UDOT Automated Freeway Performance Metrics
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Grant Farnsworth, PE
UDOT Traffic Mobility Engineer

Kelly Burns
Eric Rasband
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

Center to Center Feed

Iteris PeMS (Performance Management System)
Data cleaning, historical data aggregation & analysis
Umbrella Traffic Performance Metrics Website

http://udottraffic.utah.gov/performance.metrics/
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
Salt Lake County
Weekdays 5 to 6 pm
Automated Speed Report

Speed Report: I-15

Dates: 12/1/2015 - 12/31/2015
Time: 5:00 PM - 6:00 PM
Days: Tuesday, Wednesday, Thursday
Direction: Southbound

Milepost: 307.24 - 277.71

Graph showing speed distribution with color codes for different speeds.
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
Mobility Cake
UDOT Automated Performance Metrics

1. Online
   - Speed Report
   - Travel Time

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

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

Grant Farnsworth
gfarnsworth@utah.gov

udottraffic.utah.gov/performancemetrics