

# **Arizona 2014 SHSP**

## **Safety Planning Workshop**

### ***From Planning to Implementation***

**January 7, 2015**

**Flagstaff, AZ**

***Toward Zero Deaths by Reducing Crashes for a Safer Arizona***

# Workshop Agenda

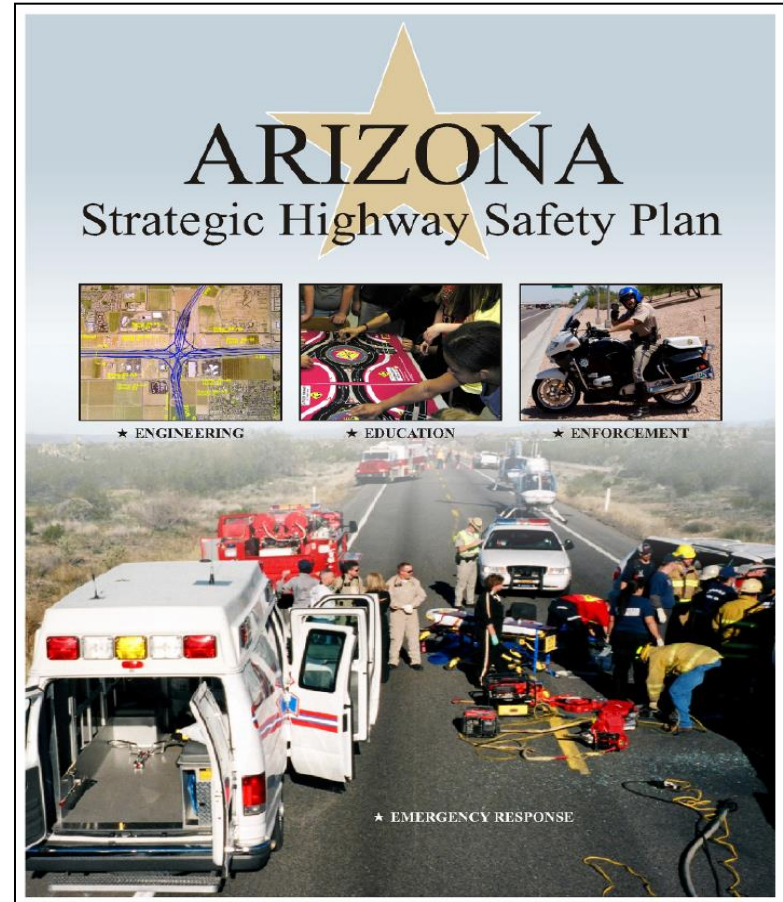
- Welcome and Introductions
- Arizona 2014 Strategic Highway Safety Plan (SHSP)  
Implementation Overview
- Tying it all Together: The Seven Principles of Safety  
Planning Integration
- Discussion and Feedback
- The Benefits of SHSP Participation
- Adjourn

# Welcome and Introductions

- Name
- Organization
- Role (Transportation Planner, Engineer, Consultant, Other)

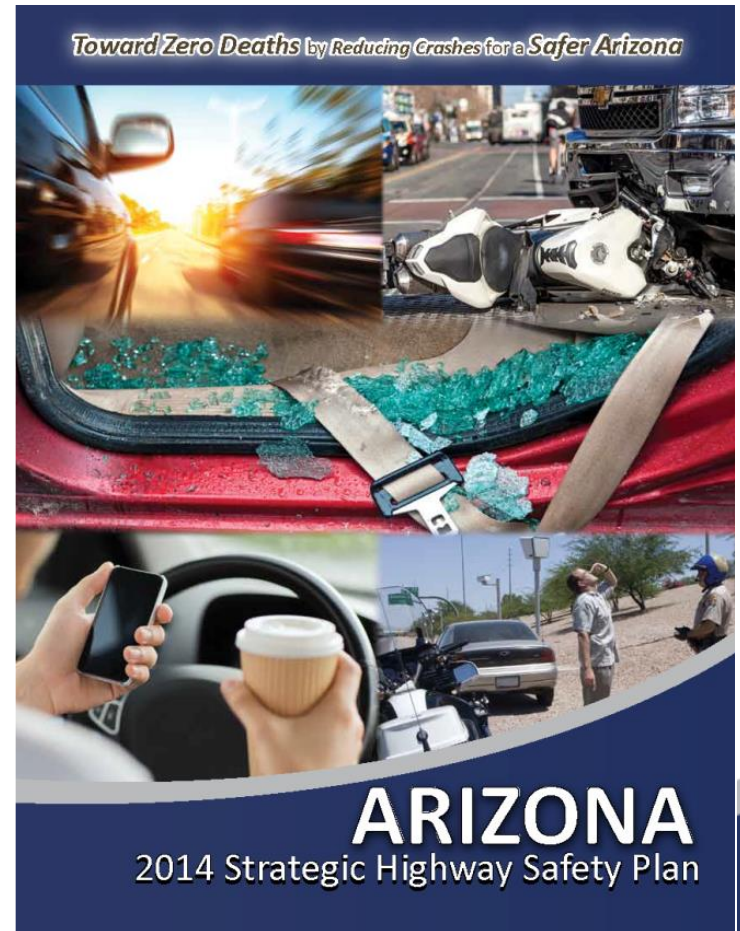
# History and Background

- Brief History
- SAFETEA-LU
- Arizona 2007 SHSP
- MAP-21
- Arizona 2014 SHSP



# Introducing the Arizona 2014 SHSP

- Data Driven
- All Public Roads
- Collaborative Process
- Multidisciplinary
- A Program of Strategies
- Coordinated
- Goal, Objective, and Performance Measures



# SHSP Leadership

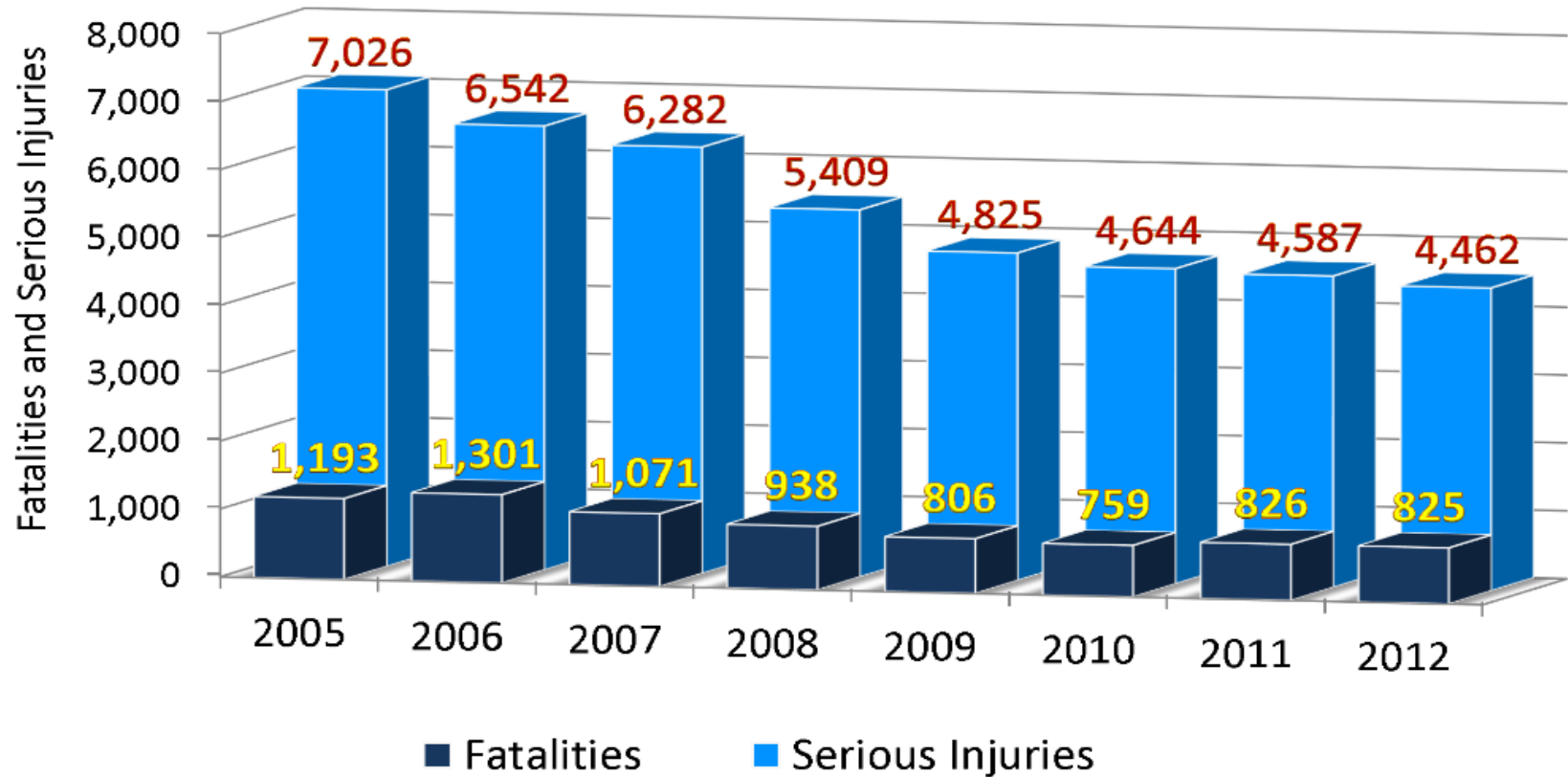


# The Process

## Stakeholder involvement



# The Trend of Road Safety in Arizona



# SHSP Contents

## **SHSP GOAL:**

*Reduce fatalities and the occurrence and severity of serious injuries on all public roadways in Arizona.*

## **SHSP OBJECTIVE:**

*Reduce the total number of fatalities and serious injuries in Arizona by three to seven percent during the next five years from the 2013 base year.*

# Emphasis Areas

## 2014 SHSP EMPHASIS AREAS

### TOP FOCUS EMPHASIS AREAS



SPEEDING AND AGGRESSIVE DRIVING  
IMPAIRED DRIVING  
OCCUPANT PROTECTION  
MOTORCYCLES  
DISTRACTED DRIVING

ROADWAY INFRASTRUCTURE AND OPERATIONS  
AGE RELATED  
HEAVY VEHICLES / BUSES / TRANSIT  
NONMOTORIZED USERS  
NATURAL RISKS  
TRAFFIC INCIDENT MANAGEMENT  
INTERJURISDICTIONAL

## EMPHASIS AREAS SUPPORT

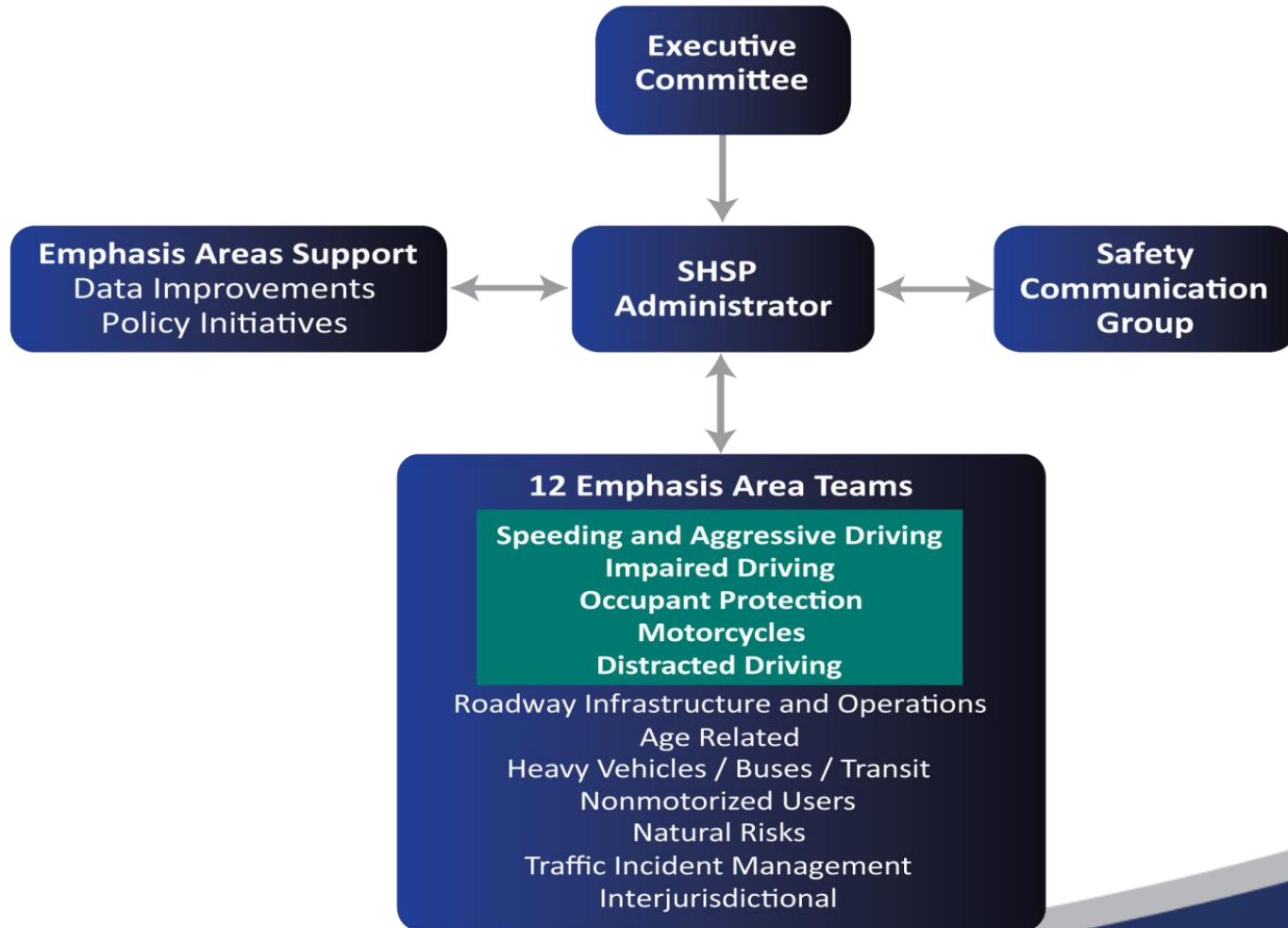
### DATA IMPROVEMENTS

COORDINATE IMPROVEMENTS TO,  
AND SHARING OF, SAFETY DATA

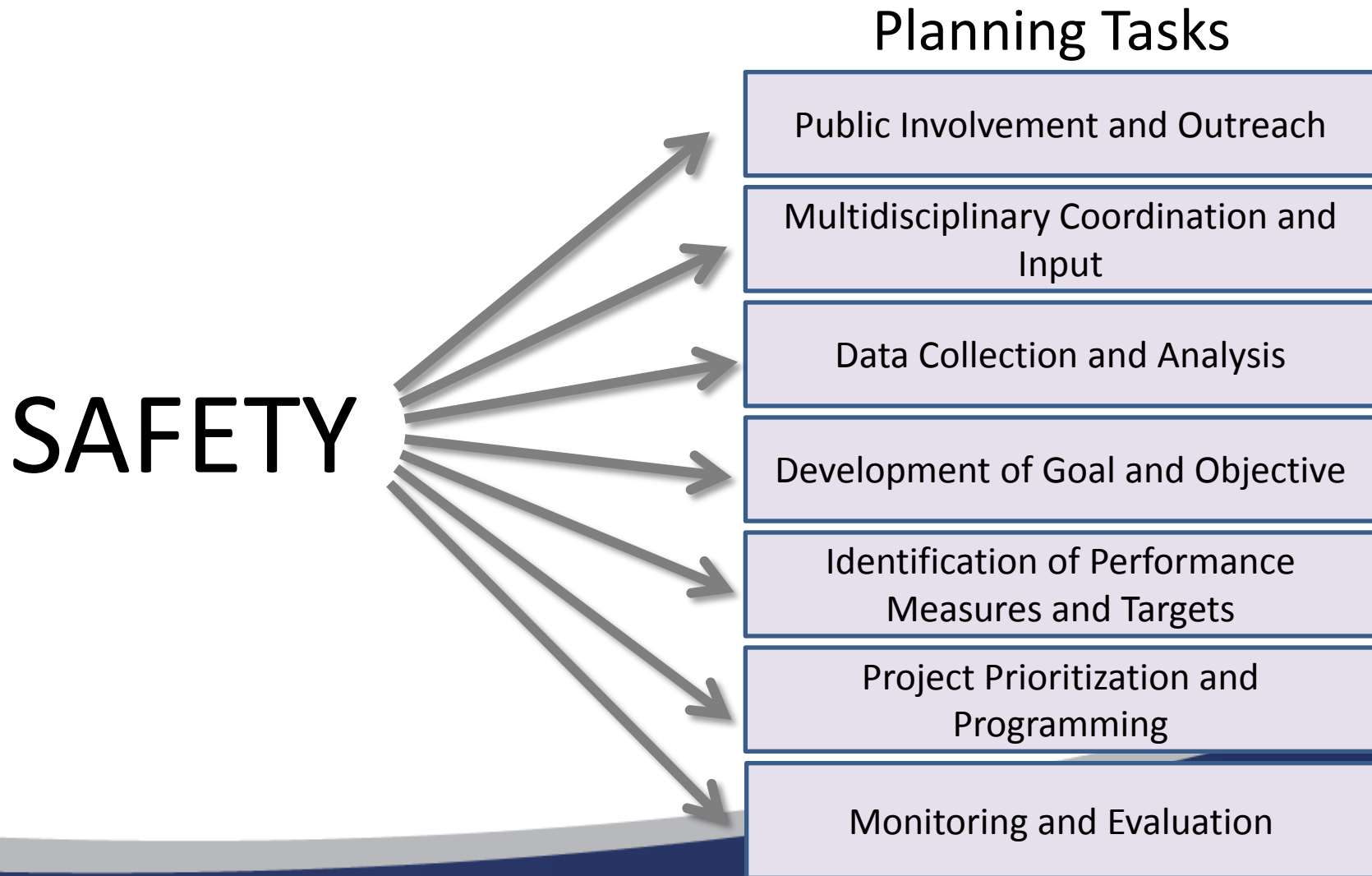
### POLICY INITIATIVES

PROVIDE DIRECTION ON  
PROPOSED CHANGES TO POLICIES,  
PROCEDURES OR LAWS

# Implementation Framework



# Safety Integration



# Recap

- MAP-21
- AZ 2014 SHSP
- Collaborative multidisciplinary data-driven
- 12 Emphasis Areas
- 4E approach
- Focus State for intersections, pedestrians, lane departures
- Reduce severity

# Tying It All Together: The Seven Principles of Safety Planning Integration

# The Transportation Planners Role

- Forum for Identifying Regional Priorities
- Conduct Public Involvement
- Connection to Elected Officials
- Lead or Support Long Range Planning processes
- Staff Expertise
- Boots on the Ground
- Champions

# Defining Safety

*Safety – Reduce fatalities and the occurrence and severity of serious injuries on all public roadways*

At a regional meeting, such as a transportation advisory committee meeting, it may be beneficial to schedule time in the agenda to ask: *What does transportation safety mean to you?*

# Public Involvement/Outreach

## Planning Task



## Safety Integration

Public Involvement and  
Outreach

*Solicit input to inform  
planning decisions*

- Utilize available public involvement tools to collect information on transportation safety issues and needs

# Public Involvement Methods

- Surveys and Comment Cards
- Open Houses
- Outreach Materials
  - Websites
  - Newsletters

## **Potential Safety Survey/ Comment Card Questions**

- In what specific areas is transportation safety a concern (i.e., walking, biking, intersections, rail crossings)?
- What are your ideas for safety solutions?
- What specific locations or roadways do you perceive as having a safety problem?

# Multidisciplinary Coordination

## Planning Task



## Safety Integration

Multidisciplinary  
Coordination

*Using committees to  
inform planning  
decisions*

- Discuss safety at committee meetings
- Include traditional/non-traditional safety stakeholders on committees
- Host safety workshops

# Committee Meetings

- Discuss safety topics with existing committees
  - Policy
  - Technical
  - Modal/Special Interest
  - Citizens
- Topic Ideas
  - Presentation on the SHSP
  - Program and fund transportation safety projects
  - Present/review regional crash data
  - Annual review of regional high-crash locations
  - Overview of road safety audits and solicit committee interest
  - Planning for a regional safety workshop



# SHSP EA Team Meetings, Summits



# Data Collection and Analysis

## Planning Task



## Safety Integration

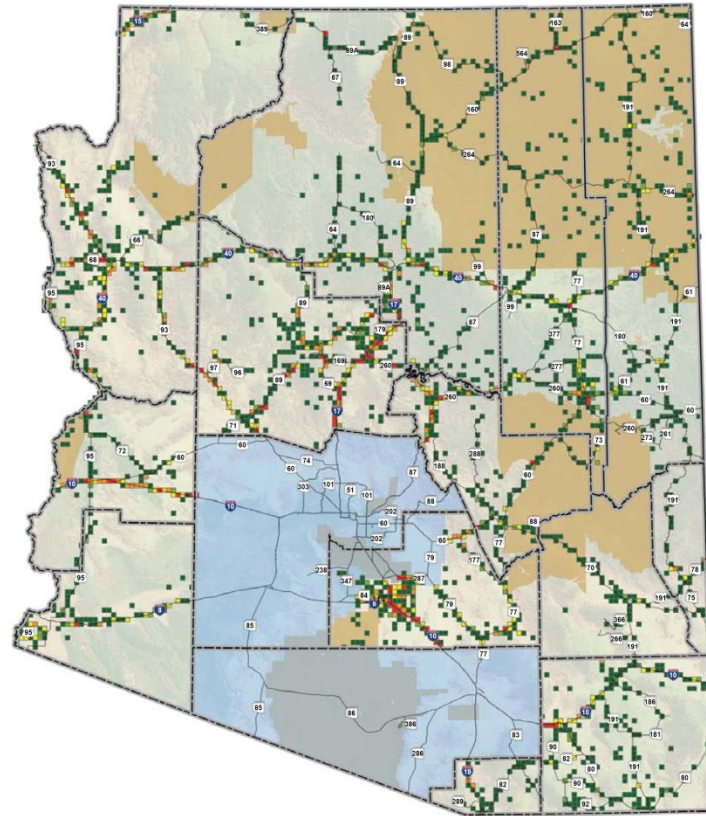
Data Collection and  
Analysis

*Identify regional trends  
and issues*

Collect and analyze  
safety data (crash,  
volume, roadway) to  
identify goals, objectives,  
and project/program  
priorities.

# Identify and Access Available Data

- State crash/roadway database
- Regional/local crash database
- Generated Crash Reports
- Local law enforcement
- LTAP/TTAP
- Local safety agencies/organizations (MADD)
- Safety Planning Documents
- Qualitative data (surveys)



# Analyze Data

- High Crash Locations and Crash Clusters
- Spatial Analysis
- Crash Frequency
- Trend Analysis
- Crash rates
- Crash Types and Contributing Factors
- Systemic Analysis
- Network Screening

## Example Methods

**Spatial Analysis** – GIS has been used to rank schools by severe and speeding-related crashes, and to rank road sections with crashes on/near curves.

**County Level Analysis** – Frequency tables using crash data variables have been used to identify countywide trends and general crash factors associated with speeding-related crashes.

**Network Screening** – Identified routes where severe and/or speeding-related crashes are over represented compared with other similar routes.

# Goals and Objectives

## Planning Task



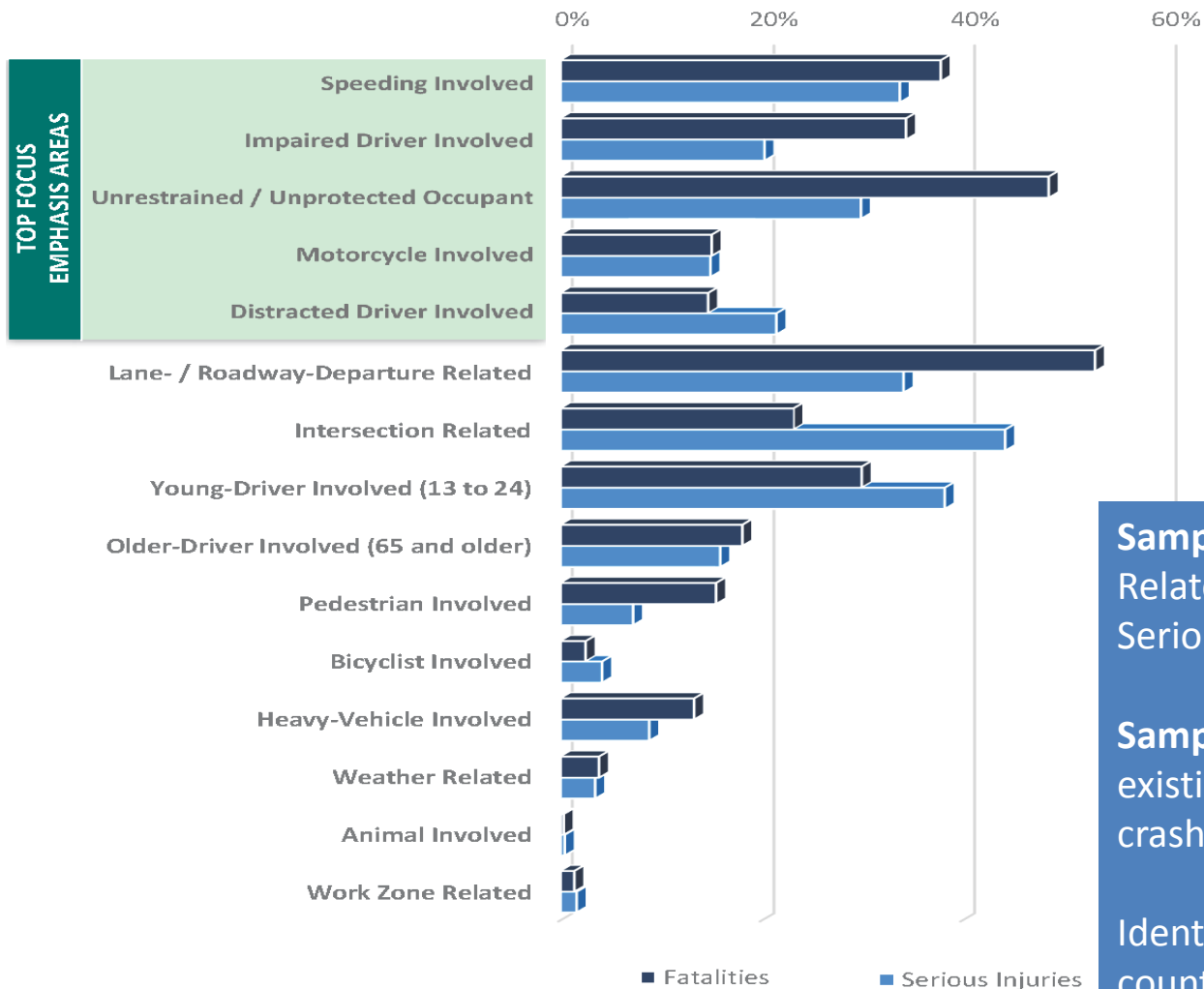
## Safety Integration

Goals and Objectives  
*Desired transportation  
outcomes and methods  
for achievement*

Utilize public and stakeholder input, the results of data analysis, and information in other plans to develop safety goals and objectives in planning documents

# Use Data

PERCENT OF TOTAL FATALITIES AND SERIOUS INJURIES BY CRASH CHARACTERISTIC



**Sample Goal:** Reduce Speed-Related Fatalities and Serious Injuries

**Sample Objectives:** Review existing speed limits on high crash location segments

Identify speed-related countermeasures to address high crash locations

# Review Other Planning Documents

- SHSP
- Highway Safety Plan (HSP)
- Local Comprehensive Plan
- Tribal Plans
- State/MPO LRTPs
- State/MPO Modal Plans
  - Bicycle/Pedestrian
  - Freight
  - Transit



# Performance Measures and Targets

## Planning Task



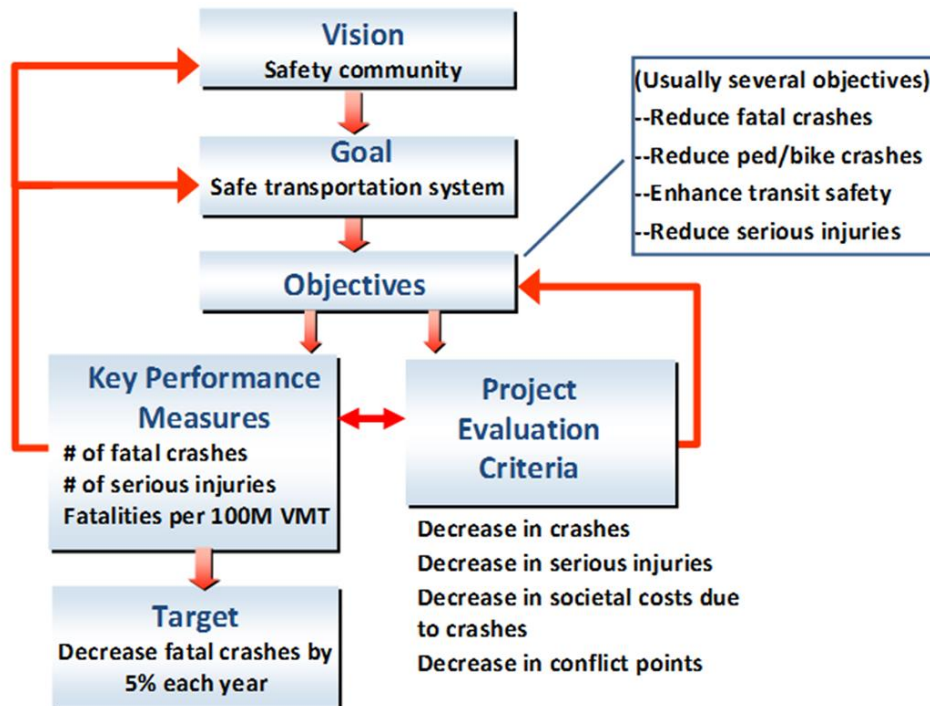
## Safety Integration

Performance Measures  
and Targets

*Tool to track and  
evaluate progress  
towards transportation  
goals*

- Identify performance measures and targets to track and evaluate progress toward the safety goals, objectives, programs, and/or projects.

# Match Performance Measures to Goals and Objectives



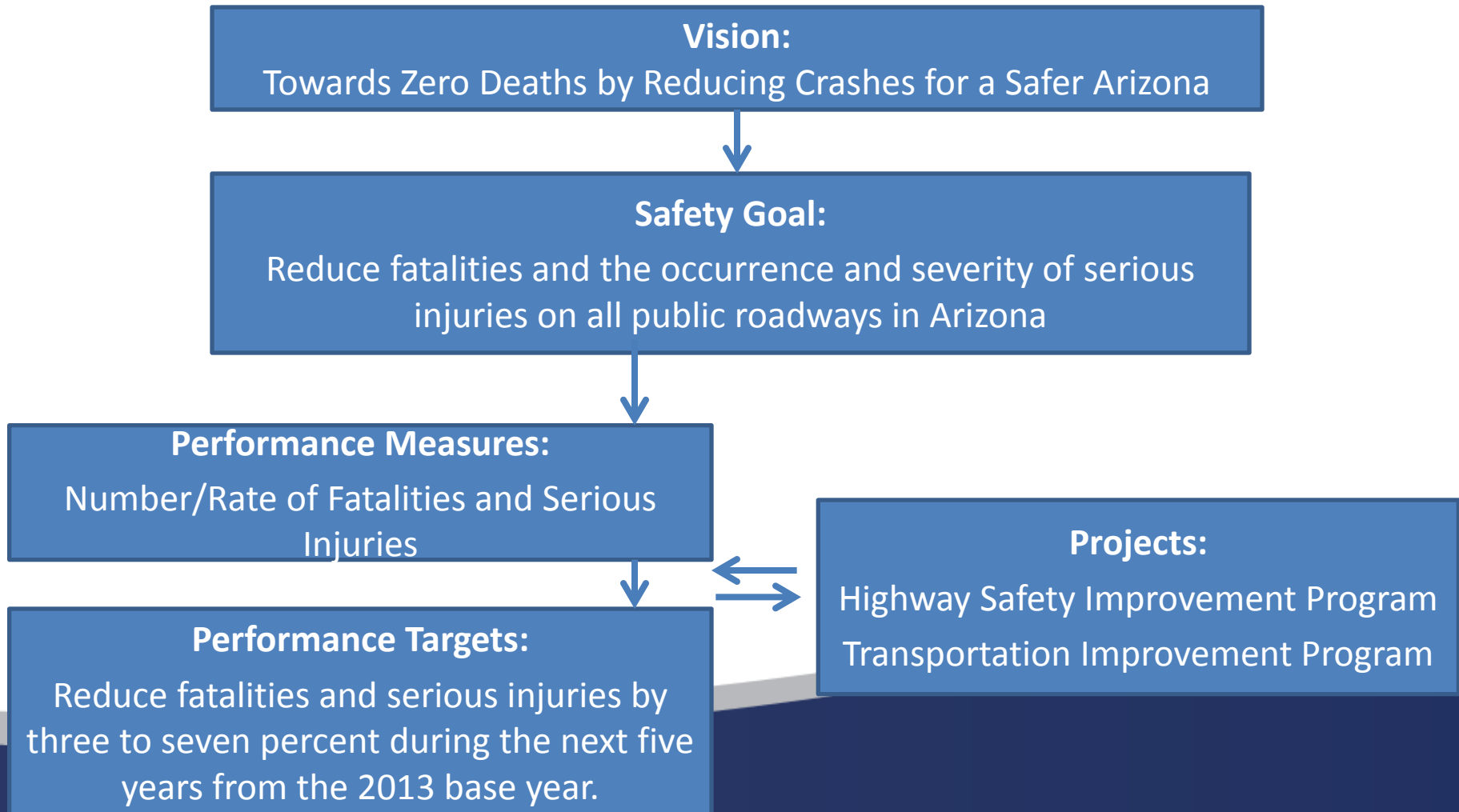
**Goal:** Safe Transportation System

**Performance Measure:** Number of fatalities and serious injuries

**Goal:** Improve Bicycle Safety

**Performance Measure:** Number of bicycle fatalities

# AZ SHSP Vision, Goal, Performance Measures and Targets



# Project Prioritization and Programming

## Planning Task



## Safety Integration

Project Prioritization and Programming

*Processes used to select and prioritize transportation projects*

- Incorporate safety into transportation project decisions
- Prioritize safety specific projects

# MPO/COG Safety into all TIP Projects

Qualitative Evaluation Criteria (Safety considerations refer back to the goals and objectives set in the regional planning process)

8	Project Improves Safety	Notes
	<i>Safety is improved with roadway widening</i>	
5	Involves a roadway or intersection that is accident prone	
4	Involves improvements for railroad grade separation or improvement to RR at grade facility	[Accounts for 8% of total points available.]
3	Improves pedestrian or bicycle safety and interaction with vehicles	
2	Improves safety on a high speed roadway greater than 50 MPH (85 percentile) or weave operations (auxiliary lanes)	
1	Improves safety on a moderate speed roadway greater than 35 MPH (85 percentile) or provides synchronization to reduce stop and go	

# Safety Specific Projects

- Coordinate with ADOT to understand HSIP project prioritization
- Identify low-cost countermeasures
- Conduct Road Safety Assessments



# Monitoring and Evaluation

## Planning Task



## Safety Integration

Monitoring and  
Evaluation

*Process to determine  
effectiveness of  
transportation  
programs/projects*

- Routinely monitor and track safety performance to evaluate progress towards meeting performance measures and targets.

# AZ SHSP Progress Tool

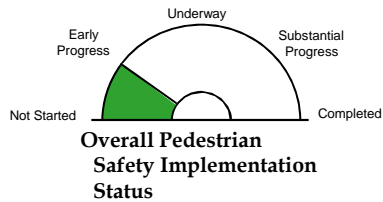
**EMPHASIS AREA: Nonmotorized Users | Pedestrians**  
**EA Team Leaders: Kerry Wilcoxon and Matt Zoll**

**Performance Measures: Fatalities and Serious**

Injuries	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Actual Fatalities	125	123	155	154	131	160					
Five-Year Avg Fatalities					138	145					
Draft Target Five-Year Avg Fatalities					145	143	141	139	137	134	
Actual Serious Injuries	418	360	347	348	372	321					
Five-Year Avg Serious Injuries					369	350					
Draft Target Five-Year Avg Serious Injuries					350	340	330	320	310	301	

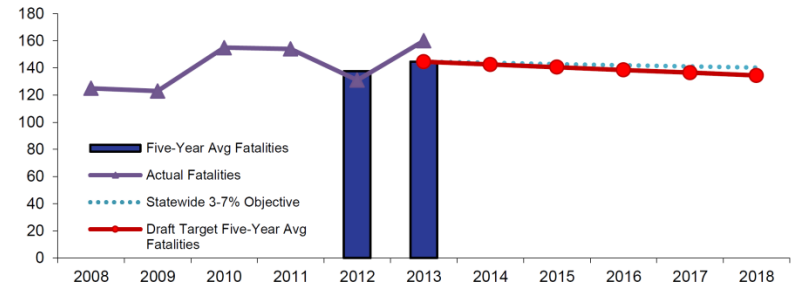
**Action Implementation**

**Summary:**

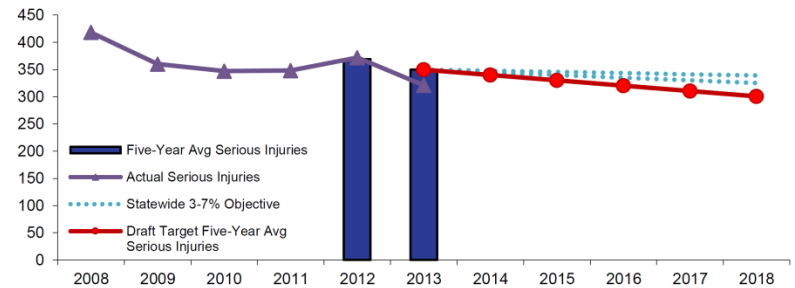


	Total	Strat A	Strat B	Strat C	Strat D	Strat E	Strat F
Not Started	12	1	0	3	4	3	1
Early Progress	3	2	1	0	0	0	0
Underway	1	1	0	0	0	0	0
Substantial Progress	2	1	1	0	0	0	0
Completed	1	1	0	0	0	0	0
<b>Total # of Actions</b>	<b>19</b>	<b>6</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>1</b>

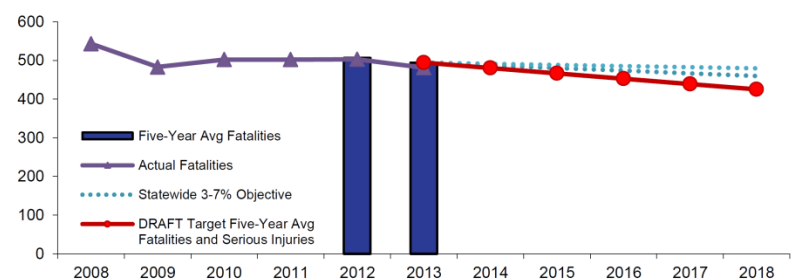
Number of Pedestrian Involved Fatalities



Number of Pedestrian Involved Serious Injuries



Number of Pedestrian Involved Fatalities and Serious Injuries



# Developing a Safety Plan





# Discussion

# Join the Journey!!

## Benefits

- Safer Roads and Streets
- Increased Public Support
- Access to Data and Expertise
- Potential Funding Eligibility
- Capacity Building
- Networking
- And, More!

# How to Join

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State Traffic Safety Engineer

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Complete a commitment  
card

[AZSHSP@azdot.gov](mailto:AZSHSP@azdot.gov)

[www.azdot.gov/shsp](http://www.azdot.gov/shsp)

*Thank You for Participating Today:  
Enjoy the Conference and Have a  
Safe Trip Home!*