

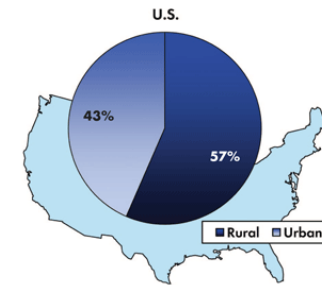
Local Road Safety Programs

29th Annual Regional Local Road Conference
Rapid City, South Dakota
October 23, 2014



The Challenge

- Is there really a problem? (57% of fatal crashes on rural roads)
- Funding is available, But.....
- A different response is required



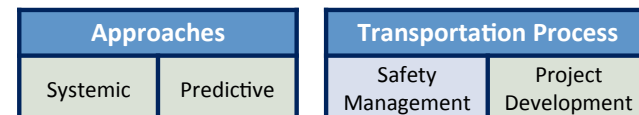
Local Crash Data

FARS Data from 2012

State	RURAL				URBAN				Total	Total Percent Local and Collector	Rural Percent Local and Collector	Urban Percent Local and Collector
	Principal Arterial	Minor Arterial	Collector	Local	Principal Arterial	Minor Arterial	Collector	Local				
Colorado	93	37	52	23	145	47	19	17	433	0.26	0.37	0.16
Iowa	77	42	79	58	27	6	0	41	330	0.54	0.54	0.55
Kansas	121	55	56	61	26	23	9	17	368	0.39	0.40	0.35
Missouri	128	79	164	66	188	66	32	37	760	0.39	0.53	0.21
Montana	77	29	51	19	6	1	1	5	189	0.40	0.40	0.46
Nebraska	49	27	24	42	24	14	1	9	190	0.40	0.46	0.21
North Dakota	51	23	33	22	14	2	0	2	147	0.39	0.43	0.11
South Dakota	34	24	29	15	4	6	2	4	118	0.42	0.43	0.38
Wyoming	21	11	9	11	13	3	3	3	74	0.35	0.38	0.27
Total	651	327	497	317	447	168	67	135	2609	0.39	0.45	0.25

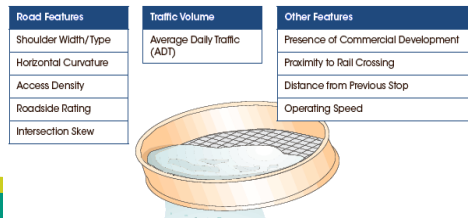
Data-Driven Safety Analysis

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



Systemic Analysis

- Implements a **system-wide screening** of a roadway network based on the presence of **high-risk roadway features** correlated with **particular severe crash types**, rather than high crash locations.



Definitions

- Systemic** – Deploying countermeasures at locations with the greatest risk
- Systematic** – Deploying countermeasures at ALL locations

Systemic Analysis

- Particularly applicable when a significant number of severe crashes happen over a wide area:
 - Rural Roadways
 - Local Roadways
 - Specific Crash Types
 - Right Angle
 - pedestrian
 - Lane Departure on curves
- Supplements traditional site analysis
- May include treating locations that **haven't** experienced many crashes

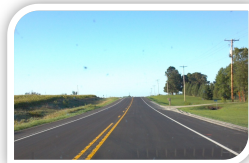
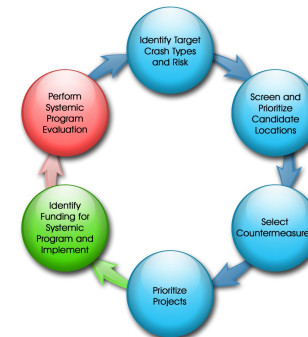


Photo Source: FHWA

Systemic Safety Project Selection Tool

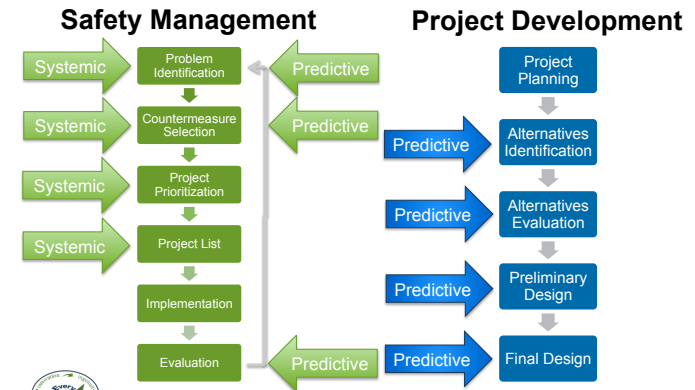
Guide



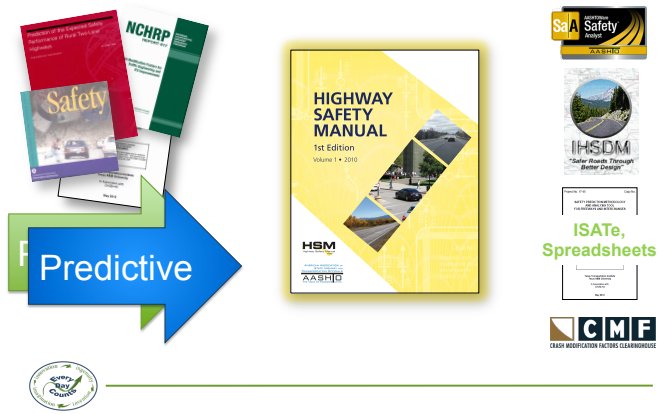
Systemic Safety Planning Process



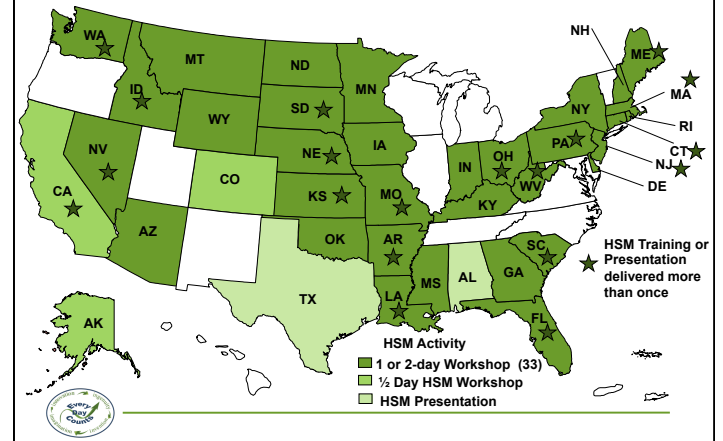
Transportation Processes



Predictive Approaches



FHWA HSM Training, 2011 - 2014



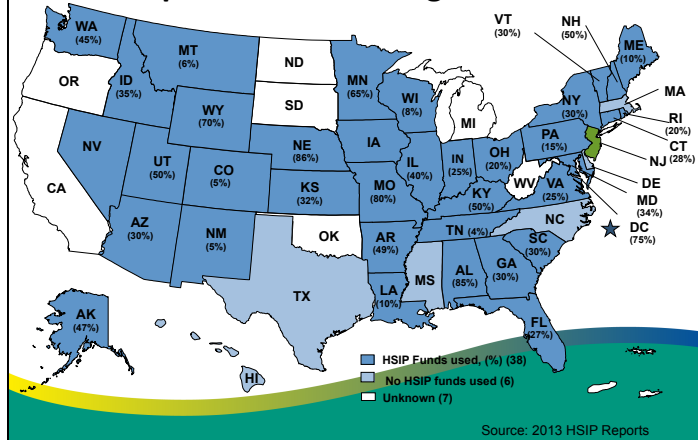
Why the Data-Driven Safety Analysis Initiative?

- **from FHWA State Data Capabilities Assessment:**
 - Use of data analysis **varies** from state-to-state
 - All states **want to improve** their data capability
 - States are **excited** about implementing the HSM and upgrading their existing analysis practices
 - Many states noted that the introduction of the HSM was a **major advance** for the transportation safety profession

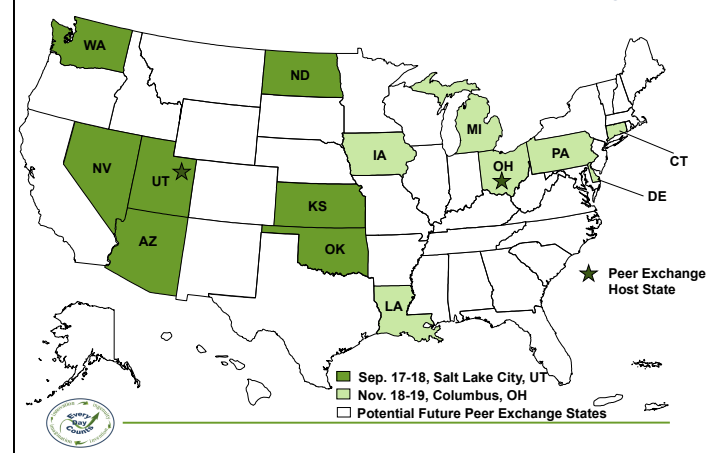
What is the Key Message regarding Data-Driven Safety Analysis?



States Implementing Systemic Safety Improvements through the HSIP



Systemic Safety Implementation Peer Exchanges



Local HSIP Expenditures 2012

State	% HSIP Funds to Locals	% Local Road Fatalities by Route Signing	% Local Road Mileage by Ownership
CO	30-50%	41%	82%
IA	0	52%	92%
KS	45%	44%	92%
MO	0	30%	73%
MT	6%	25%	63%
NE	7-11%	45%	89%
ND	UK	35%	90%
SD	25%	44%	86%
WY	20%	14%	60%



Federal-aid Essentials

- Three main components of the Web site:
 - Vast library of videos
 - Printable takeaways
 - Additional resources/contacts
- Other features
 - Subscriber alerts
 - Feedback mechanism



Web site

www.fhwa.dot.gov/federal-aidessentials



What is Working?

- Cable Median Barrier
- Rumble Strips and Stripes
- Edge Line Pavement Markings
- Chevrons on Curves
- Signal Upgrades
- Countdown Pedestrian Indications



What is Trending?

- High Friction Surfaces
- Safety Edge
- Alternative Intersection Design
- Data
- Improved Analysis Tools

What is Missing?

- Enforcement Countermeasures
- Fewer Signals
- Pedestrian/Bicycle Countermeasures
- Better Roadway Data
- Better Crash Data
- Public/Political/Management Support

Benefits of Systemic Safety Planning

- Proactive program to address fatalities and serious injuries that seemingly occurred at “random” locations
- Greater knowledge regarding severe crashes, including contributing factors and location characteristics
 - Improve planning, design, and maintenance practices
 - Risk management for tort liability

Introduction to the Guidebook



Systemic Approach to Safety: Using Risk to Drive Action



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

HSM Companion Software

HSM Part	Supporting Tool	
PART B: Roadway Safety Management Process	AASHTO SafetyAnalyst www.safetyanalyst.org	
PART C: Predictive Methods	IHSDM www.ihsdm.org	HSM & ISATe Spreadsheets
PART D: Crash Modification Factors	FHWA CMF Clearinghouse www.cmfclearinghouse.org	



Systemic Safety Resources

- Systemic Approach to Safety Website
 - <http://safety.fhwa.dot.gov/systemic>
- Training Materials
 - One-hour Overview Presentation
 - Four-hour Workshop
- Systemic Training & Technical Assistance Program
 - http://rspcb.safety.fhwa.dot.gov/p2p/p2p_app.aspx
- Systemic Safety Implementation P2P Events (*coming soon*)

Technical Assistance

- Project level reviews
- Road Safety Audits
- Process/Policy Reviews
- Training
 - Training is available at no charge
 - Funding for travel
 - Requestor provides site, prints materials, administers event
 - Prioritized based upon need

Training

- Almost anything safety related
 - Customization is possible (Washington State)
- Workshops related to local jurisdictions (Based on Guidebooks developed by FHWA Headquarters)
 - Safety Planning
 - Data and Analysis
 - Intersections
 - Roadway Departure
 - Non-Motorized Users
 - Speed Management

Questions?

Thanks for your attention

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