

Implementation  
Assistance

Implementation Q&As

Leadership Endorsement

Contact

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## Implementation Assistance Application for Reliability Data and Analysis Tools (L02/L05/L07/L08/C11)

### Objectives

The Reliability Data and Analysis Tools Implementation Assistance Plan is designed to help agencies move travel-time reliability into their business practices through the testing of data integration and analytical tools developed by SHRP2. Applicants are encouraged to include a data collection/integration component, an analytical component, and a decision-making component in their submission.

Recipients will provide feedback to FHWA on the applicability and usefulness (benefits and value) of the products tested. Suggestions regarding potential refinements to the products to improve their functionality and ease of use will also be encouraged.

### Background

SHRP2 research within the Reliability focus area produced a bundle of five analytical products that aid in diagnosing the nature of travel-time reliability problems, identifying possible corrective actions, and analyzing the probable effect on travel-time reliability of implementing those actions. The following SHRP2 products are included in the bundle:

- *Guide to Establish Monitoring Programs for Travel-Time Reliability (L02)*
- *Reliability by Design (L07)*
- *Incorporating Travel-Time Reliability into the Highway Capacity Manual (L08)*
- *Tools for Assessing Wider Economic Benefits of Transportation (C11)*
- *Handbook for Incorporating Reliability Performance Measures into Transportation Planning and Programming (L05)*

The tools in the bundle may be thought of as a progression. L02 describes methods to gather and integrate the various types of data that provide the basis for analyzing the causes of unreliable travel patterns and determining possible solutions. L07, L08, and C11 include analytical tools for estimating the likely impact on reliability of alternative mitigating strategies. L05 provides a guidebook for using the results of the analyses in generating support for funding of operations improvements that promote reliability.

A short description of the products available for testing follows. You can also learn more about these products by visiting the [Reliability Data and Analysis Tools product page](#), listening to a recorded implementation assistance webinar about these products, or reviewing the materials referenced in the below descriptions. The bundle includes:

*Guide to Establish Monitoring Programs for Travel-Time Reliability (L02)*

This [guide](#) provides agencies with methods for designing programs to monitor travel-time reliability, and helps them establish a baseline of system data to help identify current performance and areas for improvement. It serves as a guidebook for designing, building, operating, and maintaining these systems. This guide addresses freeways, toll roads, and urban arterials, providing direction on technical, analytical, economic, and institutional implementation issues. More information about this product is also available in a recorded [SHRP2 Tuesdays Webinar](#).

#### *Reliability by Design (L07)*

This is a spreadsheet-based treatment [analysis tool](#) and [design guidebook](#) that helps agencies estimate the effectiveness and comparative economic benefits of freeway design treatments for improving reliability at specific locations. Pilot testing this product requires substantial calibration using locality-specific traffic, weather, and incident data. More information about this product is also available in a recorded [SHRP2 Tuesdays Webinar](#).

#### *Incorporating Travel-Time Reliability into the Highway Capacity Manual (L08)*

This product provides reliability assessment methods based on the Highway Capacity Manual (HCM) freeway and urban street facility procedures and computational engines. The methods generate scenarios (such as weather, incidents and work zones) to consider the underlying causes of travel time variations. Agencies will be working during an active period of refinement and testing of the L08 software. Applicants must demonstrate a willingness to collaborate with FHWA and partners to refine the computational procedures. Learn more about this product by reviewing the [proposed HCM chapters](#) and a recorded [SHRP2 Tuesdays Webinar](#).

#### *Tools for Assessing Wider Economic Benefits of Transportation (C11)*

This spreadsheet-based analysis tool, developed under the Capacity focus area, provides sketch-level estimates of travel time reliability benefits. The tool takes information on the type of highway, projected traffic volume, speed, lanes and capacity, and estimates benefits using generalized relationships from other SHRP2 studies. Applicants are encouraged to collaborate with FHWA and partners about possible refinements to the computational procedures. Learn more about this product by reviewing the [project report](#), by exploring the [tools](#) available on the Transportation Project Impact Case Studies website, or by viewing a recorded [SHRP2 Tuesdays Webinar](#) about this product.

#### *Handbook for Incorporating Reliability Performance Measures into Transportation Planning and Programming (L05)*

This handbook provides an overview of procedural and technical approaches to integrate mobility and reliability performance measures and strategies into State DOT and MPO transportation planning and programming processes. The [guidebook](#) and [technical reference](#) help agencies understand how to develop reliability-related policy; how to evaluate reliability in approaches to making investment choices; and how to communicate the importance of reliability to institutional partners. More information about this product is also available in a recorded [SHRP2 Tuesdays Webinar](#).

## Leadership Endorsement

Each application submitted from an organization or agency must have the endorsement of the Chief Executive Officer or designee. The letter of endorsement is submitted **as an attachment to the application**. Guidance for creating an endorsement letter appears in the application below.

## Priority Ranking

When multiple applications are submitted from an organization or agency, each application must have a designated priority ranking. Please rank all applications in one grouping including all product submissions from your agency. For purposes of ranking do not separate your organization's applications into categories for individual products, or levels of incentives such as Lead Adopter or User Incentive.

For example, if your agency submits four applications; two applications for R06C, one for C03/C11, and one for R10, your agency must rank each application in priority order from 1 to 4, with 1 as the highest priority and 4 as the lowest priority. For your convenience, you will find a box later in this application to designate the priority ranking. FHWA and AASHTO will take into consideration the agency's rankings when reviewing and evaluating the applications for implementation assistance. Your priority ranking should be expressed as "X of Y," as in "1 of 4."

## Available Implementation Assistance

Type of Assistance: Proof of Concept Pilot

Number of Awards: 4-8

Funding Level: Funding (up to \$400K per Proof of Concept Pilot applicant) is available to be applied to the implementation of one or more products within the Reliability Data and Analysis Tools bundle. Preference will be given to agencies that demonstrate the integrated use of multiple products in the bundle to inform decision-making processes. Funding will be scaled based on the number of products to be tested, and the scope and scale of the application.

Who Can Apply: States, metropolitan planning organizations, counties, and local public agencies are eligible to apply

for this implementation assistance.

Application Deadline: June 27, 2015

## Requirements

1. Commitment of State DOT leadership to pilot test one or more of the products within the Reliability Data and Analysis Tools bundle.
2. Active leadership and participation in the pilot project by the public agency, even if using contractor support.
3. Application location/setting in which the nature of the travel time reliability problem is appropriate for analysis with the reliability bundle tools; and opportunities exist to implement strategies and actions to improve travel time reliability.
4. Commitment to work closely with the FHWA, AASHTO, and TRB staff and related contractors in advancing a product or products within the bundle.
5. Commitment to describing how the product(s) impact business processes (e.g., improving travel-time reliability, overall operation of the system, or key facilities on the system).
6. Willingness to share knowledge with other organizations interested in implementing Reliability Data and Analysis Tools, including the designation of an agency point of contact for the project.
7. Willingness to participate in regional or national knowledge-sharing events to promote the product.

# SHRP2 Implementation Assistance Program

Round 4 Application Form - *Application period closes June 27, 2014.*

## Reliability Data and Analysis Tools (L02/L05/L07/L08/C11)

**FHWA Product Lead Name:** Douglas Laird, [Douglas.Laird@dot.gov](mailto:Douglas.Laird@dot.gov), 202-366-5972

This SHRP2 Solution is part of Round 4 of the Implementation Assistance Program. For more information about this product or about applying for implementation assistance, visit the Implementation Assistance Program page

(<http://www.fhwa.dot.gov/GoSHRP2/ImplementationAssistance>) or this product's application page (where this form originated) on the GoSHRP2 website.

### Point of Contact:

The SHRP2 Implementation Assistance Program is designed to foster peer learning, and as a result, applicants are encouraged to share their experience implementing SHRP2 products with others. By submitting this application, your organization grants permission to FHWA to publish and distribute the name and business email address of a **staff member from the applying organization** who is familiar with the project. Please provide:

POC Name: Provide your response here.

POC Business Email Address: Provide your response here.

### Criteria:

Extra credit will be given for:

- Multi-agency collaboration (e.g., a State partnered with an MPO or local agency with a specific issue or need for the tool).
- Applications that make effective use of multiple products.
- Applications that demonstrate intent to integrate and consider the product results in light of the SHRP2 Capacity advanced travel analysis tools bundle.

Please limit the total length of the below form to 10 pages or fewer.

Agencies may use contractors for assisting in the proof of concept pilot, but must demonstrate that there will be sufficient agency engagement to be able to independently assess the effectiveness of each piloted product. In addition, FHWA intends to make product developers available for limited technical assistance to the selected pilot sites.

## Questions:

1. Which product or products from the Reliability Data and Analysis Tools bundle are you including in this application?

L02: Guide to Establish Monitoring Programs for Travel-Time Reliability

L07: Reliability by Design

L08: Incorporating Travel-Time Reliability into the Highway Capacity Manual

C11: Tools for Assessing Wider Economic Benefits of Transportation

L05: Handbook for Incorporating Reliability Performance Measures into the Transportation Planning and Programming

2. Briefly describe your organization's efforts to improve data monitoring and analysis to achieve more consistent, predictable highway travel times.

Provide your response here.

3. Describe your organization's interest and goals for adopting the Reliability Data and Analysis Tools. What do you hope to gain?

Provide your response here.

4. Describe your basic approach to pilot testing Reliability Data and Analysis Tools.

Provide your response here.

5. If you are only testing one product, explain why.

Provide your response here.

6. If you are not testing the L02 data product, describe the sources of your travel-time and related data and explain how they will be compiled and integrated into the tools.

Provide your response here.

7. Identify the locations/settings where you will test the products. Describe their physical and operational characteristics. Also describe the scope and scale of congestion and the nature of the travel-time reliability problem.

Provide your response here.

8. Describe how you will use each of the products you are proposing to pilot.

Provide your response here.

9. Will the products be used to analyze proposed solutions or will they be used to look back at solutions that were implemented to see if reliability benefits (i.e., travel-time variability was reduced) were achieved but not previously measured?

Provide your response here.

10. Explain how you intend to evaluate and report on the validity and usability of the products (e.g., Are the outputs understood by decision makers and regarded as credible? Are the recommendations resulting from the products accepted and scheduled for implementation? Will you have technical reviewer(s) who are outside the immediate project team?)

Provide your response here.

11. What partnerships, if any, are planned with other agencies, and what expertise will they bring?

Provide your response here.

12. Describe any contractor assistance you intend to use on the project. What is your expected level of agency staff, consultant, and university involvement?

Provide your response here.

13. Briefly describe your work plan (tasks, deliverables and approximate dates) for your use of the implementation assistance.

Provide your response here.

14. Describe the challenges you expect to encounter in pilot testing the products and how you plan to address them.

Provide your response here.

15. What cost / labor match, if any, will you provide?

Provide your response here.

16. What actions will you be taking to broaden the user community of those using Reliability Data and Analysis Tools methods?

Provide your response here.

- a. Is another agency that is interested in eventually using Reliability Data and Analysis Tools methods able to closely follow your efforts?

Provide your response here.

- b. To what extent are you planning outreach, for example, at regional professional meetings?

Provide your response here.

17. Briefly describe demonstrated executive-level support for testing these products.

Provide your response here.

As a reminder:

1. Review all background information located on this product's application page.
2. Once you have completed this form and secured the required Leadership Endorsement Letter, return to application page and complete the contact information fields.

3. Upload this form and the Leadership Endorsement Letter to the page. **Be sure you are attaching the form to the correct application page.**
4. Click “Submit;” you will receive an email confirmation that includes the uploaded endorsement letter and application form.
5. Application period will close June 27, 2014.

For more information or to find this product’s application page, visit the Implementation Assistance Program page (<http://www.fhwa.dot.gov/GoSHRP2/ImplementationAssistance>) on the GoSHRP2 website.