UNITED STATES
DEPARTMENT OF TRANSPORTATION

EnableATIS and the DMA Program: An Overview

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Noblis

EnableATIS Stakeholder Workshop
October 27, 2011
Washington DC

Overview

- Background on the Dynamic Mobility Applications (DMA) Program
  - Program Vision and Objectives
  - Overview of Program Organization
  - High Priority DMA Applications and Bundles
  - Program Roadmap

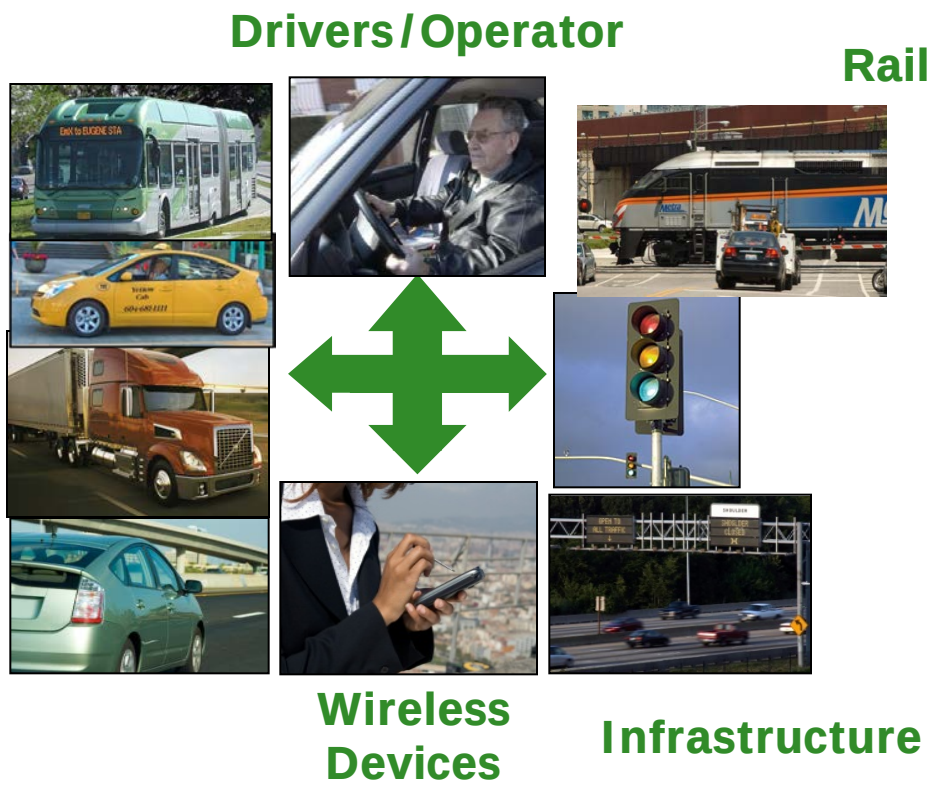
- Role of the EnableATIS Bundle in the DMA Program
  - Why Operational Concept not Concept of Operations?
  - Finding an Appropriate Federal Role
  - Leveraging Market Forces

ITS Research = Multimodal and Connected

To Improve Safety, Mobility and Environment

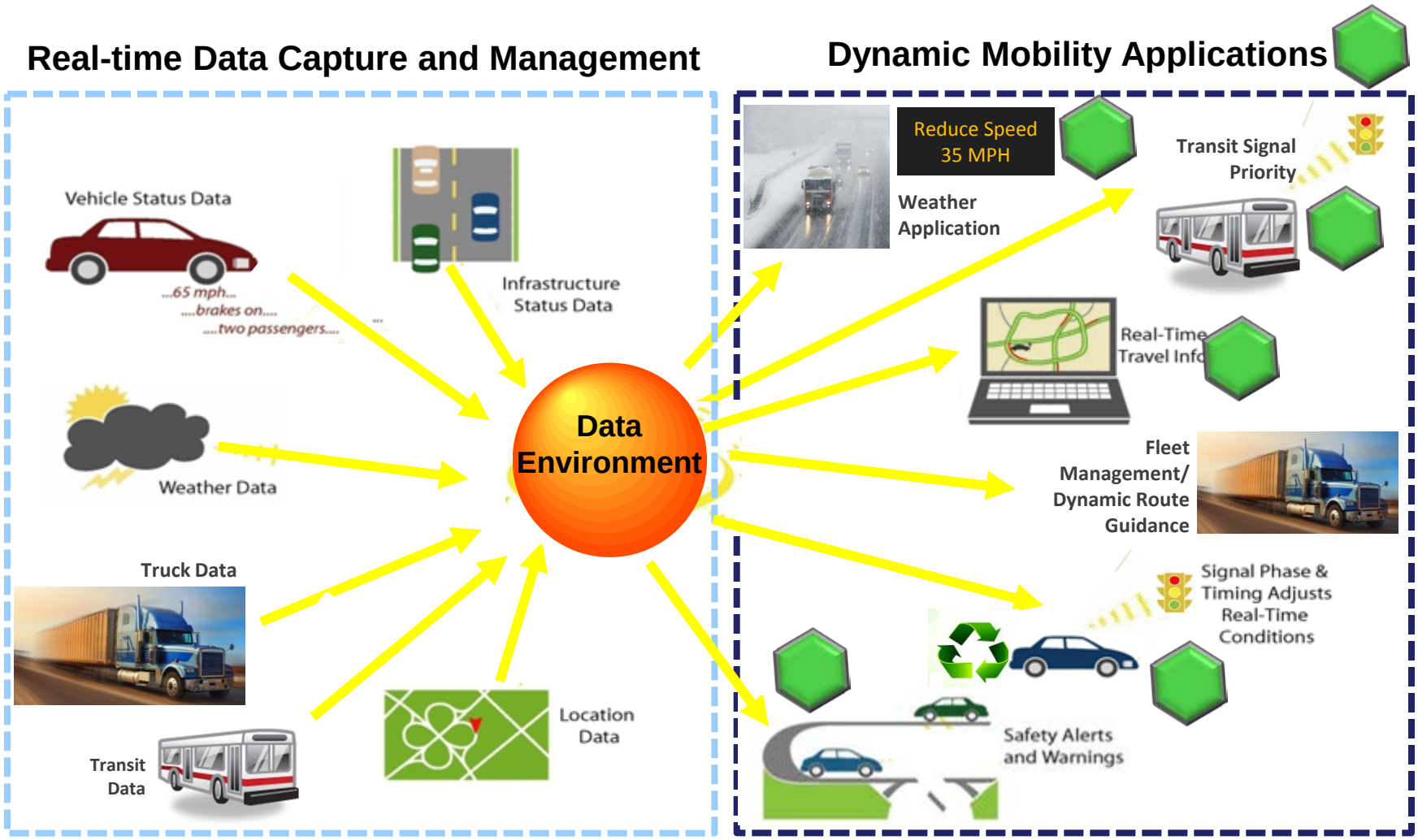
Research of technologies and applications that use wireless communications to provide connectivity:

- Among vehicles of all types
- Between vehicles and roadway infrastructure
- Among vehicles, infrastructure and wireless consumer devices

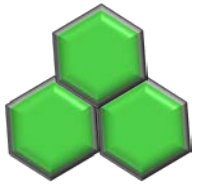


FCC Allocated 5.9 GHz Spectrum (DSRC) for Transportation Safety

Mobility Program



Dynamic Mobility Applications Program



Transformative Mobility Applications

(May have more impact when BUNDLED together)

Vision

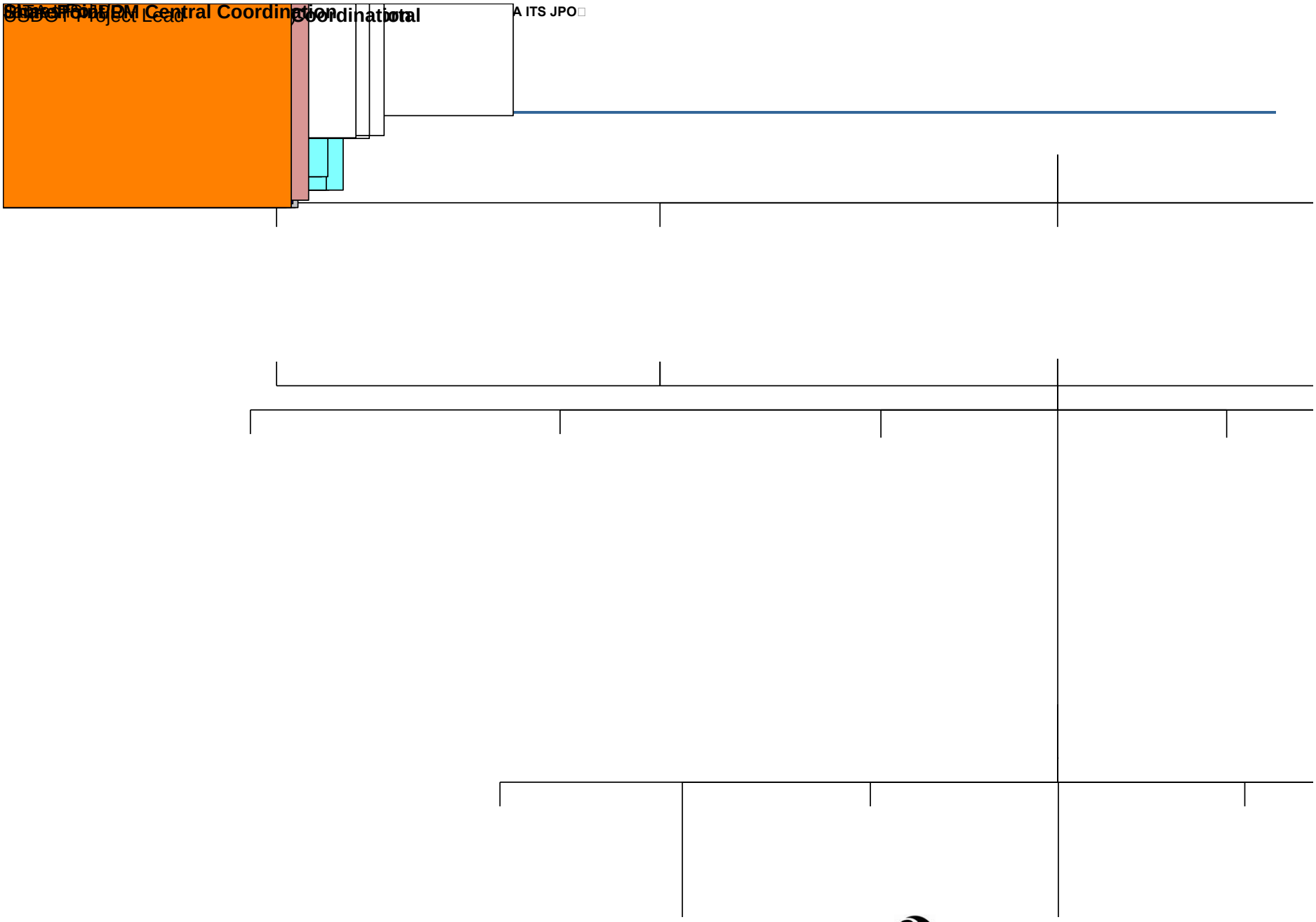
- Expedite development, testing, commercialization, and deployment of innovative mobility application
  - maximize system productivity
  - enhance mobility of individuals within the system

Objectives

- Create applications using frequently collected and rapidly disseminated multi-source data from connected travelers, vehicles (automobiles, transit, freight) and infrastructure
- Develop and assess applications showing potential to improve nature, accuracy, precision and/or speed of dynamic decision
- Demonstrate promising applications predicted to significantly improve capability of transportation system
- Determine required infrastructure for transformative applications implementation, along with associated costs and benefits

Project Partners

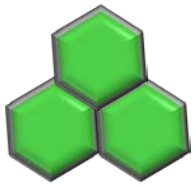
- Strong internal and external participation
  - ITS JPO, FTA, FHWA R&D, FHWA Office of Operations, FMCSA, NHTSA, FHWA Office of Safety


Coordination
A ITS JPO

Transformative Application Bundles: Identification of Prioritization Approach

Goal

- Identify, with help of stakeholders, collection of applications for development and testing in Phase 2 of Program



Transformative Mobility Applications

Approach

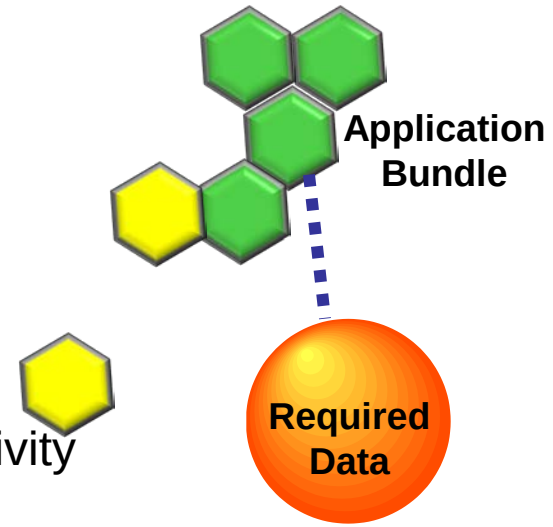
- Solicit ideas for transformative applications
  - Initial request closed on 31 July; second call closed 15 October
  - More than 90 submittals, quantity and quality exceeded expectations
- Share concepts with our stakeholders throughout the process
- Refine concepts to a manageable set of consolidated concepts (33)
  - Consolidated concepts used in variety of exercises at Mobility Workshop, 11/30-12/1/10 and with other stakeholder groups
  - ITE Task Force, Transit stakeholders, Freight stakeholders
- Combine stakeholder and federal input to support program prioritization

Candidate Applications Prioritization Criteria

- Potential for transformative impact
- Makes use of connected vehicle data
- Significant stakeholder interest

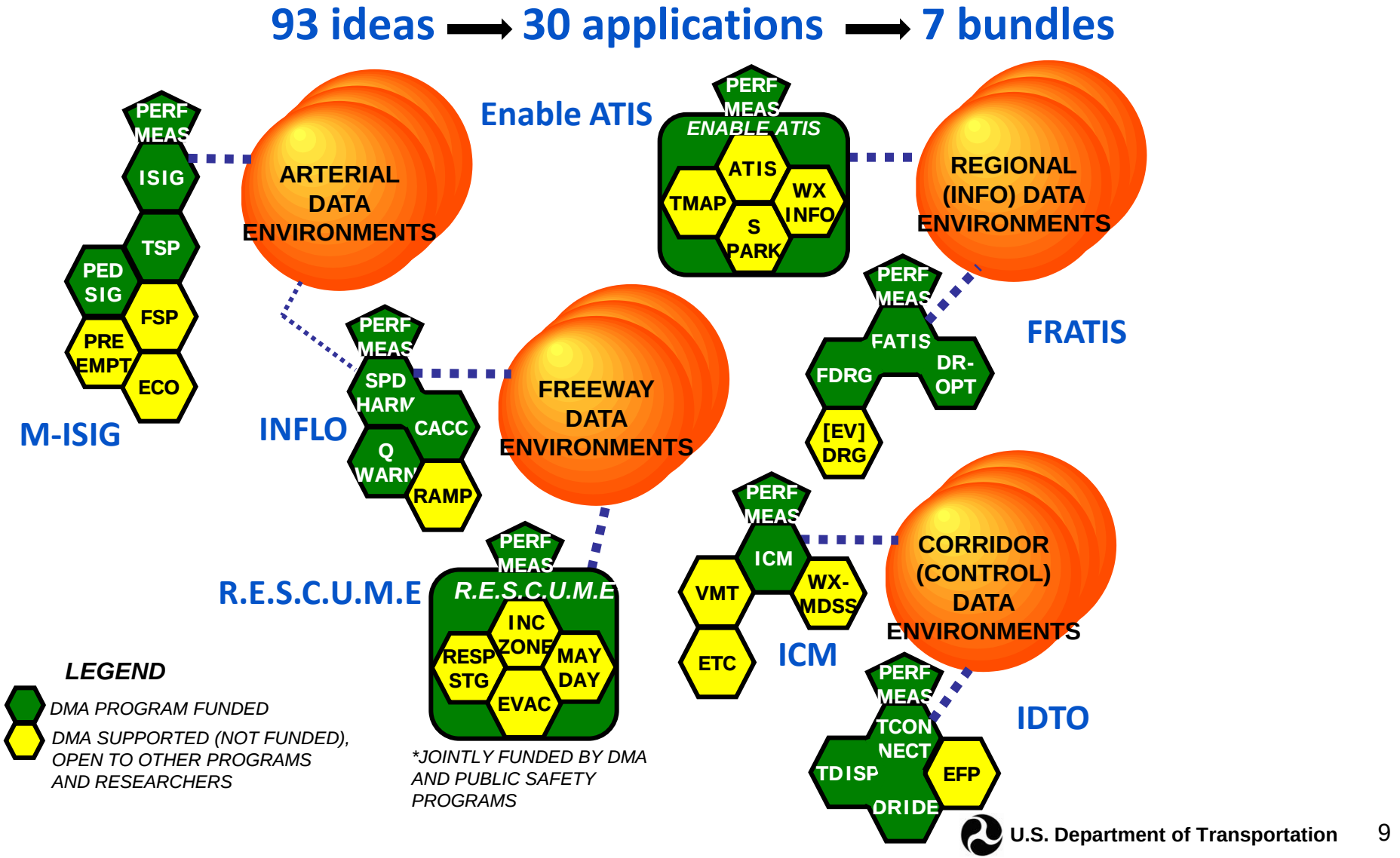
Transformative Application Bundles: Bundling Rationale and Prioritization Process

- Consolidate input from external stakeholder groups, workshop
- Consider internal stakeholder priorities
  - Leveraging on-going or other planned research
- **Group Applications into Bundles**
  - Similar high-level data needs
  - Interaction among applications predicted
  - Evident value in concurrent development
  - Encourage coordinated non-federal research activity

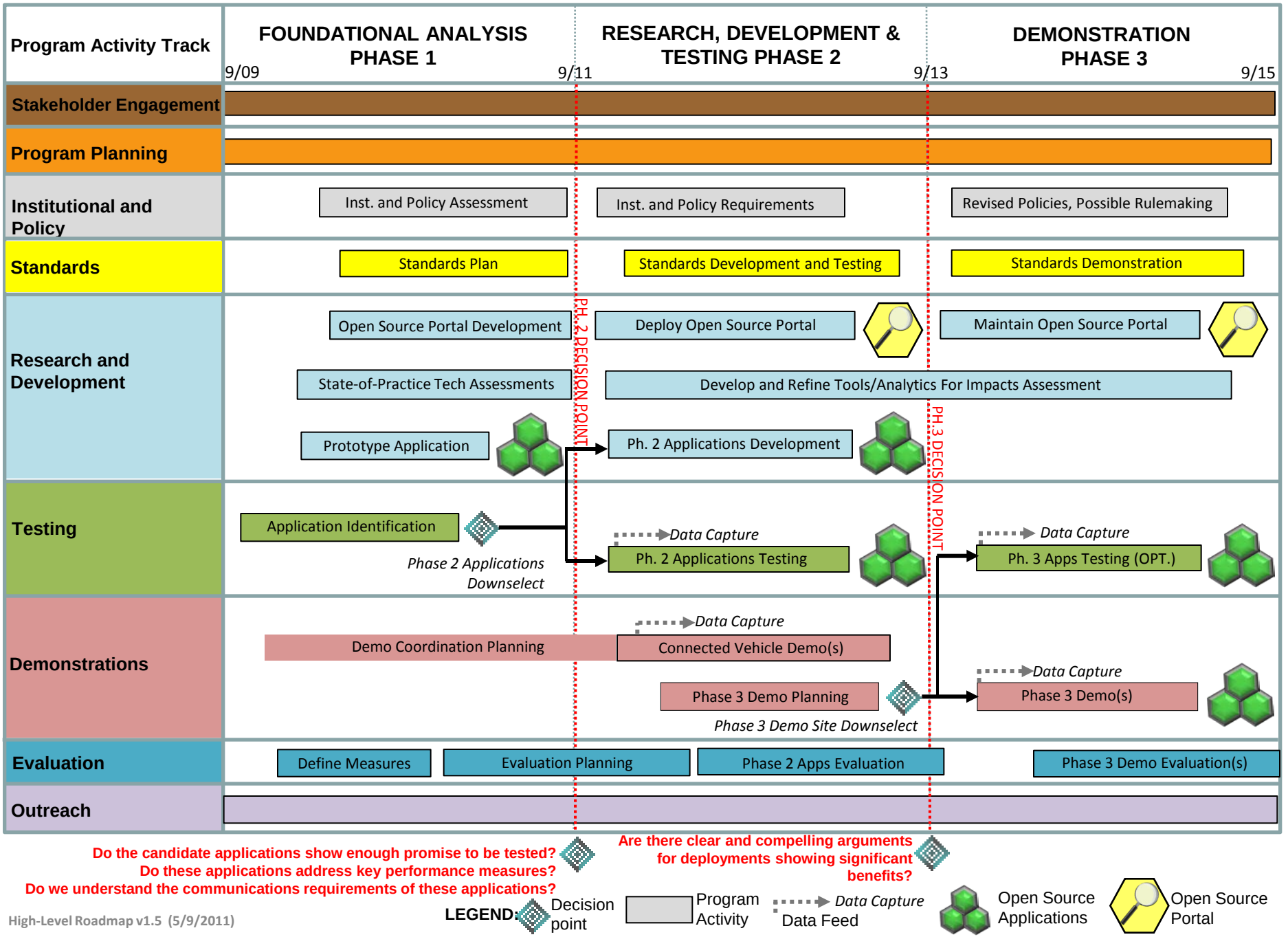


- **Bundling increases transformational impacts and reduces costs of research and development**
- Resource-constrained prioritization process based on expected value of developing application bundles, as well as individual applications
  - Applications the program cannot fund at this time are still candidates for collaborative development with other programs or stakeholders
- **High-Priority Application Bundles announced at TRB 2011**

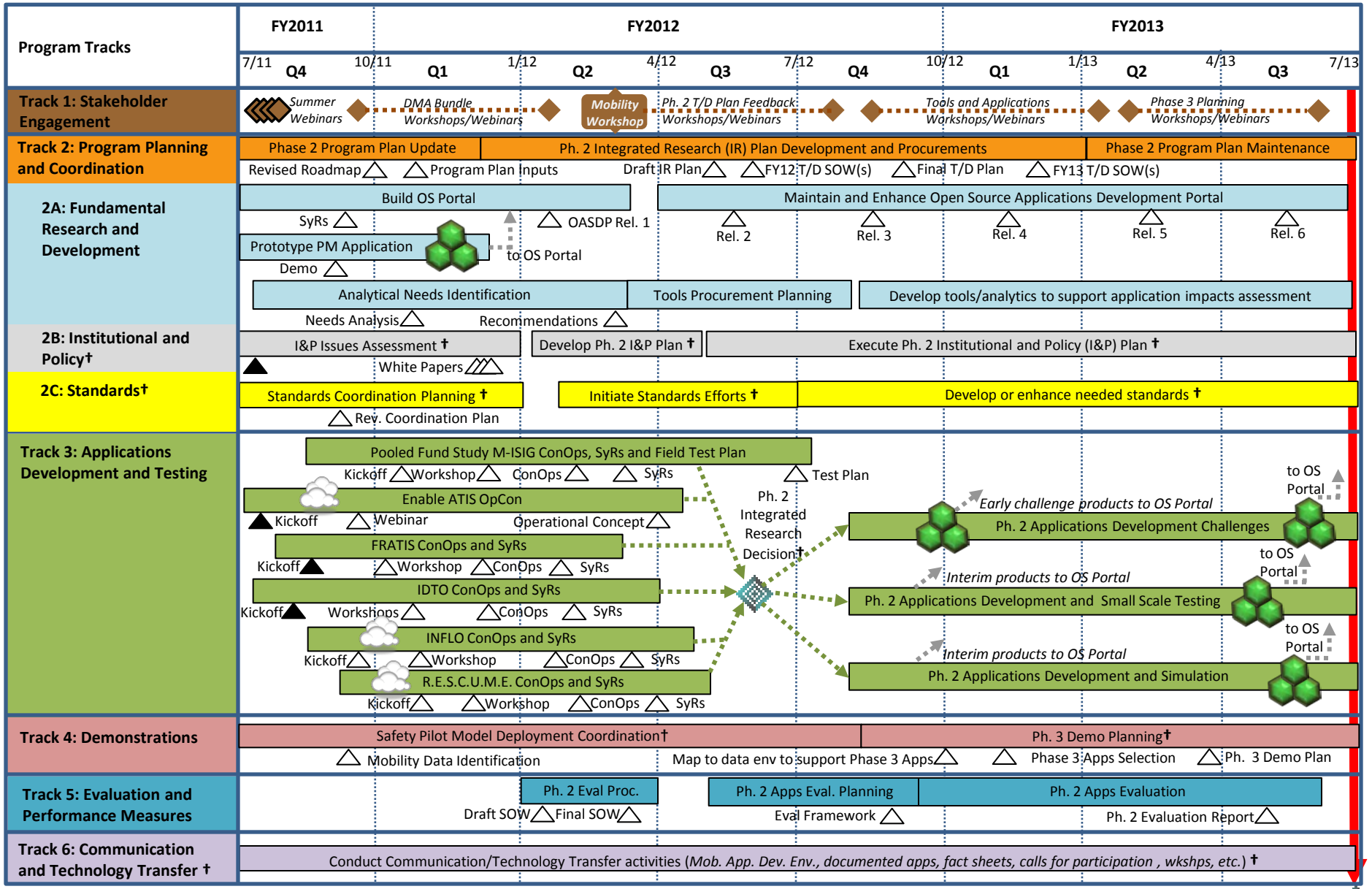
DYNAMIC MOBILITY APPLICATIONS PROGRAM
DATA ENVIRONMENTS AND APPLICATIONS MAPPING SUMMARY



Dynamic Mobility Applications Program Roadmap



Dynamic Mobility Applications Program Phase 2: Research, Development and Testing



EnableATIS Project Timeline

- Workshop – October 27, 2011
- Workshop Summary – November 2011
- Draft Operational Concept – February 2012
- Final Operational Concept – April 2012
- Readiness Assessment – April 2012
- Wrap Up – May 2012

DMA Program:
Upcoming Key Milestones

- Implement the Open Source Portal – Early 2012
- Complete Bundle ConOps/OpCons – May 2012
- Re-Engage with Stakeholders on DMA Program Direction – Early 2012
- Develop Ph. 2 Integrated Research Plan – June 2012
- Procure and Initiate Development Activity for Selected DMA Bundles – September 2012
  - Challenges
  - Small Scale Field Tests
  - Simulation Studies

Questions?