Vision Zero approaches that just might work in North Carolina

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5th Urban Street Symposium - Raleigh, NC

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What is "Vision Zero?"

"…a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all."

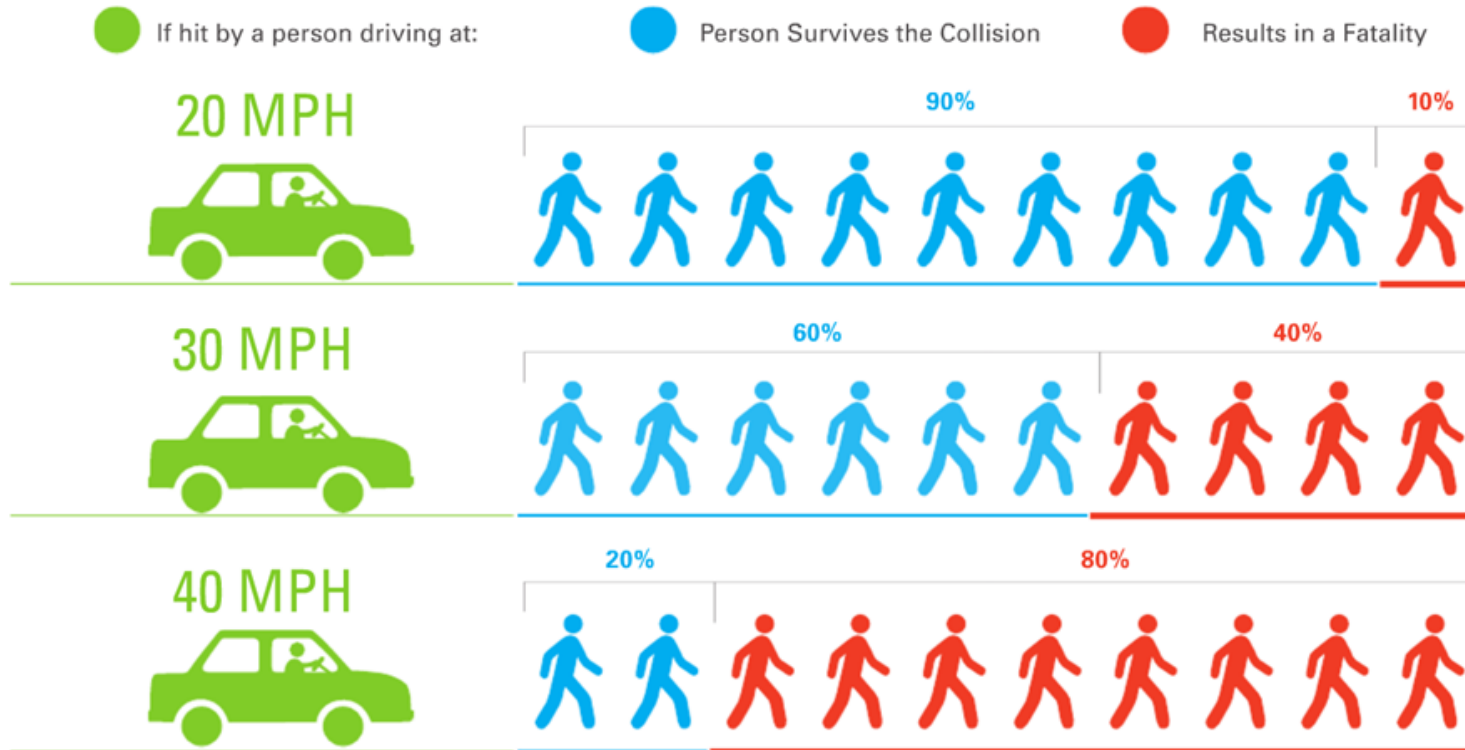Source: visionzeronetwork.org/about/what-is-vision-zero

Vision Zero's two "realizations"

1. people make mistakes

2. kinetic energy kills road users, not collisions per se

Thus, Vision Zero programs in cities tend to focus on tempering the ***absolute speed*** of vehicles

Why focus on speed?

Source: sfmta.com/projects-planning/projects/automated-speed-enforcement

Where did the "Vision Zero" idea come from?

- Sweden in 1997
- Based on the fact that **humans make mistakes**
- Designing the transportation system to manage kinetic energy in traffic systems through:
  - Vehicle design
  - Road design
  - Constant evaluation of system performance
- Education = driver education + training of planners and road designers (*Government Offices of Sweden, 2016*)

Australia's "Safe Systems" approach

- In 2004, Australian government developed a "safe systems" approach to road safety based upon Sweden's Vision Zero experience

- Accommodate **human error**

- Manage traffic speeds through **self-explaining** road designs

- Provide safety-related feedback to road users by ensuring alertness and rewarding compliance to safety laws and regulations (*McAndrews, 2013*)

What about in the US? Where did Vision Zero come from?

"The first, unprecedented, Pedestrian Safety Report and Action Plan examines over 7,000 records of crashes that have caused serious injuries or fatalities to pedestrians, and identifies underlying causes."
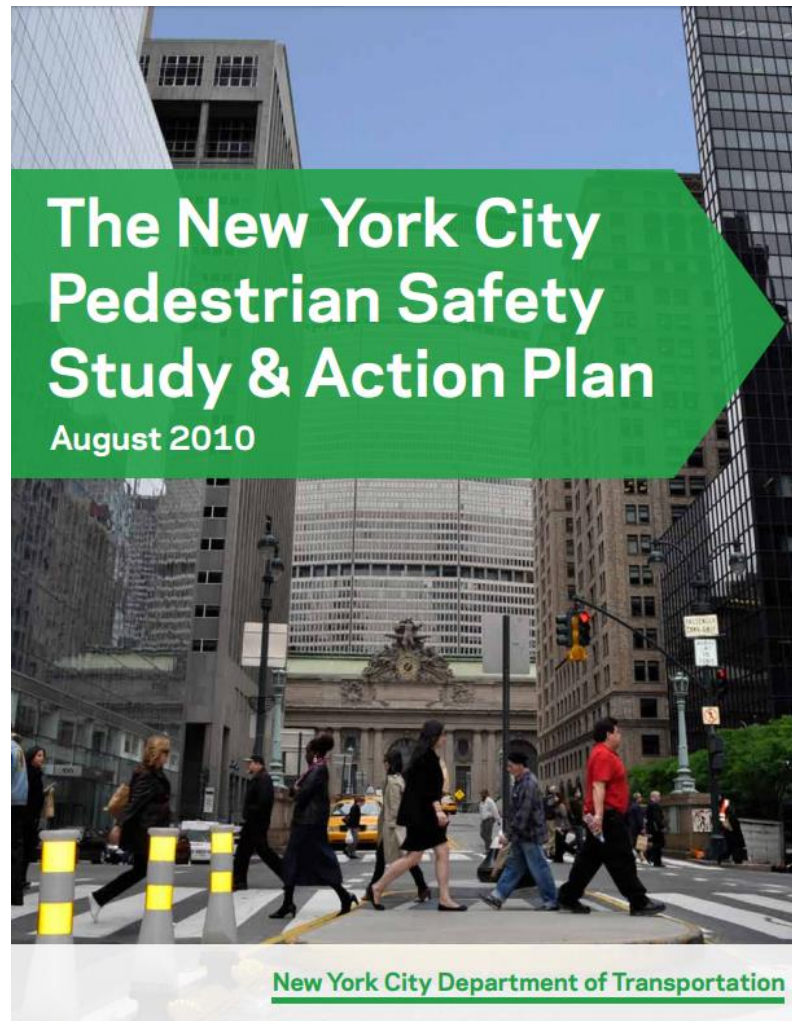
Source: nyc.gov/html/dot/downloads/pdf/nyc_ped_safety_study_action_plan.pdf

A recent research endeavor

- What do cities focus on with respect to Vision Zero? What are common barriers to implementation?

- How do cities address speeding?

- How does political will to advance Vision Zero come about?

- How does public support for Vision Zero come about?

With support from: **FiA FOUNDATION**

Data & methods: selection of cities

Involved:

• Crash statistics

• Geographic diversity

• Level of engagement with Vision Zero

For Lauderdale, FL

New Orleans, LA

New York City, NY

San Francisco, CA
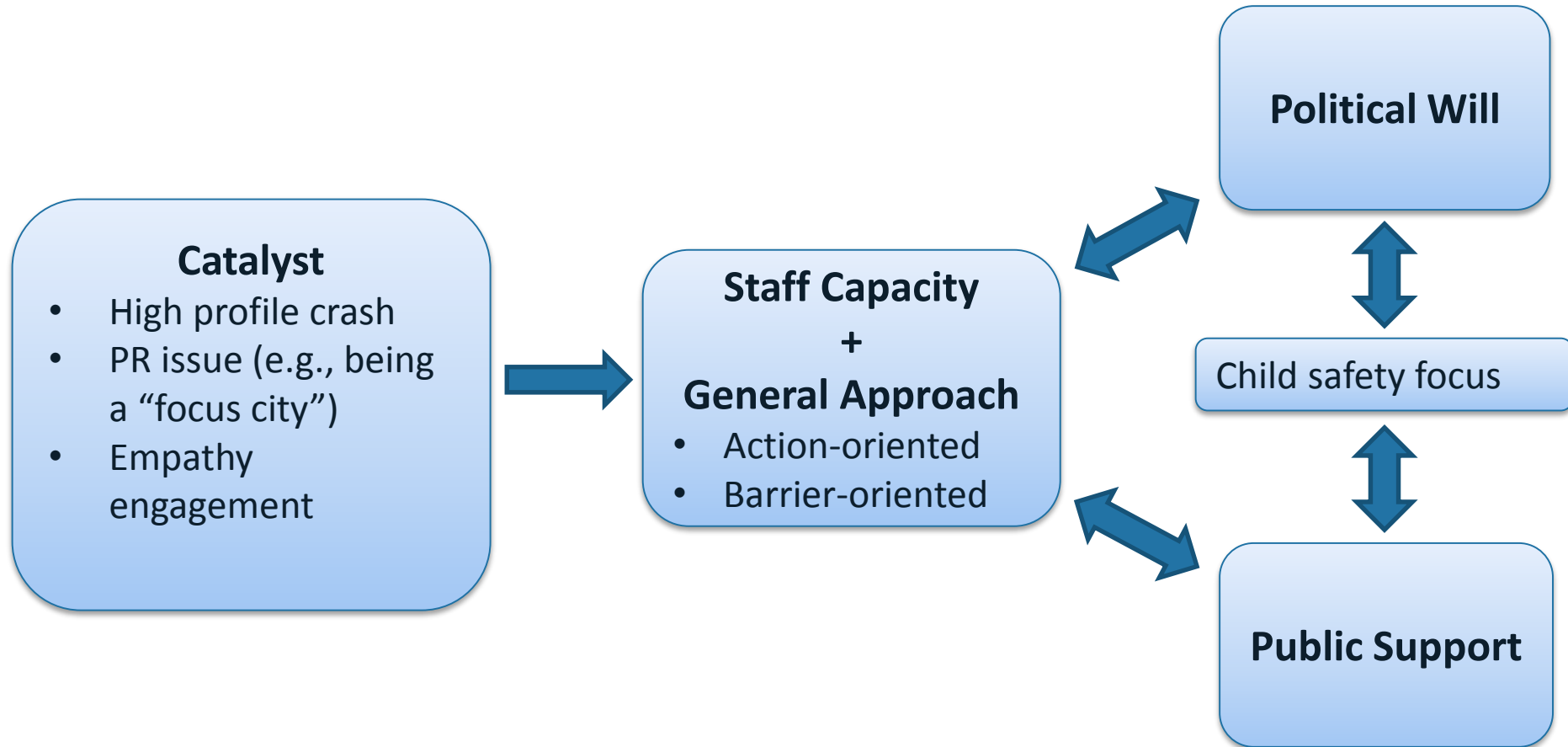
Seattle, WA

Washington, D.C.

Data & methods: data collection

- Semi-structured interviews with at least 3 stakeholders in each city, representing city staff and advocacy groups

- Focused on general safety and speeding issues, safety goals and strategies, political will, and public support

- Employed a "grounded theory analysis" of interview responses

Key findings

- All cities reported some level of using youth-related safety efforts to facilitate wider safety programs

- *Example:*
  - School-centered education and engineering projects that extend into surrounding neighborhoods

- Framing projects as school- or child safety-focused helps gain community support

Key findings

Catalyst
- High profile crash
- PR issue (e.g., being a "focus city")
- Empathy engagement

Staff Capacity + General Approach
- Action-oriented
- Barrier-oriented

Political Will

Child safety focus

Public Support

Catalyst for Vision Zero

Catalyst
- High profile crash
- PR issue (e.g., being a "focus city")
- Empathy engagement

"The death of a child walking across the street to catch a school bus inspired one Councilmember to set up the city's first School Transportation Safety Task Force. This task force brought attention to the issue of child pedestrian safety and resulted in a couple of SRTS infrastructure projects. The same Councilmember set up the city's "Pedestrian and Bicycle Safety Advisory Committee"—the first committee to make recommendations on pedestrian and bicycle safety in the city's history."

Staff capacity and general VZ approach

"Before Vision Zero, we were doing 40 – 45 projects a year. In 2016 [after Vision Zero had been underway for three years], *we completed 91 projects. There's just so much to do."*

> **Staff Capacity**
> **+**
> **General Approach**
> - Action-oriented
> - Barrier-oriented

"There is an institutional momentum in the city from the top that resists any changes from the status quo. This goes down to the staff and the few resources they get. It then becomes hard to know what the people in our city need."

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HIGHWAY SAFETY
RESEARCH CENTER

Political will for Vision Zero

"The Mayor's enthusiasm has cascaded down through the agencies. Most agencies are more engaged with Vision Zero than for most things they do. Plus, getting someone from another agency to answer the phone is easier with our Vision Zero plan."

Political Will

Public support for Vision Zero

"What the public expects us to do has changed. Safety projects and traffic calming have become more mainstreamed. We get a lot of requests for slow zones around the schools. And we really don't get a lot of push back in these areas."

Public Support

A focus on child safety in VZ programs

"There are three reasons we focus on children first:

1. *No one wants children to be unsafe. Plus, in our city, kids will be traveling on their own by the time they're in seventh grade;*

2. *Schools are our only mandated audience; and*

3. *Since our schools are scattered across the city, making adjustments to school zones affects entire neighborhoods."*

Child safety focus

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RESEARCH CENTER

How cities have gotten to Vision Zero

- They:
    - Began with a focus on youth

    - Capitalized on a sense of urgency to act

    - Dedicated funding and staff resources toward improving safety for all road users

North Carolina's approach to Vision Zero

NC Vision Zero Principles

- All road users deserve safe streets

- No loss of life on our roads is acceptable

- Injury or death is **not** an inevitable price to pay for mobility

Source: ncvisionzero.org

NC Vision Zero focus areas

Source: ncvisionzero.org/safety-focus/

Safety campaigns that started in NC

Source: ncdot.gov/programs/GHSP/initiatives/

Other noteworthy NC initiatives

Division of Bicycle & Pedestrian Transportation

BICYCLE AND PEDESTRIAN PLANNING GRANT INITIATIVE

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF BICYCLE AND PEDESTRIAN TRANSPORTATION
AND TRANSPORTATION PLANNING BRANCH

Winner of the 2010 FHWA Transportation Planning Excellence Award (source: https://www.fhwa.dot.gov/planning/tpea/2010/).

Let's Go NC!
A Pedestrian and Bicycle Safety Skills Program for Healthy Active Children

Source: connect.ncdot.gov/projects/BikePed/Pages/LetsGoNC.aspx

safe routes to school
north carolina
DEPARTMENT OF TRANSPORTATION

Source: https://connect.ncdot.gov/projects/BikePed/Documents/NCDOT_SRTS_Description.pdf

ACTIVE ROUTES TO SCHOOL

A North Carolina Safe Routes to School Project

Source: communityclinicalconnections.com/What_We_Do/Active_Routes_To_School/index.html

WATCH FOR ME — NC

Source: watchformenc.org

NCDOT's Bike Helmet Initiative

Source: ncdot.gov/bikeped/safetyeducation/helmet_initiative/

What do each of these initiatives have in common?

Given NC Vision Zero's focus areas

Source: ncvisionzero.org/safety-focus/

Where might NC head next?

Some ideas:

- Re-invigorate NC's Complete Streets program

- Incorporate systemic safety analysis into NC's project prioritization

- Monitor and evaluate safety-based progress

- Dedicate funding to safety infrastructure

# Re-invigorate its Complete Streets program

Source: completestreetsnc.org/

Further, implement safety infrastructure that we know reduces crashes. For example:

road diets;

roundabouts;

speed cushions;

leading pedestrian intervals (LPIs);

automated speed enforcement;

protected, separated bike lanes;

sidewalks;

progressive ticketing approaches to reduce speeding;

raised median islands, etc.
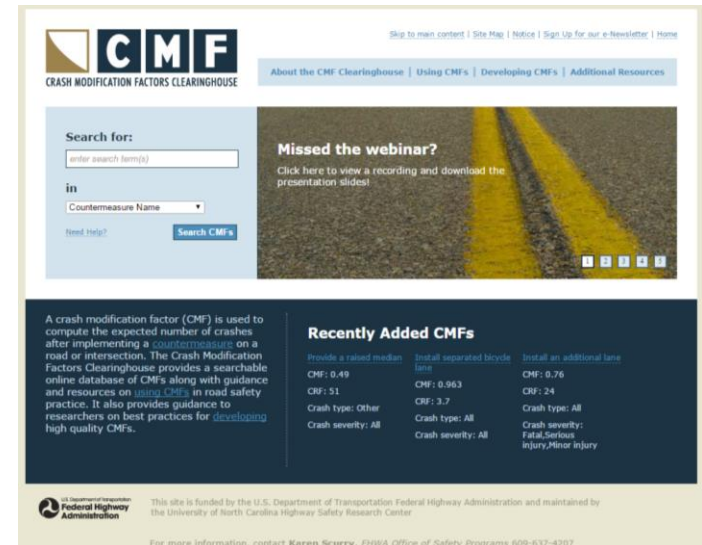
Source: cmfclearinghouse.org
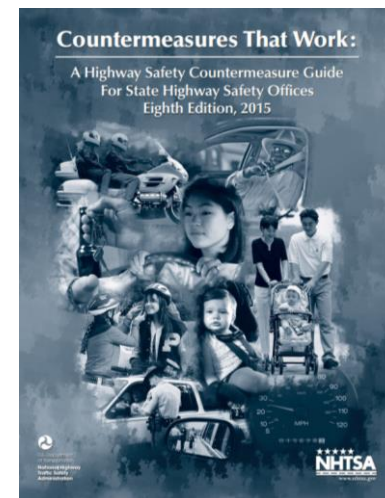
Source: nhtsa.gov/sites/nhtsa.dot.gov/files/812202-countermeasuresthatwork8th.pdf

And…

- **Graduated driver licensing** (GDL) – not about driver age, but about driving experience

- **High visibility cell phone enforcement** – about the perceived risk of a ticket

- **Pedestrian safety zones** – targeting enforcement and community-driven education in specific geographic areas

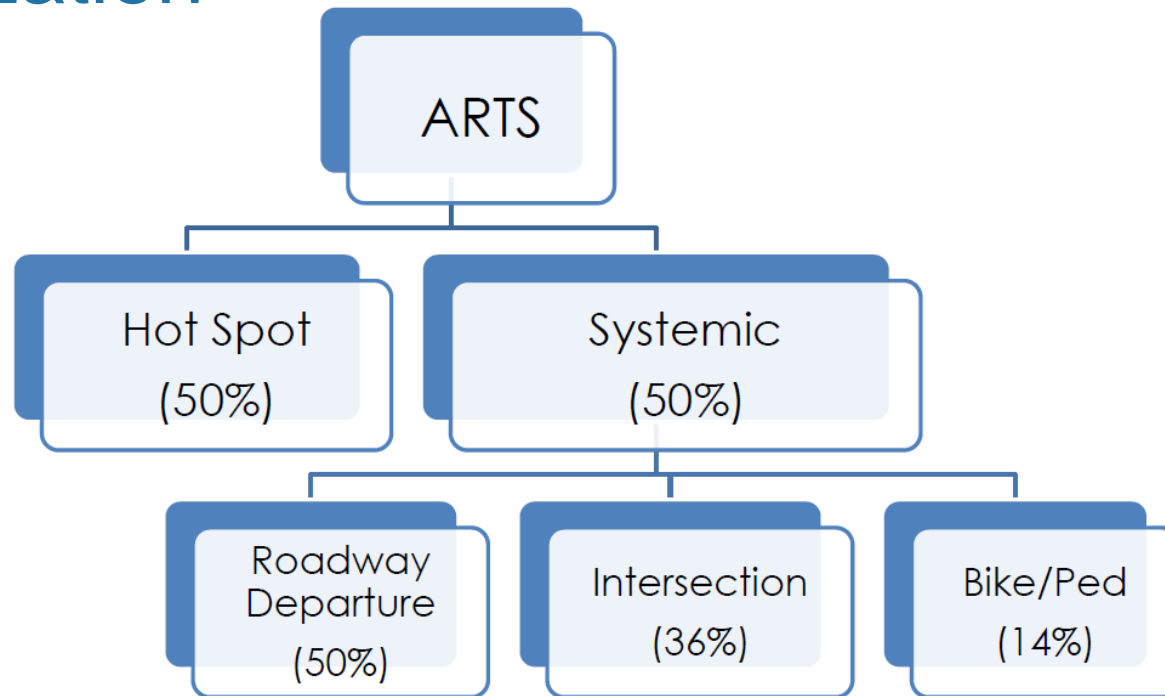- **Bicycle helmet laws** that are enforced

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- **Incorporate systemic safety analysis into prioritization**

- Monitor and evaluate safety-based progress

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Incorporate systemic safety analysis into prioritization

Numbers in ( ) represent approximate funding split (statewide)

Oregon Department of Transportation's "All Roads Transportation Safety (ARTS) Program"

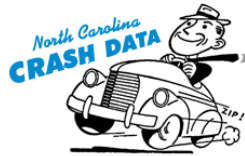Source: oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/Pages/ARTS.aspx

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- **Monitor and evaluate safety-based progress**

- Dedicate funding to safety infrastructure

Monitor and evaluate safety-based progress

The accuracy of any report or opinion based on the use of these data tables is the responsibility of the user.

Please answer two questions to help us improve our site!

CREATE A DATA TABLE

If you need help filling out this form, you can visit the Help page or click on the question mark icon beside any question.

Datasets

? Include data from the years   (○ check all years ○ uncheck all years)   ☐ Combine years in table

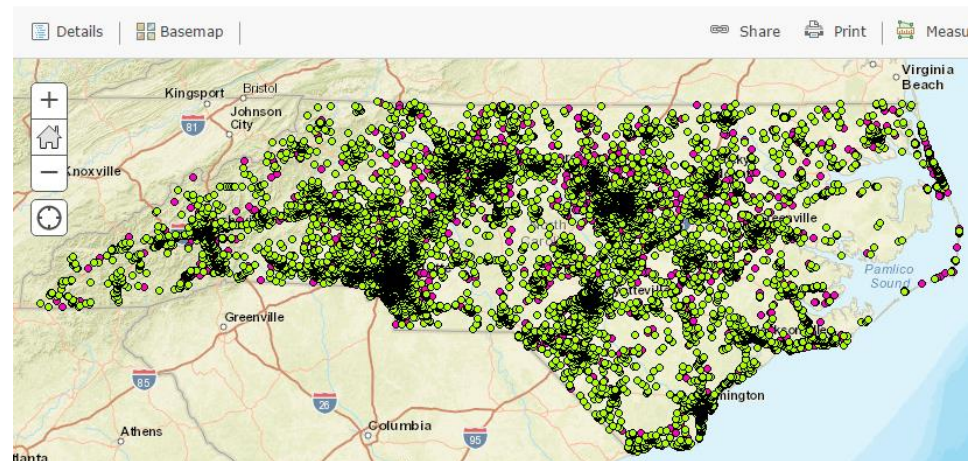☐ 2001 ☐ 2002 ☐ 2003 ☐ 2004 ☐ 2005 ☐ 2006 ☐ 2007 ☐ 2008 ☐ 2009 ☐ 2010 ☐ 2011 ☐ 2012 ☐ 2013 ☐ 2014 ☑ 2015

? I want counts of ● Crashes ○ Vehicles ○ People

? ☐ Include non-reportable crashes

Source: nccrashdata.hsrc.unc.edu/datatool.cfm

Systemic, risk-based safety assessment?

Home ▾   NCDOT Bicyclist and Pedestrian Crash Map

Details | Basemap | Share Print Measu

Source: ncdot.maps.arcgis.com

Where might NC head next?

Some ideas:

- Re-invigorate its Complete Streets program

- Incorporate systemic safety analysis into prioritization

- Monitor and evaluate safety-based progress

- **Dedicate funding to safety infrastructure**

Dedicate funding to safety infrastructure

- How projects are prioritized for funding:
  - **Statewide Mobility** (across the state); **Division Needs** (within one of 14 DOT Divisions); and **Regional Impact** (competition within Divisions)

REVENUE DISTRIBUTION

30% Division

40% Statewide
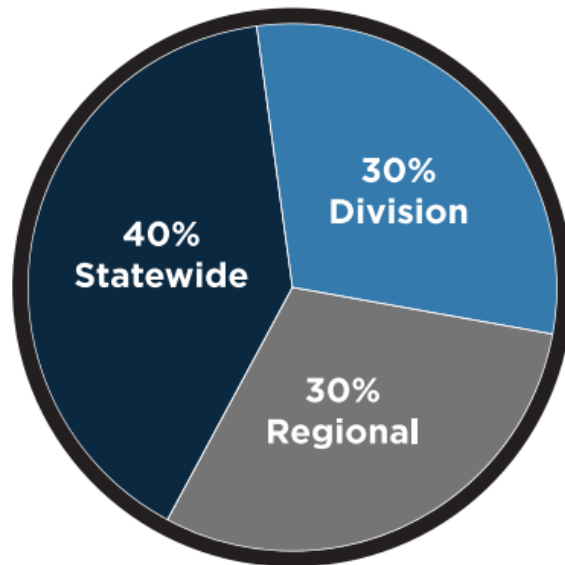
30% Regional

How does **safety** factor in?

- **Statewide Mobility: 15%**
  - *congestion* = 30%

- **Division Needs: 10%**
  - *congestion* = 15%

- **Regional Impact: 10%**
  - *congestion* = 20%

Source: ncdot.gov/download/strategictransportationinvestments/P4_Fact_Sheet.pdf

And stop committing resources to interventions that do not work

For example, "voluntary action programs"

NCHRP
REPORT 622

NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

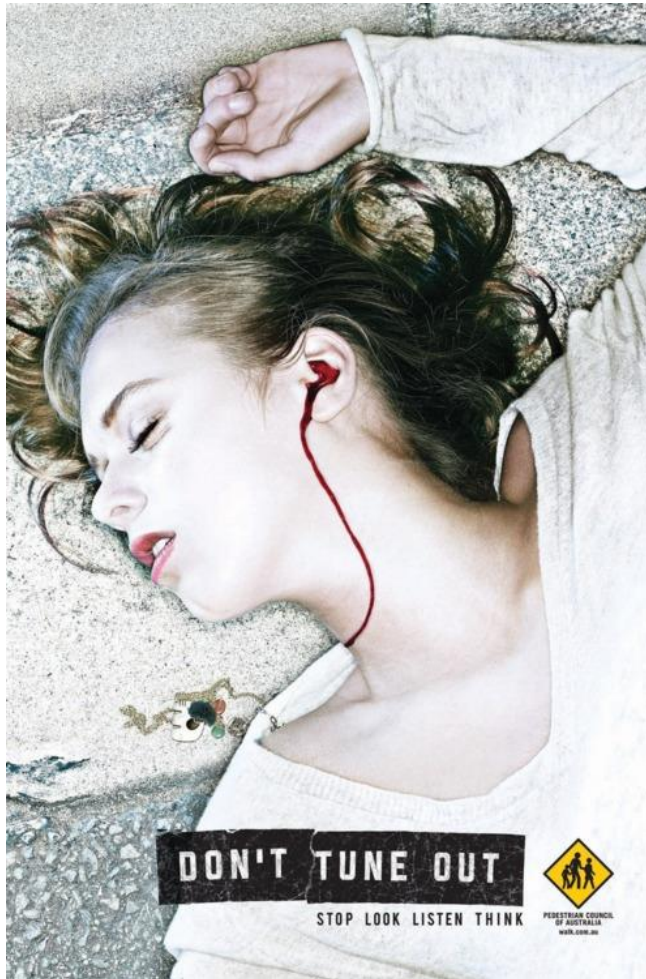**Effectiveness of Behavioral Highway Safety Countermeasures**

*"Many voluntary action programs **have long been known to be ineffective**, but their popularity remains. Exhorting people to take some preferred health action for their own benefit **is easy to do** and **gives the appearance of doing something important** for society; sometimes these efforts are referred to as **feel-good programs**" (p. 25)*

Especially fear appeals, as they can potentially increase undesirable behaviors
(Wundersitz, Hutchinson, & Wooley, 2010)

#YOLOwalksafe

Smart phones can make you do stupid things.

Keep your head up and your phone down while crossing the street.

MCDOT / MCPS

Source: montgomeryschoolsmd.org/safety/index.html

Yet, we see these campaigns everywhere

DON'T TUNE OUT

STOP LOOK LISTEN THINK

PEDESTRIAN COUNCIL OF AUSTRALIA
walk.com.au

Source: walk.com.au/pedestriancouncil/Page.asp?PageID=6349

HOW TO NOT GET HIT BY A CAR

7 COMMON WAYS IT HAPPENS

EASY TIPS TO KEEP IT FROM HAPPENING TO YOU.

Source: safekids.org/howtowalk/#begin

We know enough to start significantly improving safety now

Source: pedbikeimages.orgc

So let's work together to make Vision Zero in North Carolina a reality

Source: Robert Williams

Thank You

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