Results of the 2013 Survey of AASHTO Members on Upcoming and Potential SHRP2 Products Available for Implementation

April 10, 2013

Table of Contents

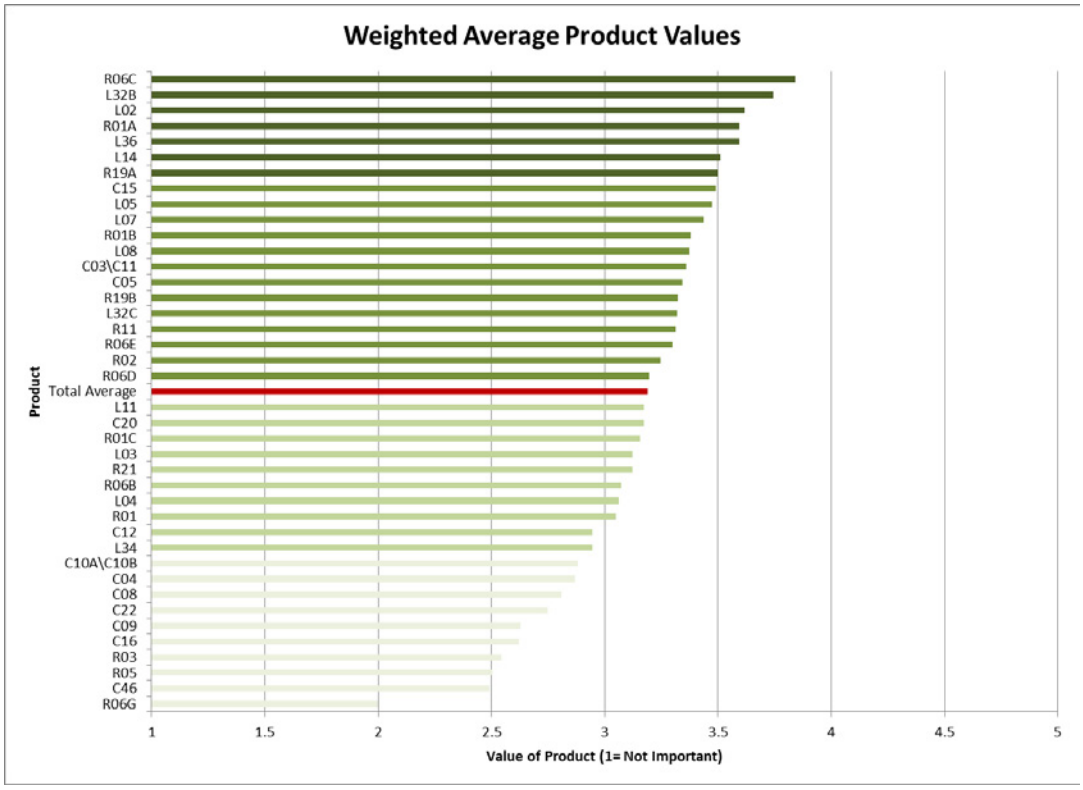
Executive Summary

AASHTO recently surveyed the states asking for a ranking of SHRP2 products in the current three-year-Implementation Plan as well as new products coming from SHRP2 research. The first survey addressed products in the capacity, reliability, and renewal focus areas. The survey was designed to identify the potential value that states placed on the products.

This survey was e used by AASHTO's Implementation Task Force to review, rank, and recommend which products should be funded and implemented by AASHTO and the Federal Highway Administration in the next few years.

This document provides the results of that survey. The table below shows the overall ranking of products by weighted product value (not including the safety focus area products). The most highly valued product was a suite of technologies to enhance quality control on asphalt pavements (R06C). Right behind it were two reliability products – the e-learning tool as part of the training for traffic incident management (L32B) and a tool and guide to designing, operating, and maintaining programs to monitor travel-time reliability (L02). The weighted average product value was 3.2. More details on the survey, how each committee voted on the products, and the product values are in the following report.

Weighted Average Product Values of All Products



Overview

AASHTO is one of three partners implementing the products from the second Strategic Highway Research Program (SHRP2). In 2012 and 2013, leaders representing numerous AASHTO committees met as the Implementation Task Force (ITF) to review, rank, and recommend which research products developed by the Transportation Planning Board (TRB) should be considered for funding and implementation by AASHTO and the Federal Highway Administration (FHWA).

Following the 2012 meeting, the ITF recommendations, along with those from FHWA, became the basis for the three-year Implementation Plan now in effect. As a result of additional funding, more research becoming available, and a better understanding of costs and processes needed to ensure user implementation, the AASHTO ITF met again in March 2013 to make recommendations on additional products that could be added to the implementation plan. These recommendations, after coordination with FHWA, will be presented in June 2013 to the SHRP2 Implementation Advisory Committee, which makes a final recommendation to FHWA about the SHRP2 implementation program scope and budget.

Survey Purpose and Approach

To plan for its March 2013 meeting with the ITF, AASHTO gathered opinions through a survey of its committee membership, asking them to rate the importance of the remaining products for potential implementation. To ensure a successful program, it is important that those SHRP2 products with the highest potential for benefit to the States be prioritized for implementation first. The products were grouped by three focus areas – capacity, renewal, and reliability.

The voting membership of each committee received a tailored survey with a set of products related to the committee area of expertise and/or interest. The survey provided a brief description of each product, as well as links to more detailed information, and asked for opinions regarding its importance relative to their work and organization.

The results of this survey were provided to the Implementation Task Force as they developed recommendations they will make to SHRP2's Implementation Advisory Committee. This report outlines the results of this survey, includes the brief product descriptions, and links to additional material. The ITF prioritized SHRP2 products for a draft implementation plan based upon its own product reviews, input from four focus area teams and from the survey results.

Products Considered in the Survey

Renewal Focus Area

R01	Encouraging Innovation in Locating and Characterizing Underground Utilities (R01)
R01A	Technologies to Store, Retrieve, and Use 3-D Utility Location Data
R01B	Utility Locating Technologies
R01C	Innovation in Location of Deep Utilities
R02	Geotechnical Solutions
R03	Fatigue Risk Management Guide
R05	Modular Pavement Solutions
R06B	Techniques to Fingerprint Construction Materials
R06C	Rapid Technologies for Quality Control Data on Asphalt Pavements
R06D	Advanced Methods to Identify Pavement Delamination and Other Subsurface Conditions
R06E	Achieving Smoothness Measures on PCC Pavements during Construction
R06G	Mapping Defects In or Behind Tunnel Linings
R11	WISE: Workzone Impact Estimation Software
R19A	Service Life Guide for 100-Year Bridges
R19B	Bridges Beyond 100 Years Innovative Systems, Components
R21	Composite Pavement Systems

Capacity Focus Area

C03\C11	Interactions between Transportation Capacity, Economic Systems, and Land Use merged with Integrating Economic Considerations Project Development
C04	Improving Our Understanding of How Highway Congestion and Pricing Affect Travel Demand
C05	Understanding the Contribution of Operations, Technology, and Design to Meeting Highway Capacity Needs
C08	Transportation Visioning in Communities (T-VIZ) (C08)
C09	Incorporating Greenhouse Gas Emissions Into the Collaborative Decision-Making Process

C10A\C10B	Partnership to Develop an Integrated, Advanced Travel Demand Model and a Fine-grained, Time-Sensitive Network
C12	The Effect of Public-Private Partnerships and Non-Traditional Procurement Processes on Highway Planning, Environmental Review, and Collaborative Decision Making
C15	Integrating Freight Considerations into Collaborative Decision Making for Additions to Highway Capacity
C16	The Effect of Smart-Growth Policies on Travel Demand
C20	Freight Demand Modeling and Data Improvement Strategic Plan
C22	A Decision Makers Guide to the Collaborative Decision Making Framework
C46	Resource on Advanced Integrated Models and an Implementation Strategy

Reliability Focus Area

L02	Guide to Establish Monitoring Programs for Travel Time Reliability
L03	Urban Freeway Models for Operations Strategies
L04	Guidelines for Incorporating Reliability Performance Measures into Travel Models
L05	Handbook for Incorporating Reliability Performance Measures into Transportation Planning & Programming
L07	Reliability by Design
L08	Reliability and the Highway Capacity Manual
L11	Economic Evaluation Models to Assess Improvements in Travel Time Reliability
L14	Communicating Traveler Information and Estimating Its Value to Travelers
L32B	E-learning for Training and Certification for Traffic Incident Responders
L32C	Train-the-Trainer Post Course Assessment Tool
L34	e-Tool for Business Processes to Improve Travel Time Reliability
L36	Regional Operations Academy

Survey Results by Focus Area

Renewal Results by Product

Tools to renew our aging system – get in, get out, stay out

- Construct smarter, using innovative, scalable construction techniques
- Accelerate project delivery and construction with off-the-shelf technologies
- Advance risk management and other existing practices through guides, web tools, standardized designs

Encouraging Innovation in Locating and Characterizing Underground Utilities (R01)

This comprehensive report and web- based tool called Selection Assistant for Utility Locating Technologies (SAULT) identifies recommended geophysical technologies to locate existing underground utilities and future location markings for utilities as they are being newly constructed.

Link to FactSheet

Link to SHRP 2 Report S2-R01-RW: Encouraging Innovation in Locating and Characterizing Underground Utilities

Link to SHRP 2 Report S2-R01-RW-2: Development of the Selection Assistant for Utility Locating Technologies

Link to SAULT web-based selection tool

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R01	**3.0**	2.9							3.2	3.3			3.1	3.1		2.9	2.9					

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products

Technologies to Store, Retrieve, and Use 3D Utility Location Data (R01A)

This storage and retrieval data model, which is based on a 3D reference system, accommodates large volumes of data, interfaces with existing design software, and provides designers with a tool to utilize captured underground utility data. This data provides the horizontal and vertical location of the facility as well as information regarding the type of utility that is buried at the location.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R01A	**3.6**	3.5				3.5			3.7	4.0			3.9	3.4		3.6	3.6	3.9				

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products

Utility Locating Technologies (R01B)

This research has created a prototype multi-sensor platform that combines several types of technologies to locate utilities all in one pass. Multi-channel ground-penetrating radar, electromagnetic imaging, and seismic systems are some of the new technologies employed on this platform.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R01B	**3.4**	3.3				3.6			3.2	4.0			4.1	3.1		2.9	3.4					

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Innovation in Location of Deep Utilities (R01C)

The primary objective of this project is to develop a new device that will go beyond the shallow underground utility location technologies and expand the locatable zoom capability needed to find deep utilities.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R01C	**3.2**	3.3				3.4			3.0	3.0			3.0	3.0		3.3	3.1					

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Geotechnical Solutions (R02)

This web-based tool, currently in the Beta testing phase, has identified over 40 geotechnical solutions to common embankment, cut slope, structure foundation interface, and pavement foundation issues. The tool contains extensive photos, case histories, and examples from past practices that lend themselves to improving geotechnical solutions for site-specific problems and conditions. The tool provides selection assistance among a number of geotechnical solutions to ensure the correct technology is applied to a given situation.

Link to FactSheet

Technical Support Tool for Geotechnical Solutions (Beta Testing Phase)

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R02	**3.2**	3.3		2.7		3.6	3.2			3.8			4.1	3.2		3.0	3.3	2.8				

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Fatigue Risk Management Guide (R03)

This research first sought to understand the causes of fatigue and stresses experienced by workers during rapid renewal projects, and then develop guidelines, procedures, and training to reduce worker fatigue experienced in the accelerated rapid renewal environment. It is anticipated that the product outcomes of this research would together provide state and local transportation departments with the tools needed to manage fatigue and increase worker safety.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R03	**2.5**	2.6								2.3	3.3	2.4	2.4	2.5		2.9						

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Modular Pavement Solutions (R05)

This research developed guidelines for public agencies to use in the selection, design, construction, installation, and maintenance of pre-cast concrete pavement systems, and provides the tools for cost/ benefit assessment in situations where the technology may apply. To address insufficient data regarding the use of precast concrete pavement (PCP) systems over an extended period of time and gaps in knowledge regarding durability and performance at the joints and panels, this research investigated projects at locations with a wide range of climates and assessed how the PCP systems were used.

Link to FactSheet

Precast Concrete Pavement Technology Report (Prepublication, Non-edited Draft Version)

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R05	**2.5**	2.5				2.7				2.3			2.4	2.1		3.4	2.1	2.8				

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Techniques to Fingerprint Construction Materials (R06B)

This research evaluates three new technologies capable of verifying specific construction materials in real time at the project site: Fourier Transform Infrared Spectroscopy (FTIR), X-Ray Florescence (XRF), and Raman Technologies. In addition to evaluating the new technologies, this SHRP2 research identified the unique signatures found on many common construction materials used in transportation projects. Using these new technologies, inspectors are able to compare the field materials' signature against a library of material spectrometry stored in the lab.

It is anticipated that there would be development of standards of practice that can be considered by AASHTO. The proposed AASHTO standards would be useful to quality assurance and quality control personnel and research and material divisions in transportation agencies.

Link to FactSheet

Evaluating Applications of Field Spectroscopy Devices to Fingerprint Commonly Used Construction Materials (Prepublication, Non-edited Draft Version)

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R06B	**3.1**	3.2				3.5	2.6			4.3			3.6	3.1		3.0	2.8					

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Rapid Technologies for Quality Control Data on Asphalt Pavements (Ro6C)

This project is demonstrating two non-destructive techniques for detecting defect areas in pavements during hot-mix asphalt construction. Both technologies (infrared and radar) test essentially 100 percent of the pavement area, providing much more inspection coverage than existing quality control methods.

A training video explaining how to use the technologies and interpret the data has been produced and model quality control specifications are currently under development and piloting. Products also include recommendations for equipment and testing protocols for using infrared and ground-penetrating radar for testing the entire surface area during new hot-mix asphalt construction.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R06C	**3.8**	3.8				4.1				4.8			3.9	3.6		3.4	3.9	3.8				

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Advanced Methods to Identify Pavement Delamination and Other Subsurface Conditions (Ro6D)

This project developed two new technologies that make advances in the detection of subsurface delamination of asphalt pavement. Ground-penetrating radar (GPR) uses a lane-width multi-antenna array with frequency sweep that can be operated at speeds up to 40 miles per hour. The impact echo (IE) and seismic analysis of surface waves (SASW) system completes data collection in less than one percent of the time required by manual point testing. The software has real-time display to monitor the quality of the data collection. The IE software can provide immediate results to identify suspect pavement conditions.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R06D	**3.2**	3.1				3.3				4.0	3.8	2.8	3.6	3.1		3.6	3.0	3.4				

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Achieving Smoothness Measures on PCC Pavements During Construction (R06E)

This project evaluates tools to measure concrete pavement smoothness in real time during construction and contemplates model specifications and guidelines for departments of transportation. This technology has the potential to improve process control. In addition, this process could allow adjustments of equipment and operations to correct surface irregularities while the concrete is still pliable, resulting in higher quality, lower cost, and faster construction, while minimizing effects to the traveling public.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R06E	**3.3**	3.2				3.7				2.3			3.4	2.9		3.6	3.4	3.5				

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Mapping Defects In or Behind Tunnel Linings (R06G)

Through the research, all the best non-destructive testing (NDT) technologies available have been reviewed and analyzed for their use in tunnel-lining assessments. A user's manual was developed for selecting NDT technologies that can detect defects behind or within tunnel linings. The manual includes information on equipment, test procedures, inspector's training requirements, data management procedures, data analysis procedures, limitations, and interpretation guidelines. Specific software called TUNNELCHECK has also been developed that supports the integration of GPR and video-collected data to identify problem areas in the tunnel more quickly.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R06G	**2.0**	1.8				2.0				3.3			1.7	1.9		2.7	1.9					

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

WISE: Work Zone Impact Estimation Software (R11)

Decision support software called *Work Zone Impact and Strategy Estimation Tool* (WISE) analyzes the impacts on road users of multiple, concurrent work zones across a network or complex corridor. This tool will help agencies assess the optimal sequencing of renewal projects, and help determine the efficiency (cost-effectiveness) of strategies for the minimization, management, and mitigation of road user costs from safety or operational perspectives. The WISE tool is flexible, and can be used at a planning level as well as the operational level.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R11	**3.3**	3.2	2.8		3.7					3.8	4.0	3.6	4.0	2.9	3.7	3.7	2.8	2.5	3.4			3.2

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Service Life Design Guide for Bridges (R19A)

The *Service Life Design Guide for Bridges* is a new reference document developed through this research. It complements AASHTO specifications and equips designers to develop specific solutions for given conditions and constraints. The *Guide* addresses design, fabrication, construction, operation, maintenance, repair, and replacement issues and applies to both new and existing bridges. It includes standard plans, model specifications for design and construction, and detailed examples.

The *Guide* includes a fault-tree flowchart that summarizes the factors that affect the service life of the bridge element or component under consideration. Each of these factors is thoroughly explained, resulting in an in-depth understanding of the important service-life-related factors for both new and existing bridges. The guide provides strategies and solutions to address the factors.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R19A	**3.5**	3.5		3.1		3.6	3.9						3.6	3.3		4.1	2.9					

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Bridges Beyond 100 Years Innovative Systems, Components (R19B)

This research will create a quantitative framework to assess service limit states more accurately and provide actual performance data, component-based distress models, and specific guidance for common bridge elements. Products of this research will be packaged in a toolkit that includes: a framework for calibrating service limit state specifications, service limit state load and resistance factors, bridge design procedures and model specifications for service limit states, tools required for future service limit state improvements, and model specification changes that include designing for durability. The toolkit allows for future improvements in service limit state calibration, particularly as data become available from projects that are currently under way.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R19B	**3.3**	3.1		3.1		3.4	3.8						2.6	3.4		4.0	2.8					

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Composite Pavement Systems (R21)

The purpose of the research was to document the behavior of composite pavements and provide models to be used for design, performance prediction, and life-cycle cost analysis. Two promising composite pavement systems were investigated as part of the research. The results of these tests, which were conducted in heavy-load highway and a variety of climatic conditions, were used to develop and validate models and design procedures to be used for design and construction of the new composite pavement systems. The new guidelines provide practical recommendations for construction specifications and techniques, life-cycle costing, quality management procedures, and training materials.

Link to FactSheet

Resources to learn more about Composite Pavement Systems

The 2008 Survey of European Composite Pavements

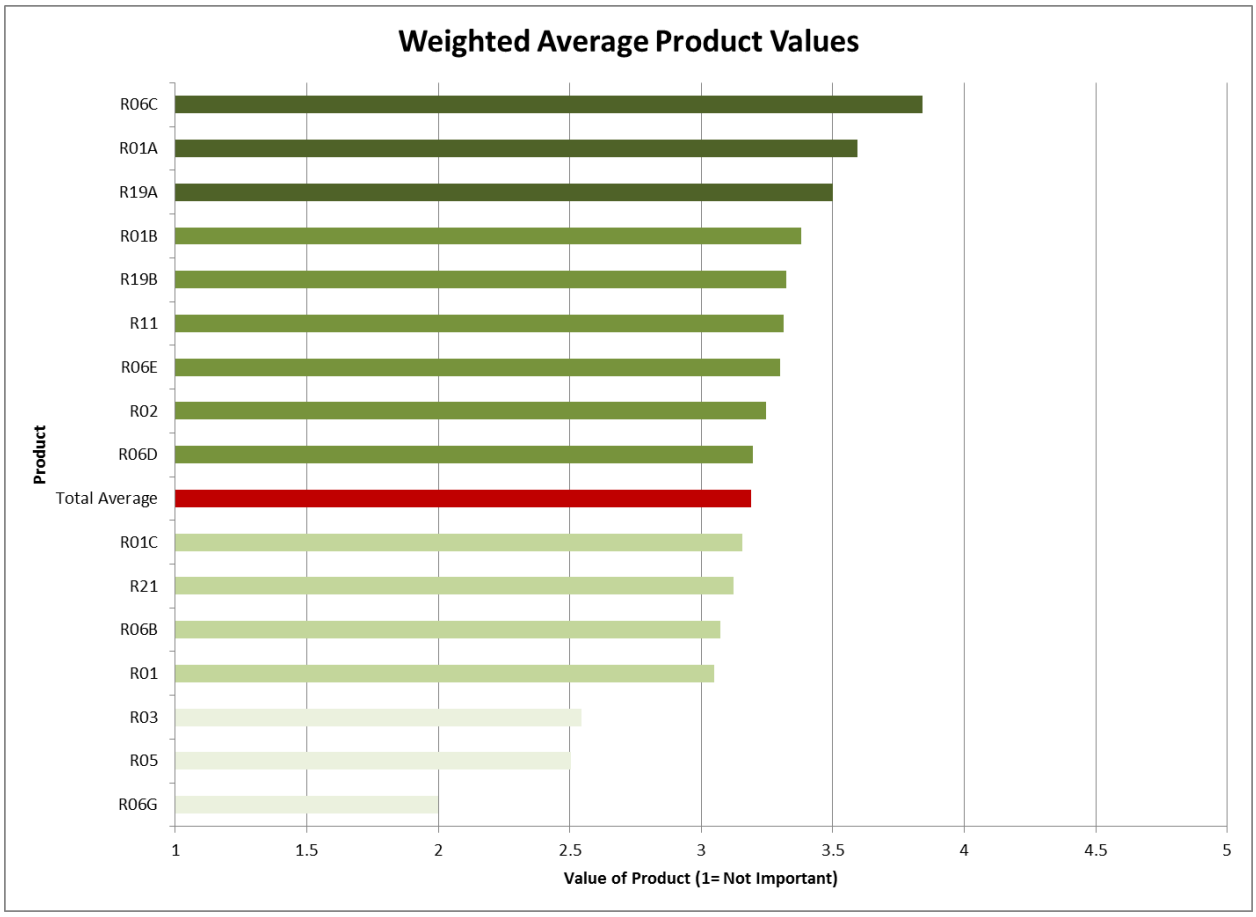
The presentation to the MinnesotaROAD Research Conference

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
R21	**3.1**	2.9				3.3				3.0			3.7	3.0		3.7	2.8	3.2				

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Weighted Average Product Values of all Renewal Products



Average Product Values of all Renewal Products by Committee

AASHTO Committee Product Ranking	Renewal															
Committee	R01	R01A	R01B	R01C	R02	R03	R05	R06B	R06C	R06D	R06E	R06G	R11	R19A	R19B	R21
Standing Committee on Highways	2.9	3.5	3.3	3.3	3.3	2.6	2.5	3.2	3.8	3.1	3.2	1.8	3.2	3.5	3.1	2.9
Standing Committee on Planning													2.8			
Standing Committee on the Environment					2.7									3.1	3.1	
Subcommittee on Maintenance													3.7			
Subcommittee on Materials		3.5	3.6	3.4	3.6		2.7	3.5	4.1	3.3	3.7	2.0		3.6	3.4	3.3
Subcommittee on Bridges and Structures					3.2			2.6						3.9	3.8	
Subcommittee on Highway Transport																
Subcommittee on Right-of-Way and Utilities	3.2	3.7	3.2	3.0												
Technology Implementation Group	3.3	4.0	4.0	3.0	3.8	2.3	2.3	4.3	4.8	4.0	2.3	3.3	3.8			3.0
Standing Committee on Highway Traffic Safety						3.3				3.8			4.0			
Subcommittee on Safety Management						2.4				2.8			3.6			
Standing Committee on Research	3.1	3.9	4.1	3.0	4.1	2.4	2.4	3.6	3.9	3.6	3.4	1.7	4.0	3.6	2.6	3.7
Research Advisory Committee	3.1	3.4	3.1	3.0	3.2	2.5	2.1	3.1	3.6	3.1	2.9	1.9	2.9	3.3	3.4	3.0
Subcommittee on Systems Operation and Management													3.7			
Subcommittee on Asset Management	2.9	3.6	2.9	3.3	3.0	2.9	3.4	3.0	3.4	3.6	3.6	2.7	3.7	4.1	4.0	3.7
Subcommittee on Construction	2.9	3.6	3.4	3.1	3.3		2.1	2.8	3.9	3.0	3.4	1.9	2.8	2.9	2.8	2.8
Subcommittee on Design		3.9			2.8		2.8		3.8	3.4	3.5		2.5			3.2
Subcommittee on Traffic Engineering													3.4			
Standing Committee on Public Transportation																
Special Committee on Intermodal Transportation and Economic Expansion																
Special Committee on Transportation Security and Emergency Management													3.2			
Weighted Average of Survey	3.0	3.6	3.4	3.2	3.2	2.5	2.5	3.1	3.8	3.2	3.3	2.0	3.3	3.5	3.3	3.1

Capacity Results by Product

Integrate economic, environmental, community and mobility needs in the planning and design of new transportation projects

- Expedite project delivery through:
  - Greater input, earlier in the process
  - Better, more predictable permitting
  - More accurate modeling techniques
- Improve decision making
- Build greater public trust through more transparency

New Economic Analysis Tools (C03\C11)

This suite of new forecasting tools and statistical models incorporate the full range of reasonable economic impacts of proposed highway projects. These new tools provide for broader economic analyses by integrating four components: reliability of travel time, connectivity to intermodal facilities for freight and passengers, access to labor and product markets, and an accounting tool that integrates the other three components and creates benchmarks to local areas. The toolkit includes Transportation Project Impact Case Studies (T-PICS), a web-based sketch planning tool that helps planners quickly estimate the likely range of economic impacts of a proposed project.

Link to FactSheet

the T-PICS tool

SHRP 2 Report S2-C03-RR-1: Interactions Between Transportation Capacity, Economic Systems, and Land Use

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
C03\C11	**3.4**	3.3	3.5	2.9									3.7	3.4								

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Improving Our Understanding of How Highway Congestion and Pricing Affect Travel Demand (C04)

The product offers the development mathematical descriptions of the full range of highway-user behavioral responses to congestion, travel-time reliability, and pricing. This report formats the mathematical descriptions of behavior so that they can be incorporated into various travel-demand modeling systems in use or being developed. The report also examines network assignment practices needed to support models that simulate behavioral responses to congestion, travel-time reliability, and pricing.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
C04	**2.9**	2.9	2.8	2.8							4.0	3.0	2.9	2.6								

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Measuring the Effectiveness of Various Operations Strategies on Congestion (C05)

Understanding the Contribution of Operations, Technology, and Design to Meeting Highway Capacity Needs is a new guide that will allow transportation agencies to use enhanced simulation models to test the effectiveness of highway operations strategies. The guide shows modelers how to compare the effectiveness of less complex operational strategies, such as intersection channelization, with more expensive and complex treatments, such as adding general-purpose highway lanes. This research will enable departments of transportation to measure the cost and effectiveness of traffic operations strategies and demonstrate whether they solve a particular congestion problem.

Link to FactSheet

TRB Project Brief

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
C05	**3.3**	3.3	3.1		3.4								3.9	3.2	3.7			2.7	3.6			2.9

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Transportation Visioning in Communities (T-VIZ) (Co8)

The Transportation Visioning for Communities (T-VIZ) guide and website provide proven approaches for transportation agencies to develop a shared vision with communities to shape transportation projects. T-VIZ provides a model approach, a step-by-step process, and case studies intended to generate consensus for a transportation project.

Link to FactSheet

Research reports, the website, and training videos

The complete library of case studies

Website for Transportation for Communities: Advancing Projects through Partnerships

SHRP 2 Report S2-C08-RR-1: Linking Community Visioning and Highway Capacity Planning

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
C08	**2.8**	2.5	2.7	3.0						3.3	3.5	2.9	3.0	3.1				2.2		2.9		

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Incorporating Greenhouse Gas Emissions Into the Collaborative Decision-Making Process (C09)

The new guidebook illustrates how greenhouse gas (GHG) emissions calculations can be incorporated into transportation planning and decision-making. Four decision contexts—long-range planning, programming, corridor planning, and National Environmental Policy Act/permitting—are described, along with questions that analysts should ask if interested in incorporating GHG emissions calculations into key decision points. An appendix to the report provides more detailed technical information. Examples of states with legislation to reduce GHG emissions, regional climate action plans, and GHG analysis in environmental review are provided.

Link to FactSheet

The Guidebook Website

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
C09	**2.6**	2.6	2.6	2.6		2.4							2.9	2.7						2.9		

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Next Generation Transportation Modeling for Better Decisions and Targeted Investments (C10A\C10B)

The *Dynamic Integrated Travel Demand Model and Time Sensitive Network* links travel behavior choices, such as departure time or route, with congested network conditions to better reflect real-world dynamics. Planners can then more directly test the effects for various alternatives on congestion. The software is available via an open source license and includes manuals and application documentation.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
C10A\C10B	**2.9**	2.9	2.6										3.1	3.0								

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

The Effect of Public-Private Partnerships In the Decision Making Process (C12)

This project addresses how and when to consider public-private partnerships (P3s) in the project planning process. Using the Transportation for Communities — Advancing Projects through Partnerships (TCAPP) guide as a framework, this report will include a business process to be followed when incorporating P3s as one potential vehicle for developing new capacity products. This report assesses the interplay between the use of P3s and the transportation and environmental planning processes in order to identify how and when they should be considered as a means to procure transportation improvements.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
C12	**2.9**	3.1	3.1	2.9									2.6	3.0			2.8					

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Better Integrating Freight Transport into Highway Capacity Planning and Decisions (C15)

The new *Freight Planning Guide* provides guidance to public transportation agencies, decision makers, and stakeholders on several issues including: where to start in considering freight needs as part of the highway capacity planning process, how to get the right freight stakeholders with the right information involved at the right time, appropriate consideration of freight that will serve economic development, and how to ensure that all types of freight movement, from international to local deliveries, are considered in highway capacity planning.

Link to FactSheet

The Online Decision Guide for Highway Planning (where this guidance will be incorporated)

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
C15	**3.5**	3.7	3.7	2.9		2.9		3.9					3.4	3.4							4.4	

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

The Effect of Smart-Growth Policies on Travel Demand (C16)

Smart Area Growth Planning or SmartGAP was developed to provide planners with scenario-forecasting tools they can use to estimate smart growth's effect on peak-hour travel, as well as its effects on sprawl, energy reduction, active travel, and carbon footprints. The new research report and software tool enable state transportation and regional agency planners to estimate the effects of different smart growth strategies on regional peak-hour travel demand and other transportation parameters. The SmartGAP tool allows a user to input different scenarios for land use, population growth, and transportation strategies, and then create a model of their effects on several critical performance areas. The tool is free, open-sourced, and user-friendly.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
C16	**2.6**	2.4	2.7	2.6							3.0	2.8	2.7	2.5						2.7		

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Freight Demand Modeling and Data Improvement Strategic Plan (C20)

This tool outlines an organizational approach that will help identify freight modeling and data priority needs, spur innovative ideas, and result in breakthrough solutions for wide application.

Link to FactSheet

The Draft Strategic Plan

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
C20	**3.2**	3.2	2.9					3.3					3.4	3.1							3.6	

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Prepare a Decision Makers Guide to the Collaborative Decision Making Framework (C22)

The goal of this project is to develop messages and strategies that effectively convey the value of Transportation for Communities — Advancing Projects through Partnerships (TCAPP) to decision makers at state and local transportation agencies as well as federal agencies. The project will include extensive market research of the target audience. Based on this research, messages that resonate with decision makers and potential marketing strategies will be developed. The effort is being directed not only at the transportation agencies, but also at the executives of resource agencies who review, and often approve or reject, alternatives for capacity-expansion projects.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
C22	**2.8**	2.8	2.6	2.8	2.9				2.6	3.3			2.9	2.9	3.0				2.5			2.3

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Resource on Advanced Integrated Models and an Implementation Strategy (C46)

This project will develop a practical howto guide on activity -based (AB) models for managers and practitioners. Delivered as an online manual, the primer will support use of the Dynamic Integrated Travel Demand Model and Time Sensitive Network open-source models produced in the C10A and C10B projects. In addition to the primer, the project will deliver a strategic implementation plan that addresses the benefits, issues, and barriers to migrating from a "traditional" approach to using travel-demand modeling to an AB modeling approach.

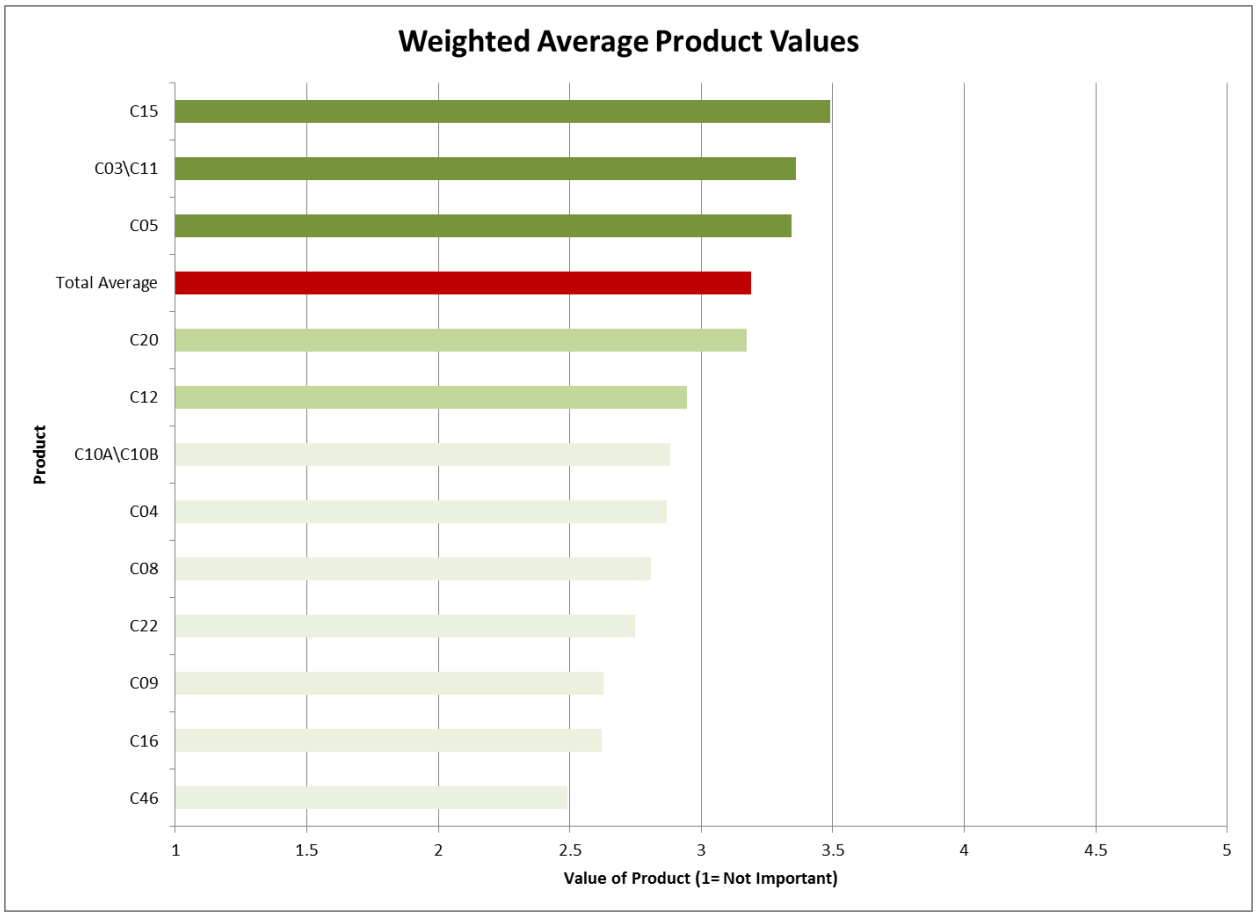
Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
C46	**2.5**	2.6	2.5										2.4	2.5								

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Weighted Average Product Values of all Capacity Products



Average Product Values of all Capacity Products by Committee

AASHTO Committee Product Ranking	Capacity											
Committee	C03\C11	C04	C05	C08	C09	C10A\C10B	C12	C15	C16	C20	C22	C46
Standing Committee on Highways	3.3	2.9	3.3	2.5	2.6	2.9	3.1	3.7	2.4	3.2	2.8	2.6
Standing Committee on Planning	3.5	2.8	3.1	2.7	2.6	2.6	3.1	3.7	2.7	2.9	2.6	2.5
Standing Committee on the Environment	2.9	2.8		3.0	2.6		2.9	2.9	2.6		2.8	
Subcommittee on Maintenance			3.4								2.9	
Subcommittee on Materials					2.4			2.9				
Subcommittee on Bridges and Structures												
Subcommittee on Highway Transport								3.9		3.3		
Subcommittee on Right-of-Way and Utilities											2.6	
Technology Implementation Group				3.3							3.3	
Standing Committee on Highway Traffic Safety		4.0		3.5					3.0			
Subcommittee on Safety Management		3.0		2.9					2.8			
Standing Committee on Research	3.7	2.9	3.9	3.0	2.9	3.1	2.6	3.4	2.7	3.4	2.9	2.4
Research Advisory Committee	3.4	2.6	3.2	3.1	2.7	3.0	3.0	3.4	2.5	3.1	2.9	2.5
Subcommittee on Systems Operation and Management			3.7								3.0	
Subcommittee on Asset Management												
Subcommittee on Construction							2.8					
Subcommittee on Design			2.7	2.2								
Subcommittee on Traffic Engineering			3.6								2.5	
Standing Committee on Public Transportation				2.9	2.9				2.7			
Special Committee on Intermodal Transportation and Economic Expansion								4.4		3.6		
Special Committee on Transportation Security and Emergency Management			2.9								2.3	
Weighted Average of Survey	3.4	2.9	3.3	2.8	2.6	2.9	2.9	3.5	2.6	3.2	2.8	2.5

Reliability Results by Product

Improve the reliability of our system and build stronger operational capabilities

- Provide relief from unexpected congestion
- Improve highway management processes
- Build a network that highway users can count on

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

This tool provides a blueprint for designing programs to monitor travel-time reliability and a guidebook for designing, building, operating, and maintaining those systems. The guidebook addresses freeways, toll roads, and urban arterials, and provides direction on technical, analytical, economic, and institutional implementation issues.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
L02	**3.6**	3.5			3.3								3.6	3.6	4.0				3.5			3.3

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Urban Freeway Models for Operations Strategies (L03)

This project defines travel-time reliability, explains the importance of travel-time distributions for measuring reliability, and recommends specific reliability performance measures. The study reexamined the contribution of the various causes of non-recurring congestion. The details of assembling the data to estimate predictive models are described for others who wish to conduct similar work. The research resulted in a two sets of models: the first relates the mean travel time on a segment to some measure of the variability in travel time. This easy-to-apply model set only requires that the analyst (or analytic procedure) provide the mean travel time along a segment. The second set of predictive models requires more inputs that reflect key contributors to travel-time unreliability.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
L03	**3.1**	2.8	2.6		3.4								2.6	2.8	3.6				3.4			3.0

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Guidelines for Incorporating Reliability Performance Measures into Travel Models (L04)

The objectives of this project are to (1) develop the capability of producing measures of reliability performance as output in traffic simulation models and planning models, and (2) determine how travel demand forecasting models can use reliability measures to produce revised estimates of travel patterns. The project will result in application guidelines for incorporating reliability into micro- and meso-simulation models and will identify key steps for integrating demand and network models. The product will also include first generation software that can potentially be integrated with many simulation packages.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
L04	**3.1**	3.1	2.9		3.2								3.4	2.9	3.2				3.0			2.8

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Incorporating Reliability Performance Measures into Transportation Planning and Programming (L05)

This "how-to" handbook provides the means—including technical procedures—for state and local transportation agencies to fully integrate mobility and reliability performance measures and strategies into transportation planning and programming processes. It provides guidance on how to maintain or improve traffic throughput on existing systems before capacity enhancement projects are undertaken or where capacity improvements cannot practically be undertaken.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
L05	**3.5**	3.5	3.7	2.8	3.4								4.3	3.7	3.7			2.8	3.6			2.7

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Reliability by Design (L07)

This project provides a design guidebook and an Excel-based tool that designers can use to estimate the cost-effectiveness of alternative design elements that can improve travel-time reliability. The design guidebook provides a catalog of different treatments, including summary information on each treatment's objective, a description of each geometric and non-geometric approach, advantages and disadvantages such as expected operational benefits, factors to consider when selecting a treatment, applicability to nonrecurring congestion, typical applications, design criteria and practices, and insight on safety effectiveness.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
L07	**3.4**	3.2		2.7	3.6						4.3	3.7	3.3	3.3	3.8			2.8	3.8			2.8

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Reliability and the Highway Capacity Manual (Lo8)

New analytical procedures developed as part of this effort incorporate travel-time reliability into the Highway Capacity Manual, which will enable planners and engineers to apply travel-time reliability performance measures to major freeways and urban streets in a corridor context.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
L08	**3.4**	3.3	3.2		3.3								3.9	3.4	3.7			3.0	3.4			2.8

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Economic Evaluation Models to Assess Improvements in Travel-Time Reliability (L11)

The project has identified a full range of actions DOTs can take to improve travel-time reliability using the following: 1) a clear understanding of the needs and requirements of road users, including freight carriers; 2) performance-based planning tools that include goals, performance measures, and targets; 3) the role of changing demographics, economics, and climate change; 4) technological advances in operations; and 5) the critical roles played in managing and operating a reliable highway network. Overall, this information may have direct use in efforts to establish the benefits of actions to improve the consistency of travel times and could also be used in benefit-cost calculations. The report will also address how road pricing can significantly improve travel-time reliability.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
L11	**3.2**	3.1	3.4		3.3								3.4	2.8	3.6				2.7			2.8

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Communicating Traveler Information and Estimating Its Value to Travelers (L14)

This lexicon is the first resource for identifying the best ways to introduce the concept of travel-time reliability to motorists and to provide information about reliability so that it is understood and useful. The lexicon and accompanying report emphasize messages and media that can effectively communicate information without increasing the risk of driver distraction.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
L14	**3.5**	3.5		2.7	3.4					4.3			3.7	3.1	4.1		3.4		3.2			3.3

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

E-learning for Training and Certification for Traffic Incident Responders (L32B)

A companion product for the train-the-trainer program in Traffic Incident Management (L12). . This e-learning tool is based on the full curriculum and will allow responders to take the course modules on-line and at their discretion.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
L32B	**3.7**	3.7			3.8						4.8	3.1	3.1	3.4	4.1				3.6			4.3

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Train-the-Trainer Post Course Assessment Tool (L32C)

This project is developing an online assessment tool for participants in the Traffic Incident Management training (L12). It will allow them to assess effectiveness of their training and its implementation.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
L32C	**3.3**	3.3			3.3						3.5	2.6	2.9	3.0	3.8				3.1			3.8

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

e-Tool for Business Processes to Improve Travel-Time Reliability (L34)

This e-tool will take the lessons from Organizational Assessment and Leadership to Improve Operations (L01/L06) and convert them into a web-based tool. Its intent is to allow a user to input a variety of scenarios, describe the desired outcomes, and have the software gnerate solutions to re-engineer day-to-day business practices. The software will allow agencies to "map" their current practices and compare them to optimal practices that could maximize the agency's highway operations success.

Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
L34	**2.9**	3.0			3.4								2.9	2.5	3.3	2.9			2.7			2.6

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Regional Operations Academy (L36)

New curriculum for regional training allows public agencies to build expertise in the emerging highway operations field. Topics such as the principles of building capability within organizations, performance measurement, goods movement, workforce development, and building a business case for systems operations and management are covered in depth. Components of the curriculum are tailored to the interests and capabilities of the specific regions where the Regional Operations Forums are delivered.

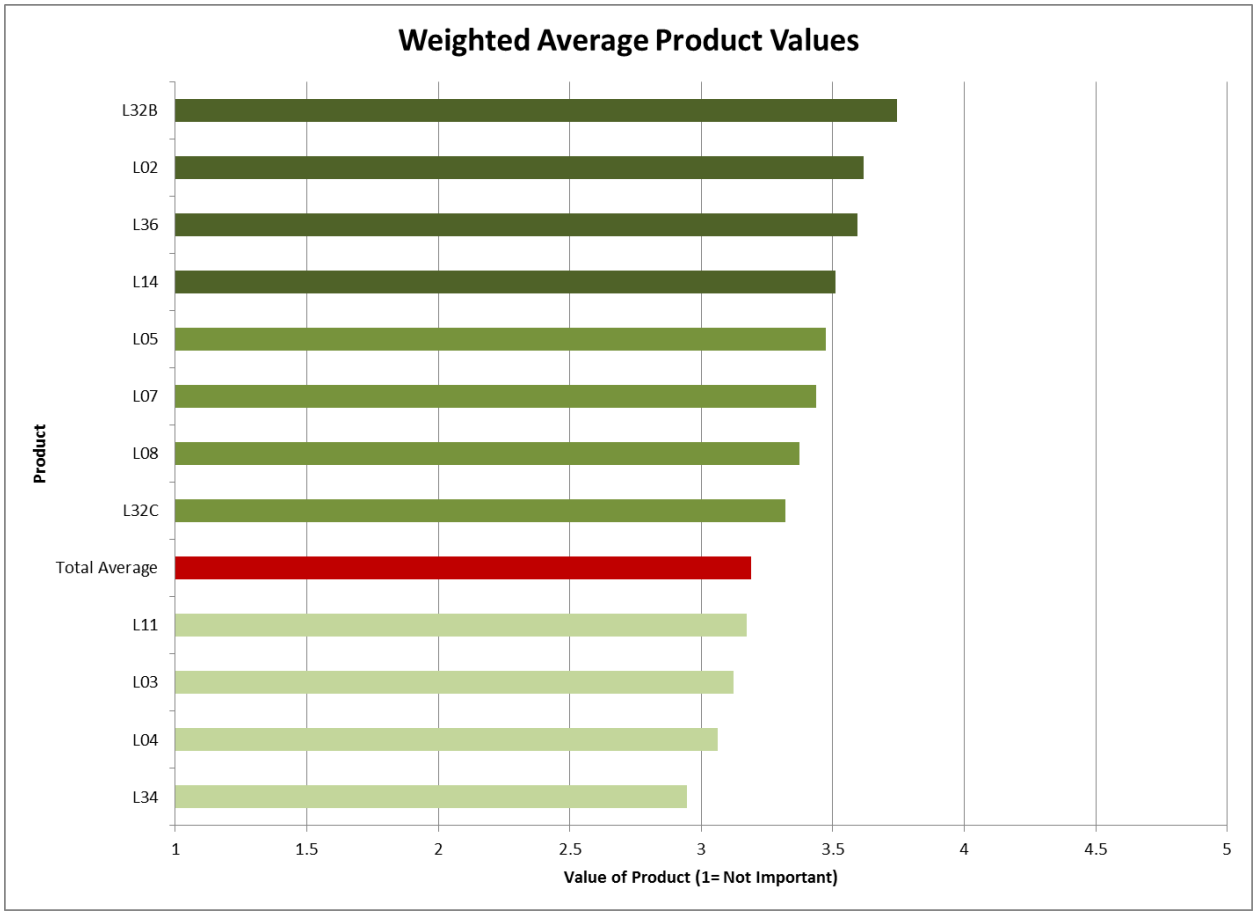
Link to FactSheet

Average Product Value by Committee*

Product Number	Weighted Average Product Value	Standing Committee on Highways	Standing Committee on Planning	Standing Committee on the Environment	Subcommittee on Maintenance	Subcommittee on Materials	Subcommittee on Bridges and Structures	Subcommittee on Highway Transport	Subcommittee on Right-of-Way and Utilities	Technology Implementation Group	Standing Committee on Highway Traffic Safety	Subcommittee on Safety Management	Standing Committee on Research	Research Advisory Committee	Subcommittee on Systems Operation and Management	Subcommittee on Asset Management	Subcommittee on Construction	Subcommittee on Design	Subcommittee on Traffic Engineering	Standing Committee on Public Transportation	Special Committee on Intermodal Transportation and Economic Expansion	Special Committee on Transportation Security and Emergency Management
L36	**3.6**	3.4			3.9						4.5	3.5	2.9	3.4	3.9				3.2			3.8

*Average Product Value by Committee reflects the average values of the Committee members responses, Committees were not surveyed on all products.

Weighted Average Product Values of all Reliability Products



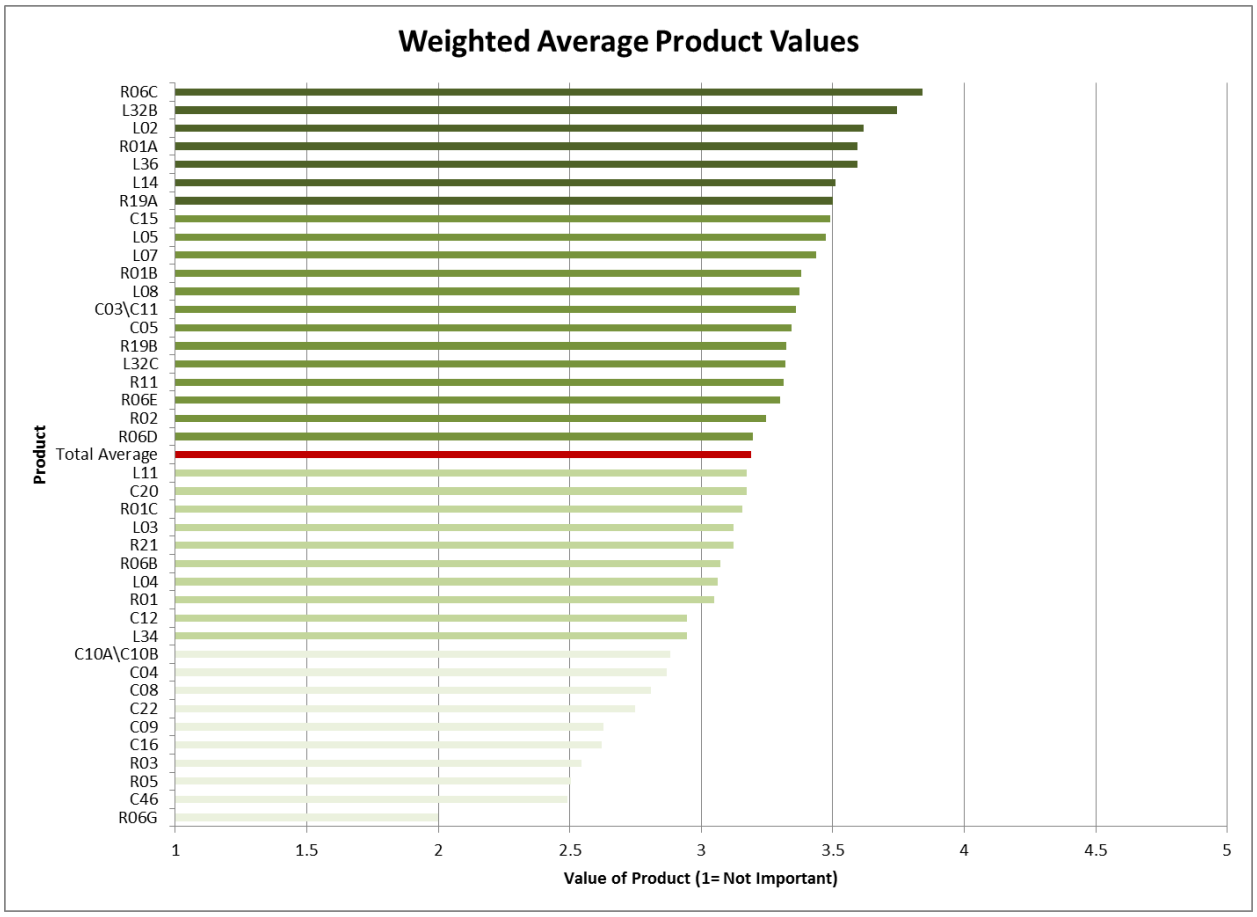
Average Product Values of all Reliability Products by Committee

AASHTO Committee Product Ranking	Reliability											
Committee	L02	L03	L04	L05	L07	L08	L11	L14	L32B	L32C	L34	L36
Standing Committee on Highways	3.5	2.8	3.1	3.5	3.2	3.3	3.1	3.5	3.7	3.3	3.0	3.4
Standing Committee on Planning		2.6	2.9	3.7		3.2	3.4					
Standing Committee on the Environment				2.8	2.7			2.7				
Subcommittee on Maintenance	3.3	3.4	3.2	3.4	3.6	3.3	3.3	3.4	3.8	3.3	3.4	3.9
Subcommittee on Materials												
Subcommittee on Bridges and Structures												
Subcommittee on Highway Transport												
Subcommittee on Right-of-Way and Utilities												
Technology Implementation Group								4.3				
Standing Committee on Highway Traffic Safety					4.3				4.8	3.5		4.5
Subcommittee on Safety Management					3.7				3.1	2.6		3.5
Standing Committee on Research	3.6	2.6	3.4	4.3	3.3	3.9	3.4	3.7	3.1	2.9	2.9	2.9
Research Advisory Committee	3.6	2.8	2.9	3.7	3.3	3.4	2.8	3.1	3.4	3.0	2.5	3.4
Subcommittee on Systems Operation and Management	4.0	3.6	3.2	3.7	3.8	3.7	3.6	4.1	4.1	3.8	3.3	3.9
Subcommittee on Asset Management											2.9	
Subcommittee on Construction								3.4				
Subcommittee on Design				2.8	2.8	3.0						
Subcommittee on Traffic Engineering	3.5	3.4	3.0	3.6	3.8	3.4	2.7	3.2	3.6	3.1	2.7	3.2
Standing Committee on Public Transportation												
Special Committee on Intermodal Transportation and Economic Expansion												
Special Committee on Transportation Security and Emergency Management	3.3	3.0	2.8	2.7	2.8	2.8	2.8	3.3	4.3	3.8	2.6	3.8
Weighted Average of Survey	3.6	3.1	3.1	3.5	3.4	3.4	3.2	3.5	3.7	3.3	2.9	3.6

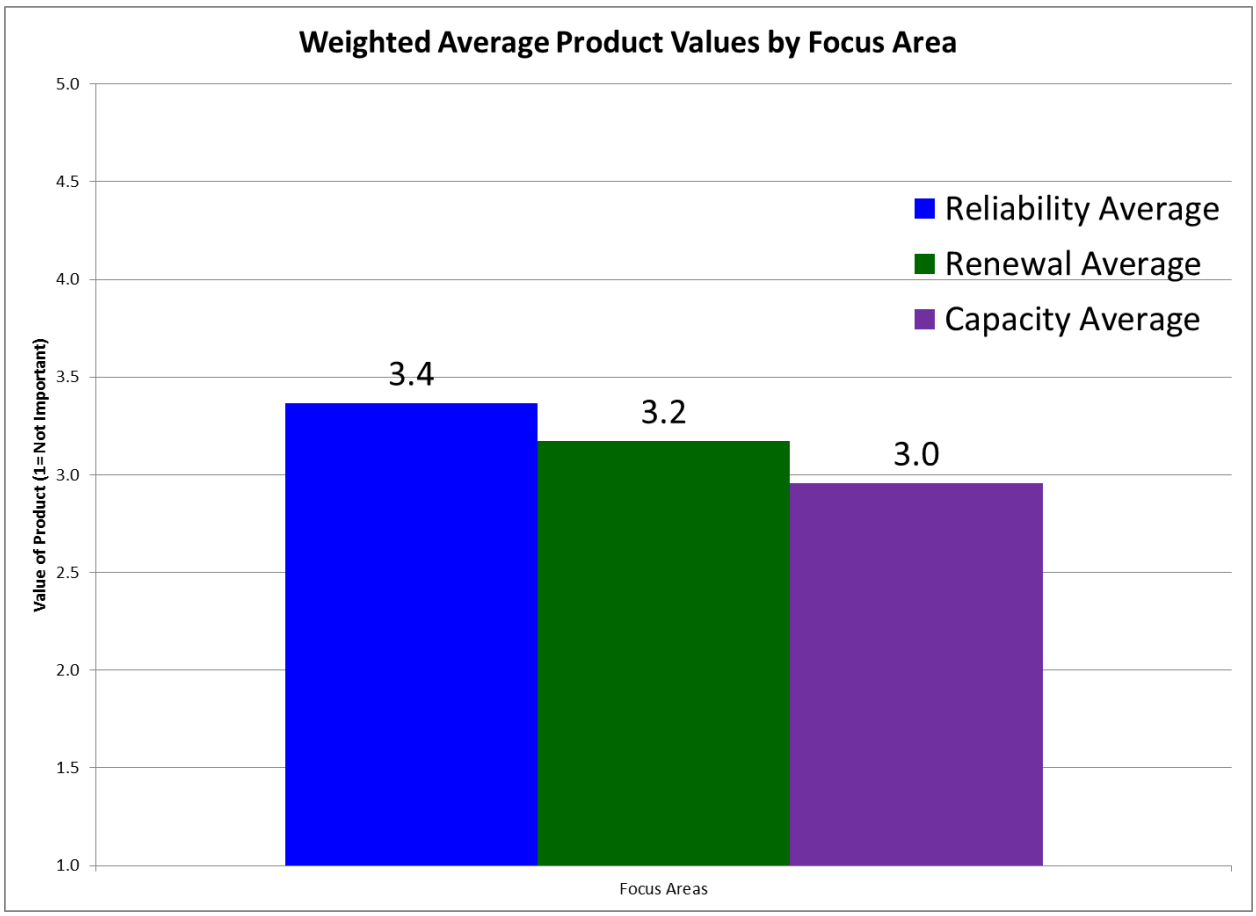
Survey Summary of Three Focus Areas

Weighted Average Product Values of All Products

The following table shows all the weighted average product values from the capacity, reliability, and renewal focus areas. (See previous pages to compare product numbers with their titles.) The average product value (in red) was 3.19, or just under 3.2 on the scale from 1 to 5, with 1 being Not Important.



Weighted Average Product Values by Focus Areas



All Survey Responses by Committee

AASHTO Committee Product Ranking	Renewal																Capacity												Reliability											
Committee	R01	R01A	R01B	R01C	R02	R03	R05	R06B	R06C	R06D	R06E	R06G	R11	R19A	R19B	R21	C03\C11	C04	C05	C08	C09	C10A\C10B	C12	C15	C16	C20	C22	C46	L02	L03	L04	L05	L07	L08	L11	L14	L32B	L32C	L34	L36
Standing Committee on Highways	2.9	3.5	3.3	3.3	3.3	2.6	2.5	3.2	3.8	3.1	3.2	1.8	3.2	3.5	3.1	2.9	3.3	2.9	3.3	2.5	2.6	2.9	3.1	3.7	2.4	3.2	2.8	2.6	3.5	2.8	3.1	3.5	3.2	3.3	3.1	3.5	3.7	3.3	3.0	3.4
Standing Committee on Planning													2.8				3.5	2.8	3.1	2.7	2.6	2.6	3.1	3.7	2.7	2.9	2.6	2.5		2.6	2.9	3.7		3.2	3.4					
Standing Committee on the Environment					2.7									3.1	3.1		2.9	2.8		3.0	2.6		2.9	2.9	2.6		2.8					2.8	2.7			2.7				
Subcommittee on Maintenance													3.7						3.4								2.9		3.3	3.4	3.2	3.4	3.6	3.3	3.3	3.4	3.8	3.3	3.4	3.9
Subcommittee on Materials		3.5	3.6	3.4	3.6		2.7	3.5	4.1	3.3	3.7	2.0		3.6	3.4	3.3					2.4			2.9																
Subcommittee on Bridges and Structures					3.2			2.6						3.9	3.8																									
Subcommittee on Highway Transport																								3.9		3.3														
Subcommittee on Right-of-Way and Utilities	3.2	3.7	3.2	3.0																							2.6													
Technology Implementation Group	3.3	4.0	4.0	3.0	3.8	2.3	2.3	4.3	4.8	4.0	2.3	3.3	3.8			3.0				3.3							3.3								4.3				
Standing Committee on Highway Traffic Safety						3.3				3.8			4.0					4.0		3.5					3.0								4.3			4.8	3.5		4.5
Subcommittee on Safety Management						2.4				2.8			3.6					3.0		2.9					2.8								3.7			3.1	2.6		3.5
Standing Committee on Research	3.1	3.9	4.1	3.0	4.1	2.4	2.4	3.6	3.9	3.6	3.4	1.7	4.0	3.6	2.6	3.7	3.7	2.9	3.9	3.0	2.9	3.1	2.6	3.4	2.7	3.4	2.9	2.4	3.6	2.6	3.4	4.3	3.3	3.9	3.4	3.7	3.1	2.9	2.9	2.9
Research Advisory Committee	3.1	3.4	3.1	3.0	3.2	2.5	2.1	3.1	3.6	3.1	2.9	1.9	2.9	3.3	3.4	3.0	3.4	2.6	3.2	3.1	2.7	3.0	3.0	3.4	2.5	3.1	2.9	2.5	3.6	2.8	2.9	3.7	3.3	3.4	2.8	3.1	3.4	3.0	2.5	3.4
Subcommittee on Systems Operation and Management													3.7						3.7								3.0		4.0	3.6	3.2	3.7	3.8	3.7	3.6	4.1	4.1	3.8	3.3	3.9
Subcommittee on Asset Management	2.9	3.6	2.9	3.3	3.0	2.9	3.4	3.0	3.4	3.6	3.6	2.7	3.7	4.1	4.0	3.7																						2.9		
Subcommittee on Construction	2.9	3.6	3.4	3.1	3.3		2.1	2.8	3.9	3.0	3.4	1.9	2.8	2.9	2.8	2.8							2.8												3.4				
Subcommittee on Design		3.9			2.8		2.8		3.8	3.4	3.5		2.5			3.2			2.7	2.2												2.8	2.8	3.0					
Subcommittee on Traffic Engineering													3.4						3.6								2.5		3.5	3.4	3.0	3.6	3.8	3.4	2.7	3.2	3.6	3.1	2.7	3.2
Standing Committee on Public Transportation																				2.9	2.9				2.7															
Special Committee on Intermodal Transportation and Economic Expansion																								4.4		3.6														
Special Committee on Transportation Security and Emergency Management													3.2						2.9								2.3		3.3	3.0	2.8	2.7	2.8	2.8	2.8	3.3	4.3	3.8	2.6	3.8
Weighted Average of Survey	3.0	3.6	3.4	3.2	3.2	2.5	2.5	3.1	3.8	3.2	3.3	2.0	3.3	3.5	3.3	3.1	3.4	2.9	3.3	2.8	2.6	2.9	2.9	3.5	2.6	3.2	2.8	2.5	3.6	3.1	3.1	3.5	3.4	3.4	3.2	3.5	3.7	3.3	2.9	3.6

This page intentionally left blank.

Conclusion

The results of the surveys conducted by AASHTO clearly show the level of interest that state departments of transportation have in the SHRP2 program. As noted above, these results provided valuable input into the deliberations of the AASHTO Implementation Task Force. The ITF meeting report is now under development. Once finalized, the ITF recommendations will be reviewed by FHWA as part of an interagency consultation effort. In mid-June, the joint FHWA/AASHTO proposal will be presented to the SHRP2 Implementation Advisory Committee and a final plan will be constructed.

Throughout 2013, implementation of the first SHR2 Solutions will continue, with ample opportunities for participation, technical assistance, and guidance to transportation agencies wishing to incorporate these new innovations into their standard practice.

For more information on the AASHTO survey, contact Pam Hutton, AASHTO's SHRP2 Implementation Manager, at *phutton@aashto.org* or 303-263-1212.