

UTC Safety Summit
***Institute for Safety and Operations of
Large-Area Rural-Urban Intermodal
Systems (SOLARIS)***

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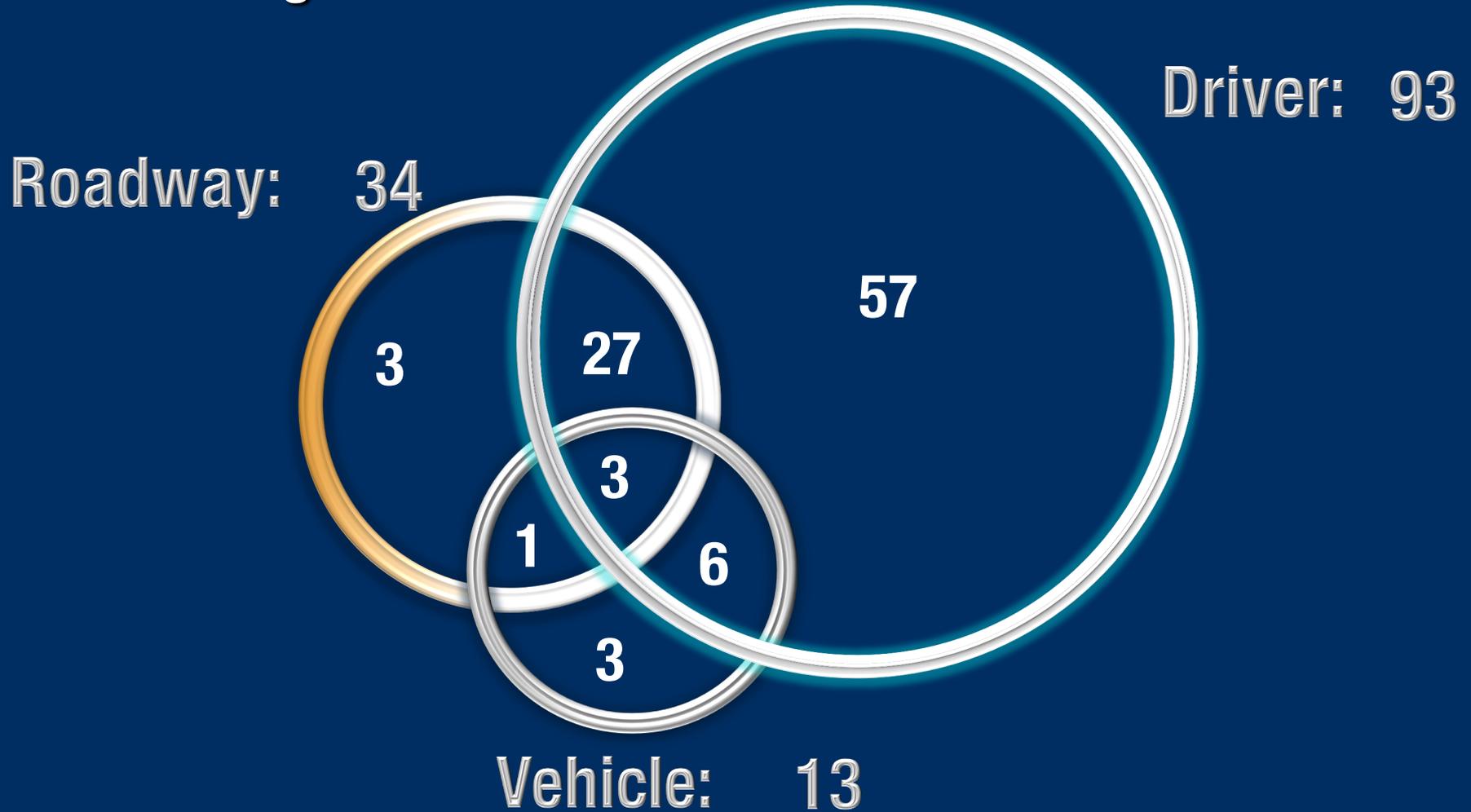
Center of Advanced Transportation Education and Research (CATER)

University of Nevada, Reno (UNR)

March 19 & 20, 2015

Venn Diagram

Contributing Factors to Crashes





■ **Who We Are**

- The SOLARIS Institute is a consortium of five outstanding research and higher educational institutions located in the desert southwest uniquely qualified to address issues related to transportation safety, operations and infrastructure.
 - **University of Nevada, Reno**
 - **University of Nevada, Las Vegas**
 - **Arizona State University**
 - **University of New Mexico**
 - **Desert Research Institute**

■ What We Do

- We focus our research on "Large Area Rural/Urban" issues specific to our tri-state area and substantial parts of the U.S. where a sparse network connects smaller cities and towns and also connects the denser networks in large cities.
- We promote intermodal transportation systems for efficient, safe, and economical movement of goods and people. Additionally, the tri-states have abundant solar and other renewable energy resources which could potentially be used as alternative energy sources for the transportation industry.

■ **University of Nevada, Reno**

- As the lead university, UNR has three premier tracks in transportation programs:
 - Transportation/traffic
 - Pavements/materials
 - Transportation Infrastructure
- The Department of Civil and Environmental Engineering houses three research centers focusing on these three tracks:
 - [The Center for Advanced Transportation Education and Research \(CATER\)](#)
 - [The Western Regional Superpave Center \(WRSC\)](#)
 - [The Center for Civil Engineering Earthquake Research \(CCEER\)](#)

■ Education and Workforce Development

• Our goals:

- Enhance existing transportation programs by including new course materials for large sparse rural-urban regions.
- Hold workshops, conferences, and continuing education courses that focus on advances in multi-modal infrastructure development, sustainability, and operations and transfer that new research knowledge to the public, industry, and academic communities
- Hold summer camps, internship programs, and provide fellowships.
- ***Prepare students for careers in transportation*** and facilitate the placement of successful graduates in government, industry, and academic organizations

■ **Technology Transfer**

- Our primary focus will be on peer-reviewed journal publications, presentations at national conferences, technical workshops, short courses, seminars, webinars, and collaboration with U.S. DOT/RITA research clusters.



■ Research

- SOLARIS focuses on applied research to produce methodologies and tools which can be readily implemented to tackle both long-standing and emerging transportation issues. Our three main research areas are:
 - Traffic Safety Data Management and Crash Mitigation
 - Technologies for Safe Traffic Operations and Management
 - Sustainable and Safe Transportation Infrastructure



- **Traffic Safety Data Management and Crash Mitigation**
 - Development of a Nevada Statewide Database for Safety Analyst Software
 - SHRP 2 Naturalistic Driving Study Data Usage Guidance for Nevada
 - NDOT SHRP 2 Implementation Assistance Program Project

- **Development of a Nevada Statewide Database for Safety Analyst Software**
 - Objectives:
 - Q/A pilot project data for accuracy and coverage
 - Build a database for all statewide SafetyAnalyst data
 - Acquire the remaining data outside the pilot project limits
 - Deliver the SafetyAnalyst to NDOT so they may employ SafetyAnalyst results statewide.

- **SHRP 2 Naturalistic Driving Study Data Usage Guidance for Nevada**
 - Objectives:
 - Guidance for selecting NDS data for highway safety analysis in Nevada.
 - Guidance for obtaining different types of NDS data and related information from other data sources.
 - Guidance for using NDS data to improve highway safety in Nevada.

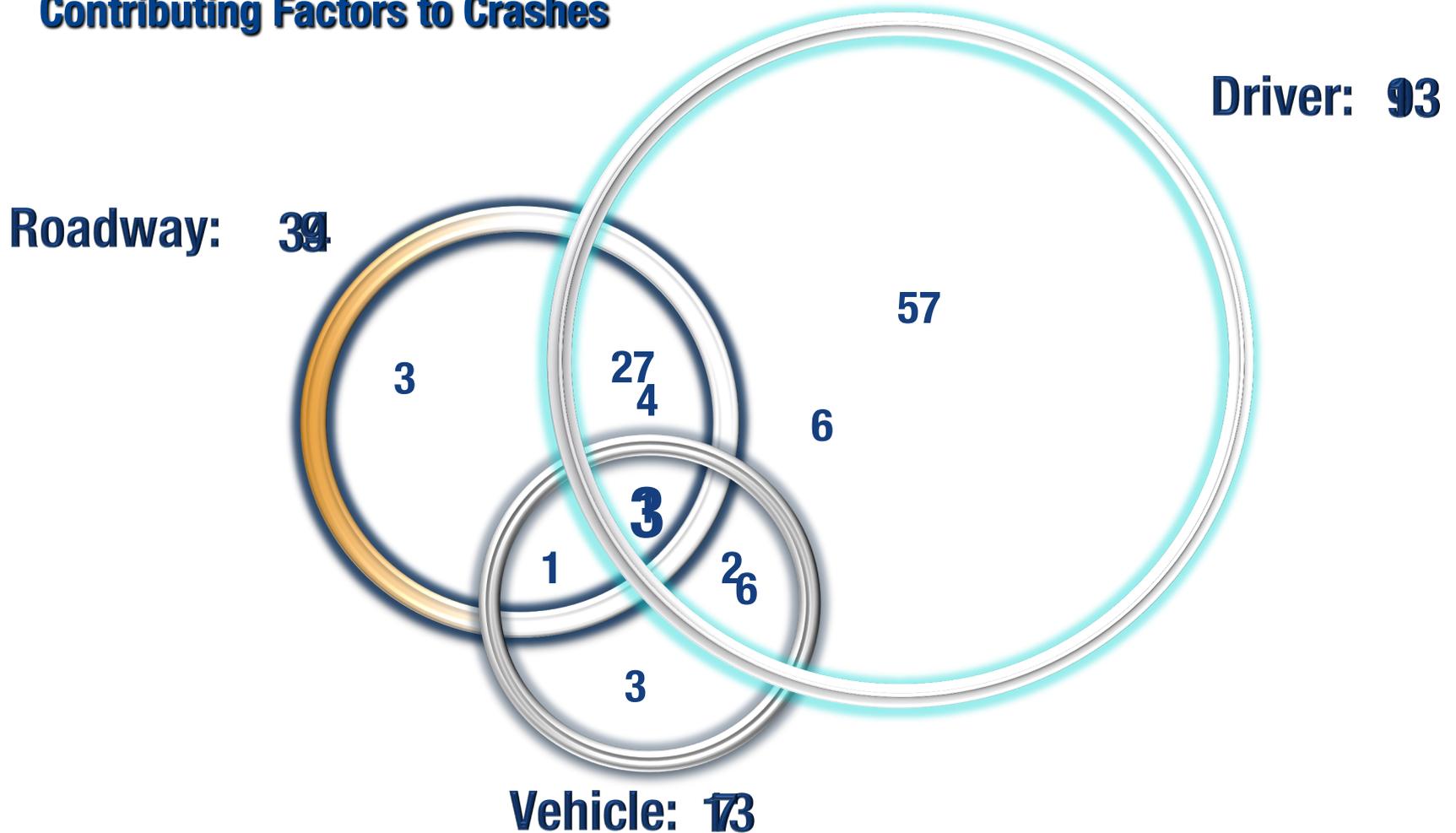
- **NDOT SHRP 2 Implementation Assistance Program Project**
 - Objectives:
 - To answer the question of “How driver, vehicle, roadway and environmental features affect turning drivers seeing the conflicting pedestrians?”
 - To identify effective countermeasures

■ Contact information

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Venn Diagram

Contributing Factors to Crashes



Venn Diagram

Contributing Factors to Crashes

Driver: 103

Roadway: 0



Drive Safe Nevada

Thank You

Questions?