

Resource Models for Practical Solutions at WSDOT

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Frances D. Harrison

December 2016



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Resource Models for Practical Solutions at WSDOT

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Washington State Department of Transportation

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December 2016

Deploying Practical Solutions Using Lean Techniques and Knowledge Management (PS AID Project)

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16. Abstract This document builds on the business process map and provides a set of resource models for each major process step. The purpose of the resource models is to identify the knowledge and information resources that each Practical Solutions process step requires. They define the major activities involved, the types of knowledge and information needed to perform these activities, and the information produced as a result of the activities. They also identify groups within WSDOT (Washington State Department of Transportation) and external to WSDOT that need to be involved in each step in various capacities.			
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Resource Models for Practical Solutions at WSDOT

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INTRODUCTION

BACKGROUND

WSDOT is in the process rolling out a “practical solutions” (PS) approach to transportation development. A PS approach emphasizes matching solutions to specific needs and contexts, with less reliance on one-size-fits-all, “cookbook” approaches. This approach elevates the importance of having the right people and groups involved in decision making and of having the right information to evaluate and tailor solutions to meet identified needs.

In 2015, WSDOT received a grant under FHWA’s Accelerated Innovation Deployment (AID) demonstration program for a project to apply lean techniques and knowledge management for deployment of practical solutions. Through this project, a high-level state map (see Figure 1) of the business process for managing and improving the multimodal transportation system under the PS approach has been developed.

DOCUMENT PURPOSE

This document builds on the business process map and provides a set of resource models for each major process step. The purpose of the resource models is to identify the knowledge and information resources that each PS process step requires. They define the major activities involved, the types of knowledge and information that are needed to perform these activities, and the information produced as a result of the activities. They also identify groups within WSDOT and external to WSDOT that need to be involved in each step in various capacities.

The resource models can be used in several ways. They can:

- Provide a common understanding of each PS process step;
- Improve understanding of what data and information is needed to support the business process to identify gaps and guide future information development initiatives and strategies;
- Improve understanding of where improvements to analytical capabilities and skill sets are needed;
- Identify where there are opportunities to consolidate currently disparate information resources and/or improve information access to meet common needs;
- Identify where there may be gaps in resourcing of different types of activities, and the implications of these gaps for WSDOT’s ability to realize their PS vision;
- Identify opportunities for streamlining and reduction of duplicative activities;
- Identify opportunities for strengthening connections between currently disparate activities;
- Identify needs for strengthening internal and external collaboration and knowledge sharing, through Communities of Practice or other mechanisms;
- Provide a basis for clarifying roles of different groups – to establish a common understanding regarding who is responsible, who must approve, who will provide support, who should be consulted, and who should be informed about different activities.

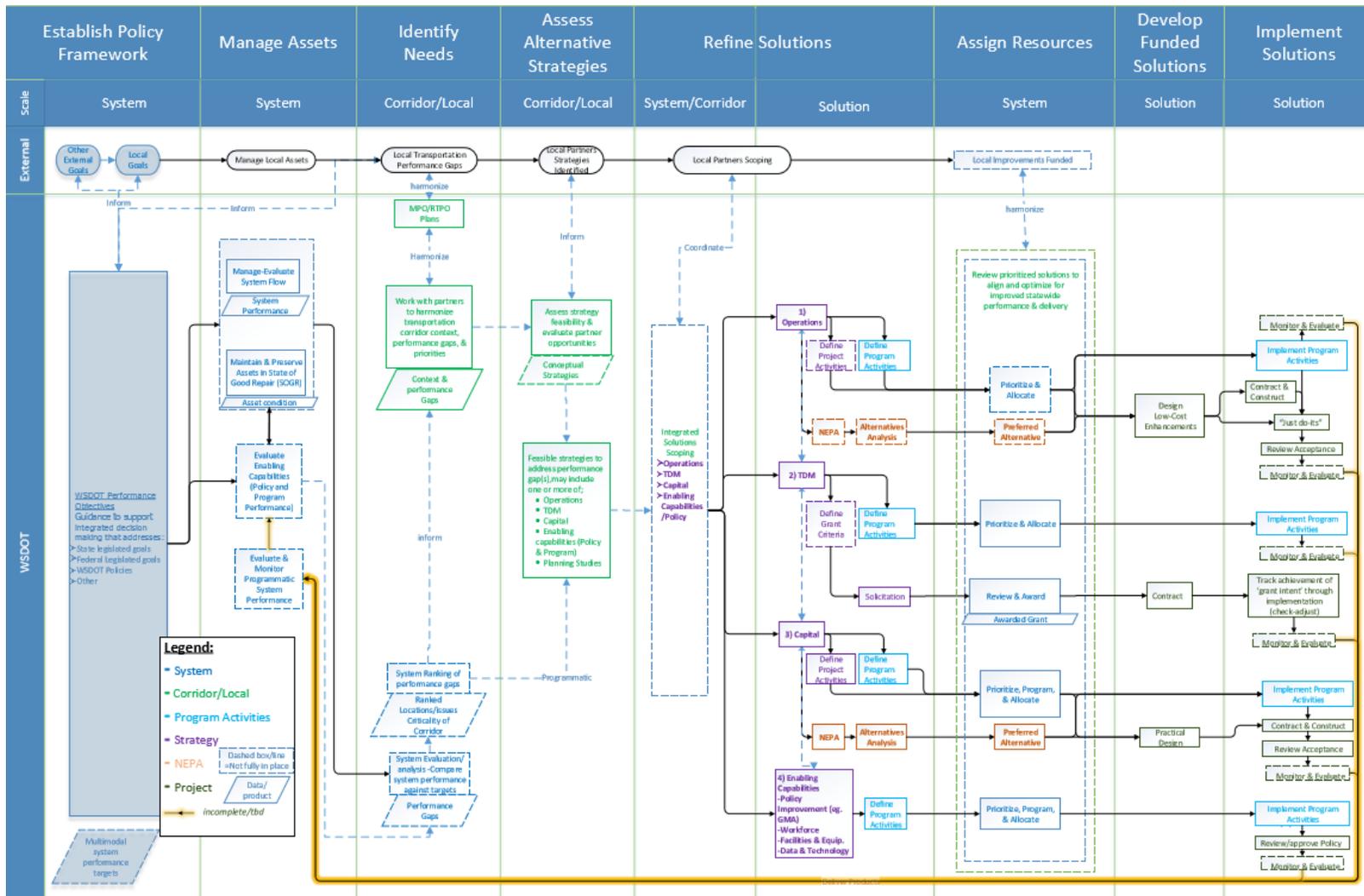


Figure 1. WSDOT Practical Solutions Process Map (as of October 2016)

One possible graphical illustration drawing upon information in the resource models is shown in figure 3 (next page.) This is a “knowledge tree” representation, in which each PS process step is a section of the tree trunk, and the branches are different types of information and knowledge used. The circles indicate which types of information and knowledge are needed by the different PR process steps.

STRUCTURE OF THE RESOURCE MODELS

Figure 2 illustrates a “business on a page” – with one block for each of the PS process steps. There is one model for each block shown, with the exception of the enabling capabilities, which were not included in the process mapping. However, references to improving WSDOT’s enabling capabilities can be found throughout the resource models.

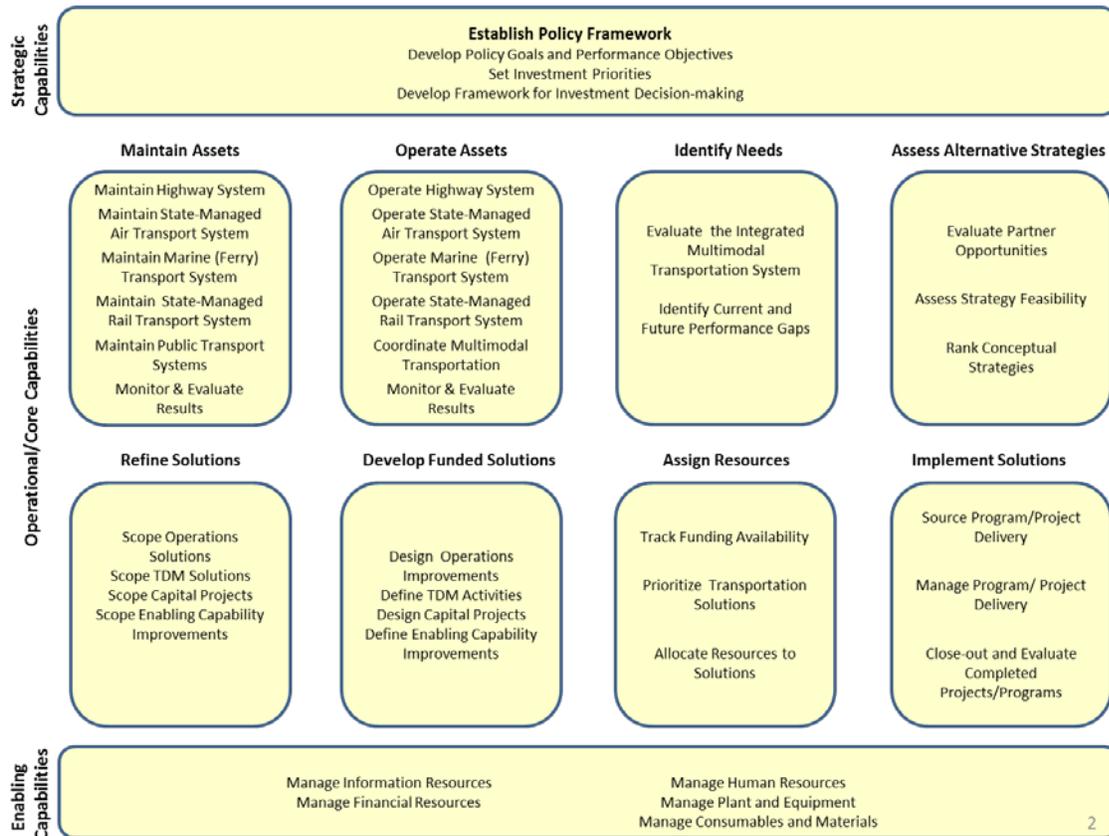


Figure 2. WSDOT Future “Business on a Page”

The structure for each of the resource models is shown in Figure 4.

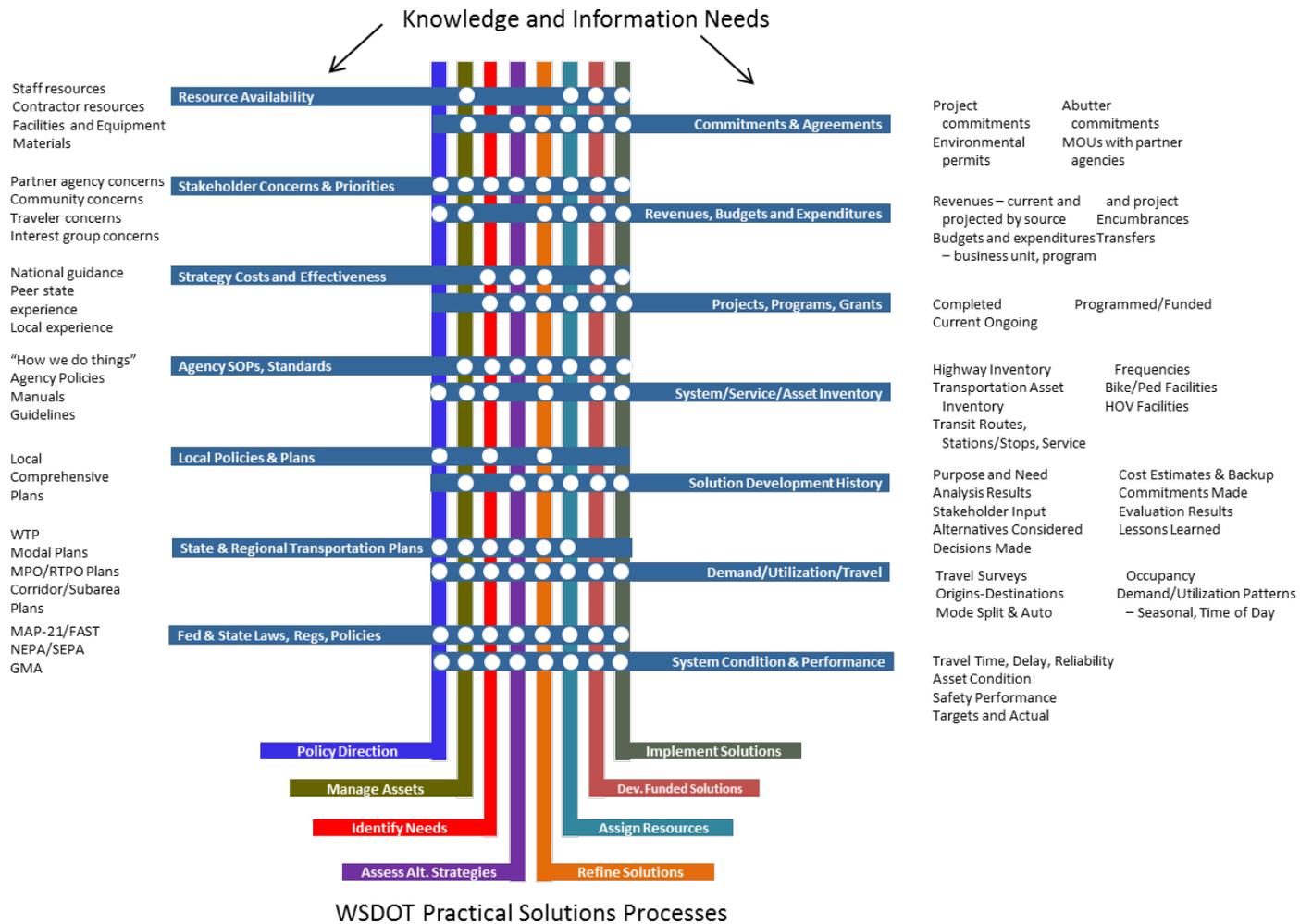


Figure 3. Knowledge Tree Representation of the Resource Models

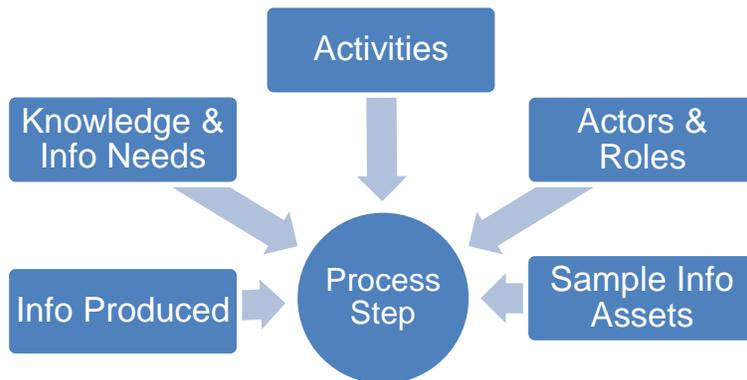


Figure 4. Resource Model Components

The **Process Step** component provides a succinct description of the process step and its purpose.

The **Activities** component describes the major types of activities involved in carrying out the process step.

The **Knowledge & Info Needs** component lists the types of information and expertise required to carry out the process step.

The **Info Produced** component summarizes the key information outputs from the process step.

The **Sample Info Assets** component lists specific types of documents and data that are used or produced by the process step.

The **Actors and Roles** component identifies groups internal to WSDOT as well as external organizations that participate in some way in the process step. A RASCI model designation is used to indicate the role of each group. The RASCI model distinguishes five roles: Responsible, Accountable, Supporting, Consulted and Informed. Note that typically RASCI models are used for more specific activities, in which there is only a single point of ownership defined for each activity. The models presented here can be viewed as a roll-up across the different specific activities involved in a process.

METHODOLOGY

Under the PS AID Project, a series of workshops were held over the summer and fall of 2015 to define Suppliers, Inputs, Products, Outputs and Customers (SIPOCs) for core functions (Goal Setting, Planning, Programming, Project Development, Construction, Maintenance and Operations). These workshops created an initial version of the process map shown in Figure 1. Based on the products of this workshop, an initial set of resource models were developed. A series of meetings with WSDOT functional representatives who were involved in the workshops were held to review and validate the models. In addition, several meetings were held to develop a detailed understanding of the Scoping and Design process at WSDOT and activities underway to develop new guidance for PS. These meetings resulted in updates to the original models.

Following this initial round of development, the models were adjusted to align to the most current version of the PS process map, which had evolved through multiple versions after several cycles of review and refinement. In addition, extensive updates were made based on a review of WSDOT manuals and intranet pages to identify current information resources and map them to process steps.

Functional leads were invited to a presentation on the revised resource models in October, 2016, and invited to submit written comments. Several sets of comments were received and incorporated to product the current version of the models.

CAVEATS

Several things should be kept in mind when reviewing and interpreting the models. First, they are at a very high level. Their purpose is to provide a structure that enables macro-level patterns to be identified rather than to define all of the details or identify every single data element, document, etc. that is needed.

Second, it is important to recognize that the process steps are intended to reflect a *future state* for WSDOT, which will take many years to achieve. In fact, it is likely that the vision for this future state will continue to evolve. Developing resource models for a future process presented challenges, given that it is difficult to rigorously validate information and knowledge needs for business processes that aren't yet in place. The information and knowledge resources and the roles identified for each step are based on *hypotheses* about what will be needed for the future and don't necessarily represent what exists today. However, the listings of specific information assets used and produced (manuals, applications, data sets) do represent current resources, providing a point of departure for considering how these may need to be expanded or consolidated to meet future needs.

RESOURCE MODELS

ESTABLISH POLICY FRAMEWORK

DESCRIPTION

Establish a framework for transportation system management and development including policy goals, objectives, and guidance for making tradeoffs across objectives.

PURPOSE

- Articulate WSDOT's responsibilities for the six legislated transportation goals and other federal and state transportation performance requirements (e.g. MAP-21/FAST)
- Set performance objectives for the state system for these goals (e.g., Target Zero for safety)
- Identify other non-transportation goals that are to be considered (e.g., sustainability)
- Provide guidance for investment trade-off decisions

RELATED STEPS

- This step provides the foundation for *Identify Needs* - identifying needs to be addressed through capital, maintenance, operational and organizational management activities.

ACTIVITIES INVOLVED

- Develop policy goals and performance objectives - work with stakeholders to develop a vision for the desired state of the system:
 - Analyze federal and state policy direction
 - Engage with stakeholders to understand concerns, goals, and priorities
 - Engage with stakeholders to develop or modify policy goals and performance objectives
- Develop framework for investment decision making - work with stakeholders to develop guidance for tradeoffs across competing objectives
 - Establish guidance for developing implementation strategies and investment trade-offs
 - Engage with stakeholders to identify synergies and conflicts
 - Engage with stakeholders to define respective responsibilities and coordination points
 - Engage with stakeholders to resolve conflicts and maximize synergies
 - Establish a framework for discussion with external partners on near term and long range needs

KNOWLEDGE AND INFORMATION USED OR NEEDED

- Federal and state laws and regulations – including legislated transportation goals
- Regional and local goals and policies related to transportation – system preservation, mobility, safety, environment, stewardship, economic vitality
- Stakeholder concerns, values and priorities
- Transportation system condition and performance trends and forecasts
- Population, economic, energy, and environmental trends and forecasts

- Transportation revenue trends and forecasts
- Industry best practices

INFORMATION PRODUCED

- WSDOT performance goals and objectives
- WSDOT performance targets
- WSDOT guidance for investment
- WSDOT high level strategies supporting performance goals and investment priorities
- WSDOT performance results

SPECIFIC INFORMATION ASSETS USED AND PRODUCED

Content Type	Examples	Used	Produced
Legislative, Regulatory and Compliance Documents	Federal Transportation Statutory Direction and Requirements - USC Title 23 and 49 MAP-21/FAST Act Washington State Code - Statutory Direction and Requirements (RCW Titles 46 and 47) OFM Baseline Report - Washington State Transportation Goals, Objectives and Performance Measures Washington State Growth Management Act	✓	
Guidelines and Policies	Washington State Energy Policy Washington State Climate Change Framework	✓	
Guidelines and Policies	WSDOT Executive Order 1082 – Business Practices for Moving Washington WSDOT Executive Order 1028 Context Sensitive Solutions WSDOT Executive Order 1090 – Moving Washington Forward: Practical Solutions WSDOT Executive Order 1096 – Agency Emphasis and Expectations		✓
Transportation Plans and Strategies	Regional Transportation Plans Resilient Washington State: A Framework for Minimizing Loss and Improving Statewide Recovery after an Earthquake	✓	
Transportation Plans and Strategies	WSDOT Community Engagement Plan Results WSDOT (Strategic Plan) Washington Transportation Plan	✓	✓

Content Type	Examples	Used	Produced
	Modal Plans: Passenger Rail Plan, Freight Mobility Plan, Highway System Plan, Bicycle Transportation and Pedestrian Walkways Plan, Aviation Plan, Ferry Plan, Public Transportation Plan Target Zero: Washington Strategic Highway Safety Plan Sustainable Transportation Action Plan Lifeline Corridor Initiative (Seismic Rehab)		
Reviews and Assessments	Gray Notebook – Performance Results	✓	✓
Reviews and Assessments	Washington State Biennial Transportation Attainment Report	✓	✓
Policy Studies	2006 Report to the Washington State Joint Transportation Committee: Alignment of Benchmarks and Goals for Washington State's Transportation System JTC study on the State Role in Public Transportation WTC Comprehensive Tolling Study JTC State Ferry System Finance Study	✓	
Data: Routes and Networks	System and Route Maps	✓	
Data – Transportation Safety	Fatality and Injury Trends	✓	
Data - Travel	Passenger Travel Trends by Mode Freight Movement Trends by Mode	✓	
Data - Modeling	Travel Forecasts Asset Condition Trends	✓	
Data - Financial	Revenue and Expenditure Trends by Source	✓	
Data – Socio-Economic	Population Trends and Forecasts Economic Trends and Forecasts	✓	

Content Type	Examples	Used	Produced
Data – Energy and Environment	Transportation Energy Consumption Trends Transportation GHG Emission Trends	✓	
Rosters and Directories	Stakeholder contact lists	✓	
Meeting Minutes	Stakeholder meeting minutes	✓	✓

ROLES AND RESPONSIBILITIES

The following high level “RASCI” chart shows roles played by different actors internal and external to WSDOT. Note that typically in a detailed decision or activity-level RASCI model, only one individual or office is *Accountable*. In this chart, several *Accountable* actors are identified because multiple decisions and activities are covered under this step.

Key:

- R = Responsible – responsible for action, owns the problem / project
- A = Accountable – approves or signs off on work before it is finalized
- S = Supports - provide resources or play a supporting role in implementation
- C = Consulted - has information and/or step necessary to complete the work
- I = Informed - must be notified of results, but need not be consulted

WSDOT (Internal) Roles and Responsibilities

Actor	R	A	S	C	I
Secretary’s Office	✓	✓			
Director, Policy & Strategy Development	✓	✓			
Assistant Secretary, Community & Economic Development	✓	✓			
Assistant Secretary, Financial Administration	✓	✓			
Assistant Secretary, Strategic, Enterprise & Employee Services	✓	✓			
Assistant Secretary, Toll Division	✓	✓			
Assistant Secretary, Engineering & Regional Operations	✓	✓			
Assistant Secretary, Washington State Ferries	✓	✓			
Accounting & Financial Services Division	✓		✓		
Aviation Division	✓		✓		
Capital Program Development & Management Division	✓		✓		
Construction Division – Materials	✓		✓		
Development Division - Environmental, Bridge & Structure	✓		✓		
Engineering Policy & Innovation Division	✓		✓		
Maintenance Operations Division	✓		✓		

Actor	R	A	S	C	I
Multimodal Planning Division	✓		✓		
Public Transportation Division	✓		✓		
Quality Assurance & Transportation System Safety Division	✓		✓		
Rail, Freight and Ports Division	✓		✓		
Strategic Assessment & Performance Analysis Division	✓		✓		
Traffic Operations Division	✓		✓		
WSF Terminal Engineering Division	✓		✓		
WSF Vessel Engineering & Maintenance Division	✓		✓		
WSF Communication Services & Planning Division	✓		✓		
WSF Safety Systems Division	✓		✓		
Regions			✓		

External Roles and Responsibilities

Actor	R	A	S	C	I
Legislature		✓	✓		✓
Washington Transportation Commission		✓			✓
Metropolitan Planning Organizations / Regional Transportation Planning Organizations, Tribal TPOs	✓		✓		
Governor			✓		✓
Freight Mobility Strategic Investment Board (FMSIB)			✓	✓	✓
WA Department of Commerce			✓	✓	✓
Other State Organizations (CRAB, TIB, WSP, Resource Agencies...)			✓	✓	
Tribal, local, regional governments			✓		
NGOs				✓	✓
Industry Groups				✓	✓
Washingtonians				✓	✓

R-Responsible A-Accountable S-Supporting C-Consulted I-Informed

RECOMMENDED GLOSSARY ENTRIES

- Investment Tradeoff
- Multimodal Transportation System
- Objective
- Partner
- Policy Direction

- Policy Goal
- Stakeholder
- Transportation System Performance

MANAGE ASSETS – OPERATE

[Note: the Manage Assets step is split into two parts – one for Operate and one for Maintain give the distinct knowledge and information needs associated with these two elements]

DESCRIPTION

Day to day operation of the multimodal transportation system – including highways, intercity rail, aviation, and ferry service. Includes both “normal” operations as well as operations during special events or emergency situations.

PURPOSE

- Optimize system flow for the traveling public and freight movement
- Manage program activities to support operation of the state transportation system

RELATED STEPS

This step is dependent on *Establish Policy Framework* to set expectations for system operations. It creates information about current operational performance used by *Identify Needs*.

ACTIVITIES INVOLVED

Operations activities can be broken down by transportation mode or system element, as each mode/element requires distinct types of knowledge:

- Operate highway system:
 - Monitor and manage traffic flow – through signal timing, ramp metering, variable speed limits, reversible lanes, hard shoulder running programs, etc.
 - Maintain and adjust operations of electrical and communication devices (signal systems, ramp meters, ITS devices, data and communications infrastructure)
 - Monitor and manage construction work zones
 - Provide snow and ice control
 - Respond to incidents and planned events¹
 - Coordinate emergency response
 - Provide traveler information
 - Manage and operate toll facilities
 - Administer commercial vehicle services
 - Constituent response – intake and tracking
- Operate state-managed air transport systems
- Operate marine transport (ferry) systems
- Operate state-managed rail transport systems
- Coordinate multimodal transportation - interactions and connections across transportation modes – examples of multimodal coordination include (but are not limited to):

¹ Incident management is included under Operate Assets but may also be included under Maintain Assets

- Integrated Corridor Management strategies to maximize capacity and coordinate across modes and jurisdictions during “normal” periods and during incidents and planned events.
- Transit signal priority
- Multi-modal traveler information
- Operate intermodal transfer facilities (ferry, bus stops, park and ride facilities, light rail, rest stops, ports, railroad crossings)
- Programs to encourage modal shifts
- Design and operational activities to accommodate non-motorized transportation (signal operations for pedestrian crossings, bike lanes, bike parking facilities, accommodation of bikes on transit and ferries, etc.)
- Monitor and Evaluate Results
 - Monitor system-level performance outcomes
 - Track and communicate progress towards achieving performance objectives
 - Monitor and evaluate results of operations program activities (from implement solutions)
 - Evaluate supporting/enabling capabilities for system operations

KNOWLEDGE AND INFORMATION USED OR NEEDED

- Why – purpose or trigger for action
 - National, state and regional guidance on transportation systems operations and management strategies
 - Assessments of current operational and safety issues and needs
 - Projected transportation system performance characteristics
 - Transportation system operations performance (congestion, service reliability, safety, etc.)
 - Transportation system utilization trends – traffic, ridership, etc.
 - Real time conditions from video, sensors, ITS devices, GPS devices
 - Problem/issue reports from incident patrols, WSP, traveling public
 - Weather conditions, both forecast and actual, for snow and ice control operations
- What – determining the right thing to do
 - Current transportation and communications infrastructure, equipment and operational characteristics (maps, schedules, asset inventories, facility plans, system design documents, etc.)
 - Highway operating restrictions (weight limits, vertical and horizontal clearances, seasonal closures, work zone closures)
 - Operational strategies currently in place and planned
 - Assessments of operational improvement benefit and cost
- How – determining how to get it done
 - Device/technology evaluations
 - Available resources for deployment (staff, equipment, contracts)
 - Available funding sources

- Budget and expenditure status for operations programs
- Who – identifying who needs to be involved
 - Operations roles and responsibilities by agency
 - Interagency agreements in place (e.g. for signal operation and maintenance, data sharing, Incident response)
 - Contracts in place
- When – identifying when an action should be taken
 - Planned projects that will result in changes to current transportation infrastructure and operational characteristics

INFORMATION PRODUCED

- Operations plans and strategies
- Project lists, work plans, budgets, spend plans
- Updated asset and equipment inventories
- Current congestion, incident, construction status (for 511 reporting)
- Incident reports
- Interagency Agreements
- Accomplishments/project delivery status
- Operations performance measurements
- Assessments of current operational and safety issues and needs
- Assessments of operational improvement benefit and cost

SPECIFIC INFORMATION ASSETS USED AND PRODUCED

Type	Examples	Input	Output
Legislative, Regulatory and Compliance Documents	FHWA and FTA Rules on ITS Standards and Architecture Conformity FHWA Work Zone Safety and Mobility Rule State Management Plan (for compliance with FTA program procedures)	✓	

Type	Examples	Input	Output
Guidelines and Policies	FHWA Regional ITS Architecture Guidance AASHTO NTIMC National Unified Goal, Sample Operating Guidelines ITE Operations Policies Joint Operations Policy Statement (JOPS) - WSDOT, WSP, Washington Fire Chiefs WSDOT Work Zone Traffic Control Guidelines for Maintenance Operations WSDOT VMS Overview, Guidance, Operations WSDOT Highway Advisor Radio Policy WSDOT Station Stop Policy Guidelines EO-1093 Tolling Roles and Responsibilities Snow and Ice Plan	✓	
Agreements and Contracts	Interagency Agreements	✓	✓
Specifications and Standards	AASHTO Green Book FHWA MUTCD and WSDOT MUTCD Updates National Electric Code (NFPA) ITS Standards – NTCIP, SAE ATIS, IEEE- DSRC/WAVE, ITE TMDD, ITE ATC, ITE ITS Cabinet, APTA TCIP, NEMA, etc. Light and Signal Standard Designs	✓	
Transportation Plans and Strategies	Results WSDOT (Strategic Plan) Washington Transportation Plan Modal Plans: Passenger Rail Plan, Freight Mobility Plan, Highway System Plan, Bicycle Transportation and Pedestrian Walkways Plan, Aviation Plan, Ferry Plan, Public Transportation Plan Target Zero: Washington Strategic Highway Safety Plan	✓	

Type	Examples	Input	Output
Transportation Plans and Strategies	Regional ITS Architecture Documents Traffic Operations Centers Strategic Plan Statewide ITS Plan ITS Communications & Wireless Technology Strategic Plan Traffic Operations Strategic Implementation Plan ITS System Engineering Documents (Concept of Operations, Requirements, Verification Plan, Validation Plan) Emergency Operations Plan Continuity of Operations Plan Programmed project lists Unfunded project lists Operational strategies planned (by location) Operational strategies in place (by location)	✓	✓
Reviews and Assessments	Gray Notebook Safety Assessments – Ferry Operational Field Assessments (sight distance, ITS solutions, etc.) - linked to corridor sketch (recently started) Technology evaluations Maintenance Accountability Process (MAP) performance assessments for Snow and Ice Control, Signals, ITS, and Highway Lighting	✓	✓
Design Plans	As-Built Plans (heights, setbacks, specific locations of assets) Shop Drawings Signal Timing Plans	✓	
Transportation Studies	Ferry Origin-Destination Studies Safety Studies (Crash Analysis) Signal warrant analysis Before/after studies Strategy benefit/cost evaluations	✓	✓
Budget and Finance Documents	Funding by source	✓	✓

Type	Examples	Input	Output
Budget and Finance Documents	Program budgets Spend plans Program expenditure status	✓	✓
Manuals	AASHTO Highway Safety Manual TRB Highway Capacity Manual TMC Standard Operating Procedures (e.g. for Amber Alerts) Traffic Manual Design Manual Maintenance Manual Vehicle Operators Manual Major Incident Tow (MIT) Program Handbook Traffic Analysis Procedures Manual Emergency Relief Procedures Manual State Managed Airport Handbook Aviation Operations Handbook General Airport Safety Plan General Aviation Security Guidelines	✓	
Data – Transportation Infrastructure	Road Inventory Data – LRS, geometrics, functional classification Transportation Asset inventory data – roadside features, P&R lots Bridge clearances and load restrictions Signal inventory and maintenance information (from the Signals information Maintenance Management System - SIMMS)	✓	
Data – Capital Assets	Vehicle and Equipment inventory data	✓	✓
Data – Real Time	Planned/scheduled lane/road closures Weather Data 511 Traffic Alerts – Congestion, Incidents, Construction Real-time video/camera feeds	✓	✓

Type	Examples	Input	Output
Data – Modeling	Travel Model inputs (e.g. Origin-Destination matrix, network specification) Travel model results (e.g. projected traffic/travel given growth, proposed improvements)	✓	✓
Data – Construction Projects	Traffic Project Scope, Location, Schedule, Status (low cost enhancement projects) - both completed and pending	✓	
Data – Travel	Service schedules Service reliability data Incident Data – type, time of day, response time, clearance time Ridership – ferry, bus, rail Traffic Counts – ADT, classification, turning movement, occupancy, pedestrian, gap, speed Travel time data (including probe data)	✓	✓
Data – Customer	Web site and traveler information usage statistics	✓	✓
Rosters and Directories	Operations personnel rosters	✓	✓
Issue Tracking Logs	Customer Requests/Complaints Reported issues (phone logs, email)	✓	✓
Technical Communications	Operations Expertise Communications (collaboration site posts, emails)		✓

ROLES AND RESPONSIBILITIES

The following high level “RASCI” chart shows roles played by different actors internal and external to WSDOT. Note that typically in a detailed decision or activity-level RASCI model, only one individual or office is *Accountable*. In this chart, several *Accountable* actors are identified because multiple decisions and activities are covered under this step.

Key:

- R = Responsible – responsible for action, owns the problem / project
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- I = Informed - must be notified of results, but need not be consulted

WSDOT (Internal) Roles and Responsibilities

Actor	R	A	S	C	I
Assistant Secretary, Engineering & Regional Operations		✓			
Assistant Secretary, Washington State Ferries (WSF)		✓			✓
Toll Division - Finance & Program Management		✓			
WSF Vessel Engineering & Maintenance Division		✓			
Development Division – Bridge & Structure	✓				
Regions	✓				
Incident Response Program Manager	✓				
Strategic Assessment & Performance Analysis Division	✓				✓
Communications Director			✓		
Aviation Division			✓		✓
Capital Program Development and Management Division			✓		✓
Construction Division			✓		✓
Maintenance Operations Division	✓	✓	✓		✓
Multimodal Planning Division			✓		✓
Rail, Freight and Ports Division			✓		✓
Toll Division			✓		✓
Design Offices			✓		✓
Project Offices			✓		
Traffic Management Centers, TMC Managers			✓	✓	✓
Operations SMEs	✓	✓	✓	✓	✓
Public Transportation Division				✓	✓
Quality Assurance & Transportation System Safety Division				✓	

External Roles and Responsibilities

Actor	R	A	S	C	I
Legislature			✓		✓
Other State Agencies (Fish & Wildlife, Ecology, OFM, DES, Commerce, AG, State Patrol)			✓		✓
Tribal, local, regional governments			✓		✓
Metropolitan Planning Organizations / Regional Transportation Planning Organizations, Tribal TPOs			✓		✓
Ports			✓		

Actor	R	A	S	C	I
Transit Agencies and Community Transportation Providers ²			✓		✓
Washington Traffic Incident Management Coalition			✓		
Traveling Public			✓		✓
Airport Users			✓		✓
Pilots			✓		✓
Ferry Passengers			✓		✓
ETL/HOT Lane Customers			✓		✓
Toll Customers			✓		✓
Industry: Private Developers, Freight Shippers, Goods Receivers, Carriers, Trucking Industry			✓		✓
FHWA			✓		✓
Other State DOTs, TRB, AASHTO, ITE, ITSA, AATSA, NTSB			✓		✓
Other State Organizations (CRAB, TIB, WSP, Resource Agencies...)				✓	
FAA					✓
Pedestrians & Cyclists					✓
Washingtonians					✓

R-Responsible A-Accountable S-Supporting C-Consulted I-Informed

RECOMMENDED GLOSSARY ENTRIES

- Active Traffic Management
- Accumulated Route Mileage (ARM)
- Arterial (manuals vs. state law)
- Connected Vehicles
- Corridor
- Collisions
- Crashes
- Duration
- Freeway
- Highway
- Incidents
- Integrated Corridor Management (ICM)

² This is a group of providers like Medicaid brokerages, Non-emergency Medical Transportation (NEMT), demand response in rural areas. The industry organization is the Community Transportation Association of America (CTAA). The local Chapter is the Community Transportation Association of the Northwest (CTA-NW).

- Intelligent Transportation Systems (ITS)
- ITS device
- Intensity
- Intermodal
- Intersection
- Level of Service
- Limited Access
- Mode
- Multilane
- Multimodal
- Mobility
- Needs Assessment
- Operational Field Assessment
- Operations
- Peak Period
- Planned Events
- Signal Coordination
- Special Events
- System Performance
- System Screening
- Strategic
- Traffic signal

MANAGE ASSETS - MAINTAIN

DESCRIPTION

Day to day maintenance of transportation assets in safe and serviceable condition. Note that planning, programming and execution of capital projects for asset preservation and renewal is covered within other steps.

PURPOSE

- Maintain transportation assets in safe and serviceable condition.

RELATED STEPS

- *Establish Policy Framework* sets expectations for maintenance (for example, establish maintenance level of service targets.)
- *Assign Resources* allocates resources for maintenance as well as capital projects that restore or improve asset condition and reduce need for reactive maintenance.
- Enabling capabilities closely related to Maintain Transportation Assets include *Manage Plant and Equipment* and *Manage Consumables and Materials*.

ACTIVITIES INVOLVED

Maintenance activities can be broken down by transportation mode or system element, as each mode/element requires distinct types of knowledge:

- Maintain highways – routine maintenance of pavement, pavement markings, rumble strips, bridges, tunnels, culverts, ditches, signs, sign structures, guardrail, roadside vegetation, and electrical and communications systems (highway lighting, ITS devices, traffic signal systems, fiber, radio towers, etc.)
- Maintain state-managed air transport systems – activities to maintain airport facilities and aircraft
- Maintain marine (ferry) transport systems – includes activities to maintain ferry terminals and vessels.
- Maintain state-managed rail transport systems –activities to maintain rail infrastructure and vehicles.
- Maintain public transport systems – includes activities to maintain intercity public transport infrastructure and vehicles, and support grantee agencies’ transit asset management practices.

Within each of these areas, maintenance activities include:

- Monitor asset inventory and condition
- Develop preventive maintenance schedules
- Prioritize and schedule planned and unplanned maintenance activities
- Execute and manage maintenance contracts
- Supervise maintenance activities
- Perform maintenance activities

- Track and report on maintenance activities

In addition, this step involves additional activities to monitor and evaluate performance results and supporting programs and policies:

- Monitor and Evaluate
 - Monitor system-Level performance outcomes
 - Track and communicate progress towards achieving performance objectives
 - Monitor and evaluate results of maintenance operations program activities (from *Implement Solutions*)
 - Evaluate supporting/enabling capabilities for system operations

KNOWLEDGE AND INFORMATION USED OR NEEDED

- Why – purpose or trigger for action
 - Audit findings
 - Agency level of service standards and targets
 - Maintenance level of service assessments (Maintenance Accountability Process)
 - Asset inspections/condition measurements
 - Maintenance issue reports
 - Asset risk register (future)
- What – determining the right thing to do
 - Federal and state environmental regulations and related permits (e.g. Endangered Species Act, Growth Management Act, Federal Clean Water Act - National Pollutant Discharge Elimination System)
 - Waterways and wetland locations
 - Sensitive habitats
 - Stormwater management plans
 - Manufacturer’s manuals
 - Design/as-built plans
 - Asset inventories (location, type, condition)
 - Routes/Guideway
 - Features (signs, barriers, drainage, etc.)
 - Structures
 - Vehicles (trains, buses, vessels, aircraft)
 - Asset Value
 - Depreciated Value
 - Replacement Cost
- How – determining how to get it done
 - Agency standard operating procedures
 - Agency and industry design standards
 - Maintenance Resource Availability
 - Labor

- Equipment
 - Materials
 - State workforce dollar limits
- Who – identifying who needs to be involved
 - Required skills (based on asset and activity)
 - Adopt-a Highway agreements, Roadside Enhancement permits
 - Contracts in place
 - Agreements (e.g. responsibilities for city streets that are part of the state highway system)
- When – identifying when an action should be taken
 - Planned projects that will result in changes to current transportation infrastructure
 - Approved budgets and cumulative expenditures
 - Maintenance Plans and Schedules
 - Preventive maintenance schedules
 - Work orders

INFORMATION PRODUCED

- Performance reports
- Updated asset inventory and condition information
 - Asset inventories
 - Features (signs, barriers, drainage, etc.)
 - Vehicles (trains, buses, vessels, aircraft)
 - Asset inspections/condition measurements
 - Maintenance level of service measurements
 - Maintenance issue reports
- Interagency agreements
- Project lists, work plans, budgets, spend plans
- Maintenance schedules and work orders
- Work Accomplishments and Resource Utilization

SPECIFIC INFORMATION ASSETS USED AND PRODUCED

Type	Examples	Used	Produced
Legislative, Regulatory and Compliance Documents	Federal and state environmental laws and regulations RCW 70.93 Waste Reduction RCW 47.40.100 State Adopt a Highway Program RCW 90.03.525 Storm Water Control Facilities	✓	

Type	Examples	Used	Produced
	RCW 47.28.030 Contracts State Forces Monetary Limits RCW 47.24 City Streets as Part of State Highways		
Budget and Finance Documents	Biennial Budget Request and Decision Package Maintenance and Operations Budgets	✓	✓
Budget and Finance Documents	Capital Program	✓	
Procurement Documents	Vehicle Contract List Various Commodity (i.e. salt, paint, etc.) Contracts	✓	
Agreements and Contracts	Permits and Agreements (Adopt-A-Highway, Roadside Enhancement, Utilities, Stormwater, Drainage, etc.) Collective Bargaining Agreements	✓	✓
Human Resource Documents	Workforce Information (staff by classification)	✓	
Guidelines and Policies	Work Zone Traffic Control Guidelines for Maintenance Operations (M5544) Endangered Species Act (ESA) Guidelines Roadside Vegetation Management Plans Maintenance Environmental Compliance Assurance Process (ECAP) Asset Inspection Checklists	✓	
Plans and Strategies	Maintenance Accountability Process (MAP) Targets WSDOT Sustainable Transportation	✓	✓
Transportation Plans and Strategies	Roadside Classification Plan Freight Plan Bike/Ped Plan Human Service Transport Commute Trip Reduction Ferry Long Range Plan Aviation System Plan Rail Plan (ranked list of needs) Service development plan	✓	

Type	Examples	Used	Produced
	Fleet management plan ITS Plan Vegetation Management Plans Annual Snow and Ice Plans		
Specifications and Standards	Equipment Contract Specifications (TEF) MUTCD and WSDOT Updates	✓	
Reviews and Assessments	Nighttime sign and pavement marking reviews Maintenance Accountability Process (MAP) reports Biological Assessments	✓	✓
Permits	Environmental Permit Applications NPDES Permits Hydraulic Project Approvals (HPA) Regional Road Maintenance Program (RRMP)	✓	
Design Plans	As-Built Plans	✓	
Manuals	Maintenance Manual Traffic Manual Field Data Collection Manuals Sign Fabrication Manual Traffic Sign Management System User Manual Vehicle Operators Manual Safety Procedures and Guidelines Manual Environmental Procedures Manual Asset Owners' Manuals (future)	✓	
Data – Transportation Infrastructure	Highway Inventory Airport Master Plans, Layout Plans Facilities Inventory	✓	
Data – Transportation Infrastructure	Bridge Inventory and Condition Data Bridge Inspection Reports Pavement Inventory and Condition Data Roadside Features Inventory Data Traffic Signals Inventory Data	✓	✓

Type	Examples	Used	Produced
	Traffic Signs Inventory Data Sign Condition Data Fleet Inventory Data Culvert Inventory Ferry Inventory Maintenance Accountability Process (MAP) Results		
Data – Transportation Service Vehicles	Aircraft Inventory Vessel Inventory Bus Inventory Locomotive Inventory	✓	✓
Data – Real Time	Weather Incidents Real time winter maintenance vehicle and materials tracking information	✓	
Data – Capital Assets	Equipment/Fleet Inventory (TEF) Equipment Specifications Data (PES)	✓	✓
Data – Consumables	Materials Inventory Fuel Consumption Records Materials for new signs	✓	✓
Data – Maintenance Work Planning and Tracking	Maintenance Work Orders Maintenance Work Schedules Maintenance Work Accomplishments Maintenance Costs by Activity Adopt A Highway Activity Reports Highway Activity Tracking System (HATS) Signals information Maintenance Management System (SiMMS) Maintenance Productivity Enhancement Tool (MPET) Traffic Sign Management System (TSMS) Skipline	✓	✓
Data - Financial	Timesheet Information Financial transaction information (from TRAINS)	✓	✓

Type	Examples	Used	Produced
Rosters and Directories	Email directories Adopt-A-Highway Sponsor List	✓	✓
Newsletters and Articles	Adopt-A-Highway Newsletter		✓

ROLES AND RESPONSIBILITIES

The following high level “RASCI” chart shows roles played by different actors internal and external to WSDOT. Note that typically in a detailed decision or activity-level RASCI model, only one individual or office is *Accountable*. In this chart, several *Accountable* actors are identified because multiple decisions and activities are covered under this step.

Key:

- R = Responsible – responsible for action, owns the problem / project
- A = Accountable – approves or signs off on work before it is finalized
- S = Supports - provide resources or play a supporting role in implementation
- C = Consulted - has information and/or step necessary to complete the work
- I = Informed - must be notified of results, but need not be consulted

WSDOT (Internal) Roles and Responsibilities

Actor	R	A	S	C	I
Assistant Secretary, Engineering & Regional Operations		✓			
Assistant Secretary, Washington State Ferries		✓			
Aviation Division		✓			
Development Division – Bridge & Structure	✓	✓			
Maintenance Operations Division	✓	✓	✓		
WSF Terminal Engineering Division		✓			
WSF Vessel Engineering & Maintenance		✓			
Toll Division - Finance & Program Management	✓				
Regions	✓				
Strategic Assessment & Performance Analysis Division	✓				✓
Budget & Financial Analysis Division			✓		✓
Capital Program Development and Management Division			✓		✓
Construction Division			✓		
Development Division			✓		
Rail, Freight and Ports Division			✓		
Public Transportation Division			✓		

Actor	R	A	S	C	I
WSF Finance & Administration Division			✓		
Field Maintenance Crews			✓		✓
Craftsmen: electrical, carpenter, sheet metal, weld, machinists, etc.			✓		
Asset Managers			✓		✓
Multimodal Planning Division					✓
Quality Assurance & Transportation System Safety Division					✓
Risk Management and Legal Services Division - Torts Claims & Records Management					✓
Traffic Operations Division		✓	✓	✓	✓

External Roles and Responsibilities

Actor	R	A	S	C	I
Governor			✓		✓
Legislature			✓		✓
Environmental resource agencies			✓		
Abutters, Neighbors			✓		
Business/Industry			✓		✓
Contractors			✓		✓
Material and equipment vendors			✓		
Environmental Groups			✓		
Traveling Public (all modes)			✓		
Truckers, freight haulers			✓		
Other states, outside experts			✓		✓
Washingtonians					✓
Other State Organizations (CRAB, TIB, WSP, Resource Agencies...)					✓

R-Responsible A-Accountable S-Supporting C-Consulted I-Informed

RECOMMENDED GLOSSARY ENTRIES

- Maintenance Work Accomplishment
- Manual on Uniform Traffic Control Devices (MUTCD)
- Preservation
- Preventive Maintenance
- Responsive Maintenance
- Routine Maintenance

IDENTIFY NEEDS

DESCRIPTION

Evaluate the integrated multimodal transportation system - work with stakeholders to review and evaluate how the current system is operating with respect to stated performance objectives.

PURPOSE

- Obtain a comprehensive, objective understanding of performance gaps in order to provide the foundation for development of strategies for improvement.

RELATED STEPS

This step is dependent on *Establish Policy Framework* – which establishes performance objectives that provide the basis for assessment of transportation needs and performance gaps. It constrains *Assess Alternative Strategies* – since alternative strategies must respond specifically to the needs that have been identified. It is informed by feedback from *Manage Assets*. It also informs several other steps:

- *Refine Solutions* and *Develop Funded Solutions* – needs provide the basis for scoping and design of solutions
- *Assign Resources* – the nature of the performance gaps identified may be used to identify appropriate funding sources. The extent of the performance gaps identified may be used to prioritize solutions for funding.
- *Implement Solutions* – completed solutions are evaluated to determine whether it addressed the identified needs.

ACTIVITIES INVOLVED

- Evaluate the integrated multimodal transportation system
 - Compile and review data on current transportation system performance (condition, safety, mobility, reliability, accessibility) and analyze economic, environmental and social factors impacted by transportation
 - Work with stakeholders to review and evaluate how the current system is operating with respect to goals and targets for mobility, accessibility, sustainability, safety and economic development:
 - Understand stakeholder perspectives on transportation system performance and related factors
 - Analyze transportation system condition and performance
 - Perform forecasting to understand future emerging needs
- Identify current and potential future gaps – where performance is projected to be below established thresholds
 - Consult with local, regional and modal partners to understand their performance objectives and perspectives on transportation system performance and related factors and “harmonize” understanding of needs

- Review existing WSDOT plans and programs to determine what needs are slated to be addressed
- Screen performance gaps based on criticality

KNOWLEDGE AND INFORMATION USED OR NEEDED

- Why – basis for identifying the need
 - Documented policy goals and objectives
 - Established performance targets or thresholds
- What – understanding the nature of the need
 - Prior (older) plans and studies that documented needs
 - Current data on system condition and performance – including asset condition, congestion, travel time, accessibility, safety, etc. – what
 - Existing programmed projects that may improve system conditions and performance – what to do
- How – determining how to identify or estimate the need
 - Available data required to establish need – e.g. land use, function, demand/use
 - Available tools for forecasting
- When – understanding when the need will occur
 - Forecasts of future system condition and performance
- Who – identifying whose input should be considered
 - Documented stakeholder/community input
 - Stakeholder contact lists

INFORMATION PRODUCED

- Summary of assets and services performing below established performance thresholds
- Corridor Sketches
- Planning Studies
- Media releases
- Outreach materials

SPECIFIC INFORMATION ASSETS USED AND PRODUCED

Type	Examples	Used	Produced
Transportation Plans and Strategies (WSDOT)	Washington Transportation Plan Highway System Plan Freight Plan Bike/Ped Plan Ferry Long Range Plan Human Services Transport Plan Public Transportation Plan Rail Plan WTC Rail Capacity and System Needs Study Rail Service Development Plan Rail Fleet Management Plan Target Zero Plan Scenic Byways Corridor Management Plans CPDM Investment Plans (for different program categories) Transportation Asset Management Plan (future) WSDOT Urban Areas Congestion Relief Analysis Freight and Goods Transportation System Update WSDOT Research Report: Defining the Washington State Truck Intermodal Network	✓	✓
Transportation Plans and Strategies (External)	National and State Policy Documents (goals and performance objectives) Local Comprehensive Plans Subarea Plans Regional and Metropolitan Transportation Plans Road Safety Assessment Guidelines	✓	
Budget and Finance Documents	Capital Program/STIP/TIP Priority Array Tracking System (PATS)	✓	✓
Transportation Studies	Corridor/Route/Subarea Studies	✓	✓

Type	Examples	Used	Produced
Data – Transportation Infrastructure	Pavement Condition Data Bridge Condition Data Bridge Inspection Reports	✓	
Data – Safety	CrashData	✓	
Data – Modeling	Modeling Results – MPOs, WSDOT		✓
Data – Socio-Economic	Demographics Data	✓	
Data – Energy and Environment	Land Use Data Environmental Data	✓	

ROLES AND RESPONSIBILITIES

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WSDOT (Internal) Roles and Responsibilities

Actor	R	A	S	C	I
Assistant Secretary, Community & Economic Development		✓			
Washington State Ferries (WSF)		✓			
Multimodal Planning Division	✓				
WSF Terminal Engineering Division	✓				
WSF Vessel Engineering & Maintenance	✓				
Secretary’s Office			✓		
Aviation Division			✓		
Capital Program Development & Management Division			✓		✓
Development Division			✓		

Actor	R	A	S	C	I
Development Division - Bridge & Structures Office			✓		
Local Programs Division			✓		
Maintenance Operations Division			✓		
Public Transportation Division (including Bike Coordinator)			✓		
Rail, Freight and Ports Division			✓		
Materials Lab			✓		
Regions - Program Management			✓		
Regions - Environmental			✓		
Washington State Transportation Center (TRAC)			✓		
Tribal Relations Liaison				✓	
Engineering Policy and Innovation Division				✓	
Quality Assurance & Transportation System Safety Division				✓	
Traffic Operations Division	✓	✓	✓	✓	✓
Environmental Services Office				✓	
Regions – Design					✓

External Roles and Responsibilities

Actor	R	A	S	C	I
Tribal, local, regional governments				✓	✓
Metropolitan Planning Organizations/Regional Transportation Planning Organizations, Tribal TPOs	✓				✓
Other State Organizations (CRAB, TIB, WSP, Resource Agencies...)				✓	
Washington State Dept. of Commerce			✓		
Washington State Patrol Commercial Vehicle Enforcement Division			✓		
Washingtonians				✓	
Transport Canada, Canada Border Services Agency			✓		
Ports			✓		
US Army Corps of Engineers			✓		
US Census Bureau			✓		
Industry: Private Developers, Freight Shippers, Goods Receivers, Carriers, Trucking Industry				✓	
NGOs				✓	

R-Responsible A-Accountable S-Supporting C-Consulted I-Informed

RECOMMENDED GLOSSARY ENTRIES

- Benefit Cost Analysis
- Capital Program
- Comprehensive Plan
- Corridor Study
- Goal
- Investment Plan
- Least Cost Planning
- Need
- Objective
- Performance gap
- Performance target
- Performance threshold
- Priority Array
- Subarea Plan
- State Transportation Improvement Program (STIP)
- Transportation Plan

ASSESS ALTERNATIVE STRATEGIES

DESCRIPTION

Evaluation of alternative ways of addressing identified needs, and select the lowest cost feasible strategy. This is a filtering process that results in an identification of a preferred strategy. The preferred strategy may consist of one or more solutions to be undertaken over a defined time horizon (sequentially or in parallel), by WSDOT and/or partner agencies. Operations and demand management options are to be considered prior to capital project solutions.

PURPOSE

Consider a wide range of strategies to address a given set of needs in order to address identified needs at the lowest cost.

RELATED STEPS

This step is dependent on *Identify Needs* – which establishes the performance gaps to be addressed through improvement strategies. It constrains *Refine Solutions* – since the process of refining solutions begins with those that were included within the preferred strategy.

ACTIVITIES INVOLVED

- Evaluate Partner Opportunities
 - Consult with partner agencies to identify opportunities for collaborative efforts
 - Identify planning efforts or studies that address information and policy gaps
- Assess Strategy Feasibility
 - Conduct a root cause analysis for the identified needs
 - Identify and assess feasibility and efficacy of demand management strategies
 - Evaluate transit service improvements, employer-based commute trip reduction programs, park and ride lot expansion
 - Identify and assess feasibility and efficacy of enabling capabilities
 - Evaluate policy or programmatic changes
 - Identify and assess feasibility and efficacy of operational strategies
 - Evaluate: signal timing optimization, ramp metering, channelization, acquisition of access rights, etc.
 - Identify and assess feasibility and efficacy of capacity expansion strategies
 - Perform modeling and analysis to quantify potential impacts of alternative strategies
- Rank conceptual strategies and identify time horizon for implementation

KNOWLEDGE AND INFORMATION USED OR NEEDED

- Vicinity maps
- Available data on context required to establish feasibility of alternative strategies – e.g. land use, road network configuration, capacity, operational characteristics
- Current and modeled travel patterns
- Documentation of TDM strategies already in place

- Current public transportation service – schedules, capacity, ridership
- Current bike/pedestrian facilities
- Model outputs projecting future system condition and performance assuming alternative strategies
- Available information on costs of alternative strategies
- Documented stakeholder/community input
- Available research about applicability, cost and effectiveness of alternative strategies

INFORMATION PRODUCED

- Descriptions of feasible alternative strategies
- Analysis of effectiveness, benefits and costs of feasible strategies
- Conceptual strategy ranking and recommendations

SPECIFIC INFORMATION ASSETS USED AND PRODUCED

Type	Examples	Used	Produced
Transportation Plans and Strategies (WSDOT)	Washington Transportation Plan Highway System Plan Freight Plan Bike/Ped Plan Ferry Long Range Plan Human Services Transport Plan Public Transportation Plan Rail Plan Rail Service Development Plan Rail Fleet Management Plan Target Zero Plan Corridor Plans and Studies (including corridor purpose, adjacent land uses, available transportation modes/services) CPDM Investment Plans (for different program categories) Special Studies/Plans Maintenance Accountability Process (MAP) Targets Transportation Asset Management Plan (future)	✓	✓

Type	Examples	Used	Produced
Transportation Plans and Strategies (External)	Local Comprehensive Plans Subarea Plans Regional and Metropolitan Transportation Plans	✓	
Reviews and Assessments	Prior strategy effectiveness evaluations Crash Reduction Factors Before/After Analysis for mobility (TDGO) – for Nickel and TPA Projects Results from Safety Highway Segment Analysis Tool	✓	
Data – Transportation Infrastructure	Corridor/Facility Classifications (functional class, NHS, freight corridor, recreational route, etc.) Pavement Condition Data Bridge Condition Data Bridge Inspection Reports Highway features (rumble strips, signs, guardrail, etc.) Non-motorized travel facilities (bike lanes, multi-use paths)	✓	
Data – Public Transportation	Transit route maps/schedules Park and ride lot locations and utilization Special needs transportation service areas Commute Trip Reduction Program Information (employers, targets)		
Data – Travel	Crash Data Traffic patterns – reliability, peak congestion Transportation facility utilization (e.g. bike counts, bus trips, freight movement) Census – journey to work data (including trip length) Traveler survey data – trip purpose, destinations, trip diaries, reverse commuting)	✓	

Type	Examples	Used	Produced
Data - Modeling	Modeling Results (WSDOT and MPO) Traffic Analysis Results	✓	
Data – Energy and Environment	Land Use Data Environmental Data	✓	
Data – Socioeconomic	Business Locations Population Demographics (young, elderly, disabled) Employee Demographics	✓	

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WSDOT (Internal) Roles and Responsibilities

Actor	R	A	S	C	I
Assistant Secretary, Community & Economic Development		✓			
Regions		✓			
Washington State Ferries (WSF)		✓			
WSF Terminal Engineering Division	✓				
WSF Vessel Engineering & Maintenance Division	✓				
Multimodal Planning Division	✓				✓
Engineering Policy and Innovation Division			✓		
Development Division			✓		
Environmental Services Office			✓		
Regions – Environmental			✓		
Regions - Planning			✓		
Washington State Transportation Center (TRAC)			✓		
Maintenance Operations Division				✓	

Actor	R	A	S	C	I
Traffic Operations Division	✓	✓	✓	✓	✓
Public Transportation Division (including Bike Coordinator				✓	
Innovative Partnerships Division				✓	
Quality Assurance & Transportation Safety System Division				✓	
Aviation Division				✓	
Rail, Freight and Ports Division				✓	
Development Division - Environment				✓	
Development Division - Bridge & Structure				✓	
WSDOT Employees (bring understanding of different solutions)				✓	
Tribal Relations Liaison				✓	
Secretary's Office					✓

External Roles and Responsibilities

Actor	R	A	S	C	I
Washington State Dept. of Commerce			✓		
Washington State Patrol Commercial Vehicle Enforcement Division			✓		
Washington State Traffic Safety Commission			✓		
Transport Canada, Canada Border Services Agency			✓		
Ports			✓		
Transit Agencies			✓		
Advocacy Groups			✓		
Federal Partners (FHWA, FTA)			✓		
Professional Associations - TRB, AASHTO, APA, etc.			✓		✓
Tribal, local, regional governments				✓	✓
Metropolitan Planning Organizations/Regional Transportation Planning Organizations, Tribal TPOs				✓	✓
Other State Organizations (CRAB, TIB, WSP, Resource Agencies)				✓	
Industry: Private Developers, Freight Shippers, Goods Receivers, Carriers, Trucking Industry				✓	
NGOs				✓	
Washingtonians				✓	

R-Responsible A-Accountable S-Supporting C-Consulted I-Informed

RECOMMENDED GLOSSARY ENTRIES

- Capacity Expansion Strategy
- Demand Management Strategy
- Need
- Operational Strategy
- Performance gap
- Preferred Strategy
- Solution
- Strategy

REFINE SOLUTIONS

DESCRIPTION

Development of specific, implementable solutions to address identified and prioritized needs. Solutions may include project and programmatic activities. Projects may include capital and non-capital activities with a defined beginning and end.

PURPOSE

Define solutions in sufficient detail to allow for estimation of costs, assignment of funding, and identification of implementation responsibilities. Ensure sufficient communication and collaboration across disciplines and organizations to ensure that the solution addresses relevant concerns. Reduce the likelihood that the solution will be judged unacceptable at a later point in time.

RELATED STEPS

Assess Alternative Strategies constrains the solutions to be developed. *Assign Resources* is dependent on *Refine Solutions* to describe the solution in sufficient detail to ascertain funding eligibility and amount needed. *Develop Funded Solution* uses the solution description developed in *Refine Solutions* as a starting point for further specification.

ACTIVITIES INVOLVED

- Develop/scope integrated set of solutions at the corridor, subarea or system level.
- Scope Operations solutions – define project and program activities at a level of detail sufficient for budgeting and funding assignment
- Scope TDM solutions – define program activities and grant criteria.
- Scope Capital projects
 - Identify and evaluate alternatives
 - Benefit-cost analysis
 - Sustainability evaluation
 - Conduct environmental analysis
 - Establish design parameters
 - Create initial cost estimate for design and construction phases to serve as the basis for programming of funds
- Define/scope ongoing enabling capability improvements so that resources can be assigned and an appropriate implementation mechanism can be identified.
- Document refined solutions with information that can be used to identify eligible funding sources and prioritize within and across program areas.

KNOWLEDGE AND INFORMATION USED OR NEEDED

- Design procedures and techniques
- Planning documents
- Data about system performance
- Prioritized needs and solutions

- Sustainability assessment results
- Construction project documents
- Available funding
- Local agency agreements
- Grant applications

INFORMATION PRODUCED

- Alternatives evaluations
- Solution definitions
 - Project planning report
 - Design Parameter Sheets
 - Project summary documents
 - ITS concept of operations documents
 - Program descriptions
- Planning-level cost estimates and benefit-cost analyses
 - Project estimates
 - Program budget requests
- Local agency agreements
- Crash Analysis Report

SPECIFIC INFORMATION ASSETS USED AND PRODUCED

Type	Examples	Used	Produced
Transportation Plans and Strategies	Washington Transportation Plan (WTP) Highway System Plan Corridor Sketch (Desired Performance) Corridor Plans/Studies (High Level Strategies) ITS Plan Freight Plan Bike/Ped Plan Airport System Plan Ferry Long Range Plan Human Service Transport Commuter Trip Reduction Public Transportation Plan Rail Plan (ranked list of needs) Service development plan Fleet management plan	✓	
Guidelines and Policies	FHWA MUTCD and WSDOT Updates	✓	

Type	Examples	Used	Produced
	Policy Guidelines (e.g. Executive Orders 1096, 1028, 1090)		
Manuals	Design Manual (Design Matrices and Guidelines)	✓	
Project Documents	Project Definition - Purpose & Need Alternatives Comparison Table Cost Estimates Benefit/Cost Analysis Environmental Documents/EIS		✓
Reviews and Assessments	Safety Studies Crash Analysis Reports (CAR) Value Engineering Study/Report Interchange Justification Report Ranked Needs and Solutions - Capital, TDM, Operations (FUTURE?) Maintenance Impacts (M2 budget impacts, procurement contracts, equipment and materials lists) (FUTURE?) New Maintenance and Operations Responsibilities (FUTURE?)	✓	✓
Agreements and Contracts	Project Commitments and Approvals Local Agency Agreements	✓	✓
Agreements and Contracts	Utility/3rd party agreements	✓	
Budget and Finance Documents	Available Funding Legislative Project Commitments Capital Program - Proposed and Final	✓	
Design Plans	Footprint set - 30% design		✓
Data – Transportation Infrastructure	System Condition and Performance Data Rail Fleet and Crew Time Scheduling Information, Load Factors	✓	
Data - Modeling	Traffic Forecasts Crash Forecasts (with and without countermeasures)	✓	✓
Data – Construction Projects	Planning-Level Cost Estimates and Benefit/Cost Analysis		

Type	Examples	Used	Produced
Data – Socioeconomic	Population Forecasts/Growth Assumptions		

ROLES AND RESPONSIBILITIES

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- I = Informed - must be notified of results, but need not be consulted

WSDOT (Internal) Roles and Responsibilities

Actor	R	A	S	C	I
Assistant Secretary, Financial Administration		✓			
Regions – HQ, Design Offices, Materials, Traffic Offices, Planning and Eng. Services		✓			✓
Assistant Secretary, Washington State Ferries		✓			
WSF Terminal Engineering Division		✓			
WSF Vessel Engineering & Maintenance Division		✓			
Capital Program Development and Management Division	✓				✓
Budget and Financial Analysis Division	✓				
Maintenance Staff			✓		
Development Division - Design Policy and Standards			✓		
Engineering Policy and Innovation Division			✓		
Environmental Services Office			✓		✓
Local Programs Division			✓		✓
Traffic Operations Division	✓	✓	✓	✓	✓
Real Estate Services Office			✓		
Project Offices			✓		✓
Records/archives offices			✓		✓
WSF – Facilities Engineers			✓		✓
Assistant Secretary, Engineering & Regional Operations			✓		

Actor	R	A	S	C	I
Quality Assurance & Transportation System Safety Division				✓	
Multimodal Planning Division			✓		
Public Transportation Division				✓	
Aviation Division			✓		
Rail, Freight and Ports Division				✓	
Innovative Partnerships Division			✓		
Maintenance Operations Division				✓	
Development Division - Environment				✓	
Development Division - Bridge & Structures				✓	
Construction Division – Materials				✓	
WSF Safety Systems Division			✓		

External Roles and Responsibilities

Actor	R	A	S	C	I
Transit Agencies and Community Transportation Providers			✓		✓
Rail Partners			✓		
Local Agencies/Owner-Operators			✓		✓
FHWA			✓		
FRA			✓		
FTA			✓		
Commute Trip Reduction Board			✓		
Community			✓		
Utilities and Utility Customers			✓		

R-Responsible A-Accountable S-Supporting C-Consulted I-Informed

RECOMMENDED GLOSSARY ENTRIES

- Capital Project
- Crash Analysis Report (CAR)
- Design Parameter
- Operations Strategies
- Program Activities
- Scoping
- Solution
- Transportation Demand Management (TDM)

ASSIGN RESOURCES

DESCRIPTION

Assignment of funding to projects and programs through development of capital programs, departmental and program budgets and external grant awards.

PURPOSE

Allocate available resources in a manner that balances multiple factors including funding constraints, project constraints, commitments, cost-effectiveness and cost-benefit, tradeoffs, priorities, geographic balance, equity, workload, cross-solution synergy and coordination needs.

RELATED STEPS

Establish Policy Framework provides the criteria and structure for prioritization and resource allocation.

Refine Solutions informs assessment of funding eligibility and provide a realistic estimate of required funding amounts.

ACTIVITIES INVOLVED

Activities include:

- Track funding availability: Identify funding sources and estimate funding availability to implement different types of transportation strategies
 - Estimate future federal and state funding availability
 - Monitor available fund balances
- Prioritize transportation solutions: Prioritize transportation solutions to help determine which should be funded first.
 - Prioritize operations initiatives (programs or projects)
 - Balance “just do it” resources with longer term investment needs and program activities (IRT). Consider how inter-Regional activities align.
 - Prioritize TDM initiatives (programs or projects)
 - Identify grant and program activities as well as actions needed by operations and capital solutions to implement demand management. Balance improvement investments with preservation needs. Consider opportunities to align activities across modes. Advertising grant opportunities and selecting recipients.
 - Prioritize capital projects
 - Apply prioritization methodologies, evaluate alignment of proposed activities for cohesiveness, and balance regional and statewide investments.
- Allocate resources to solutions: Program and manage funds and staff resources to support delivery of transportation programs and projects.
 - Allocate resources to program categories
 - Develop capital program (assign funds to projects)
 - Develop TDM investment program/plan

- Review proposed investments across program categories to synergize activities and optimize delivery timing.
 - Conduct outreach to transportation, community and natural resource partners
 - Develop operations investment program/plan

KNOWLEDGE AND INFORMATION USED OR NEEDED

- Policy guidelines and Executive Orders
- Planning documents
- System performance and condition data and projections
- Planning-level cost estimates and benefit/cost analyses
- Environmental documents and permit applications
- Construction project documents, studies, and reports
- Legislative project commitments
- Documentation of available funding, proposed and final capital program
- Decision packages

INFORMATION PRODUCED

- Proposed and final capital program
- Documentation of available funding
- Approved budget requests

SPECIFIC INFORMATION ASSETS USED AND PRODUCED

Type	Examples	Used	Produced
Legal, Regulatory and Compliance Documents	FHWA Stewardship Agreement (defines investment for safety) RCW 1073 Ref Priority Array	✓	
Guidelines and Policies	Policy Guidelines (e.g. Executive Orders 1096, 1028, 1090)	✓	
Manuals	Local Agency Guidelines Manual Project Control and Reporting Manual	✓	

Type	Examples	Used	Produced
Transportation Plans and Strategies	Highway System Plan Corridor Sketch (Desired Performance) Corridor Plans/Studies (High Level Strategies) ITS Plan Freight Plan Bike/Ped Plan Airport System Plan Ferry Long Range Plan Human Service Transport Plan Commute Trip Reduction Plan Public Transportation Plan Rail Plan (ranked list of needs) Service development plan Fleet management plan	✓	
Reviews and Assessments	Value Engineering Study/Report Crash Analysis Reports	✓	
Capital Program Documents	Capital Program - Proposed and Final Legislative Project Commitments Project Budget, Schedule, Scope Summaries CIPP Book Capital Improvement and Preservation Program Project Re-appropriations - All Capital Programs Capital Project Delivery Programs Quarterly Update Project Variance Report Re-appropriation and Cost Estimate Updates Local Federal Program Target Delivery	✓	✓
Project Documents	Environmental Documents/EIS - (could delay a project) ROW Documents	✓	
Project Documents	Funding Transfer Correspondence		✓

Type	Examples	Used	Produced
Financial Reports	Toll Credits Report Consultant Usage Expenditures Expenditure Authority Schedule Section 601 Fund Transfers	✓	✓
Permits	Environmental Permit Applications	✓	
Agreements and Contracts	Commitments and Approvals Owner Commitments, Purchase Documents, Certification	✓	
Data – Transportation Infrastructure	Population Forecasts/Growth Assumptions Traffic Forecasts System Condition and Performance Data Planning-Level Cost Estimates and Benefit/Cost Analysis	✓	
Data: Safety	Safety Deficiencies		
Data: Travel	Rail Fleet and Crew Time Scheduling Information Load Factors Ranked Needs and Solutions - Capital, TDM, Operations (FUTURE?)		

ROLES AND RESPONSIBILITIES

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WSDOT (Internal) Roles and Responsibilities

Actor	R	A	S	C	I
Assistant Secretary, Financial Administration		✓			
Assistant Secretary, Washington State Ferries (WSF)		✓			
Maintenance Operations Division		✓			
Traffic Operations Division	✓	✓	✓	✓	✓
Public Transportation Division		✓			
Local Programs Division		✓			
Rail, Freight and Ports Division		✓			
WSF Finance & Administration Division	✓				
Budget & Financial Analysis Division	✓				
Capital Program Development and Management Division	✓				✓
Secretary's Office			✓		✓
Maintenance Staff			✓		
Development Division - Design Policy and Standards			✓		
Engineering Policy and Innovation Division			✓		
Local Programs Division			✓		✓
Regions - Program Management			✓		✓
Project Offices			✓		✓
Records/archives offices			✓		✓
WSF Terminal Engineering Division			✓		
WSF Vessel Engineering & Maintenance Division			✓		
WSDOT Ad & Award Office			✓		✓
Assistant Secretary, Engineering & Regional Operations			✓		
Regions			✓		
Construction Division			✓		
Intergovernmental & Tribal Relations Director			✓		
Accounting & Financial Management Division			✓		
Development Division			✓		
Quality Assurance & Transportation System Safety Division				✓	

External Roles and Responsibilities

Actor	R	A	S	C	I
Transit Agencies and Community Transportation Providers			✓		✓
Local Agencies/Owner-Operators			✓		✓
FHWA			✓		✓
FRA			✓		
FTA			✓		
Rail Partners			✓		
Legislature			✓		✓
Governor					✓
MPOs/RTPOs/TTPO					✓
Other State Organizations (CRAB, TIB, WSP, Resource Agencies)					✓
NGOs					✓
Contractors					✓
Industry					✓
Washingtonians					✓

R-Responsible A-Accountable S-Supporting C-Consulted I-Informed

RECOMMENDED GLOSSARY ENTRIES

- Capital Program
- Funding
- Prioritization
- Project Commitment
- Resource Allocation
- Solution
- TDM – Transportation Demand Management

DEVELOP FUNDED SOLUTIONS

DESCRIPTION

Design of funded solutions so that they can be delivered. This may include preparation of plans, specifications and estimates (PS&E) for a construction project, development of detailed plans or contract language for operational or programmatic improvements, specification of policy and program activities to improve practices, or scope definition for successful candidates in WSDOT's grant programs. The intensity of this activity will vary by the type of solution.

(Note: decisions to deliver projects via "design-build" contracting models are part of the Implement Solutions step. However, design work that may be conducted within a design/build contract is included under the Develop Funded Solutions step.)

PURPOSE

Ensure that the solution addresses the identified performance gap, is consistent with any scoping decisions or agreements that have been made, will fit with the context, and will meet applicable agency standards and regulatory requirements at the lowest cost.

RELATED STEPS

Refine Solutions provides the initial definition of the solution that is the input to *Develop Funded Solutions*. *Assign Resources* establishes the funding source and timing for the solution – which will typically impact or constrain the parameters of the developed solution. The *Develop Funded Solutions* step will typically be carried out to meet specific requirements of the intended approach to be followed in the *Implement Solutions* step.

ACTIVITIES INVOLVED

- Operations Improvements:
 - Define project activities
 - Define program activities
- TDM
 - Define grant criteria and develop grant solicitation
 - Define TDM program activities
- Capital Projects: Specify the details of a transportation project so that it can be constructed.
 - Geometric review – decision to proceed with ROW acquisition
 - General plans review
 - Preliminary contract review
 - Final contract review
 - Advertisement approval
- Enabling Capabilities
 - Define policy and program activities (workforce, facilities and equipment, data and information acquisition, technology)

KNOWLEDGE AND INFORMATION USED OR NEEDED

- System performance – current and forecasted
- Solution definitions and priority ranking
- Design standards, procedures, required deliverables and approval processes
- Decisions leading up to this point – from planning studies, public meetings, engineering studies, purpose and need, scope, cost estimate, benefit-cost analysis
- Constraints and commitments
- Available resources

INFORMATION PRODUCED

- Basis of Design
- Basis of Estimate
- Design Parameter Sheets
- Community Engagement Documentation Package (CEDP)
- Plans, Specifications and Estimates (PS&E)
- Right of way (R.W) plans
- R/W Certification
- Documentation of Maintenance impacts (?)
- 3rd party agreements, including utilities and local agencies (?)
- Grant awards
- Draft asset owner manuals (future)

SPECIFIC INFORMATION ASSETS USED AND PRODUCED

Type	Examples	Used	Produced
Guidelines and Policies	Policy Guidelines (e.g. Executive Orders 1096, 1028, 1090) MUTCD and WSDOT Updates CADD Review Checklists	✓	
Guidelines and Policies	New Maintenance and Operations Responsibilities (FUTURE?)		✓
Manuals	Design Manual Construction Manual	✓	

Type	Examples	Used	Produced
Transportation Plans and Strategies	Washington Transportation Plan (WTP) Highway System Plan Corridor Sketch (Desired Performance) Corridor Plans/Studies (High Level Strategies) ITS Plan Freight Plan Bike/Ped Plan Airport System Plan Ferry Long Range Plan Human Service Transport Commute Trip Reduction Public Transportation Plan Rail Plan (ranked list of needs) Service development plan Fleet management plan	✓	
Program Documents	Legislative Project Commitments Capital Program - Proposed and Final Ranked Needs and Solutions - Capital, TDM, Operations (FUTURE?)	✓	✓
Project Documents	Project Definition - Purpose & Need, Cost Estimate, B/C (CPDM) Limited Access Hearing Transcripts	✓	
Project Documents	Environmental Documents/EIS Scope of Work for Specialty Groups Commitments and Approvals ROW Documents - ROW Plans, Property Owner Commitments, Purchase Documents, Certification Value Engineering Study/Report Interchange Justification Report Footprint set - 30% design Project file & Design Documentation Package (DDP)	✓	✓

Type	Examples	Used	Produced
Project Documents	Maintenance Impacts (M2 budget impacts, procurement contracts, Equipment and materials lists) (FUTURE?) New Maintenance and Operations Responsibilities (FUTURE?) Project Kickoff Meeting Minutes		✓
Agreements and Contracts	Utility/3rd party agreements Local Agency Agreements	✓	✓
Permits	Environmental Permit Applications	✓	✓
Data: Transportation Infrastructure	System Condition and Performance Data	✓	
Data: Transportation Operations	Rail Fleet and Crew Time Scheduling Information Load Factors	✓	
Data: Safety	Safety Deficiencies	✓	
Data: Modeling	Traffic Forecasts	✓	

ROLES AND RESPONSIBILITIES

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WSDOT (Internal) Roles and Responsibilities

Actor	R	A	S	C	I
Assistant Secretary, Engineering & Regional Operations		✓			
Assistant Secretary, Washington State Ferries (WSF)		✓			
WSF Vessel Engineering & Maintenance Division		✓			
Public Transportation Division		✓			

Actor	R	A	S	C	I
Aviation Division		✓			
Rail, Freight and Ports Division		✓			
Toll Division – Systems		✓			
Region Managers		✓			
WSF Terminal Engineering Division	✓				
Development Division	✓				
Assistant Secretary, Financial Administration			✓		
Development Division - Design Policy and Standards			✓		
Engineering Policy and Innovation Division			✓		
Environmental Services Office			✓		✓
Local Programs Division			✓		✓
Utilities Office			✓		✓
Real Estate Services Office			✓		✓
Project Offices			✓		✓
Records/archives offices			✓		✓
WSF facility engineers			✓		✓
WSF Communication Services & Planning Division			✓		
Tribal Relations Liaison			✓		
WSDOT Ad & Award Office			✓		
Regions – HQ, Design Offices, Materials, Traffic Offices, Planning and Eng. Services			✓		✓
Construction Division – Materials				✓	
Capital Program Development and Management Division				✓	
Development Division – Environment				✓	
Quality Assurance & Transportation System Safety Division				✓	
Maintenance Operations Division				✓	
Multimodal Planning Division				✓	
Traffic Operations Division	✓	✓	✓	✓	✓
WSF Safety Systems Division				✓	
Construction inspectors					✓
Maintenance Staff					✓

External Roles and Responsibilities

Actor	R	A	S	C	I
Office of Risk Services/ Attorney General			✓		
Community			✓		
Utilities and Utility Customers			✓		✓
Transit owners			✓		✓
Contractors			✓		✓
Local Agencies/Owner-Operators			✓		✓
FHWA			✓		
FRA			✓		
FTA			✓		
Rail Partners			✓		
Tribes				✓	
Other State Organizations (CRAB, TIB, WSP, Resource Agencies...)				✓	
Metropolitan Planning Organizations / Regional Transportation Planning Organizations, Tribal TPOs				✓	
Local Governments				✓	
Industry				✓	
Washingtonians				✓	
Legislature					✓

R-Responsible A-Accountable S-Supporting C-Consulted I-Informed

RECOMMENDED GLOSSARY ENTRIES

- Design
- Plans, Specifications and Estimates (PS&E)
- Program Activities
- Project
- Transportation Solution

IMPLEMENT SOLUTIONS

DESCRIPTION

Management and oversight of the implementation of project or program activity, including evaluation of the completed project or program activity to compare results with expectations. Implementation may be carried out by WSDOT staff, contractors, partner agencies, or a combination. Solutions include low cost operational improvements, TDM program activities, capital projects, and enabling program activities related to policy development, data and technology, workforce development, facilities, etc.

PURPOSE

Ensure that the solution is implemented to meet intended scope and meet (or reduce) established schedule and budget. Ensure that coordination and communication activities occur to minimize adverse impacts. Evaluate the solution's result to inform future actions.

RELATED STEPS

Develop Funded Solutions establishes the baseline input to *Implement Solutions*. Some solutions will impact *Manage Assets* – for example, by improving asset condition and reducing the need for day to day maintenance, or by installing ITS devices that will require new operational skills and procedures.

ACTIVITIES INVOLVED

- Source program/project delivery: Determine how transportation programs and projects will be delivered and execute the necessary agreements or commitments for delivery.
 - Determine sourcing strategy for capital projects
 - Advertise contracts and select contractors
 - Develop work programs and schedules for WSDOT staff or contractors
 - Negotiate and execute agreements with local agencies
- Manage program/project delivery: Oversee program and project delivery to control scope, schedule, and budget and ensure quality.
 - Manage construction projects
 - Manage internal WSDOT program and work activities
 - Monitor grantee activities
- Close out and evaluate completed projects/programs: Review results of the completed project or program activities to assess results against original expectations and support feedback and reporting for accountability
 - Evaluate capital project results
 - Evaluate operational improvements
 - Evaluate programmatic improvements
 - Evaluate enabling capability improvements
 - Close out project or program activity
 - Convey new/modified asset information to asset managers
 - Archive project documents and data

KNOWLEDGE AND INFORMATION USED OR NEEDED

- Construction Projects
 - Construction management and administration requirements
 - Work zone management techniques and standards
 - Construction standard specifications
 - Qualified products
 - Contract details – scope, schedule, budget, requirements
 - Design details
 - Project development history
 - Commitments
 - Abutter concerns
 - Site characteristics
 - Project financial status
 - Daily inspection findings
 - Traffic patterns (for construction scheduling analysis results (e.g. from CA4PRS))
 - Scheduled maintenance and construction activities in the vicinity
 - Milestone status
 - Performance/results
- Program Implementation
 - Planned activities
 - Available resources (staff, contractor, facilities)
 - Budget status
 - Milestone status
 - Performance/results

INFORMATION PRODUCED

- Project accounting and inspector reports
- Contract estimates and payments
- Contract materials, including contract advertisement, awards, and executed contracts
- Construction project cost documents and completed project records
- Construction contract records and DBE reports
- As-built plans
- Payroll information
- Public outreach information
- Asset owner manuals

SPECIFIC INFORMATION ASSETS USED AND PRODUCED

Type	Examples	Used	Produced
Guidelines and Policies	Concrete Placement Checklist Final Project Records Checklist	✓	

Type	Examples	Used	Produced
Training Materials	Work Zone/Traffic Control/Flagger Training Materials	✓	
Manuals	WSDOT Design Manual WSDOT Construction Manual Materials Manual WSDOT Traffic Manual (Work Zone Safety) WSDOT Safety Procedures and Guidelines Manual	✓	
Data: Construction Projects	DBE Goals - for individual contracts (overall goals - from OEO) Certified Payroll (federal projects - check 25% to ensure compliance) + state audit every year Noise Analysis Reports	✓	
Data: Construction Projects	Prevailing Wage Reports and Data - including subcontracts (sublet requests - sublet date summary from Construction Data Mart) Project Budget and Expenditures - Accounting Reports Inspection Documentation and Data - Inspectors Daily Reports	✓	✓
Data: Construction Projects	DBE Goal Progress (for individual contracts) Contract Estimates and Payments Apprenticeship Info - monthly reports for projects that require apprenticeships (RCS - > \$3M must have 15% of labor hours) Construction Materials Test Results/Materials Records Asset Management Systems		✓
Agreements and Contracts	Ad and Award: Contract Advertisement, Bid Proposals, Award Package, Bid History Executed Contracts	✓	✓
Procurement Documents	Contractor Prequalification Questionnaire Prequalified Contractor List DBE List MSVWBE	✓	

Type	Examples	Used	Produced
Program Documents	Project Budget, Schedule, Scope Summaries CIPP Book	✓	✓
Project Documents	Traffic Control Plan Design Documentation Package Design Phase Commitments (local agency, environmental, RW) Construction Schedules	✓	
Project Documents	Value Engineering Cost Proposals (VECP) Cost Reduction Incentive Proposals (CRIP) Completed Project Records (Project File, Final Records, Temporary Final Records, Audit and Estimate File - actual contract docs, Cos, CAPS payments, execution & award docs)	✓	✓
Project Documents	DBE Reports Certified Payroll - Wages & Tax Information Construction Contract Records - Change Orders, DMWBE, EEO, Training, Working Days Public Outreach Materials Quarterly Progress Reports		✓
Specifications and Standards	Standard Specifications for Road, Bridge, and Municipal Construction Qualified Products List	✓	
Design Plans	Completed PS&E Package	✓	
Design Plans	Shop Drawings As-Built Plans		✓

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WSDOT (Internal) Roles and Responsibilities

Actor	R	A	S	C	I
Assistant Secretary, Engineering & Regional Operations		✓			
Assistant Secretary, Washington State Ferries		✓			
Regions, Region Safety Offices		✓			✓
Construction Division		✓	✓		
WSF Terminal Engineering Division		✓			
WSF Vessel Engineering & Maintenance Division		✓			
Project Offices, PE Office	✓				✓
Assistant Secretary, Financial Administration			✓		
Communications Director			✓		
Multimodal Planning Division			✓		
Public Transportation Division			✓		
Aviation Division			✓		
Budget & Financial Analysis Division			✓		
Capital Program Development and Management Division			✓		✓
Construction Division – Materials			✓		
Development Division - Environment			✓		
Development Division - Bridge & Structure			✓		
Rail, Freight and Ports Division			✓		
Toll Division – Systems			✓		
Traffic Operations Division	✓	✓	✓	✓	✓
WSF Finance & Administration Division			✓		
WSF Communication Services & Planning Division			✓		
Design Offices			✓		✓
Enterprise Risk Management Office			✓		✓
Secretary's Office			✓		✓
Office of Equal Opportunity			✓		
Bridge Experts			✓		
Geotechnical Experts			✓		
Maintenance Staff			✓		✓
Maintenance Operations			✓		

Actor	R	A	S	C	I
Materials Lab			✓		
Operations Staff			✓		✓
Right of Way Experts			✓		
Traffic Experts			✓		
Utilities Experts			✓		
Development Division				✓	
Tribal Relations Liaison				✓	
Records Management					✓
Quality Assurance & Transportation System Safety Division					✓

External Roles and Responsibilities

Actor	R	A	S	C	I
Apprentices			✓		✓
Association of General Contractors, DBEs			✓		✓
Attorney General's Office			✓		
Contractors, Small Contractors, Subcontractors			✓		✓
FHWA			✓		✓
FTA			✓		✓
General Public/ Traveling Public/Environmental Groups/ Tourists/ Business Community/Freight Shippers			✓		
Labor Unions			✓		✓
Local Agencies			✓		✓
Permitting Agencies			✓		
Stakeholders (Transit, Business, Bik/Ped/ADA)			✓		
WA Department of Labor and Industry (Prevailing Wage Statements)			✓		
WA Office of Minority and Women Owned Business Enterprises (OWMBE)			✓		
Tribes				✓	
Industry				✓	
Local Governments					✓
Governor					✓
Washington Transportation Commission					✓
Legislature					✓

Actor	R	A	S	C	I
Metropolitan Planning Organizations / Regional Transportation Planning Organizations, Tribal TPOs					✓
Other State Organizations (CRAB, TIB, WSP, Resource Agencies...)					✓
NGOs					✓
Washingtonians					✓

R-Responsible A-Accountable S-Supporting C-Consulted I-Informed

RECOMMENDED GLOSSARY ENTRIES

- Evaluate
- Capital Project
- Disadvantaged Business Enterprise (DBE)
- Program
- Program Delivery
- Programmatic Improvement
- Project Delivery
- Results
- Source

Americans with Disabilities Act (ADA) Information:

This material can be made available in an alternate format by emailing the Office of Equal Opportunity at wsdotada@wsdot.wa.gov or by calling toll free, 855-362-4ADA(4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

Title VI Statement to Public:

It is the Washington State Department of Transportation's (WSDOT) policy to assure that no person shall, on the grounds of race, color, national origin or sex, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equal Opportunity (OEO). For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OEO's Title VI Coordinator at (360) 705-7082.
