Utah’s Approach to Deployment of Connected and Automated Vehicles

Blaine Leonard, P.E., F.ASCE
Technology & Innovation Engineer
Utah Department of Transportation
Deploy Available Technology Now

Redwood Road Connected Vehicle TSP Project

- DSRC on 24 intersections
- DSRC on 10 UTA buses
- Grant conditional priority when bus is behind schedule
- Goal to improve transit schedule reliability
- Operational since Nov 2017
- Results:
  - Schedule reliability improved
  - 3% average
  - Up to 6% during SB peak
Deploy Available Technology Now

Provo-Orem BRT Connected Vehicle TSP Project

- 10.5-mile Corridor
- DSRC on 47 Intersections
- DSRC on 25 Buses
- Operational on Dec 3, 2018

Snow Plow Pre-emption Project

- Salt Lake Valley: 5 Corridors
- 55 Additional Intersections
- 46 Snow Plows
- Operational by January 2019
Build for the Future

Connected Vehicle Data Ecosystem

- Manage all of the present and future Connected Vehicle data
  - Processing the data into actionable information
  - What to keep / What to discard / How long to store
  - Securing the data
  - Maintaining privacy
- Software applications
  - Roadside applications
  - On-board implementation
    - Pull vehicle data
    - Push information to vehicles
    - Work with automakers
- Expand hardware deployment
- Integrate with TOC
Demonstrate Potential / Interact with the Public

Automated Vehicle Shuttle Demonstration

▪ Deploy AV Shuttle in four to eight locations
  ▪ January – Sept 2019
▪ Joint UDOT / UTA Project
▪ Evaluate public responses / attitudes
▪ Broad discussion about vehicle autonomy
▪ Study potential uses and capabilities
  ▪ First mile – last mile solution
  ▪ Interaction with signals
Implement Forward-Thinking Policy

Autonomous Vehicle Legislation

- Legislation being drafted for 2019 session
  - Working with legislature and other interested / impacted parties
- Issues include:
  - Permission to operate on Utah roads
    - Need to clarify what is allowed
    - Testing and operation / with or without driver
  - Definitions of terms
    - Followed SAE definitions
  - Registration / Licensing / Insurance
  - Monitoring safe (or unsafe) behavior
  - Data access