Deployment, Use, and Effect of RT Traveler Information Systems

NCHRP 08-82
Westat & UMD-CATT
(Nov 2012)
Presented By: Tom Jacobs
Research Objectives

• Explore Agency Perceptions/Rational for Providing Traveler Info (TI)
• Explore Public Perceptions/Rational for Using TI
• Identify Synergies, Gaps, Recommendations for Improvement, etc.
• Explore Future of TI
Summary of Information Collection

• DOT Agency Surveys & Interviews
  – Web-based Survey (43 agencies responded)
  – Detailed Follow-Up Phone Interviews (5 agencies)

• Travelers
  – Detailed Assessments in DC, Orlando, San Fran, Teaneck
    • Consisted of Surveys, Focus Groups, Traveler Logs
  – Follow Up (Survey Only) Assessments of Detroit, Salt Lake City
Figure 3. Perceived traveler information system effectiveness in meeting agency goals.
Results - Agency

Figure 4. Deployment of traveler information systems.
Results - Agency

Figure 5. Reasons for disseminating real-time traveler information.
Results - Agency

Figure 6. Factors hindering agencies’ abilities to effectively evaluate traveler information programs.
Results - Traveler

Figure 9. Traveler information type used to make a trip decision prior to trip start (web survey data).
Results - Traveler

Information type used to make decision to change trip while in transit

- Traffic incidents: 45.4% (137)
- Weather information (including smog alerts): 43.7% (132)
- Roadwork/construction zones and road closures: 41.1% (124)
- Visual observation of traffic conditions: 41.1% (124)
- Travel times: 26.5% (80)
- Alternate routes: 26.5% (80)
- None—I never change a trip once it has begun: 21.9% (66)
- Special events: 19.9% (60)
- Public safety information (e.g., Amber alerts): 14.9% (45)
- Parking availability: 10.6% (32)
- Live traffic cameras: 9.9% (30)
- Safety information (e.g., “Buckle Up,” Signal When...): 8.9% (27)

Figure 10. Information type used to make a decision to change trip while in transit (web survey data).
Figure 13. Traveler information sources used when changing a trip in the last 3 days.
Results - Traveler

Traveler Information types used when changing a trip in the last 3 days

- Traffic incidents: 48.6%
- Travel times: 43.1%
- Alternate routes: 37.5%
- Roadwork/construction zones and road closures: 31.9%
- Visual observation of traffic conditions: 31.9%
- Weather information (including smog alerts): 23.6%
- Public safety information (e.g., Amber...): 12.5%
- Live traffic cameras: 11.1%
- Parking availability: 8.3%
- Special events: 6.9%
- Safety information (e.g., "Buckle up." "Signal...": 4.2%

Figure 14. Traveler information types used when changing a trip in the last 3 days.
Results - Traveler

Figure 15. Most influential traveler information types.
Some Interesting Takeaways

• In general, good correlation between what TI agencies are providing & what public wants

• Travelers want incident, weather, and construction info to help make decisions
  – Also like Travel Times & Alternate Route Info

• Travelers want a wide variety of options to obtain TI
  – Radio most important
  – DMS use significant
  – Social media on rise
Some Interesting Takeaways

• Significant Lack of 511 Use/Awareness
• Agencies AND travelers don’t perceive HAR as effective means of TI dissemination
• Traveler’s perception of DMS:
  – Overall favorable...like to have information
  – General trust in information accuracy
  – Do help make en-route trip adjustments
  – Would like better placement (e.g. before making commitment to getting on highway)
Looking Ahead

• Smartphone / Telematics Integration
  – Apple CarPlay, Google Android Auto, (GM abandoning MyLink)

• More technology integration will remove need for “search and discovery” of TI
  – Integrated technology will (1) know where you are; (2) know where you need to be; (3) know the conditions along the way; (4) know the best time to leave; (5) know the best route to take (and ultimately “drive” you automatically)

• Augmented Reality with smartphones, google glass, wearable technology