Safety and ITS: A Perfect Partnership

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Using existing data & tools in innovative ways

Look! Shiny!
Existing Data
Data Quality 6-Pack

- Timely
- Accurate
- Complete
- Consistent
- Integrated
- Accessible
Data Collection
# Accessible Analysis Tools

**Collision Date**

- Start Date/Time: [ ] [ ] 12:00 AM ▼

- End Date/Time: [ ] [ ] 12:00 AM ▼

- Day of Week: Sunday [ ] Monday [ ] Tuesday [ ] Wednesday [ ] Thursday [ ] Friday [ ] Saturday [ ]

- Time of Day From: [ ] Select Time of Day From ▼

- Time of Day To: [ ] Select Time of Day To ▼

**Collision Location**

- Roadway Type: [ ] Select a Roadway Type ▼

- Agency Type: [ ] Select an Agency Type ▼

- *You must select a County or City or check Statewide.*

- County: [ ] Select a County ▼

- City: [ ] Select a City ▼

- Statewide: [ ]

- Primary Trafficway: [ ]

- Secondary Trafficway: [ ]

- Block/Milepost Begin: [ ]

- Block/Milepost End: [ ]

- Block/Milepost: [ ]

- School Zone: [ ]

- Intersection Related: [ ]

[http://www.wsp.wa.gov/driver/collision-records](http://www.wsp.wa.gov/driver/collision-records)
New Data Sources
CREATING SAFER ROADS FOR EVERYONE
Real-time Detection
New Safety Data Layer: Close Calls
Automated Traffic Signal Performance Measures

Chart Selection

Metrics List

- Purdue Phase Termination
- Split Monitor
- Pedestrian Delay
- Preemption Details
- Turning Movement Counts
- Purdue Coordination Diagram
- Approach Volume
- Approach Delay
- Arrivals On Red
- Approach Speed
- Yellow and Red Actuations
- Purdue Split Failure

Yellow and Red Actuations
Y-axis Max
15

Severe Red Light Violations
4

- Red Light Violations
- Severe Red Light Violations
- Percent Red Light Violations
- Percent Severe Red Light Violations
- Average Time Red Light Violations
- Yellow Light Occurrences
- Percent Yellow Light Occurrences
- Average Time Yellow Occurrences
Integrating Other Datasets
Existing Tools
## Intersection Conflict Warning System

<table>
<thead>
<tr>
<th>ICWS Result</th>
<th>Severe Crashes CMF (% reduction)</th>
<th>Angle Crashes CMF (% reduction)</th>
<th>All Crashes CMF (% reduction)</th>
<th>Night Crashes CMF (% reduction)</th>
<th>Average B/C (Hi/Lo Range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-lane x 2-lane</td>
<td>0.70 (30%)</td>
<td>0.80 (20%)</td>
<td>0.73 (17%)</td>
<td>0.90 (10%)</td>
<td>27:1 (16:1-39:1)</td>
</tr>
<tr>
<td>4-lane x 2-lane</td>
<td>0.80 (20%)</td>
<td>0.85 (15%)</td>
<td>0.83 (17%)</td>
<td>0.97 (3%)</td>
<td>10:1 (6:1-14:1)</td>
</tr>
</tbody>
</table>
Humans are bad at driving
Only two eyes, both in front.
Neck rotation is terrible.

Computational power of meat.
Require sleep.
Consume substances & drive worse.
Expensive to repair.

Think they are good at driving.
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