

Information Architecture and Operational Concepts

Breakout Report-out

Topics Discussed

- Role of the Owner/Operator and Infrastructure?
 - Need for infrastructure?
 - Provision of infrastructure to incentivize automated operation and increased throughput, safety?
- Role of Communications
 - Autonomous vs. cooperative
 - OEMs not depending on V2X?
 - Benefits of cooperative operation for accelerating deployment, improving safety, enabling modes (platooning), moving infrastructure to the cloud

Framework

- Identify Infrastructure Owners/Players
- Consider Infrastructure by class/function
 - Freeways
 - Urban
 - Parking
 - Transit
 - CVO

Automated Vehicle Business Model Analysis

- Segment by type of owner-operator
- Two dimensional
 - what are needs of owner-operator?
 - ex: more throughput with same infrastructure footprint
 - what capabilities are enabled by automation?
- Play against one another to identify opportunities
- Monetize benefits and costs
 - revenue generation / cost avoidance
- Examples
 - premium services on tolled facilities
 - guaranteed drive time
 - automated parking
 - changes to urban form
 - platooned trucks on freeways
 - policy / operational issues

What Standards and Tools are Needed to Facilitate Deployment?

- Lane delineation
- Standards – MUTCD extension to AVs
- Interstate consistency of infrastructure (e.g., speed limit signage)
- Local infrastructure vs. cloud and wireless delivery
- SPaT
- Dynamic infrastructure: work zones
 - How to identify, communicate, adjust
 - Discontinuous automated operation?
- Urban: parking, pedestrians?

#3 Define a Logical Path to Deployment

- Intended to provide guidance to Transportation Executives to posture their organizations to leverage AV
 - How should an infrastructure owner plan (both short and long term) for AVO to leverage its benefits?
- What to deploy now vs later
 - Support / encourage early adoption / stimulate local deployment
 - Future proof investments (in policy, electronics, pavement)
 - Invest in tech xfers/info clearing house/access to test beds
- Articulate policy needs and considerations (for other to address)
- Balance of Policy/Pavement/Electronics Needs/Goals
- What are real-life field implications, lessons learned from early deployment and experience
- What is roadmap to implementation
 - As a function of market penetration
 - Within each use case (Freeways/ Urban/CVO/Transit)
 - As a function of technology maturity