

Regional ITS Operations & Implementation Plan for the Salem-Keizer Metropolitan Area

Expanded Stakeholder Workshop
March 17, 2005



Oregon Department of
Transportation

DKS Associates
TRANSPORTATION SOLUTIONS



cityofsalem.

Polk County

Cherriots
SALEM AREA TRANSIT



Mid Willamette Valley
Council of Governments



U.S. Department of Transportation
Federal Highway Administration

Salem 9-1-1 Dispatch Center

Traffic Operations and Management

User Needs Identified to Date

- ▶ Need ability to automatically collect vehicle counts with classification
- ▶ Need more count stations
- ▶ Need to install cameras
 - at all new intersections
 - Interstate 5 interchanges
 - West Salem bridges
 - Mission Street
 - Cordon Road
 - Lancaster Road
- ▶ Need means to show traffic congestion on key corridors.
- ▶ Need the ability to share access to video images and data devices
- ▶ Need traveler information for the Willamette River Bridges due to limited alternate route options
- ▶ Need to set up an incident management plan/tool for using Willamette River Bridge for reverse traffic in the event of one bridge closure.
- ▶ Need real-time construction mapping information
- ▶ Need to integrate systems between local transportation and emergency agencies
- ▶ Need to support “unrestricted freight mobility”
- ▶ Need to address safety and blocking issues at rail crossings
- ▶ Need to provide additional information regarding flood monitoring and slide monitoring
- ▶ Need advanced traffic control



Questions to Address

- ▶ Do you agree with the transportation user needs on the list?
- ▶ Are there any obvious transportation user needs missing?
- ▶ Are there any specific corridors you would suggest as a diversion route during incidents?
- ▶ Are there any specific arterial roadways where traffic management tools should be applied?
- ▶ Are there any specific at-grade railroad crossings that need improvements? If so, is there anything that would be useful to improve the safety of these crossings and/or reduce delay to emergency and private vehicles?
- ▶ Are there any specific locations throughout the metropolitan area with parking problems?
- ▶ What type of information should be provided to travelers? How should it be provided?
- ▶ Who do you need to interact with if there is an incident and signal timing should be adjusted? What tools are needed?

User Services Bundles and User Services	Traffic Operations & Management
Travel and Traffic Management	
Pre-Trip Travel Information	
En-Route Driver Information	
Route Guidance	
Ride Matching & Reservation	
Traveler Services Information	
Traffic Control	
Incident Management	
Travel Demand Management	
Emissions Testing & Mitigation	
Highway Rail Intersection	
Public Transportation Management	
Public Transportation Management	
En-Route Transit Information	
Personalized Public Transit	
Public Travel Security	
Electronic Payment Services	
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Commercial Vehicle Operations	
Commercial Vehicle Electronic Clearance	
Automated Roadside Safety Inspection	
On-Board Safety & Security Monitoring	
Commercial Vehicle Administrative Processes	
Hazardous Material Security & Incident Response	
Freight Mobility	
Emergency Management	
Emergency Notification & Personal Security	
Emergency Vehicle Management	
Disaster Response & Evacuation	
Advanced Vehicle Safety Systems	
Longitudinal Collision Avoidance	
Lateral Collision Avoidance	
Intersection Collision Avoidance	
Vision Enhancement for Crash Avoidance	
Safety Readiness	
Pre-Crash Restraint Deployment	
Automated Vehicle Operation	
Information Management	
Archived Data Function	
Maintenance & Construction Management	
Maintenance & Construction Operations	

Emergency Management

User Needs Identified to Date

- ▶ Need to facilitate preemption by vehicle ID
- ▶ Need to share incident information between 911, police, fire and transportation
- ▶ Need to deploy vehicle tracking on fire department vehicles
- ▶ Need to provide real-time information to mobile data devices
- ▶ Need to enhance evacuation management
- ▶ Need to have information related to road closures, major accidents, and detour information available to 911 center
- ▶ Need to share incident information between computer aided dispatch (CAD) systems.
- ▶ Need some plan for terrorist attacks and capitol mall security issues
- ▶ Need to notify public about road closures, affects on rail etc. for terrorist attacks



Incident Management

User Needs Identified to Date

- ▶ Need improved detour route management
- ▶ Need a common communication link
- ▶ Need to provide advanced information to travelers (variety of media and provide other choices)
- ▶ Need to enhance the incident management program
- ▶ Need to provide additional video coverage
- ▶ Need to provide traveler information for incidents on Commercial Ave
- ▶ Need to provide incident classification information (fender bender vs. major)
- ▶ Need to separate severity of accidents to filter the page notification
- ▶ Need to provide incident detection
- ▶ Need to provide infrastructure to support detection/traveler information
- ▶ Need to have tool to indicate traffic speeds on the roadside so that a page can be sent when traffic slows or stops



Questions to Address

- ▶ Do you agree with the incident management needs on the list?
- ▶ Are there any obvious incident management needs missing?
- ▶ What tools could you use for better on-scene traffic management?
- ▶ What tools could you use to improve multi-agency coordination and communication?
- ▶ Is there a need for multi-agency communications during incidents?
- ▶ Is there a need for traffic information en-route to an incident site?

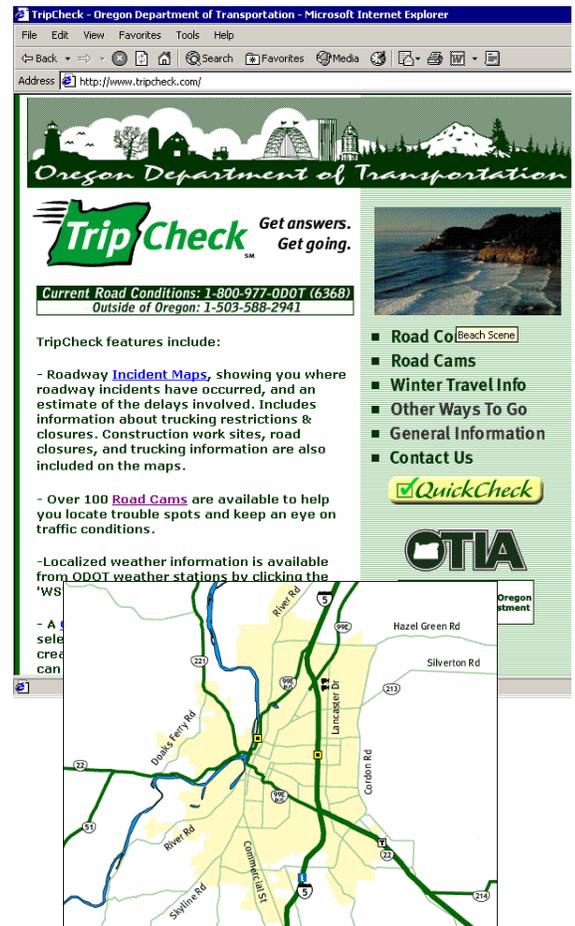
- ▶ Imagine you are a 911 dispatcher and someone calls in on a cell phone to report a crash on I-5 but they do not know their exact location or travel direction. What information would be useful to you?
- ▶ Do you agree with the emergency management needs on the list?
- ▶ Are there any obvious emergency management needs missing?
- ▶ Imagine you are an emergency dispatcher. What information would be useful to you for incident identification and directing emergency response personnel?
- ▶ What kinds of things cause delays in response time? What is needed to reduce response times?
- ▶ Imagine there is a serious crash on I-5. Who will respond? Who needs to coordinate with whom? What information should be provided to motorists? What information would be useful to responders en-route?
- ▶ Imagine you are responding to an incident in Salem and you turn left onto a roadway only to stop behind a queue waiting for a train to move through an at-grade crossing. What information could be provided to avoid this situation? Where should the information be provided? Can you think of specific locations this information would be useful?

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Traveler Information

User Needs Identified to Date

- ▶ Need real-time, accessible traveler information
- ▶ Need to install VMS at:
 - Lancaster
 - Cordon (I-5 detour route)
 - Silverton Road
 - Highway 22 East
 - River Road northbound at Brooklake Road
 - 99W/Highway 22 intersection
- ▶ Need to utilize and implement dynamic message signs, highway advisory radio, Internet, Cable TV, in-vehicle, 511, radio for distribution of traveler information.
- ▶ Need to integrate information from multiple sources (construction, incidents, public transit, congestion, alternate routes)
- ▶ Need to be able to access information about operational status of ferry systems
- ▶ Need to be able to post images on internet (ODOT TripCheck)
- ▶ Need weather stations at:
 - West Salem Hill
 - Fall City
 - Grand Ronde



Questions to Address

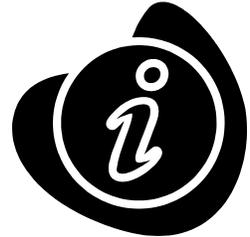
- ▶ Do you agree with the traveler information needs on the list?
- ▶ Are there any obvious traveler information needs missing?
- ▶ Imagine you are considering taking public transportation instead of driving this morning. What information would be useful to you to make that decision? Where should the information be provided?
- ▶ Are there locations within the study area where weather information would help you plan your trip? What information would be useful and where should it be provided?



Information Management

User Needs Identified to Date

- ▶ Need to install sufficient communications infrastructure to support future bandwidth requirements
- ▶ Need to install communications over the bridges
- ▶ Need to provide the NWTOC with access to all weather stations
- ▶ Need a cable channel dedicated to travel/incident management
- ▶ Need an automatic notification system for the media
- ▶ Need communication between City of Salem and ODOT TOC
- ▶ Need a filter mechanism to filter out “extra” information so that you only see/hear the information you need.



Questions to Address

- ▶ Do you agree with the information management needs on the list?
- ▶ Are there any obvious information management needs missing?
- ▶ Imagine you are a planner at MWVCOG. What type of information would be most useful to you when developing models and addressing transportation demand management techniques? How should this information be provided?
- ▶ What type of information collected by other agencies would be useful to your agency? How would this information be shared?

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Public Transportation Management

User Needs Identified to Date

- ▶ Need to utilize automatic vehicle locaters (AVL) on Cherriotics fixed-routes
- ▶ Need to implement Mobile Data on paratransit
- ▶ Need to support the High Priority Transportation Corridor
- ▶ Need to implement transit signal priority along bus routes
- ▶ Need to incorporate transit arrival information
- ▶ Need a uniform CAD interface from fixed route to paratransit
- ▶ Need to provide support for the regional trip planner
- ▶ Need to disseminate information about the operational status of ferry



Questions to Address

- ▶ Do you agree with the public transportation needs on the list?
- ▶ Are there any obvious public transportation needs missing?
- ▶ What would make public transportation more desirable?
- ▶ What information about transit should be provided and where should it be provided?

Maintenance and Construction Management



User Needs Identified to Date

- ▶ Need to implement in-vehicle geo-coding of maintenance items (potholes, tree-limbs, signs)
- ▶ Need to provide a central source for construction information/construction zone coordination
- ▶ Need to enhance construction zone management to improve safety (video on site)
- ▶ Need to improve construction activity information (e.g. monitor delays, provide travel time information)
- ▶ Need better traffic control and advance signing in construction zones

Questions to Address

- ▶ Do you agree with the maintenance and construction needs on the list?
- ▶ Are there any obvious maintenance and construction needs missing?
- ▶ Is there any need to know the location of maintenance vehicles?
- ▶ Imagine there is a large flood. Do you need to coordinate road closures with anyone? What information do you need to share with other agencies?
- ▶ What are some ways to improve coordination of construction and maintenance projects?

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