UNITED STATES
DEPARTMENT OF TRANSPORTATION

ITS Program Multimodalism

Meeting of the ITS Program Advisory Committee
January 6–7, 2011
Metropolitan Transportation Commission Auditorium
Oakland, California

Advisory Committee Comments

Multimodalism

The committee believes that the ITS JPO's programs must be fundamentally multimodal in their approach. While there are components of the JPO program that go beyond highway transportation, the budget of JPO is overwhelmingly highway oriented. We recommend that JPO clearly articulate their multimodal goals and the manner in which their program addresses these goals including those for public transportation and freight in modes other than highway.

ITS Program Multimodalism

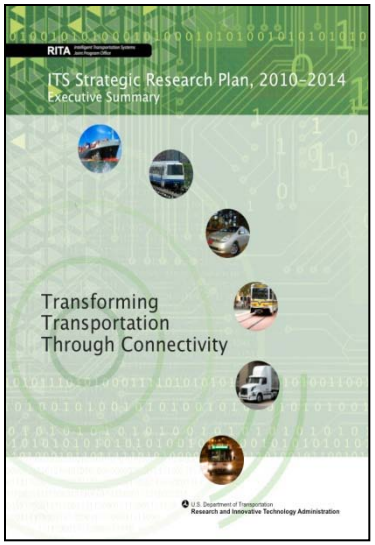
- ITS Program Multimodalism is reflected at multiple levels in:
  - Collaboration in ITS Research Planning and Execution
  - ITS Program Management and Governance
  - ITS Program Research Goals
  - Interaction With Stakeholders

ITS Strategic Research Plan 2010-2014
A Truly Multimodal Effort

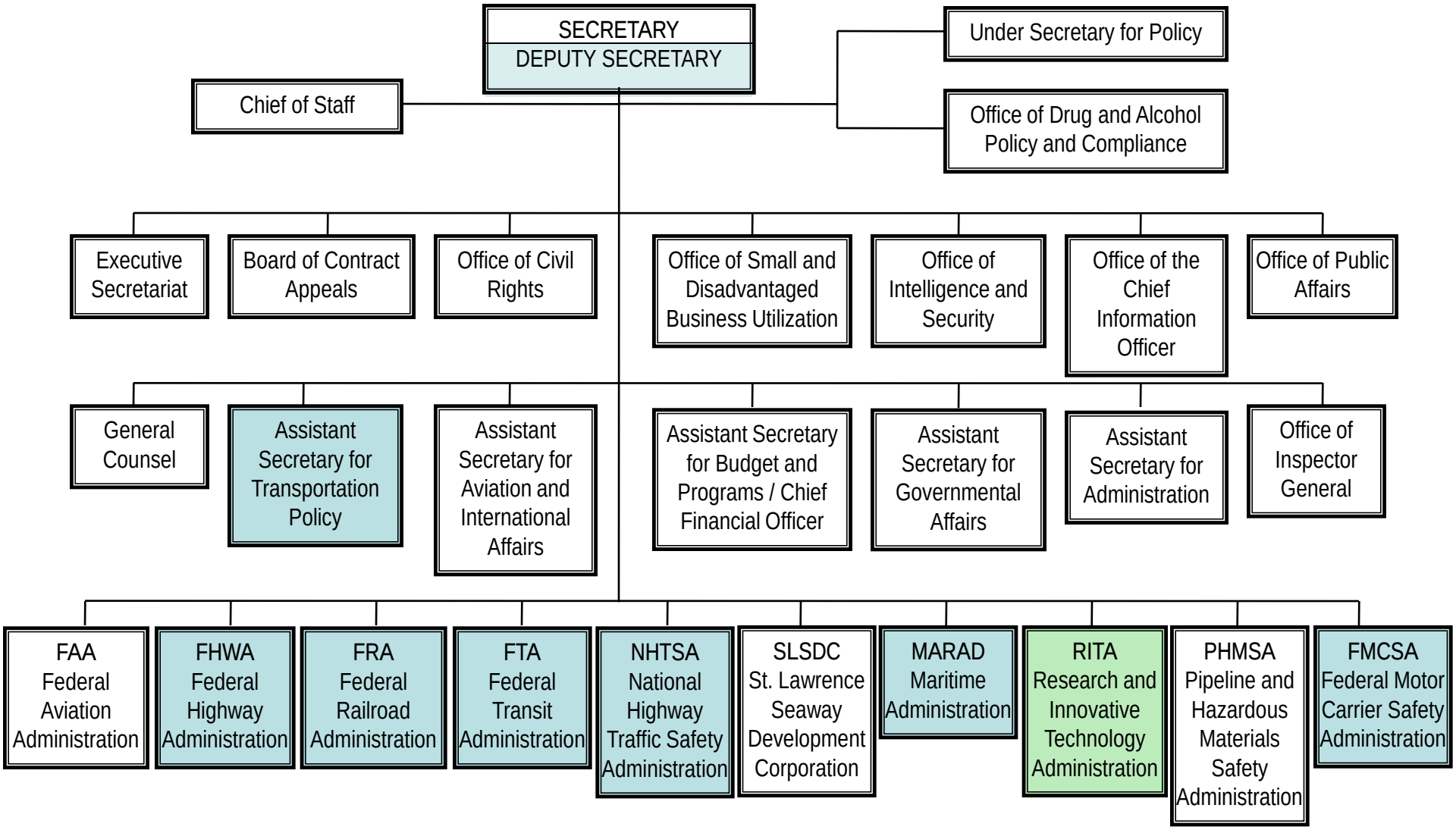
Vision

To research and facilitate a national, **multimodal surface transportation system** that features a connected transportation environment around **vehicles of all types**, the infrastructure, and portable devices to serve the public good by leveraging technology to maximize safety, mobility, and environmental performance.

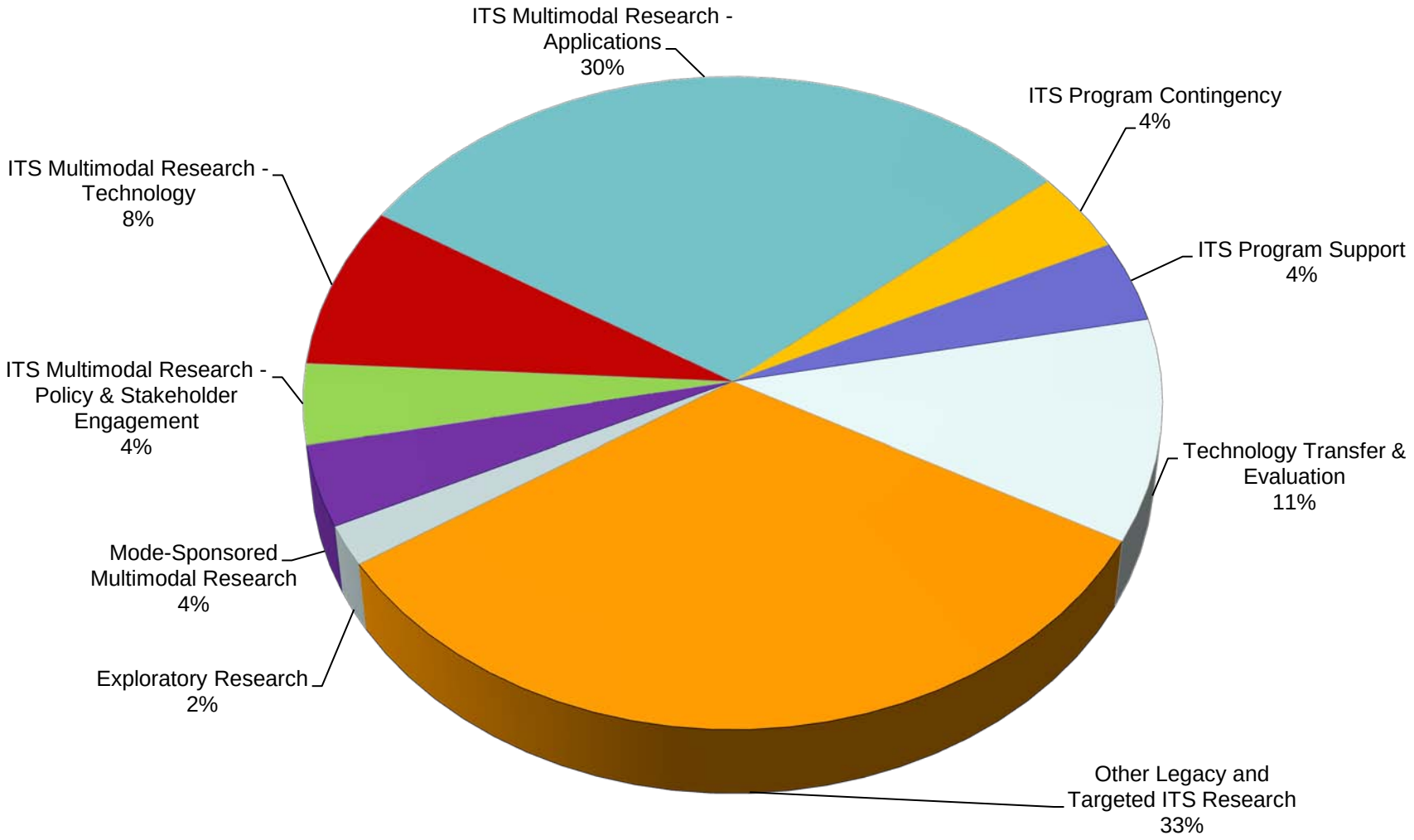
Plan developed with full participation by all surface transportation modal administrations as well as with significant interaction with multi-modal stakeholders.



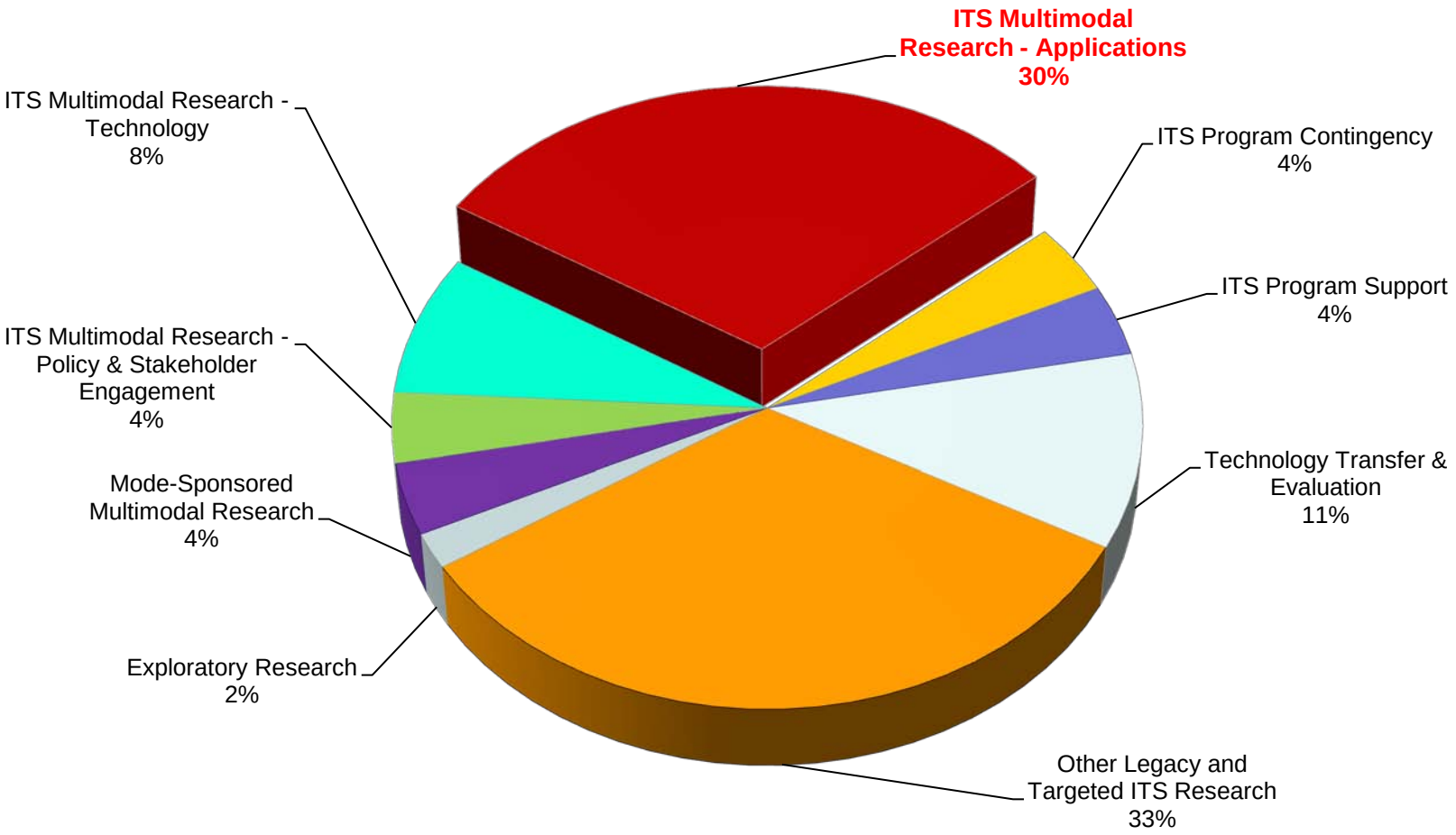
Departmental Management and Governance



ITS Program Budget: 2010 Actual



ITS Program Budget: 2010 Actual



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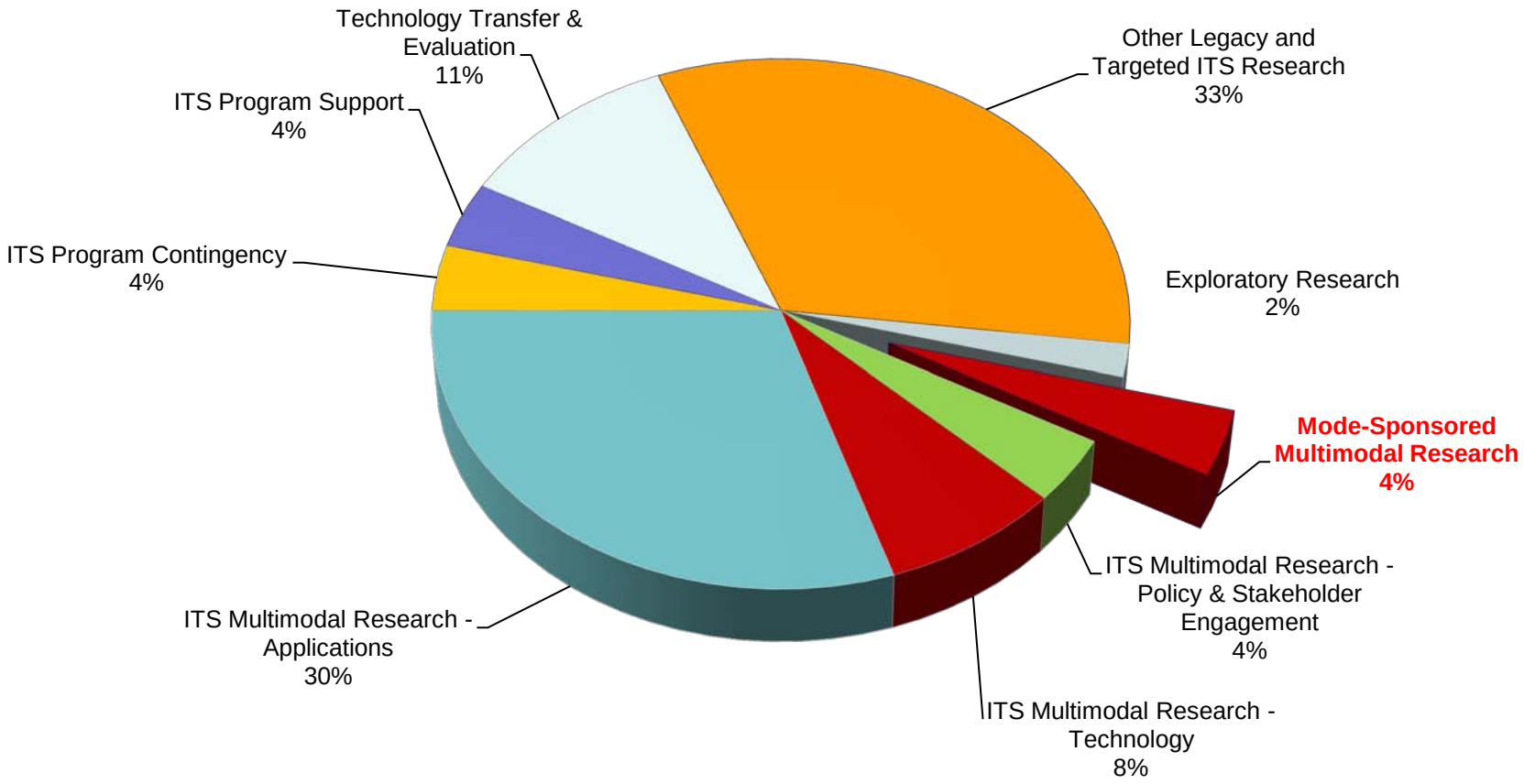


Major ITS Research Component Details

V2V and V2I Applications

IntelliDrive Vehicle-to-Vehicle (V2V) Communications for Safety IntelliDrive Vehicle-to-Infrastructure (V2I) Communications for Safety Safety Pilot	18.5% in FY 10
Real-Time Data Capture & Management Dynamic Mobility Applications Road Weather Management Applications for the Environment: Real-Time Information Synthesis (AERIS)	14.5% in FY 10

Mode-Sponsored Multimodal Research

Active Traffic Management International Border Crossing E-Screening Smart Roadside Commercial Vehicle Information Systems and Networks (CVISN) Core and Expanded Program Multimodal Integrated Payment Systems ITS Maritime Applications	4.1% in FY 10

ITS Budget Details

Other Legacy and Targeted ITS Research

I-95 Corridor Coalition Integrated Corridor Management (ICM): Transit and Highway Mobility Services for All Americans: Paratransit Small Business Innovation Research (SBIR) Previous Initiatives in Concluding Stages (Congestion Initiative $25M)	19.1% in FY 10

Technology Transfer and Evaluation

Professional Capacity Building (PCB) Communications Transit Stakeholders Public Safety Stakeholders ITS Architecture and Standards Evaluation	12.5% in FY 10

ITS Budget Details (cont.)

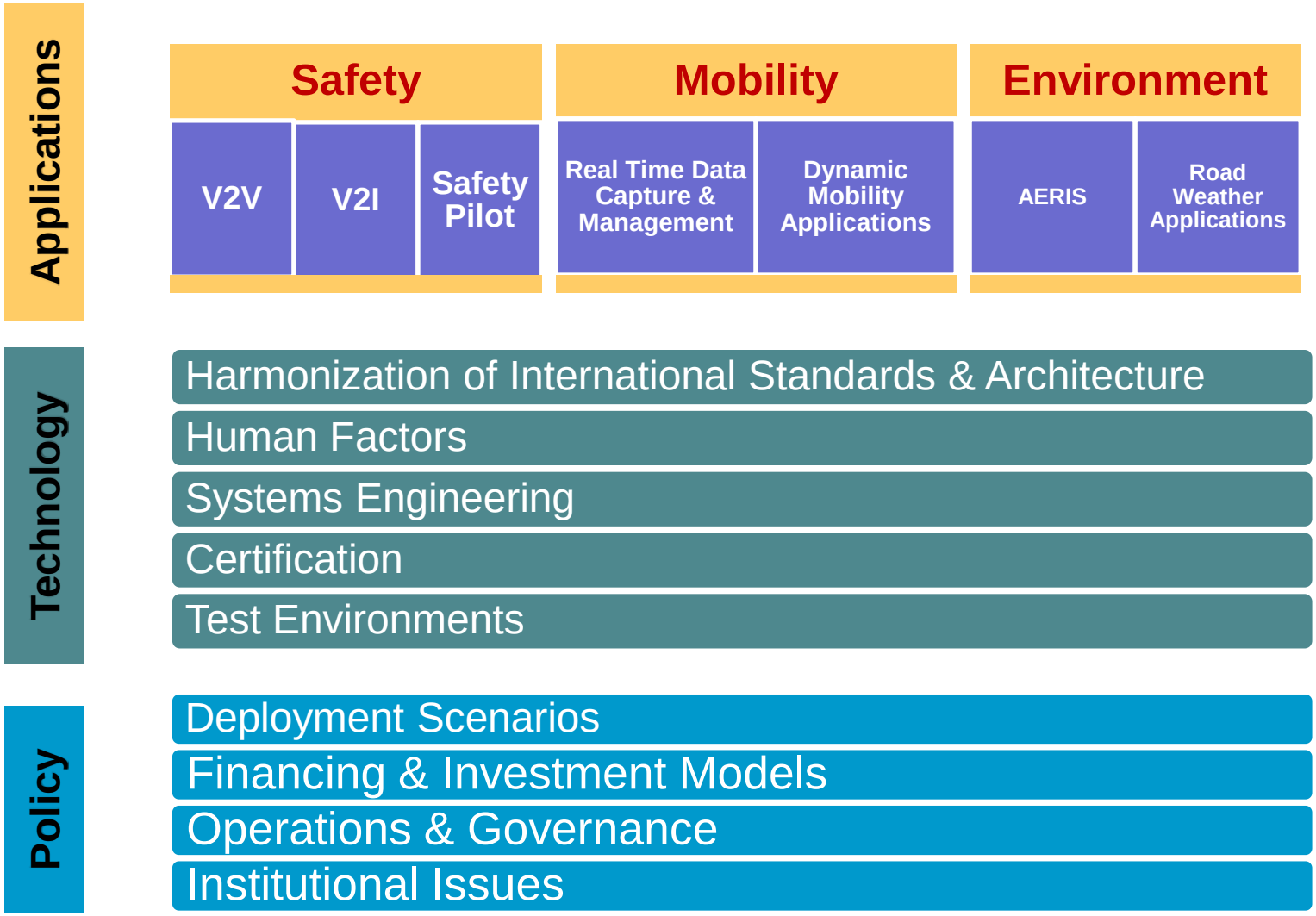
Exploratory Research

Technology Options for Collecting User Fees Commuter, Freight, and Heavy Rail Safety Exploratory Innovation Challenge	2.7% in FY 10

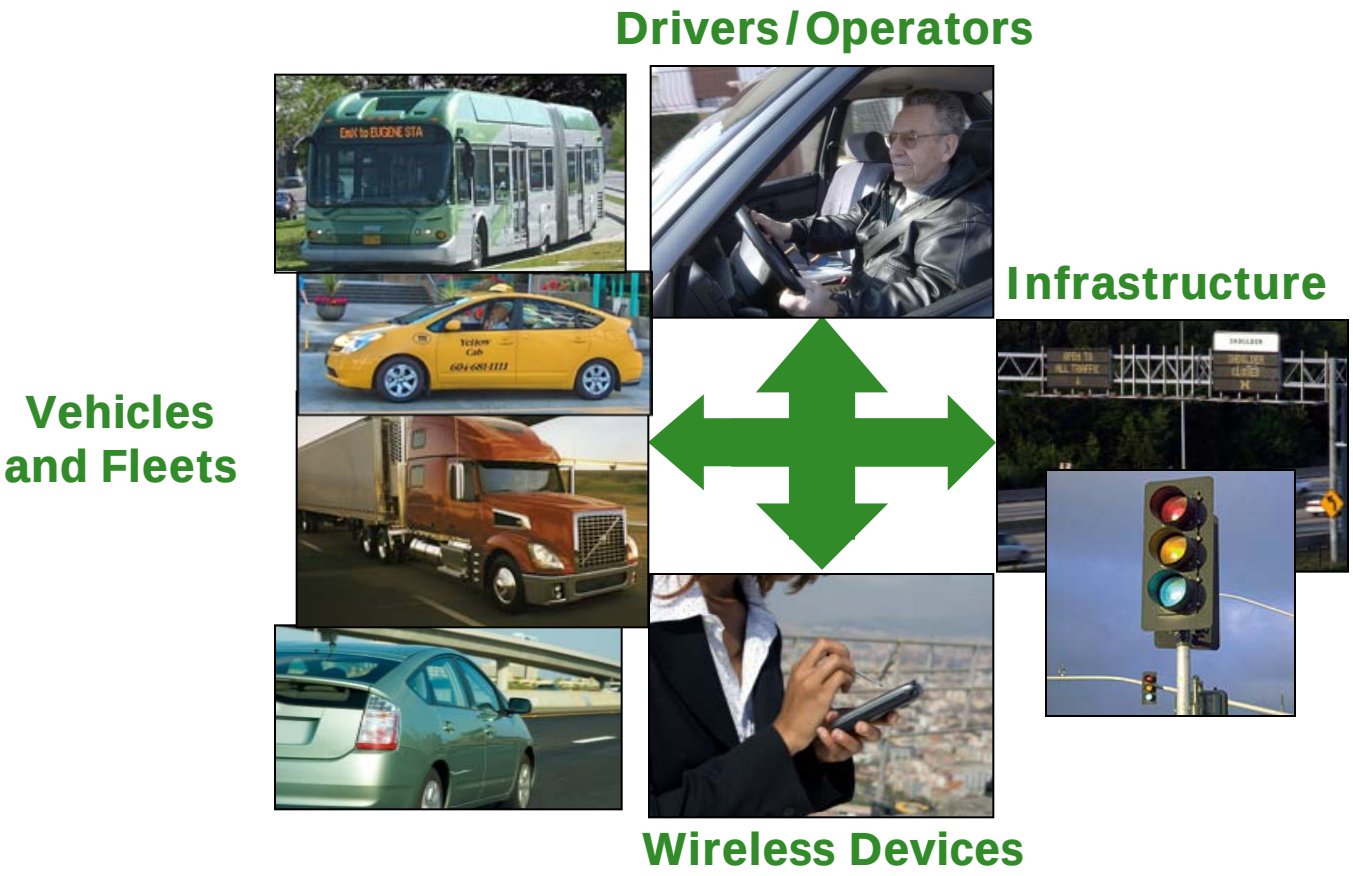
Foundational Technology Research – Applicable to All Modes

Human Factors Research Including Driver Distraction Test Bed International Standards/Architecture Harmonization Certification Systems Engineering Technology Scanning	9.4% in FY 10

IntelliDrive Research Program Components



ITS Research = Multimodal and Connected



A World With Connected Vehicles

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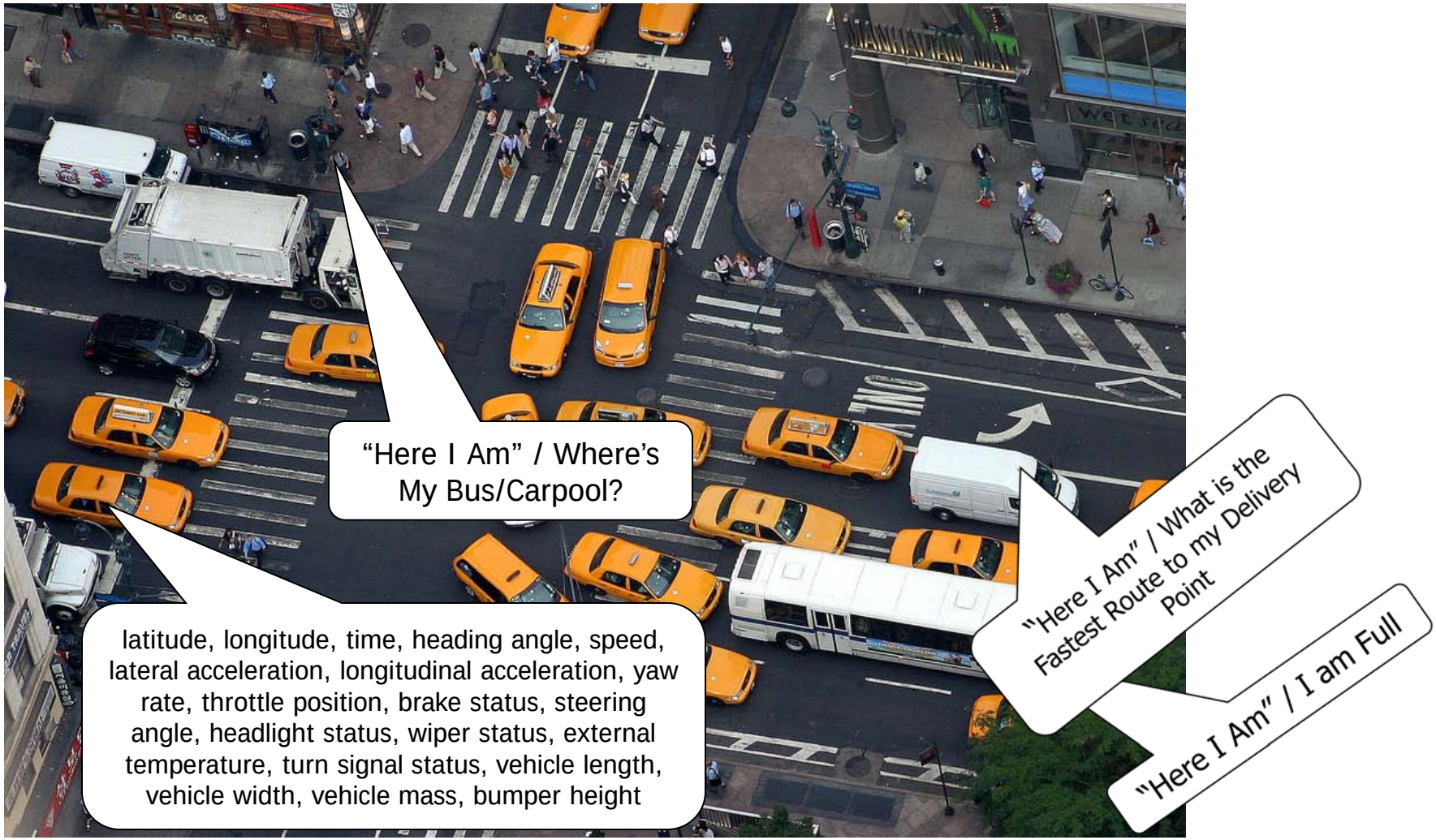


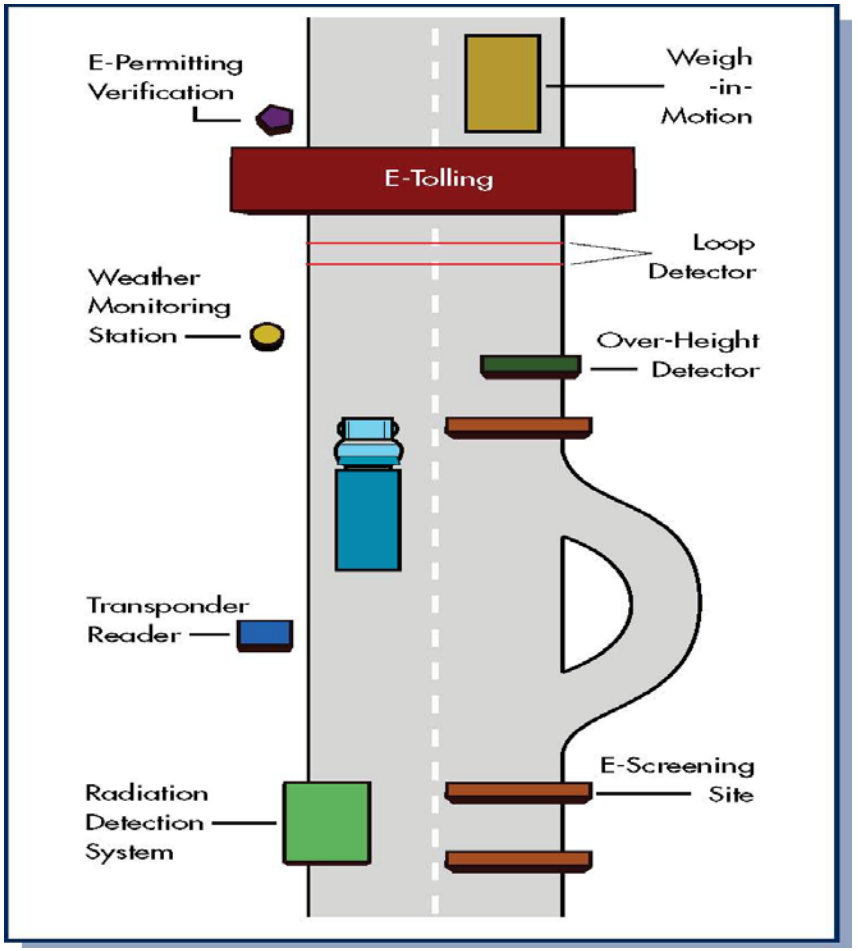
Rail Transportation - Safety and Logistics

- Transit light rail collision warning (pedestrians/vehicles)
- Freight movement logistics management for goods
- Commuter rail
- Funded a Heavy Rail Communications Assessment
- Coordinating with Canada

Pictures courtesy of Jeff Spencer, USDOT and FRA

Commercial Vehicles – Smart Roadside

- The Smart Roadside Program allows truck and driver to be screened with roadside sensors while traveling.
- Regulatory functions can be employed while not interrupting the travel of compliant carriers.
- Safety is improved by eliminating stop and go traffic.
- Sensors can provide shippers greater visibility of goods movement.



Safety Pilot

- Major road test and real world implementation taking place 2011 – 2013 involving:
  - Multiple vehicle types
  - Fully integrated systems and aftermarket devices
- Also to test
  - Prototype security mechanisms
  - Certification processes

Safety Pilot

- Goals
  - Support real world V2V and V2I applications with a data rich environment
  - Establish benefits data in support of NHTSA 2013 Agency Decision on V2V Communications with Real World Field Data
  - Create Public Awareness & Determine User Acceptance
- Outcomes
  - Benefits and user acceptance data for supporting future federal actions
  - Archived road network data for supporting mobility, environmental, and other industry research
  - Multiple supplier sources for devices and infrastructure
  - Better understanding of the operational policy issues associated with the deployment of V2V and V2I

ITS Maritime

- FY 10 - Added ITS Maritime project to ITS work plan
  - Utilize wireless connectivity to improve maritime freight flow integration and efficiency with rail and highway
- 2010 - Obtained staffing support and assigned MARAD project lead
- 2011 - Complete project planning and scoping the effort
- 2012 – Full project implementation

Picture courtesy of Tim Frazier

Modes Addressed in ITS Research Programs

	TRANSIT	CARS	TRUCKS	RAIL	MARITIME
Multimodal Research -- IntelliDrive Applications					
IntelliDriveVehicle-to-Vehicle Communications for Safety	√	√	√		
IntelliDriveVehicle-to-Infrastructure Communications for Safety	√	√	√	TBD	
Safety Pilot	√	√	√		
Real-Time Data Capture & Management	√	√	√	TBD	TBD
Dynamic Mobility Applications	√	√	√	√	TBD
Road Weather Management	√	√	√		
Applications for the Environment: Real-Time Information Synthesis (AERIS)	√	√	√		
Mode-Specific Research					
Active Traffic Management	√	√	√		
International Border Crossing E-Screening	√	√	√		
Smart Roadside			√		
CVISN Core and Expanded Program			√		
Multimodal Integrated Payment Systems	√	√	√	√	
ITS Maritime Applications			√	√	√

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