

Integrating Business Processes to Improve Travel-Time Reliability

Road users see the benefits when highway operations are managed more strategically

Given that traffic congestion caused by weather, crashes, work zones, and special events creates more than half of all motorist delay, processes to better manage traffic operations and leverage existing capacity will make the highway system more reliable and reduce the cost of congestion for drivers, freight operators, and other users.

Transportation systems management and operations (TSM&O) is a cross-cutting, cross-silo discipline that engages multiple divisions within a state or local department of transportation (DOT), as well as other transportation, enforcement, and emergency services agencies within a region. Improving operations-related business practices can help transportation agencies establish a structure to enhance current practices and implement new practices to plan and respond more effectively to nonrecurring congestion on their systems.

Helping Transportation Agencies Assess and Improve Their Organizational Capabilities

The Solution

Integrating Business Processes to Improve Travel-Time Reliability (L01) helps transportation agency managers evaluate and improve their organizational capabilities to conduct effective and efficient operations. Developed through the second Strategic Highway Research Program (SHRP2), it defines key business processes within DOT and transportation agency operations related to travel-time reliability, and demonstrates how successful strategies and business process integration activities can be adopted to improve travel-time reliability.

Business processes include management strategies and related programming activities that directly or indirectly affect operations in a significant way. Integrating these processes may bring together certain steps of a specific business process and/or allow for the integration of multiple steps involving several agencies. These processes allow DOTs

How Agencies Can Re-engineer Business Practices to Enhance Traffic Operations

FOCUS AREA:
Reliability (L01)

Guidance for business process mapping, improving and integrating operational and programmatic practices, and building alignments with other institutionalized processes within an agency.

Save Lives

- Improved work zone management and operations result in safer and less congested work zones.



Save Money

- Improved incident management increases travel-time reliability, thereby allowing commuters and freight operators to avoid costly delays.



Save Time

- Tools lead to reduced traffic congestion and traveler delay.



to improve reliability through management of six major sources of nonrecurring congestion: incidents, weather, work zones, special events, traffic incidents, and fluctuations in demand.

The product also helps agency managers identify critical gaps in their current processes and provides strategies to address these gaps, including combining and integrating processes that will result in greater travel-time reliability.

The Tools

This product provides step-by-step instructions for integrating operational and programmatic processes to help managers identify and leverage new efficient processes that improve the reliability of the network and conditions for its users. It also provides recommendations for documenting and institutionalizing operational processes to improve their sustainability after implementation. In addition, this product summarizes the benefits and challenges associated with integrating and institutionalizing operational processes related to travel-time reliability.

Case studies demonstrate how other states and metropolitan planning organizations have adjusted their business processes to better handle traffic incident management, work zone management, and other business functions related to travel-time reliability.

The Benefits

Using this product enables an agency to add transparency to business processes and subsequently build trust with partnering entities and credibility with the public. Ultimately, a more efficient operations management system will result in processes that can lead to cost savings and reduced congestion.

How can you learn more?

For more information, contact Wayne Berman at FHWA, wayne.berman@dot.gov; Gummada Murthy at AASHTO, gmurthy@aaashto.org; and David Plazak at TRB, dplazak@nas.edu. A web-based tool, *Systems Operations and Management Guidance*, is available on the AASHTO website at www.aashtosomguidance.org. The following resources are available online and from the TRB Bookstore: the report, *Integrating Business Processes to Improve Travel Time Reliability*, at <http://www.trb.org/Publications/Blurbs/165283.aspx>; and *Guide to Integrating Business Processes to Improve Travel Time Reliability*, at <http://www.trb.org/Publications/Blurbs/165284.aspx>.



About SHRP2 Implementation

The second Strategic Highway Research Program is a national partnership of key transportation organizations: the Federal Highway Administration, the American Association of State Highway and Transportation Officials, and the Transportation Research Board. Together, these partners conduct research and deploy products that will help the transportation community enhance the productivity, boost the efficiency, increase the safety, and improve the reliability of the Nation's highway system.

Strategic Highway Research Program

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