

# CSCRS Project #18

## Strengthening Existing and Facilitating New Vision Zero Plans

Presentation by Kelly Evenson and Becky Naumann

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# Team

- Carmen Cuthbertson
- Seth LaJeunesse
- Becky Naumann
- Sam Schilsky
- Camden Spade
- Molly Wen



All results should be considered in progress.

We welcome feedback.

Kelly's email: [Kelly\\_evenson@unc.edu](mailto:Kelly_evenson@unc.edu)

# Vision Zero (VZ)

- VZ takes a systems approach to reducing fatalities and serious injuries from road traffic crashes to zero, while increasing healthy, equitable, and sustainable mobility for all.
- Plans are an important policy tool that communities can use is the development, adoption, and implementation of a VZ plan.

# Plans

- Plans are documents tailored to local needs and aspirations.
- They are accepted principles that can serve as criteria for determining what makes a good plan.
- Most people could probably identify good plans from bad ones, but general characteristics of good plans are not often abstracted.
- Identifying features of good plans is important because future plans, and plan updates, could benefit greatly from this information.
- Furthermore, good or high quality plans strengthen their ability to influence outcomes.

# VZ Plans

- public document that provides the vision for future efforts to reduce traffic fatalities and serious injuries to zero
- unique and tailored to the community
- identifies the community's vision and goals
- should also review existing policies and programs
- includes information on implementation, including a timeline and evaluation and monitoring of plan implementation

# What do we know about VZ plans?

- There is little guidance to communities for how to develop a high quality VZ plan.
- We also do not know what elements VZ plans contain and whether those elements make a difference.



## ACTION PLAN

December 2017



# We realize Vision Zero can happen without an independent plan.

## **Boulder, CO**

- 2014 VZ adopted as part of the city's transportation master plan

## **Sacramento, CA**

- 2017 VZ resolution passed
- 2018 action plan adopted

## **Bellevue, WA**

- 2015 passed resolution
- 2016 passed ordinance to adopt VZ into the comprehensive plan.
- 2018 VZ action plan and scope of work



# Aim 1: High Quality Plan Elements

- Purpose: identify important or critical features of VZ plans
- Why? High quality VZ plans are hypothesized to be associated with better progress towards VZ than lower quality plans.
- Developed by our team with feedback from Eric Dumbaugh (Florida Atlantic University) and Daniel Rodriguez (Berkeley)

# Important Elements of High Quality VZ Plans (1)

- (1) Includes a vision and a mission.
- (2) Includes goals/objectives to accomplish the vision with a specific time horizon and assigns responsibility for the tasks.
- (3) Takes a systems-based approach.
- (4) Includes a commitment to an equitable approach to VZ.
- (5) Demonstrates political commitment.
- (6) A multi-disciplinary task force or committee is in place, working towards the vision where collaboration is emphasized.

# Important Elements of High Quality VZ Plans (2)

- (7) Involves public participation in the development of the plan and describes this effort, along with stakeholder involvement, in the plan.
- (8) Documents the history that led to plan creation.
- (9) Documents traffic-related injuries and deaths in the community
- (10) Uses a data driven approach to communicate, using maps, tables, and figures that are clear, accurate, and readable.
- (11) Inventories and reviews other relevant plans and programs in the community that might have overlapping or complementary objectives.

# Important Elements of High Quality VZ Plans (3)

- (12) Proposes ways to involve the community to reach its goals and objectives.
- (13) Finds ways to update the community on progress to maintain transparency.
- (14) Identifies both existing funding and new funding streams to support VZ efforts.
- (15) Includes management of speed limits at a safe level.
- (16) Recognizes that mistakes can happen and that the infrastructure should be able to support those errors.
- (17) Integrates ways to sustain the VZ program, even in the midst of changing leadership and funding.

## Aim 2: Complete an inventory of VZ plans.

- Collected all US plans through December 2018
- Permission sought to post plan in a central location (Dataverse)
- Summary to date:
  - 26 plans identified
  - 25 gave permission to post on Dataverse
    - 2 would like us to post their updated/final plan (Durham, Eugene)
  - 1 no response (San Antonio)

<https://dataverse.unc.edu/dataverse/VZPlans>

Distribution: CSCRS newsletter, website, inform VZ Network, other ideas?

# US VZ Plans thru 2018 - Municipalities

- Alexandria, VA
- Austin, TX
- Boston, MA
- Cambridge, MA
- Chicago, IL
- Columbia, MO
- Denver, CO
- Durham, NC
- Eugene, OR
- Fremont, CA
- Fort Lauderdale, FL
- Los Angeles, CA
- Monterey, CA
- New York City, NY
- Philadelphia, PA
- Portland, OR
- Richmond, VA
- Sacramento, CA
- San Antonio, TX
- San Francisco, CA
- San Jose, CA
- Seattle, WA

# US VZ Plans thru 2018 – Counties and Districts

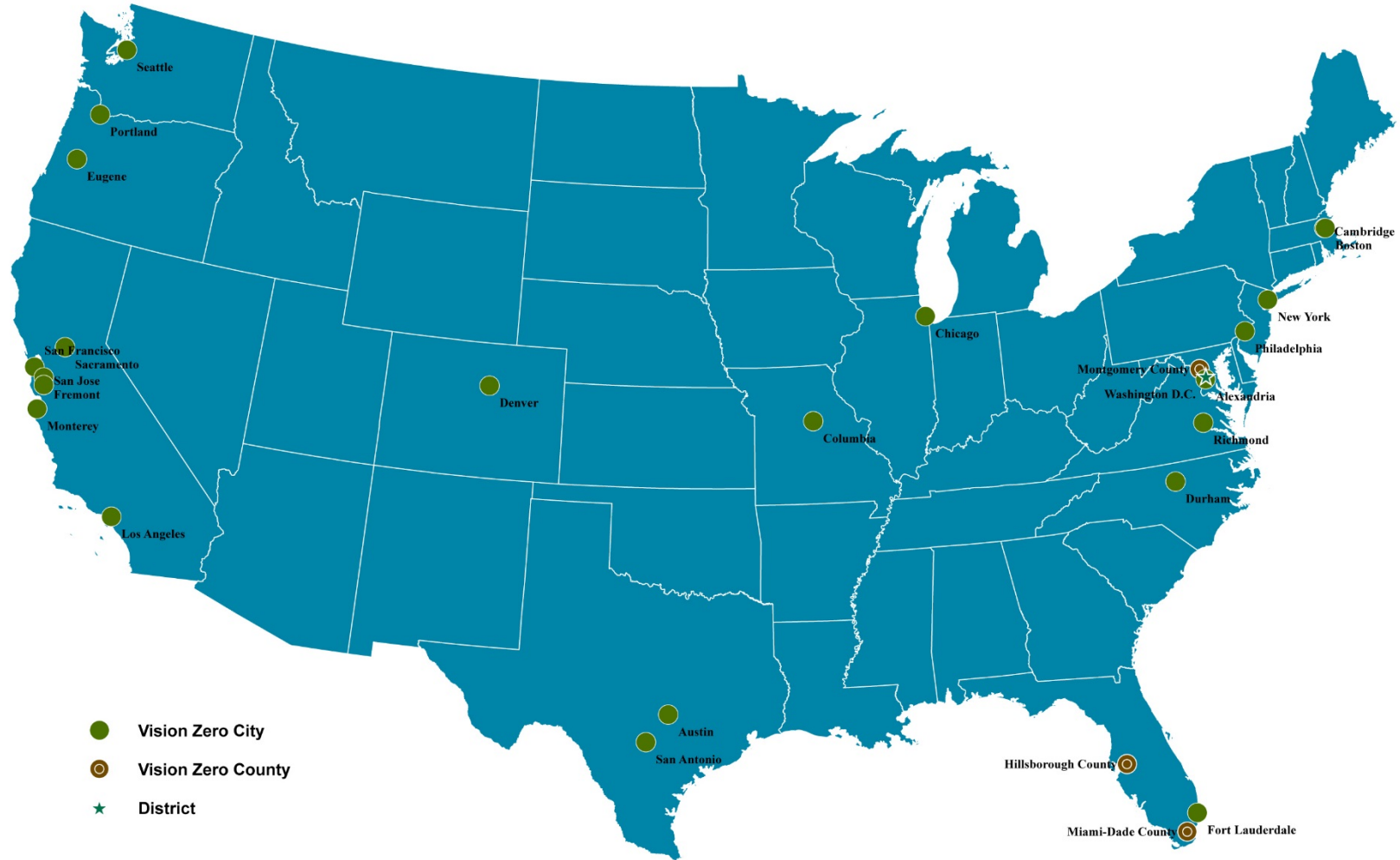
## **Counties**

- Hillsborough County, FL
- Miami-Dade County, FL
- Montgomery County, FL

## **Districts**

- Washington DC

# Vision Zero Cities and Counties





# Aim 3: Describe plan elements and compare to the high quality VZ elements

- To accomplish this we developed an abstraction tool
- Coding process:
  - Training on several plans to gain consistency
  - Plan was coded
  - Second reviewer checked all coding
  - Differences resolved by consensus
  - Team meetings to discuss any issues
  - Input results into Qualtrics
  - Analysis



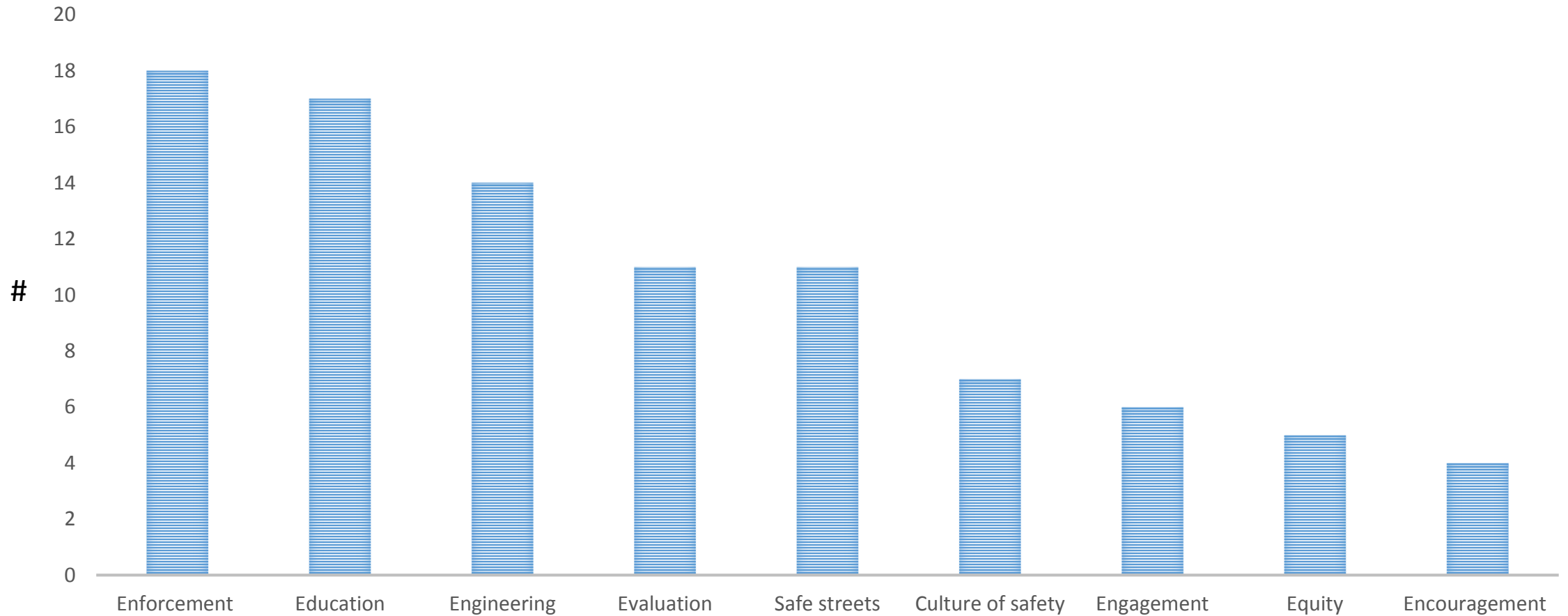
# Results from 26 VZ Plans

- Year of publication
  - 1 2014
  - 4 2015
  - 5 2016
  - 15 2017
  - 1 2018
- Maps of severe/fatal crashes
  - 20 yes
  - 6 no
- Describes history of stakeholder involvement
  - 8 yes
  - 18 no
- Describes public participation process
  - 4 present and detailed
  - 12 present not detailed
  - 10 not present

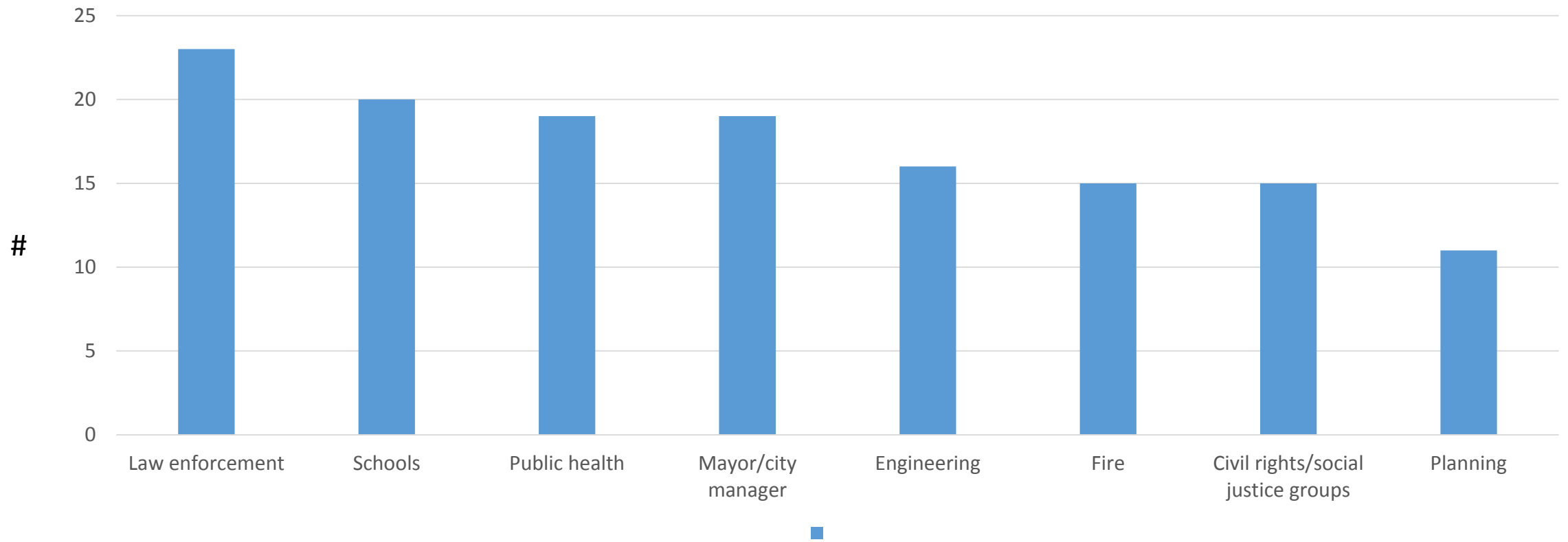
# Vision and Goals from 26 VZ Plans

- Vision statement
  - 23 yes
  - 3 no
- Year to accomplish vision
  - 18 yes
  - 4 no
  - 4 no vision stated
- Year to accomplish vision
  - 3           2020-2024
  - 6           2025-2029
  - 9           2030-2035
- Clear statement of goals
  - 13 goals linked to measurable outcomes
  - 9 goals provided but not linked to measurable outcomes
  - 4 no goals specified
- Goals in addition to eliminating traffic fatalities and deaths
  - 15 yes
  - 7 no
  - 4 no goals specified

# Goal Framework from 26 VZ Plans



# Most Frequent Partners on 25 VZ Plans



# Bringing a complex systems science lens to the coding tool

- Used complex systems science frameworks to examine if and the extent to which systems thinking ideas and complexity considerations were included in plans
- Adapted and incorporated “Intervention Level Framework” and “Operationalizing Systems Thinking Rubric”

**Description of Intervention Level Framework**

Level	Description
Paradigm	System's deepest held beliefs Source of system's goals, rules, and structures Difficult to intervene at this level but can be very effective
Goals	Targets that conform to the system's paradigm and need to be achieved for paradigm to shift
System structure	Actions at this level can change aim of the system Interconnections between system elements and subsystems Actions at this level will shift the system structure by changing system linkages or incorporating novel elements
Feedback and delays	Allows the system to regulate itself by providing information about the outcome of different actions back to the source of the actions Actions at this level can create new feedback or increase gain around existing loops
Structural elements	Subsystems, actors, and physical elements of the system Easiest level at which to intervene Many actions at this level are usually required to create system-wide change

**Table B4**  
Rubric – Operationalizing Systems Thinking: Goals and Unintended Consequences.

Construct	Criteria and Rating Guide
<b>Goals Prompts 5 and 6</b>	<b>0</b> No response was provided, or response was unable to identify clear goals
	<b>1</b> The response identified <i>short-term</i> goal/s that address only one <i>technical</i> or <i>contextual</i> (economic, or political, or environmental, or social or time only)
	<b>2</b> The response identified goals that are: 1. <i>long-term</i> and address only one <i>aspect</i> ; or 2. <i>short-term</i> and address both <i>technical</i> and <i>contextual aspects</i> ; or 3. both <i>short-</i> and <i>long-term</i> and address only one <i>aspect</i>
<b>Unintended Consequences Prompts 7 and 8</b>	<b>3</b> The response identified goals that articulates <i>both short- and long-term goals</i> and address <i>both technical and contextual aspects</i>
	<b>0</b> No response was provided, or response did not show potential unintended consequences
	<b>1</b> The response identified potential unintended consequences that cover one or more <i>aspects: technical</i> and/or <i>contextual</i> (economic, political, environmental, social, time, etc) but did not consider <i>interaction</i> of different <i>aspects</i> and issues

# What are some examples of a plan demonstrating systems thinking principles?

- Collected information on many constructs and elements; a few examples:

Example Element	Example from Plans
Structural changes discussed in plans?	Forming a new crash analysis team– combining data across agencies to take a more holistic look at the problem & share info
Both technical and contextual elements in planned activities?	Where to place pedestrian islands & crosswalks (technical) and cultural competency trainings (contextual)
Interactions and feedback between technical and contextual issues discussed?	“A key element of ensuring comfortable and walkable neighborhoods are clean litter-free streets...Cleaner streets can kickoff a virtuous cycle for Vision Zero. Cleaner streets will lead to more people walking, which will lead to improved health outcomes and safety in numbers as pedestrian activity increases....”
Anticipate potential unintended effects of planned activities?	"Develop and implement trust building opportunities among law enforcement and low-income communities and communities of color, especially prior to deploying any additional traffic enforcement in these areas.”

# Results from systems thinking-related elements (n=26 plans)

- Some evidence of planning to intervene on road safety system “structure” (80%)
- 23% mentioned potential unintended effects that they needed to consider
- One third of plans talked about using evaluation data to adapt or change future plans (i.e., information feedback)
- 23% addressed larger Vision Zero sustainability in their community
- 30% of plans: no goals or goals with no timeline and 27% had both short- and long-term goals that considered technical and contextual aspects (remaining plans fell somewhere in between)
- 50% talked about shared responsibility of road safety/Vision Zero



# Aim 4/5: Make recommendations and disseminate findings

- Research brief
- Presentations
- Peer-reviewed publications – ideas?
  - Safety Science and Injury Prevention, Traffic Injury Prevention, Acc Analysis Prevention, Intl J Injury Control and Safety Promotion
  - Health related journals: Am J Public Health; J of Physical Activity and Health; J Public Health Mgmt Practice

# Vision Zero Plan Guide

- Developing a guide to help communities
  - Work on a new VZ plan
  - Revise an existing plan
- Incorporate good examples from existing plans



# Ideas for Future Work

- Pilot test and evaluate the VZ Plan Guide; revise accordingly
- Work with communities to use the Guide
- Examine whether systems science-informed methods, in conjunction with the Guide, improve plan formulation/refinement and the likelihood of plan execution
- Explore whether/how rural and suburban communities envision VZ; discover how plans differ based on their needs
- Evaluate whether communities with a VZ Plan, particularly a high quality plan, are more likely to reach their goal of zero serious traffic-related accidents and deaths

# Questions?

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## **Contact information**

- Kelly Evenson
  - Email: [Kelly\\_evenson@unc.edu](mailto:Kelly_evenson@unc.edu)
- Becky Naumann
  - Email: [rnaumann@email.unc.edu](mailto:rnaumann@email.unc.edu)