CERV Session 7:
UDOT and Connected Vehicles

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Connected Vehicle Deployments

Benefits:

- Improved Safety / Fewer Crashes (long term)
  - Information & warnings to the driver / system
  - Attention to vulnerable road users
  - More efficient snow & ice removal
  - **Synergy** with automated vehicles / redundancy

- Fewer crashes yield less congestion

- More efficient transit operations (short term / day one)

- Improved data and analytics

UDOT
Keeping Utah Moving
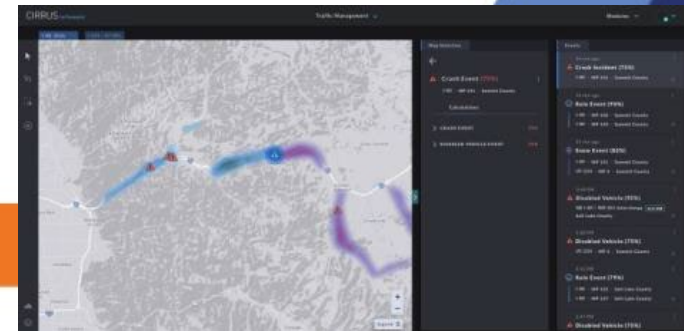
Connected Vehicle Deployments

Current Deployment:

- 338 Roadside Units
- 271 Equipped Vehicles

Applications:

- Transit Signal Priority
- Snowplow / Emergency Vehicle Preemption
- Vehicle Insights (weather / crash)
- Spot Weather Impact Warning
- Curve Speed Warning

Connected Vehicle Deployments – 2023/2024

Applications under development:

- Rural applications – intersection warning, variable speed limit

- Intersection safety – Bike/Ped warning

- Air Quality measurement / mitigation

Deployments

- 156 RSUs

- 317 OBUs
  - Buses, Plows, Freight Trucks, Fleet Vehicles

- Replace existing DSRC RSUs / OBUs
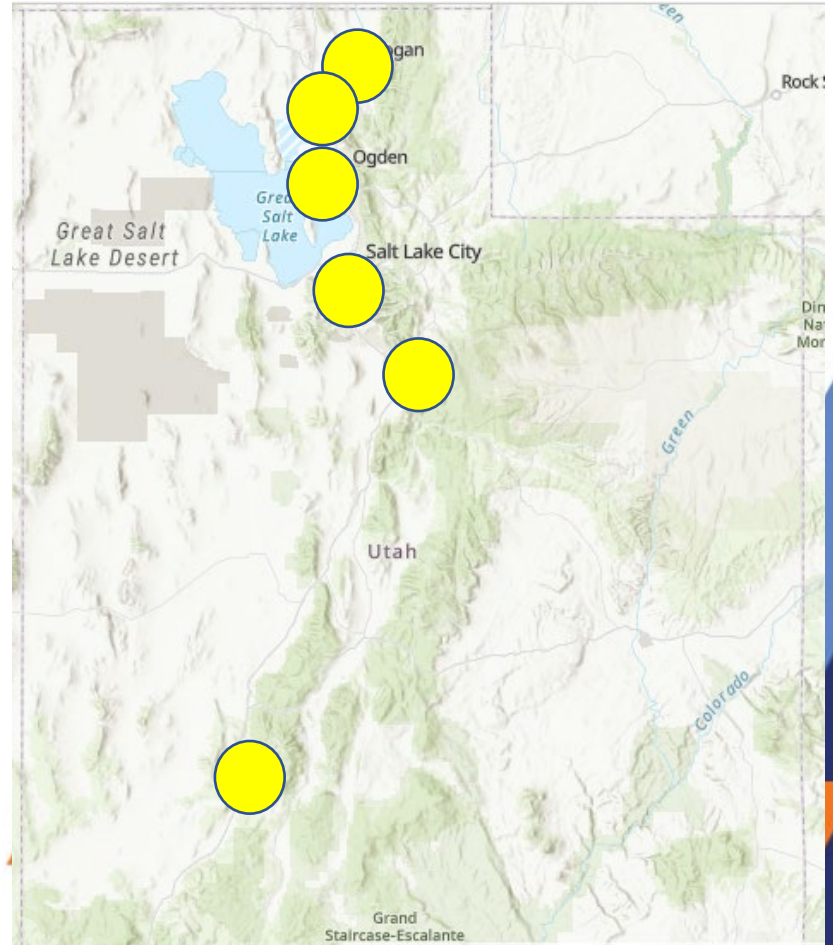
Building Trust with Automakers

Working with Automakers

- Ford, GM, Nissan
- Connected Intersections on SR-224
- Verify that our broadcasts are:
  - Accurate, Consistent, Reliable, Secured
- Based on:
  - ITE Connected Intersections Guidance Standard
  - SAE Standard for Roadside Units
- Building:
  - Verification process and test tools
  - Tools to verify consistent broadcasts
  - System for security certificate distribution from a common trust chain

Need OEM Participation to Achieve Safety

Static Data Collection Site (parking lot)

Existing RSUs (Dual Mode)
Existing RSUs with SPaT / MAP
Proposed RSUs (optional)