CONNECTED VEHICLE PILOT
Deployment Program

Preparing a Training & Education Plan for Connected Vehicle Deployments

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TODAY'S AGENDA

- Purpose of this Technical Assistance Webinar Series
  - To assist not only the three selected sites, but also other early deployers of connected vehicle technologies to conduct Concept Development activities.

- Webinar Content
  - Connected Vehicle Pilot Deployment Program Overview
  - Participant Training and Stakeholder Education
  - Stakeholder Q&A
  - How to Stay Connected

- Webinar Protocol
  - Please mute your phone during the entire webinar
  - You are welcome to ask questions via chatbox at the Q&A Section
  - The webinar will be recorded except the Q&A Section
  - The webinar recording and the presentation material will be posted on the CV Pilots website within a week
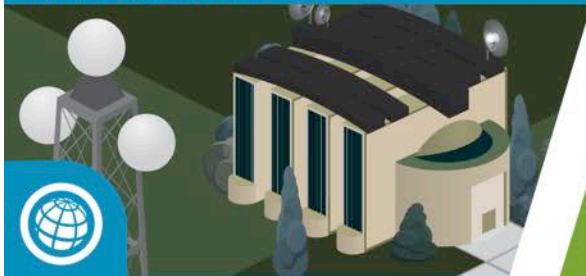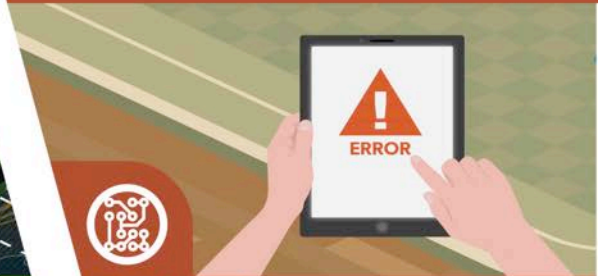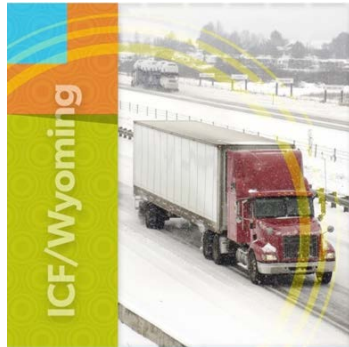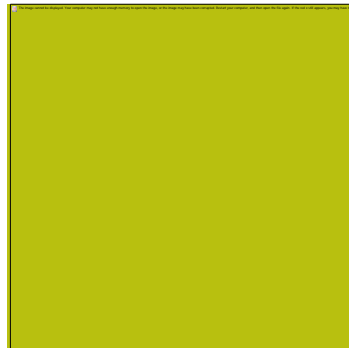
SITES SELECTED – 2015 AWARDS

- Reduce the number and severity of adverse weather-related incidents in the I-80 Corridor in order to improve safety and reduce incident-related delays.
- Focused on the needs of commercial vehicle operators in the State of Wyoming.

- Improve safety and mobility of travelers in New York City through connected vehicle technologies.
- Vehicle to vehicle (V2V) technology installed in up to 10,000 vehicles in Midtown Manhattan, and vehicle to infrastructure (V2I) technology installed along high-accident rate arterials in Manhattan and Central Brooklyn.

- Alleviate congestion and improve safety during morning commuting hours.
- Deploy a variety of connected vehicle technologies on and in the vicinity of reversible express lanes and three major arterials in downtown Tampa to solve the transportation challenges.

DEPLOYMENT SCHEDULE
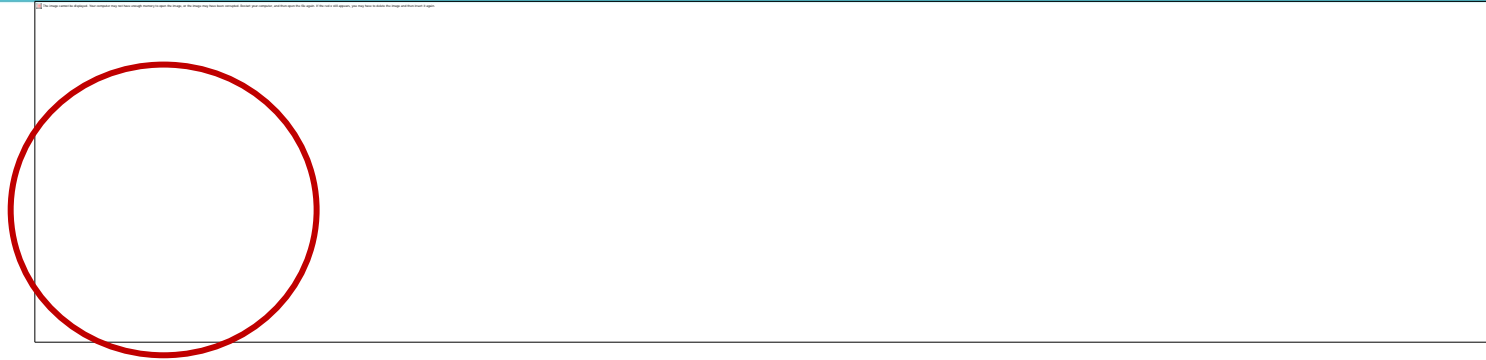
- **Overall Deployment Schedule**
  - Phase 1: Concept Development
    - Creates the foundational plan to enable further design and deployment
  - Phase 2: Design/Deploy/Test
    - Detailed design and deployment followed by testing to ensure deployment functions as intended (both technically and institutionally)
  - Phase 3: Maintain/Operate
    - Focus is on assessing the performance of the deployed system
  - Post Pilot Operations (CV tech integrated into operational practice)
- **Public webinars to share the concept development activities from the three sites**
  - Concept of Operations Webinar (February – March 2016)
  - Performance Measurement Webinar (May – June 2016)
  - Deployment Plan Webinar (August 2016)

What is the Training & Education Plan?

The **Participant Training and Stakeholder Education Plan** describes the underlying needs of the Pilot Deployment to prepare a plan for the recruitment and training of all participating drivers and personnel to permit satisfactory use and servicing of the equipment.

Training and Education will address participating stakeholders'

- Roles
- Responsibilities
- Activities

When drafting your Training Plan:

- Have a good understanding of the *concept* being deployed (ConOps)
- Consult with the heads of any public (or other) organizations affected
- Know the difference between training vs. outreach
- Coordinate with the Human Use and Safety Plans

KEY CONCEPTS FOR YOUR TRAINING PLAN

1. Identify the various participants and participant groups needed

2. Recruit prospective participants

3. Train participants for their roles during the operational phase

4. Evaluate participants' understanding of training

1.   IDENTIFYING PARTICIPANTS

All stakeholders should be considered during this step.

- Drivers
  - Professional drivers (taxi drivers, truck drivers, bus drivers)
  - Public drivers (drivers from the general public)
- Pedestrians
  - Equipped pedestrians
- Operational staff
  - Technicians
  - TMC staff
  - Management staff
- Trainers
- Other

2. RECRUITING PARTICIPANTS

- Get agencies and members of the general public on-board
  - Recruiting specialized participants may involve direct engagement with stakeholders (e.g., fleet vehicle operators)
  - Recruiting participants from the general population
    - Word of mouth
    - Print advertisements
    - Electronic newsletters
    - Social media

- Recruited drivers should:
  - Have the required license for the type of vehicle they will be operating
  - Be in overall good health
  - Possess a good driving record

- Recruitment (and participant compensation) must be OK'd by IRB before recruiting can begin

U.S. Department of Transportation

3A. TRAINING PARTICIPANTS

- ***"Why am I here?"***
  - □ Give participants a general overview of the deployment and the goals it is setting out to achieve, as well as their particular role

- Introduce them to the functions of the applications being implemented and appropriate responding actions

- Walk-through various scenarios

- *Contingency Plan* – make sure participants know what to do in the event that systems are not functioning properly

Various training methods can be used for the different participant groups:

□ Equipped drivers / pedestrians

- ▪ Must convey to participants the range of the corresponding DVIs or alerts that will elicit their response.
- ▪ Recommended approach: in-person workshops

□ Technicians and maintenance staff

- ▪ Must be trained on installation and will need to know how to troubleshoot malfunctioning systems brought in throughout the pilot period.
- ▪ Recommend approach: hands-on field training

□ Operations staff

- ▪ Will need to be equipped with a response plan that provides guidance for monitoring and decision making tasks.
- ▪ Recommended approach: workshops, demonstrations

4.   EVALUATING PARTICIPANT TRAINING

- Participants should verify their understanding of their roles
  - Have them demonstrate what they have learned throughout training or at the conclusion of training to prove their readiness for operation.
  - During training: Group activities, "exit" tickets
  - Following the conclusion of training: Oral / written assessments

- Participants should also complete evaluations about their experience being trained

IMPLEMENTING YOUR TRAINING PLAN

- Create and adhere to a training budget

- Prep instructors through "Train the Trainer" sessions

- Secure training facilities

- Procure equipment and materials needed for training

TRAINING CHALLENGES

- Coordination of IRB process and recruiting participants
  - o Issue: Participant candidates cannot be approached unless IRB-cleared.
  - o Possible Solution: Start the IRB certification process as soon as possible.

- Recruiting particular participant groups
  - o Issue: Participants with certain characteristics will be needed (e.g. possession of specific types of licenses).
  - o Possible Solution: Recruit directly through specific media (e.g. commercial agencies).

- Planning and coordination of diverse training requirements
  - o Issue: Difficult to offer training sessions that accommodate all targeted stakeholder groups.
  - o Possible Solution: Survey training groups to figure out their availability; offer multiple sessions.

TRAINING CHALLENGES (CONT.)

- Coordination with evaluation and performance measurement activities

  - Issue: If participants are playing a specific role related to evaluation or performance measurement activities, they will have specific protocols to follow.

  - Possible Solution: User training should include details of the proposed protocol, e.g., how operations staff should be entering data into *Participant Action Logs*.

- Retaining participants

  - Issue: Participant turnover requires additional training.

  - Possible Solution: Provide incentives; touch-base with participants every so often.

Guest Presenter

Doug Pape*, Battelle*

Lessons Learned from the driver clinics for the Integrated Truck Project (2013).

Recruitment

- Make your equipment flexible

- Be creative in your media

Get Paid to Try New Safety Equipment

TRUCK DRIVERS NEEDED

Be part of the future of transportation!

We're inviting truck drivers with a Class A CDL to try out Connected Commercial Vehicle technology and give us their opinions. Appointments are available August 22 and 23. You will get paid to drive our trucks at the former Alameda Naval Air Station.

For more information check out our website or call:

www.DriverClinic.org · 1-800-

Training

- For the drivers
  - Make the messages self-explanatory
  - Show a video with the vehicles
  - Explain maintenance

Training

- For others (maintenance, installers, traffic management personnel)
  - What to do, what not to do, when to ask for help
  - Make installations consistent

Staying in Touch

- Make sure they can contact you

- Make sure you can contact them

- Always keep your ears open

STAKEHOLDER Q&A

- Please keep your phone muted

- Please use chatbox to ask questions

- Questions will be answered in the order in which they were received

- This Q&A section will not be recorded, nor posted to the website

STAY CONNECTED

Join us for the *Getting Ready for Deployment* Series

- Discover more about the 2015 CV Pilot Sites
- Learn the Essential Steps to CV Deployment
- Engage in Technical Discussion

Website: www.its.dot.gov/pilots
Twitter: @ITSJPODirector
Facebook: www.facebook.com/USDOTResearch

Contact for CV Pilots Program:

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January 2016 Technical Assistance Webinars:

- 1/25/2016, 1:00 – 2:30 pm EST
  Preparing a Human Use Approval Summary for Connected Vehicle Deployments

- 1/27/2016, 12:30 – 2:00 pm EST
  Preparing a Training and Education Plan for Connected Vehicle Deployments

- 1/28/2016, 2:00 – 3:30 pm EST
  Utilizing the Open Source Application Development Portal for Connected Vehicle Deployments

Please visit the CV pilots website for the recording and the briefing material of the previous webinars.