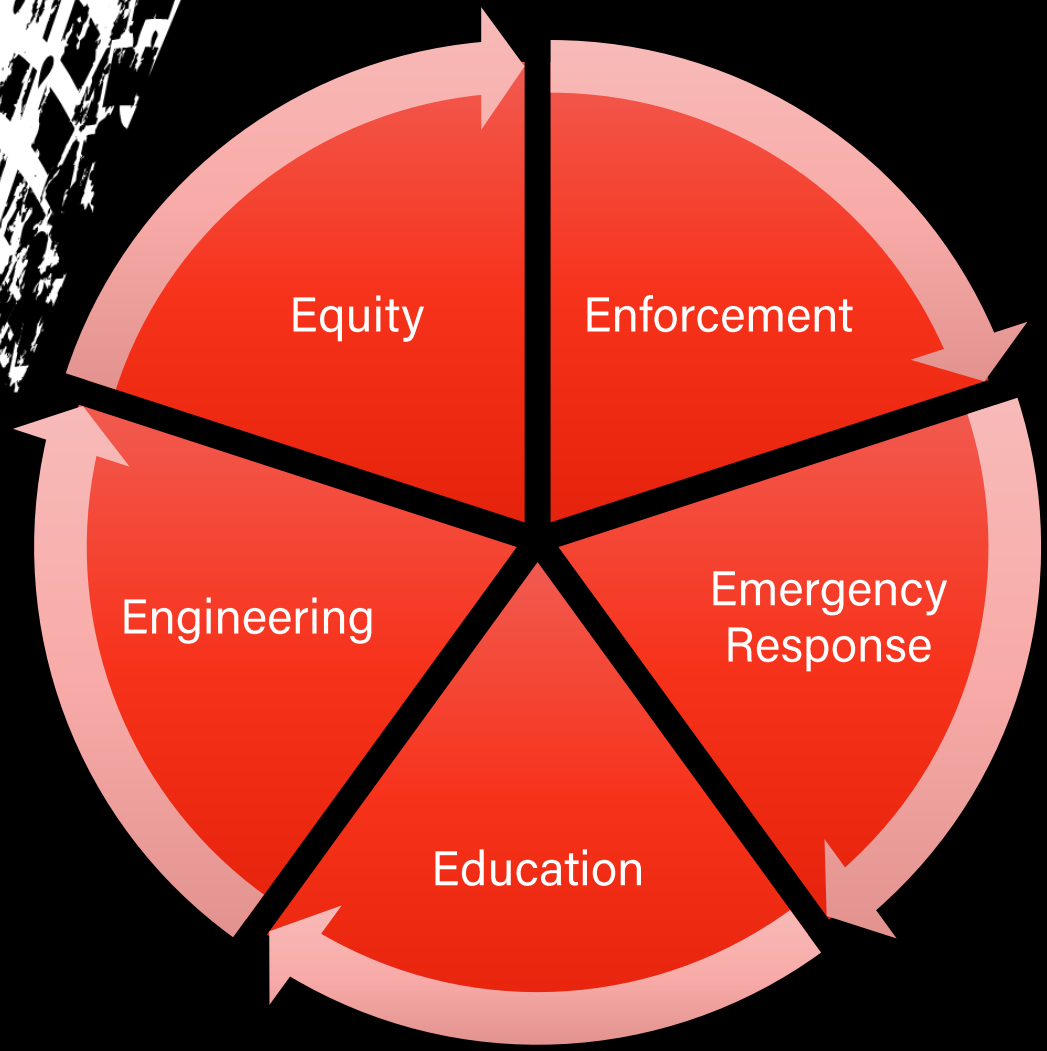
DRIVE AWARE north texas

NCTCOG Roadway Safety Plan

Transportation Public Meeting
Public Input Period: September 12, 2022 – October 11, 2022
Kevin Kroll, Senior Transportation Planner
Roadway Safety Program Area

What is a Roadway Safety Plan?

- A Roadway Safety Plan provides a framework for identifying, analyzing, and prioritizing roadway safety improvements on local roads.
- It serves as a guide to identify crash factors which contribute to a high number of fatal and serious injuries
- Appropriate safety projects and countermeasures are then selected
- The overall goal is to eliminate fatal crashes by 2050.



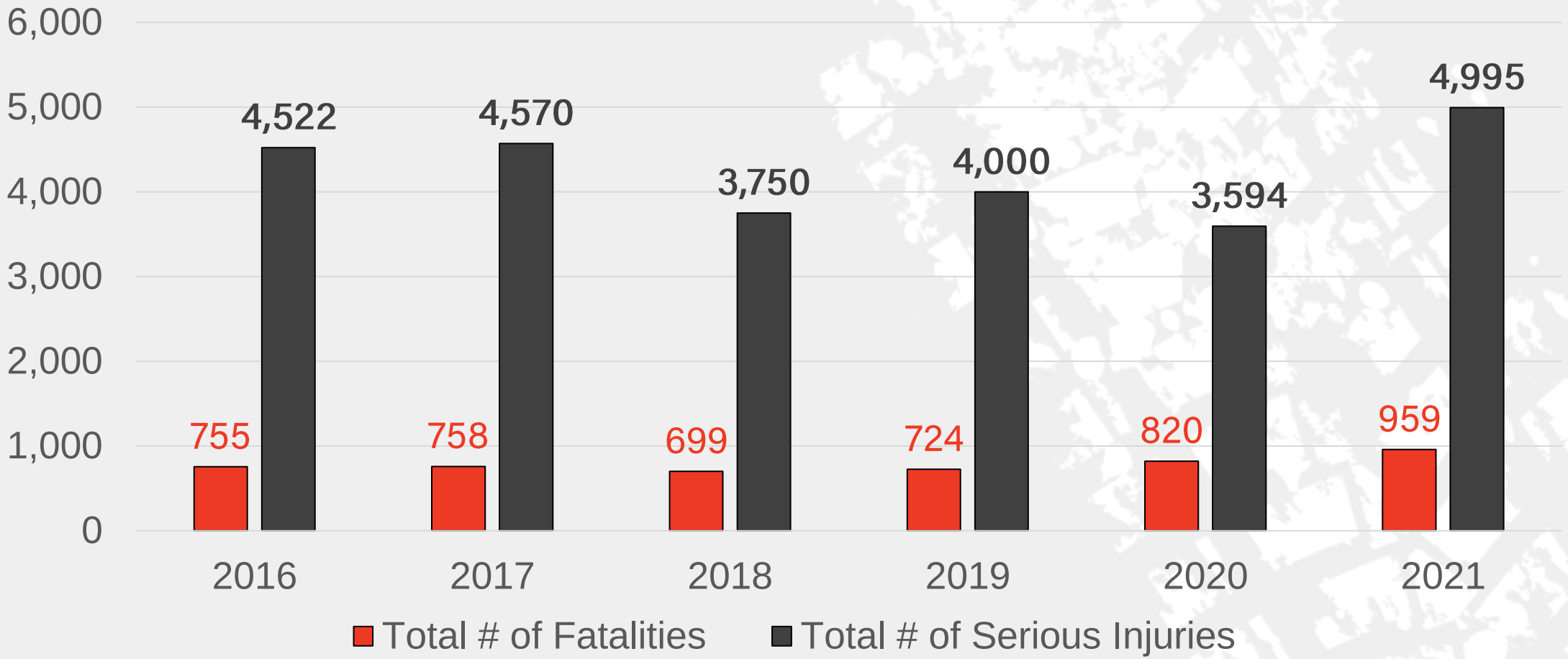
Need for a Roadway Safety Plan

- Metropolitan Planning Organizations (MPOs) like the North Central Texas Council of Governments (NCTCOG) are required to monitor and set targets for a specific set of performance measures
- Initial safety performance targets for 2018 were approved by Regional Transportation Council (RTC) in December 2017
- RTC Established Regional Safety Position:

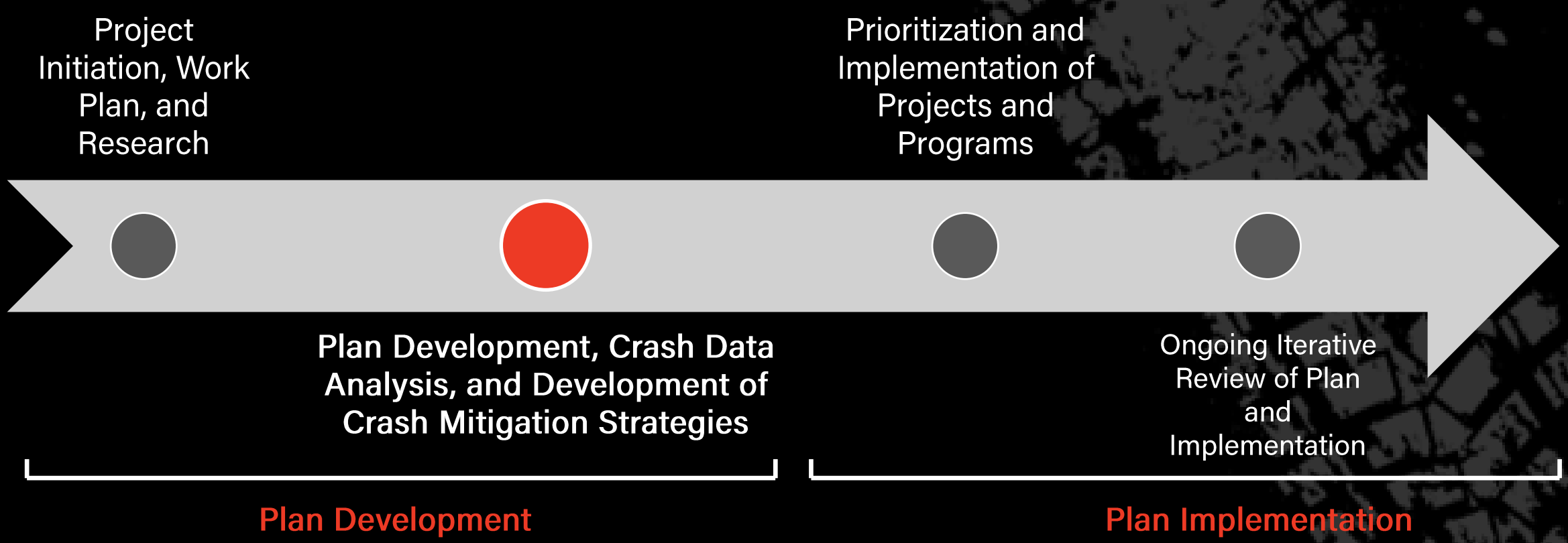
  "*Even one death on the transportation system is unacceptable. Staff will work with our partners to develop projects, programs, and policies that assist in eliminating serious injuries and fatalities across all modes of travel.*"
- Texas Transportation Commission adoption of Minute Order 115481

  "The Texas Transportation Commission directs the Texas Department of Transportation to work toward the goal of reducing the number of deaths on Texas roadways by half by the year 2035 and to zero by the year 2050. The commission acknowledges a majority of motor vehicle crashes can be prevented, thereby reducing fatalities."

Fatal and Serious Injuries Within the 12-County Area (2016-2021)



NCTCOG Roadway Safety Plan Development Process



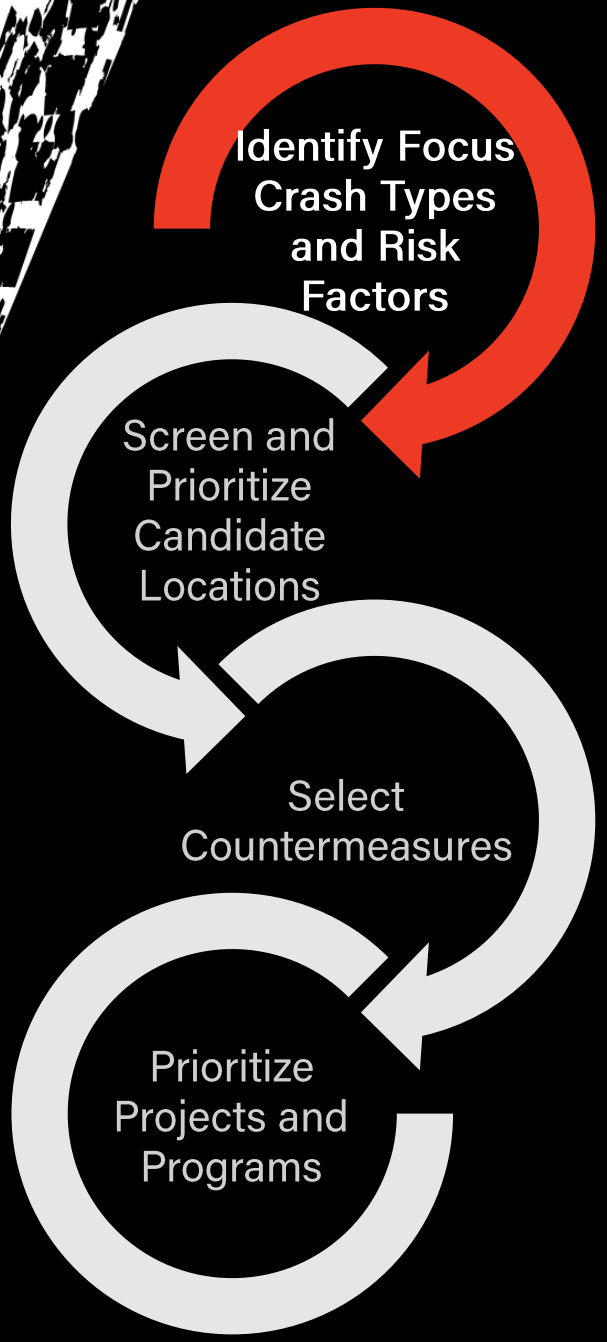
Systemic Safety Approach

The Systemic Safety Analysis approach evaluates crash risk across an entire roadway system instead of managing risk at specific locations

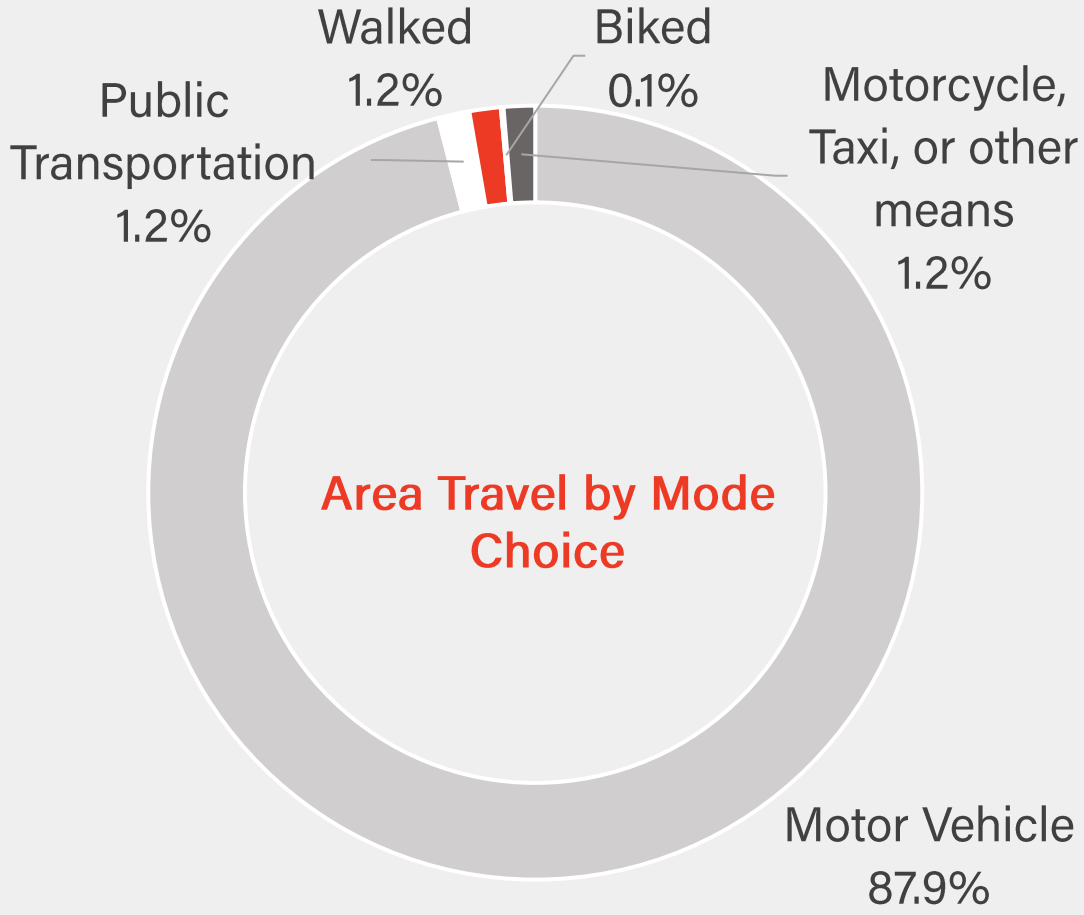
This method helps identify what types of roadways and roadway characteristics produce fatal and serious injuries in the future.

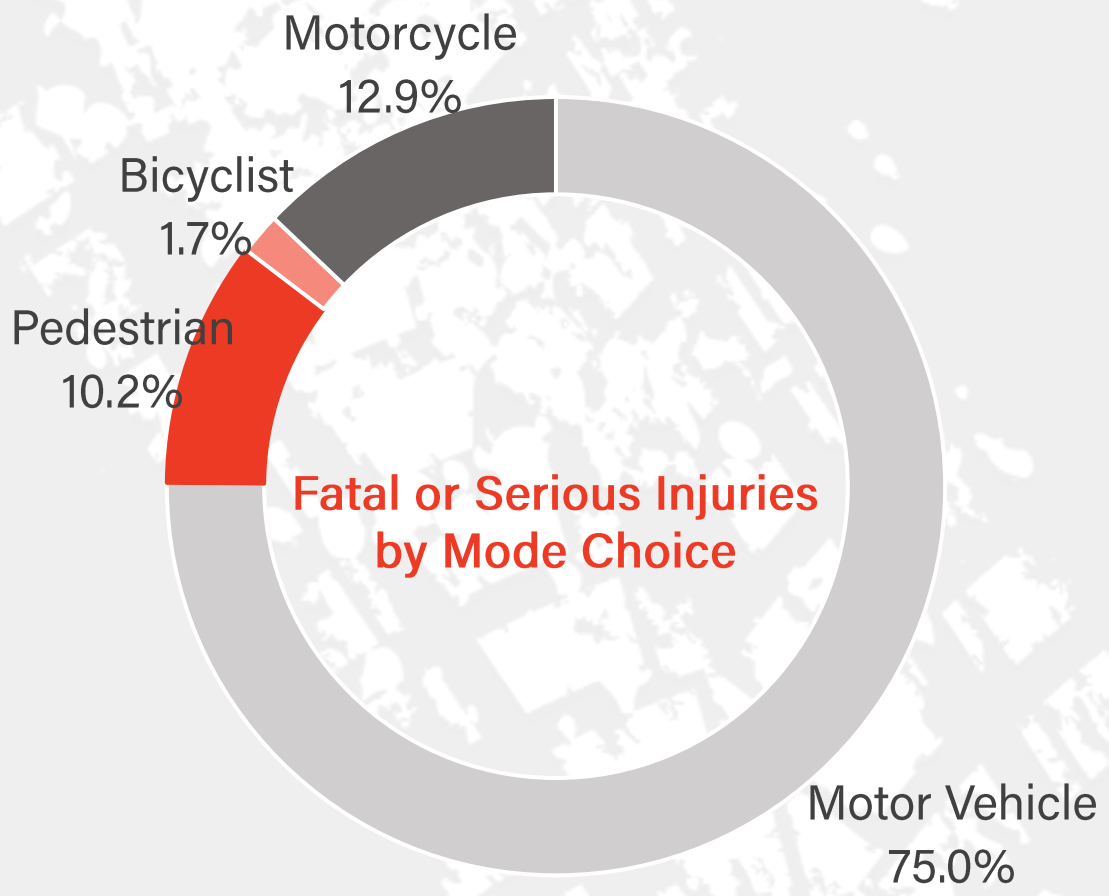
Guiding Principles:

- Deaths and serious injuries are unacceptable
- Humans make mistakes
- Humans are vulnerable
- Responsibility is shared
- Safety is proactive
- Redundancy is crucial



Region-wide Analysis
Percentage Fatal and Serious Injuries by Travel Mode (2016-2020)





Dallas/Ft Worth Commuting Characteristics from ACS 2019
Crash Data for the 12-County Area, all roadways

Regional Safety Plan Emphasis Areas Based on Overrepresentation Analysis

Regional Emphasis Areas

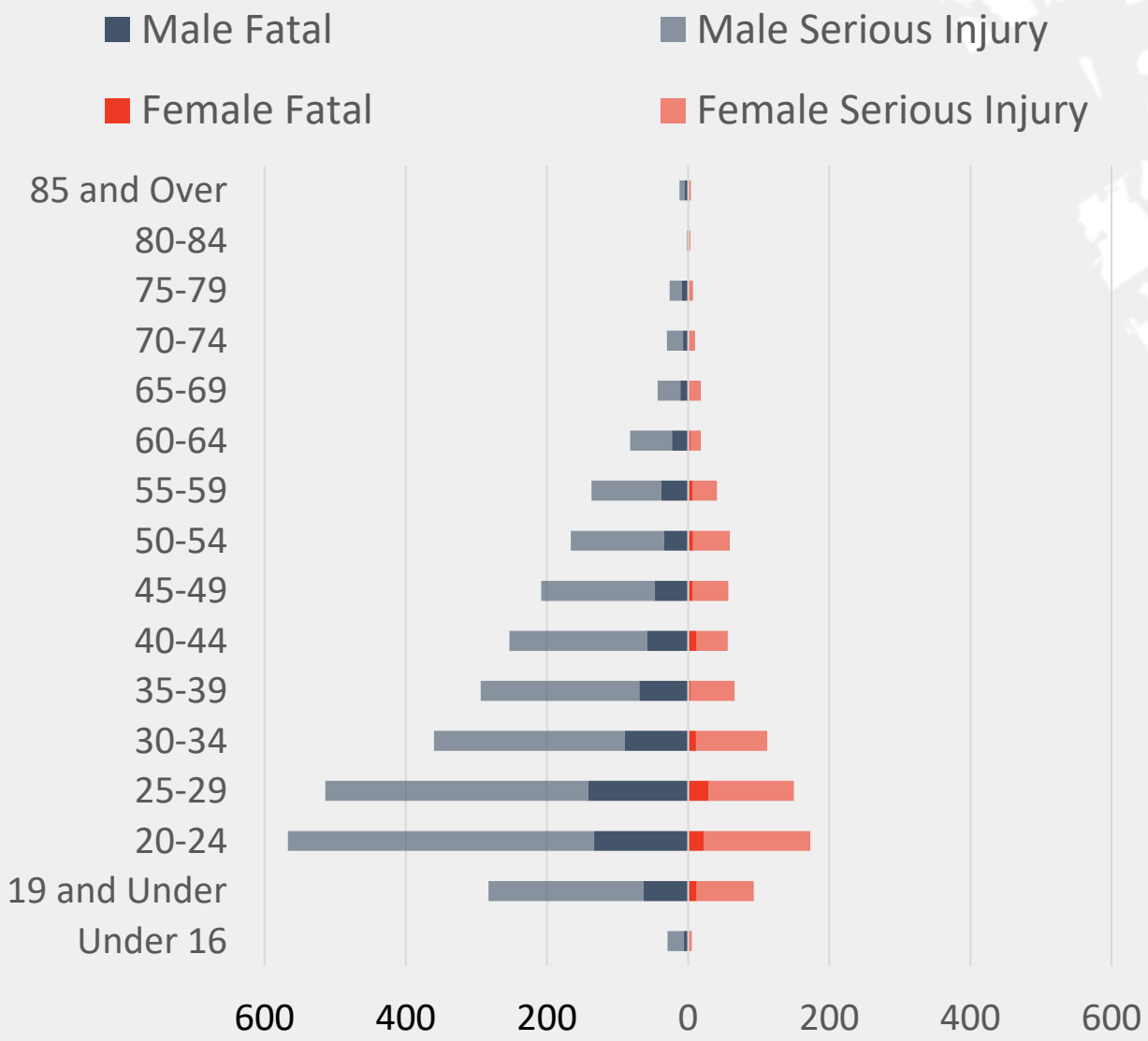
- Speeding
- Distracted driving
- Impaired driving
- Intersection safety
- Bicyclist and pedestrian safety
- Roadway and lane departures
- Occupant protection
- Motorcycles

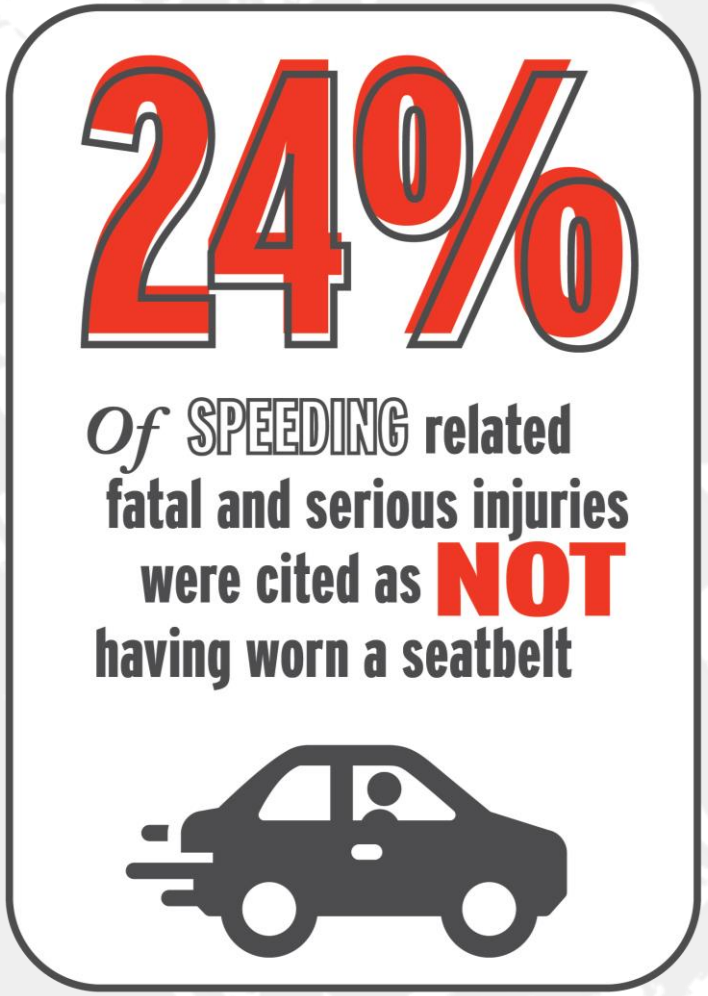
Additional "Areas of Concern"

- Wrong way driving
- Crashes occurring at night*
- Younger drivers*
- Older road users (65+)*

*Represented within multiple emphasis areas

Example: Speeding Related Fatal and Serious Injuries



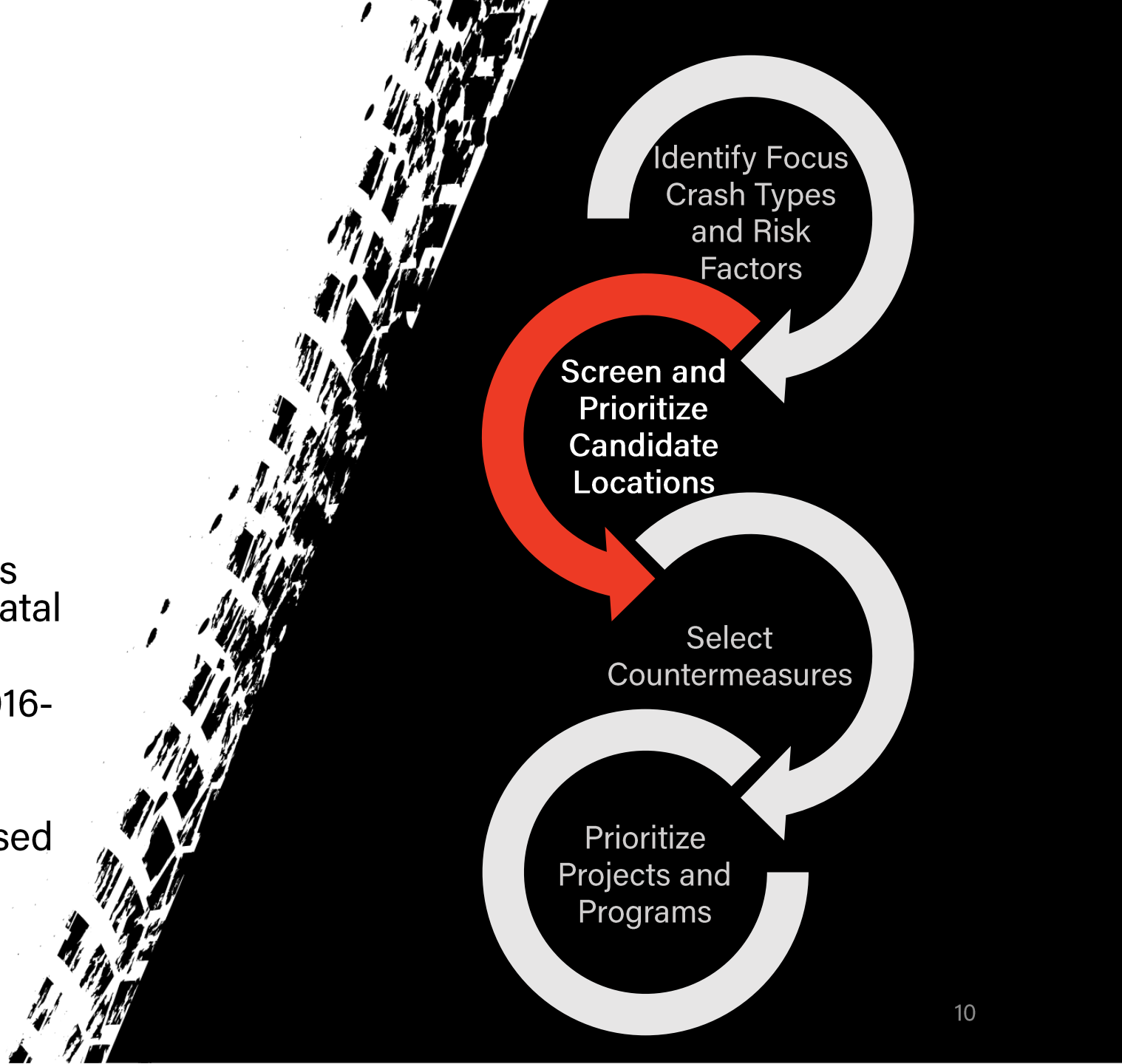


High Injury Network

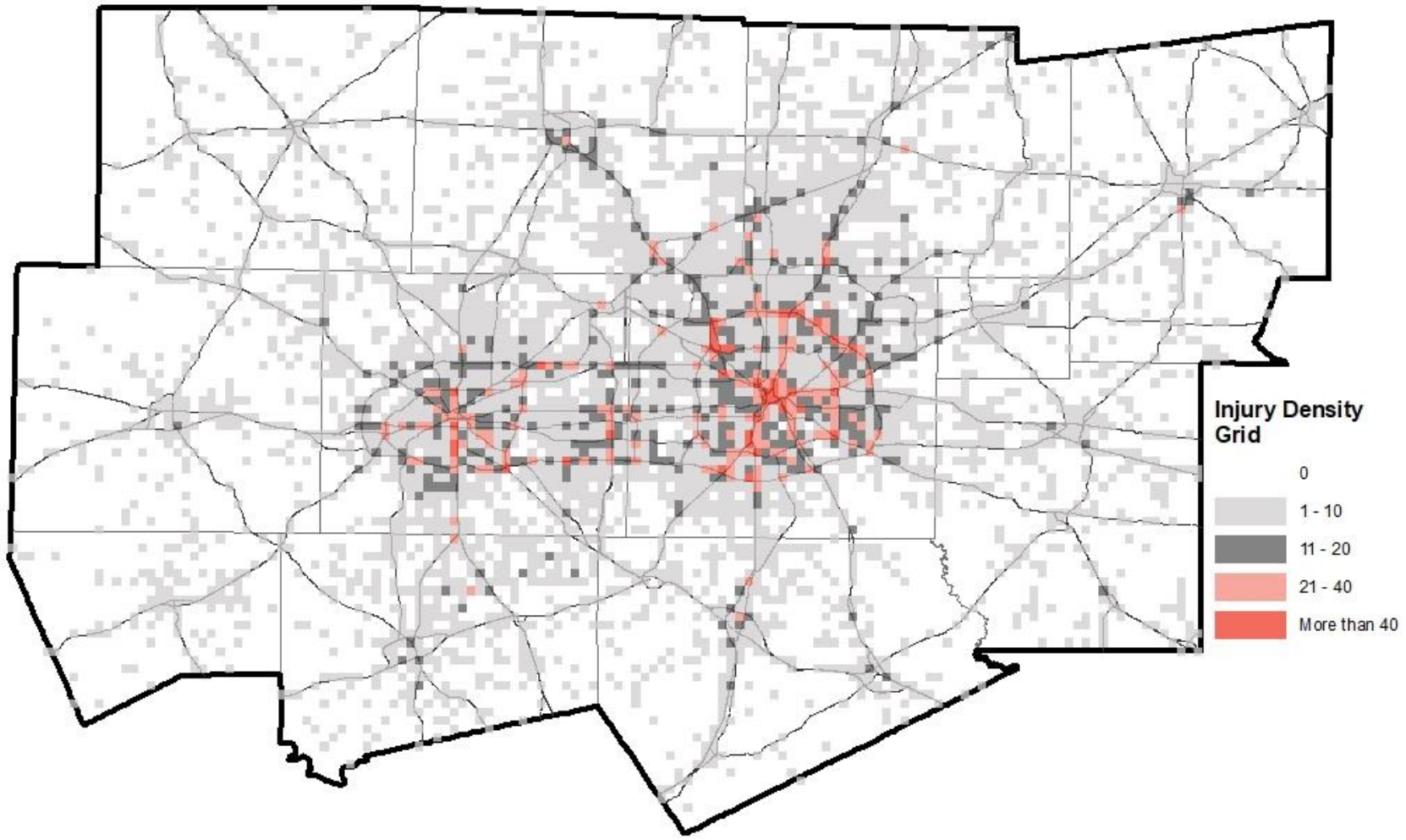
The Systemic Safety Analysis approach evaluates risk across an entire roadway system versus managing risk at specific locations.

However, it is also helpful to identify roadways that have a history of a high number of fatal and serious injuries.

- Network of designated road segments where the highest concentrations of fatal and serious injury crashes occur
- Five-year range of crash data from 2016-2020
- Can be used to help prioritize safety improvements in the region and be used in tandem with the findings of our systemic analysis



High Injury Network:
Fatal and Serious Injuries by Location (2016-2020)



Each Square represents a 1-sq mile area.

Countermeasure Selection

The third step in the Systemic Safety Analysis approach identifies potential countermeasures for each of the 8 emphasis areas.

What are safety countermeasures?

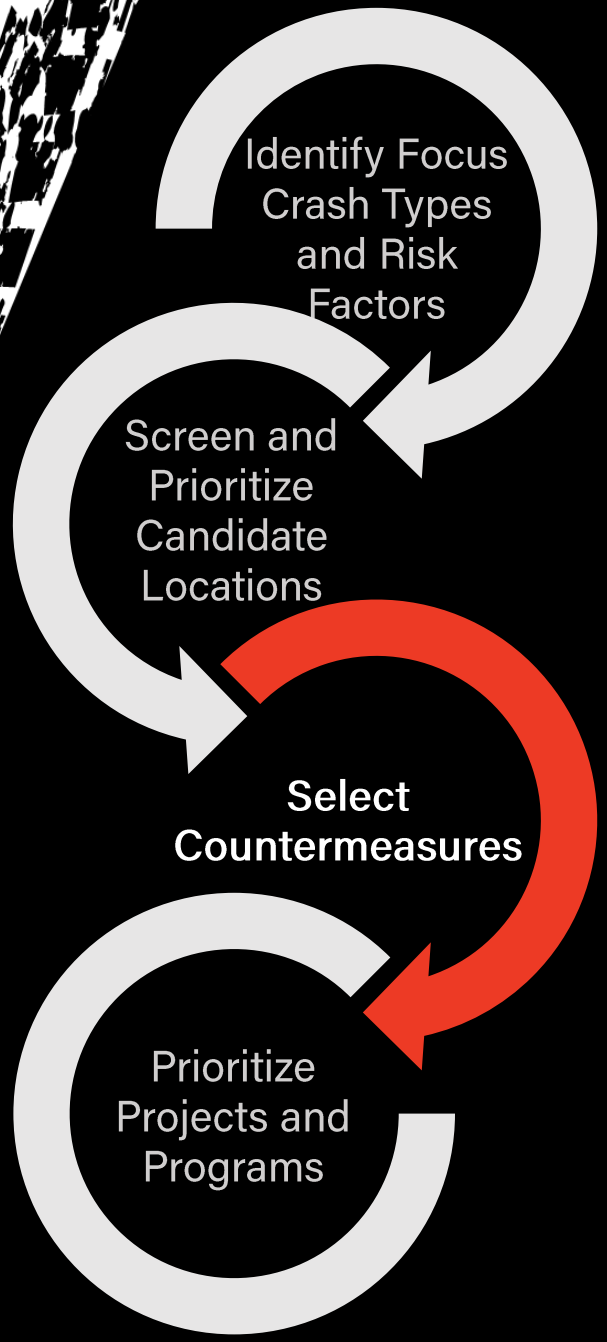
Safety countermeasures can be any action undertaken to decrease the risk of a crash occurring or to reduce the severity of a crash.

Countermeasures may involve engineering upgrades, behavioral education campaigns, traffic enforcement programs, or emergency response.

Countermeasure selection should be data driven and risk-based.

Things to consider:

1. Cost
2. Location(s)
3. Proven effectiveness
4. Time to implement



Example Countermeasures: Speeding

Countermeasure	Category	Estimated Reduction in Fatal and Serious Injuries	Cost to Benefit Ratio
Improve the effectiveness of educational techniques, tools, and strategies for speeding - younger male drivers	Education	9%	9 to 1
Increase and sustain high-visibility speeding enforcement	Enforcement		
Appropriate Speed Limits for All Road Users	Engineering	26%	
Variable Speed Limits	Engineering	51%	9 to 1 - 40 to 1
Pull Out / Enforcement Zones	Engineering		
Speed Safety Cameras	Engineering, Enforcement	20-47%	
Build or redesign roadways with traffic calming countermeasures and "self-enforcing" speed	Engineering		

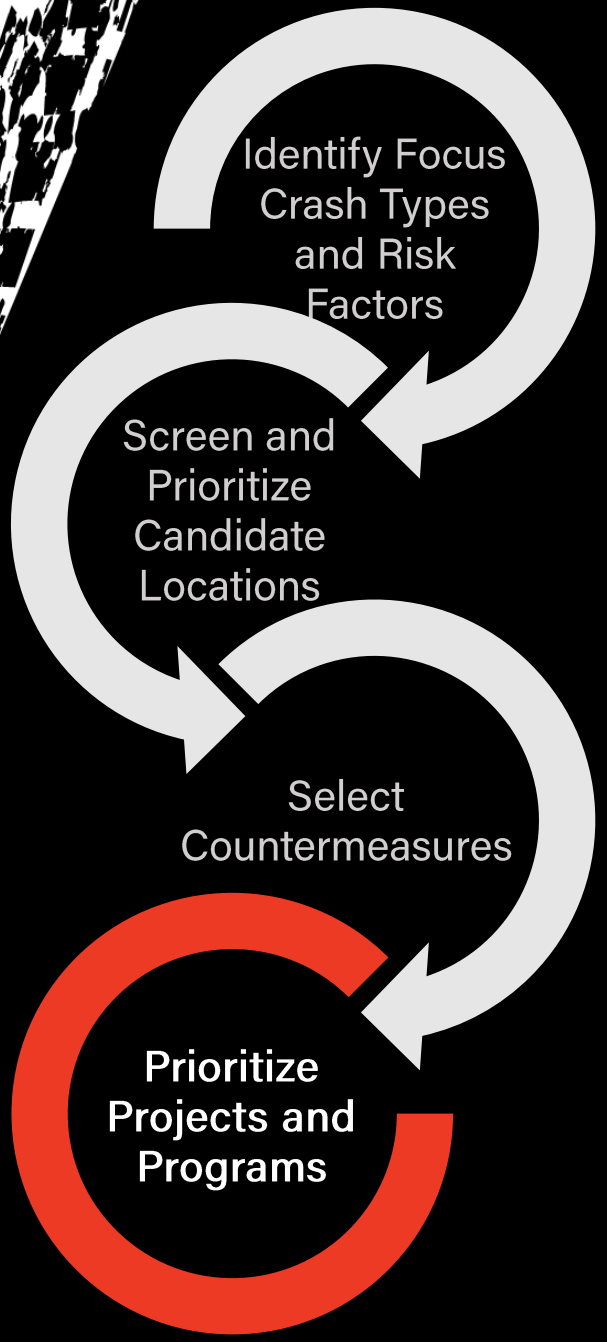
The Roadway Safety Plan will include countermeasures for all regional emphasis areas

Next Step - Prioritize Safety Projects, Programs, and Policies

Develop a list of high-priority safety improvement projects scheduled for implementation. This considers both high-crash locations and system-wide analysis. Note that this step will occur after the Roadway Safety Plan itself is completed.

Main Tasks within the final step of the Systemic Safety Analysis

1. Create decision process for selecting countermeasures
2. Develop safety projects, programs, and policies
3. Prioritize project implementation



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