



SAFE SYSTEM **APPROACH**

Zero is our goal. A Safe System is how we get there.

Palm Beach TPA Vision Zero Workshop
Chimai N. Ngo, FHWA Office of Safety – May 2022



U.S. Department of Transportation
Federal Highway Administration



ZERO IS OUR GOAL
A SAFE SYSTEM IS HOW WE GET THERE

CONTENTS

- Overview of Safe System Approach
- Implementation Opportunities
- Resources



Source: FHWA

HOW DOES THE U.S. *REACH ZERO DEATHS*?



SAFE SYSTEM

APPROACH

**Zero is our goal. A Safe System
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Source: FHWA

A NEW DIRECTION

- **Human Centered**
- **Eliminates Fatal And Serious Injuries by:**

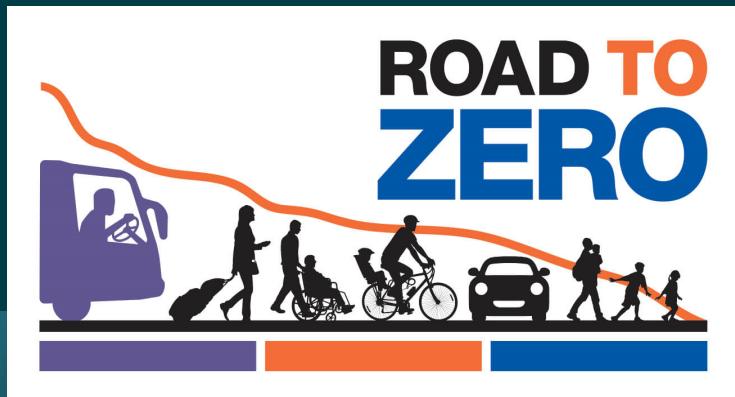


**Accommodating
human mistakes**



**Keeping impacts on the human
body at tolerable levels**

SAFE SYSTEM IN THE UNITED STATES



Source: National Safety Council

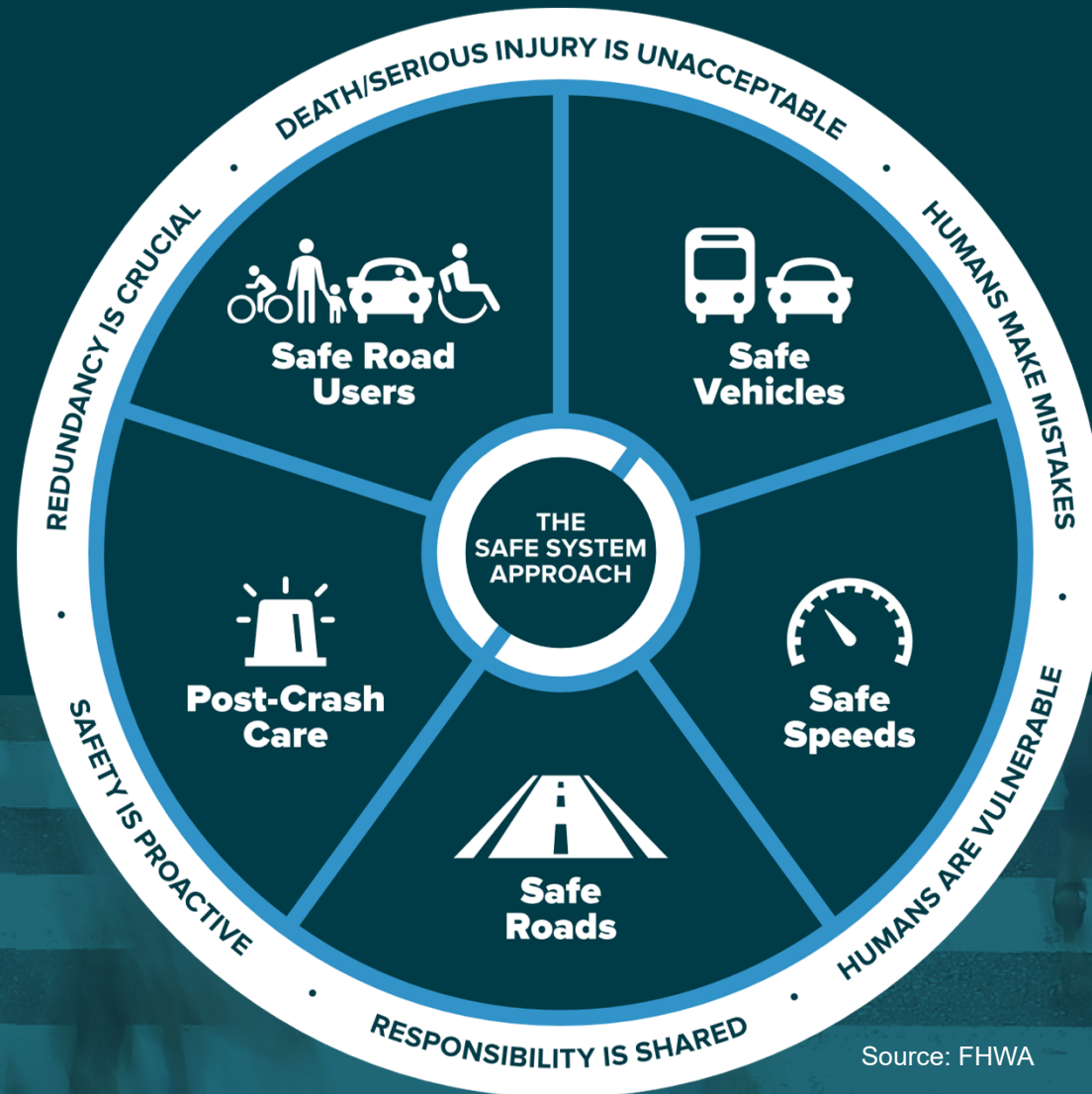


Source: AASHTO



Source: Vision Zero Network

THE SAFE SYSTEM APPROACH



Source: FHWA

THE 6 SAFE SYSTEM PRINCIPLES



**Death/serious injury
is unacceptable**



**Humans make
mistakes**



**Humans are
vulnerable**



**Responsibility is
shared**



Safety is proactive



**Redundancy
is crucial**

THE 5 SAFE SYSTEM ELEMENTS



Safe road users



Safe vehicles



Safe speeds



Safe roads



Post-crash care

OTHER CONSIDERATIONS IN THE SAFE SYSTEM APPROACH



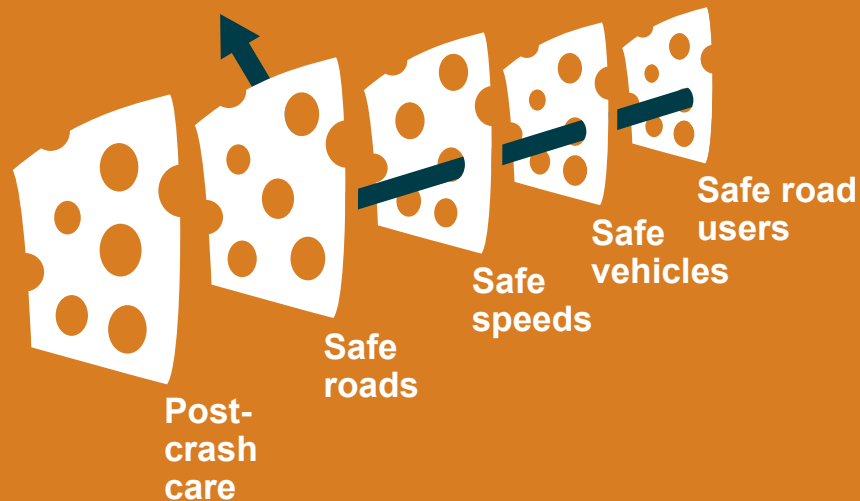
Source: Source: FHWA, modification with permission of
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IT'S NO ~~ACCIDENT~~
IT'S A **CRASH**

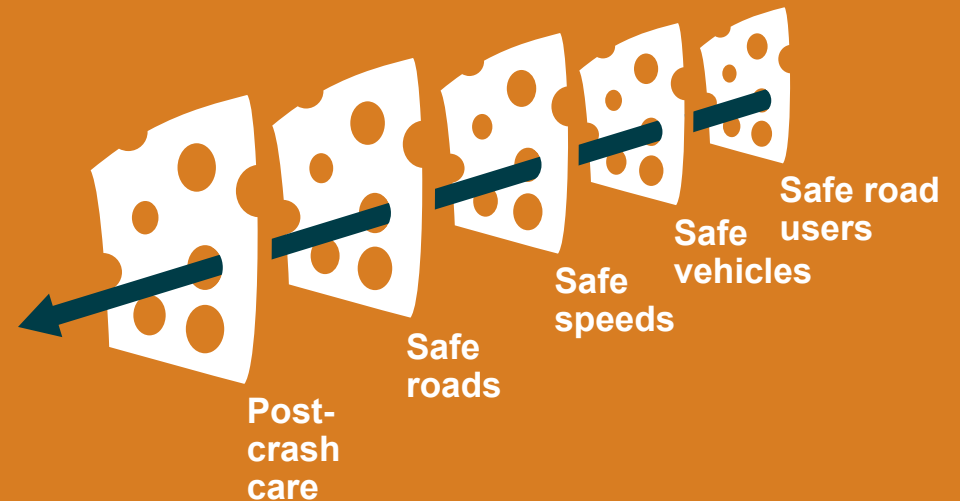
Source: FHWA

THE 5 SAFE SYSTEM ELEMENTS CREATE REDUNDANCY

The “Swiss Cheese Model” of redundancy creates layers of protection



Death and serious injuries only happen when all layers fail



WHERE ARE YOU ON THE SAFE SYSTEM JOURNEY?

Traditional approach

Prevent crashes →

Improve human behavior →

Control speeding →

Individuals are responsible →

React based on crash history →

Safe System approach

Prevent death and serious injuries

Design for human mistakes/limitations

Reduce system kinetic energy

Share responsibility

Proactively identify and address risks

IMPLEMENTATION OPPORTUNITIES

- Policies
 - Land use, housing, equity, safety (e.g., speed limits), etc.
- Planning
 - Transportation plans and programs, Vision Zero action plans, local road safety plans, etc.
- Design
 - Context-sensitive solutions
 - Geometric design – separation of modes in time and space, self-enforcing, etc.

NATIONAL ROADWAY SAFETY STRATEGY



U.S. Department
of Transportation

National Roadway Safety Strategy

United States Department of Transportation | January 2022

Source: US DOT

“The Department will work to ensure the goal of reaching **zero** roadway fatalities and the principles of an integrated **Safe System Approach** are part of the implementation of all U.S. DOT program activities that affect the Nation’s roadways.”

National Roadway Safety Strategy

SAFE STREETS AND ROADS FOR ALL (SS4A)

Funding: \$5 billion available for competitive grants over 5 years

Focus: preventing roadway deaths and serious injuries

Eligible Entities: MPOs, counties, cities, towns, and Tribes

Grant types:

- Planning (comprehensive safety action plans); and
- Implementation grants

Notice of Funding Opportunity: coming soon

For more information: <https://www.transportation.gov/SS4A>



FHWA RESOURCES



Safe System Materials

Find more resources at:

<https://safety.fhwa.dot.gov/zerodeaths/resources.cfm>



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