



Data in Motion:

New York City's Speed Camera Program, 2014-Present

Research on the Road 2021

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Speed management

Possibly our most important tool in Vision Zero

Safe System Approach:

1. To err is human
2. Road design should be “forgiving” of those errors

Human body can only
withstand so much

Lower speed = lower harm

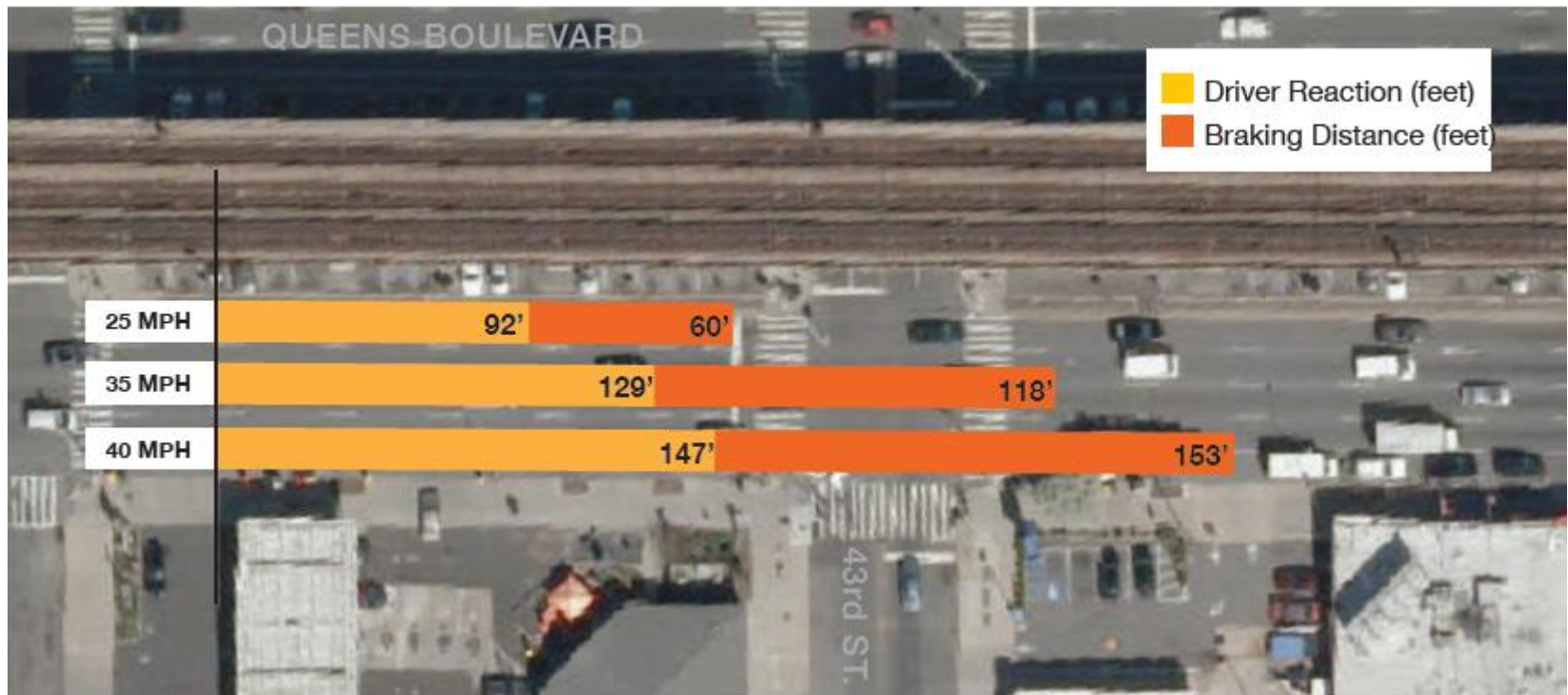


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Speed Limit Reduction

Small change, big impact

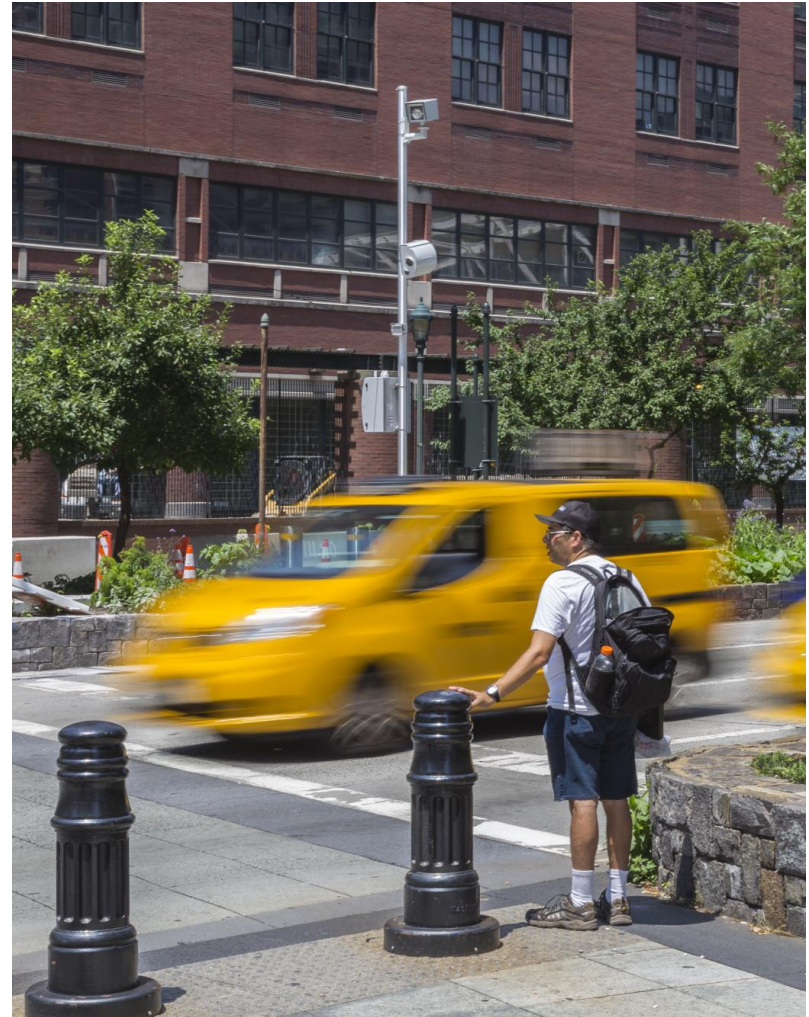
- 2014: Default speed limit set at 25 mph
 - Minor difference in speed can mean large change in stopping distance
 - Risk of pedestrian death halved



Automated Speed Enforcement

World's Most Extensive Speed Camera Program

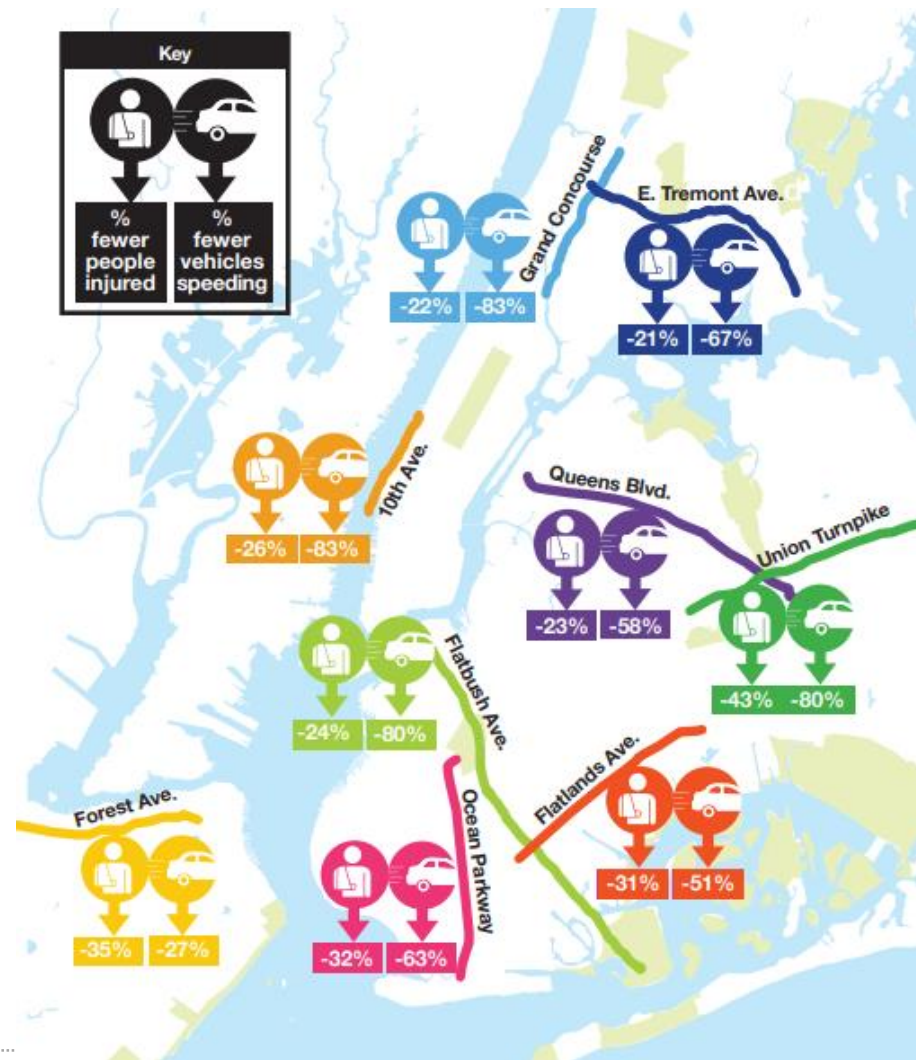
- 750 school speed zones
 - Quarter-mile around school building
 - Multiple cameras allowed per zone
 - Approximately 1300 cameras and counting
- In operation 6 AM – 10 PM, weekdays, year-round
- Triggered at 10+ mph over speed limit
- \$50 fine issued to registered owner
 - Driver not identified, so no points on license
- Siting determined by data on speeding and pedestrian injury crashes



The Bottom Line: It Works

Results

- Speeding has fallen **71.5%** at camera locations.
- Injuries down **17%**.
- In 2019, two-thirds of vehicles that received one violation did not receive another.
 - After major expansion of location and hours by 2020, still over half of violators did not receive a second ticket
- Only 0.1% of violations have been overturned since the start of the program in 2014.



How Did We Get Here?

Working with the State and Advocates

NYC could not create its own speed camera program – had to be authorized by State Legislature.

NYC DOT has strong relationship with street safety advocacy groups who maintained pressure on elected officials with coalition-building and personal stories.

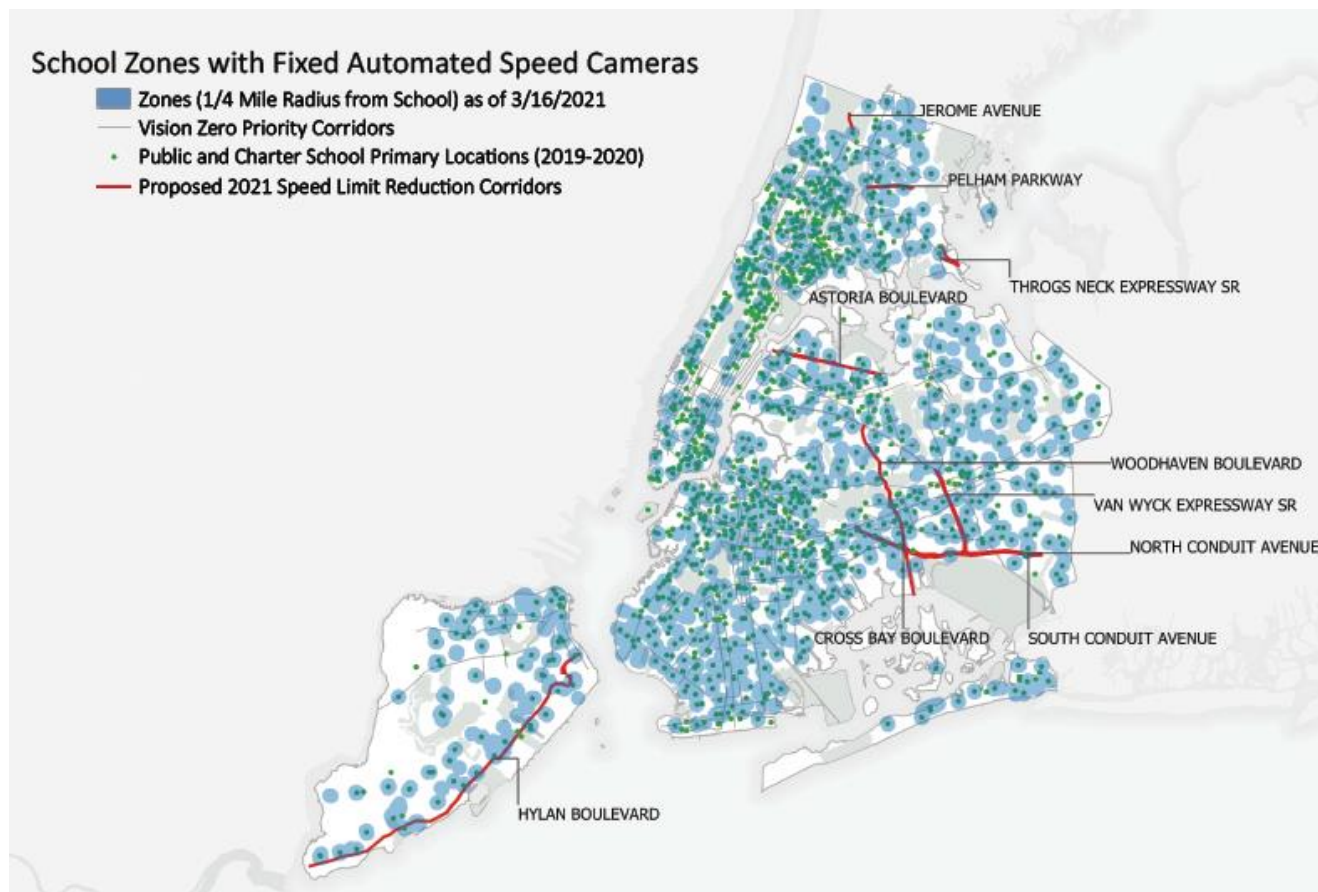
- Began as a pilot program at 20 locations in 2014
- Increased to 140 locations mid-2014
- Program expired in 2018
- New Legislature passed extensive expansion in 2019



Who gets a camera?

The inherent equitability of our data-based approach

- Speed data derived from citywide telematics
- Pedestrian KSI
- Likely to be overlap with historic planning inequalities
- Neither a perk nor a punishment

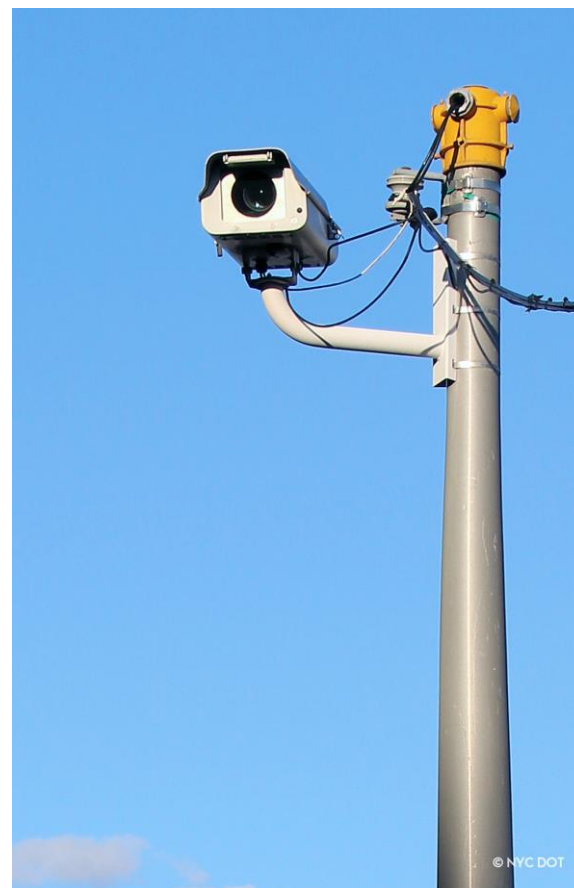


Data leads the way to the future

2020: A year like no other

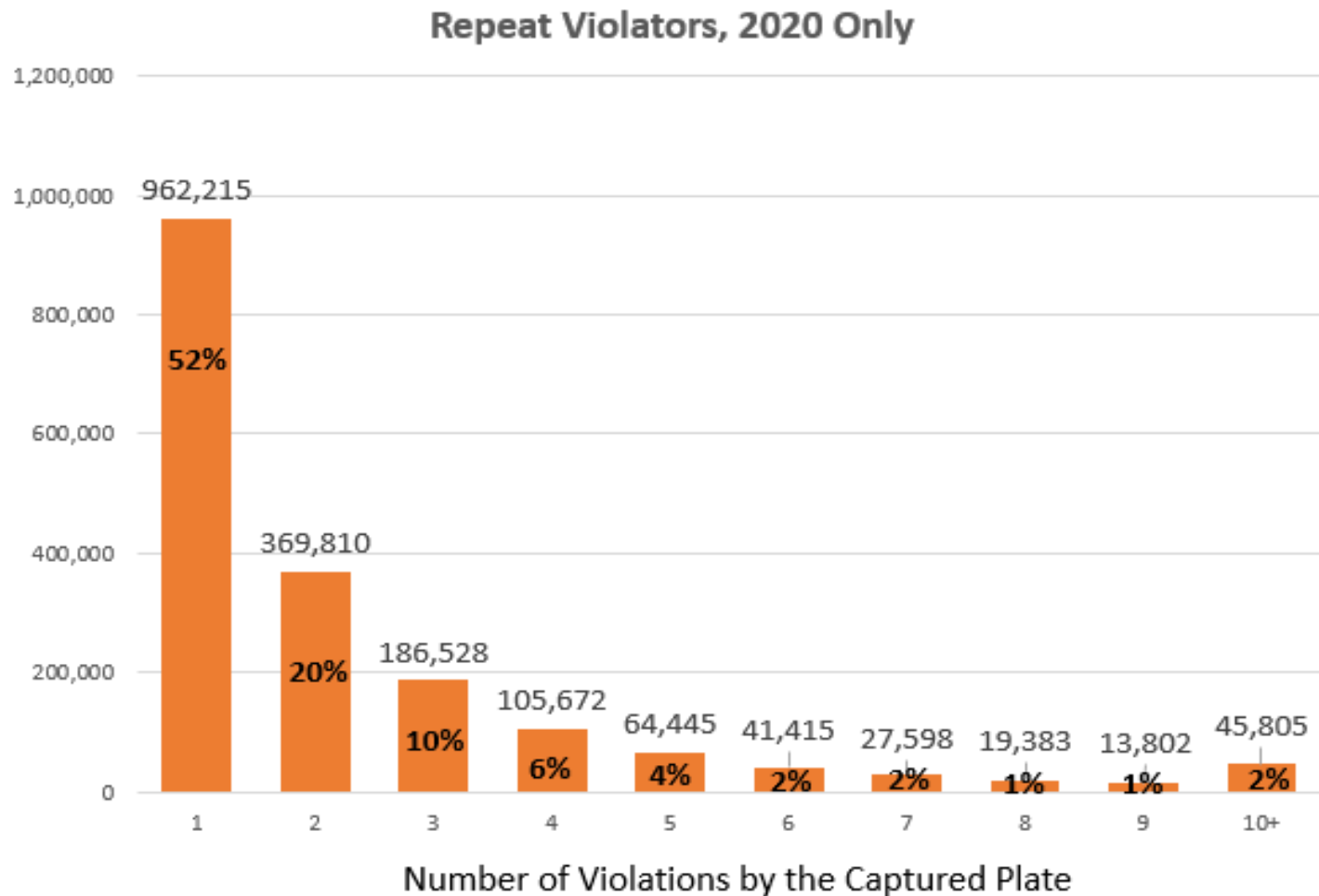
Covid-19: Increase in speeding on emptier roads; major jump in motor vehicle occupant and motorcyclist deaths

- 75% of fatalities happened in places, or at times, when no speed camera was in operation (on highways, in the overnight hours: 10pm-6am, or on weekends).
- 35% of non-highway fatalities happened within school zones with cameras, but at times when the cameras were not in operation



Those persistent challenges...

What to do about hardcore recidivists?



Digging into data

NYC DOT and the University of Chicago

- Began collaboration in 2019 with UChicago Energy and Environment Lab
- Established link between the number of red light and speed camera violations and increased risk of traffic injury
- History of red light camera violations were shown to be more predictive than speed camera violations with regard to involvement in an injury crash

Data for policy evaluation

Local Law 36 of 2020

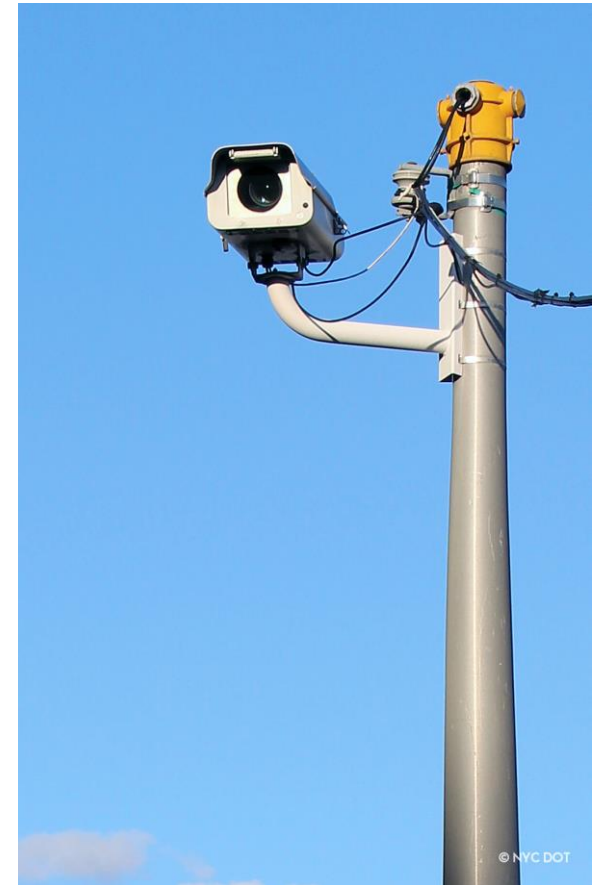
- Dangerous Vehicle Abatement Program created by City Council
- Registered owners of vehicles with excessive speed or red light camera tickets will be required to take a safe driving class or risk the car being impounded
- DOT is creating program with a specialized restorative justice education provider
- DOT required to issue a report evaluating outcomes, including recidivism, and how certain driving behaviors correlate with crashes

Legislative proposal

Working Towards 24/7 Operation

S5602/A6681

- 24/7 speed camera operation in NYC
- Escalating penalties, up to 90-day registration suspension for six violations in two years
- Allows records to be shared with insurance companies



Data-driven policy wish list for research

Should the legislation pass, we would want to learn...

- What is the “tipping point” fine amount that deters the average recidivist driver?
 - Do drivers with 10+ speed camera tickets have less cost sensitivity than those with fewer?
- Would having a “sliding scale” based on income change recidivism?
- What is the profile of drivers who speed overnight compared to during the day?
- How do insurance sanctions compare to a direct fine when it comes to recidivism?



Summing it up

Or, Against New York Exceptionalism

- Initiating a Vision Zero program created the **mandate for action**
- Keeping a **data-driven approach** central to Vision Zero's identity laid the groundwork for focusing on speed management
- Clear, convincing, trustworthy **statistics** made the case for necessity
- Advocates who **humanized** the statistics created political momentum
- Ample, continuous **communication and outreach** convinced the public speed cameras and their penalties were fair, effective, and reasonable
- **Re-examination of data** perfects the program and allows it to meet our needs

Policy needs data but data isn't everything

In praise of a multi-faceted approach to Vision Zero

- Engineering
- Enforcement
- Education
- Multiple agencies
- Comprehensive initiative



Thank You!

Questions?

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