



# Local Agency ITS Strategic Plans

PSRC Regional Traffic Operations Committee  
November 3<sup>rd</sup>, 2022

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## Outline

- Introduction
- Contents
- Using the Plan

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# INTRODUCTION

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Local Agency ITS Strategic Plans – Introduction

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## What is ITS?

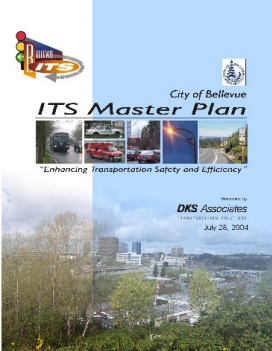
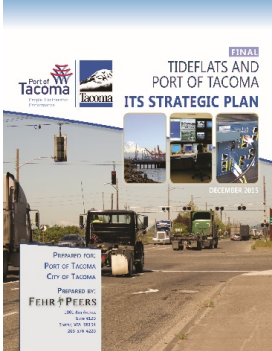




- Improve mobility without adding capacity
- Reduce environmental impacts
- Improve safety for all modes

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## ITS Plans Vary in Size and Scope

Local Agency	Multi-Agency	Regional	National
			

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## Why are ITS Plans important?

Creates a jurisdiction-wide ITS vision	Documents existing systems and processes	Identifies ways in which existing systems can be leveraged
Provides insight on what technologies are available	Prioritizes what and where to invest	Helps support grant development efforts

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# CONTENTS

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## What all is included in an ITS Plan?

```
graph LR; Vision[Goals, Objectives, User Needs, Workshops] --> ExistingConditions[Signals, Communications, Hardware/Software, Public Survey]; ExistingConditions --> TechnologyScan[National, Regional, Case Studies]; TechnologyScan --> ImplementationPlan[Quick Wins, Programmed Projects, Grant Support];
```

The diagram illustrates the sequential components of an ITS Plan:

- Vision**
  - Goals
  - Objectives
  - User Needs
  - Workshops
- Existing Conditions**
  - Signals
  - Communications
  - Hardware/Software
  - Public Survey
- Technology Scan**
  - National
  - Regional
  - Case Studies
- Implementation Plan**
  - Quick Wins
  - Programmed Projects
  - Grant Support

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# Vehicle Detection

- Detector types – active vs passive
- Detector placement
- Detector layout standardization

Detection is critical for adaptive signal and signal performance measures deployment

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# Signal Controllers

- Advanced Transportation Controller (ATC)
- High-resolution signal data
- Supports advanced signal operations
  - Adaptive signal Control (ASC)
  - Transit Signal Priority (TSP)
  - Variable lane use control

ASC/3 and Cobalt

All

M52 + LINUX, M62

970 ATC, 980 ATC,  
Various 2070s

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# CCTV Cameras

- Pan-tilt-zoom, 360, fish-eye
- Real-time monitoring
- Safety applications



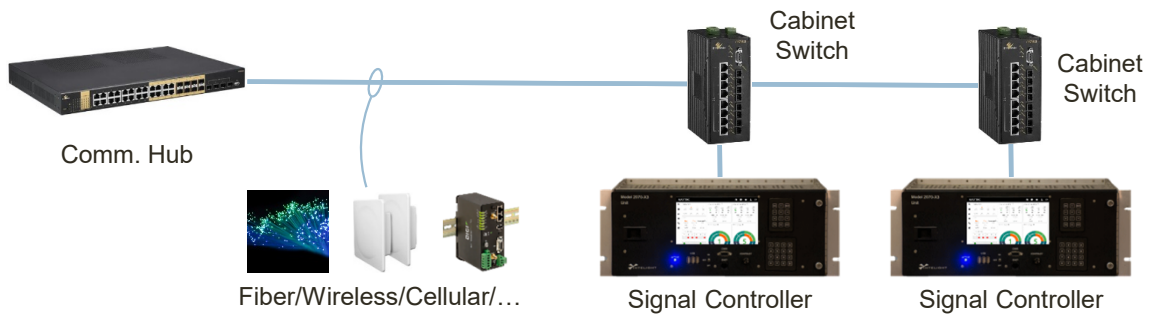
BriskSynergies



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# Network Communications



- Fiber network topology
- Bandwidth evaluation
- Franchise agreements with third parties



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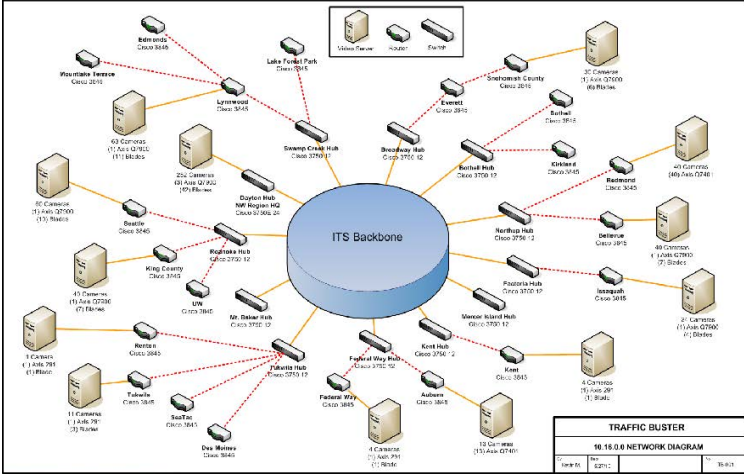


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# Traffic Management Centers

- Video wall monitoring
- Remote control
- Center-to-Center
- Open data portal

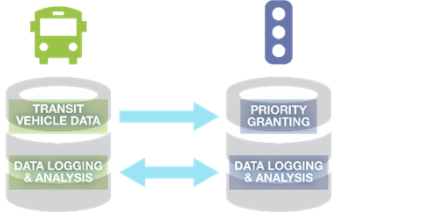
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# Public and Private Partnerships

### Transit + Traffic Example




**TRANSIT**

Cellular Communications




OBS Vehicle Data



TSP SYSTEM SERVER Data Processing


**TRAFFIC**

Interagency Fiber Communications




ATMS Data Processing



Traffic Fiber Communications





SIGNAL CONTROLLER Priority Granting

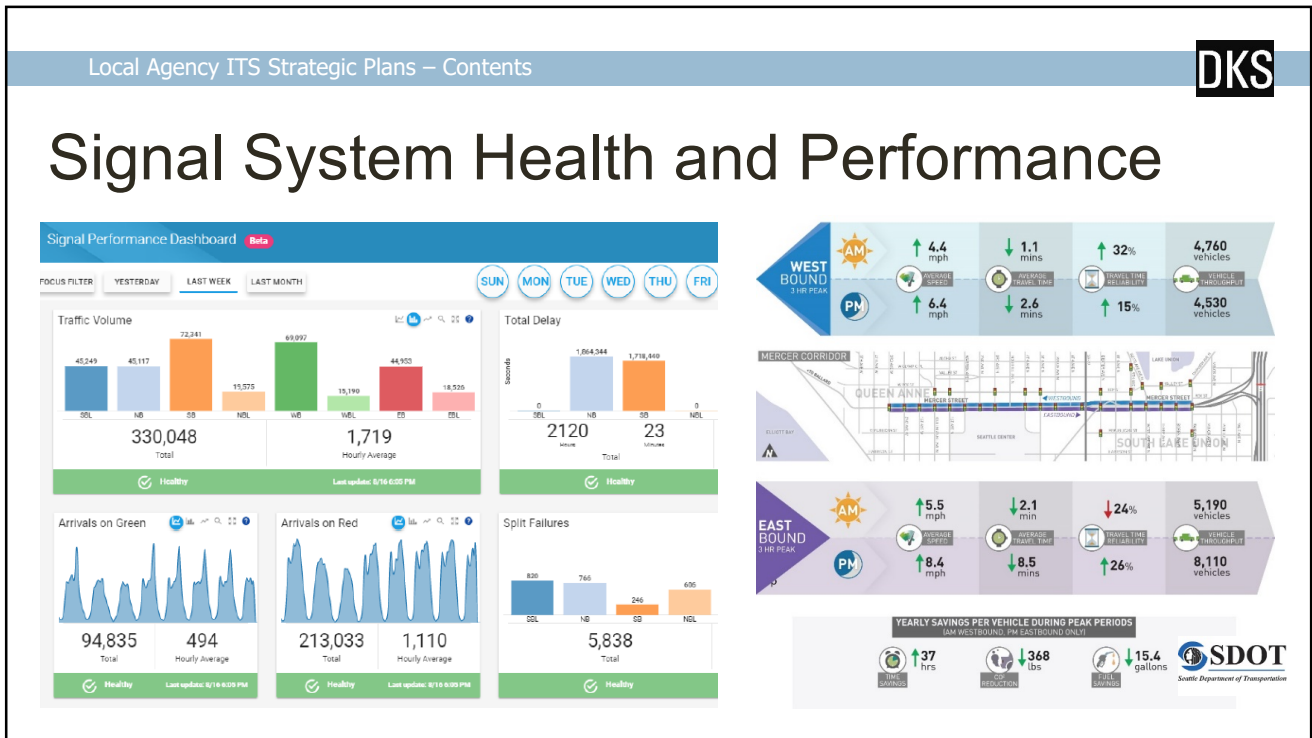
### Third-party Data Providers



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# Prioritize → Implement → Maintain

**Project Name:**  
**NE 124th St Corridor System Upgrades**  
(Between 100th Ave NE and 132nd Pl NE)

**Priority Ranking:**  
High

**Project Description & Needs:**  
The 124th St Corridor is a principal east-west arterial with average annual daily traffic of more than 30,000 vehicles per day. It provides for inter-city connectivity and has a full interchange with I-405. ITS systems (owned and operated by King County) currently exist on this corridor. The proposed ITS project makes recommendations for system upgrades along NE 124th St, between 100th Ave NE to 132nd Pl NE (Slater Ave NE), in order to ensure compatibility with the City's communication standards. The proposed upgrades improve access to HOV and the City of Redmond by reducing idling times along the corridor and improving signal operations. This project is found to be of a high priority based on the criteria used to rank the different proposed projects.

There are currently nine signalized intersections along the identified corridor. Three of which are operated by WSDOT (at 116th Ave NE, and I-405 Ramp), one is operated by King County (at Slater Ave NE), and the remaining five are owned and operated by the City (at 100th Ave NE, 113th Ave NE, 120th Pl NE, 124th Ave NE, 128th Ln NE).

The project will include five new controllers at the City owned intersections and one DMS (at Slater Ave NE intersection). The communication to the proposed City's Traffic Management Center will be via the City's existing fiber infrastructure. This project will require collaboration with WSDOT and King County whereby the information shared between the agencies will be used for signal timing plans and corridor coordination.

**Project Location Map:**

**Project Components:**

- 5 signal controller upgrades
- 1 DMS
- 5 Ethernet Switches

**Project Dependencies:**

- Implementation of TMC
- Communication link to TMC
- Coordination with WSDOT and King County

**Project Benefits:**

Safety	Capacity/Throughput	Benefit to Environment
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Estimated Project Cost (in 2008 \$):**  
\$49,600

The screenshot shows the 'City of Renton Maps of Your Community' interface. The map displays the NE 124th St Corridor with various transportation system layers overlaid, including traffic lights, streetlights, school beacons, signal flashers, and guardrails. The interface includes a search bar, a layer list, and navigation tools.

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# Final Thoughts

- **Performance** – intersection report cards
- **Capacity** – vehicle vs person throughput
- **Equity** – addressing who, not just the what
- Other Efforts and Opportunities
  - WSDOT Transportation Systems Management and Operations (TSMO)
  - IIJA – SMART, ATTAIN
  - C-V2X

**TSMO Toolbox**  
TO MANAGE AND OPERATE WSDOT'S TRANSPORTATION ASSETS

The diagram illustrates the TSMO Toolbox, which includes the following components:

- PLANNING AND POLICY DEVELOPMENT
- INTELLIGENT TRANSPORTATION SYSTEMS
- TRANSPORTATION DEMAND MANAGEMENT
- COOPERATIVE AUTOMATED TRANSPORTATION & TECHNOLOGY
- TRANSPORTATION OPERATIONS

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# Thank You!

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