

Highlights of the Roadway Safety Data Program



Robert Pollack - FHWA

2015 Data Palooza



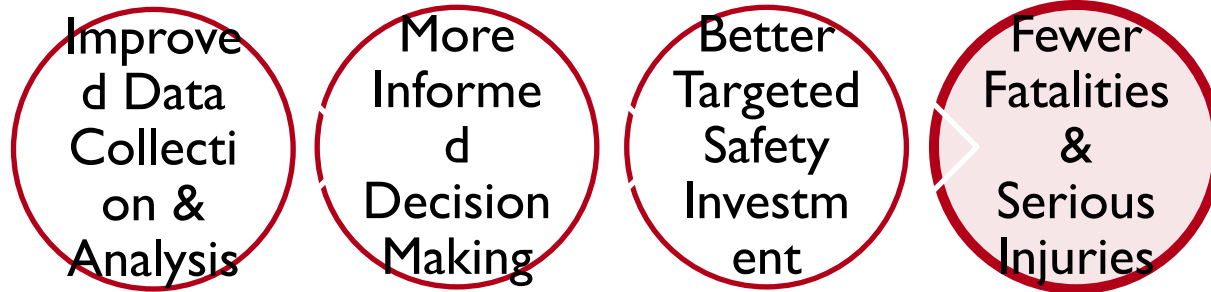
**Roadway Safety
Data Program**



U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives
<http://safety.fhwa.dot.gov>

FHWA Roadway Safety Data Program (RSDP)



<http://safety.fhwa.dot.gov/rsdp>

Roadway Safety Data Program Elements



Data Guidance

Resource Development

Technical Assistance

Training

<http://safety.fhwa.dot.gov/rsdp>

What Data is Currently Collected?

MAP-21 Data Guidance

- Types of roadways covered
- Types of data included
- Geolocation of safety data to a common highway basemap
- Analysis and evaluation capabilities

State Safety Data Guidance Links:

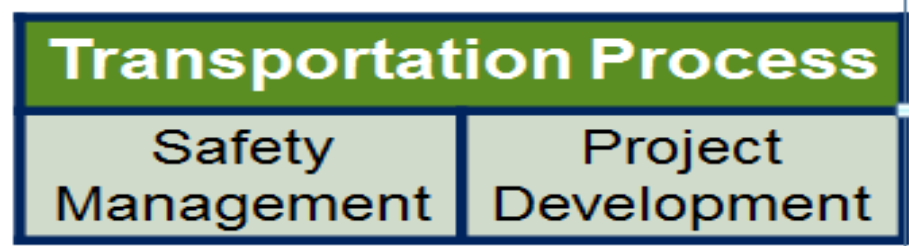
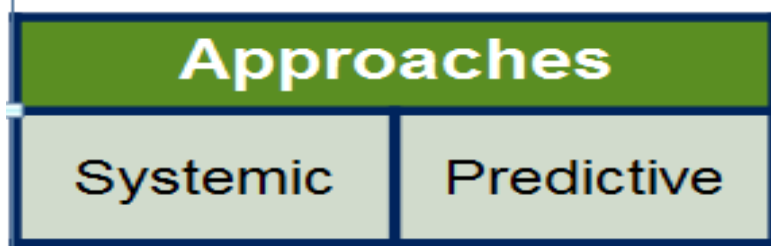
<http://www.fhwa.dot.gov/map21/guidance/guidesafetydata.cfm>

<http://www.fhwa.dot.gov/map21/qandas/qassds.cfm>

How is Safety Data Used?

Data-Driven Safety Analysis

- The application of two science-based analysis approaches into two common transportation processes



Systemic Approach

- Supplements the traditional site analysis (i.e. “hot-spot”) approach
- Particularly applicable when a significant number of severe crashes happen over a wide area:
 - Rural Roadways
 - Local Roadways
 - May focus on specific crash types
 - Cross-median
 - Pedestrian
 - Curve



Systemic Approach to Safety



- Systemic Safety Improvement
 - An improvement that is widely implemented based on high-risk roadway features that are correlated with particular crash types, rather than crash frequency.
- Systemic Problem Identification
 - System-wide crash analysis
 - Crash characteristics at the system level

Select focus
crash type(s)



Select focus
facilities



Identify common
characteristics

Systemic Approach to Safety

<http://safety.fhwa.dot.gov/systemic>

U.S. Department of Transportation
Federal Highway Administration

Office of Safety
A Systemic Approach to Safety - Using Risk to Drive Action

Home | About Systemic | Why Systemic | Resources/Contact



Systemic safety is a new approach to highway safety that focuses on the overall system rather than just individual sites. It recognizes that many safety problems are caused by systemic factors that affect a large number of sites. By addressing these systemic factors, we can make low-cost safety improvements that will have a significant impact on overall highway safety.

A Way to Manage Risk

Highway safety improvement projects are designed to improve safety by minimizing or eliminating risk to roadway users. Rather than managing risk at certain locations, a systemic approach takes a broader view and looks at risk across an entire roadway system. A system-based approach acknowledges that crashes alone are not always sufficient to determine what countermeasures to implement, particularly on low volume local and rural roadways where crash densities are lower, and in many urban areas particularly those where there are conflicts between vehicles and vulnerable road users (pedestrians, bicyclists, and motorcyclists).



Click [here](#) for a list of potential risk factors a state or local agency might consider with the systemic safety approach.

Systemic In Practice

Several states are using the systemic approach to safety and achieving results. For more details, select one of the states below:

[Missouri](#)
[Minnesota](#)

A feature on the FHWA Office of Safety Roadway Safety Noteworthy Practice Database allows you to add your own noteworthy practice. [Click here](#) to submit your practice. [Click here](#) to visit the database.

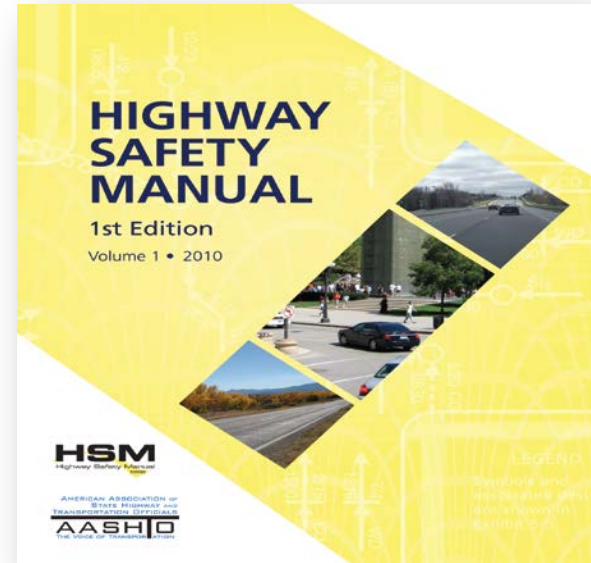
Predictive Analysis

- Uses crash, roadway, and traffic volume data
- Provides reliable **estimates** of an existing or proposed roadway's **expected safety performance**.
- Helps agencies **quantify** the **safety impacts** of transportation decisions, similar to the way agencies quantify:
 - traffic growth
 - environmental impacts
 - traffic operations
 - pavement life
 - construction costs



Highway Safety Manual

- Provides practitioners with the best factual information and tools for safety analysis and evaluation
- Presents tools and methodologies for consideration of safety throughout the project development process
- Targeted at practitioners in planning, design, operations, construction, and maintenance



What is Needed to Improve the Utility of our Safety Data?

Safety Data Needs

- More safety data (data for all public roads)
- Better quality data
- More efficient and effective use of data
- Technical assistance to agencies

Innovative Solutions for Improving Safety Data

RSDP Resources



- Roadway Safety Data Capability Assessment
- MIRE and Management Information System
- Benefit-Cost Analysis of Investing in Data Systems
- MIRE Fundamental Data Element Cost-Benefit Estimation
- Highway Safety Manual Guides & Support Tools

RSDP Resources



- Safety Data and Analysis Case Studies
- Safety Data and Analysis Toolbox
- Integration of State and Local Safety Data
- Business Case for Investments to Improve State Safety Data and Analysis Systems

RSDP Technical Assistance



- Roadway Data Improvement Program (RDIP)
- Roadway Data Extraction Technical Assistance Program (RDETAP)
- Highway Safety Manual technical support
- Data & Analysis “Flexible” Technical Assistance
- SHRP2 Naturalistic Driving Study data analysis support

RSDP Training



- New Approaches to Highway Safety Analysis
- Highway Safety Manual Training
 - National Highway Institute
 - Resource Center
- Additional Safety Data & Analysis Training Needs???

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