DISTRICT FIVE OFFICE OF SAFETY

FDOT's Re-Focus on Safety

Safety begins with ME

Safety begins with YOU

Loreen Bobo, P.E.
FDOT D5 Safety Administrator
Office of Safety

Why?

ONE LIFE LOST IS ***TOO MANY***

FATALITIES

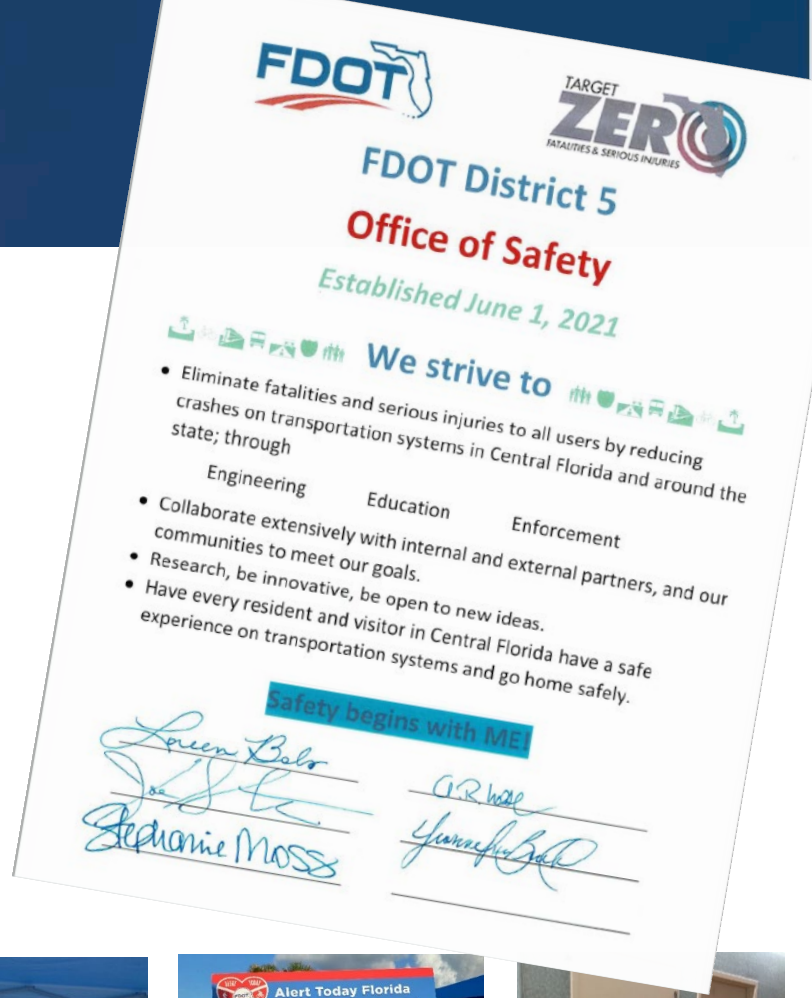
SERIOUS INJURIES

ON FLORIDA'S ROADS ***EACH DAY***

Office of Safety Team

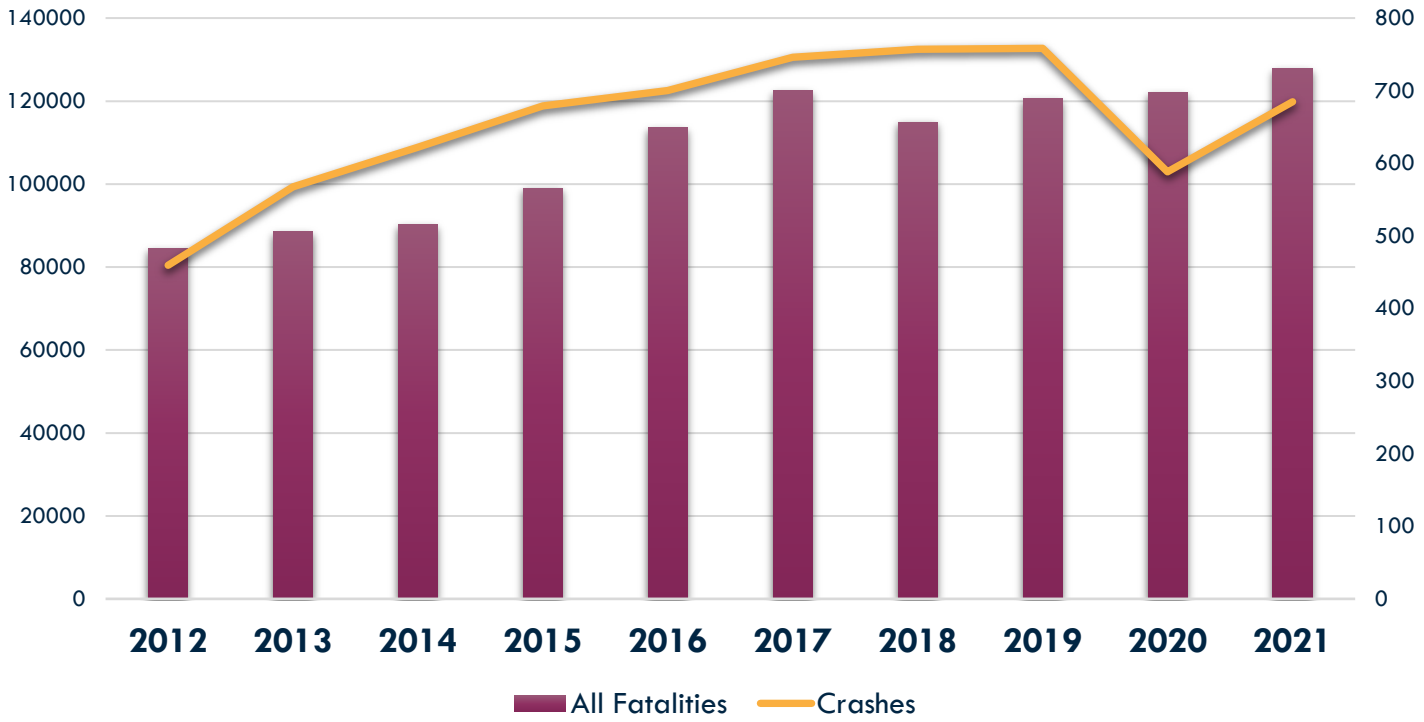
Established
June 1, 2021

- ✓ Safety Administrator reports directly to the District Secretary
- ✓ Team of seven representing:
  - Community Traffic Safety Teams
  - Bicycle and Pedestrian Coordination
  - Traffic Safety Specialists
  - Allocation of Federal Highway Safety Funds
  - Design Safety Influence
- ✓ Not exclusive to Development or Operations

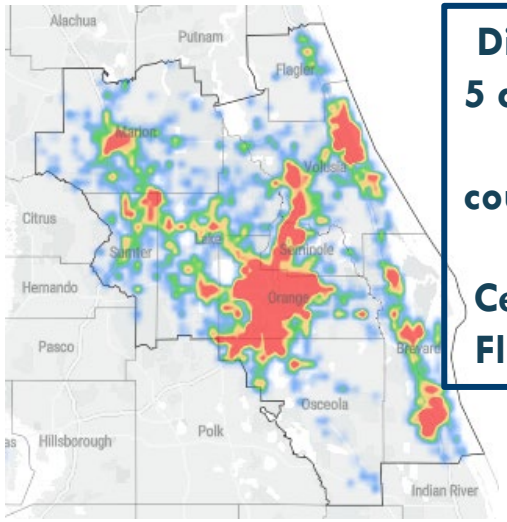


Why Does Safety Remain a Focus?

District 5 Fatalities and Crashes



This data is being certified; final numbers may vary slightly.



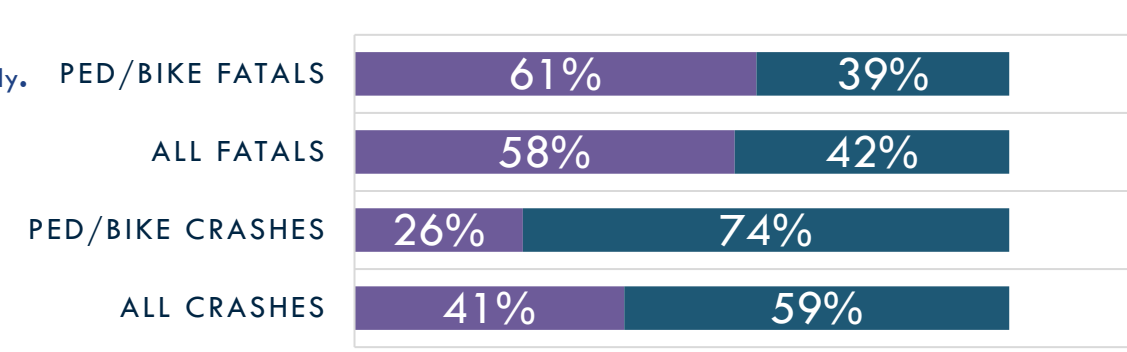
District 5 covers 9 counties in Central Florida

Biggest issues are **speeding, distracted driving,** and **occupant protection.**

764 Fatalities (3,758 statewide) in 2021,
202 (1,039 statewide) were people walking and biking.

Over 26% were our most vulnerable users

STATE VS LOCAL



What do we want to achieve?

Provide a unified effort to *greatly* reduce crashes and affects of crashes to ultimately get to zero fatalities and serious injuries

Vision Zero vs Target Zero

Vision Zero

- Vision Zero sets the goal of eliminating all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all, in a set period with clear, measurable strategies.
- Traffic deaths are PREVENTABLE.
- Acknowledge HUMAN BEHAVIOR influences crashes
- Multidisciplinary approach
- https://visionzeronetwork.org

FDOT's Target Zero

- Target Zero is a parallel effort that plans programs and projects, both infrastructure and behavioral related, to help achieve zero fatalities and serious injuries.

Adopted!

A NEW DIRECTION

The Safe System approach aims to eliminate fatal and serious injuries for all road users by:

Accommodating human mistakes

Keeping impacts on the human body at tolerable levels

SUCCESSFUL SAFE SYSTEM ADOPTERS

Sweden

Vision Zero

60-70%

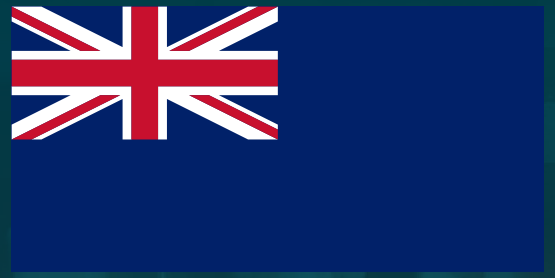
Reduction in fatalities
1994-2015

Netherlands

Sustainable Safety

50-60%

Reduction in fatalities
1994-2015



Australia

Safe System

50-60%

Reduction in fatalities
1994-2015

New Zealand

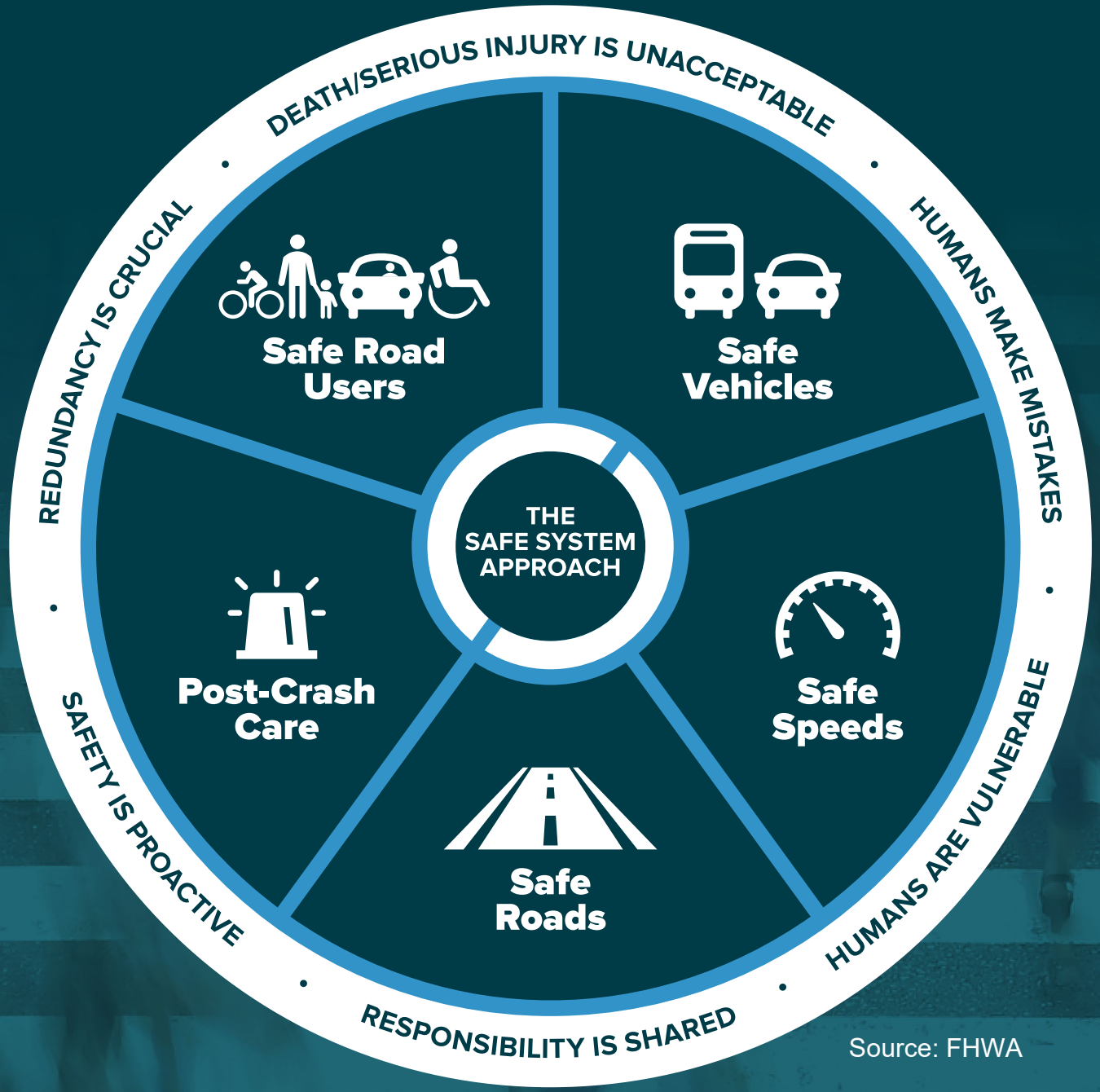
Safer Journeys

50-60%

Reduction in fatalities
1994-2015

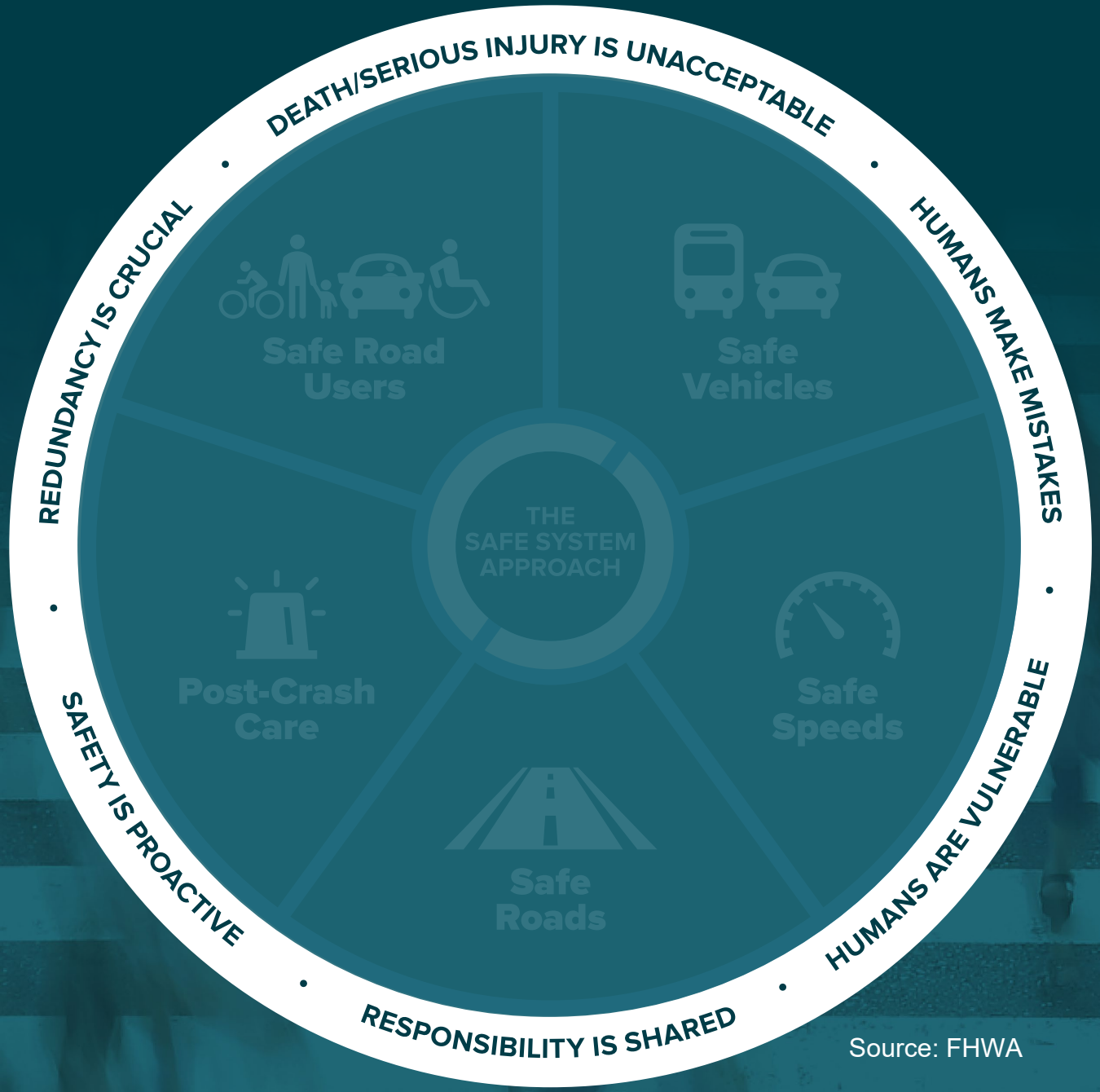
Source: World Resources Institute

THE SAFE SYSTEM APPROACH



Source: FHWA

THE 6 SAFE SYSTEM PRINCIPLES



Source: FHWA

THE 5 SAFE SYSTEM ELEMENTS

Source: FHWA

THE 6 SAFE SYSTEM PRINCIPLES

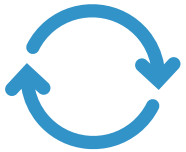
Death/serious injury is unacceptable

Humans make mistakes

Humans are vulnerable

Responsibility is shared

Safety is proactive



Redundancy is crucial

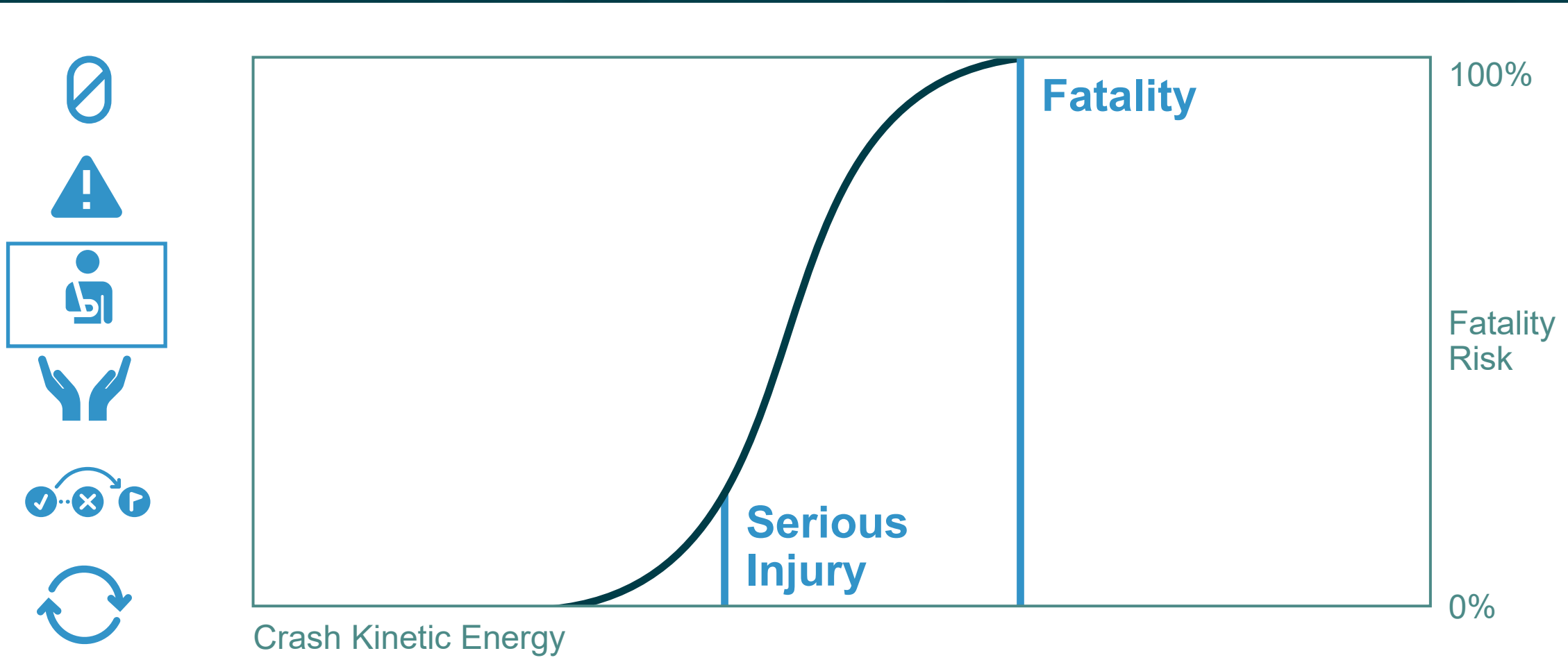
DEATH/SERIOUS INJURY IS UNACCEPTABLE

Source: Vision Zero Network

HUMANS MAKE MISTAKES

Source: Fehr & Peers

HUMANS ARE VULNERABLE



Source: FHWA

RESPONSIBILITY IS SHARED

System managers

Planners, designers, builders, operators, maintenance workers

Vehicle manufacturers

Law enforcement personnel

Post-crash personnel

System users

SAFETY IS PROACTIVE

Identify risks

Mitigate risks

REDUNDANCY IS CRUCIAL

Safe road users

Safe vehicles

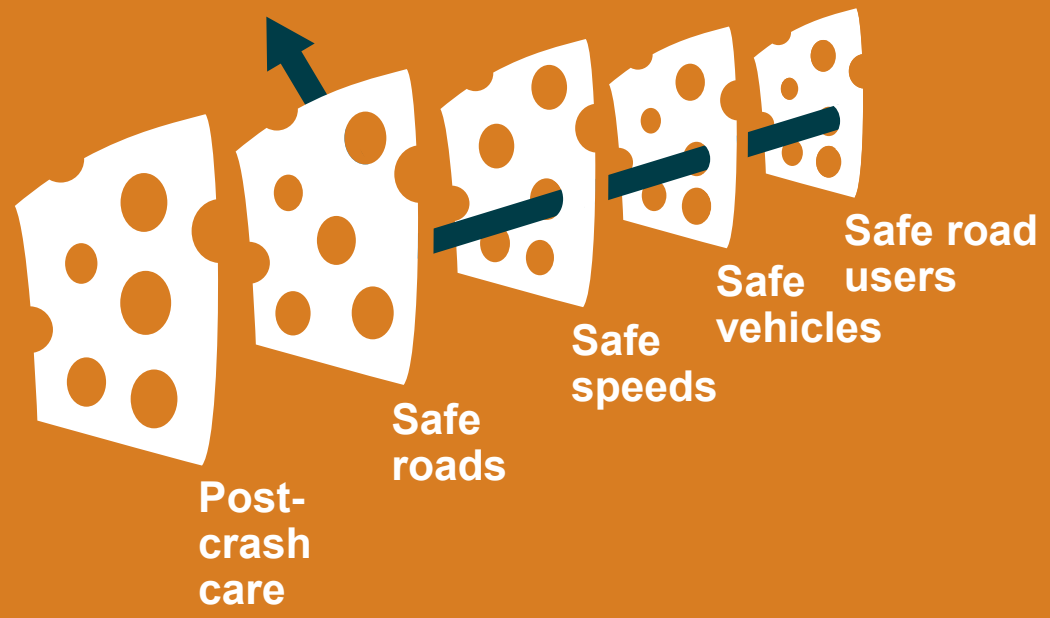
Safe speeds

Safe roads

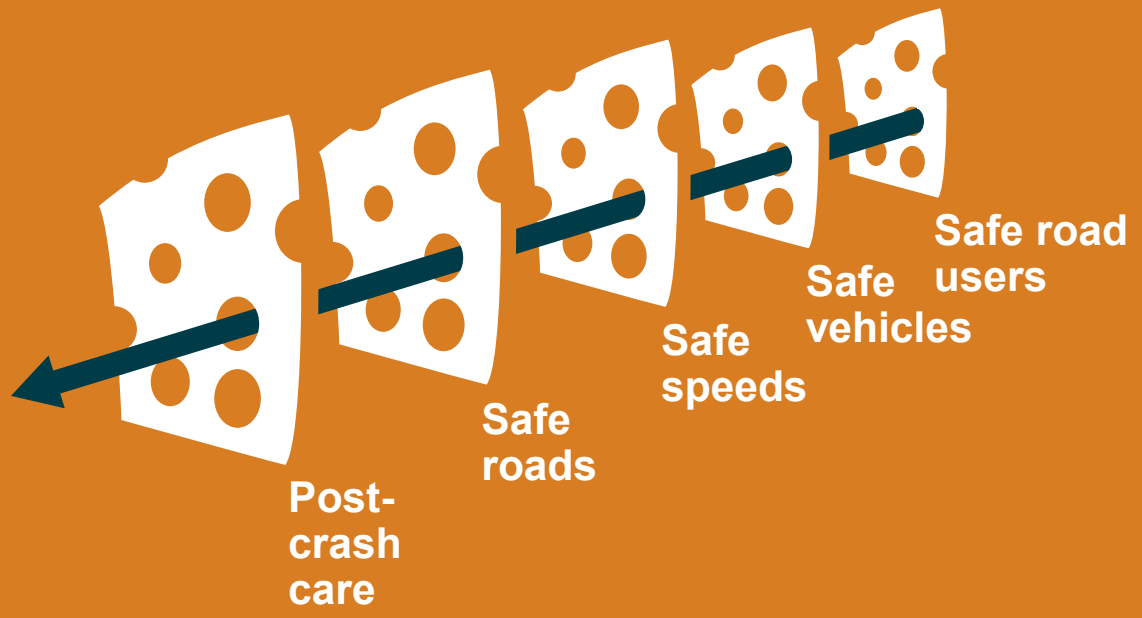
Post-crash care

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



Source: FHWA

THE 5 SAFE SYSTEM ELEMENTS

WHERE ARE YOU ON THE SAFE SYSTEM JOURNEY?

Traditional approach		Safe System approach
Prevent crashes	→	Prevent death and serious injuries
Improve human behavior	→	Design for human mistakes/limitations
Control speeding	→	Reduce system kinetic energy
Individuals are responsible	→	Share responsibility
React based on crash history	→	Proactively identify and address risks

FHWA RESOURCES

Safe System Materials

Find more resources at: safety.fhwa.dot.gov/zerodeaths

Implementing the Safe System approach is our shared responsibility, *and we all have a role*.

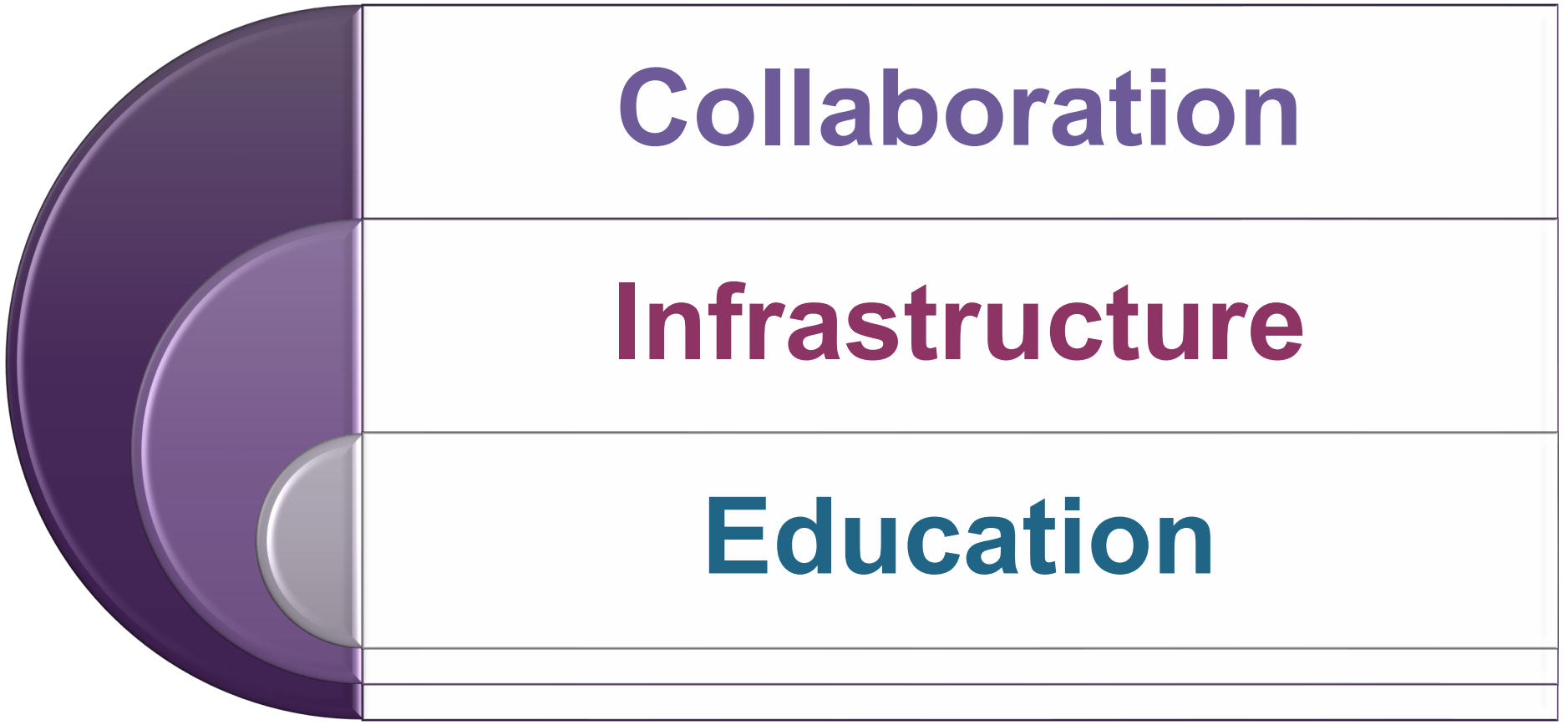
Source: Fehr & Peers

Source: Arlington County, VA

Source: Fehr & Peers

Source: Fehr & Peers

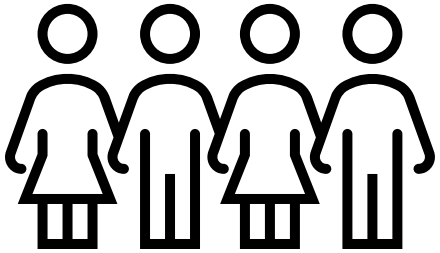
STRATEGIC PLAN - FOUNDATION



FLORIDA
STRATEGIC HIGHWAY SAFETY PLAN

COLLABORATION

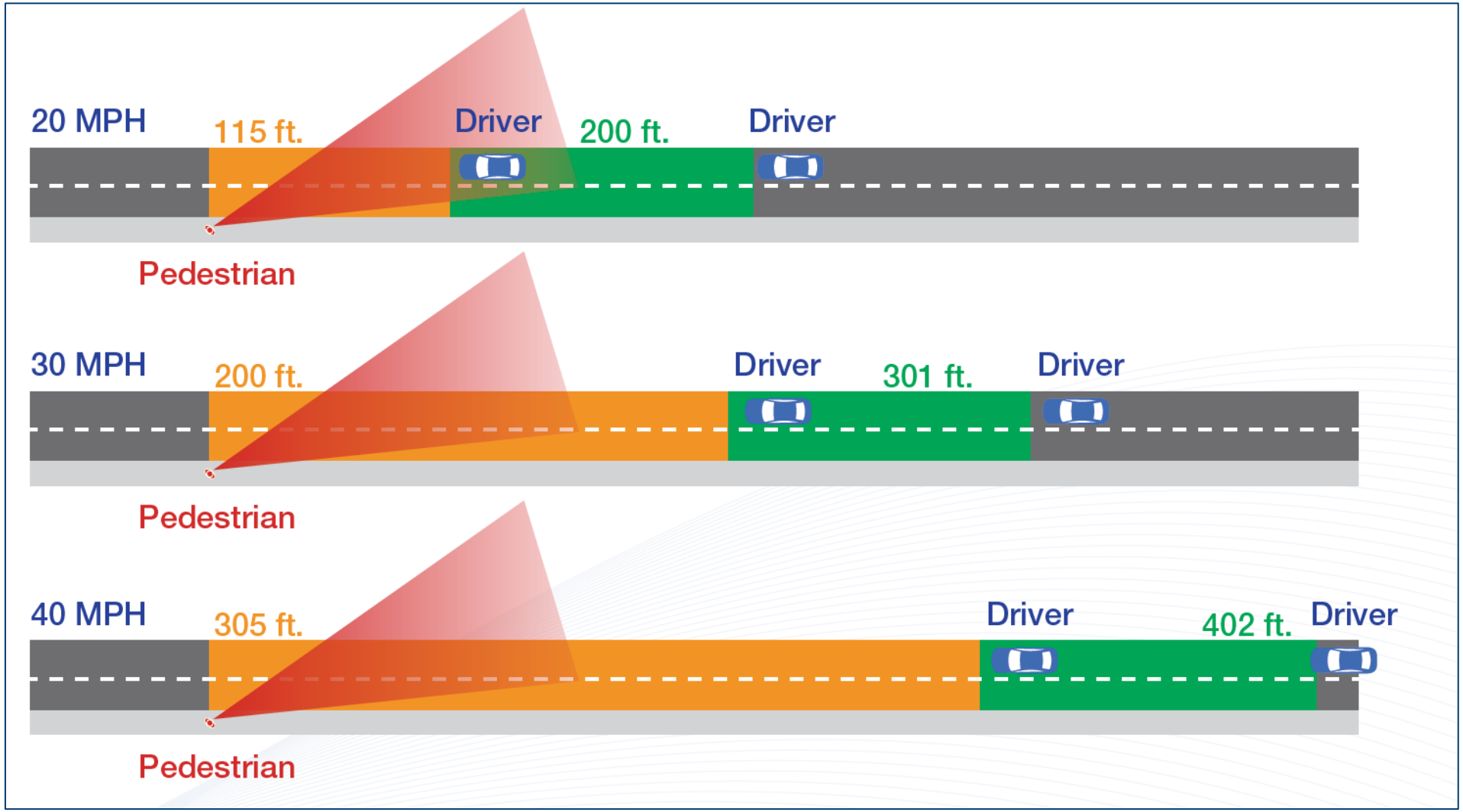
- Internal and External Partners
- Community-Centric
- Share our efforts, learn from others
- Aligning our various efforts is important



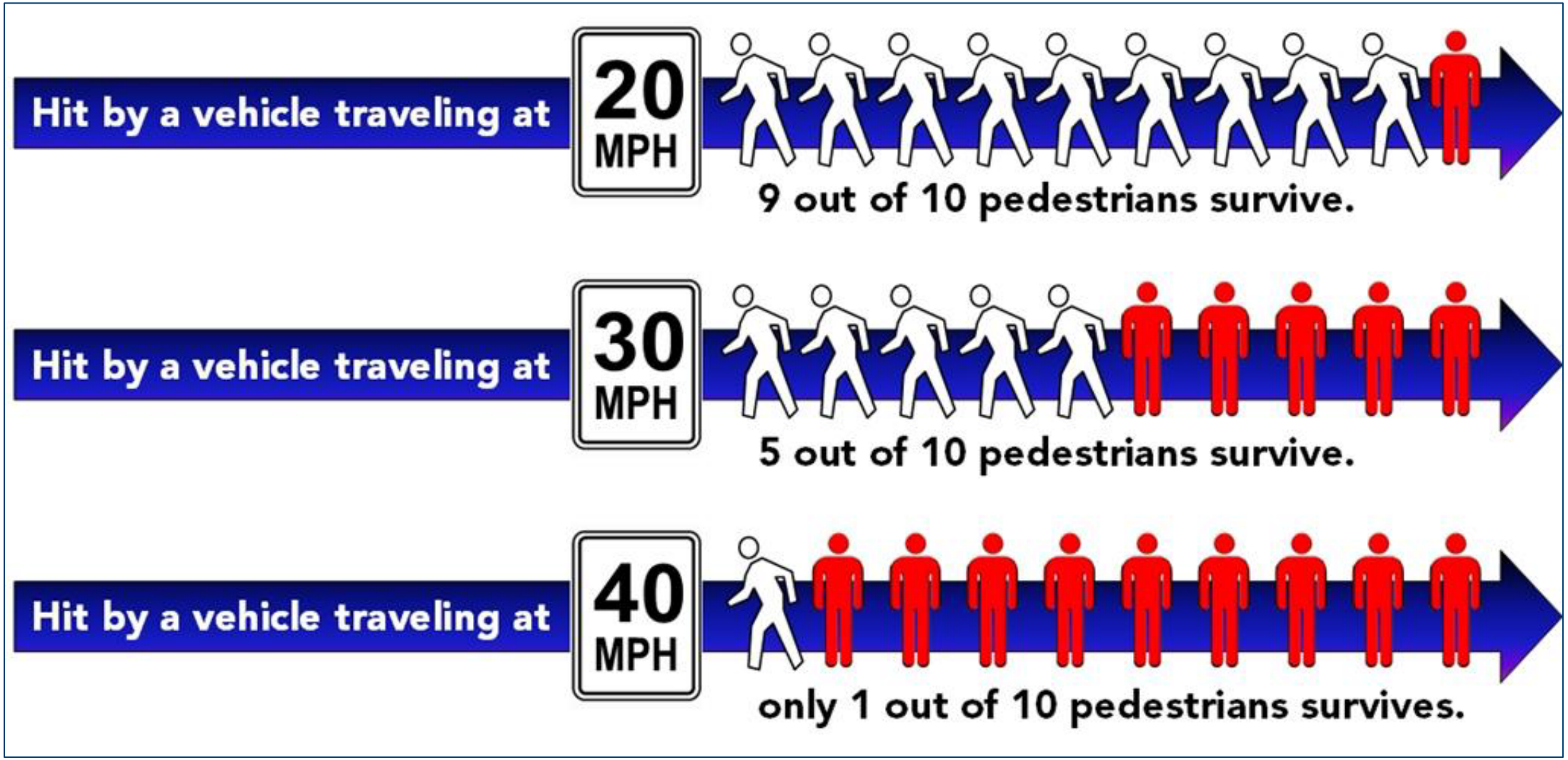
INFRASTRUCTURE

- Every project is a safety project
  - Touch every project to empower and ensure max countermeasures are included.
- State Road or Local Road??? Does it really matter!
- Be proactive and Be bold on every project
  - If we want to save lives we have to be bold
- It may not be too late to incorporate the right elements into a project
- Target Speed – Lower speeds save lives

Why slower speeds?



Why slower speeds?



FDOT DESIGN MANUAL

202 Speed Management

Figure 202.3.1 Concept Sketch - Midblock Chicane

Figure 202.3.4 Concept Sketch – Terminated Vista Example

Table 202.3.1 Strategies to Achieve Desired Operating Speed

Context Classification	Design Speed (mph)	Strategies
C1	55-70	Project-specific; see ***FDM 202.4***.
C2	55-70	Project-specific; see ***FDM 202.4***.
C2T	40-45	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, RRFBs and PHBs
	35	Techniques for 40-45 mph, plus On-street Parking, Street Trees, Short Blocks, Median Islands at Crossings, Road Diet, Bulbouts, Terminated Vista
	30	Techniques for 35-45 mph, plus Chicanes, Median Islands in curved sections, Textured Surface
	≤ 25	Techniques for 30-45 mph, plus Vertical Deflection
C3R, C3C	50-55	Project-specific; see ***FDM 202.4***.
	40-45	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, RRFB and PHB
	35	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, Median Islands in crossings, Road Diet, RRFB and Hawk, Terminated Vista
C4	40-45	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, RRFB and PHB
	35	Techniques for 40-45mph plus On-Street Parking, Street Trees, Short Blocks, Median Islands at Crossings, Bulbouts, Terminated Vista
	30	Techniques for 35-45 mph plus Chicanes, Median Islands in Curve Sections, Textured Surface
C5	35	Roundabout, On-street Parking, Street Trees, Short Blocks, Speed Feedback Signs, Median Islands in Crossings, Road Diet, Bulbouts, RRFB and HAWK, Terminated Vista
	30	Techniques for 35 mph plus Chicanes, Median Island in Curve Sections, Textured Surface
	25	Techniques for 30-35 mph plus Vertical Deflection
C6	30	Roundabout, On-Street Parking, Horizontal Deflection, Street Trees, Median Islands in Curve Sections, Road Diet, Bulbouts, Terminated Vista, Textured Surface
	25	Techniques for 30 mph plus vertical deflection

SETTING SPEED

Design Speed

- **A principal design control that regulates the selection of many of the project standards and criteria used to design a roadway project.**

Posted Speed

- **Maximum speed allowed in a speed zone as designated by a sign within the zone.**

Target Speed

- **Highest speed at which vehicles should operate on a thoroughfare in a specific context, consistent with the level of multi-modal activity generated by adjacent land uses, to provide both mobility for motor vehicles and a supportive environment for pedestrians, bicyclists, and public transit users.**

APPROACHES TO SETTING SPEED

Previous Approach

- Determine the Design Speed
  - Context based range
- Select Posted Speed
  - approx. 5 mph below Design Speed
- Anticipated Driver behavior
  - 85th percentile matches Posted Speed

Current Approach

- Determine Target Speed: (Design=Posted=Target Speed)
  - Consider Context Classification
  - Consider all Users: cyclists, and pedestrians, and vehicles
  - Strategic Intermodal System (SIS) facility or Evacuation Route
- Compare to Design and Posted Speeds
  - All at once
  - Incremental
  - Speed management techniques

TARGET SPEED

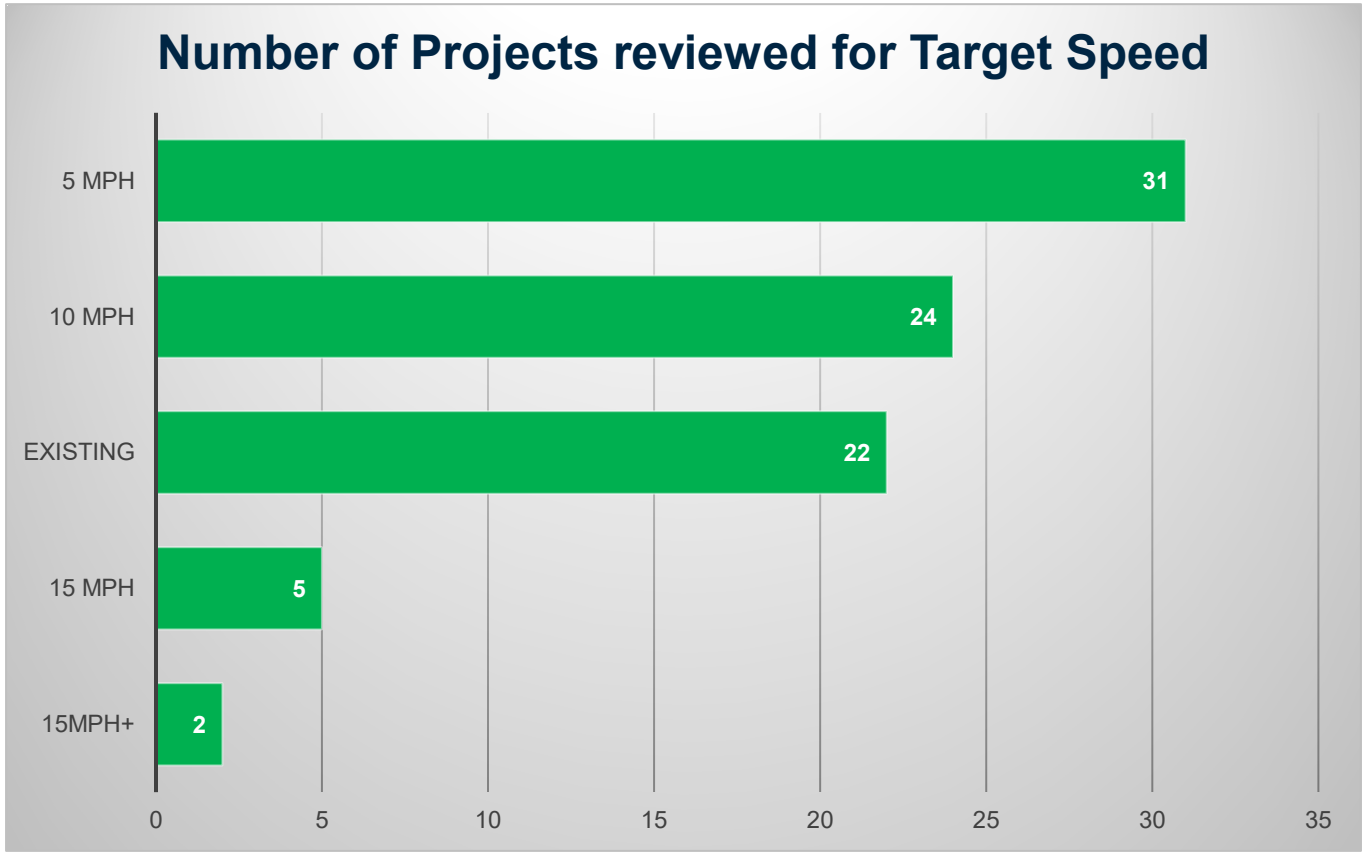
- Established by the Planning Office
- Must be within the range of Design Speeds for the context classification
- Must reflect the needs of safety, equity, quality of life, and economic development of the corridor
- Approved by a multi-disciplined team that includes Design, Traffic Operations, Safety, Planning, and Program Management
- Collaboration meetings

SPEED MANAGEMENT TECHNIQUES

- Roundabouts
- On-Street Parking
- Chicanes
- Lane Narrowing
- Horizontal Deflection
- Street Trees/ Landscaping
- Short Blocks
- Midblock Crossings
- Speed Tables
- And More!

TARGET SPEED REVIEWS

- Target Speed Reviews
  - Reviewed over 80 projects already in design from October 2021 to March 2022.
  - New projects are assigned a Target Speed during scoping
  - Office of Safety to do observational studies as these projects go to construction and complete



Opportunities for Safety Plans

- **Apply for a Federal Grant, Safe Streets and Roads for All (SS4A) Grant Program**

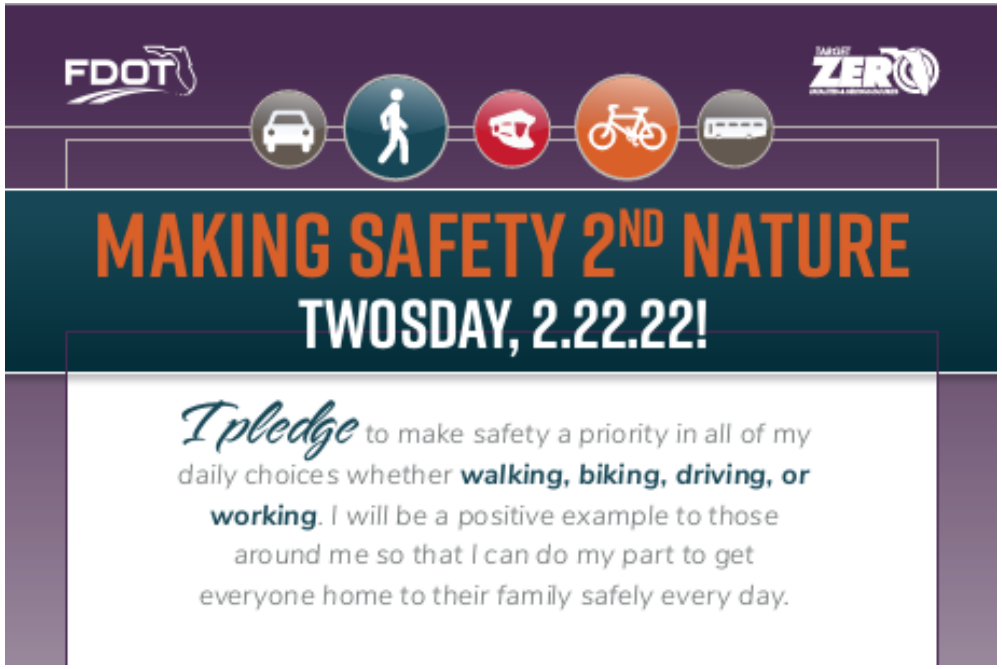
- **Local Road Safety Plans (LRSP)**
  - *While local roads are less traveled than State highways, they have a much higher rate of fatal and serious injury crashes.*
  - Prioritized list of issues, risks, actions, and improvements that can be used to reduce fatalities and serious injuries on local roads.
  - Support the goals of a State's overall Strategic Highway Safety Plan (SHSP)
    - https://www.fdot.gov/safety/shsp2016/
  - Do-It-Yourself Website created by FHWA
    - https://safety.fhwa.dot.gov/provencountermeasures/local_roads.cfm

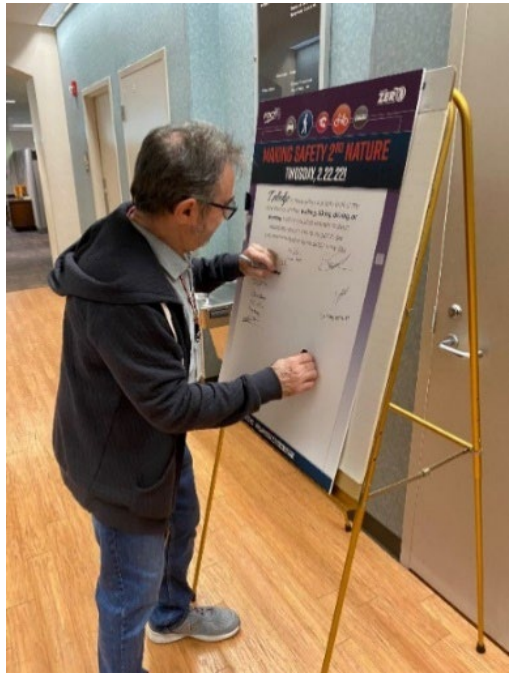
EDUCATION

- All users – Be responsible and respectful.
- Safety Begins with ME! Safety Begins with YOU!
  - Make it personal
- Reach children, they will influence their parents (and vice versa)
- Different ways to engage and share the safety messages
- Growing the Culture

Safety Starts with Us – Growing the Culture

- Growing the Safety Culture
  - Within the District
  - Target Zero Delegates in every unit
  - 2.22.22 Making Safety 2nd Nature Pledge





Safety Starts with Us – Making it personal

- Making the safety ‘mission’ personal – All of us, including users of our transportation system can make a difference.
  - D5-Safetyideas@dot.state.fl.us

- How are you going to make a difference?
  - Safety begins with **YOU**, act responsibly. Respect other users.
    - Educate and encourage your family, neighbors, and friends to drive, walk, and bike safely, so that they make it home every day.
  - Encourage safety conversations and actions in your daily work.

Safety Starts with Us – Start with our Children

- Children are our future, outreach and growing that safety culture with them is very important.

Early Elementary Student Winner
Title “Daddy Rides in Heaven”

Safety Starts with Us – Safety Ambassadors

- Encouraging our engineering partners to be Safety Ambassadors
  - Carry that safety mindset whether working with FDOT, Developers, Counties, Cities
  - Think bold, bring ideas to the table
  - Share the safety message in your areas of influence

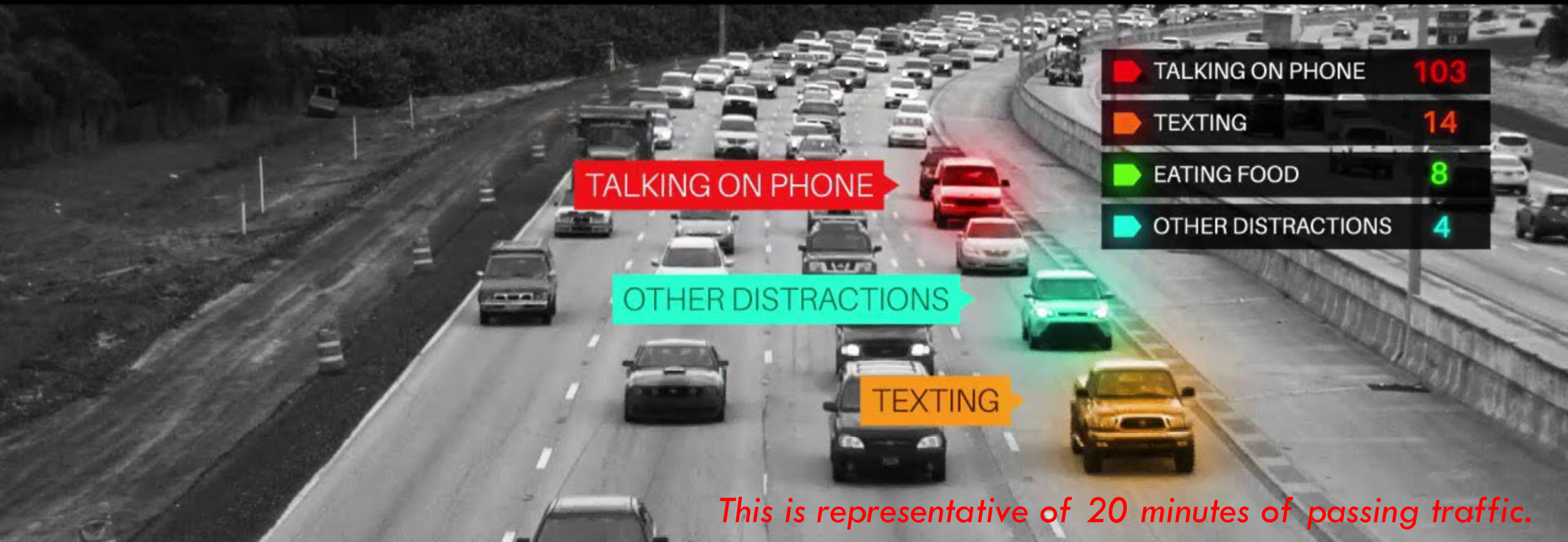
What can YOU do to make a difference?

- Safety begins with **YOU**, act responsibly. Respect other users.
  - Educate and encourage your family, neighbors, and friends to drive, walk, and bike safely, so that they make it home every day.

- Encourage safety conversations and actions in your daily work.

Safety Second,
it takes just a second to be safe.

HAVE YOU EVER WONDERED
HOW MANY PEOPLE **AREN'T WATCHING**
THE ROAD WHILE DRIVING?



This is representative of 20 minutes of passing traffic.

Safety begins with ME…

Safety begins with YOU!

Thank you!

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FDOT D5 Safety Administrator
Office of Safety
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