Western States Regional Operations
Peer Exchange:
Performance Management

Evaluating the Status of Current Practice
Washington State Department of Transportation
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November 16, 2015
WSDOT Performance Management

Which performance metrics do we report on?

Who are the customers/stakeholders of the metrics we report on?

How are we preparing for MAP 21 requirements?

Any measures for internal use?

How does the level of reporting compare among the various TSMO areas (ex. incident response, mobility, signal operations, traffic management centers)?

How are performance goals set? Which ones? Describe the process of determining these goals? How are they tracked?

What decisions are made based on reported metrics?
WSDOT Performance Management: Current Efforts

- Mobility Performance Management Working Group
- AID Project – TSM&O Business Mapping
- Corridor Sketch Tool – Performance based planning
- Performance Analysis Tool
- Practical Solutions
- Context Classification System
## Mobility Performance Management Working Group

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<th>Goal</th>
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AID Project/TSM&O Business Process Mapping

Overview: Facilitate deployment of the practical solutions approach within transportation system development and management

Project Budget: $750,000 (FHWA AID Grant and Internal Funding)

Project Team: Consultant
  WSDOT Staff

Specific Goals:

• Map high level business process for transportation system development and management.
  – Develop a roadmap for priority improvements necessary for deploying practical solutions and, if underway, current initiatives addressing these improvements.

• Initiate knowledge architecture that identifies participants and responsibilities to support the business process.

• Develop an information architecture for data and information necessary to support and produced by the business process.
AID Project/TSM&O Business Process Mapping
Practical Solutions Components

Least Cost Planning
…an approach to making planning decisions that considers a variety of conceptual strategies to achieve the desired system performance targets for the least cost.

Practical Design
…an approach to making project decisions that focuses on the need for the project and looks for the lowest cost solutions.
1. Practical Solutions

...an approach to making planning decisions that considers a variety of conceptual strategies to achieve the desired system performance targets for the least cost.
Least Cost Planning Policy & Support

- Focuses on the **need** for a project
- Moves from a standards-based to performance-based approach
- Empowers planning staff to be innovative
- Supports planning staff through executive direction and process development
Best Practices of Least Cost Planning

• Develop comprehensive transportation modeling and evaluation techniques
• Forecast customer’s needs for transportation services
• Define goals for meeting customer’s transportation needs
• Develop a complete list of options
• Select the best mix of transportation options
• Develop an action plan
• Implement the action plan
• Evaluate the results
Corridor Sketch Planning Tool

Overview: Implement performance-based least cost planning

Project Budget: Internal Planning Department Effort

Project Team: WSDOT Planning and Traffic Operations Staff
Pilot projects

Specific Goals:
1. Capture and document consistent baseline information about each transportation corridor in the state to inform future investment decisions.
2. Establish performance expectations for individual corridors.
3. Integrate Practical Solutions at the planning level.
   - Maximize benefits at the lowest cost by optimizing the use of current capacity and efficient use of resources.
Welcome to the Corridor Sketch Database (08-25-2015)

Find Corridor (Browse Maps)

Corridor Information (by ID#)

Please document the existing Operational Strategies currently deployed within this corridor and identify which of these strategies are included in the State ITS Plan using the check boxes provided below. The Strategies identified within this corridor identified in the State ITS Plan are listed at the bottom of this worksheet. Please coordinate your efforts with your regional traffic engineers.

Operational Field Assessments and Low Cost Enhancements
Have you reviewed and captured the Operational Field Assessment results and strategy recommendations with Traffic Operations?

If you answered yes above, please explain.

Have you reviewed and captured recent and planned Low Cost Enhancements with Traffic Operations?

If you answered yes above, please explain.

Please use the check boxes provided to identify the Operational Strategies and Services within this Corridor that are "Currently Deployed" or included in the State ITS Plan.

- Fiber Optics
- Traffic Data Collection Systems
- Signal Coordination (Main System)
- Signal Coordination (Adjacent Corridors, Inc Local Network)
- Transit Signal Prioritization
- Closed Circuit Television Cameras (CCTV)
- Highway Advisory Radio (HAR)
- Incident Response
- Road and Weather Information Systems (RWIS)
- Wireless Communication Systems
- Tug Slope Information Systems (motorized)
- EMS Accommodations (OPTICON) (Fire, Police, Medical)
- static or active dynamic warning signing
- WIM or CVI/SN

Intelligent Transportation Systems (ITS)

What Needs to Change?
- *Databases
- *Connecting Washington
- *Study Info
- *MTP/RTP Strategies
- Completed Projects

Location

Map

Land Use

Current Function

Future Function

Modes

Operations

Demand Management

Vicinity Map (Required)

Double-click the box below to add a map or double-click the map to update or remove.
Drivenet - Performance Analysis Tool

Digital Roadway Interactive Visualization and Equation Network

Overview: Provide WSDOT new tools to examine roadway performance

Project Budget: $400,000 (SHRP2) & on-going internal funding

Project Team: Washington State Transportation Center (TRAC)
  - STARlab
  - WSDOT Staff

Specific Goals:
1. Coordinate software development effort within agency.
2. Create an automated, stable and reliable tool that can produce current Gray Notebook and Corridor Report reporting needs that are currently done manually.
3. Look at feasibility of tool producing other current or future reporting needs. (i.e. MAP21, Freight, corridor level)
4. Develop long term business plan establishing realistic expectations and development parameters paired with adequate funding/resources to support development.
Enterprise system that utilizes loop data combined with other data sources to produce Congestion Report and other performance measures focusing on RELIABILITY.

http://www.uwstarlab.org
Context Classification System - Performance in Context

Baseline Performance
System or Corridor Level Performance

Understand Context

Contextual Performance
Segment level performance

Performance Priorities
Identify trade-off potential

Possible Road Types
Mess around with the cross section, how can you best meet the various performance categories

Regulatory Performance
Footprint better understood - what other performance areas are impacted

Alternative Refinement, Evaluate Performance

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CONTINUOUS INPUTS

- Community, Partner, and Stakeholder Input
- Agency policy and guidance Input
- Funding, Permitting and Environmental Resource Agency Input

PLANNING PHASE

- Baseline Performance Needs Identified
- Existing and Future Land Use Characteristics
- Existing and Future Transportation Characteristics
- Context Classification
- Modal Compatibility Established (Design Users)
- Target Speed Established (Design Operating Speed)
- Contextual and Modal Performance Identified

ADVANCE PLANNING/PER DESIGN PHASE

- Suitable Road Types
- Regulatory Performance Identified
- Road Type Alternative Development
- Performance Trade-offs and Optimization
- Preferred Alternative

FINAL DESIGN PHASE

- Optimize preferred alternative and impact mitigation
- Prepare construction plans and final design documents
WSDOT Performance Management

Which performance metrics do we report on?

Who are the customers/stakeholders of the metrics we report on?

How are we preparing for MAP 21 requirements?

Any measures for internal use?

How does the level of reporting compare among the various TSMO areas (ex. incident response, mobility, signal operations, traffic management centers)?

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