

VISION ZERO IN NYC

NYC'S DATA DRIVEN APPROACH TO SAVING LIVES

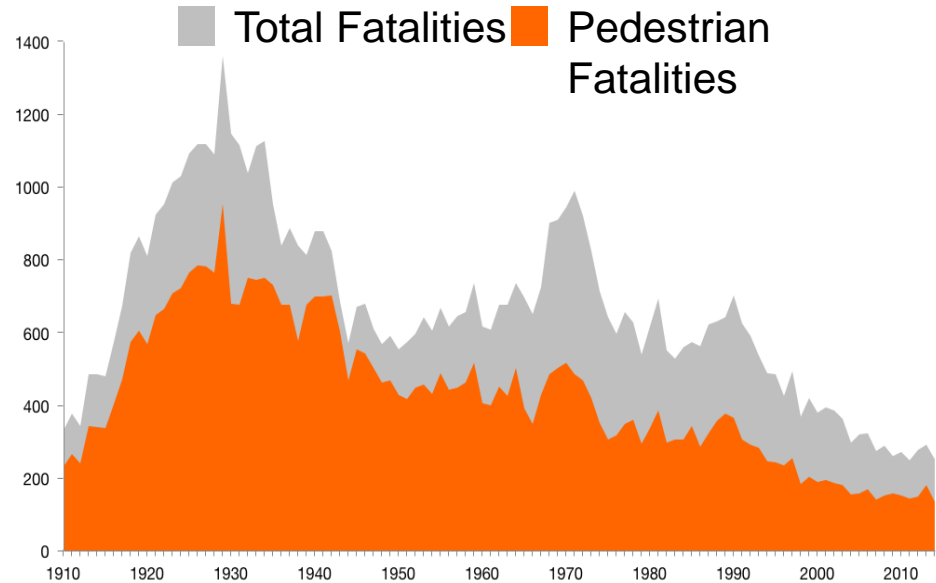
Translating Injury Science into Prevention Symposium
May 2017



TRAFFIC SAFETY IN NYC

Context

- Traffic fatality rate in NYC is 4x lower than the national rate
- 63% of the fatalities in 2016 were pedestrians
- Traffic fatalities in NYC have been declining from their peak in the 1920s
- 2016 had the lowest number of fatalities on record



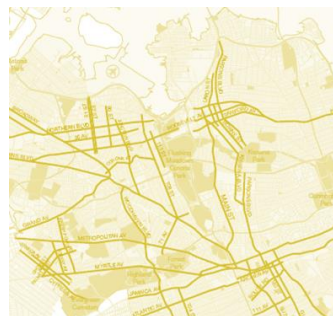
VISION ZERO NYC

Public Policy + Mindset Change

- Lead by City Hall
- Prominent
- Multi-Agency
- Funded
- Comprehensive



LEGISLATION



PLANNING



ENFORCEMENT



ENGINEERING



EDUCATION

VISION ZERO NYC

Key Features

- **Legislation:**
 - 25 mph speed limit November 2014
- **Planning:**
 - Borough Pedestrian Safety Action Plans
- **Enforcement:**
 - Focus on the most dangerous behaviors
- **Engineering:**
 - Increasing the number of safety focused projects
- **Education:**
 - Targeted outreach



DATA

Using Data to Support Projects

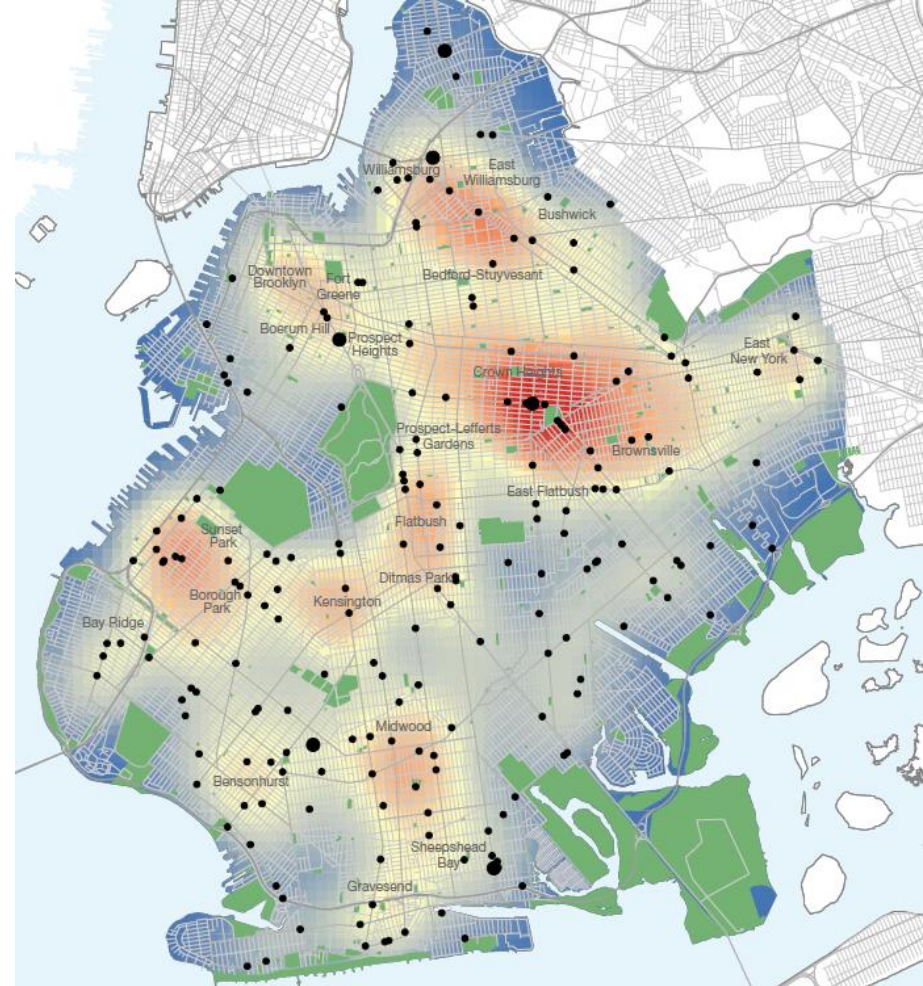
- Diverse data sources support diversity of projects and programs
- Basis of key initiatives and studies
- Data drives both where and what for projects



SAFETY DATA

Crash and Behavior

- Crash data
 - NYSDOT/NYS DMV
 - NYPD
 - CIS fatality reports
- Behavior data
 - GPS
 - Radar speeds
 - Resident identified problems
- Enforcement data
 - Traffic violation data
 - Camera enforcement data
- Performance data
 - Travel times
 - Traffic volumes



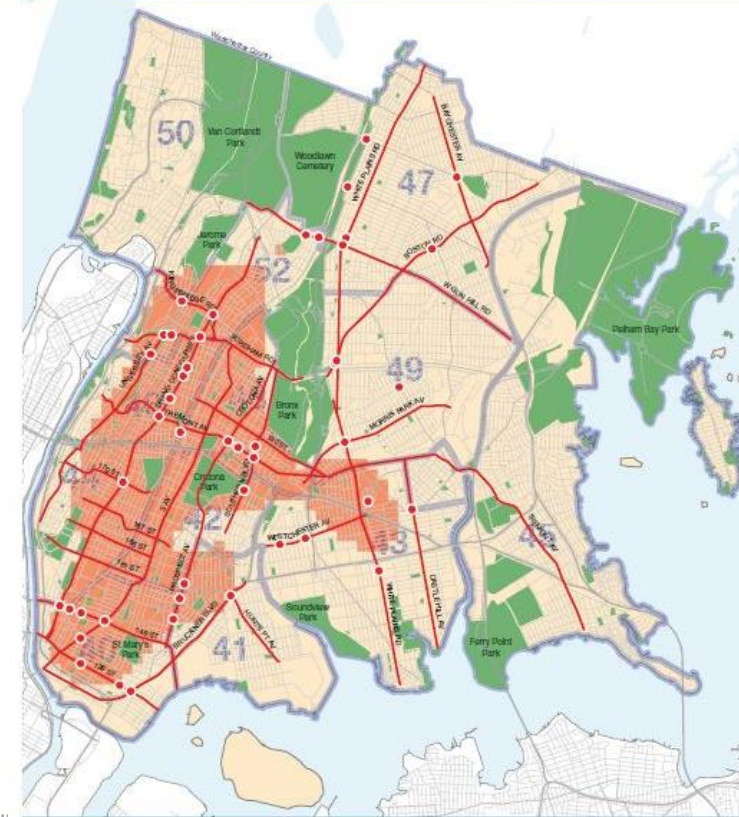
ANALYSIS AND PLANNING

Targeted Projects

- Vision Zero Priority Areas
- Corridors, Intersections and Neighborhoods
 - 443 miles of Priority Corridors
 - 292 Priority Intersections
 - 56 square miles of Priority Area
 - 4,622 KSI
- Target safety interventions to the locations most in need

	Share of Borough	Borough	% of Borough	Share of Total Ped KSI	Total Ped KSI	% of Total Ped KSI	% of Total Ped Fatalities
Priority Corridors	25 corridors (65 street miles)	791 miles	8%	534	1,041	51%	44%
Priority Intersections	48 intersections	6,438 intersections	1%	159	1,041	15%	8%
Priority Areas	8 sq miles	42 sq miles	20%	521	1,041	50%	31%
Combined Total	—	—	—	774	—	74%	61%

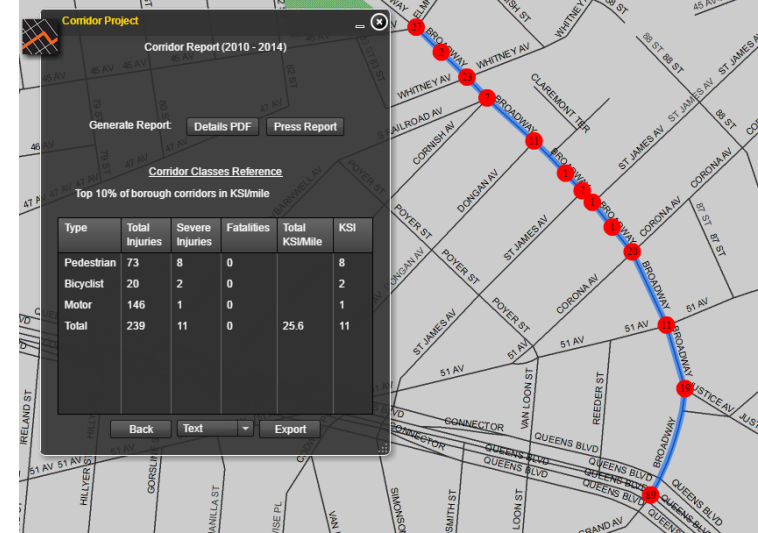
*Due to overlapping geographies, the combined total of pedestrian KSI is less than the sum of pedestrian KSI for the Priority Corridors, Intersections, and Areas.



ANALYSIS AND PLANNING

Project Development

- Project selection
- Project design responds to crash characteristics of location
 - Number and severity of crashes
 - Type of crashes
 - Time of day
 - Location characteristics



Pedestrian Crashes by Control and Pedestrian Action, 2010-2014

	Number of Crashes	Percent of Known Crashes	Percent of Known Crashes(Boro)
Signalized Intersection: Crossing With Signal	34	54.8%	39%
Signalized Intersection: Crossing Against Signal	7	11.3%	9.5%
Stop-Controlled Intersection / Crosswalk	0	0%	9.1%
Other Actions/Uncontrolled Intersection	16	25.8%	30.4%
Midblock	4	6.5%	12%
Other Control Types	1	1.6%	0.1%
Total Known	62	100%	100%
Unknown/Indeterminate	8	N/A	N/A
Total	70	N/A	N/A

Source: Injury data: NYSDOT/NYS DMV Accident Database
 Fatality data: NYCDOT/NYPD Reconciled Fatality Database

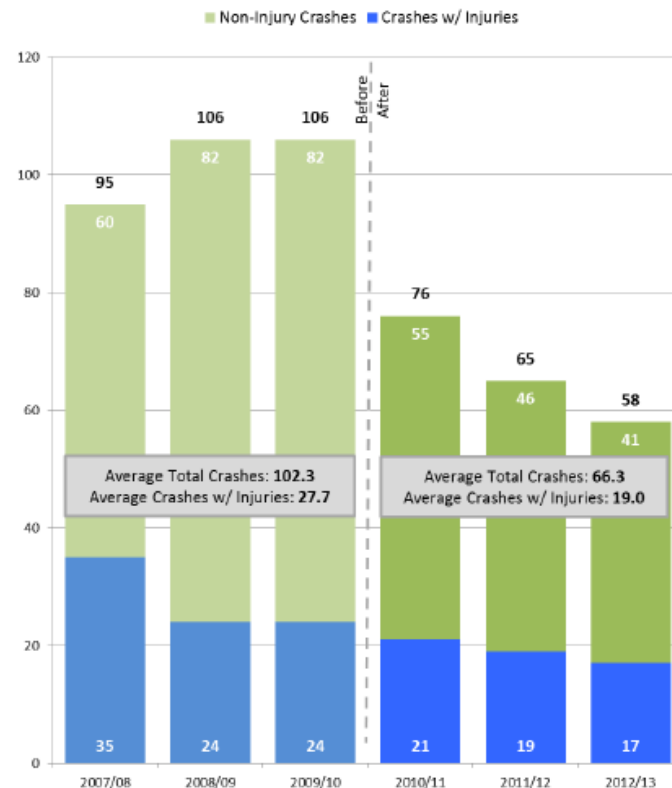
PROJECT PERFORMANCE

Evaluation

- Simple, easy, and standardized before / after analysis
- Revisit project design in response to the outcomes of monitoring
- Before and after comparisons are conducted on
 - Safety data
 - Speeds
 - Traffic volumes
 - Travel times

Crashes, Three-Year After Analysis

W. 6th Street (65th St. to 86th St.)

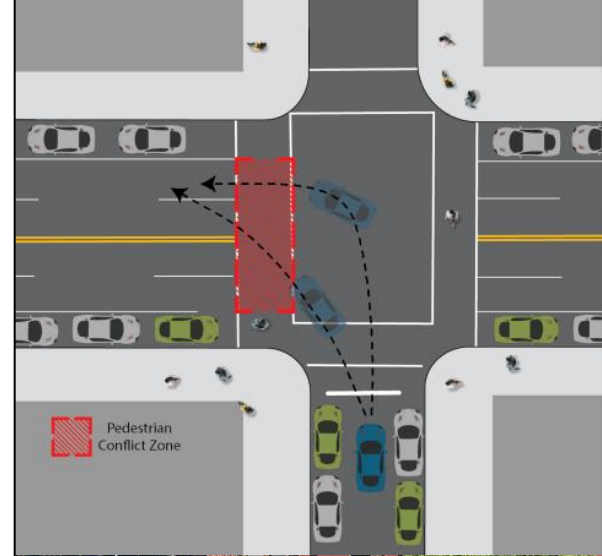


"Each before year period is the 12-month period beginning May 1 and ending April 30. The 3-yr after period is July 1, 2010 to June 30, 2013. The implementation period of May 1 to June 30, 2010 is excluded. Source: NYPD AIS/TAMS Crash Database"

RESEARCH

Program Development

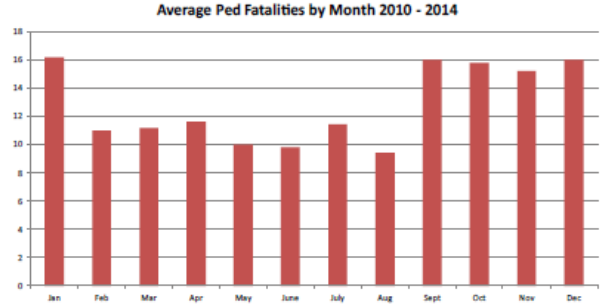
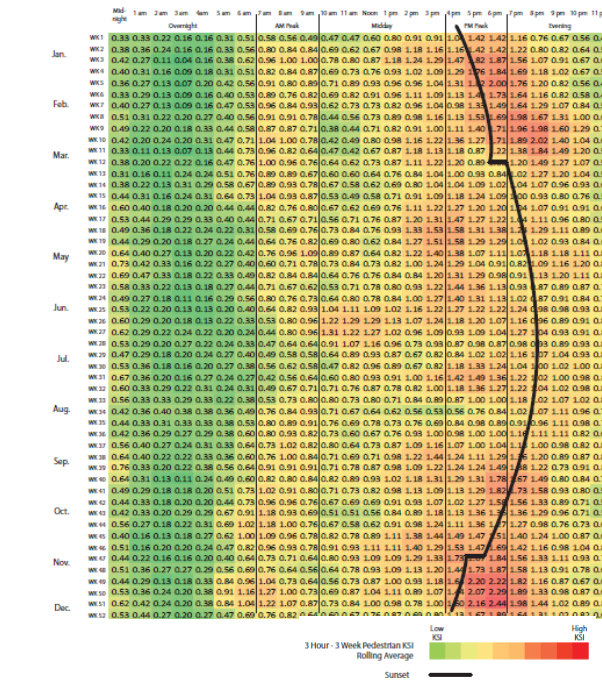
- Left turn study: Analysis of locations with the greatest concentration of left turn injuries:
 - Vehicle was coming from the minor approach
 - Vehicle was coming from one-way street
 - Receiving street was 60' or wider two-way street
- Left Turn Study Treatment Analysis Results
 - Median speeds -24.4 %
 - Maximum speeds -18 %
 - Vehicles crossing double yellow line -97.6%



RESEARCH

Targeted Enforcement

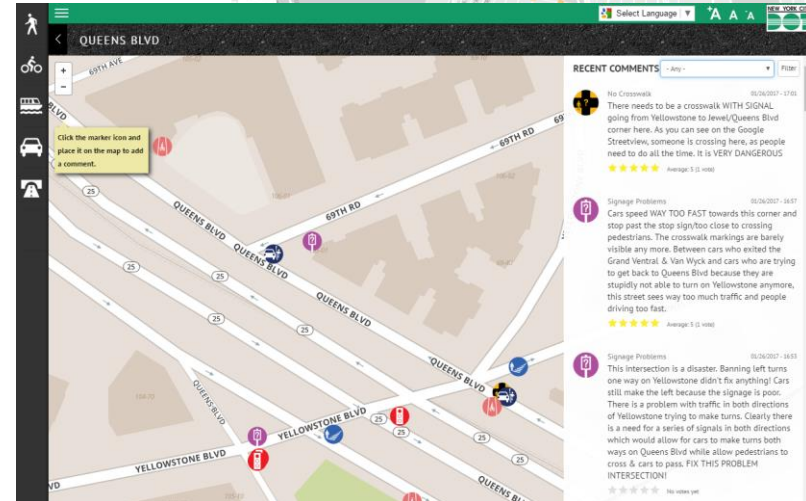
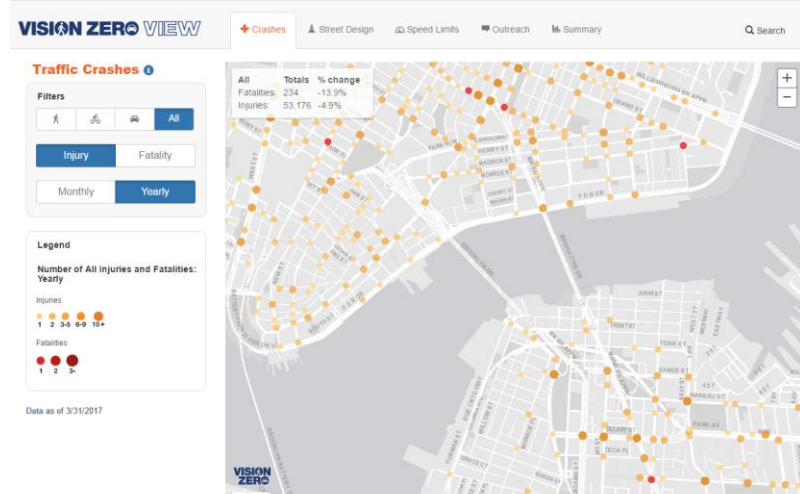
- 50% increase in winter pedestrian fatality rate
- 40% increase in early evening pedestrian KSI in Fall and Winter
- Increased Evening/ Nighttime Enforcement
- Focus on Priority Locations



COMMUNICATION

Public Data

- Vision Zero View
 - Informed requests
 - Independent research
- Project based public engagement mapping apps
 - Structured public comments
 - Analysis to inform decisions



PROCESS

Queens Blvd Project Development

- VZ Priority areas
 - Priority Corridor
 - 8 Priority Intersections
 - Priority Zone
- Queens Blvd crash history
 - 12 pedestrian fatalities
 - 182 KSI
 - 2,896 total injuries
- Data identified problems
 - Bicycle and pedestrian safety
 - Insufficient crossing time
 - Motor vehicle speeds
 - Transitions between main line and service road



PROCESS

Queens Blvd Project Evaluation

- Project benefits:
 - Calms service roads
 - Reduces speeding
 - Shortens crossing distances
 - Safe convenient bicycle travel
 - Safer vehicle transitions
- 1 year after analysis
 - Decreased crashes by 14%
 - Pedestrian injuries decreased by 49%
 - Cyclists injuries decreased by 42%
- 0 fatalities since implementation

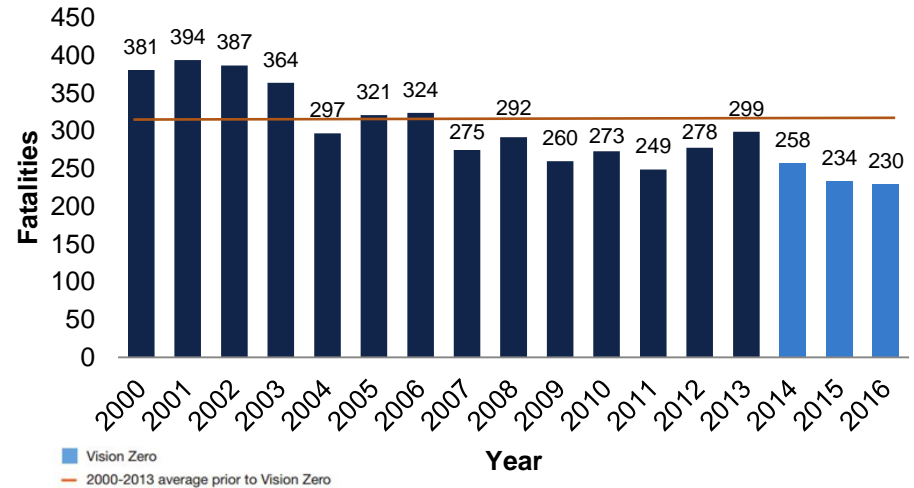


PROGRESS

Continued Safety Gains

- 2016 had the fewest traffic fatalities on record
- Since Vision Zero: safest three-year period in the City's history

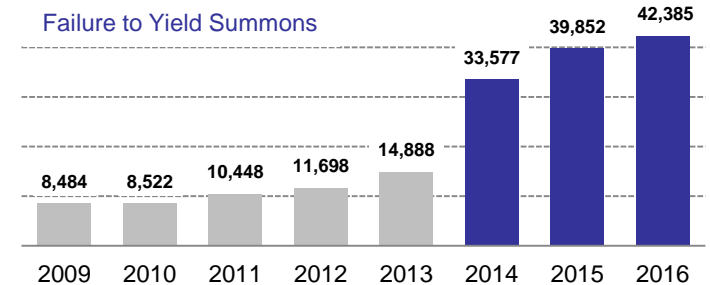
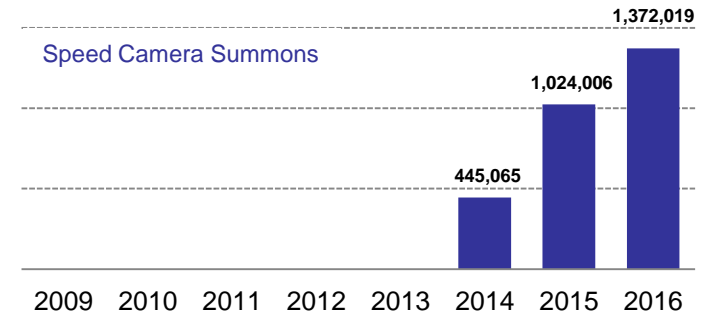
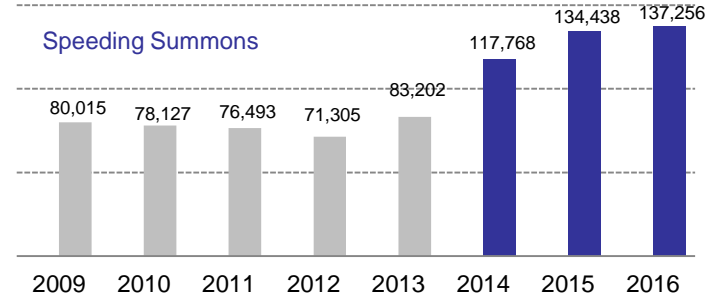
NYC Traffic Fatalities 2000-2016



PROGRESS

Enforcement

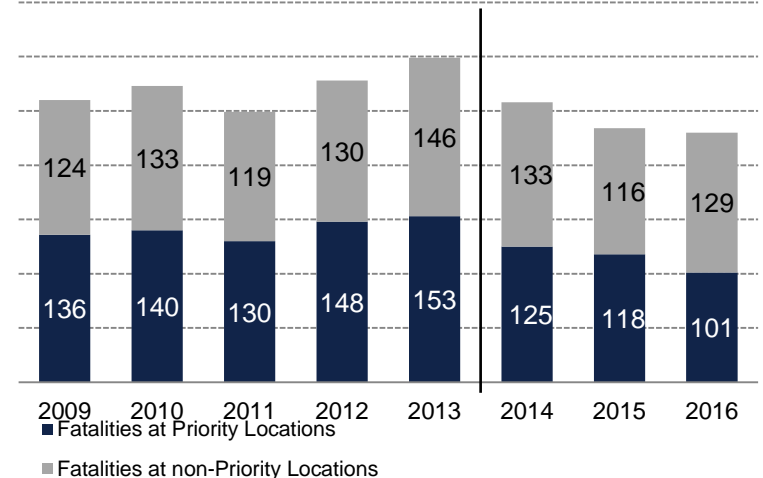
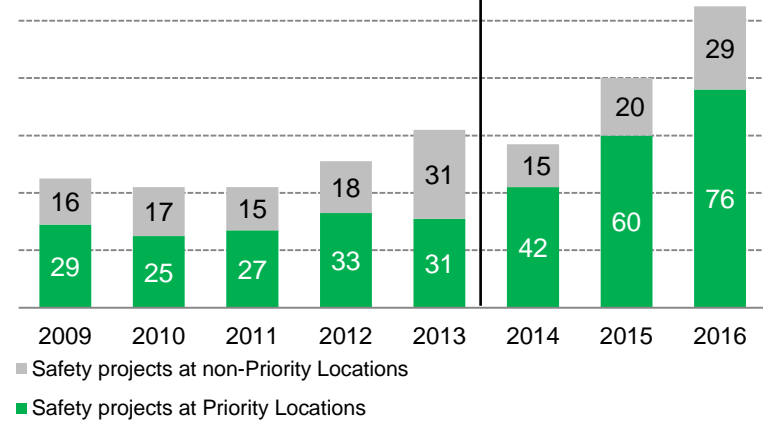
- Speeding summons +76%
- Speed camera summons +1,372,019
- Failure to yield summons +292%



PROGRESS

Prioritizing the Most Dangerous Places

- Safety projects have increased by 117% mostly at priority locations
- Priority locations account for 72% of safety projects
- Priority locations have experienced a 29% decline in traffic fatalities



LOOKING AHEAD

New Data

- New data collection technologies
- NYPD FORMS Crash Data
- DOHMH probabilistic mapping
- DCAS CANceiver fleet GPS data



THANK YOU!

Questions?



NYC DOT



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