



Breakout Summary and Workshop Wrap-Up

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Session 6-I: Building a Pilot Deployment Concept and Partnerships

- **Session Objective:**

- Gather feedback from stakeholders about recommended leaders and partnerships for a successful pilot deployment.

- **Activity Summary**

- Intro, Discussion, Example Pilot Deployment Walkthroughs

- **Key Findings**

- State Agencies need to lead deployments - they will be the operators of the infrastructure
- Community involvement
- OEMs may be leaders of safety applications
- Takes time to get partnership teams together
- Consider staged procurement and developing a draft RFP
- Or, staged effort may take too long – state and local agencies that are ready to put skin in the game want assurance of their investments



Session 6-II: Pilot Program Phases and Waves

- **Session Objective:**

- Engender stakeholder feedback on the proposed program structure and timing to ensure that the schedule is both practical but not too conservative.

- **Activity Summary**

- Intro, Survey Form, General Discussion

- **Key Findings**

- In general, employ System Engineering process
- Don't prescribe timeline for planning (size of the site and complexity of the proposal)
- Consider USDOT reporting and review requirements
- CV experience affects waves but does not necessarily affects timeline
- Data privacy, cyber security, and liability are critical elements but not significantly impact schedule
- Integration with existing operations



Session 6-III: Security Management and Certification

- **Session Objective:**

- Collect feedback on how USDOT can best help CV pilot sites incorporate Security Management and Certification Systems into the pilot tests.

- **Activity Summary**

- Intro, Discussion, Voting on Four Proposed SCMS Approaches

- **Key Findings**

- Should USDOT provide a working security design?
 - Consensus: **Yes, sites need this level of support.** Also, there should be commonality across the pilots. Some commented that some flexibility for innovative approaches should be allowed
- Consider specifying existing standards for physical security (e.g., FIPS-140 level 2); also must consider security interconnected legacy systems
- Are the goals of the CV pilots to test applications (only), security (only), or both in combination? This drives some of the SCMS answers
- Consider running a separate series of tests for alternative security approaches



Session 6-IV: Open Source

- **Session Objective:**

- Explore ideas on how Open Source applications can help the development and support of the CV pilot program.

- **Activity Summary**

- Intro, Voting Exercise, Discussion

- **Key Findings**

- Mobility and safety apps make most sense for open source
- Public (infrastructure-based) apps better suited for open source
- Basic libraries and toolkits more important than all software
- Documentation and test data important for all forms of open source code
- IP Rights approach needs flexibility to accommodate different approaches (commercial vs. research)



Session 7-I: Communications: Role of DSRC

- **Session Objective:**

- Collect feedback on the extent to which DSRC should be a key component of CV Pilot tests and what alternatives are being considered.

- **Activity Summary**

- Intro, Discussion, Exercise on Role of DSRC in Example Pilot Deployment Concepts

- **Key Findings**

- Varying views on keeping DSRC as a requirement: encourage but not require
- Safety requires DSRC, other apps should be able to use other methods if they meet requirements
- We want CV pilots to be test of DSRC channel utilization – will usage for mobility apps interfere with safety apps?
- DSRC is more than sending BSMs. Other apps use DSRC also
- We want to leverage data from vehicles beyond currently available commercial offerings



Session 7-II: Mobile and Carry-in Devices

- **Session Objective:**

- Engender stakeholder feedback on the utilization of vehicle devices and future enhancement with the increase of integrated vehicle devices.

- **Activity Summary**

- Intro, Matching Game, Questions and Discussions, Brainstorm
- 14 in person participants / 48 online

- **Key Findings**

- Challenges:

- Concern of driver distraction with mobile devices – need to be integrated (bluetooth)
- Text to speech/voice recognition is important
- For safety applications – Mobile and carry-in devices are more difficult
- Carry-in devices will fade away

- Most appropriate role:

- Smart phone can be gateway to making any vehicle a connected vehicle
- Vehicle can act as probes and give drivers information to make smart decisions



Session 7-III: Evaluation and Performance Measurement

- **Session Objective:**

- Solicit stakeholder input on:
 - Definition of successful CV pilot deployments
 - Motivators for encouraging adoption and continued deployment of connected vehicle technology and applications
 - Measurement of value of connected vehicle applications in concert with CV pilot deployment activities

- **Activity Summary**

- Discussion

- **Key Findings**

- Measure of successful CV Pilot Deployments include:
 - Interoperability with legacy systems and applications
 - Sustained return on investment
 - Clear value to the general public
- Key motivators to encourage adoption and deployment of CV:
 - Demonstrate benefits to broad group of stakeholders
 - Go to sites that have a clear need/problems
 - Creative approach required to incentivize new stakeholder groups (tolling, insurance)
- Assessment of application value:
 - Need to look at individual applications as well as synergistic bundles of applications



Session 7-IV: Open Data

- **Session Objective:**

- To explore ideas on how Open Data can be used to help the development and support of the CV pilot program

- **Activity Summary**

- Open Data Overview and Quiz, Priority Card Game, General Discussion

- **Key Findings**

- Data Quality & Latency were highest priority
 - Needed to test real-time applications
- Sanitize data at the source
- Private Sector needs incentive to share data in CV Pilots – ROI, Value Prop.
- Opt-in services could be possible for applications, but PII still needs to be preserved
- Standard data formats – we have time to develop standard data formats – tremendous benefit on the backend



Getting Ready for Pilot Deployments

- Get familiar with USDOT connected vehicle research products
- Attend upcoming stakeholder events
- 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



Upcoming Stakeholder Events

- Connected Vehicle 101 Workshops at ITS America State Chapter meetings:

Date	Event	Location	URL
Aug. 21	ITS Pennsylvania Annual Meeting	Philadelphia, PA	http://www.itspennsylvania.com/
Sep. 7	ITS World Congress	Detroit, MI	http://itsworldcongress.org/
Sep. 30	ITS Alaska Annual Meeting	Anchorage, AK	http://www.itsalaska.org/
Oct. 15	ITSCA Annual Meeting and Exhibition	Santa Clara, CA	http://www.itscalifornia.org/
Nov. 12	2014 ITS Texas Annual Meeting	Irving, TX	http://itstexas.org/

- T3 Webinars: http://www.pcb.its.dot.gov/t3_webinars.aspx

Date	Title	URL
May 14	Transit Safety and Mobility Applications in a Connected Vehicle World	http://www.pcb.its.dot.gov/t3/s140514_cv_transit_apps.aspx
May 22	National Connected Vehicle Field Infrastructure Footprint Analysis	http://www.pcb.its.dot.gov/t3/s140522_cv_footprint_analysis.asp



Upcoming Stakeholder Events

- Plug-Fests: <http://www.its.dot.gov/testbed/plugfests.htm#calendar>
 - Detroit Area: May 13-15, 2014
 - Palo Alto, CA : June 24-26, 2014
 - Detroit Area : August 5-7, 2014
 - Hackathon: Late 2014/January 2015, Novi, MI
- Regional CV Pilot Workshops (TBD)



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Thank You For Your Participation

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