



Through Vision Zero SF we commit to working together to prioritize street safety and eliminate traffic deaths in San Francisco.

VISION ZERO PROGRESS UPDATE

September 3, 2019

Chava Kronenberg, San Francisco Municipal Transportation Agency
Megan Wier, San Francisco Department of Public Health




Presentation Overview

- Vision Zero Goal and Trends
- Vision Zero Organizational Structure
- Vision Zero 2019 Action Strategy- Strategic Actions
 - Safe Streets
 - Safe People
 - Data Systems
- Vision Zero Metrics
- Beyond Strategic Actions

IN MEMORIAM

Lucy Morales
Nancy Ng
Matilde Cheng
Zhao Guan
Gerard Graybosch
Jose Manuel Haros Carrasco
Janice Higashi
Tess Rothstein
Madlen Koteva
Phala Neuo
Pablo Ramirez

Galina Alterman
Mark Swink
Darren Travis
Grace Jang
Waseem Ali
Sela Henriquez
Alexander Reyes
Alexander Norton
Michael Evans
Benjamin Dean
Hui Jun Yang



In 2014, the City and County of San Francisco adopted Vision Zero as a policy.

Vision Zero is the city's commitment to creating safer, more livable streets with the goal of **eliminating all traffic fatalities and reducing severe injuries.**

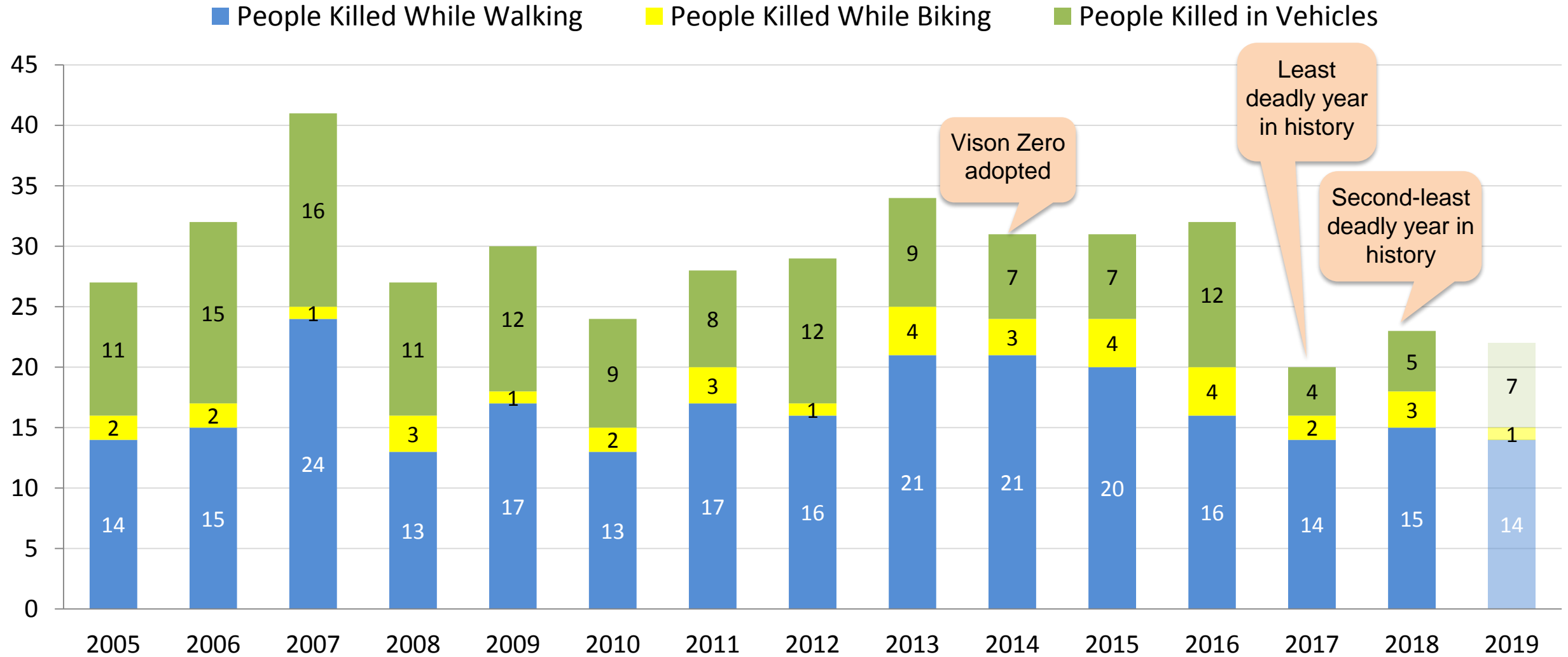
Traffic fatalities are a public health crisis:

- At least 20 people killed in crashes on SF streets each year
- Over 500 people hospitalized with severe injuries from traffic crashes annually at ZSFGH
- Approximately *half* of patients at ZSFG's Trauma Center are people injured in traffic collisions
- ZSFG Trauma Surgeons and staff treating someone severely injured in a traffic crash every 17 hours



8/21/15

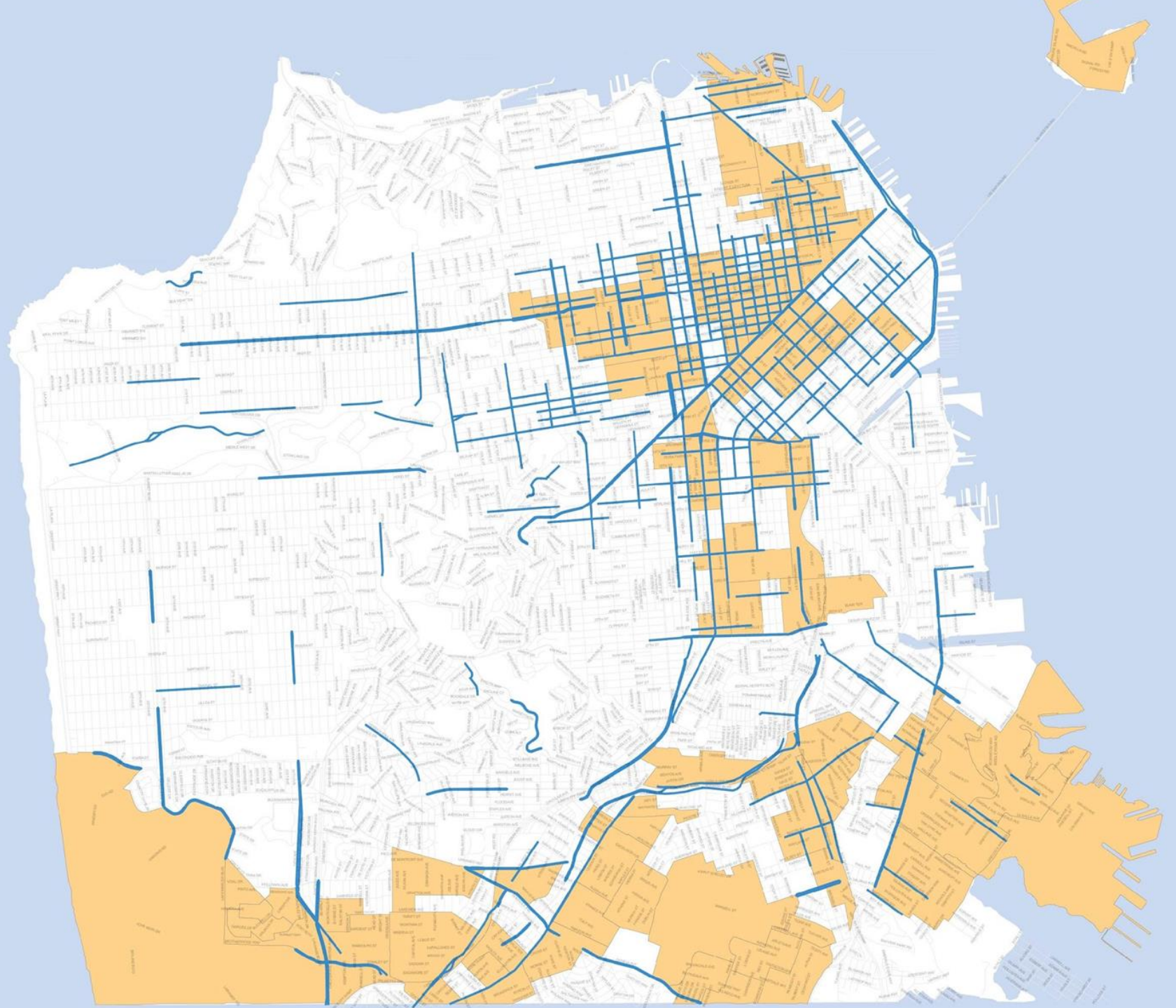
TRENDS: WE HAVE MUCH MORE WORK TO DO TO SAVE LIVES



***2019 FATALITY COUNTS REFLECT BEST DATA AVAILABLE TO DATE – PARTIAL YEAR ONLY**

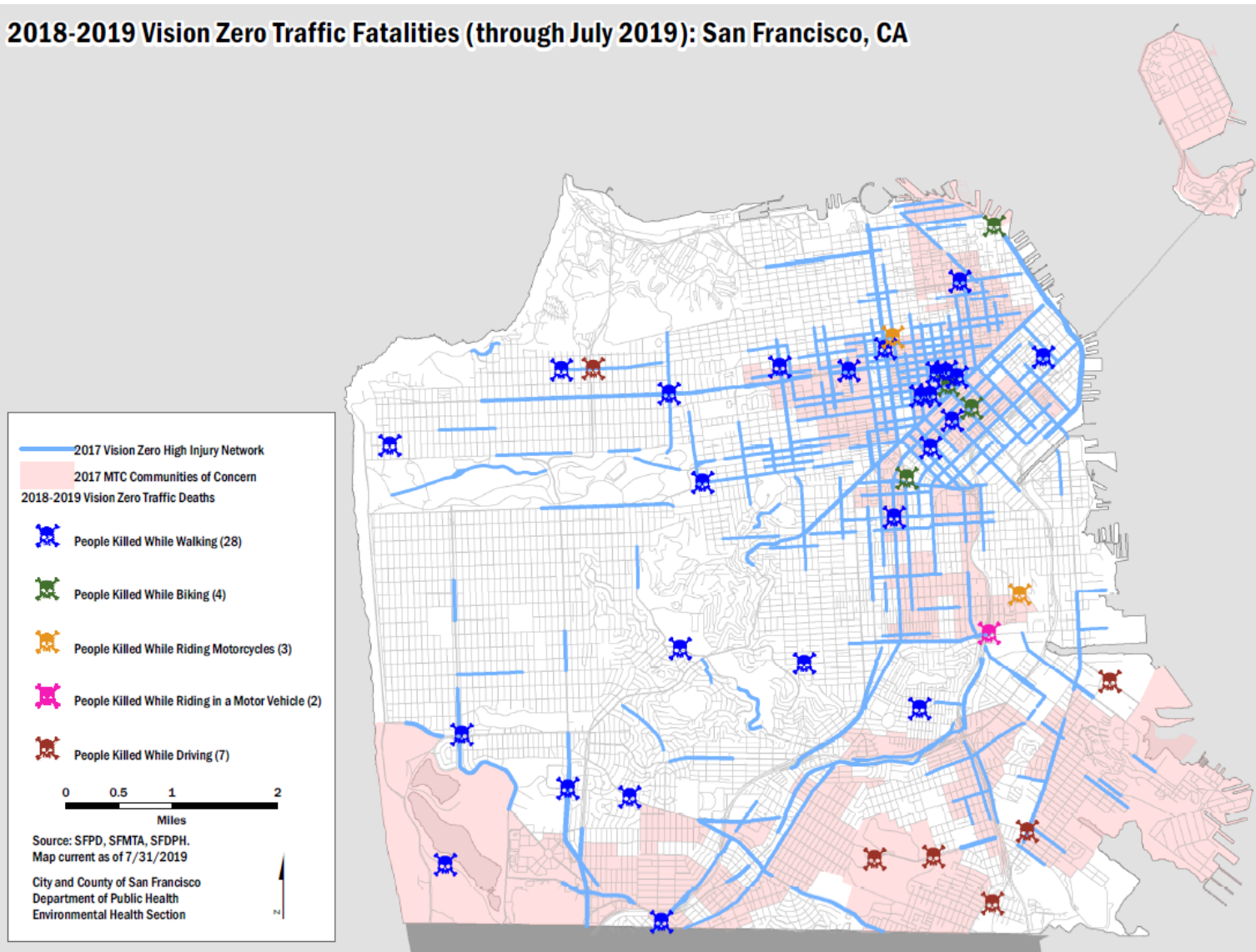
Vision Zero High Injury Network: A Predictive Tool for Targeted Actions

- 13% of City Streets account for 75% of severe and fatal injuries
- Half of the network in Communities of Concern – which include 1/3 of City Streets
- Developed based on both hospital data and police data



2018 & 2019 FATALITY TRENDS

2018-2019 Vision Zero Traffic Fatalities (through July 2019): San Francisco, CA



2018-2019 (August) Traffic Deaths:

- ~60% (N=27/45) of traffic fatalities occurred on the **Vision Zero High Injury Network**
- ~60% (N=26/45) fatalities occurred in a **Community of Concern**
- 1/3 (N=15/45) of traffic fatalities were **Seniors (aged 65+)**
 - 43% (N=12/28) of **pedestrian** deaths were seniors
- **Unsafe Speed and Driver Failure to Yield** continue to be top primary collision factors

VULNERABLE POPULATIONS TRENDS

People walking comprise 65% of fatalities.

- Among pedestrian fatalities ~40% were **people age 65 and older** yet seniors in this age group comprise ~15% of San Francisco residents.
- ~6% of pedestrian injuries admitted to the Zuckerberg SF General Hospital's Trauma Center historically recorded as **having a mobility, visual, or hearing disability**.

Both **cyclists** and **motorcyclists** are disproportionately impacted.

- Each comprise ~20% of severe and fatal injuries

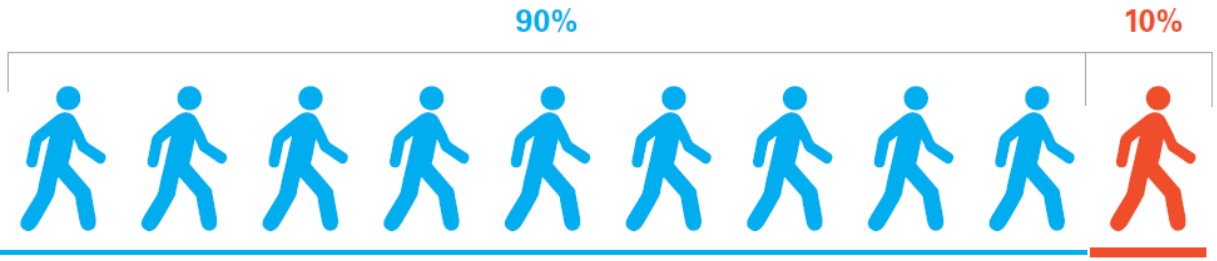
In 2018, 22% of fatalities were people experiencing **homelessness**; City homeless population is less than one percent.



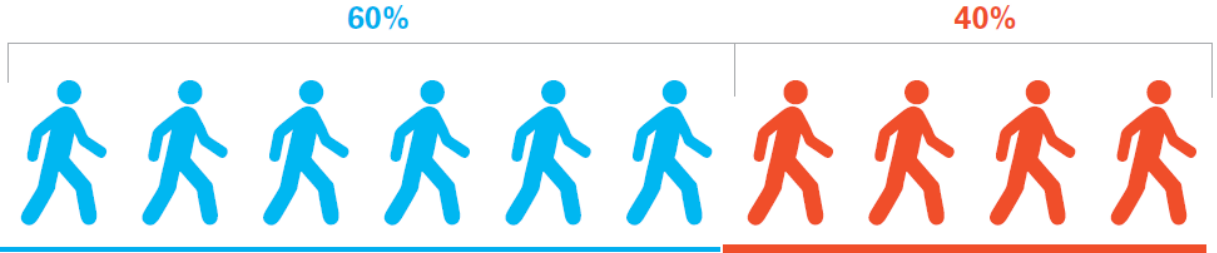
SLOWER SPEEDS *SAVE LIVES*

● If hit by a person driving at: ● Person Survives the Collision ● Results in a Fatality

20 MPH



30 MPH



40 MPH



SENIORS ARE MORE VULNERABLE AT ANY GIVEN SPEED

MULTI-DEPARTMENT, CITYWIDE POLICY

Transportation Authority Vision Zero Committee

Community & City Vision Zero Task Force

San Francisco Vision Zero

Data Systems

Legislative Agenda

Safe Streets

Engineering complete streets projects

Traffic calming in neighborhoods

Safe People

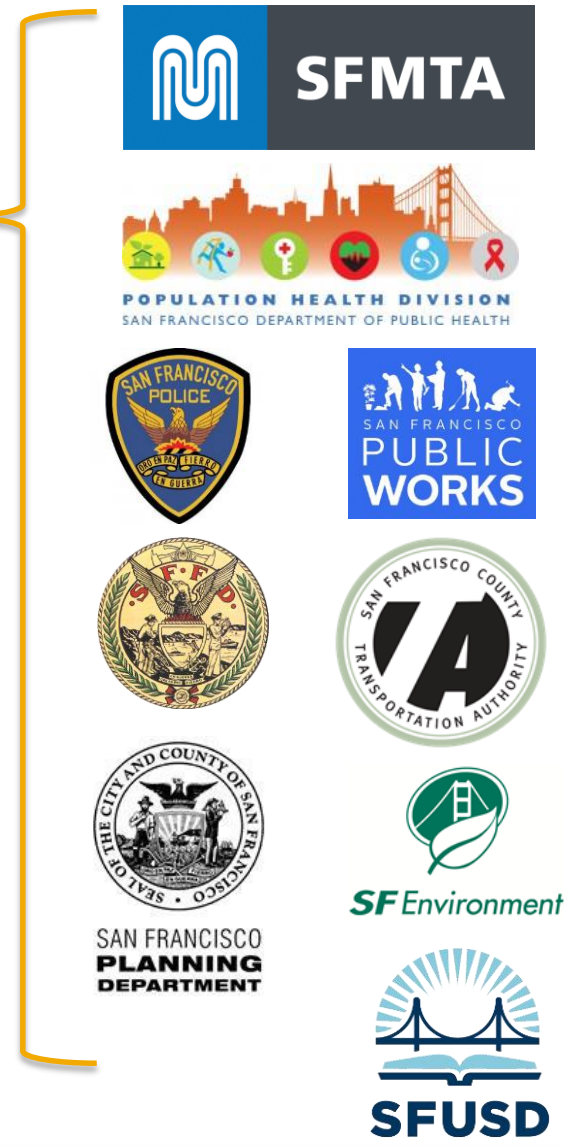
Educating and raising awareness about street safety

Enforcing traffic laws

Safe Vehicles

Using technology to ensure safe vehicles

Locally ensure emerging mobility providers have safe vehicles

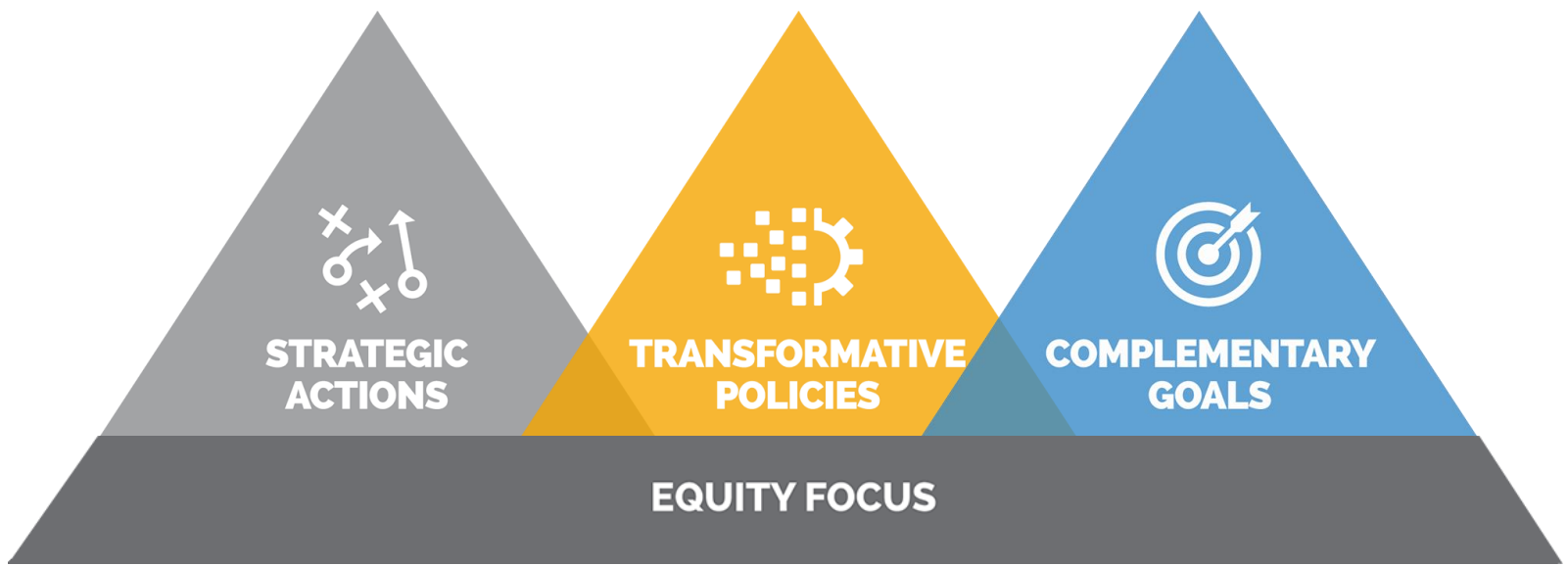


2019 VISION ZERO STRATEGY



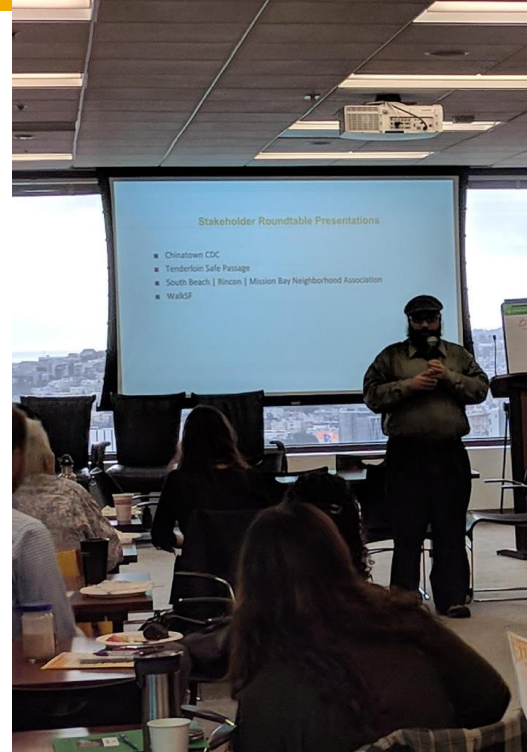
VISION ZERO
ACTION STRATEGY

Eliminating Traffic Deaths in San Francisco



2019 ACTION STRATEGY DEVELOPMENT

- Developed from July 2018 to March 2019
- Reviewed peer cities' action strategies and national guidance
- Surveyed of dozens of City staff directly involved in Vision Zero policies, programs and projects
- Three workshops for community members and city staff, with dozens in attendance
- 11 coffee talks reaching 200 community members



A Vision for Transportation Safety Framework for Identifying Best Practice Strategies to Advance Vision Zero

Arielle Fleisher, Megan L. Wier, and Mari Hunter

The Traffic Safety Best Practices Matrix is presented. It is a tool to help U.S. cities to identify the landscape of strategies being used domestically and internationally to advance Vision Zero, as pioneered by Sweden. Many cities across the United States have expressed an interest in Vision Zero, with a growing number passing policies calling for the elimination of traffic-related fatalities over the next decade. Despite the increase in interest, little guidance exists around what Vision Zero is and what actions can be implemented to help realize zero deaths. The matrix pulls together the results of an extensive examination of the measures that cities and countries are pursuing to reduce traffic-related fatalities and improve safety. The matrix attempts to bridge the gap by presenting a framework that cities can use to identify effective strategies, benchmark their efforts relative to other jurisdictions, and reach out to cities and countries pursuing Vision Zero policies for additional information. An analysis of the matrix, focuses on three categories: measures with widespread adoption, limited implementation, and minimal utilization. There is discussion of how these findings can inform the next steps for Vision Zero implementation, with a focus on implications for U.S. cities. The main recommendations are to develop mechanisms that institutionalize Vision Zero across sectors, focus education on supporting changes in organizational practices and policy reform, improve collaboration across all levels of government, explore technology that meets the unique needs of cities, and create data systems that facilitate accountability and encourage public participation.

Vision Zero is a road safety policy that aims to achieve a transportation system in which there are zero fatalities or serious injuries for all modes of transportation. Adopted by Sweden in 1997, the safety platform attempts to create a safe system by taking an ethical approach to road safety (1). Vision Zero is widely accepted as an innovative road safety policy and is noted for its departure from the traditional road safety paradigm with regard to its charge that the road safety problem to be addressed is the shortcomings in the design of the transportation system, assertion that transportation system designers are responsible for road safety, call for road users to demand safety, and insistence that the ultimate objective of road safety is zero deaths (2).

Many cities across the United States have expressed an interest in Vision Zero. As of July 2015, the following cities have passed

a Vision Zero policy, calling for the elimination of traffic-related fatalities and in some cases serious injuries over the next 10 years: San Francisco, San Jose, San Mateo, and San Diego, California; Seattle, Washington; Portland, Oregon; New York City; Washington, D.C.; and Boston, Massachusetts. Despite the increase in interest, little guidance exists for local transportation planners, policy makers, public health practitioners, police, and others working as part of this effort around what Vision Zero is and what actions could be implemented to help realize zero deaths. This paper aims to bridge that gap by presenting a tool, the Traffic Safety Best Practices Matrix, to help cities identify the landscape of strategies being used domestically and internationally to advance Vision Zero. The matrix pulls together the results of an extensive examination of the measures that cities and countries are pursuing to reduce traffic-related fatalities and serious injuries. By identifying the landscape of strategies being used by cities pursuing Vision Zero, and specifying strategy efficacy as currently known, the matrix presents a framework for strategy identification and evaluation, as well as opportunity benchmarking. Analysis of the matrix focuses on three categories: measures with (a) widespread adoption, (b) limited implementation, and (c) minimal utilization. Also, the research offers findings that can inform next steps for Vision Zero implementation. While the potential for Vision Zero to reduce fatalities and serious injuries is significant based on Sweden's experience (3), there is currently a knowledge gap with respect to specific implementation measures utilized to advance the policy. It is anticipated that the matrix, in addition to the analysis presented in this paper, will help cities, especially those considering adopting the policy, to develop comprehensive strategies, benchmark their efforts, and reach out to other jurisdictions pursuing Vision Zero for additional information.

CALL FOR SAFE SYSTEM APPROACH TO SAFETY: WHAT IS VISION ZERO?

Vision Zero is based on two premises: people make mistakes, and there is a critical limit beyond which survival and recovery from an injury are not possible (4). Vision Zero does not assume that collisions will not happen—people make mistakes no matter how well-educated and compliant in obeying traffic laws (5). Rather, the focus for road safety analysis and planning is on eliminating the risk of chronic health impairment or death caused by a collision (4). To do so, Vision Zero focuses on decreasing the likelihood that crashes will result in serious injury or death by designing the transportation system in a way that ensures that road users can tolerate the kinetic energies produced by the collision. It is kinetic energy that kills and injures the road user—not the collision. The level of physical force the human body can tolerate thus forms the basic parameter in the



NEW IDEAS

Share your ideas for new Vision Zero action items.

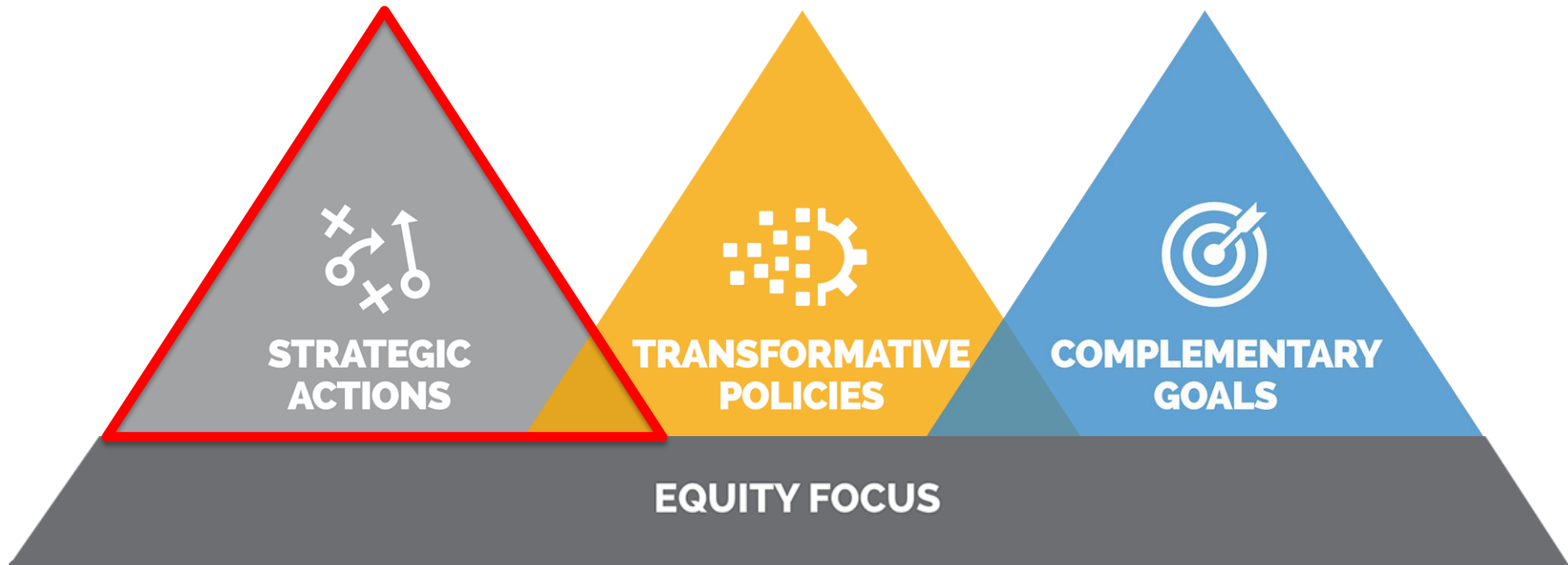
This idea is for:

- Safe People
- Safe Streets
- Safe Vehicles

Name and Organization (optional):



WHAT WILL IT TAKE TO GET TO ZERO?



STRATEGIC ACTIONS

Safe Streets



Engineer streets for safety using proven high impact tools on the streets with the highest need.

Highlight Actions:

- Install 8 miles annually of high-impact sustainable travel lanes
- Complete near-term improvements (signal timing and crossing markings) at all intersections on the High Injury Network
- Reduce project delivery timelines on 5 corridors in 2 years through quick-builds
- Implement a permanent strategic closure for private vehicles on Market Street from 10th to Main Street in both directions to improve safety for sustainable transportation users



STRATEGIC ACTIONS

Safe Streets



Install 8 miles annually of high-impact sustainable travel lanes

- Muni red lane projects like Van Ness BRT and Geary Phase 1
- Protected bicycle facilities like Polk St. and 2nd St.
- Widened sidewalks like 6th St and Taylor St.
- Quick-build projects for all modes like 5th St., 6th St. and 7th St.

Targeted Improvement: 'Road diets' are a proven countermeasure to reduce speeding vehicles. These projects all directly result in a road diet that both increase safety and encourage mode shift.

2019 Progress: Completion of Polk Street project, quick-build implementation

Annual Investment: \$25-50M

Source of Funds: Capital funding including 2014 Prop A GO Bond, SFCTA Prop K ½ cent sales tax; competitive funds from Federal, State, Region: One Bay Area Grants, Active Transportation Planning, and New Starts

Action Item Owner: Viktoriya Wise

STRATEGIC ACTIONS

Safe Streets



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Action Item Owner: Viktoriya Wise

STRATEGIC ACTIONS

Safe Streets



Complete near-term improvements (signal timing and crossing markings) at all intersections on the High Injury Network

- *Signal timing*- Currently updating 25% of signals in the system with slower walking speeds, leading pedestrian intervals and other upgrades in 2019
- *Crosswalks*- Coordinate with paving program, including high-visibility crosswalks and advanced limit lines
- *Daylighting*- Commitment to daylighting intersections city-wide

Targeted Improvement: 60% of collisions occur in an intersection. These minor to major improvements improve visibility, facilitate crossing and can reduce vehicle speeds.

2019 Progress: 76 Leading Pedestrian Intervals; 33 new pedestrian signals, 121 slower walking speeds

Annual Investment: \$2M

Source of Funds: 2014 Prop B General Fund Set-Aside for Transportation, SFMTA Road Fund (Operating)

Action Item Owner: Ricardo Olea

STRATEGIC ACTIONS

Safe Streets

Reduce project delivery timelines on 5 corridors in 2 years

- Now defined as Sustainable Streets quick-build projects
- More aggressive commitments: 10 corridors in 1 year from additional capital funding
- Streamlined legislative processes in May 2019 reduce project timelines by at least 4 months
- New SFCTA quick-build funding reduce project timelines by 3 months
- For large infrastructure projects, can deliver project benefits years ahead of schedule, such as 5th St. and 6th St.

Targeted Improvement: The most impactful projects typically have implementation timelines of 2-10 years. This action streamlines and implements under a year for new projects.

2019 Progress: Completed projects on Howard (3rd to 5th), Taylor (Ellis to Turk), 7th St (Townsend to 16th), Valencia (Market to 15th)
Annual Investment: \$6M

Source of Funds: SFCTA Prop K ½ cent sales tax; 2014 Prop B General Fund Set-Aside for Transportation

Action Item Owner: Jamie Parks

STRATEGIC ACTIONS

Safe Streets

Implement a permanent strategic closure for private vehicles on Market Street from 10th to Main Street in both directions to improve safety for sustainable transportation users.

- Final project approvals anticipated in October 2019
- Quick-build Market St to be implemented subsequent to Board approval

Targeted Improvement: Reducing traffic volumes reduces injury risk. There is significant interest in testing streets for reduced general auto access, and pedestrianization in particular.

2019 Progress: Plan to legislate for SFMTA Board in fall, with immediate implementation of turn restrictions and general access restrictions directly following.

Investment: \$2M

Source of Funds: SFCTA Prop K ½ cent sales tax; 2014 Prop B General Fund Set-Aside for Transportation, 2014 Prop A GO Bond

Action Item Owner: Ian Trout

STRATEGIC ACTIONS

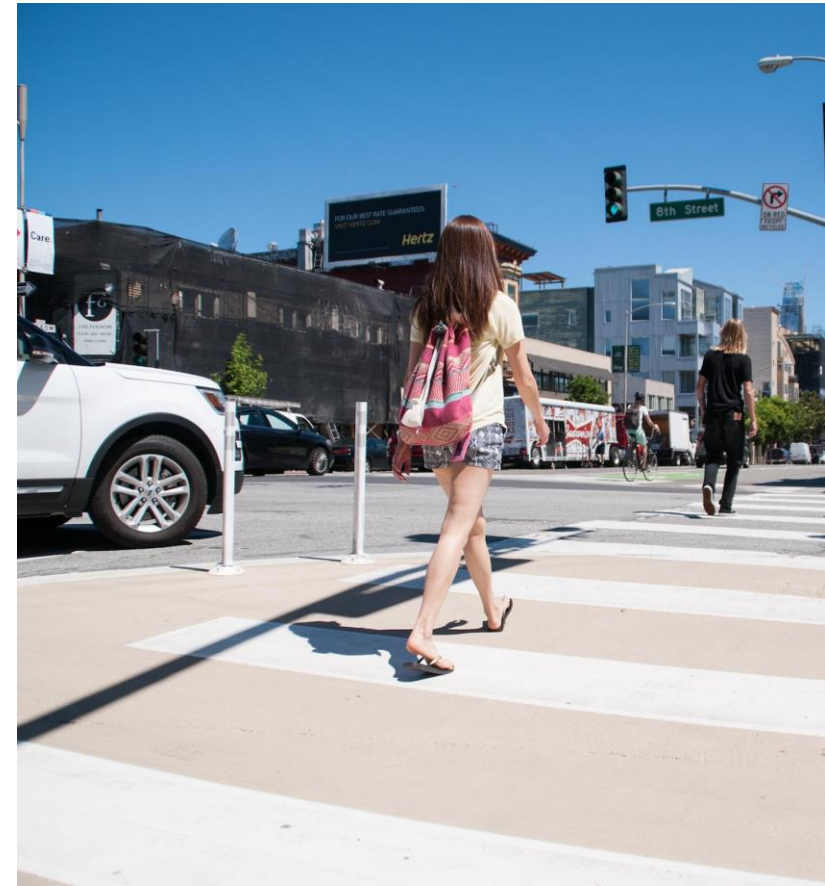
Safe People



Complement engineering programs and fill gaps where there is limited engineering intervention.

Highlight Actions:

- Launch an education program focused on changing driver behavior to reduce collisions resulting from left-turns
- Facilitate 6 training opportunities for SF motorcycle riders in partnership with the California Motorcycle Safety Program to encourage safe and informed riding
- Through community grants and multi-lingual presentations, engage seniors, service providers, and community-based organizations on Vision Zero to build support for safer streets
- Issue 50% of traffic citations for top five causes of collisions.



STRATEGIC ACTIONS

Safe People



Launch an education program focused on changing driver behavior to reduce collisions resulting from left-turns

- SFMTA to pilot safety treatments at 8 intersections in the city early 2020 based on New York City DOT effort
- Convened SFMTA staff, advocates, and national transportation behavior experts to discuss left turns collisions and resultant interventions
- Education campaign will launch in winter 2020 after the street pilot installation

Targeted Improvement: Left-turning vehicles account for 20% of severe and fatal collisions, and the causes are complex with limited engineering interventions.

2019 Progress: Preparing for street pilot; readying for pre-evaluation; conducting quantitative and qualitative surveys to inform education campaign

Investment: \$2M over two years

Source of Funds: Active Transportation Planning grants, 2016

Action Item Owner: Uyen Ngo

STRATEGIC ACTIONS

Safe People



Facilitate 6 training opportunities for SF motorcycle riders in partnership with the San Francisco Police Department motorcycle training officers to encourage safe and informed riding

- Motorcycle riders are vulnerable road users – only 2% of the population but represent 20% of traffic fatalities
- First of its kind motorcycle safety program in the nation
- Program includes bus ads, social media videos, outreach, ambassador trainings, and hands-on safety skills courses

Targeted Improvement: Motorcycle riders can represent up to 20% of annual fatalities, but limited engineering interventions address specific traffic safety related to motorcyclists.

2019 Progress: Bus ads, social media, and outreach to motorcycle shops and clubs in May; six trainings to be completed in August

Investment: \$400,000 over three years

Source of Funds: California Office of Traffic Safety Grant, 2016

Action Item Owner: Uyen Ngo

STRATEGIC ACTIONS

Safe People



Through community grants and multi-lingual presentations, engage seniors, service providers, and community-based organizations on Vision Zero to build support for safer streets

- Seniors are more vulnerable to severe and fatal injury in traffic crashes, particularly while they are walking
- SFDPH conducts multi-lingual (Cantonese, Mandarin, Spanish) presentations to seniors and service providers on Vision Zero, how to get involved, and how to stay safe
- Funding 7 community based organizations to conduct in-depth education and outreach in their neighborhoods, focus on HIN

Targeted Improvement: Seniors comprise ~15% of SF residents and close to half of pedestrian deaths. Engagement with seniors and service providers supports culture change to prioritize our more vulnerable road users.

2019 Progress: Conducted 25 presentations by DPH staff; reached over 2,000 seniors and service providers through presentations, workshops, press conferences. Developed and distributed SSFS brochures/lanyards with inserted cards in English, Chinese, Spanish, and Tagalog.

Investment: \$270,000 annually

Source of Funds: SFDPH General Fund

Action Item Owner: Patricia Erwin, SFDPH

STRATEGIC ACTIONS

Safe People



Issue 50% of traffic citations for top five causes of collisions.

- New team of four motorcycle officers dedicated to enforcing the Focus on the Five violations.
- Officers on this task force are exempt from other duties to focus on enforcement.
- Beginning June 2019, VZETF focused on high injury corridors and locations of recent fatal collisions.
- Team has written over 400 citations; 99% of these citations were for Focus on the Five violations.

Targeted Improvement: Enforcement on the most prevalent citations issued for severe injuries and collisions reduces instances of those behaviors.

2019 Progress: New Vision Zero Enforcement Task Force

Source of Funds: SFMTA and SFPD Operating

Action Item Owner: SFPD Traffic Company

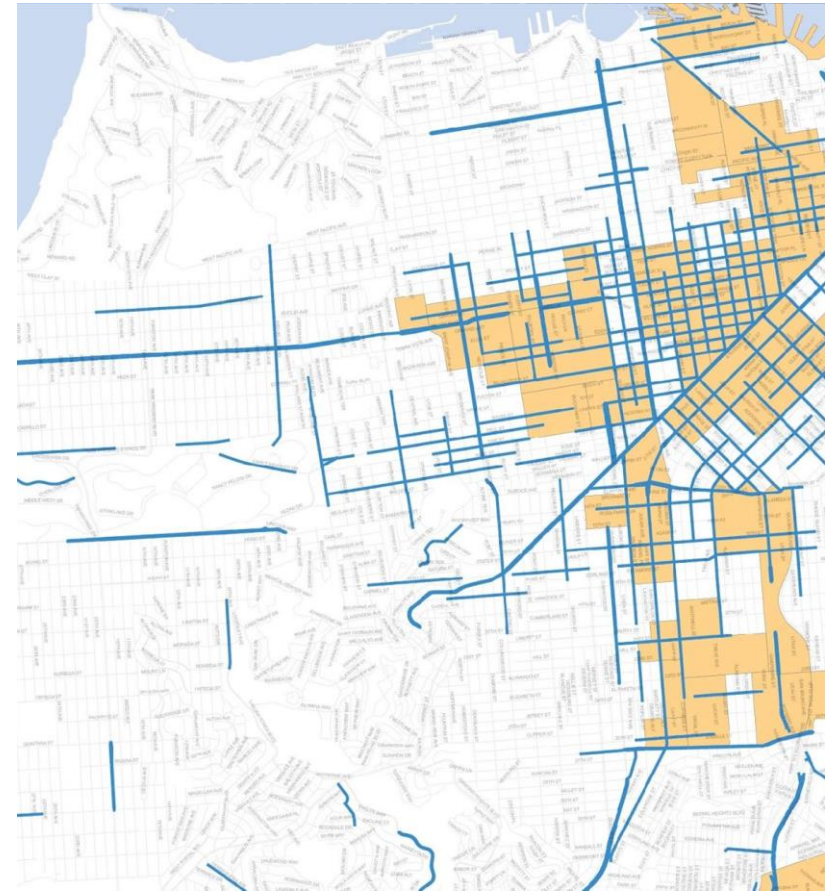
STRATEGIC ACTIONS

Data Systems

Inform and monitor targeted Vision Zero efforts for future projects, policies and programs.

Highlight Actions:

- Update High Injury Network in 2021 using Zuckerberg SFGH data
- Issue an annual report on severe injuries utilizing Zuckerberg SF General Hospital and Trauma Center and police data



STRATEGIC ACTIONS

Data Systems

Update High Injury Network in 2021 using Zuckerberg SFGH data

- The High Injury Network has been iterated on multiple times, with the last update in 2017
- Informs where resources are prioritized
- First-in-nation High Injury Network to include hospital-only and police-reported crashes

Targeted Improvement: Linking hospital and police data provides a more comprehensive understanding of injuries in the city to inform targeted interventions – capturing injuries not reported by police and improving assessment of severity.

2019 Progress: Police and hospital data being compiled for the linkage of data from 2013-2018 to inform the next update of the HIN in 2020.

Investment: SFMTA funds a SFPDH Vision Zero Epidemiologist to conduct this work in partnership with SFPDH and Zuckerberg SF General Hospital staff.

Source of Funds: SFPDH and SFMTA Operating

Action Item Owner: Megan Wier, SFPDH

STRATEGIC ACTIONS

Data Systems

Issue an annual report on severe injuries utilizing Zuckerberg SF General Hospital and Trauma Center and police data

- Indicates long-term trends, beyond annual fatalities counts
- Directly informs policy, program and project interventions both through incorporation in the High Injury Network and new initiative development

Targeted Improvement: Understanding trends in severe injuries informs Vision Zero monitoring and investments.

2019 Progress: A report on Severe Injury Trends through 2018 will be finalized to present to the Vision Zero Task Force on September 16th.

Investment: This work is led by an SFDPH Epidemiologist

Source of Funds: SFMTA Operating

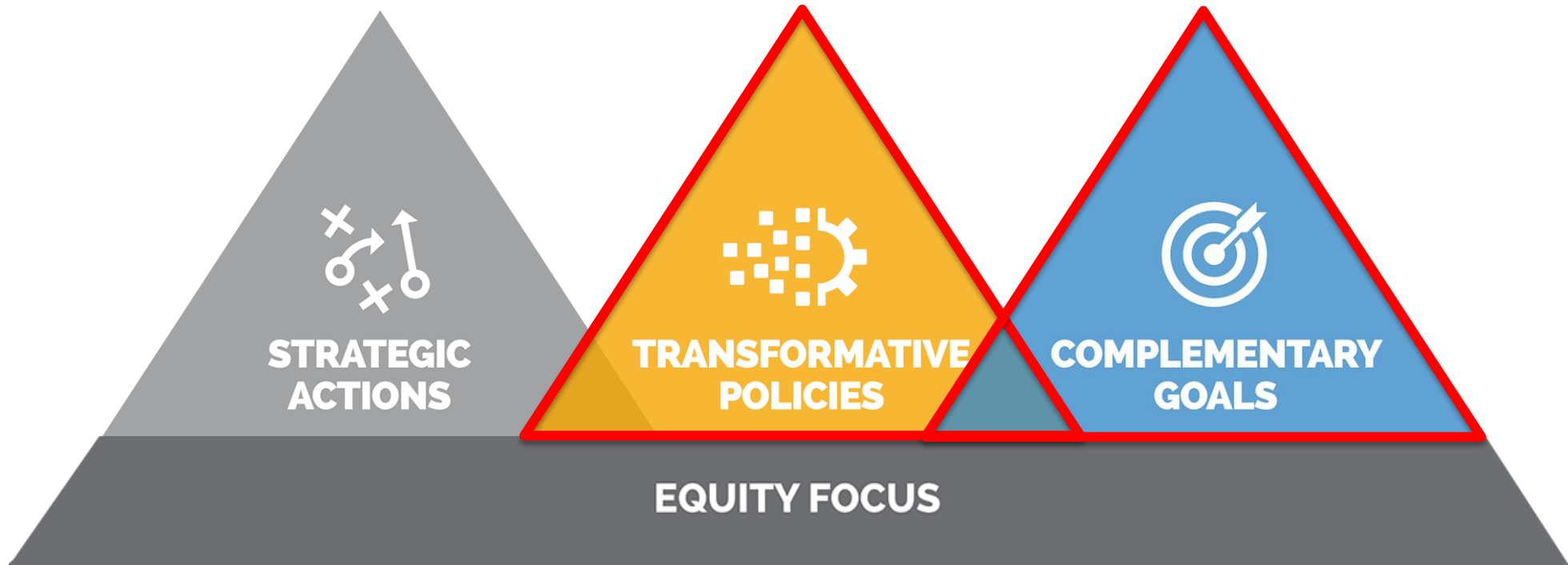
Action Item Owner: Megan Wier, SFDPH

MEASURING PROGRESS

METRIC	2021/2024 TARGETS
Fatalities <i>2018: 23 fatalities</i>	Zero by 2024
Sustainable travel lanes miles added, Citywide <i>2014-2018: 40 miles</i>	16 Miles / 40 Miles
Safety treatments installed on the High Injury Network <i>2018: 9 miles on the HIN</i>	More than 13 miles of safety treatments on HIN annually
Percentage of safety treatments installed in Communities of Concern (CoC) <i>2018: 38% of HIN miles in CoC</i>	Miles implemented in CoC equal to or greater than the proportion of the HIN falling within those communities
Focus on the Five violation citations, proportion of citywide total <i>2018: Citywide 41%</i>	Citywide 50%

METRIC	2021/2024 TARGETS
Vision Zero outreach <i>2018: Over 250 million media impressions and over 15,000 people reached at events</i>	15,000 people annually at community events and 250 million digital media impressions
Vision Zero community awareness <i>2016: 11% Awareness</i>	20% Awareness / 30% Awareness
Vision Zero street team outreach <i>2018: 52 community events, 100% with translated materials and interpretation services</i>	47 community events annually, 100% with translated materials and interpretation services
Youth and Senior programming <i>2018: Seniors: 2,100 people reached, 56% in a language other than English</i> <i>2018: Schools: 27 schools participating with programming in Spanish and Chinese</i>	Seniors: 2,500 people annually (55% in non-English language) Schools: 103 schools participating annually, with programming in Spanish and Chinese
SFDPH grants for community engagement <i>2018: 9 awards</i>	8 awards per year

WHAT WILL IT TAKE TO GET TO ZERO?



EQUITY FOCUS



Deepening community engagement

with community leaders and local stakeholders to ensure that strategic actions reduce injury inequities and do not exacerbate existing inequities.



Prioritizing and monitoring improvements

on the high injury network, in Communities of Concern, and where there are concentrations of severe/fatal injuries to seniors and people with disabilities and other vulnerable populations to address historic differences in resource allocation.



Ensuring Vision Zero transformative policies consider and address equity impacts

on vulnerable populations, including the impact of fines and fees on low income residents.



Implementing data-driven, culturally competent, multilingual education, engagement and enforcement campaigns

targeted in impacted areas.



Developing and institutionalizing an injury surveillance system

to ensure the most complete data is available for all people injured and analyzing by vulnerable populations and sharing the data with the public.

TRANSFORMATIVE POLICY AGENDA



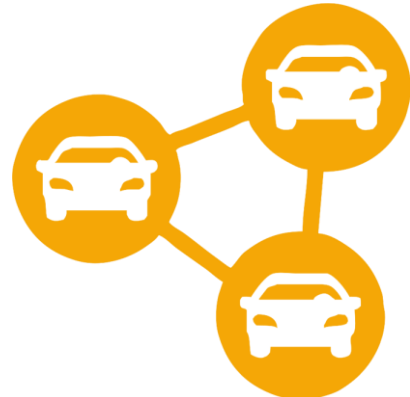
Automated Enforcement



Urban Speed Limit Setting

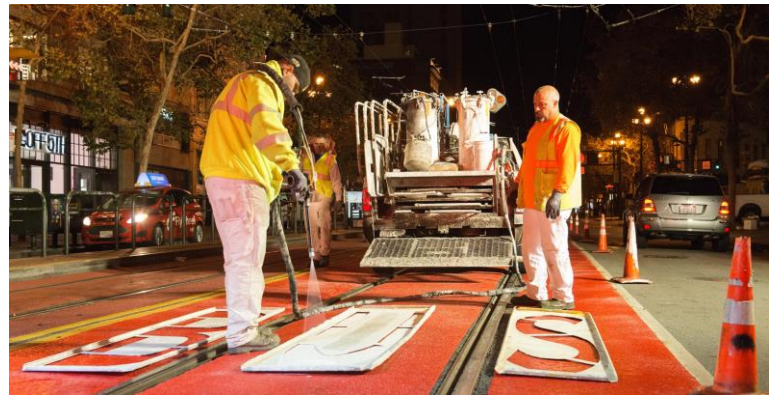
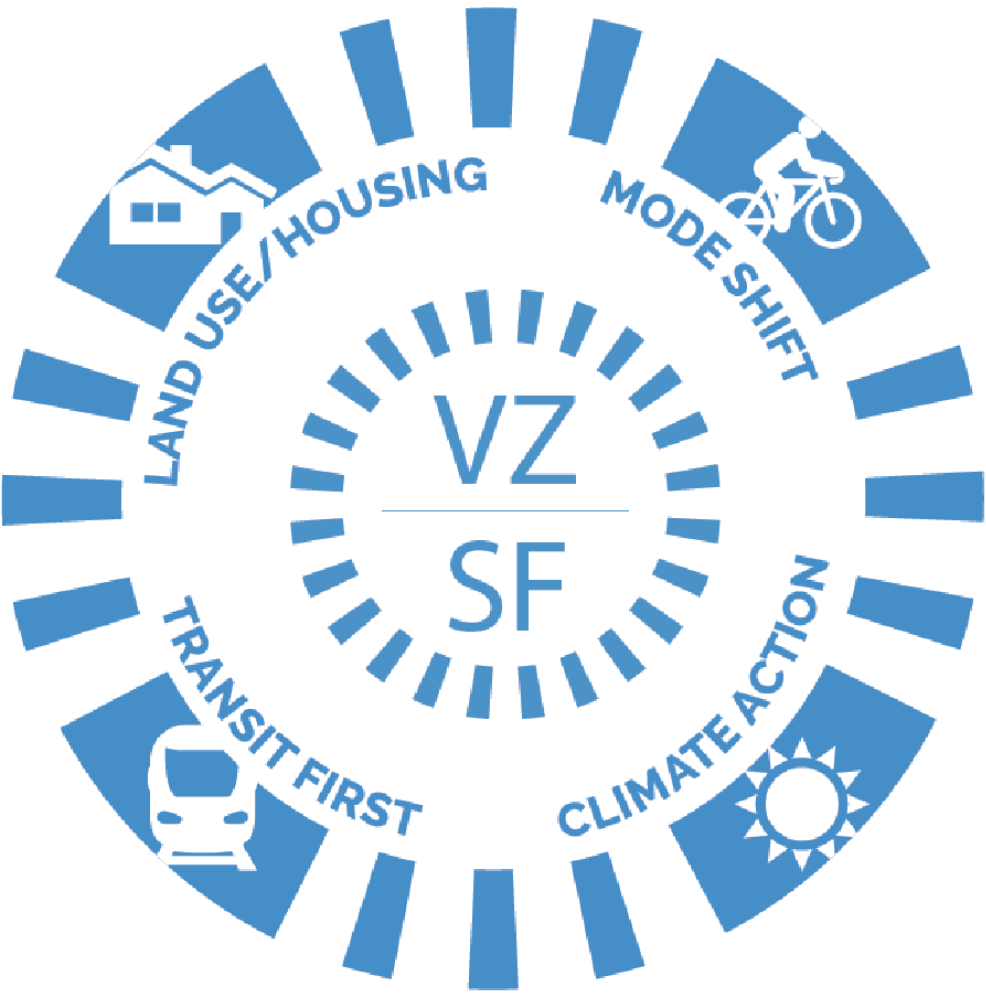


Pricing and Reducing Vehicle Miles Travelled



Local Regulation Of Transportation Network Companies

ADVANCING COMPLEMENTARY CITY GOALS





VISION
ZERO
SF

Thank you.



TRACKING PROGRESS

ON TRACK
64%

Completed Actions Include

- Street safety evaluations
- Motorcycle training course
- Emerging Mobility injury monitoring system

MONITOR
33%

Work is Being Done

- Phased work
- Interdepartmental
- Variety of funding sources
- Political environment

AT RISK
3%

Circumstances for At Risk Actions

- Staffing
- Funding
- Political environment