What Is ITS?

• Stands for Intelligent Transportation Systems

• ITS includes communication and other technologies that improve traffic flow and enhance the safety, efficiency, and dependability of the transportation system

• Examples include signal coordination, transit signal priority, ramp metering, emergency vehicle preemption, etc.
Overview of 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, which highlights existing and planned ITS systems in the region

• Incorporating ITS and emerging transportation technologies into regional planning
Regional ITS/Signals Inventory

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

• Why is an ITS inventory important?
  
  o Understanding where ITS assets are is critical to understanding where need exists
  
  o Will provide a consistent regional dataset that will inform local and regional planning
  
  o Will help regional partners facilitate coordination and cross-jurisdictional collaboration on ITS efforts
Informing Future Planning Efforts

Develop a regional inventory of existing ITS

From recent RTP analysis, identify issues and better understand system performance

Regional ITS needs and gaps analysis

Inform local and regional planning
Approach

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

<table>
<thead>
<tr>
<th>Traffic Signals*</th>
<th>Additional ITS Assets</th>
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<tr>
<td>• Where are they?</td>
<td>• Where are they?</td>
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<tr>
<td>• Data required for various ITS features such as Transit Signal Priority and signal coordination</td>
<td>• Includes Traffic Management Centers, data collection tools, and Active Traffic Management</td>
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<td>• Optional data includes technical aspects such as hardware and communication systems</td>
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*Only collected data for traffic signals along the National Highway System
The National Highway System (NHS) includes all roads classified as Principal Arterials or above and some additional roads that connect to intermodal terminals.

In the central Puget Sound region there are ~6,850 intersections along the NHS

- ~750 intersecting with other NHS routes
- ~6,100 intersecting with non-NHS arterials, collectors and local roads
Survey Summary

- 100% response rate
- ~38% of NHS intersections are signalized (~2,600 signals)
- Majority of NHS-to-NHS intersections have traffic signals (~80%)

*Numbers are rounded to the nearest increment of 50*
Sample Regional Statistics*

- 13% of signals have Transit Signal Priority
- 77% of signals have Emergency Vehicle Preemption
- There are 13 Traffic Management Centers in the region, managing elements such as signals, CCTV cameras, and messaging signs

*Analysis only includes intersections and signals along the National Highway System
Visualizing the Data

- Snapshot on the right provides an example of the type of interactive map being considered
The ITS inventory is intended to be integrated with other data as part of a broader needs and gaps assessment.

Example on the right shows Pierce Transit’s bus network in Tacoma overlayed with Transit Signal Priority signals.
Next Steps

- Finalize dataset and continue exploring options for visualizing the data and enhancing overall usefulness for stakeholders

- Continue to analyze data, integrate with other datasets, and incorporate into ongoing and planned analyses

- Use findings to inform the next Regional Transportation Plan