ITS Planning at the Puget Sound Regional Council

2019 National Operations Center of Excellence
TSMO Regional and Local Peer Agency Exchange
Today’s Presentation

• Our Region/What We Do
• ITS Planning at PSRC
• Current Effort: ITS Inventory
Central Puget Sound

• 4.1 million people
• 2.2 million jobs
• 4 counties: King, Pierce, Snohomish and Kitsap
• 82 cities and towns
• Urban and rural
• 6,400 square miles
• 1,000 square miles urbanized
Puget Sound Regional Council

What we do

• Planning: growth, economy, transportation
• Federal transportation funds
• Regional data and forecasts
• Forum for regional issues

Our members

• Cities, Counties, Ports, Transit
• State Agencies and Tribal Governments
ITS Planning at PSRC

• Engaging with stakeholders on ITS topics and planning efforts through our Regional Traffic Operations Committee (RTOC)

• Maintaining the Regional ITS Architecture

• Incorporating ITS and emerging transportation technologies into our Regional Transportation Plan and VISION policy framework
ITS Inventory – Ongoing Effort

• Identified as a key effort via stakeholder feedback and a peer review of other MPOs

• Why is an ITS inventory important?
  
  o Understanding the current deployment of ITS assets is critical to understanding where need exists
  
  o Will provide consistent and uniform information about signals and ITS deployments across jurisdictions at a systemwide level
  
  o Will serve as a tool for regional partners to facilitate coordination and cross-jurisdictional collaboration on ITS efforts
ITS Inventory – Where Does This Fit?

Work with jurisdictions to develop a **regional inventory** of existing/on the ground ITS deployments

Conduct **supporting analyses** to identify issues, hotspots and better understand system performance

Regional ITS needs and gaps analysis

Develop **policy recommendations** for the next long range plan update
**ITS Inventory - Approach**

- Developed an online survey instrument with stakeholder feedback to facilitate data collection on:

<table>
<thead>
<tr>
<th>Traffic Signals</th>
<th>Additional ITS Deployments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where are they?</td>
<td>Where are they?</td>
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<tr>
<td>Optional data: Hardware, software, cabinet, communication systems</td>
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</tbody>
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- Provided jurisdictions with 7 weeks to complete the survey (December 10th – January 31st)
ITS Inventory – Preliminary Results

• Awaiting full dataset to complete analysis
  o Four jurisdictions accounting for ~1/3rd of all signals have not yet submitted

• Received data on 1,646 signals so far. Some preliminary findings from this dataset include:
  o 58% of signals are coordinated
  o 15% of signals have Transit Signal Priority
  o 48% of signals meet Accessible Pedestrian Standards
  o 11% of signals have Adaptive Signal Control

• Per the data received so far, 13 jurisdictions in the region have their own Traffic Management Centers
ITS Inventory – Preliminary Results

- Currently exploring options to visualize and communicate the results

Note: All exhibits are preliminary drafts and are for discussion purposes only.
What We’ve Learned

• Working with stakeholders to develop the survey framework, ensure the accuracy of technical details, and achieve buy-in was an essential part of the survey development process.

• When determining what to ask for, we had to consider the complexity of the data, the value it would provide, and the ability to obtain consistent datasets.

• Starting with a more limited geographic scope for the inventory (only signals along NHS) made the data collection process more manageable.
What We’ve Learned (cont.)

• Providing highly specific instructions and standardized templates were critical steps to ensuring data integration

• Targeted, persistent follow-up efforts and a high-touch approach have been necessary. We’ve also benefitted from making ourselves available to help jurisdictions throughout the data collection process
Challenges

• Developing a survey instrument that was both specific and flexible enough proved to be a significant challenge

• Obtaining a near-100% response rate (required for a comprehensive inventory such as this one) has been arduous and time-consuming

• Communicating the results effectively has required considerable exploration as we seek to address the questions below:
  
  o What is the appropriate scale and platform for visualizing the data?
  
  o How can summary statistics be conveyed in useful and meaningful ways?
Next Steps

• Follow-up with remaining jurisdictions and complete inventory

• Develop an approach to integrate inventory data and other datasets (e.g. congestion, transit network) to identify system-level needs and gaps

• Use results to inform and potentially develop policy recommendations for the next Regional Transportation Plan
Thank you.