The Connected Vehicle Pilot Deployment Program

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Background

- Multiple existing ITS and Connected Vehicle programs planning field tests
- Infeasible for all programs to conduct independent large-scale tests and deployments
- Cross-cutting needs have been broadly identified for many applications
- Clear opportunities for synergy among technologies, messages, and concepts
- Our assessment is that the current state of connected vehicle technology:
  - Clear opportunity to successfully deploy collections of complementary connected vehicle applications
  - Pilot deployments can have a cost-beneficial impact in the short-term
  - Potentially transformative impacts in the long-term
CV Pilot Program Vision

- The VISION of the Connected Vehicle Pilots program is
  - to conduct research,
  - promote technology transfer,
  - and facilitate the nationwide deployment of a Connected Vehicle environment
CV Pilot Program Goals

- The **GOALS** of the CV Pilots Program are to
  - accelerate early deployment of Connected Vehicle technology
  - understand and estimate benefits associated with deployment
  - identify and solve key issues related to technical and institutional barriers
The Connected Vehicle Environment

- A Connected Vehicle Environment is
  - a robust (resilient, secure, and operational) transportation environment
  - where vehicles, mobile devices, and fixed infrastructure communicate
  - agnostic to communications media selected based on function and cost
  - improving traveler safety and traveler & goods mobility while minimizing environmental impacts
Organizing Principles

- Pilots will be *pilot deployments*, that is, real-world environment deployments
  - If successful, deployed technologies are expected to remain as permanent operational elements

- There will be *multiple* pilot sites over time
  - Each site will have different needs, focus and applications
    - That is, pilot deployments must address a critical problem
    - The needs of each site must drive the application selection process

- Pilot deployments are expected to be both *large-scale and multi-modal*
  - *Large-scale* implies pilot deployments will have measureable impact, not a specific minimum geographic or vehicle fleet size
  - Sites will deploy *multiple applications* drawing on the products of USDOT and other connected vehicle research
Proposed Pilot Deployment Requirements

- Multiple connected vehicle applications must be deployed together
  - Cost-effectively leveraging captured CV and mobile device data
  - Address multi-modal problems

- Pilot deployments should leverage USDOT-sponsored research
  - Need not include all applications (in fact, this is unlikely to be practical)
  - May include new connected vehicle applications not considered by USDOT
  - All applications selected must work and have an impact

- Pilot deployments should include the capture of data from multiple sources
  - At a minimum, vehicles must represent one source of data used in the pilot deployment

- Multiple forms of communications technologies are desired
  - DSRC desired as one communication technology
Proposed Pilot Deployment Requirements (continued)

- Well-defined, focused, quantitative performance measures
  - Support an independent evaluation effort

- Share pilot deployment data and lessons learned
  - While protecting privacy and intellectual property

- Security and credentialing management system

- Integrated or carry-in devices for connected vehicles capable of generating an SAE J2735 Basic Safety Message (BSM)
Key Milestones for the CV Pilots Program

- Request for Information (RFI) Issued  
  March 2014

- CV Pilot Program Stakeholder Workshop  
  April 2014

- Regional Pre-Deployment Workshop/Webinar Series (TBD)  
  Summer-Fall 2014

- Solicitation for Wave 1 Pilot Deployment Concepts  
  Early 2015

- Wave 1 Pilot Deployments Award(s)  
  September 2015

- Solicitation for Wave 2 Pilot Deployment Concepts  
  Early 2016

- Wave 2 Pilot Deployments Award(s)  
  September 2016

- Pilot Deployments Complete  
  September 2020
Getting Ready for Pilot Deployments

- Get familiar with USDOT connected vehicle research products
- Attend upcoming stakeholder events
  - We will cover these in our last session of the day
- Find like-minded partners from the public and private sectors to create a pilot deployment concept
  - Grounded in local needs, i.e., solving real transportation problems
  - Targeting specific and meaningful performance goals
  - Built around a cost-effective collection of connected vehicle applications that leverages common data capture and dissemination
Stakeholder Q&A