Automated Freeway Performance Measures

• Project Inception
  – Comparison of overall freeway performance
  – Objective data vs. anecdotal perception
  – Data driven decisions
UDOT’s Freeway Detection System

3,070 Detectors
94% Operational

Transuite
UDOT Traffic map, travel times, ramp meters

Iteris PeMS (Performance Management System)
Data cleaning, historical data aggregation & analysis

Center to Center Feed
Umbrella Traffic Performance Metrics Website

U DOT
Traffic
Monthly Report

Freeway Performance Metrics
Analyze and measure freeway traffic performance.

2015-6-10 17-24

Automated Traffic Signal Performance Measures
1639 Measured Traffic Signals

PEMS
Performance Measurement System

Traffic Stats
The Department has a variety of publications for traffic related information.

Signal Health
UDOT System Health Monitoring

UGATE
Provides spatial and non-spatial UDOT data.

Travel Wise
Frequent Reports

Zero Fatalities
Other Resources

http://udottraffic.utah.gov/performancemetrics/
Freeway Performance Metrics Website

http://udottraffic.utah.gov/freewayperformancemetrics/
Building Freeway Performance Measures

- Brainstorm –
  - What is needed
  - What are we trying to measure
  - What actions can we take from this metric
- Create a prototype
- Present to senior leadership
- Make adjustments
- Document process
- Allow inhouse software developers to use their creativity
Speed Report – Created with Adobe

Salt Lake County
Weekdays 5 to 6 pm
Mobility Cake

- Show the delay that can be attributed to the incidents, construction, and weather.
- Show where the delay is occurring on a corridor.
- Make assumptions that can be easily understood - don’t be a black box algorithm.
- Leverage existing databases and ITS infrastructure
1. Online
   - Speed Report
   - Travel Time

2. Staging
   - Mobility Cake
   - Traffic/Incident Time-Lapse
   - Reliability

3. Future
   - Delay
   - Volume-Balance
   - Ramp Meter Wait Time