

Vision Zero Philosophy

The Task Force investigated an approach to road safety that has a proven track record of saving lives and preventing serious injuries, particularly among pedestrians. This approach is called Vision Zero, and is gaining tremendous momentum in cities across the country.

Vision Zero is a policy goal and data-driven strategy to achieve zero traffic fatalities or serious injuries across all forms of road transportation. The core of Vision Zero is shifting away from “acceptable” levels of risk and toward the belief that traffic deaths and serious injuries are both preventable and ethically unacceptable. The Vision Zero philosophy influences road design, enforcement, and culture to bring about a marked reduction in crashes that lead to death and serious injury.

Vision Zero is comprehensive: it considers all road users and values the safety of people walking, biking, using a wheelchair or public transit just as much as people driving. This approach examines how different types of road users interact, and prioritizes the safety of vulnerable road users, such as pedestrians, because by definition they are the most likely to be killed or injured if there is a crash.

“You should be able to move freely – and feel safe at the same time. This is what the Vision Zero Initiative is all about.”

Vision Zero Initiative

Road travel is associated with a culture that accepts deaths and serious injuries as inevitable, an unfortunate but unavoidable cost of modern mobility and freedom. This is in stark contrast to other transportation modes, such as air travel, where zero fatalities are tolerated. Vision Zero challenges this culture of acceptance and demonstrates that all roadway fatalities and serious injuries are preventable.

Speed is the major determining factor in whether or not a crash will result in death or serious injury, especially for pedestrians. While a low-speed crash between a person walking and a person driving is unlikely to kill the pedestrian, a high-speed crash almost certainly will. The high-speed fatality, therefore, is entirely preventable by simply reducing the speed of the vehicle.

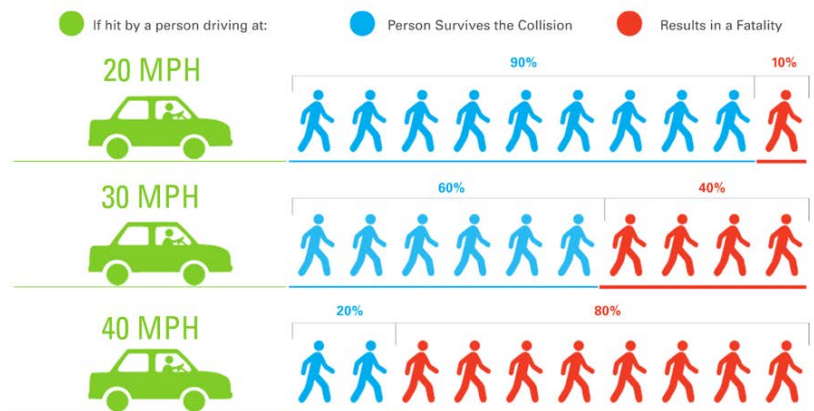


Image credit: San Francisco Municipal Transportation Agency

Advocates of Vision Zero encourage the use of the term “crash” instead of “accident,” because “accident” implies that nothing could have been done to prevent it. While it may not be possible to prevent all crashes, it is possible to prevent crashes from resulting in deaths and serious injuries. The Vision Zero philosophy urges that we have an ethical obligation to bring about change to prevent injuries and save lives.

The road transportation system typically places responsibility for safety on road users. Each driver, pedestrian, wheelchair user or bicyclist is expected to follow the rules of the road precisely and never make a mistake. This type of approach does not account for human error and is in contrast to other transportation systems such as air and rail that are built assuming that their users are going to make mistakes. Vision Zero instead places responsibility on the system design and the people who influence the design. The road system can be built to absorb human error or prevent it. Road design and policy can encourage either safe or dangerous transportation behaviors.

“Every crash with serious injuries or fatalities is something you need to carefully look at and say,

‘What was wrong here?’

‘What should I have done?’

– not the citizen –

‘What should I have done – as a professional and responsible person in the system.’”

Claes Tingvall, Director of Traffic Safety
Swedish National Road Administration

History: Sweden

Vision Zero originated in Sweden, where it was adopted as a national policy goal in 1997. Since that time, Sweden has seen a steady decline in traffic fatalities despite growing traffic volume. From 1990 to 2010, taking into account the rise in traffic volume, Sweden experienced a 73% reduction in road fatalities (1). Vision Zero has proven to be an effective approach for protecting vulnerable road users as well. Over the last 5 years alone, Sweden has seen a 50% reduction in pedestrian fatalities (2). And in 2012, in the entire country of Sweden with a population of over 9 million, there was only one fatality of a child under age seven, compared to 58 fatalities in 1970 (3).

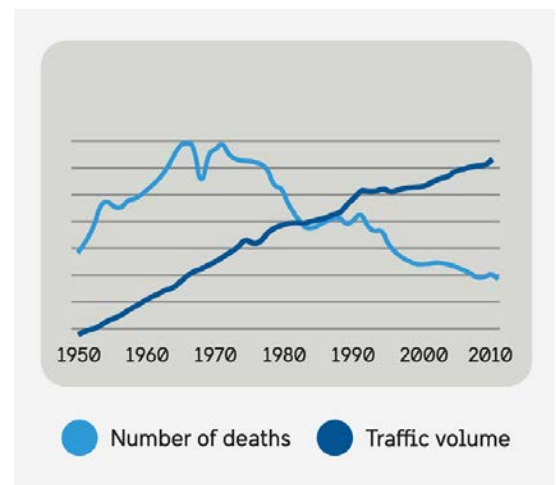


Image credit: Vision Zero Initiative

As a result of the success of Vision Zero in Sweden, the World Health Organization has recognized Vision Zero as a best practice that should be replicated in other countries (4).

Vision Zero Cities

A Vision Zero City meets the following minimum standards:

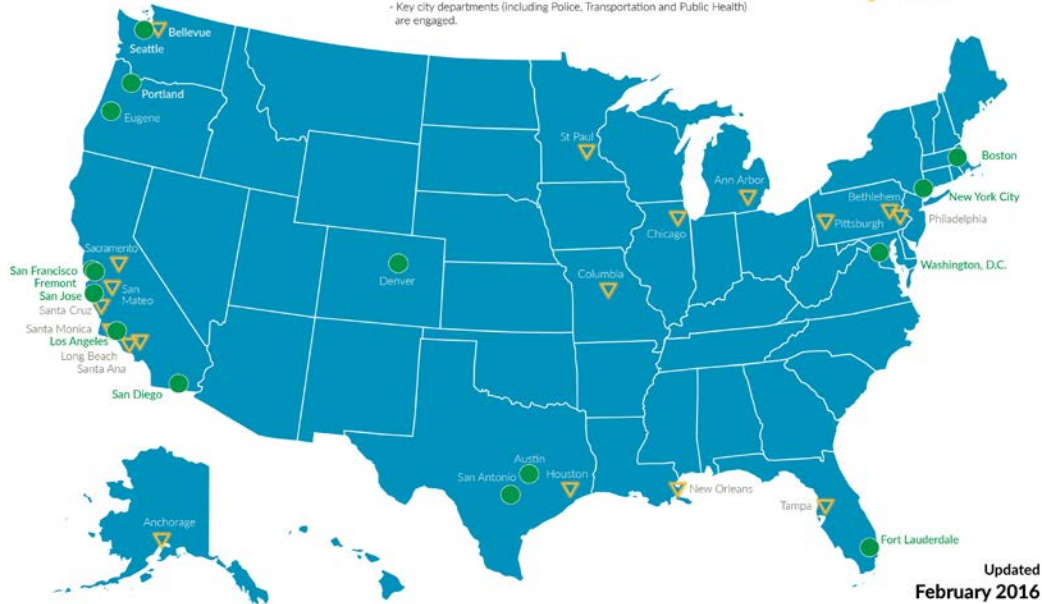
- Sets clear goal of eliminating traffic fatalities and severe injuries
- Mayor has publicly, officially committed to Vision Zero
- Vision Zero plan or strategy is in place, or Mayor has committed to doing so in clear time frame
- Key city departments (including Police, Transportation and Public Health) are engaged.



Vision Zero City



Considering Vision Zero



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History: United States

Image credit: Vision Zero Network

In the last two years, Vision Zero has gained serious traction across the United States as city leaders and advocates have searched for a solution to the crisis of traffic deaths and serious injuries. Since 2014, fifteen cities have passed Vision Zero policies, including New York City, San Francisco, Boston, Portland and Seattle. An additional eighteen cities are in the process of considering Vision Zero policies.

While the early adopters of Vision Zero have tended to be large cities, several smaller and mid-size cities have also adopted or are considering Vision Zero policies: Bellevue, WA (134,000), Eugene, OR (159,000), Fremont, CA (225,000), Ann Arbor, MI (117,000), and Bethlehem, PA (75,000).

Vision Zero strategies

The cities and countries that adopt Vision Zero all share the goal of achieving zero traffic fatalities or serious injuries. As Vision Zero is data-driven, however, the strategy to achieve that goal must by necessity be responsive to the crash data for each particular area. Analyzing the crash data informs the Vision Zero strategy by answering questions such as:

- Where are fatal and serious injury crashes happening?
- What types of road users are involved in these crashes?
- What factors are contributing to the crashes?
- What proven interventions could be used to prevent the crashes?

New York City

In 2014, New York City became the first U.S. city to adopt a Vision Zero policy. Recognizing that “the primary mission of government is to protect the public,” Vision Zero was championed by Mayor Bill de Blasio as a way to change the status quo and systematically address the crashes that were seriously injuring or killing New Yorkers every 2 hours (5).

New York City’s Vision Zero strategy is a collaborative effort among multiple city departments: Transportation, Police, Taxi & Limousine Commission, Health & Mental Hygiene, Education, and Citywide Administrative Services. The Mayor’s Office created a permanent Vision Zero task force, comprised of key government, advocacy and private sector partners, to implement and extend the plan.

Key Action Plan strategies:

- Publishing crash and safety data regularly in user-friendly formats
- Ad campaign aimed at reducing speeding, failure-to-yield and other forms of reckless driving
- Increasing the number of law enforcement personnel and enforcement against dangerous transportation behaviors
- Education outreach to students on safe pedestrian behaviors and their parents on how to make school zones safe
- Engineering improvements at targeted intersections and corridors
- Lowering speed limits and installing traffic calming measures
- Including traffic fatality and injury prevention messages in public health materials
- Leading a state legislative campaign to give the city authority to use speed and red-light cameras, reduce city speed limits, and increase penalties for dangerous driver behaviors

New York City’s Vision Zero strategy, even with only 2 years of implementation, has been a resounding success.

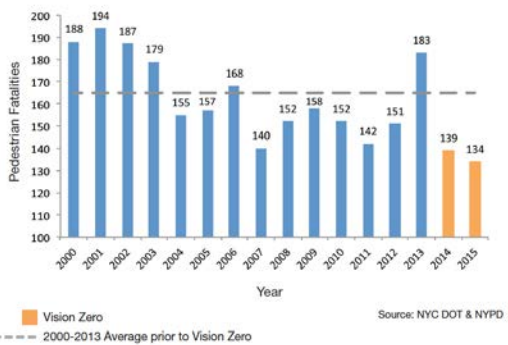
2015 was the safest year ever on New York City streets. Overall traffic fatalities reached their lowest level since record-keeping began in 1910, down 22% compared to 2013, before Vision Zero launched (6).

For pedestrians, safer streets came even sooner. In 2014, the first year of Vision Zero implementation, the number of pedestrian fatalities reached the lowest level ever recorded – and 2015 beat that record low.

NYC Traffic Fatalities



NYC Pedestrian Fatalities



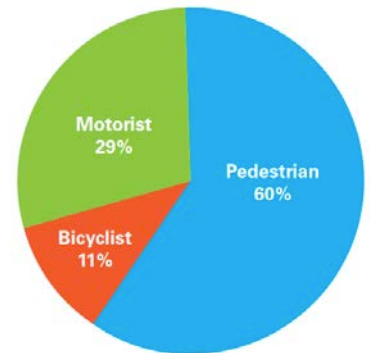


San Francisco

San Francisco also adopted a Vision Zero policy in 2014, with a goal of eliminating traffic fatalities by 2024 (7).

Vision Zero SF is supported by resolutions of multiple agencies and departments including the Office of the Mayor, Municipal Transportation Agency, Police, Fire, Department of Public Health, Planning, Environment, Youth Commission, Disability Council, and the Board of Education of the Unified School District.

Social equity is at the core of San Francisco's Vision Zero strategy. The City identified that 70% of their severe injury and fatal crashes occurred on only 12% of city streets, and identified these as a "High Injury Network." Half of these high-risk streets pass through low-income neighborhoods, communities of color, senior housing, and areas where people rely on walking and transit as their primary form of transportation. San Francisco's Vision Zero strategy prioritizes safety on these streets and in these neighborhoods, to ensure that all community members can travel safely.



Traffic Fatalities, 2013-2014
San Francisco Police Department*
Image credit: Vision Zero SF Two-Year Action Strategy

Key Action Strategy components:

- Creation of a Vision Zero Task Force led by City staff, an expansion of the Pedestrian Safety Task Force
- Expediting the building of 24 street engineering projects to address an increase in fatalities on high injury corridors among people walking and biking
- Expanding Safe Routes to School programs to allow students to walk and bike to school safely
- Partnering police crash data with hospital patient records to create a better picture of street safety, especially for crashes involving people walking and biking which are tremendously underreported
- Passing a street and transit bond with over \$150 million dedicated to street safety projects
- Advocating for changes to state law to allow the City to use automated speed enforcement near schools and housing for seniors and people with disabilities

Seattle

Seattle has been recognized as one of the safest cities in the country, with a fatality rate close to that of Sweden, and was recently named the safest city in the U.S. for pedestrians (8). However, recognizing that even one death is unacceptable, in 2015 Seattle adopted a Vision Zero plan to end traffic deaths and serious injuries by 2030 (9).

Key Near-Term Actions:

- Create a 20 MPH Zone Program to reduce residential speed limits to 20 mph on streets with high collision history or near schools or parks
- Reduce arterial speed limits to 30 mph or lower
- Data-driven pedestrian safety improvements in downtown, including leading or lagging pedestrian intervals, protected turn phases, elimination of dual turn lanes, signal improvements, and no turns on red
- Develop protected bike lanes
- Transit improvements to increase pedestrian safety and access to transit stops and stations
- Safe Routes to School infrastructure improvements near schools
- Automated enforcement in school zones



The average car trip in Seattle is 3.5 miles. Reducing the speed limit from 35 to 30 mph will add about a minute to this trip (or 17 seconds per mile), assuming free flowing traffic

How Vision Zero can apply to Columbia

Columbia is lagging behind other cities that are prioritizing transportation safety. While many leading Vision Zero cities are experiencing a decline in traffic fatalities, Columbia's fatality rate has shown no significant decline, with an average of 9 fatalities per year. This corresponds to a rate of 7.8 fatalities per 100,000 people – much higher than New York City, San Francisco, Seattle, Boston, Washington, D.C., or Los Angeles (10).

Columbia community members want transportation to be safer. In the 2040 Long-Range Transportation Plan, CATSO identified improved transportation safety as a community need and 90% of the citizen respondents supported improvement or expansion of infrastructure for walking and biking (11). Columbia's Community Vision Statement for transportation states that citizens should be able to "move about freely within the region using whatever means are desired – automobile, bus, bicycle, walking – and to do so safely" (12).

	Road Fatality per 100,000 people	2012 Fatalities	Population
Sweden*	3.0	285	9,500,000
United States*	11.6	36166	313,900,000
Washington State	6.4	444	6,897,012
King County	4.3	85	1,957,000
Seattle	3.2	20	634,535
Portland	5.3	32	603,106
New York City	3.2	268	8,336,697

*Data from 2013 World Health Organization Report using 2010 numbers

Image credit: Seattle Vision Zero Plan

Columbians want safer transportation, but the City does not currently have an actionable strategy to prevent crashes through data-driven steps. For example, the Long-Range Transportation Plan includes an objective to design “streets and highways that are safe and efficient to move vehicular traffic and accommodate transit, pedestrians and bicyclists” (11), but the objective has no associated safety performance measure and there is no process in place to evaluate crashes and prevent reoccurrence. Vision Zero will help Columbia set and meet safety goals.

Adopting a Vision Zero policy and strategy can be a critical component of the City’s recent Strategic Plan emphasis on social equity. Vision Zero strategies can improve transportation safety for all Columbia residents because everyone uses some form of transportation, but can especially improve outcomes for underserved persons (e.g., people of color, low-income families, children, older persons, people with diverse abilities) and vulnerable road users (e.g., people walking or biking). These groups are at greater risk of traffic injury and death because the transportation system is most ill-fitted to their needs. In Boone County, the motor vehicle traffic death rate for African Americans is nearly twice that of whites and traffic-related emergency room visits are three times as high (13). Older adults compose 17% of the population (14), but are involved in 23% of Columbia’s crashes (15). People walking or biking are involved in only 3% of crashes in Columbia, but account for 25% of fatalities (15). And, of Columbia’s pedestrian injuries, 20% are children (15).

In light of the data on Columbia’s serious injury and fatality crashes, particularly those of pedestrians, components of a responsive Vision Zero strategy could include:

- Creation of a Vision Zero Task Force, website and educational campaign
- Collaboration with MoDOT to develop a City/state Vision Zero partnership on MoDOT roads within Columbia city limits
- Reducing speed limits, particularly on high-risk streets
- Using automated enforcement, especially near schools, underserved communities and areas of vulnerable road users
- Creating a crash review panel to review all fatal and serious injury crashes and make crash prevention recommendations
- Implement data-driven pedestrian safety improvements, such as leading pedestrian intervals, protected turn phases and no right turns on red
- Prioritizing road infrastructure improvements based on crash data, such as installing sidewalks along higher-speed roads

If Vision Zero is to be successful in Columbia, the adoption of the policy and development and implementation of the strategy should follow the model of early-adopter Vision Zero cities. These are summarized by the Vision Zero Network in the *9 Components of a Strong Vision Zero Commitment*.

1. Political Commitment: leadership by the highest-ranking local officials, including the Mayor, City Council and City Manager
2. Multi-Disciplinary Leadership: creation of a Vision Zero Task Force composed of representatives from multiple City departments

3. Action Plan: Vision Zero strategy created within 1 year of commitment
4. Equity: commitment to an inclusive public process and safe transportation for all road users in all areas of the city
5. Cooperation & Collaboration: partnership between governmental agencies and community stakeholders
6. Systems-Based Approach: focusing on strategies that will change the transportation system to influence behavior
7. Data-Driven: prioritizing resources based on evidence of greatest needs and impact
8. Community Engagement: creating opportunities for meaningful public involvement and input
9. Transparency: regular updates on progress on the strategy and performance measures

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