

# Strategic Highway Safety Plan Evaluation Process Model



*“The Focus is Results”*



U.S. Department of Transportation  
**Federal Highway Administration**



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16. Abstract  This document provides an evaluation process model (EPM) that States can use to support a program evaluation of their Strategic Highway Safety Plan (SHSP). Program evaluation looks at the overall SHSP and helps States assess their SHSP's process and performance.  Safety improvements depend on a program of data-driven priorities and proven effective strategies. Evaluation helps States achieve such a program by determining whether current SHSP activities deserve enhancement, revision, or replacement. In addition, the Highway Safety Improvement Program (HSIP) requires regularly recurring SHSP evaluation to ensure the accuracy of data and proposed strategies; the EPM can help States address this evaluation requirement as well.  The EPM features discussions on four basic evaluation components (planning for evaluation, process evaluation, performance evaluation, and using evaluation results). For each component, the document provides background information and recommended actions, as well as checklists (Chapters 1 and 4) and self assessment questions (Chapters 2 and 3) for practitioners to use to evaluate their SHSP. SHSP leaders and managers can benefit from considering the information and recommendations in this document. Regions, localities, tribes, and others may also find the EPM useful for evaluating safety plans.			
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## Foreword

The *Strategic Highway Safety Plan Evaluation Process Model* (EPM) could not have arrived at a better time. Now more than ever transportation safety focuses on the need for performance-based planning and management, which can only be accomplished through evaluation. Evaluation is critical to any safety planning process and the Strategic Highway Safety Plan (SHSP) is no exception. Through evaluation States determine the impact of their SHSP, enabling them to recognize their successes, uncover challenges in implementing strategies or meeting goals and objectives, and identify opportunities for improvement.

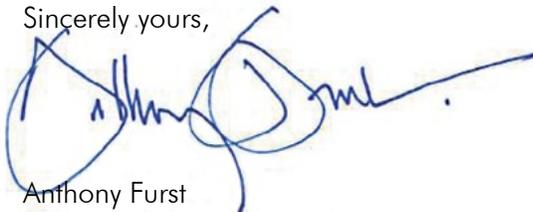
The EPM contains background information, recommended actions, checklists, and self assessment questions for addressing four basic evaluation components:

- Planning for evaluation;
- Assessing the SHSP management effort;
- Assessing SHSP implementation and performance; and
- Interpreting and applying the results.

The EPM contains examples from States successfully using evaluation methods to assess the SHSP; demonstrating evaluation is not only possible, but preferable. A series of worksheets are provided, which are designed to encourage a deeper review of each of the self assessment questions. After thoughtfully responding to the questions in these worksheets, States can develop an action plan that builds on existing strengths and addresses areas of weakness. Armed with this information, SHSP managers can improve the SHSP process, focus resources on the largest problems, and apply the most effective countermeasures.

Thorough SHSP evaluation is an important investment in the State transportation safety program. The EPM was developed with this in mind and aims to provide States with a helpful and effective process to further their evaluation efforts.

Sincerely yours,

A handwritten signature in blue ink, appearing to read 'Anthony Furst', with a long horizontal stroke extending to the right.

Anthony Furst

Associate Administrator for Safety  
Federal Highway Administration





# Table of Contents

<b>The Strategic Highway Safety Plan Evaluation Process Model Overview .....</b>	<b>1</b>
History and Background .....	2
EPM Purpose .....	2
EPM Components .....	4
<b>Chapter 1 – Planning for Evaluation: Getting Started .....</b>	<b>5</b>
Introduction .....	5
Purpose of Evaluation Planning .....	6
Methods .....	6
Evaluation Planning Checklist .....	14
<b>Chapter 2 – Process Evaluation: Getting on the Right Track .....</b>	<b>15</b>
Introduction .....	15
Purpose .....	15
Methods .....	15
Self Assessment Questions .....	26
<b>Chapter 3 – Performance Evaluation: Outputs and Outcomes .....</b>	<b>28</b>
Introduction .....	28
Purpose .....	28
Self Assessment Questions .....	34
<b>Chapter 4 – Using Evaluation: The Focus is Results .....</b>	<b>35</b>
Introduction .....	35
Interpret the Data .....	35
Apply the Results .....	36
Using Evaluation Checklist .....	38
<b>Conclusion .....</b>	<b>39</b>
<b>Appendix – EPM Worksheets .....</b>	<b>40</b>





# The Strategic Highway Safety Plan Evaluation Process Model Overview

Transportation safety reached an important milestone in October 2007 when all 50 States and the District of Columbia completed development of Strategic Highway Safety Plans (SHSP). Since then, dramatic road safety improvements have occurred across the nation, including a decrease in fatalities and serious injuries. These improvements may in part be related to changes resulting from the implementation of data driven, multidisciplinary, collaborative, results-oriented SHSPs.

Today all States are implementing SHSPs, and some are asking questions about SHSP effectiveness, e.g., which elements work well and which do not meet expectations. An organized approach to evaluation or an Evaluation Process Model (EPM) helps answer these important questions.

Elements of SHSP evaluation already are in place in many States; however, additional benefits can be realized by organizing and institutionalizing these elements into a comprehensive program evaluation. Evaluation strengthens SHSP efforts by:

- Demonstrating the SHSP's contribution to transportation safety;
- Uncovering challenges in prioritizing or implementing programs and strategies;
- Determining progress in meeting transportation safety goals and objectives;
- Validating emphasis areas and strategies, or revealing the need to revise them;
- Identifying opportunities for greater efficiencies and improvements to the SHSP;
- Confirming the need for a comprehensive, data driven approach to safety; and
- Underscoring the need to prioritize transportation safety resources and funding.

## EVALUATION IS...

The systematic collection of information about the activities, characteristics, and outcomes of a program to make judgments about it, improve its effectiveness, and/or inform decisions about future programming.



## History and Background

To address the devastating human and economic consequences of traffic crashes, the American Association of State Highway and Transportation Officials (AASHTO) published an SHSP in 1997 and encouraged States to develop data-driven, evidence-based SHSPs addressing the emphasis areas in the AASHTO plan. Some States subsequently developed SHSPs using the AASHTO plan as a model. In 2005, Federal legislation<sup>1</sup> required States to develop SHSPs.

The Federal Highway Administration (FHWA), together with other safety partners, provided SHSP development guidance in *A Champion's Guidebook to Saving Lives* (Champion's Guidebook) and implementation guidance in the *SHSP Implementation Process Model* (IPM). The next logical step after development and implementation is to evaluate SHSP process and performance to determine if limited safety resources are deployed efficiently and effectively.

The information in the EPM builds upon and is supported by current evaluation methodology, model practices, and processes identified through in-depth interviews in six States, technical review and comment by FHWA safety experts, the knowledge and experience of the EPM development team, and lessons learned from a multi-State pilot test.

## EPM Purpose

### WHY SHOULD STATES USE THE EPM?

Safety improvements depend on a program of data driven priorities and proven effective strategies. Evaluation helps States achieve such a program by analyzing SHSP process and performance and determining whether current activities deserve enhancement, revision, or replacement.

Evaluation is intended to take the place of trial and error, guesswork based on anecdotal evidence, and intuition. The Highway Safety Improvement Program (HSIP) requires regularly recurring SHSP evaluation to ensure the accuracy of data and proposed strategies. The EPM can help States address this evaluation requirement as well.

The EPM provides guidance on evaluation methods, including when, where, and how to use them. It will help States answer basic questions of evaluation, such as:

1. What are we trying to do?
2. How well are we doing it?
3. How can we improve?

<sup>1</sup> 23 U.S.C. §148.

**The definition of insanity is doing the same thing over and over and expecting different results.**

*Albert Einstein  
(attributed)*



Not every element described in the EPM will apply to every SHSP, but all SHSP leaders and managers can benefit from considering the information and recommendations. Regions, localities, tribes, and others also may find the EPM useful for evaluating safety plans.

## **WHEN SHOULD A STATE USE THE EPM?**

The EPM's primary purpose is to support a "point in time" program evaluation of the SHSP process and performance. The specific timing of SHSP evaluation is determined by the State, but must take into consideration Federal requirements as well as the needs and circumstances of the State.

The EPM is applied more successfully if certain elements of evaluation are ongoing and are instituted early in the SHSP process. For example, tracking the implementation status of strategies and setting performance goals and objectives are evaluation practices typically initiated early in the SHSP process and then monitored regularly to gauge progress. Practices such as these support the needs of SHSP evaluation and the EPM.

## **WHO SHOULD USE THE EPM?**

The EPM's intended audiences are SHSP leaders, such as safety program managers/coordinators, transportation safety planners, and other traffic safety professionals.

## **HOW IS PROGRAM EVALUATION DIFFERENT FROM PROJECT EVALUATION?**

Program evaluation<sup>2</sup> looks at the overall SHSP. It can identify where SHSP and emphasis area goals are met or unmet and point toward likely strengths or shortcomings, i.e., the failure to implement certain strategies or the identification of strategies not having the expected effect. A project-level evaluation examines the effectiveness of specific projects, such as replacing a four-way intersection with a roundabout, improving a pedestrian crossing, etc. Please refer to the [Highway Safety Improvement Program \(HSIP\) Manual](#) and/or the National Highway Traffic Safety Administration's (NHTSA) [The Art of Appropriate Evaluation: A Guide for Highway Safety Program Managers](#) for additional information on project-level evaluation.

## **IS PROGRAM EVALUATION WORTH THE EFFORT?**

SHSP program evaluation takes time and effort, but it is essential for continued improvements. The EPM is designed to help simplify and provide direction for achieving the most useful results. Sometimes program managers are reluctant to conduct evaluations because they fear potential fallout from negative

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<sup>2</sup> In this document, the terms program evaluation and evaluation are used interchangeably. Project evaluation will be specified as such.



Source: Federal Highway Administration.

results; however, both positive and negative results can lead to positive change. Successful SHSP implementation relies on being open to continual feedback and adjusting the SHSP as needed. Evaluation provides this feedback and helps identify successful, as well as ineffective strategies, make warranted course corrections, and enhance the return on safety investments.

## EPM Components

The EPM contains background information, recommended actions, checklists, and self assessment questions for addressing four basic evaluation components: planning, process evaluation, performance evaluation, and the use of evaluation results. The recommended actions are steps designed to help States prepare for and conduct an SHSP evaluation, and the self assessment questions help identify successes, challenges, and opportunities in the SHSP itself or in the implementation process.

The appendix contains worksheets for Chapters 2 and 3. The worksheets are intended to provide a deeper review of the self assessment questions, document evaluation results, and record follow up action items to maintain or improve SHSP process and performance.

### PLANNING FOR EVALUATION – GETTING STARTED

Chapter 1 addresses how to prepare for an evaluation and describes various planning methods and steps required to organize the evaluation. If an SHSP evaluation plan already is in place, Chapter 1 can be reviewed for ideas to strengthen it.

### PROCESS EVALUATION – GETTING ON THE RIGHT TRACK

Chapter 2 is intended to help States evaluate SHSP management methods, including the strength of the leadership structure; whether the development process was sufficiently data driven, evidence-based, multidisciplinary, multi-modal, and collaborative; and the degree of alignment among agency priorities. This examination will help leaders and managers identify opportunities to improve the overall SHSP process.

### PERFORMANCE EVALUATION – MEASURING OUTPUTS AND OUTCOMES

Chapter 3 provides methods for evaluating SHSP outputs and outcomes. Outputs measure the degree to which SHSP strategies and action plans are implemented. Outcomes measure the degree to which SHSP goals and objectives are met.

### USING EVALUATION – THE FOCUS IS RESULTS

Chapter 4 offers methods for interpreting, applying, and sharing the evaluation results to improve the SHSP process and performance.



# Chapter 1 – Planning for Evaluation: Getting Started

## Introduction

It is never too early to institute good evaluation practices; in fact, planning for evaluation should begin when the SHSP is developed. During the early stages of SHSP development attention should be given to how progress will be measured and success determined. Some essential elements to have in place prior to conducting the SHSP evaluation include:

- SHSP emphasis areas with performance measures, goals, and measurable objectives;
- Implementation or action plans for each SHSP emphasis area with action steps, countermeasures, assigned roles and responsibilities, etc.;
- Ongoing data collection and analysis; and
- Mechanisms for tracking SHSP implementation, and monitoring progress toward reaching goals and objectives.

Chances are most of these practices already are in place, providing a strong base for conducting an SHSP evaluation. The [Champion's Guidebook](#) and [IPM](#) provide more detail on SHSP development and implementation. The steps and recommendations in these guides help create an SHSP ready for evaluation.

The EPM supports a comprehensive, high-level evaluation of the SHSP. This can occur at any point in time, but should take into consideration Federal requirements for regularly recurring evaluation, as well as the State's needs and circumstances. Some likely times are:

- Prior to or as part of an SHSP update;
- After active SHSP implementation; or
- When an SHSP leader or other official wants to know whether the SHSP is making a difference in transportation safety.

## EVALUATION IN ACTION

### California Regularly Tracks SHSP Implementation

California's comprehensive Strategic Highway Safety Plan (SHSP) includes 17 Challenge Areas and currently 175 Actions. The SHSP Steering Committee meets bimonthly with Challenge Area Leaders, Action Leads, and other SHSP safety stakeholders to discuss implementation issues, present new actions, address challenges, and celebrate success. The State uses an electronic system (OnTrack) to track the implementation and progress of SHSP Actions, which allows Action Leads to update the status of the Actions for which they are responsible and provide updated comments on-line. A unique feature of the OnTrack system is the ability to produce a variety of tailored reports. For example, users can sort data by agency to see a summary of the status of implementation of Actions by Lead Agency. Monthly SHSP status reports are generated from OnTrack and posted, as required, on the SHSP web site. The tracking tool keeps safety stakeholders involved and provides them with a report and agenda to discuss at SHSP Steering Committee meetings and Challenge Area Team meetings. It also establishes a level of accountability and gives safety stakeholders ownership in the SHSP implementation process.



States should always be thinking about how to gauge success and what indicators will be used to determine progress. Typically these indicators fall into two categories: process evaluation and performance evaluation.

- **Process evaluation** addresses the SHSP procedural, administrative, and managerial aspects and assesses progress in these areas.
- **Performance evaluation** addresses the outputs and outcomes resulting from SHSP implementation. It assesses the progress of SHSP implementation and the degree to which it is meeting goals and objectives.

Keeping these indicators in mind early in SHSP development and implementation will ensure important questions about the SHSP can be answered at any time.

## Purpose of Evaluation Planning

The purpose of evaluation planning is to place managers and stakeholders in the best position to conduct the evaluation. It provides a formalized process and direction for evaluation activities, and helps answer the following questions:

- **Objectives:** What SHSP issues or questions need to be addressed?
- **Data:** What data are needed to address the objectives?
- **Resources:** What resources are available?
- **Roles and Responsibilities:** Who is responsible? Who is involved?
- **Results:** How and when will the results be reported and used?

## Methods

This section provides more detail on planning methods.

### IDENTIFY EVALUATION OBJECTIVES

Program managers should determine which SHSP process and performance areas to evaluate and develop a set of objectives to focus the evaluation effort and identify the resources needed to conduct the evaluation. Once objectives are drafted and resources are identified, they should be circulated to decision-makers with authority over the program to enlist their support for the evaluation objectives and the resources needed, such as staff and funding support.

SHSP program managers will most likely develop three levels of evaluation objectives that address both process and performance issues.

#### SHSP EVALUATION PLANNING PROCESS



Source: Cambridge Systematics, Inc.



- **Level 1: Process.** Process-level evaluation objectives relate to the overall SHSP process, such as the organizational structure by which the program is developed, managed, implemented, and evaluated. These objectives typically focus on elements related to leadership and management structures, collaboration, communication, etc.
- **Level 2: Outputs.** Output-level evaluation objectives relate to how the SHSP is being implemented and how well the actual implementation matches up to the plan.

Neither process- nor output-level evaluations require elaborate data collection efforts or a research design, but they do require an understanding of what should have happened in terms of leadership and program implementation. They also require a systematic approach for tracking program/strategy implementation.

- **Level 3: Outcomes.** Outcome-level evaluation objectives focus on the *impact* the SHSP is having on transportation safety with respect to fatalities, injuries, and crashes. Changes in awareness, attitudes, and behaviors also can be addressed through outcome-level evaluation.

All three evaluation levels require program managers and leaders to develop evaluation objectives they believe will provide the most effective feedback regarding the progress of the SHSP. While an evaluation specialist can provide suggestions, the persons responsible for program effectiveness must ultimately decide what measures best indicate the overall success of the SHSP.

Table 1 illustrates evaluation objectives for the three levels. In this example, SHSP leadership determined assessing SHSP representation was a priority and established objectives to assess partner participation (level one objective). Impaired driving, occupant protection, and head on crashes were emphasis areas, so objectives were established to measure outputs and outcomes in these areas (level two and three objectives). To answer the level two and three evaluation objectives, the data must be available and tracked to measure progress.

**Outputs:** The extent to which SHSP strategies and actions are implemented.

**Outcomes:** The degree to which SHSP strategies and activities contribute to reducing fatalities and serious injuries, improve road user safety attitudes and behaviors, etc.



**Table 1. Example Objectives by Evaluation Level**

EVALUATION OBJECTIVES		
Level 1: SHSP Process	Level 2: SHSP Outputs	Level 3: SHSP Outcomes
<ul style="list-style-type: none"> <li>• Determine if top-level management is involved in the SHSP and if it is sufficient to support the process.</li> <li>• Determine if the emphasis area team members represent the 4 E's of safety.<sup>a</sup></li> </ul>	<ul style="list-style-type: none"> <li>• How many occupant protection and impaired driving high-visibility enforcement campaigns were conducted?</li> <li>• How many citations were issued during the occupant protection impaired driving high-visibility enforcement campaigns?</li> <li>• How many miles of centerline rumble strips were installed on two-lane rural roads?</li> </ul>	<ul style="list-style-type: none"> <li>• What is the safety belt use rate state-wide and in high-risk areas and populations?</li> <li>• What is the unbelted fatality and serious injury rate in the State?</li> <li>• What is the impaired driving fatality and serious injury rate in the State?</li> <li>• How many head-on crashes on rural roads occurred in counties where centerline rumble strips were installed?</li> <li>• What is the head-on crash fatality and serious injury rate in counties where centerline rumble strips were installed?</li> </ul>

<sup>a</sup> 4 E's: engineering, enforcement, education, and emergency medical services/response.



### **Recommended Actions**

1. Determine the SHSP process and performance areas to evaluate.
2. Identify the resources needed to conduct the evaluation.
3. Develop evaluation objectives for assessing the SHSP process.
4. Develop evaluation objectives for assessing SHSP performance (outputs and outcomes).
5. Circulate the objectives and resource requirements among SHSP decision-makers to obtain their support.

### **REVIEW METHODS FOR DATA COLLECTION AND MANAGEMENT**

Quality data is necessary for conducting any evaluation. Fortunately, data quality and timeliness are improving in all States due to various programs that support data improvements, such as FHWA’s Crash Data Improvement Program (CDIP) and NHTSA’s traffic records assessment. If sufficient data are not available, program managers may need to revise the evaluation objectives or implement a data collection effort. Reviewing data collection and management methods will reveal whether:

- Data are available and of sufficient quality to track and assess progress and answer the evaluation objectives;
- Resources are available to collect data currently not available; and
- Objectives for which no evaluation data are available are reconsidered or modified.

Most States have some type of tracking mechanism in place. Tracking the following elements supports process and performance evaluations:

- The implementation status of SHSP strategies and related action steps;
- Outputs from implementing the SHSP strategies;
- Number and rates of fatalities and serious injuries; and
- Changes in road user attitudes and behaviors.

### **Recommended Actions**

1. Review the existing data collection and management methods to determine the following:
  - a. Quality data are available to track progress and answer the evaluation questions;

#### **CRASH DATA QUALITY CHARACTERISTICS**

- Timeliness.
- Accuracy.
- Completeness.
- Consistency/Uniformity.
- Integration.
- Accessibility.

For more information refer to the [FHWA Crash Data Improvement Program Guide](#).



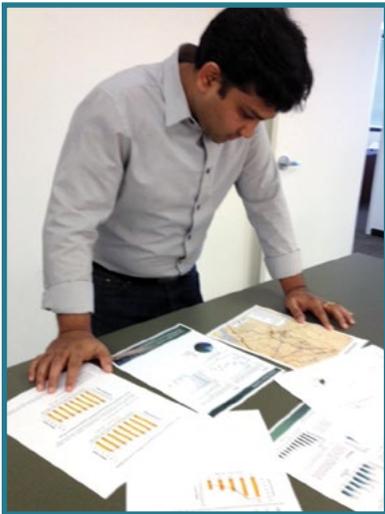
- b. Resources are available to collect data currently not available; and
  - c. Objectives for which no evaluation data are available are reconsidered or modified.
2. Review the tracking mechanism(s) in place to determine:
    - a. Where the information can be obtained and what is captured (e.g., implementation status of SHSP strategies and actions, number and rates of fatalities and serious injuries, etc.).
    - b. If information needed for the evaluation is not formally tracked, can a mechanism be put in place or information gathered using an alternative method?

## DETERMINE HOW TO MEASURE PROGRESS

Sufficient data are not always available to measure everything, but establishing specific evaluation objectives will help identify which data are a priority. Lack of data should not preclude the attempt to evaluate the SHSP. If quantitative data are not yet available, a qualitative evaluation can be performed. The important point is to focus on what can be evaluated.

Measuring success becomes more difficult as the measurement moves from outputs (e.g., what activities occurred, such as the number of traffic citations) towards outcomes. However, outcomes, such as a decrease in traffic crashes or crash-related injuries and deaths hold greater importance. The following list suggests performance measures that could be used in descending order of importance.

- **Primary Outcome Measures.** Reductions in the number and rate of fatal and serious injury crashes statewide and by Emphasis Area.
- **Secondary Outcome Measures** (also called Proxy Measures). Changes in observed behavior, such as safety belt and helmet use, speeding, red light running, pedestrians who jaywalk, changes in average speeds due to traffic calming countermeasures, and other observed behavior changes.
- **Self Report Measures** (what people say). Have you ever driven after having too much to drink? How often do you wear your safety belt?
- **Attitudinal Data Measures** (what people believe). Support for legislative initiatives; knowledge of safety belt laws; teen attitudes about drinking and driving; and attitudes toward roundabouts, rumble strips, and other infrastructure safety improvements.
- **Awareness Data Measures** (what messages people have heard). Awareness of high-visibility enforcement, perceived risk of getting a traffic ticket.



Source: Cambridge Systematics, Inc.



- **Activity Levels** (program implementation). Miles of rumble strips, pavement markings, signage, and other infrastructure improvement; citations issued by the police, special police patrols, and check points; presentations; training programs; media coverage; legislation;<sup>3</sup> etc.

If the highest levels of measurement are not available, other more obtainable measures might be considered.

### **Recommended Actions**

1. Review the existing SHSP performance measures and categorize them as (in descending order of importance):
  - a. Primary outcome;
  - b. Secondary outcome;
  - c. Self reporting;
  - d. Attitudinal;
  - e. Awareness; or
  - f. Activity level.
2. Include the higher level performance measures (e.g., primary outcomes) in the evaluation if data are available (to answer the evaluation objectives) and consider other, more attainable measures if they are not available.

### **IDENTIFY AND SECURE RESOURCES**

Evaluation often requires resources, including funding, staff time, and evaluation expertise. It is important to identify and secure these resources so they are available for the program evaluation and throughout the life of the SHSP. Evaluation does not require high-level scientific or technical expertise; however, it does require people capable of objectively collecting, tracking, and analyzing data and other information to produce and interpret results. SHSP leadership should dedicate staff and financial resources to support this function.

Evaluation of other safety plans or programs, such as the HSIP, Commercial Vehicle Safety Plan (CVSP), or the Highway Safety Plan (HSP), should be underway and could provide additional resources or expertise for the SHSP evaluation effort. Universities (e.g., professors and graduate students who may be looking for evaluation projects) provide another good source of evaluation expertise.

Establish a timeframe for evaluation or a target date for completion. While most of the information and data needed for the evaluation already are collected and accessible, it will take time to gather and analyze all of the pieces and synthesize them into meaningful results.

<sup>3</sup> The National Highway Traffic Safety Administration (2008). *The Art of Evaluation*, page 32.



### **Recommended Actions**

1. Identify available resources to support SHSP evaluation.
2. Identify individuals or agencies with the skills to analyze data and other information and provide evaluation support.
3. Explore the availability of universities, professors/graduate students, and others if extra help or expertise is needed.
4. Collect information on current evaluation efforts among the partners, e.g., CVSP, HSP, etc.
5. Determine a timeframe for conducting SHSP evaluation.

### **ASSIGN EVALUATION ROLES AND RESPONSIBILITIES**

Evaluation typically includes a management function to drive the effort and an analysis function for collecting, analyzing, and reporting data and results. These functions could be performed by a single person or by several people. Responsibilities should be clearly defined in either case and include a description of the data to be collected, the level and type of analyses to be conducted, and a reporting schedule.

### **Recommended Actions**

1. Determine the agency responsible for coordinating the overall program evaluation effort.
2. Identify the individual(s) who will manage the evaluation effort, collect and analyze data, and report the evaluation results.

### **REPORT AND USE EVALUATION RESULTS**

Define the reporting process and describe how the results will be used to improve SHSP process and performance. The reporting process should identify the parties responsible for generating and distributing the results, the audiences who will receive the information, when will they receive it, and how it will be presented (e.g., spreadsheets, formal written documents, verbal updates, e-mail notices, etc.). Assign a lead person responsible for generating and distributing evaluation results.

States should document how they intend to use the results, e.g., to identify successes, gaps, challenges, and opportunities. At a minimum use the results to review and, where necessary, improve SHSP process and performance. Other uses of evaluation results include informing elected officials, engaging safety stakeholders, and reaching out to a broader audience, e.g., the public. For more information on how to use evaluation results, see Chapter 4.



### **Recommended Actions**

1. Identify the parties responsible for generating the evaluation results.
2. Assign a lead person to pull together the results from the various parties and distribute them to the appropriate committees, agencies, etc.
3. Determine who will receive the results of the evaluation, i.e., agency executives, Steering Committee members, all stakeholders, etc.
4. Decide how the results will be formatted, i.e., formal reports, spreadsheets, PowerPoint presentations, etc.
5. Identify how the evaluation results will be used.

### **DOCUMENT EVALUATION APPROACH**

States should document the evaluation approach. This need not be a long or complicated plan. It could be as simple as a one-page description of the evaluation objectives, data needs, resources, roles and responsibilities, and methods for applying the results.

Documenting these elements of the evaluation will formalize the process, keep the evaluation focused on the original objectives, record details of the evaluation, such as the specific tasks and roles and responsibilities, establish a level of accountability, and serve as a reference for new leadership and staff.

### **Recommended Actions**

1. Document the evaluation elements (objectives, data needs, resources, roles and responsibilities, application methods, etc.) to formalize the process.



Source: Federal Highway Administration.



## Evaluation Planning Checklist

The following checklist is designed to support evaluation planning. If most or all of these activities are completed, the State is prepared for SHSP evaluation.

- ✓ Identify evaluation objectives.
- ✓ Identify the data needed to address the objectives and perform the evaluation.
- ✓ Determine if existing data collection strategies are sufficient for evaluation.
- ✓ Identify resources needed to collect data or adjust evaluation objectives if available data are insufficient for evaluation purposes.
- ✓ Assign responsibility for generating and distributing evaluation results.
- ✓ Document a reporting process to update agencies, partners, and decision-makers on SHSP evaluation results.
- ✓ Determine how evaluation results will be applied.
- ✓ Document the approach or plan for the evaluation.



# Chapter 2 – Process Evaluation: Getting on the Right Track

## Introduction

Process evaluation is the examination of SHSP management processes. The results identify successful practices; alert SHSP leaders, managers, and stakeholders to potential needs, weaknesses, and threats; and provide insights for overcoming those challenges and improving the process.

## Purpose

Evaluation requires attention to SHSP outputs and outcomes, but also to the management of the SHSP. Conducting a process evaluation provides insight into a variety of SHSP program management elements, such as organizational structure; coordination; the use of data in determining emphasis areas, goals, objectives, strategies and actions; and the alignment of agency priorities.

## Methods

Methods to assess SHSP processes will vary, but this section offers some potential methods used effectively by States.

### IDENTIFY PROCESS EVALUATION ELEMENTS

The following elements should be assessed for a comprehensive process evaluation. These have been identified in the *SHSP Implementation Process Model (IPM)* as essential for successful SHSP implementation, but States can consider additional elements as well.

- SHSP organizational structure;
- Multidisciplinary, multimodal collaboration;
- SHSP goal and objective setting methods;



Source: Cambridge Systematics, Inc.



Source: PhotoDisc Inc.

- Data driven and evidence-based emphasis areas, strategies, and actions; and
- Aligned agency priorities.

### SHSP Organizational Structure

Assessing the organizational structure for SHSP implementation provides information about how well it is performing. The organizational structure varies from State to State, but regardless of the form it takes, it should function to manage the entire SHSP process; from development and implementation to evaluation and measuring performance. Assessing the SHSP organizational structure helps determine if it is providing the support needed to manage the SHSP process. An example of an SHSP organizational structure is provided in Figure 1 below.

**Figure 1. Example SHSP Organizational Structure**



Source: Cambridge Systematics, Inc.

Key features of this structure include:

- An executive committee or leadership council composed of members who are leaders of departments and agencies, such as the department of transportation, the State Highway Safety Office (SHSO), public safety, statewide law enforcement organizations, licensing agencies, departments of health and education, and others.
- A steering committee or working group designed to represent not only the executive committee, but also the majority of partners.
- Multidisciplinary emphasis area teams composed of stakeholders from the safety community, as well as other interested partners, experts, and citizens. Some States also encourage local, tribal, regional, and district representation to provide additional focus for certain geographical regions.



- An SHSP program coordinator who is responsible for the overall day-to-day management of SHSP activities.

A review of the organizational structure should identify and document:

- **How representatives are recruited.** A State should review how they recruit representatives for the various SHSP committees and teams to determine if they have an active and successful process for reaching out to partners. For example, in some States, leaders of one or more of the key agencies recruit their counterparts from other agencies. In other States, the SHSP manager may hold one-on-one meetings with top-level executives to discuss their participation and identify incentives for their involvement. States also should determine if potential partners can easily contact and reach out to those already involved in the SHSP to express their interest in participating.
- **Representation on various committees or working groups.** A State should examine the representation on SHSP committees and working groups to determine if they are multidisciplinary and multimodal. Representation should include a broad range of stakeholders from key agencies and organizations.
- **Access to leadership, resources, etc.** States should assess the level of access the various SHSP committees and working groups have to top management and leadership. They also should consider if they have ample opportunities to keep leadership informed of SHSP progress, and gain their support in addressing challenges. Emphasis area teams should have access to steering or executive committee members as well as managers in their respective agencies.
- **Meeting frequency and level of participation on SHSP committees, teams, and working groups.** States should review the degree to which frequency and participation levels have met or changed from original expectations.
- **The role and function of the SHSP committees, teams, and/or groups.** Use the following questions to assess the roles and functions:
  - Does a committee (e.g., executive committee) oversee the SHSP effort? How often does it meet to assess progress, determine priorities, recommend course corrections, and address challenges? Does the committee appoint representatives to a steering committee or to working groups? Do these representatives have access to top-level executives and the ability to make decisions?
  - Is a committee (e.g., steering committee) responsible for day-to-day SHSP implementation?
  - Is a committee responsible for providing support to local and regional partners?



- Do the Emphasis Area Teams develop the performance measures, strategies, and action steps necessary for translating the goals and objectives of the SHSP into detailed action plans?
- Is there an SHSP program manager or coordinator who oversees the overall day-to-day management of SHSP activities (e.g., convenes, facilitates, and documents committees, working groups, emphasis area teams, etc.)?
- How do the existing roles and functions of the various SHSP committees and groups compare to original expectations?

A candid discussion among the committee and/or working group members can often identify the strengths and weaknesses of the organizational structure (e.g., multidisciplinary representation, leadership or access to leadership, etc.) and identify strategies for improvement.<sup>4</sup>

### **Recommended Actions**

1. Review the SHSP organizational structure to identify and document its format and functions(s).
2. Examine the positions of persons serving on SHSP committees (e.g., steering and executive committees), as well as emphasis area and local/regional/district teams to determine their contribution to the SHSP process and access to leadership and resources.
3. Review the schedule of SHSP leadership and committee meetings to determine if they meet as frequently as planned or needed.
4. Review the SHSP organizational structure to determine the level of support provided to partners in local and regional coalitions.
5. Review the role and function of SHSP committees, teams, and/or groups. Compare these current roles and functions with the expectations set at the beginning of the SHSP process.

### **Multidisciplinary, Multimodal Collaboration**

Traffic fatalities and serious injuries involve multiple contributing factors which affect the mission and work of many disciplines and agencies. This highlights the need for multidisciplinary and multiagency approaches and is why the SHSP is required to involve the input of disciplines representing the 4 E's of safety (engineering, enforcement, education, and Emergency Medical Services (EMS)). SHSP partners typically include the State Department of Transportation (DOT); the State Highway Safety Office (SHSO); departments of public safety (State police or patrol); health and education; Motor Carrier Safety Assistance Program (MCSAP) managers; Federal partners (FHWA, FMCSA, and NHTSA);

<sup>4</sup> Review the SHSP Implementation Process Model (IPM) for information about establishing effective executive, steering, and emphasis area teams.



metropolitan planning organizations (MPO); local agencies; tribal governments; special interest groups; and others.

The various agencies and organizations involved in the SHSP bring unique and valuable perspectives to bear on the roadway safety problem. Their differing philosophies and problem solving approaches, however, can sometimes make collaboration challenging. Measuring the effectiveness of communication and collaboration among the disciplines and agencies can be difficult; however, it is important to know if the right people are at the table and if they are working together effectively.

Safety improvement also requires attention to the different roadway users and the interaction among them, e.g., passenger vehicles, commercial vehicles, trains, pedestrians, bicyclists, motorcyclists, transit users, and others. Communication, collaboration, and interaction among the disciplines and modes improve the potential for identifying and addressing issues, implementing programs, and assessing effectiveness. Each State's SHSP leadership should assess the decision-making environment and encourage key agencies and individuals to be involved. The [Champion's Guidebook](#) and [IPM](#) provide further detail for identifying the collaboration partners and processes.

The representatives that make up emphasis area action teams, task forces, etc., can be interviewed or surveyed to determine the degree to which multiple disciplines and modes are represented and collaborative arrangements are in place. These individuals can be contacted during regular monthly or quarterly meetings; however, input from less active stakeholders also is valuable. Often working group members are program managers rather than practitioners or field personnel. Interviews with field personnel will strengthen the evaluation's validity and lead to more robust results. States should identify the interviewees depending on the SHSP emphasis areas, strategies, and action plans. Typical interview or survey candidates include:

- Project and program directors;
- State and local law enforcement participating in SHSP-related campaigns;
- HSIP, SHSO, and MCSAP staff;
- Transportation planners at the State, regional, and local levels;
- County, regional, and local traffic and safety engineers;
- Other State, regional, and local safety professionals (from Departments of Health, Departments of Education, etc.); and
- State and local elected and appointed officials.



When reviewing collaboration processes, States should ask:

- **Does a basic foundation for effective collaboration and a process to support collaborative efforts exist?** For example, a memorandum of understanding (MOU) can be a useful tool for institutionalizing the collaborative process. MOUs also help with the implementation of strategies and build sustainability and accountability. As stakeholders change and new partners come on board, commitment on the part of all agencies can be reaffirmed by updating the MOU. What mechanisms are in place to support collaboration?
- **Does collaboration result in multidisciplinary safety decisions that are reflected in other plans and programs?** Other safety and transportation plans, such as the HSP, HSIP, the CVSP, the long-range transportation plan (LRTP), statewide and regional transportation improvement programs (S/TIP), and other planning and programming documents should be consistent with the SHSP goals, objectives, and strategies as appropriate to their missions, regulations, requirements, and stakeholders. Conversely, SHSP managers and stakeholders should consider the relevant goals, objectives, and strategies in the other plans. Has collaboration resulted in this level of coordination and alignment?
- **Are the vision, mission, and goals of the SHSP clearly and continually communicated to all partners and stakeholders?** Identify formal and informal communication mechanisms for ensuring frequent and continuous information regarding the SHSP, such as regularly scheduled steering committee meetings, newsletters, retreats, etc. How effective are they?

Reviewing the status of SHSP collaboration should reveal if the SHSP process is truly multidisciplinary and multimodal. Collaboration should be evident not only in the SHSP development process, but also in the alignment of State safety priorities and plans and the implementation of SHSP strategies.

#### **Recommended Actions**

1. Review the membership of the various committees, emphasis area action teams, task forces, etc., to assess the degree to which multiple disciplines and modes are represented and actively involved.
2. Determine if mechanisms are in place that facilitate an active, efficient collaborative process, such as MOUs.
3. Review the planning documents of the various agencies and safety partners to discern how well they reflect elements of the SHSP, such as the goals, objectives, and strategies.
4. Determine if the SHSP vision, mission, and goals are clearly and continually communicated to all partners and stakeholders.



## Goal and Objective Setting Methods

Establishing performance measures and setting transportation safety goals and objectives are becoming widely advocated practices in the U.S. and internationally. Evidence shows reductions in fatalities and fatality rates are positively correlated with setting measurable objectives.<sup>5</sup> Objectives improve road safety by:

- Providing a way to measure program effectiveness;
- Steering programs toward implementation of proven effective road safety countermeasures;
- Motivating stakeholders to act; and
- Establishing a method for assessing accountability.<sup>6</sup>

The process evaluation should identify and assess the methods used to set SHSP goals and objectives. For example:

- Are data driven objective setting methods used, as opposed to aspirational goals?
- Are goals aggressive yet achievable?
- Are objectives specific, measurable, time bound, and realistic?

SHSP goals and objectives typically have a foundation in data analysis and broad political support. They should be aggressive yet achievable. Numerous methods are used to identify and set objectives, such as using historical trends, modeling, benchmarking, relying on expert judgment, collaborating with stakeholders, applying legislative mandates, adopting a national strategy or recommendation, or some combination of the above. One of the most commonly used methods is trend analysis, which is discussed in more detail below.

### Using Trend Analysis to Set Objectives

Often some form of trend analysis is employed to determine where the State will be if current trends continue. The anticipated effects of the State's efforts are then applied to the trend to estimate the impact and set SHSP goals and objectives.

To conduct a trend analysis, evaluators should chart a rolling average over time using three to five years of data. A rolling average chart provides a smoother line than a chart of individual data points, making trends more evident. These trend lines show what has occurred in the past and can then

<sup>5</sup> Gargett, S., Connelly, L.G., and Nghiem, S. (2011). *Are we there yet? Australian road safety targets and road traffic crash fatalities*, BMC Public Health, 11:270, 2011.

<sup>6</sup> OECD and International Transport Forum. (2008). *Towards Zero: Ambitious road safety targets and the safe system approach*, Paris, OECD.

## EVALUATION IN ACTION

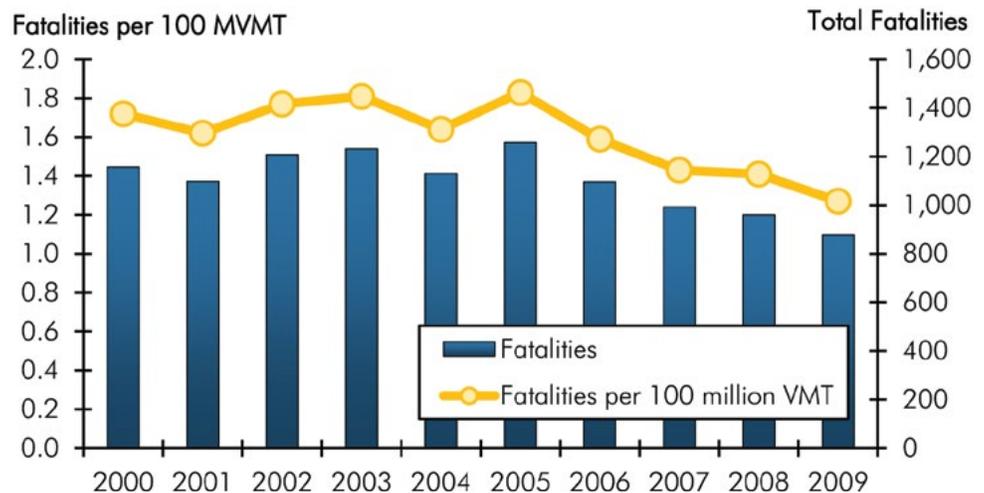
### Louisiana Uses Data to Set Annual SHSP Objectives

Louisiana uses data to set annual SHSP objectives for the reduction of traffic-related fatalities and serious injuries. The State adopted a goal to halve fatalities by 2030 and uses a baseline average of 2006-2008 fatality and serious injury data to calculate the rate of change necessary to achieve the 50 percent reduction. Louisiana regularly evaluates the plan's effectiveness by using the annual number of motor vehicle-related fatalities and serious injuries as performance measures. The same metric is also used to track performance for each emphasis area and to indicate the number of countermeasures underway, completed, or not started. Louisiana bases the selection of SHSP emphasis areas on baseline data, which clearly defines the problem, the contributing crash factors, programs and projects with the greatest potential for improvement, and whether sufficient resources to implement proven countermeasures are available.



be extrapolated into the future to provide a sense of what might be expected if the trends continue. This extrapolated trend line becomes the baseline against which goals and objectives are set.

Figure 2 shows historical fatality data from Missouri. The bars show the actual number of fatalities from 2000 to 2009 while the line shows the fatality rate per 100 million vehicle miles of travel over the same time period. To conduct a trend analysis, this data would be projected into the future assuming no changes in current safety efforts. From this baseline, future goals and objectives are set.



Source: Cambridge Systematics, Inc. based on data from the Missouri Department of Transportation.

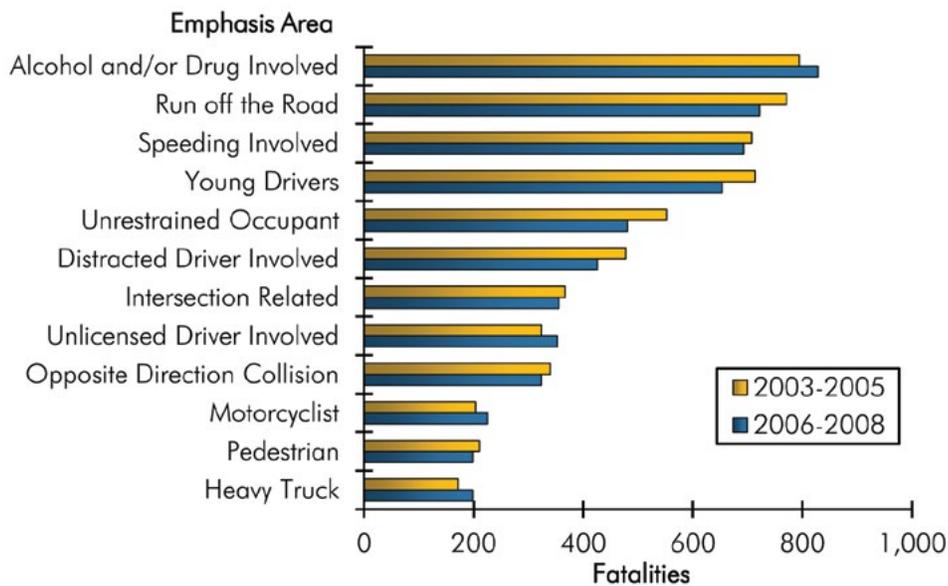
### Figure 2. Missouri Fatalities and Fatality Rates

Trend analysis also can be conducted by emphasis area to show more precisely where safety improvements and degradations are occurring.

Figure 3 demonstrates another method for displaying historical data to set future objectives. These data show general trends for Washington State’s emphasis area and can help SHSP leadership identify which emphasis areas need greater attention. The horizontal bars show three-year total fatalities by emphasis area. The red bars show earlier years (2003-2005) and the blue bars demonstrate the most recent years (2006-2008). For example, the blue bar associated with Alcohol and/or Drug Involved Fatalities extends further than the red bar which means the number of fatalities is increasing rather than staying the same or improving. To conduct trend analysis for each of the emphasis areas, a State would track historical fatalities by emphasis area, set a baseline by projecting the resulting trends into the future, and set goals and objectives against the baseline.



**Figure 3. Emphasis Area Chart (Derived from Washington State SHSP)**



Source: Cambridge Systematics, Inc. based on data from Washington State’s Strategic Highway Safety Plan.

### Recommended Actions

1. Review the analysis methods used to set objectives. Are they data driven?
2. Determine if objectives are specific, measurable, time bound, and realistic.

### Data-Driven and Evidence-Based Emphasis Areas, Strategies, and Actions

Process evaluation helps States assess whether their efforts are data driven and focused in areas where documented safety problems exist, for both infrastructure and behavioral programs. Process evaluation also assesses whether the appropriate strategies and actions have been selected.

A data-driven approach to problem identification is critical because it provides the information and statistics needed to determine the most significant safety problems (emphasis areas) and select the appropriate performance measures. Using crash and other safety data to guide emphasis area selection helps direct resources to the areas of greatest need.

Process evaluation also should include a review of how strategies are selected. It is best to select strategies and countermeasures based on evidence from the research. These can be found in a variety of sources, including the [NCHRP 500 Series](#),<sup>7</sup> the [FHWA Crash Modification Factors Clearinghouse](#), the

<sup>7</sup> NCHRP: National Cooperative Highway Research Program.

### EVALUATION IN ACTION

#### Virginia Uses Data to Identify SHSP Emphasis Areas

Virginia uses a data-driven process to identify emphasis areas for the SHSP. Stakeholders review the percentage of total traffic deaths and severe injuries attributed to each of the potential emphasis areas in the AASHTO SHSP. While crash factors are often interrelated and reflected in more than one emphasis area, the significant areas that Virginia’s crash data highlights are roadway departure, speeding, intersection crashes, and young drivers. These became the Commonwealth’s SHSP emphasis areas.



## EVALUATION IN ACTION

### Maine Uses Data to Select SHSP Strategies

Maine reviews crash, complaint, citation, injury, and emergency medical services (EMS) data, as well as observational and attitudinal survey data to inform the selection of SHSP strategies. The State collects crash and EMS data electronically and strong collaboration among State agencies facilitates effective data sharing and access, which results in excellent data quality and enables the stakeholders to uncover detailed information about traffic safety challenges. For instance, a review of the crash data revealed the need for further analysis of operating after suspension (OAS) data to filter out suspensions unrelated to driving behavior, such as failure to pay child support; hence it is difficult to link OAS strategies to crash outcomes. Therefore, Maine adopted a set of strategies in the SHSP to address the issue, such as develop a mechanism in the Maine Crash Reporting System to identify the reason an operator involved in a crash is suspended.

### Highway Safety Manual, Countermeasures that Work, and NCHRP 622: Effectiveness of Behavioral Highway Safety Countermeasures.

If a new, promising, or innovative strategy with less research to support its effectiveness is identified, the strategy should be accompanied by an evaluation to validate its impact and justify future use.

#### Recommended Actions

1. Review methods used for identifying safety problems and selecting emphasis areas. Determine whether safety data analysis was the primary input to problem identification and emphasis area selection.
2. Determine whether the latest safety data and research was used to identify evidence-based strategies and actions.
3. Identify strategies in the SHSP that may lack a preponderance of evidence of effectiveness. Determine if there was enough information or evidence (e.g., success in another State) to justify its use, or if an evaluation was conducted, or is planned, to validate the use of the strategy.

#### Aligning Agency Priorities

Another type of process evaluation measures shifts in agency priorities. Effective SHSP management leverages the resources of other transportation planning and programming activities. SHSPs are designed to be the umbrella or overarching safety plan for a State; hence, it is expected the partner agencies will begin to shift their priorities where appropriate to align with the SHSP goals, objectives, performance measures, emphasis areas, etc. Evaluation of these often subtle changes could be accomplished by examining the individual agency programs before and after SHSP implementation to identify programmatic and budgetary shifts in agency priorities, as well as changes to the safety decision-making culture. These would indicate a shift of institutional processes and practices to align with SHSP goals, objectives, and performance measures at agencies responsible for transportation safety.

Alignment should occur in the State's: Highway Safety Improvement Program (HSIP); Highway Safety Plan (HSP); Commercial Vehicle Safety Plan (CVSP); Long Range Transportation Plan (LRTP); and the Statewide and Metropolitan Transportation Improvement Program (S/TIP). Alignment also should be evident in other transportation planning documents, such as pedestrian/bicycle plans, corridor plans, and freight plans among others.

#### Recommended Actions

1. Review the HSP, CVSP, HSIP, LRTP, and S/TIPs to determine the degree to which they align with the SHSP.
2. Review other plans, e.g., pedestrian/bicycle plans, corridor plans, local road plans, etc., to determine the degree to which their goals and strategies align with the SHSP.



## PROCESS EVALUATION ACTIVITIES

States can use a number of methods to collect process evaluation information. Examples include:

- 1. SHSP Retreat or Group Exercise.** The working group or steering committee holds a retreat or group exercise and devotes themselves to a candid discussion of the SHSP process. An experienced facilitator should be considered to keep the participants on topic and help the group work through areas of uncertainty or potential disagreement. The discussion should focus on accomplishments and identify opportunities for improvement. A retreat report should document the findings, follow up actions, and persons responsible for implementing the actions. Refer to the [HSIP Self Assessment Toolbox](#) for more ideas on how to format and facilitate this type of activity.
- 2. Internal Evaluation.** The SHSP Program Coordinator, with staff support, conducts an internal evaluation of the SHSP process. This approach depends on support from the State's SHSP leadership.
- 3. Objective Observer.** An objective observer collects information through a survey and/or a series of interviews with working group members, safety stakeholders, top management, and others. The observer documents the findings and follows up with the interviewees to validate or clarify the findings and gather any additional information. The observer prepares a report for review by SHSP leadership, the working group, and other stakeholders.
- 4. Peer Review or Exchange.** A State hosts a peer review or exchange with one or more other States to present its SHSP process elements and methods. Together they identify strengths and weaknesses and the peer State representatives offer alternative methods to improve SHSP process effectiveness. Peer exchanges provide a good model for improving practice, as demonstrated by the State DOT research divisions which have been implementing this practice for many years. An important element is the involvement of an experienced facilitator with knowledge of the process and the subject areas who keeps the discussion on track and documents and reports the findings.

### **Recommended Action**

1. Review the possible methods to collect process evaluation information. Identify the pros and cons of each method.
2. Determine and document the most appropriate method and the rationale for the selection.



## EVALUATION IN ACTION

### Rhode Island Peer Exchange Provides Help for SHSP Update

At the beginning of the SHSP update process Rhode Island hosted a peer exchange to learn from the experiences of Georgia and Maine. A focus of the discussion was tracking SHSP implementation and measuring SHSP effectiveness. Rhode Island would like to invest in data collection and analysis systems to accurately identify emphasis areas and track performance. Because data are central to the evaluation process, the State was interested to learn how peer States are addressing the issue of incomplete data. Georgia identified training for law enforcement personnel and the implementation of an electronic crash reporting system as critical for improving crash data accuracy and timeliness. Maine reported the benefits of their simple query format to perform crash data analysis on attributes recorded in crash reports, as well as the development of standard reports on topics such as motorcycle crashes and high crash locations to communicate the latest crash trends.

## Self Assessment Questions

The following self assessment questions are designed to inform process evaluation. Answering “yes” to a question indicates the State has a well functioning SHSP process in that area of review. Answering “no” indicates improvements can be made.

1. Is the SHSP process supported by an actively engaged organizational structure?
2. Are top-level managers represented in executive committees or leadership structures/groups established for the SHSP?
3. Are members of the executive or leadership group, the steering committee, the emphasis area teams, and other groups multidisciplinary and multimodal?
4. Do members of the executive committee or leadership group have the decision-making authority needed to effectively support the SHSP process?
5. Do members of the executive committee or leadership group assign persons with decision-making authority to the steering committee or working group?
6. Are multiple transportation modes represented, and do they actively participate on the steering committee/working group and emphasis area teams?
7. Has an SHSP program coordinator or manager been assigned? What percentage of this person’s time is dedicated to the SHSP?
8. Do the leadership and working groups/committees meet as frequently as expected?
9. Are emphasis areas supported by teams with engaged leaders?
10. Are local/regional/district coalitions supported by the SHSP organizational structure?
11. Are the necessary disciplines, modes, and agencies (representing the 4 E’s) engaged in SHSP decision-making and implementation?
12. Do the stakeholders regularly collaborate on decisions that affect SHSP updates and implementation?
13. Do the necessary stakeholders collaborate and jointly decide on SHSP goal and objective setting methods?
14. Are data-driven methods, such as trend analysis, used to establish goals and set aggressive, yet achievable, objectives?



15. Are objectives specific, measurable, time bound, and realistic?
16. Is data analysis used to select the emphasis areas?
17. Are the emphasis area strategies selected through an evidence-based process?
18. Are promising and innovative strategies with less evidence of effectiveness accompanied by an evaluation?
19. Have the various agencies and safety partners incorporated elements of the SHSP into their planning documents? (HSPs, HSIPs, CVSPs, LRTPs, S/TIPs, etc.)



# Chapter 3 – Performance Evaluation: Outputs and Outcomes

## Introduction

Over the past 15 years, State DOTs, SHSOs, Metropolitan Planning Organizations (MPOs), and other government agencies have increased the use of performance management principles to plan, prioritize, track, and improve the effectiveness of their programs. Performance management and the use of performance measures assess the outputs and outcomes resulting from SHSP implementation.

## Purpose

The purpose of performance evaluation is to determine how effective the SHSP has been in meeting its goals and objectives. Performance evaluation compares the actual degree of SHSP implementation (output evaluation) and the degree to which the implemented strategies have contributed to (or are correlated with) measurable change (outcome evaluation).

## OUTPUT EVALUATION

Output evaluation is defined as determining the extent to which SHSP strategies and actions are implemented and outputs are produced; in other words, it measures progress and productivity. Identifying the degree to which the SHSP is implemented is not only a necessary step to determine SHSP outputs, it also will help determine if implementation is impacting SHSP outcomes.

It is common for an SHSP to generate emphasis area action plans that identify strategies and actions to be accomplished, responsibility for completing each action, and expected completion dates. States that regularly track SHSP implementation progress are well positioned to perform output evaluation. The expected or planned timeline for completing SHSP actions and the level of planned activity forms a baseline. Performance evaluation based on outputs compares the actual degree of SHSP implementation to this baseline.



Examples of output performance measures include:

- The number of high-visibility enforcement campaigns;
- The number of public service announcements aired (earned media);
- The number of intersections with improved pavement markings; and
- The number of center line miles with cable median barrier, rumble strips, etc.

## OUTPUT EVALUATION METHODS

Output evaluation helps determine the status of or the extent to which SHSP strategies and actions are implemented (e.g., not started, partially implemented, fully implemented, etc.). The idea is to track performance measures that relate to progress made in implementing the SHSP. For example, if a State has determined lane departure crashes are responsible for a significantly high proportion of fatal crashes, it may decide to implement a variety of countermeasures to keep vehicles in their lanes. One of these might be the installation of shoulder and centerline rumble strips. The performance measure is the number of miles of rumble strip installed. Some States also may decide to track spending on rumble strip installation as a separate performance measure. In both cases it is important to collect and report the data.

Many infrastructure-related countermeasures require multiple years for completion. In those cases, progress milestones can be developed and tracked, such as identifying promising sites for installing the countermeasure. These milestones can, at a minimum, show progress towards a performance measure.

## OUTCOME EVALUATION

Outcome evaluation measures the degree to which SHSP goals and objectives are being met and whether there is a reduction in fatalities and serious injuries, improvement in road user safety attitudes and behaviors, etc. In other words, it can help answer the question, “Are we doing the right things?”

Typical outcome performance measures relate to the number and rate of crashes, fatalities and serious injuries, observed behavior, emergency response times, public perceptions of safety for the various transportation modes, etc.

## PERFORMANCE MEASURES

Legislation requires the U.S. Department of Transportation to establish performance measures for the Federal-aid program. In the area of safety these measures are the number and rate of serious injuries and fatalities (23 U.S.C. 150). States will be required to set targets for and report on these performance measures, so they should be considered when developing SHSP performance measures as well.

NHTSA and the Governor’s Highway Safety Association (GHSA) have also developed a set of core performance measures, including:

- Number of traffic fatalities (three-year or five-year moving averages);
- Number of serious injuries in traffic crashes;
- Number of speeding-related fatalities; and
- Number of pedestrian fatalities.

For a list of all NHTSA/GHSA performance measures, see: [Traffic Safety Performance Measures for States and Federal Agencies](#).

States can also review [A Primer on Safety Performance Measures for the Transportation Planning Process](#) developed by FHWA for help in creating safety performance measures.



Safety issues vary across the country; therefore, no single set of safety performance measures is applicable to all States.<sup>8</sup>

Outcome evaluation is challenging because the link between SHSP implementation and crash reduction is indirect. Causality is difficult to establish because scientific evaluation conditions and controlled studies are simply not possible in the transportation safety field. However, while it is not possible to conclusively demonstrate that action A “caused” condition B, correlations between conditions A and B can be identified and used in outcome evaluation.

Even though establishing causality is difficult, statistical analysis to measure program outcomes is feasible and can provide important information for identifying which efforts are likely contributing to positive safety outcomes. However, it is clear the SHSP process has resulted in multiagency, multidisciplinary, multimodal programs nonexistent before SHSPs were legislatively required. Interactive, resource sharing, and multidisciplinary programs are complex and difficult to implement, manage, and sustain, but recent experience in the U.S. proves it is possible and can be very successful.

Performance evaluation based on outcomes determines whether the strategies and actions contribute to (or are correlated with) measurable change. The ultimate evaluation question is whether the SHSP has achieved the intended results in terms of reducing fatalities and serious injuries on the roadways. Outcomes also may measure improvements in road user safety attitudes, awareness, and behaviors. If countermeasure implementation costs are available, a benefit cost analysis can be performed to compare implementation costs to the economic results of injury and fatality reduction. Performance evaluation based on outcomes consists of reviewing performance measures and comparing them to baseline data. In this case, baseline data on selected performance measures is gathered prior to SHSP implementation (e.g., fatality and injury numbers and or rates, awareness measures, observational survey results, etc.).

Performance measures for outcome evaluation typically include the following:

- Overall fatalities and serious injuries;
- Fatalities and serious injuries by emphasis area;
- Observed behavior, e.g., annual safety belt observations; and
- Knowledge and awareness.

SHSPs encourage multidisciplinary approaches resulting in multiple strategies, which often makes it difficult to separate the effect of a single strategy.



Source: Cambridge Systematics, Inc.

<sup>8</sup> FHWA. (2010). *A Primer on Safety Performance Measures and the Transportation Planning Process*.



Nevertheless, the impact of a combination of strategies can be assessed at the program level. If spending also is tracked, benefit cost ratios can be calculated improving future resource allocation and focusing limited resources on the programs with the greatest potential impact.

## **OUTCOME EVALUATION METHODS**

Outcome performance measures use trend analysis, benefit/cost analysis, survey, and other data to shed light on performance outcomes, e.g., fatalities, serious injuries, etc. These measures reveal the extent to which actions are affecting safety outcomes. Performance evaluation compares outcome data on SHSP objectives to baseline data to determine the degree to which objectives are met.

### ***Trend Analysis***

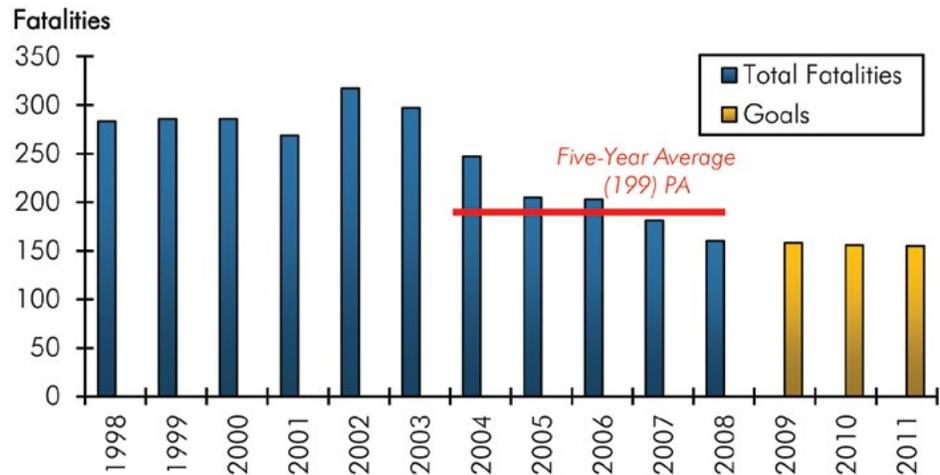
As noted previously, trend analysis can be used to set objectives, but it also can be used to track progress over time. Most States measure and track safety by monitoring multiple years of fatality and serious injury data.

To measure safety outcomes, most States focus on serious injury crashes. Agencies typically calculate the number and rate of fatalities and serious injuries as a general statistical measure. Some States also calculate these statistics by emphasis area to identify areas where progress is being achieved, as well as areas where the numbers do not appear to be moving or are moving in the wrong direction. Performance evaluation in this case consists of comparing crash outcomes with previously set objectives at both the overall and emphasis area levels.

Figure 4 shows the progress in one of Pennsylvania's emphasis areas. When Pennsylvania developed an SHSP in 2006, one of the goals in the infrastructure improvements emphasis area was to reduce head-on crashes, the most severe type of crash. On average, head-on crashes accounted for 17 percent of total fatalities, but only 4 percent of all reportable crashes in Pennsylvania. The State's objective was to reduce head-on fatalities to 200 in 2008. The fatality data show Pennsylvania met the objective; in fact they reached it early.



**Figure 4. Head-On Fatalities: Historical Fatality Data and Future Goals**



Source: Cambridge Systematics, Inc. based on data from Pennsylvania’s Strategic Highway Safety Plan.

Crash trends can provide an indication of overall safety performance, but may not provide enough data to attribute crash reductions to a specific SHSP strategy because other programs or environmental factors, such as an increase in population, a decrease in exposure, etc., also are contributing to the reduction. For example, implementing the recommendations from a corridor safety study may result in not only engineering improvements, such as rumble strips, but also public education on the importance of buckling up and high-visibility speed enforcement. In this case, tracking performance based on rumble strip installation most likely would over estimate the amount of change associated with the countermeasure because it would not take into account increased safety belt use and speed reductions.

This mingling of impacts from multiple strategies and countermeasures sometimes has the unintended consequence of keeping ineffective countermeasures in place. For example, consider the combination of an effective and an ineffective countermeasure on crash reduction. If both were equally funded, a reduction in crashes could be achieved, yet because it is difficult to ascribe the reduction to the correct countermeasure, it may appear both countermeasures were effective. For this reason, it is important to use proven effective countermeasures and conduct evaluations of those countermeasures with less evidence of effectiveness.

### **Attitude and Behavior Analysis**

Many SHSPs contain emphasis areas, strategies, and actions designed to change attitudes and improve safety behavior, such as high-visibility enforcement programs, public- and school-based education programs, etc. Typically,



these programs attempt to increase the use of occupant protection, reduce impaired, aggressive, or distracted driving, etc. Attitude and behavior change can be measured by random observational and telephone surveys.<sup>9</sup> Survey data can be used not only to measure performance, but also to construct programs. For example, if survey data show the public strongly supports tougher impaired driving laws, the results could be used to educate and inform elected officials.

### **Benefit/Cost Analysis**

Conducting a program-level benefit/cost analysis of SHSP-related efforts is difficult to accomplish because of the complexity of SHSPs and the difficulty of measuring the costs and benefits of many behavioral programs. However, if benefit/cost analysis is conducted on a large number of related projects, such as a statewide program of projects to improve or restore the super elevation of large numbers of horizontal curves, it could provide some level of overall SHSP assessment (e.g., the benefits of the program have outweighed the costs), and it provides some indication the program has shown success in improving safety. Typically, program benefit/cost analysis is conducted using three years of data for both before and after implementation of improvements.

The primary use of benefit/cost analysis is to direct resources to program areas with the greatest potential to improve safety. Additional information on benefit/cost evaluation methods at the individual project level can be found in FHWA's [Highway Safety Improvement Program Manual](#).

### **Recommended Actions**

1. Assemble data for assessing output and outcome performance measures.
2. Identify missing data which may prevent assessment of performance measures.
3. Determine if other performance measures can be used to determine progress.
4. Document baseline data.
5. Determine the output and outcome measures for each SHSP emphasis area.
6. Compare output performance measures with baseline data.
7. Compare outcome performance measures with baseline data.
8. Compare observation and/or telephone survey results to measure changes in awareness, attitudes, and behaviors.
9. Collect and review the data available for benefit/cost analyses.
10. Conduct program-level benefit/cost analyses where feasible.

<sup>9</sup> One commonly used observational survey technique is the annual statewide safety belt use survey managed by NHTSA.

## EVALUATION IN ACTION

### **Pennsylvania Uses Benefit/Cost Analysis to Determine SHSP Priorities**

Pennsylvania compiled a list of countermeasures where the State had invested significant resources, such as safety belts. A review of the data revealed the initial infusion of resources increased the use rate from 76 percent in 2002 to 86 percent in 2010; however, continued spending had not pushed the rate much above the 86 percent mark. This prompted the State to review current countermeasures and determine whether other promising strategies should receive support from the State's limited resources. The review resulted in a realignment of funding among the SHSP emphasis areas and a grantee requirement to justify requests in terms of effectiveness in reducing traffic-related fatalities and serious injuries.



## Self-Assessment Questions

The following self-assessment questions are designed to inform performance evaluation. Answering “yes” to a question indicates the State’s SHSP has been effective or successful in this area of performance evaluation. Answering “no” indicates improvements can be made.

1. Has the current status of all output and outcome performance measures been gathered and reviewed?
2. Are the performance measures clearly related to SHSP goals and objectives?
3. Are the numbers and rates of fatalities and serious injuries used as general statistical measures?
4. Are the numbers and rates of fatalities and serious injuries tracked and reported by emphasis area and compared to previously set objectives?
5. Have fatality and serious injury objectives been met?
6. Are observation and/or telephone survey data collected and analyzed to track changes in awareness, attitudes, and behaviors?
7. Have awareness, attitude, and behavior objectives been met?
8. Are program-level benefit/cost analyses conducted on certain SHSP programs?
  - If so, have the benefits of the program(s) outweighed the costs?



# Chapter 4 – Using Evaluation: The Focus is Results

The preceding chapters introduced the benefits of evaluation, tips on evaluation planning, and methods for evaluating both SHSP process and performance. The purpose of this chapter is to provide information and encouragement for using evaluation results to improve the SHSP process and performance.

## Introduction

The EPM introduction explained the basic purpose of evaluation as keeping the SHSP process open to feedback, change, and improvement. Assume for a moment that recommendations from the previous chapters have been implemented and accomplished. The next steps are to interpret the data and use them to improve the SHSP.

## Interpret the Data

It is essential to interpret, document, and share SHSP evaluation results with managers and stakeholders. It helps them: understand organizational strengths and challenges; gauge progress in meeting goals and objectives; and make informed decisions. The interpretation depends on the data collected and the questions raised. No singular list of questions is applicable to all situations. Rather, example questions based on possible process and performance results are provided below.

## SHSP PROCESS

Suppose the analysis of process evaluation data reveals that, over time, the high-level decision-makers who were originally involved no longer attend the steering committee meetings and have delegated the task to staff. Answers to the following questions would help interpret the data:

- Do the staff members have access to leadership?
- Can they make decisions on behalf of leadership?
- Are the staff members able to secure resources when needed?
- Is enthusiasm for SHSP implementation and evaluation dwindling?



Source: Cambridge Systematics, Inc.



## EVALUATION IN ACTION

### Alaska Uses Evaluation to Educate the Public on Traffic Safety

Alaska used evaluation results to announce the update of their Strategic Traffic Safety Plan (STSP) at a media event attended by the State's top traffic safety officials. Hosted by the Deputy Commissioner of the Department of Transportation and Public Facilities, the event included presentations from a U.S. Congressman; Commissioners for the Departments of Public Safety, Health and Social Services, and Administration; and a representative from the Department of Corrections. Evaluation data were used to highlight the State's traffic safety issues and to celebrate successes such as declines in unrestrained, alcohol-related, and speeding fatalities. The officials applauded the declining numbers but said one death on Alaska's highways is too many. They urged everyone to embrace the STSP's goal of "Toward Zero Deaths."

Depending on the answers to these and other questions, the current steering committee could determine that delegating the steering committee participation to the staff level does not hinder SHSP process and performance. On the contrary, it is improved because the current members have fewer competing priorities and duties and are able to devote more time and attention to the work. On the other hand, if lack of leadership presence has resulted in fewer resources and less decision-making authority, methods would need to be devised to reengage the leaders.

## SHSP PERFORMANCE

Analysis of performance evaluation data may reveal the number of fatalities and serious injuries in some emphasis areas are not decreasing as planned.

Again, the solutions will vary, but any of the following challenges could be underlying the failure to make progress:

- Data deficiencies, e.g., inability to identify problem locations;
- Implementing ineffective (unproven) strategies;
- Inadequate resources to implement the countermeasures;
- Lack of sufficient authority among those charged with implementation;
- Inadequate expertise or understanding of how to implement the strategies; or
- Lack of the political support necessary to change public attitudes.

Identifying and implementing solutions begins with correctly defining the problem. Solutions may then become obvious, but first the data need to be interpreted sufficiently.

For example, if an SHSP goal or objective is not met, the results may suggest a strategy is ineffective; however, in some cases the strategies may not have been implemented as intended. In this case, a State would need to determine if new strategies are needed or if implementation issues need to be addressed.

## Apply the Results

Evaluation results must be reviewed to identify and document ways to improve SHSP process and performance. These "lessons learned" should be widely shared along with the evaluation results. Of course, once the data are interpreted and shared, a commitment to use the results is necessary.



## OPERATIONALIZE THE FINDINGS

Evaluation results should be used to enhance the SHSP process, improve performance, inform managers and stakeholders, and facilitate decision-making.

States can use evaluation results to accomplish the following purposes, among others. These will be particularly important when updating the SHSP:

- Verify SHSP strategies and action plans are being implemented as intended;
- Validate the expected effectiveness of SHSP processes, strategies, and programs;
- Identify effective processes, strategies, and programs for replication;
- Identify weaknesses in the SHSP strategies and actions, such as failure to implement strategies, as well as strategies not achieving the intended results;
- Improve SHSP implementation;
- Direct resources to areas with the highest probability of improving safety;
- Inform elected officials, the media, and the public about the SHSP's impact;
- Identify potential leaders and partners across disciplines and modes; and
- Generate public understanding of the SHSP and recruit participation and support.

## SHARE THE INFORMATION

States should establish a feedback loop to ensure evaluation results are studied, used, and incorporated in the SHSP process. Evaluation results should be shared with decision-makers, SHSP committees and teams at all levels, safety stakeholders, and as appropriate with the public and the media. Information sharing informs partners and stakeholders about the SHSP process and performance. SHSP stakeholders should be aware of successful, as well as deficient programs as soon as the information is available, reviewed, and validated. This enables leaders and managers to address challenges; implement course corrections; educate stakeholders about the SHSP process, programs, and activities; inform the public to increase understanding and support for the SHSP; and inform elected and appointed officials so they consider additional funding and support for safety efforts.

## EVALUATION IN ACTION

### Missouri Uses Evaluation Results to Inform Stakeholders and Examine Emphasis Areas

Data are critical to the success of the Missouri SHSP evaluation process, which is why the State determined safety stakeholders should regularly access up-to-date data. The State compiles and distributes statewide, regional, and county fatality numbers to all safety coalition members weekly, which allows comparison to previous time periods. To compile the information, the State uses a standardized tracking methodology, which enables consistent longitudinal analysis. The data include information on both behavior and infrastructure, e.g., areas of the State with low safety belt use or infrastructure improvements by location and installation date to enable before-and-after evaluations. Distributing the data keeps stakeholders involved in the SHSP process and regularly reminds them of the overall goal to save lives and prevent injuries. The data also helps regions and localities examine their data closely to identify the most pressing highway safety problems.



Sharing results helps sustain partnerships and momentum and can help persuade decision-makers to support evaluation as an integral part of the SHSP process. As awareness about transportation safety issues and programs increases, further support for the SHSP is generated. Results are typically shared through press releases, news media events, brochures, formal reports, newsletters, presentations, and other methods.

Many States hold Safety Summits or conferences to share information and generate enthusiasm for SHSP implementation. Sessions could highlight evaluation results, especially noteworthy or exemplary practices that encourage others to adopt similar strategies in their communities or organizations. Sharing less successful results is also beneficial, especially if this results in brainstorming, consensus building, and solutions.

## Using Evaluation Checklist

The following checklist is designed to support the use of evaluation results. If an action on the checklist is in progress or completed, the State is well on the way to using evaluation results to improve the SHSP process and performance.

- ✓ Evaluation results have been interpreted and documented.
- ✓ Evaluation results were reviewed to identify lessons learned.
- ✓ Lessons learned have been used to improve SHSP process and performance.
- ✓ SHSP stakeholders are made aware of both successful and unsuccessful programs and strategies as soon as sufficient information is available.
- ✓ Evaluation results are being used to increase public understanding of SHSP programs and strategies.
- ✓ Evaluation results are being used to help inform elected and appointed officials so they might support increased funding and resources for safety programs and strategies.
- ✓ Evaluation results are being used to identify additional safety leaders and partners.
- ✓ Evaluation results that identify gaps and weaknesses in SHSP process or performance are being addressed through follow-up actions.
- ✓ Evaluation results are used to direct resources to areas with the highest probability of improving safety.



# Conclusion

Evaluation does not need to be complicated or difficult. In fact, it should be as simple and straightforward as possible to ease interpretation and use by leaders, managers, and safety stakeholders. Once the data are collected and analyzed, the results can be used to assess the level of SHSP implementation and SHSP performance in terms of outputs and outcomes. The results can be shared and used for continuous SHSP process improvement. Armed with this information, SHSP managers can focus resources and efforts on the most critical problems and the most effective countermeasures. It is an essential investment in the State transportation safety program.

An important message is, “*don’t get stuck!*” If the data, expertise, or resources are not available in some areas, move on to other areas where evaluation is feasible. Also, “*don’t let evaluation results gather dust!*” Develop plans and obtain commitments to use the results to improve SHSP efficiency and effectiveness. Good luck!



Source: Cambridge Systematics, Inc.



## Appendix – EPM Worksheets

The sample worksheets provided in this appendix are based on the information provided in the EPM and are intended to help States document the evaluation results and record follow-up action items. They are based on the self assessment questions posed throughout the EPM. By carefully reviewing and answering the questions in these worksheets, States will gain an understanding of their strengths and weaknesses and begin to develop an action plan for strengthening their SHSP.

The worksheets are organized by EPM chapter, with one worksheet for Chapter 2 and another for Chapter 3.<sup>10</sup> Each worksheet is composed of two parts. The first part is designed to encourage a deeper review of each of the self assessment questions with the goal of identifying action items for improving the SHSP. The second part is designed to take the action items and identify those who are responsible for completing them, and when they should be done. The end result is an action plan that includes tasks to be accomplished, persons responsible for accomplishing them, and deadlines.

While the self-assessment questions can be simply answered with a yes or no, greater benefit is derived if they are considered and responded to in a deeper fashion. Filling in the fields next to each question fleshes out issues associated with them and helps identify next steps. The following example helps describe this process.

### EXAMPLE: CHAPTER 3

Consider a self-assessment question from Chapter 3, **“Are the number and rate of fatalities and serious injuries tracked and reported by emphasis area and compared to previously set objectives?”**

The worksheet provides a place to answer yes or no to this question. If each emphasis area has performance measures for fatality and serious injury magnitudes and/or rates, the answer to the question is **Yes, we track the number of fatalities and serious injuries on an annual basis as data become available.**

The next space in the worksheet is to provide additional information (“as evidenced by”). A possible answer to this question may be: **Annual data reports by emphasis area and for the SHSP as a whole are provided to the leadership showing progress toward SHSP goals/objectives.**

<sup>10</sup> Chapter 1: Preparing for Evaluation and Chapter 4: Using Evaluation are best addressed by working through the checklists at the end of each of those chapters.



The third space in the worksheet is “what is the impact (positive or negative).” You are tracking and reporting on the number of fatalities and serious injuries on an annual basis and providing the information to the SHSP leadership so they can see progress. What is the positive impact of this activity; is there any negative impact? Possible answers include the following:

- **Positive Impact – Emphasis area teams and SHSP leadership are regularly informed and can make course corrections when needed, not just at the end of the SHSP cycle/period of performance.**
- **Negative Impact – Because fatalities and serious injuries are only tracked by actual numbers and not by geographic area, it may be difficult to determine where the problem is occurring, which prevents hot spot and systemic analysis of the State’s traffic safety problems.**

The fourth space in the worksheet is “opportunities” or how the State can improve its process with respect to this question. The response might consist of the following items:

- **Collect and track overall fatalities by rates to allow for a comparison with other neighboring States and the national fatality rate.**
- **Collect and track fatalities and serious injuries by geographic area to identify problem locations.**
- **Provide information on SHSP progress on achieving fatality and serious injury goals/objectives to the public.**

The last space in the worksheet is for action items. At this point, opportunities identified in the previous step can be transformed into tasks such as the following:

- **Develop a method to collect and analyze fatalities and serious injuries by geographic area.**
- **Determine who should receive the data and how often.**
- **Decide whether the information can be used to form regional teams to assist with SHSP implementation.**

This process should be repeated for each question.<sup>11</sup> When completed, it will result in a list of action items. These action items should be transferred to the second part of the worksheet under “Action Item Summary.” Each action item can then be assigned to a responsible person and given a deadline. The resulting collection of action items, responsible persons, and deadlines creates a plan to enhance the SHSP process and efforts.

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<sup>11</sup> Questions should be modified, added, or removed based on each State’s particular circumstances.

## Process Evaluation – Getting on the Right Track

The elements examined in process evaluation are: **SHSP organizational structure; multidisciplinary, multimodal collaboration; goal and objective setting methods; data driven and evidence-based emphasis areas, strategies, and actions; and aligning agency priorities.** For each of these elements the primary question driving the evaluation is:

### WHAT WILL IT TAKE TO CONVINCe US OUR PROGRAMS/ STRATEGIES/ACTIONS/INVESTMENTS ARE ON THE RIGHT TRACK?

The questions below will help determine the effectiveness of current process evaluation efforts and identify areas for improvement. The EPM is based on noteworthy practices and current research and is general in nature. States should feel free to add to or modify these questions to fit their particular situation.

**COLUMN DESCRIPTIONS**

**As evidenced by:** What is the evidence for the yes (or the no) answer?

**What is the Impact:** What impact, positive or negative, is this having on our SHSP process?

**Opportunities:** How can we improve our efforts with respect to this question?

**Action Items:** What steps will we take to improve our process, when should the steps be completed, and who is responsible for completing them?

SHSP Organizational Structure Questions	Yes/No	As evidenced by (observations)	What is the impact (positive or negative)?	Opportunities	Action Items
1. Is the SHSP process supported by an actively engaged organizational structure?					

SHSP Organizational Structure Questions	Yes/No	As evidenced by (observations)	What is the impact (positive or negative)?	Opportunities	Action Items
2. Are top-level managers represented in executive committees or leadership structures/groups established for the SHSP?					
3. Do members of the executive committee or leadership group have the decision-making authority needed to effectively support the SHSP process?					
4. Do members of the executive committee or leadership group assign persons with decision-making authority to the steering committee or working group?					
5. Are multiple transportation modes represented, and do they actively participate on the steering committee/working groups and emphasis area teams?					

<b>SHSP Organizational Structure Questions</b>	<b>Yes/No</b>	<b>As evidenced by (observations)</b>	<b>What is the impact (positive or negative)?</b>	<b>Opportunities</b>	<b>Action Items</b>
6. Has a SHSP program coordinator or manager been assigned? What percentage of this person's time is dedicated to the SHSP?					
7. Do the leadership and working groups/committees meet as frequently as expected?					
8. Are emphasis areas supported by teams with engaged leaders?					

<b>Multidisciplinary and Multimodal Collaboration Questions</b>	<b>Yes/No</b>	<b>As evidenced by (observations)</b>	<b>What is the impact (positive or negative)?</b>	<b>Opportunities</b>	<b>Action Items</b>
1. Are members of the executive or leadership group, the steering committee, the emphasis area teams, and other groups multidisciplinary and multimodal?					

Multidisciplinary and Multimodal Collaboration Questions	Yes/No	As evidenced by (observations)	What is the impact (positive or negative)?	Opportunities	Action Items
2. Are local/regional/district coalitions supported by the SHSP organizational structure?					
3. Are the necessary disciplines, modes, and agencies (representing the 4 E's) engaged in SHSP decision-making and implementation?					
4. Do the stakeholders regularly collaborate on decisions that affect SHSP updates and implementation?					
5. Do the necessary stakeholders collaborate and jointly decide on SHSP goal and objective setting methods?					

<b>Goal - and Objective-Setting Methods Questions</b>	<b>Yes/No</b>	<b>As evidenced by (observations)</b>	<b>What is the impact (positive or negative)?</b>	<b>Opportunities</b>	<b>Action Items</b>
1. Are data-driven methods, such as trend analysis, used to establish goals and set aggressive, yet achievable objectives?					
2. Are objectives specific, measurable, time bound, and realistic?					

<b>Data-Driven and Evidence-Based Emphasis Areas, Strategies, and Actions Questions</b>	<b>Yes/No</b>	<b>As evidenced by (observations)</b>	<b>What is the impact (positive or negative)?</b>	<b>Opportunities</b>	<b>Action Items</b>
1. Is data analysis used to select the emphasis areas?					
2. Are the emphasis areas strategies selected through an evidence based process?					
3. Are promising and innovative strategies with less evidence of effectiveness accompanied by an evaluation?					

Aligning Agency Priorities Questions	Yes/No	As evidenced by (observations)	What is the impact (positive or negative)?	Opportunities	Action Items
1. Have the various agencies and safety partners incorporated elements of the SHSP into their planning documents? (HSPs, HSIPs, CVSPs, LRTPs, S/TIPs, etc.)					

## Action Item Summary

SHSP Organizational Structure – Action Items	Deadline	Responsible Person
1.		
2.		
3.		
4.		
5.		
6.		

Multidisciplinary and Multimodal Collaboration – Action Items	Deadline	Responsible Person
1.		
2.		
3.		
4.		
5.		
6.		

Goal- and Objective-Setting Methods – Action Items	Deadline	Responsible Person
1.		
2.		
3.		
4.		
5.		
6.		

Data-Driven and Evidence-Based Emphasis Areas, Strategies, and Actions – Action Items	Deadline	Responsible Person
1.		
2.		
3.		
4.		
5.		
6.		

## Aligning Agency Priorities – Action Items

Aligning Agency Priorities – Action Items	Deadline	Responsible Person
1.		
2.		
3.		
4.		
5.		
6.		

## Performance Evaluation – Outputs and Outcomes

Performance evaluation is comprised of: **output evaluation and outcome evaluation.** For each of these areas the primary question driving the evaluation is:

### WHAT WILL IT TAKE TO CONVINCe US OUR PROGRAMS/ STRATEGIES/ACTIONS/INVESTMENTS ARE GETTING US WHERE WE NEED TO BE?

The questions below will help determine the effectiveness of current performance evaluation efforts and identify areas for improvement. The EPM is based on noteworthy practices and current research and is general in nature. States should feel free to add to and/or modify these questions to fit their particular situation.

#### COLUMN DESCRIPTIONS

**As evidenced by:** What is the evidence for the yes (or the no) answer?

**What is the Impact:** What impact, positive or negative, is this having on our SHSP process?

**Opportunities:** How can we improve our efforts with respect to this question?

**Action Items:** What steps will we take to improve our process, when should the steps be completed, and who is responsible for completing them?

Performance Evaluation Questions	Yes/No	As evidenced by (observations)	What is the impact (positive or negative)?	Opportunities	Action Items
1. Has the current status of all output and outcome performance measures been gathered and reviewed?					

<b>Performance Evaluation Questions</b>	<b>Yes/No</b>	<b>As evidenced by (observations)</b>	<b>What is the impact (positive or negative)?</b>	<b>Opportunities</b>	<b>Action Items</b>
2. Are the performance measures clearly related to SHSP goals and objectives?					
3. Are the numbers and rates of fatalities and serious injuries used as general statistical measures?					
4. Are the numbers and rates of fatalities and serious injuries tracked and reported by emphasis area and compared to previously set objectives?					
5. Have fatality and serious injury objectives been met?					
6. Are observation and/or telephone survey data collected and analyzed to track changes in awareness, attitudes, and behaviors?					
7. Have awareness, attitude, and behavior objectives been met?					

Performance Evaluation Questions	Yes/No	As evidenced by (observations)	What is the impact (positive or negative)?	Opportunities	Action Items
8. Are program-level benefit/cost analyses conducted on certain SHSP programs?					
9. Have the benefits of the program(s) outweighed the costs?					

## Action Item Summary

SHSP Organizational Structure – Action Items	Deadline	Responsible Person
1.		
2.		
3.		
4.		
5.		
6.		
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8.		
9.		
10.		





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