

## Effective solutions to meet real challenges

The results of more than 100 research projects designed to meet the most pressing problems facing our Nation's highway system will be made available in a series of implementable solutions to support transportation professionals as they plan, operate, maintain, and improve safety on America's roadways.

Visit the SHRP2 Solutions booth to learn more about:

- Long-life bridges and pavements
- Faster delivery on all kinds of reconstruction and rehabilitation projects
- Reducing delays from utilities and railroad conflicts
- Responder training to clear traffic incidents quickly and improve safety
- Better processes to address operations issues
- Strategies to improve travel time reliability
- Approaches to streamline environmental reviews
- Tools to assess project economic development impacts



### Save Lives

SHRP2 Solutions make our roads safer by examining driver behaviors that contribute to crashes and by reducing worker and traveler exposure to dangerous construction zones, incident scenes, and congestion.



### Save Money

SHRP2 Solutions decrease construction and maintenance costs with innovations that result in longer-lasting infrastructure that can be installed and repaired more rapidly.



### Save Time

SHRP2 Solutions expedite project delivery through systematic, collaborative planning and rapid construction techniques; decrease work zone-related delays; and make travel times more reliable by boosting agencies' abilities to respond to unexpected congestion.

Partner Agencies



## A collaboration to define innovative and practical solutions to complex challenges.

The second Strategic Highway Research Program (SHRP2) is a national partnership of key transportation organizations including the Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), and the Transportation Research Board (TRB).

The collaborative work of these organizations helped to ensure research projects evolved from real challenges at national, state, and local levels. To date, more than 700 volunteers representing diverse industry, government, and advocacy groups in the transportation community have participated in SHRP2.

SHRP2 was authorized by Congress and builds on the success of the first SHRP, which produced, among other innovations, Superpave, a process for creating more durable roads. The Moving Ahead for Progress in the 21st Century Act has recently authorized additional funding to support implementation efforts through 2015.

To learn more, visit: [www.fhwa.dot.gov/goSHRP2](http://www.fhwa.dot.gov/goSHRP2)

To ask questions, visit:

[www.fhwa.dot.gov/goSHRP2/GetInvolved/Contact](http://www.fhwa.dot.gov/goSHRP2/GetInvolved/Contact)

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# Save lives. Save money. Save time.

**SHRP2 Solutions is at the forefront of transportation innovation — helping the Nation's transportation community improve safety, enhance productivity, boost efficiency, and increase reliability by introducing solutions to improve the country's highway system.**

# Innovative Tools for the Road Ahead

In establishing SHRP2, Congress recognized that developing effective solutions to complex challenges requires both large-scale collaboration and intensive focus. As a result, SHRP2 has concentrated resources in four broad focus areas identified by state transportation agencies as essential to the Nation's health, safety, economy, and quality of life.



## Safety

Continuing through 2014, the highlight of this focus area is the Naturalistic Driving Study (NDS), which will produce an unprecedented national database documenting more than 2.5 million trips from vehicle drivers of all ages to understand driver behavior and facilitate safety advances and technologies for the decades to come.

- Better understand driver behavior to reduce crashes, injuries, and fatalities
- Build safety campaigns based on hard data
- Derive design standards and safety countermeasures from actual driver behavior

### Why it matters:

The central goal of the NDS is to assess the role of driver performance and behavior in traffic safety by collecting data to understand how drivers interact with and adapt to the vehicle, traffic environment, roadway characteristics, traffic control devices, and the environment.

This information will support the development of new and improved countermeasures that will significantly improve highway safety. The study will include approximately 3,100 drivers in six states throughout the United States.



## Capacity

Integrate environmental, economic, and community requirements into new highway capacity projects to align with community goals, advance consensus-based decisions, and avoid costly delays.

- Improve collaborative decision making for better, faster, more widely accepted project decisions
- Increase public trust through increased transparency in multimodal decision making

**Several Capacity products will be introduced in the coming year including *Implementing Eco-Logical*, a web-based tool for identifying and addressing ecological priorities early in the planning process.**

### Why it matters:

Implementing *Eco-Logical* includes an Integrated Ecological Framework (IEF), a nine-step, science-based process to help identify ecological priorities in a region and make timely decisions about highway enhancements that benefit transportation and the environment. The solution also includes tools for conducting ecological assessments, along with guidelines and model agreements to support integrating conservation, planning, and environmental permitting into an agency's ecosystem approach.

Implementing *Eco-Logical* offers improved environmental outcomes — and it also saves time and costs related to planning and regulatory decision making. Using this solution can expedite planning and permitting for construction, as well as advance collaboration among highway and environmental resources agencies.



## Renewal

Renew the Nation's vital, aging highway system with tools that help you meet your goals with less disruption and improved safety.

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

**Renewal products include strategies for managing complex projects, low-cost preservation techniques for high-volume roads, and a toolkit for rapid bridge construction.**

### Why it matters:

The toolkit for rapid bridge construction includes concept designs for prefabricated bridge components that can be produced off-site and installed quickly by local contractors using standard equipment. State departments of transportation and local contractors can use the concept designs in the toolkit to build or replace typical bridges faster and at a lower cost. The designs can be incorporated into project plans with minimal alterations, speeding project delivery, improving safety, and reducing disruption caused by local bridge projects. This means less congestion for travelers and local businesses.



## Reliability

Improve the reliability of our system with operational tools that minimize the impact of unexpected congestion, and provide motorists more predictable and consistent travel times.

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

**Emerging products include guidance for benchmarking your organization's current capabilities, as well as a multi-disciplinary national training program for traffic incident responders, to ensure faster, safer incident clearance.**

### Why it matters:

Effective clearing of traffic incident scenes is essential to reducing the risk of responder and traveler injuries and fatalities, secondary crashes, and congestion delays. This SHRP2 Solution introduces a national, multi-disciplinary training curriculum for first responders to improve effectiveness and coordination during incidents.

Endorsed by the International Association of Chiefs of Police, the International Association of Fire Chiefs, and the National Volunteer Fire Council, this train-the-trainer program strengthens current incident management programs, provides a common platform to enhance the on-scene management skills of responders, and ensures that the entire responder corps is uniformly and quickly trained in the latest techniques.

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**“If I can show you a way to fix bridges faster, more safely, with equal quality and costs that are comparable to conventional methods, with far less impact to the public — would you be interested?”**

— Christopher Williams, Senior Project Manager, Vermont Agency of Transportation