Automated Freeway Performance Measures

- **Project Inception**
  - Comparison of overall freeway performance
  - Objective data vs. anecdotal perception
  - Data driven decisions

[Image of a control room with multiple monitors showing traffic and surveillance videos.]
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/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
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.
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?

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