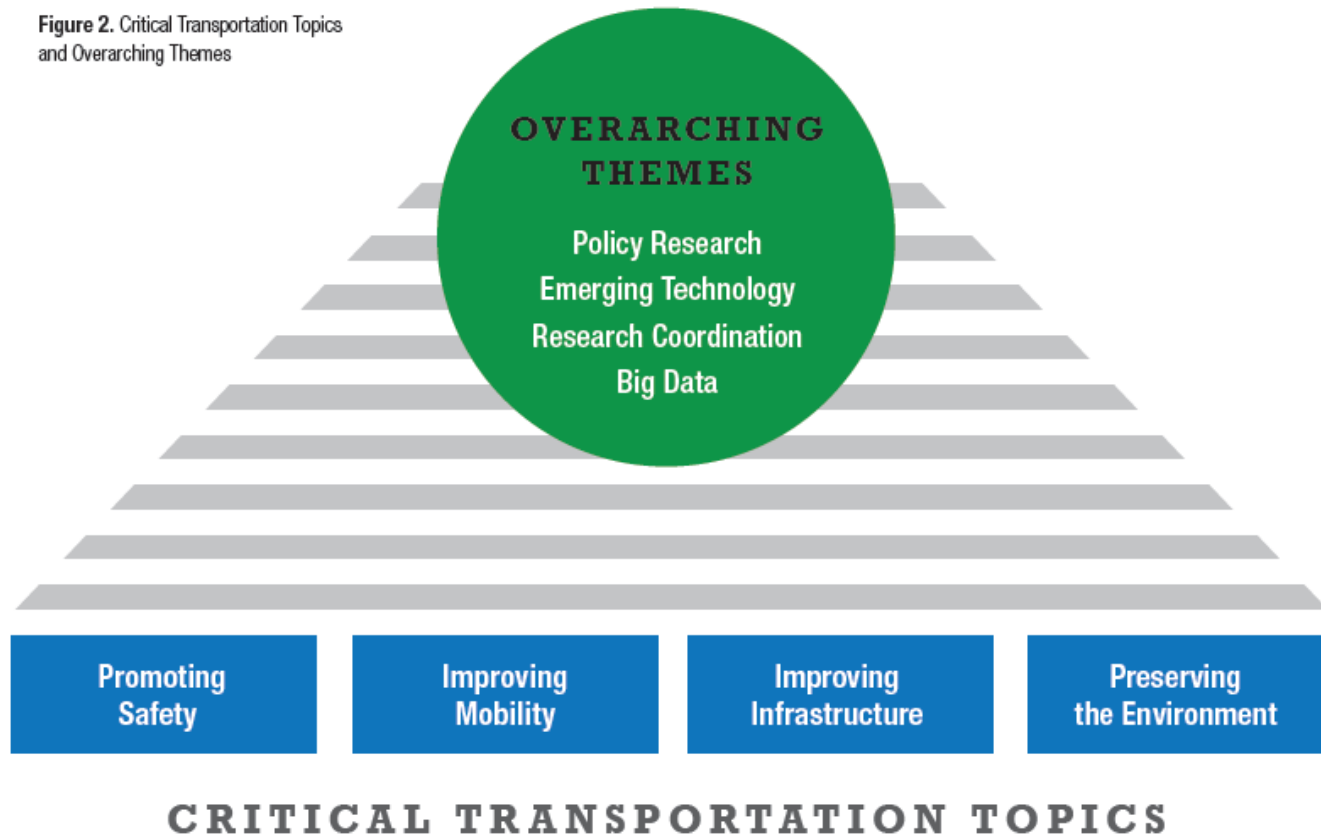


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Overarching Themes

Figure 2. Critical Transportation Topics and Overarching Themes



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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

Federal Aviation Administration

Federal Highway Administration

Federal Motor Carrier Safety Administration

National Highway Traffic Safety Administration

Federal Transit Administration

Federal Railroad Administration

Pipeline and Hazardous Materials Safety Administration

Maritime Administration

Intelligent Transportation Systems –
Joint Program Office



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Research and Development Strategies

- The R&D Strategies of each U.S. DOT agency are presented by critical transportation topic area
- This section includes information on new initiatives and research areas where cross-agency collaboration occurs. Some examples:
 - Mobility on Demand (MOD)
 - Smart City Challenge
 - Human Factors in Transportation
 - Cyber Security
 - Accessible Transportation Technologies Research Initiative (ATTRI)
 - Infrastructure Resilience
 - Climate Change Mitigation



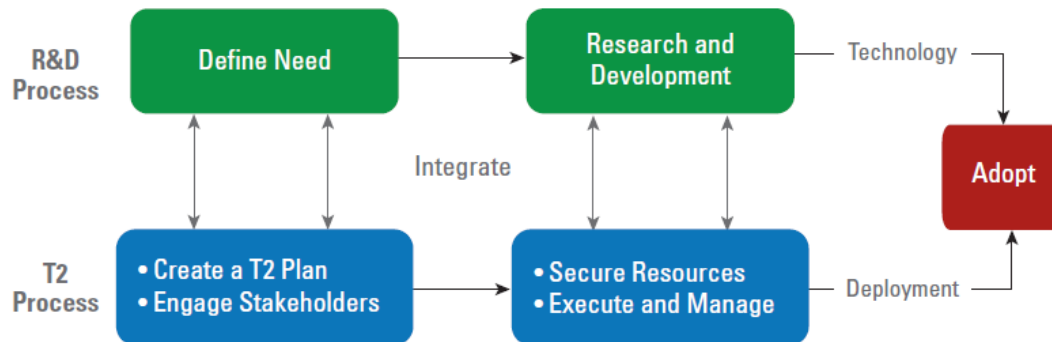
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Technology Deployment

- 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

Figure 3. Integrating the R&D process with the Technology Transfer Process



Principles: Understand Adopter Needs, Address Barriers to Adoption, Understand the Technology, and Communicate Value

Building a Foundation for Effective
Technology Transfer through Integration
with the Research Process

A Primer



March 2016

DOT-VNTSC-OSTR-16-02

Prepared for:
Office of the Assistant Secretary for Research and Technology
Washington, D.C.

U.S. Department of Transportation
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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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