Collaborative Sciences Center for ROAD SAFETY

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Creating Safer Systems and Healthier Communities: A Resource Hub

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Managing kinetic energy in NC

– Delineator systems in Greenville

Photo credit: Aaron Hines, City of Greenville

Photo credit: Pat Gruner, Daily Reflector

Managing kinetic energy in NC

– Protected bike lanes and road diets in Charlotte

Photo credit: Ely Portillo

Hamorton Place - Before Conversion

Hamorton Place After Conversion

Image source: City of Charlotte

Managing kinetic energy in NC

– UDO update and BRT in Raleigh

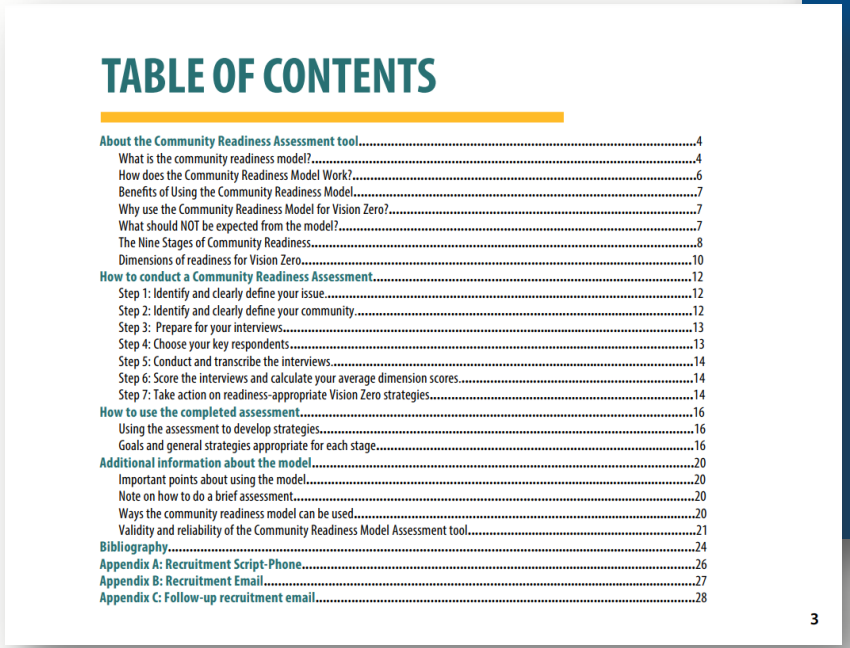
B. Avenue 2-Lane, Divided

Width	
A Right-of-way width ~~With center turn lane~~ ~~With median~~	~~76'~~ 81' ~~80'~~
B Back-of-curb to back-of-curb ~~With center turn lane~~ ~~With median~~	~~48'~~ 38' ~~52'~~
Streetscape	
~~C Utility placement, easement~~	~~5'~~
~~D~~C Maintenance strip (min)	~~2'~~1'
~~E~~D Sidewalk (min)	6'
~~F~~E Planting area (min)	6'
F Bike Lane (min)	5'
G Buffer (min; planted, paved, or paver)	3.5'
Travelway	
~~G Bike lane~~	~~7'~~
H Travel lane	11'
I Center median or turn lane ~~Striped turn lane~~ ~~Median~~	11' ~~15'~~

Image source: City of Raleigh

Resource Hub website

Tools and Applications: The Community Readiness Assessment



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HOW TO CONDUCT A COMMUNITY READINESS ASSESSMENT

Conducting a Community Readiness Assessment is the key to determining your community's readiness by dimension (key factors influencing your community's preparedness) and by overall stage (Figure 1).

1. Identify and clearly define your issue.
2. Identify and clearly define your community.
3. Prepare your interview questions.
4. Choose your key respondents.
5. Conduct and transcribe your interviews
6. Score the interviews across the dimensions
7. Take action on readiness-appropriate Vision Zero strategies

Step 1: Identify and clearly define your issue.

Readiness assessments are issue-specific. This manual is written with the issue of eliminating road and traffic deaths and serious injuries in mind. Focus on this issue will not only provide you with valuable insight into your community's perspective on road safety and a Vision Zero approach, but will also provide information on related issues such as transit, community health, and access to alternative transportation.

A note on terms:
Community members may or may not be aware of branded initiatives like Vision Zero. Allow respondents to describe what efforts they are familiar with in their own concrete terms (e.g., red light cameras). At the conclusion of the interview, you can offer to share more about the Vision Zero project in your community. You might want to practice describing it to someone outside your field, such as a friend. Here is one possible definition:

Vision Zero is based on the belief that people have the right to move through their communities without the risk of death or serious injury. It's an approach that accounts for the fact that humans make mistakes, transferring more of the responsibility of safety onto road designers and policy makers than has been done in the past. Vision Zero strategies include designing roads and transportation systems in a way that prevents human error from resulting in death or serious injury. Strategies include systems level change and collaboration between diverse stakeholders, using data to inform interventions, prioritizing equity and community involvement, managing speed, and promoting alternative transportation

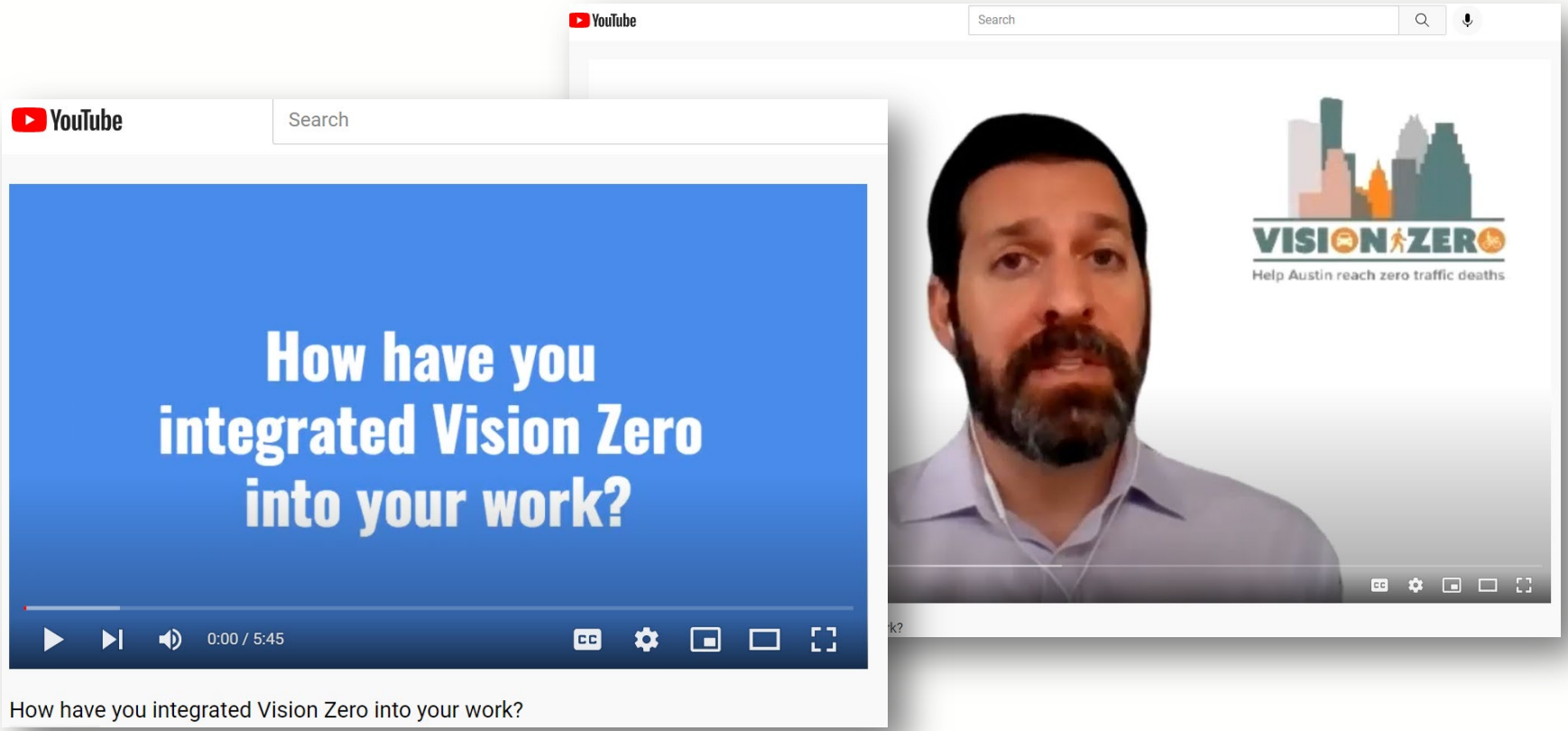
"The problem" you want to find out about in interviews refers to deaths and serious injuries on roads. However, there are many other social costs of road deaths and disabling injury you can emphasize. This includes, for example, the estimated 5 people per individual directly affected in some substantive way by the death/injury; PTSD among crash survivors and witnesses of severe crashes. Thus, you can make it clear that "the problem" includes proximal death and injury, intermediate financial and emotional damage to families/close friends, as well as more distal mental health impacts of severe crash events.

Step 2: Identify and clearly define your community.

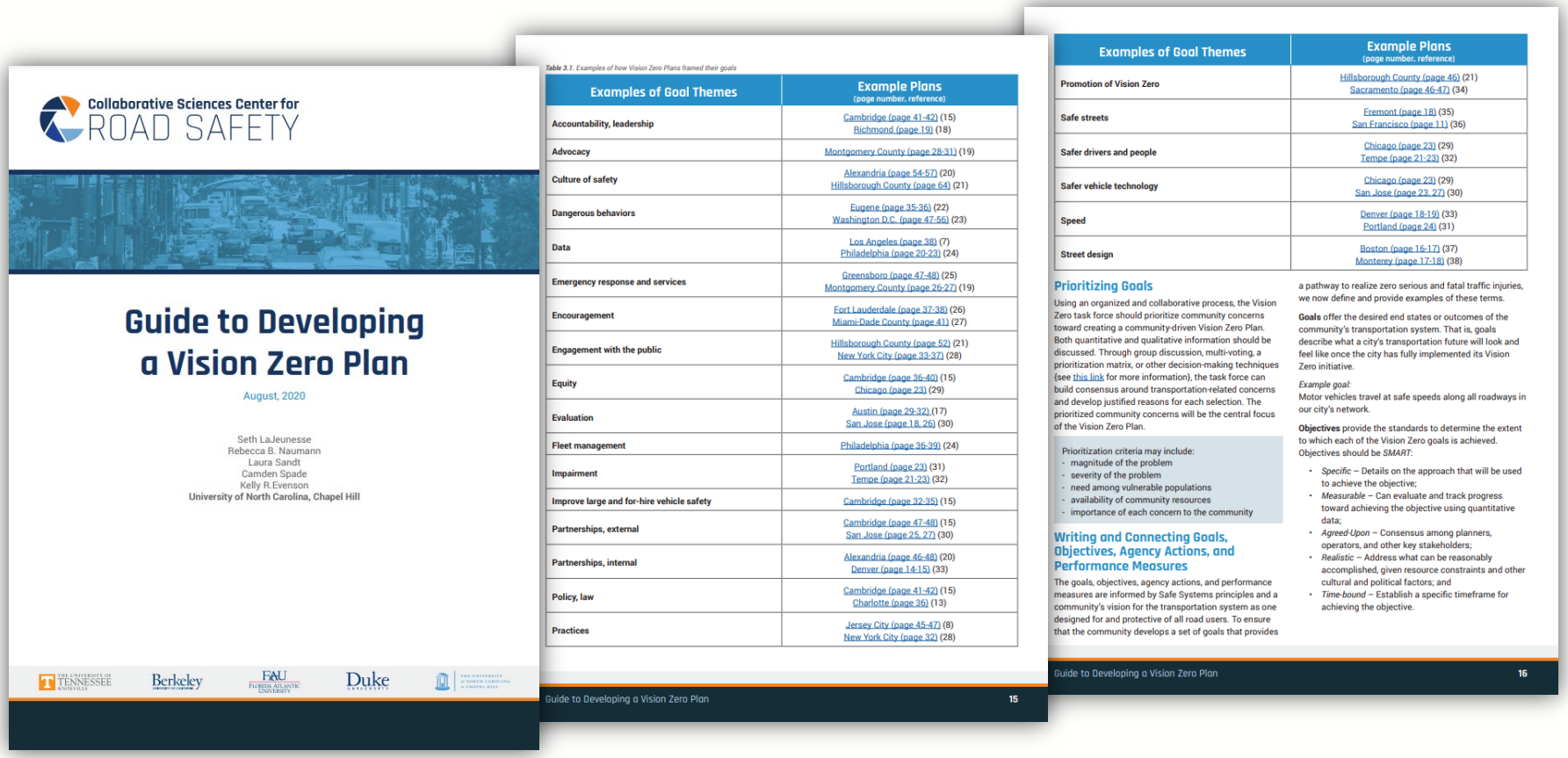
Identify the community whose readiness you are assessing. Many Vision Zero initiatives are specific to a defined geographical area, such as a town, city, region or transportation network. However, Vision Zero readiness can also be assessed for a smaller subset of a community including:

- Geographic community – a city, a county, an area enclosed by certain boundaries, etc.
- Subgroup of a geographical community defined by ethnicity, age, etc.
- Occupation group such as law enforcement, engineers, medical/emergency professionals, etc.
- Organizations or departments of organizations (e.g., a university, a school district).

Tools and Applications: Voices of Vision Zero across the U.S.



Tools and Applications: Guide to Developing a Vision Zero Plan



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Guide to Developing a Vision Zero Plan

August, 2020

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Table 3.1. Examples of how Vision Zero Plans framed their goals

Examples of Goal Themes	Example Plans (page number, reference)
Accountability, leadership	Cambridge (page 41-42) (15) Richmond (page 19) (18)
Advocacy	Montgomery County (page 28-31) (19)
Culture of safety	Alexandria (page 54-57) (20) Hillsborough County (page 64) (21)
Dangerous behaviors	Eugene (page 35-36) (22) Washington D.C. (page 47-56) (23)
Data	Los Angeles (page 38) (7) Philadelphia (page 20-23) (24)
Emergency response and services	Greensboro (page 47-48) (25) Montgomery County (page 26-27) (19)
Encouragement	Fort Lauderdale (page 37-38) (26) Miami-Dade County (page 41) (27)
Engagement with the public	Hillsborough County (page 52) (21) New York City (page 33-37) (28)
Equity	Cambridge (page 36-40) (15) Chicago (page 23) (29)
Evaluation	Austin (page 29-32) (17) San Jose (page 18, 26) (30)
Fleet management	Philadelphia (page 36-39) (24)
Impairment	Portland (page 23) (31) Tempe (page 21-23) (32)
Improve large and for-hire vehicle safety	Cambridge (page 32-35) (15)
Partnerships, external	Cambridge (page 47-48) (15) San Jose (page 25, 27) (30)
Partnerships, internal	Alexandria (page 46-48) (20) Denver (page 14-15) (33)
Policy, law	Cambridge (page 41-42) (15) Charlotte (page 36) (13)
Practices	Jersey City (page 45-47) (8) New York City (page 32) (28)

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Examples of Goal Themes	Example Plans (page number, reference)
Promotion of Vision Zero	Hillsborough County (page 46) (21) Sacramento (page 46-47) (34)
Safe streets	Fremont (page 18) (35) San Francisco (page 11) (36)
Safer drivers and people	Chicago (page 23) (29) Tempe (page 21-23) (32)
Safer vehicle technology	Chicago (page 23) (29) San Jose (page 23, 27) (30)
Speed	Denver (page 18-19) (33) Portland (page 24) (31)
Street design	Boston (page 16-17) (37) Monterey (page 17-18) (38)

Prioritizing Goals

Using an organized and collaborative process, the Vision Zero task force should prioritize community concerns toward creating a community-driven Vision Zero Plan. Both quantitative and qualitative information should be discussed. Through group discussion, multi-voting, a prioritization matrix, or other decision-making techniques (see this link for more information), the task force can build consensus around transportation-related concerns and develop justified reasons for each selection. The prioritized community concerns will be the central focus of the Vision Zero Plan.

Prioritization criteria may include:
- magnitude of the problem
- severity of the problem
- need among vulnerable populations
- availability of community resources
- importance of each concern to the community

Writing and Connecting Goals, Objectives, Agency Actions, and Performance Measures

The goals, objectives, agency actions, and performance measures are informed by Safe Systems principles and a community's vision for the transportation system as one designed for and protective of all road users. To ensure that the community develops a set of goals that provides a pathway to realize zero serious and fatal traffic injuries, we now define and provide examples of these terms.

Goals offer the desired end states or outcomes of the community's transportation system. That is, goals describe what a city's transportation future will look and feel like once the city has fully implemented its Vision Zero initiative.

Example goal:
Motor vehicles travel at safe speeds along all roadways in our city's network.

Objectives provide the standards to determine the extent to which each of the Vision Zero goals is achieved. Objectives should be *SMART*:

- *Specific* – Details on the approach that will be used to achieve the objective;
- *Measurable* – Can evaluate and track progress toward achieving the objective using quantitative data;
- *Agreed-Upon* – Consensus among planners, operators, and other key stakeholders;
- *Realistic* – Address what can be reasonably accomplished, given resource constraints and other cultural and political factors; and
- *Time-bound* – Establish a specific timeframe for achieving the objective.

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Tools and Applications: Media Framing Guide

Collaborative Sciences Center for ROAD SAFETY

Shaping the narrative around traffic injury:

A media framing guide for transportation and public health professionals

November 2020

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Who tends to tell the story?

Who is behind media framing of traffic crashes? In our recent examination of 1,156 broadcast TV news articles covering traffic crashes, journalists most often quoted a law enforcement officer or agency (18.4% of all articles), followed by crash witnesses (11.9%) and crash-involved parties (6.1%). Media coverage centered around a law enforcement perspective tended to involve identifying crash-involved parties, detailing circumstances that led to the crash, assigning "fault", and documenting any legal consequences crash-involved parties face. Previous studies have found similar trends in media framing of traffic injury, suggesting that such "villainizing" coverage might contribute to the perceived inevitability of crashes by signaling that bad driving behavior is unavoidable (Smith and Martin, 2007; Classen, Eby, Molnar, Dobbs, and Winter, 2011).

As mentioned, law enforcement, bystanders and witnesses, and crash-involved parties were quoted most often in coverage of traffic crashes. On the other hand, transportation planners and engineers, roadway safety advocates, and public health professionals were quoted in only 1.1, 0.4, and 0.1 percent of the 1,156 covered crash events, respectively.

To help shape public perception of traffic injury as a preventable public health issue, journalists, professionals who work in injury prevention and design of roadways, and community advocates should work together to speak to common traffic injury themes beyond assigning blame and putting all of the responsibility to be safe on individual road users.

Professionals and stakeholders who can and should get involved

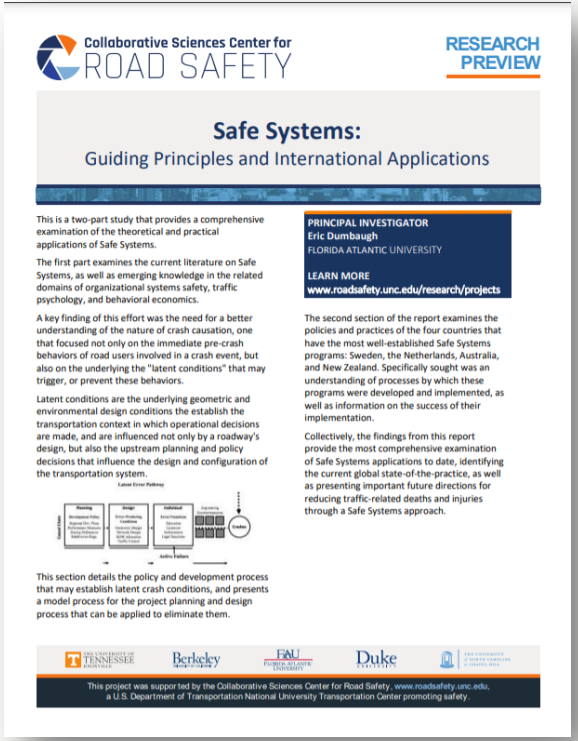
The inevitability of traffic injury is a common public misconception. Though the World Health Organization considers traffic deaths a "preventable health epidemic" (World Health Organization, 2009), the episodic nature of most traffic injury framing neglects the broader social and environmental contexts in which crashes occur (Ralph, Iacobucci, Thigpen, & Goddard, 2019). In our review of 1,156 TV news articles covering traffic crashes, we found that journalists often omitted important crash details such as roadway characteristics (e.g., what is the posted speed limit?, how many lanes does the road have?) or consumer trends that favor larger, higher horsepower vehicles (Insurance Institute for Highway Safety, 2016).

Figure 1 displays the current and potential flow of information related to a crash, organized according to levels of knowledge about traffic collisions. As shown in **Figure 1**, members of the public, including decision makers, receive news of traffic crashes from their local news media. Journalists, in turn, receive content for stories about crash events from local police or the court system. Those involved in crashes sometimes engage with police officers and the court system, but nearly always connect with insurance companies. The top tier represents the professional groups that are rarely included in traffic crash narratives, but have influence on the safety of roadways, the prevention of injury, and can speak to how communities are affected by road trauma. In the next section, we will focus on how these professionals' voices and more contextual frames can lead to better understanding of traffic injury, its causes, and possible solutions.

Figure 1. A depiction of the role of news media amidst the interactions that unfold in the aftermath of a crash. (Solid arrows denote interactions that commonly occur; dashed arrows denote interactions that occur less frequently; and grey-outlined white boxes and arrows denote promising though less featured communication channels to present traffic injury as a preventable public health issue).

Teaching, Training, and Talks

CSCRS Research on Vision Zero and Safe Systems



Collaborative Sciences Center for ROAD SAFETY

RESEARCH PREVIEW

Safe Systems:
Guiding Principles and International Applications

This is a two-part study that provides a comprehensive examination of the theoretical and practical applications of Safe Systems.

The first part examines the current literature on Safe Systems, as well as emerging knowledge in the related domains of organizational systems safety, traffic psychology, and behavioral economics.

A key finding of this effort was the need for a better understanding of the nature of crash causation, one that focused not only on the immediate pre-crash behaviors of road users involved in a crash event, but also on the underlying the "latent conditions" that may trigger, or prevent these behaviors.

Latent conditions are the underlying geometric and environmental design conditions the establish the transportation context in which operational decisions are made, and are influenced not only by a roadway's design, but also the upstream planning and policy decisions that influence the design and configuration of the transportation system.

This section details the policy and development process that may establish latent crash conditions, and presents a model process for the project planning and design process that can be applied to eliminate them.

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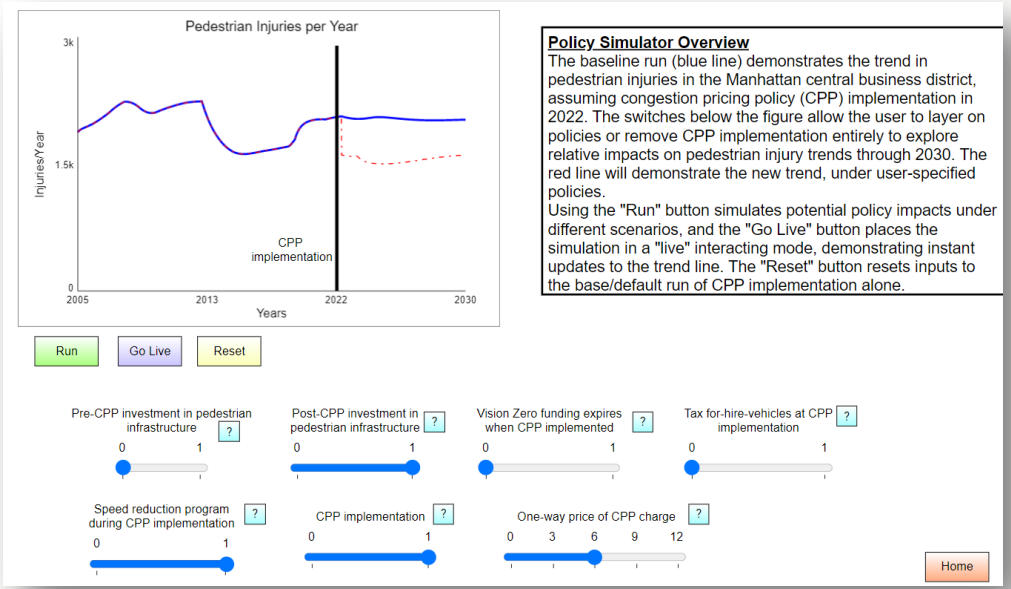
The second section of the report examines the policies and practices of the four countries that have the most well-established Safe Systems programs: Sweden, the Netherlands, Australia, and New Zealand. Specifically sought was an understanding of processes by which these programs were developed and implemented, as well as information on the success of their implementation.

Collectively, the findings from this report provide the most comprehensive examination of Safe Systems applications to date, identifying the current global state-of-the-practice, as well as presenting important future directions for reducing traffic-related deaths and injuries through a Safe Systems approach.

This project was supported by the Collaborative Sciences Center for Road Safety, www.roadsafety.unc.edu, a U.S. Department of Transportation National University Transportation Center promoting safety.



Policy Simulator Overview

The baseline run (blue line) demonstrates the trend in pedestrian injuries in the Manhattan central business district, assuming congestion pricing policy (CPP) implementation in 2022. The switches below the figure allow the user to layer on policies or remove CPP implementation entirely to explore relative impacts on pedestrian injury trends through 2030. The red line will demonstrate the new trend, under user-specified policies.

Using the "Run" button simulates potential policy impacts under different scenarios, and the "Go Live" button places the simulation in a "live" interacting mode, demonstrating instant updates to the trend line. The "Reset" button resets inputs to the base/default run of CPP implementation alone.

Other Favorite Resources

Thank you!

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