Intelligent Transportation Systems: It's Not All High Tech

Natalie Bettger
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Presentation Outline

Why Intelligent Transportation Systems?

Where Are We Headed?

Challenges Ahead

Why Intelligent Transportation Systems?

Problem: Unreliable Transportation Systems

Solution: ITS improves efficiency and reliability of the existing transportation system.

Problem: Funding Shortfalls

Solution: ITS maximizes the use of transportation dollars.

Problem: Unreliable Transportation Systems

52-58% of Delays Caused by Incidents

Annual Cost of Congestion = $ Billions

Solution: ITS Improves Efficiency and Reliability of the Existing Transportation System

- Quick Detection of Traffic Incidents
- Quick and Appropriate Response to Traffic Incidents
- Adjust Operations Based on Traffic Conditions
- Dissemination of Traffic Information to the Traveling Public

Improved Operations Including Detection and Response of Incidents

Deploy and Communicate with Traffic Detection Equipment

Define Multi-Agency Data and Video Exchange Standards

Integrate Systems to Exchange Data and Video

- Integrate with Emergency Responders
- Deploy Communication Network
- Implement Software Integration

Dissemination of Traffic Information to the Traveling Public

Media Connections (TV and Radio)

Dynamic Message Signs (DMS)

Websites

Regional 511 (Traveler Information)

Transportation Management Centers

Problem: Funding Shortfalls
Based on Projected Year 2030 Populations (Millions $, 2006)

Organization	Total Needs to Improve	Unfunded Needs to Improve
MPOs* (LOS F)	$2,946,291	$2,161,025
AASHTO	$6,300,000	$3,100,000
National Commission	$5,574,000	$3,510,000

SOURCE: Needs from 22 MPOs in Texas using the 2006 Texas Metropolitan Mobility Plan/Texas Urban Mobility Plan analysis for the year 2030. Assembled by the North Central Texas Council of Governments for the purpose of aggregating a national funding need. Additionally, AASHTO Report on Long-Term Financing Needs for Surface Transportation (September 2007), and National Surface Transportation Policy and Revenue Study Commission Transportation for Tomorrow (December 2007).
*NOTE: MPOs represent 14.8 percent of the total United States land area (excluding Alaska).

Solution: ITS Maximizes the Use of Transportation Dollars

- Implementation of Operational Improvements
  - Lower Cost and Quick to Implement
- Innovative Funding Options
  - Toll Road Revenue
  - Red Light Enforcement
  - Enhanced Traveler Information
  - Parking Charges (Early Deployment Central Area Charges)
  - Advertising
- Accountability
  - Quantify Effectiveness of Implemented Strategies

Where Are We Headed?

- Video Exchange Standards
- Data Exchange Through Center-to-Center
- Multi-Modal System Integration
- Consolidated Websites
- Seamless System to Travelers
- Regional/Statewide 5-1-1
- Coordination with Emergency Services
- Advanced Warning Safety Systems
- Archive Video for Non-Transportation Purposes

Conclusion – Challenges Ahead

- Technology Based
  - Integrating Legacy Systems
  - Developing Standards
- Policy Based
  - Sharing/Maintaining Infrastructure
  - Multi-Agency Buy-In
  - Institutional Agreements

Questions

Natalie Bettger
Senior Program Manager
817-695-9280
nbettger@nctcog.org