

# 2023 VULNERABLE ROAD USERS (VRU) SAFETY ASSESSMENT

PARTNERS WORKSHOP

JUNE 30, 2023

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# WORKSHOP AGENDA

1. Introductions
2. Project Overview
3. VRU SA Components
4. Methodology
5. Schedule
6. Discussion Prompts



# INTRODUCTIONS

# OR VRU SAFETY ASSESSMENT TEAM

## DKS Team

- Brian Chandler, Project Manager
- Lacy Brown, Lead Safety Analyst
- Houssam Ghandour, Safety Analyst
- Anders Hart, Staff Support

## Oregon DOT

- Angela Kargel, State Traffic Services Engineer & Unit Manager
- Jessica Horning, Pedestrian and Bicycle Program Manager
- Heidi Manlove, Pedestrian and Bicycle Program Manager
- Traci Pearl, Transportation Safety Office Manager
- Walt McAllister, Safe Communities/Traffic Records Program Manager
- Doug Bish, Safety Emphasis Area Coordinator
- Christina McDaniel-Wilson, State Traffic Safety Engineer
- Jiguang Zhao, Traffic Safety Engineer
- Mary McGowan, Senior Transportation Planner/SAP Implementation Project Manager



## PROJECT OVERVIEW

# VRU SA OVERVIEW

## Requirements

- Complete an initial VRU SA and include in the Strategic Highway Safety Plan (SHSP)
  - > **Oregon Transportation Safety Action Plan (TSAP)**
- Approved by Governor or designee
- Process approved by FHWA (like SHSP)
- Due November 15, 2023

## Resources

- FHWA VRU SA [Guidance](#) (Oct 2022)
  - > Written guidance
  - > Webinars

### Regulations

Pub. L. 117-58  
23 U.S.C. 148(a)(9)  
23 U.S.C. 148(a)(13)(G)  
23 U.S.C. 148(a)(15)  
23 U.S.C. 148(a)(16)  
23 U.S.C. 148(l)  
23 CFR 490.205  
23 CFR 450.210  
23 CFR 450.316  
ANSI D16.1-2007

## VULNERABLE ROAD USER DEFINITION

- Pedestrian
- Bicyclist
- On Personal Conveyance
- **Not motorcyclists**

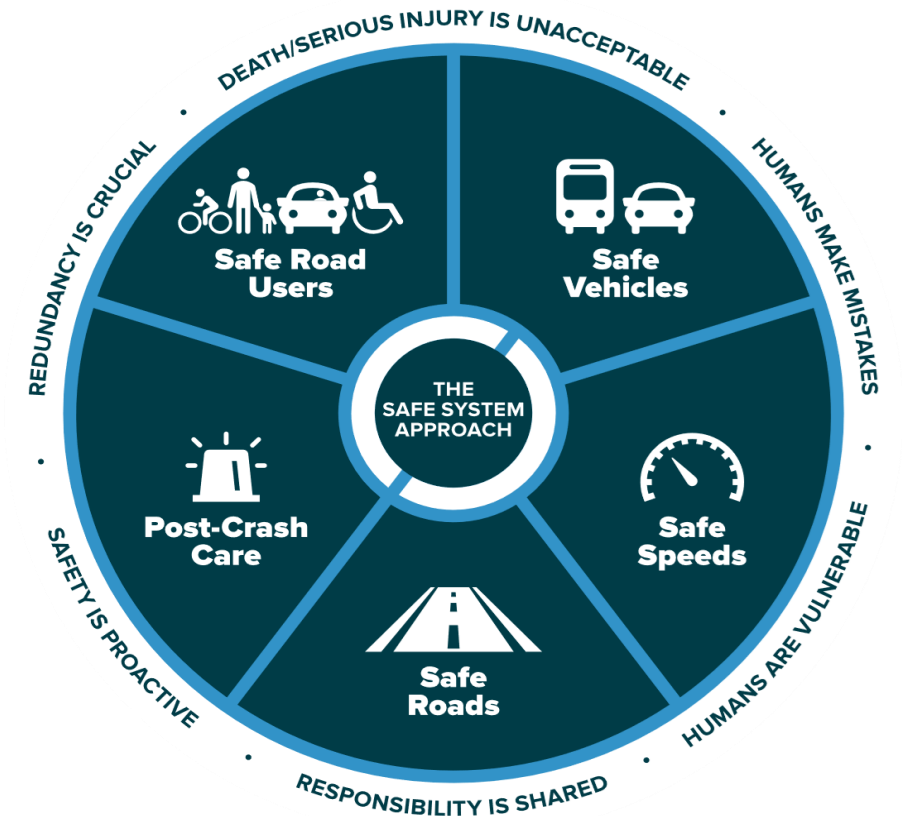


## **VRU SA COMPONENTS**

# VRU SA COMPONENTS

Per FHWA Guidance Template

- Overview of VRU Safety Performance
- Summary of Quantitative Analysis
- Summary of Consultation/ENgagement
- Program of Projects or Strategies
- Safe System Approach



Metro Regional Transportation Safety Strategy

<https://www.oregonmetro.gov/regional-transportation-safety-plan>

FHWA Safe System Approach

<https://highways.dot.gov/safety/zero-deaths>





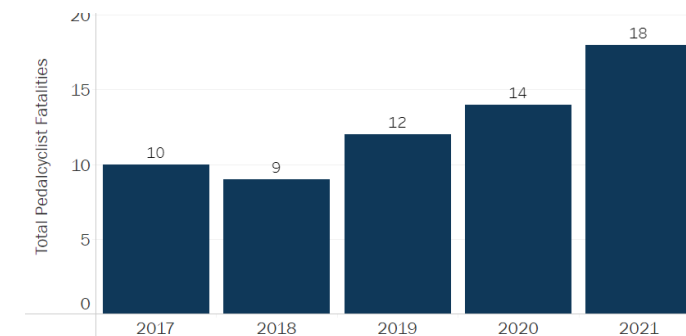
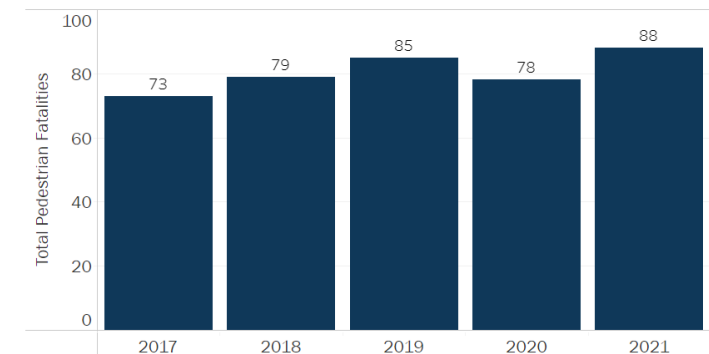
## **METHODOLOGY**

# VRU SA METHODOLOGY: ANALYSIS

- Data Analysis Summary
  - > Crash History (2017-2021)
  - > Other Risk Factors
    - Availability (State system, local roads)
    - Missing/limited data (VRU volumes)
  - > Demographics / Equity
    - Oregon Social Equity Index (SEI)
- High Risk Areas
  - > Defining Terms
    - Risk of what?
      - VRU crash occurrence
      - VRU crash severity
    - Areas
      - Geographic (lat/lon)
      - Facility Types

## Previous & Current Related Efforts

- 2023 ARTS Ped/Bike Analysis
- 2021 Ped/Bike Safety Implementation Plan



# VRU SA: PROGRAM OF STRATEGIES

- Address factors contributing to VRU crashes identified in High-Risk Areas
- Infrastructure Countermeasures
  - ARTS-listed Countermeasures (with CMFs)
    - > Non-ARTS (include CMF and source)
  - > Behavioral Countermeasures
    - > NHTSA Countermeasures That Work

## Evaluate each Countermeasure

- Safe System Approach Principles
- Equity Considerations
- Potential to meet GHG Targets



# VRU SA: PARTNER CONSULTATION/ENGAGEMENT

- OBPAC Coordination
- Partners Roundtable / Workshop
  - > Introduce Assessment
  - > Open Discussion
- Engagement Materials
- Partner Reviews
  - > Methodology
  - > Program of Strategies
  - > VRU SA Draft and Final
- OTSC and OTC Reviews



OBPAC: Oregon Bicycle and Pedestrian Advisory Committee  
OTSC: Oregon Transportation Safety Committee  
OTC: Oregon Transportation Commission



## **PROJECT SCHEDULE**

# PROJECT SCHEDULE

Milestone	Timeline
Partners Workshop	June 30
Final Technical Memos 1. VRU Analysis Summary 2. High-Risk Area Methods and Assumptions	Late-July
High Risk Area Identification	August-September
Program of Strategies	September
VRU Safety Assessment Drafts	1. Mid-August 2. Early-September 3. Late-September 4. Late-October
<i>Public Comment Period (potential)</i>	<i>TBD</i>
VRU Safety Assessment Final for Submittal	November
Amended 2021 Transportation Safety Action Plan (TSAP)	November-December



## **DISCUSSION PROMPTS**

# SAFER PEOPLE

1. What strategies has your agency used (or planned to use) to improve the human behaviors to reduce the risk of crashes and injuries?
2. Has your agency used (or planned to use) education and awareness campaigns in promoting safer driving habits, or used more comprehensive measures such as stricter law enforcement of traffic laws? Which is more effective?
3. What strategies have your agency adopted (or planned to adopt) for promoting safer user (driver, pedestrian, and bicyclist) behavior?
4. How does your agency encourage more people to use active transportation modes?





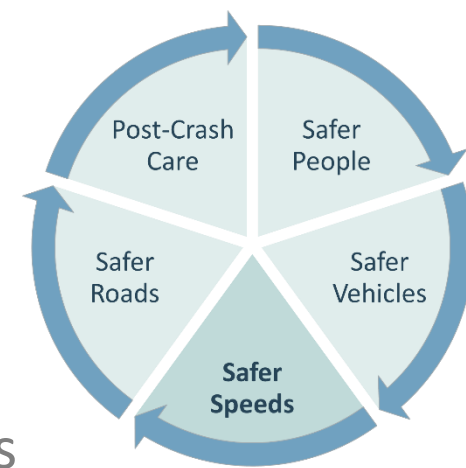
# SAFER VEHICLES

1. How familiar are you with the concept of safer vehicle design and how important do you think it is in relation to overall safety?
2. In your opinion, what are some of the key features or technologies (for example, adaptive headlight beams (ADB), connected autonomous vehicles (CAV), Lane-keeping assist (LKA), Lane departure warning (LDW), cross-over mirrors etc.) that make a vehicle “safer” from a road safety perspective?
3. What do you think are some of the key challenges and barriers to implementing key features or safer vehicle technologies more widely and how do you think these could be addressed?
4. How should we incorporate safer vehicle features and technologies into the VRU assessment as well as into broader road safety strategies and initiatives?



# SAFER SPEEDS

1. What does safer speeds mean to you when you think about the safety of vulnerable road users?
2. What kinds of strategies and factors (lower speeds, infrastructure such as road diets and roundabouts, technology such as speed feedback signs, public outreach & education/ awareness campaigns etc.) help achieve safer speeds?
3. What are the barriers (or potential barriers) to achieving safer speeds?



# SAFER ROADS

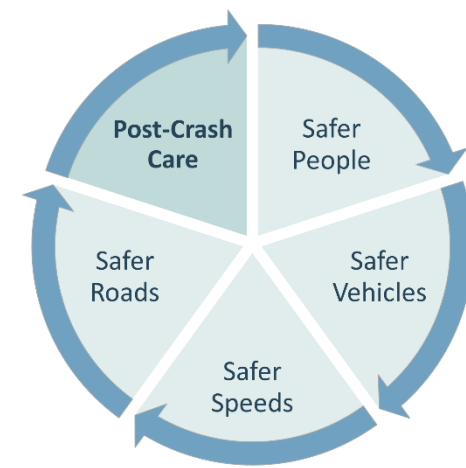
## 1. Where is the greatest need for VRU safety improvements?

- > Local streets
  - > Urban collectors/arterials
  - > Rural highways
  - > Big cities
  - > Small towns
  - > Other
- If you could pick one roadway improvement that would have the biggest impact on VRU safety, what would it be?



# POST-CRASH CARE

1. How do you think we can improve the coordination and communication between EMS and healthcare responders and other stakeholders involved in post-crash care?
2. What are some important factors that determine the effectiveness of post-crash care? How can we incorporate these into broader road safety strategies and ensure that they are prioritized?
3. How can we improve the availability and accessibility of post-crash care services for some special vulnerable road users such as children, disabled, and aging road users?



# QUESTIONS

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