CONNECTED VEHICLE PILOT
Deployment Program

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TODAY'S AGENDA

- Cory Krause

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  - Connected Vehicle Pilot Deployment Program Overview
    - Program Goals
    - Release of CV Pilots Synopsis

- Denise Masi

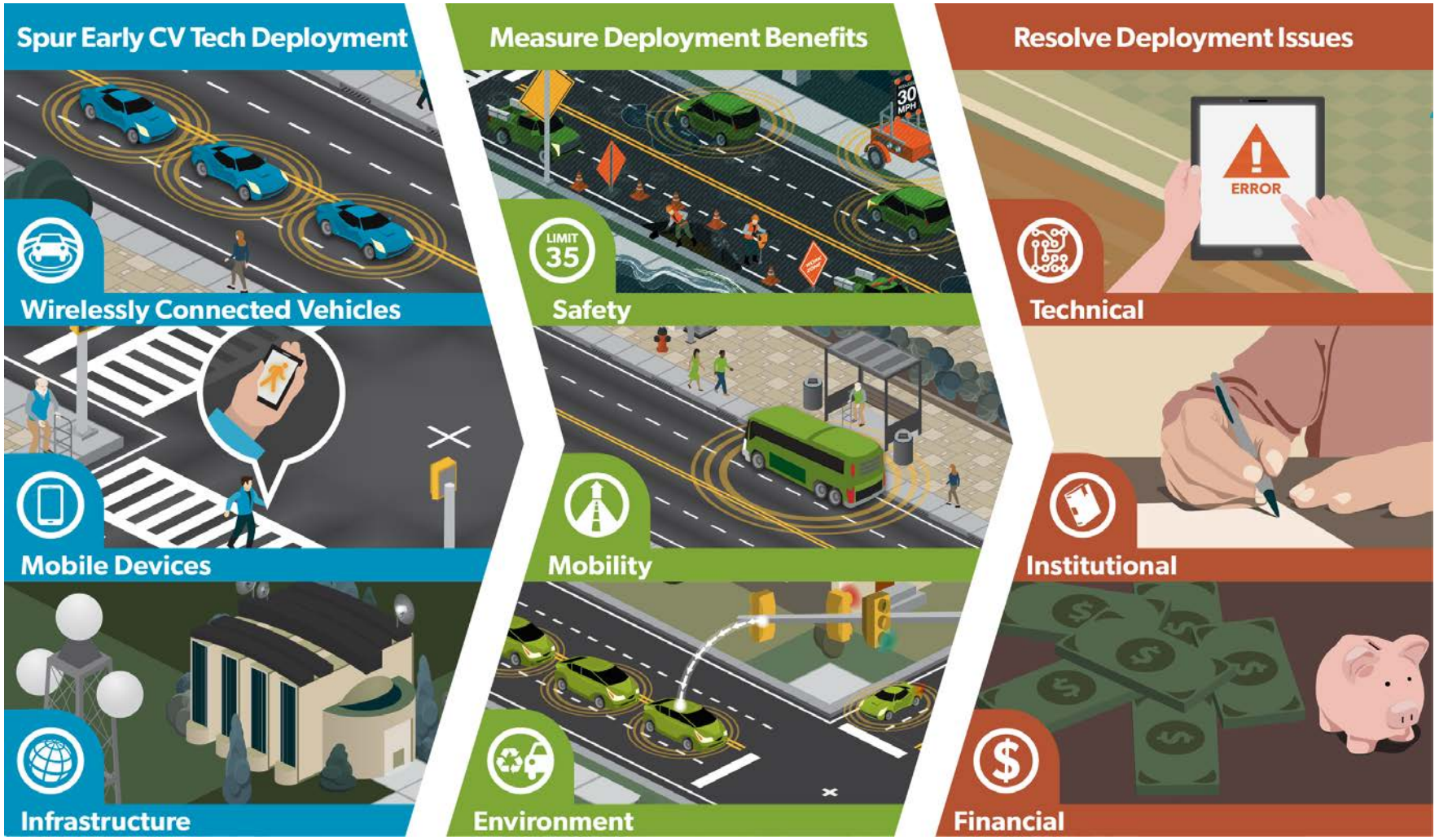
  Fellow, Noblis, Inc.

  - CO-PILOT Cost Estimator
    - Overview and Features
    - Tool Demonstration

- Stakeholder Q&A

Connected Vehicle Pilot Deployment Program Overview

PROGRAM GOALS



General Program Information

- *Needs-Driven Focus*
  - Related to system performance – mobility, safety, public agency efficiency and reduced environmental impacts
  - Needs identified by relevant stakeholders
  - Needs represented in performance measures and performance targets
  - Identify applications addressing these needs
  - The ability to capture and analyze observed data to monitor performance over time
  - Support data needs associated with an independent evaluation effort

- *Phases of the Pilot Deployment Effort*
  - **Phase 1: Concept Development – up to 12 months**
  - Phase 2: Design/Build/Test – up to 20 months
  - Phase 3: Maintain and Operate – 18 months

PHASE 1 CONTRACT SCOPE

- Objective
  - To fully develop an innovative and synergistic connected vehicle pilot deployment concept, to build partnerships among stakeholders, and to prepare a comprehensive pilot deployment plan that reduces technical, institutional and financial risk
- Delineation of Work
- Solicitation
  - Will be issued on or before January 30, 2015
  - Synopsis: https://www.fbo.gov/
  - Solicitation Number: DTFH6115R00003

Task	Description
1	Program Management
2	Pilot Deployment Concept of Operations (ConOps)
3	Security Management Operating Concept
4	Safety Management Plan
5	Performance Measurement and Evaluation Support Plan
6	Pilot Deployment System Requirements
7	Application Deployment Plan
8	Human Use Approval
9	Participant Training and Stakeholder Education Plan
10	Partnership Coordination and Finalization
11	Outreach Plan
12	Comprehensive Pilot Deployment Plan
13	Deployment Readiness Summary

ESTIMATED PILOTS DEPLOYMENT BUDGETS

- Based on our research, pilot deployments (Phases 1-3), varied in range and effort as follows:
  - Smaller focused deployments: $2-$5 million in federal funds
  - Medium-sized deployments: $5-$12 million in federal funds
  - Larger deployments: $12-$20 million in federal funds

- USDOT developed a **cost estimation tool** to facilitate the development of cost estimates based on the pilot deployment effort ranging from $2 million to $20 million in federal funds.

FURTHER INFORMATION

- CV Pilots Website
  - http://www.its.dot.gov/pilots

- Program Contact
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- Solicitation Contact
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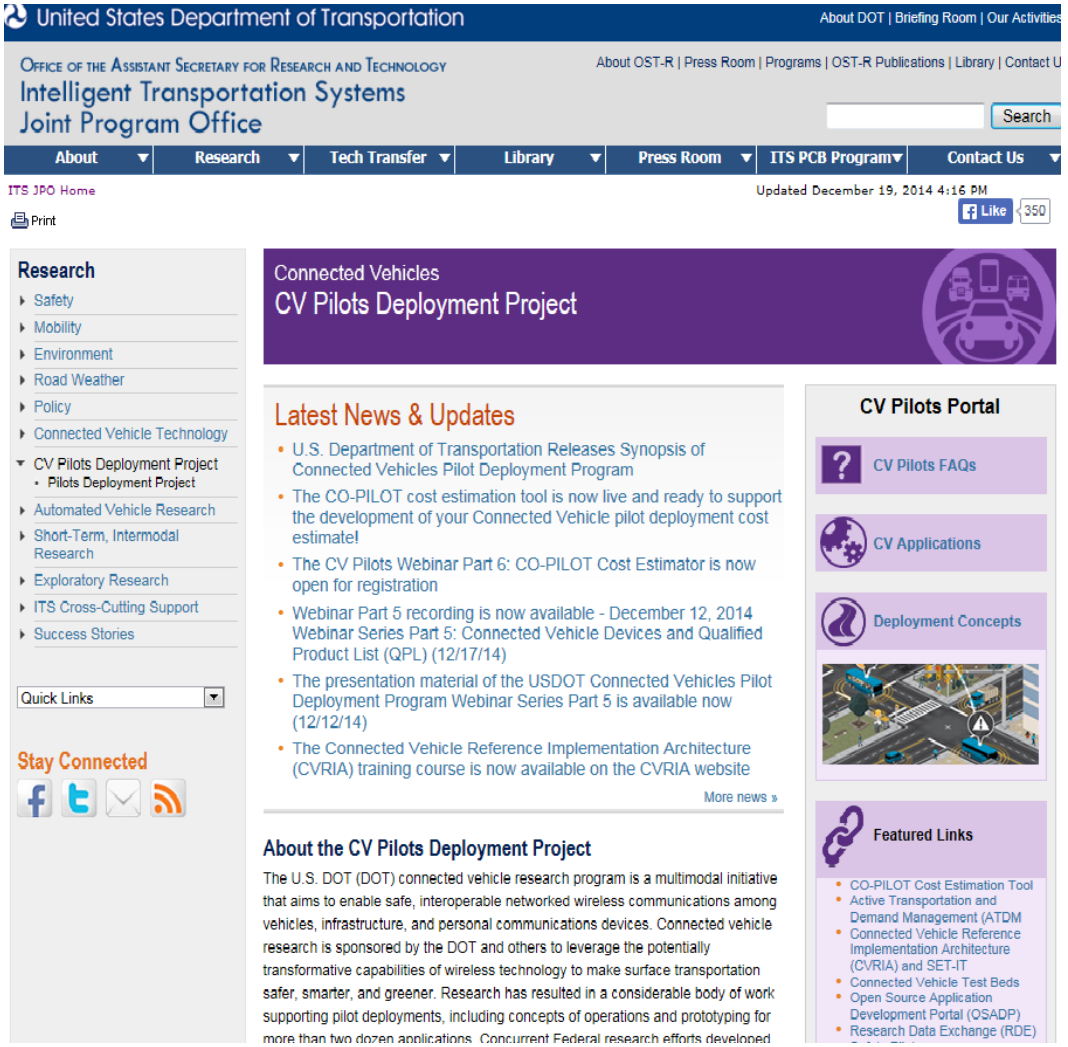


CO-PILOT Cost Estimator

CO-PILOT COST ESTIMATOR OVERVIEW

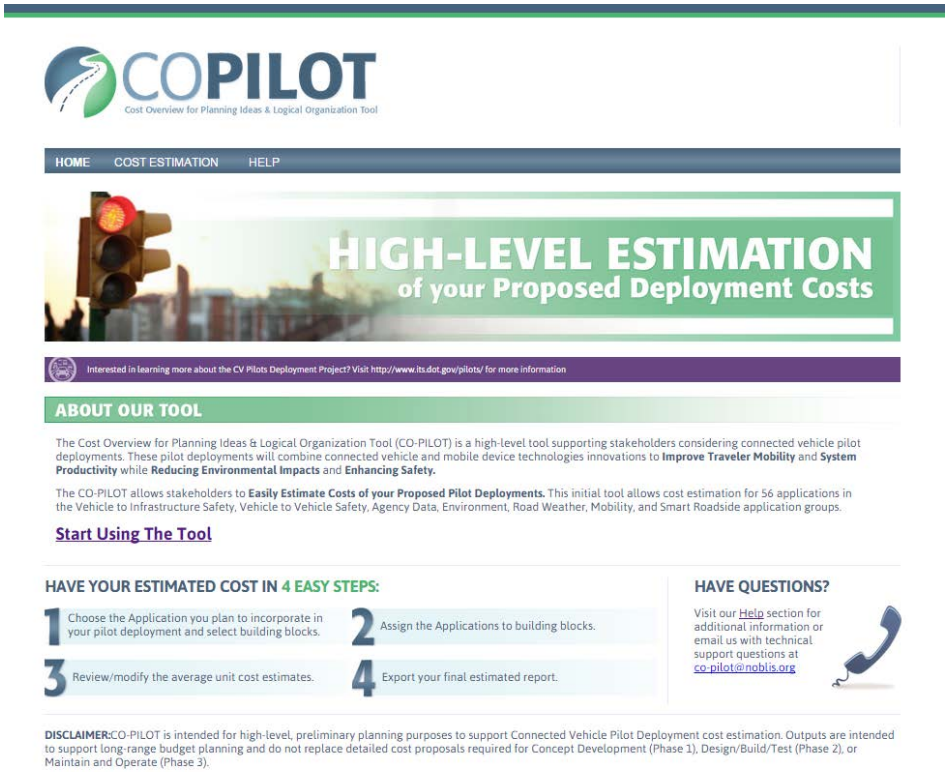
- High-level Cost Estimation Planning Tool
  - To facilitate the development of cost estimates for the Connected Vehicle Pilot Deployments.
  - Allows users to generate deployment cost estimates for 56 applications

CONNECTED VEHICLE APPLICATIONS

V2I Safety	Environment	Mobility
Red Light Violation Warning	Eco-Approach and Departure at Signalized Intersections	Advanced Traveler Information System
Curve Speed Warning	Eco-Traffic Signal Timing	Intelligent Traffic Signal System (I-SIG)
Stop Sign Gap Assist	Eco-Traffic Signal Priority	Signal Priority (transit, freight)
Spot Weather Impact Warning	Connected Eco-Driving	Mobile Accessible Pedestrian Signal System (PED-SIG)
Reduced Speed/Work Zone Warning	Wireless Inductive/Resonance Charging	Emergency Vehicle Preemption (PREEMPT)
Pedestrian in Signalized Crosswalk Warning (Transit)	Eco-Lanes Management	Dynamic Speed Harmonization (SPD-HARM)
V2V Safety	Eco-Speed Harmonization	Queue Warning (Q-WARN)
Emergency Electronic Brake Lights (EEBL)	Eco-Cooperative Adaptive Cruise Control	Cooperative Adaptive Cruise Control (CACC)
Forward Collision Warning (FCW)	Eco-Traveler Information	Incident Scene Pre-Arrival Staging Guidance for Emergency Responders (RESP-STG)
Intersection Movement Assist (IMA)	Eco-Ramp Metering	Incident Scene Work Zone Alerts for Drivers and Workers (INC-ZONE)
Left Turn Assist (LTA)	Low Emissions Zone Management	Emergency Communications and Evacuation (EVAC)
Blind Spot/Lane Change Warning (BSW/LCW)	AFV Charging / Fueling Information	Connection Protection (T-CONNECT)
Do Not Pass Warning (DNPW)	Eco-Smart Parking	Dynamic Transit Operations (T-DISP)
Vehicle Turning Right in Front of Bus Warning (Transit)	Dynamic Eco-Routing (light vehicle, transit, freight)	Dynamic Ridesharing (D-RIDE)
Agency Data	Eco-ICM Decision Support System	Freight-Specific Dynamic Travel Planning and Performance
Probe-based Pavement Maintenance	**Road Weather**	Drayage Optimization
Probe-enabled Traffic Monitoring	Motorist Advisories and Warnings (MAW)	**Smart Roadside**
Vehicle Classification-based Traffic Studies	Enhanced MDSS	Wireless Inspection
CV-enabled Turning Movement & Intersection Analysis	Vehicle Data Translator (VDT)	Smart Truck Parking
CV-enabled Origin-Destination Studies	Weather Response Traffic Information (WxTINFO)	
Work Zone Traveler Information		

FEATURES OF CO-PILOT COST ESTIMATOR

- CO-PILOT breaks down each CV application into associated Building Blocks and Cost Components
  - Building Blocks: locations or entities requiring components for an application, e.g., Intersections
- CO-PILOT includes default costs and required quantities for each component
  - Average costs and quantities for each component can be modified
  - Quantities take into account the overlap between application components at a Building Block, depending on user selections
- CO-PILOT uses a simulation approach to account for uncertainty in both unit and overall costs
- CO-PILOT output includes graphical depictions of cost distributions and detailed spreadsheet output



Tool Demonstration

Stakeholder Q&A