

Vision Zero: designing a safe system

How we can make progress on our commitment to end traffic deaths and serious injuries on city streets by 2030

Our Vision, Mission, Values, & Goals

Seattle is a thriving equitable community powered by dependable transportation. We're on a mission to deliver a transportation system that provides safe and affordable access to places and opportunities.

Core Values & Goals:

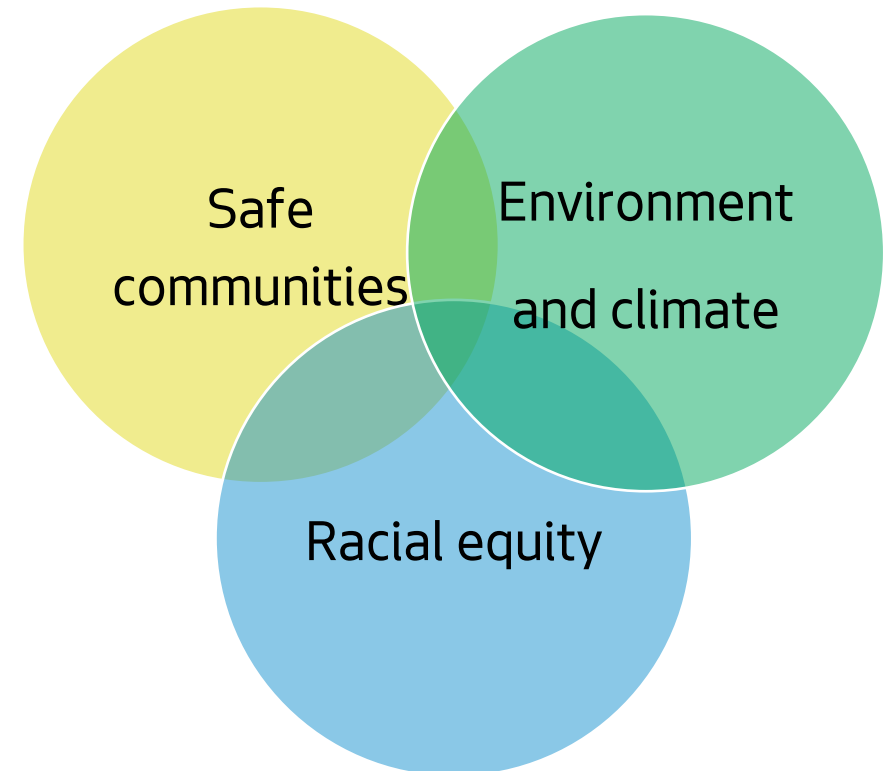
Equity, Safety, Mobility, Sustainability, Livability, and Excellence.

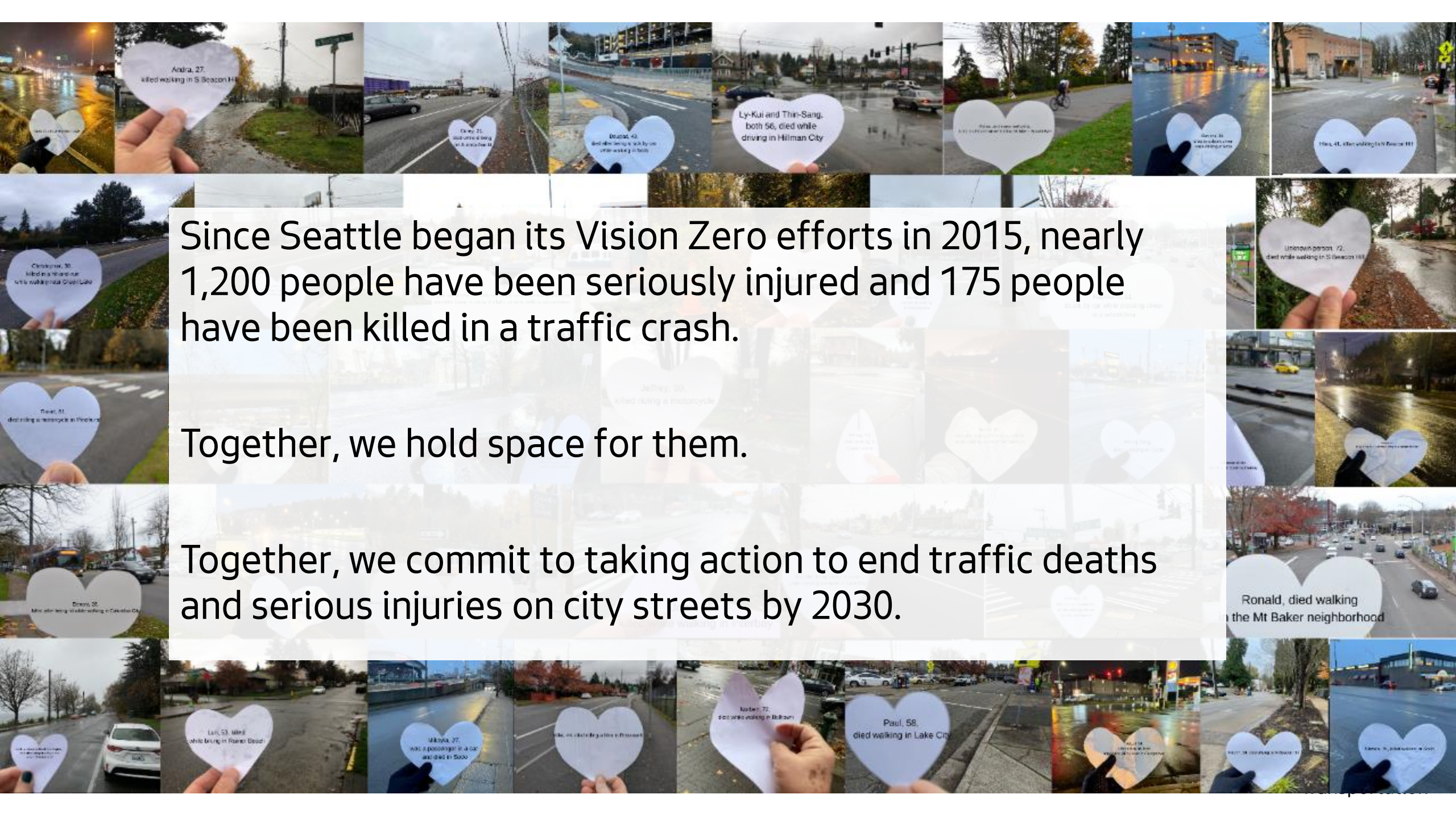
Departmental goal: Make vigorous progress on Vision Zero and reimagine community safety to eliminate injuries, deaths, and disparate impacts.

Presentation purpose, overview, themes

Highlighting what's needed to achieve Vision Zero, we'll focus on:

- Fatal and serious injury trends and people most affected
- Doing more of what works: reducing speeds and conflict points
- Adopting a safe system approach
- Leading with equity, investing in education, and working together





Since Seattle began its Vision Zero efforts in 2015, nearly 1,200 people have been seriously injured and 175 people have been killed in a traffic crash.

Together, we hold space for them.

Together, we commit to taking action to end traffic deaths and serious injuries on city streets by 2030.

Andra, 27, killed walking in S Swacon Hill

Ly-Kui and Thin-Sang, both 56, died while driving in Hillman City

Unknown person, 72, died while walking in S Swacon Hill

Ronald, died walking the Mt Baker neighborhood

Christopher, 30, killed in a 90-mph truck hitting a Crosswalk

Jeffrey, 30, killed riding a motorcycle

David, 51, died riding a motorcycle in Phelan

Ernest, 30, killed while walking in Rainier Beach

Luis, 53, killed while driving in Rainier Beach

Mikayla, 27, was a passenger in a car that died in SoDo

John, 40, killed while driving in Phelan

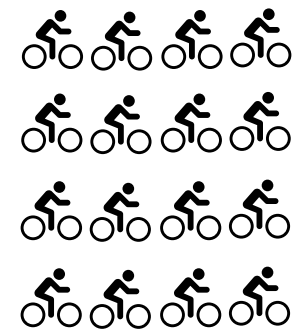
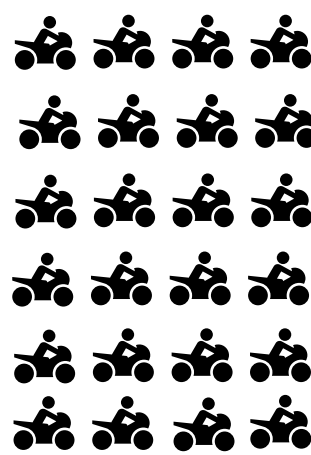
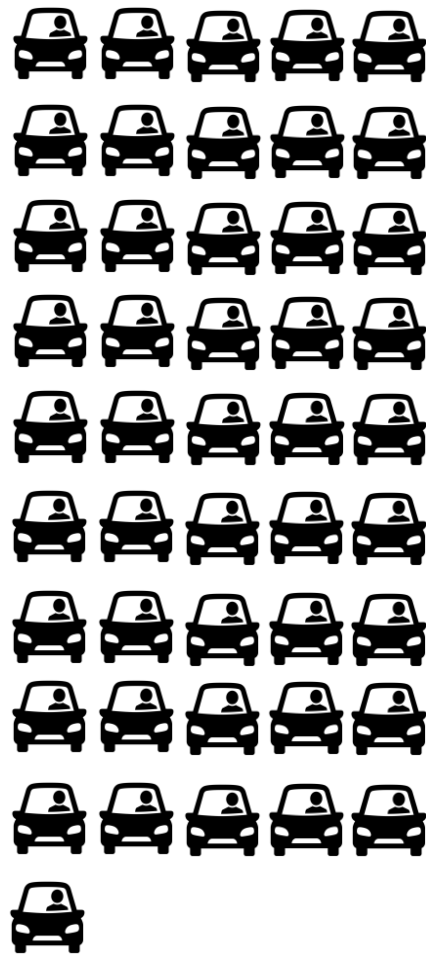
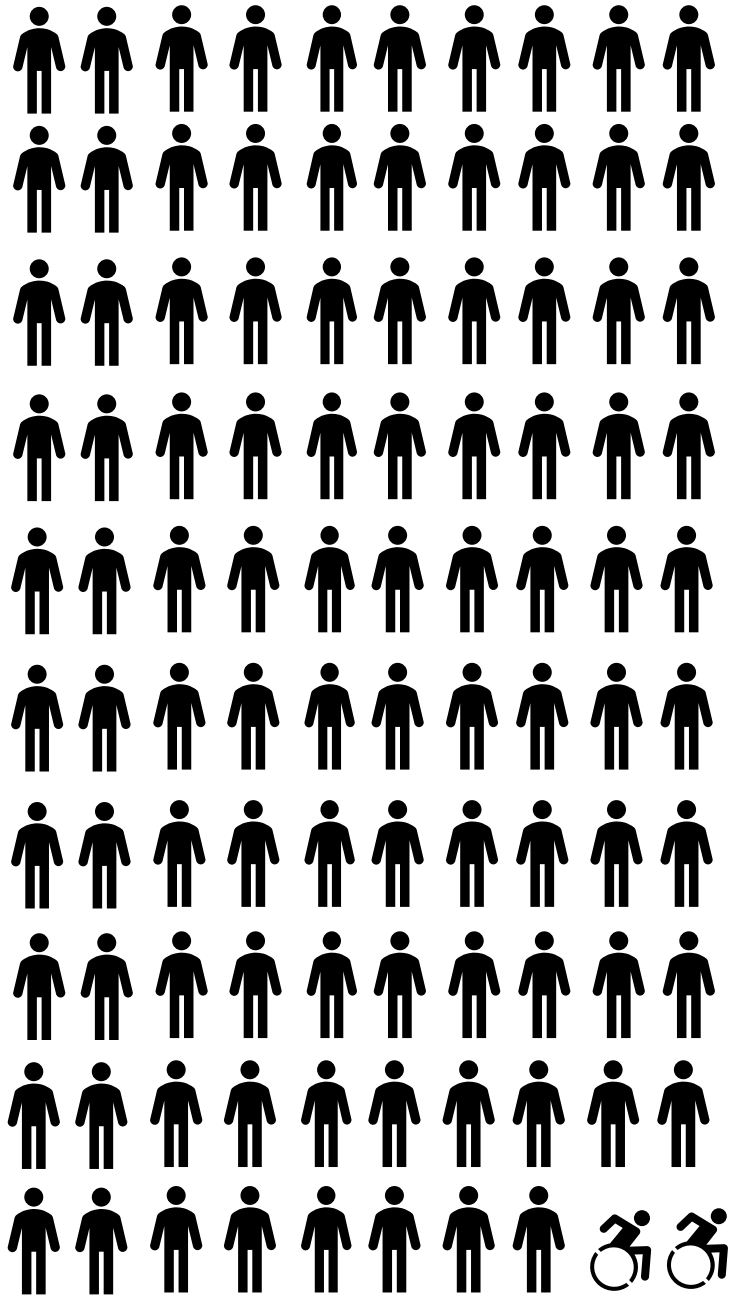
Kurtis, 72, died while walking in Hillman

Paul, 58, died walking in Lake City

John, 74, killed while walking in Rainier Beach

John, 74, killed while walking in Rainier Beach

Karen, 60, killed while walking in Rainier Beach



While Seattle is a leader in road safety, this is the scale of the loss of life occurring on our streets over the past 7 years. It is not acceptable.

Nothing on a slide could ever fully convey this loss, though it is important to recognize and understand what this does to a family and to our community.

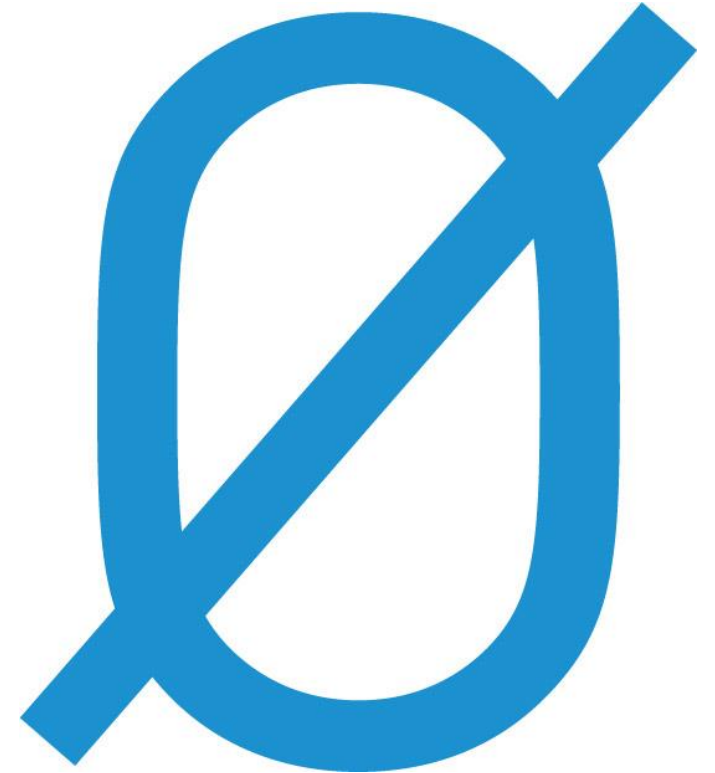
In addition, over the past decade (2010 - 2020), the societal cost of fatal and serious crashes on City of Seattle streets amounted to ~\$2.1B (source: WSDOT).

What is Vision Zero?

Seattle's goal to end traffic deaths and serious injuries on city streets by 2030.

Key principles

- Traffic deaths and injuries are preventable
- Humans make mistakes, are vulnerable and fragile
- Success does not hinge on individual behavior, but on the design of a safe system



National trends

 SMARTCITIES **DIVE** Deep Dive Opinion Library Events Topics ▾

Traffic fatalities hit 16-year high in 2021, with pedestrian deaths up 13%

Published May 18, 2022

[*Smart Cities Dive May 18, 2022*](#)

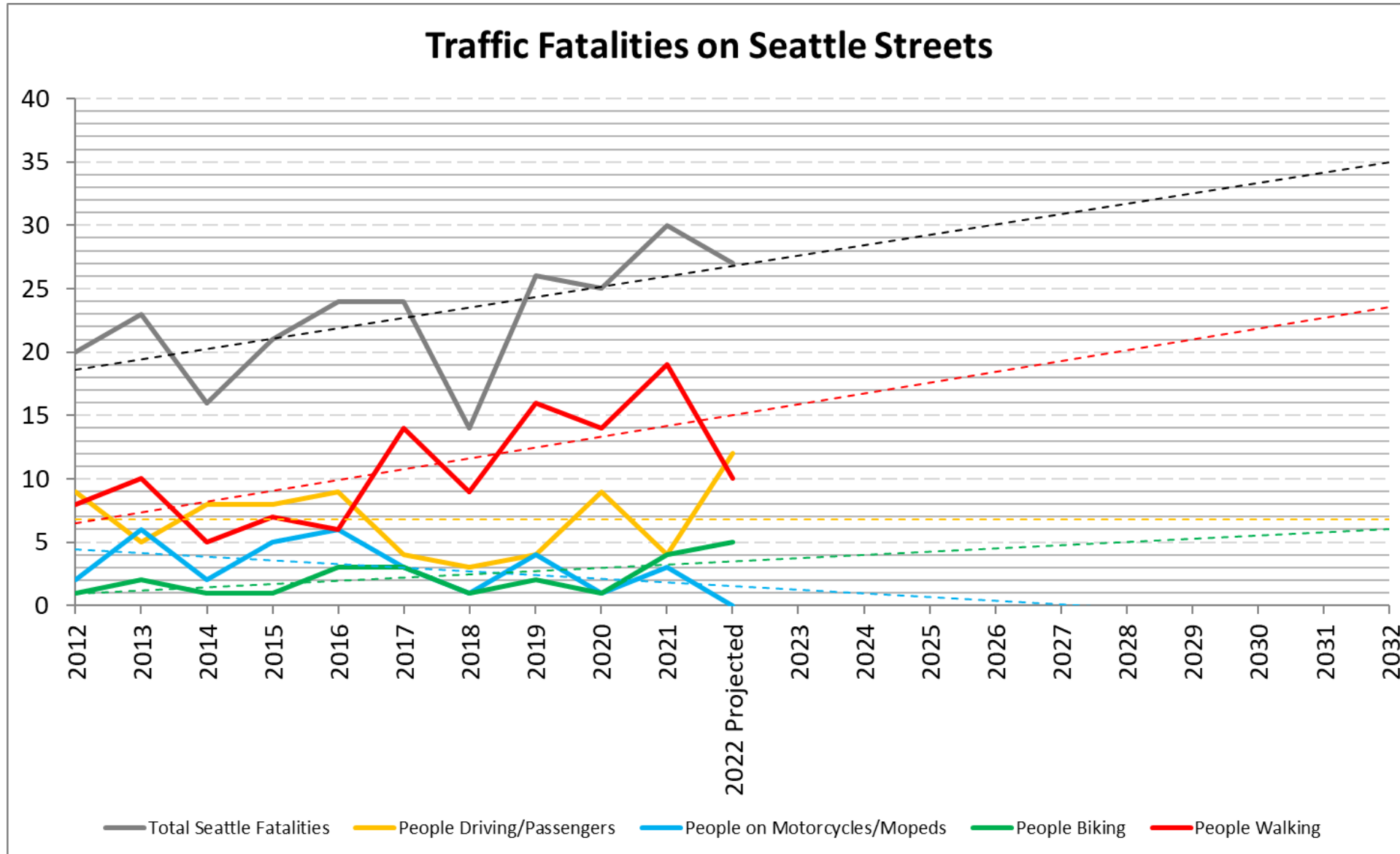
Pedestrian fatalities have been rising pre-pandemic.

Throughout pandemic, total collisions have dropped, volumes and travel patterns have changed.

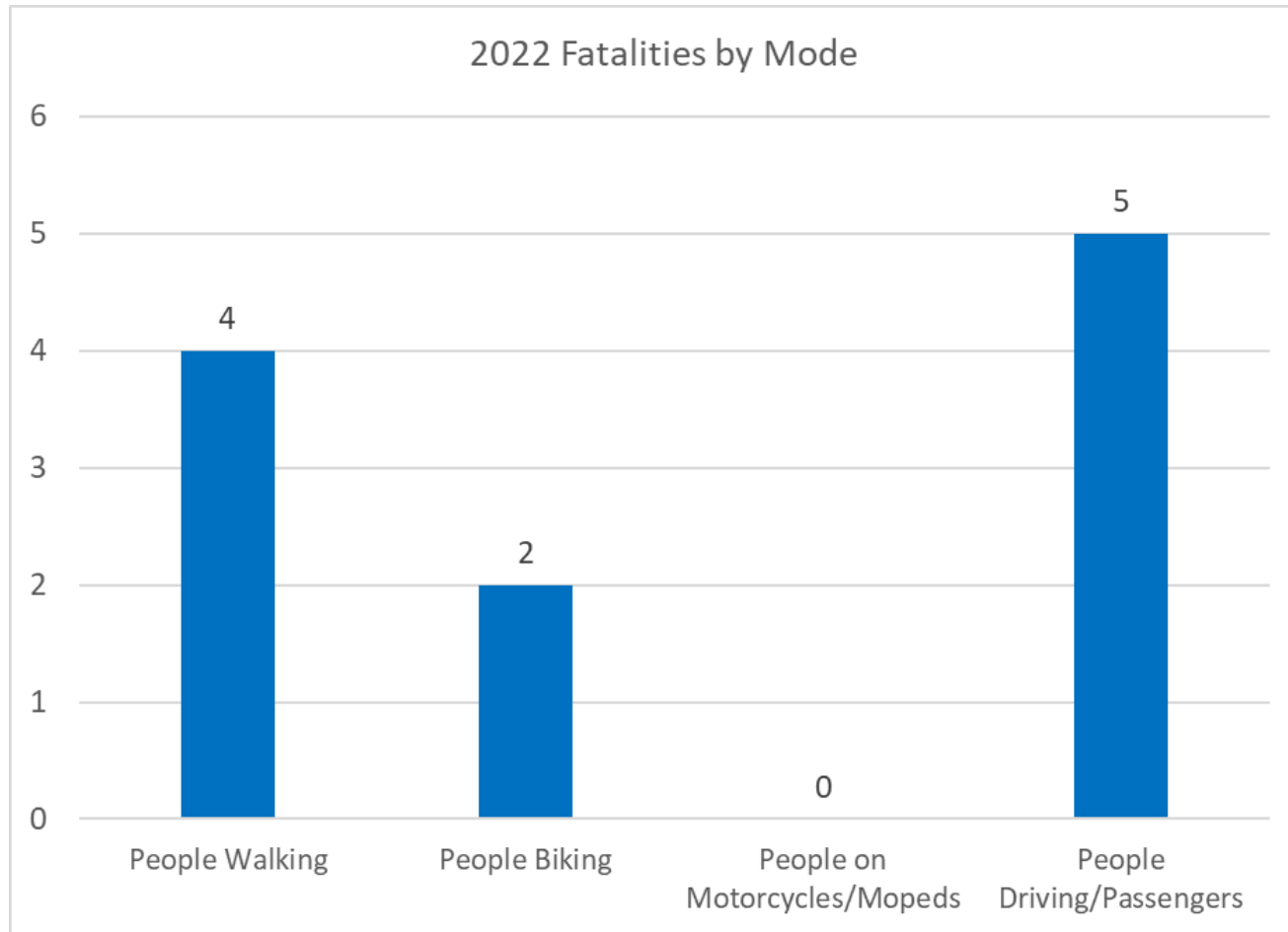
Less congestion gives way to more opportunity to speed.

Higher speeds (and the national rise of larger vehicles) mean crashes that are more deadly.

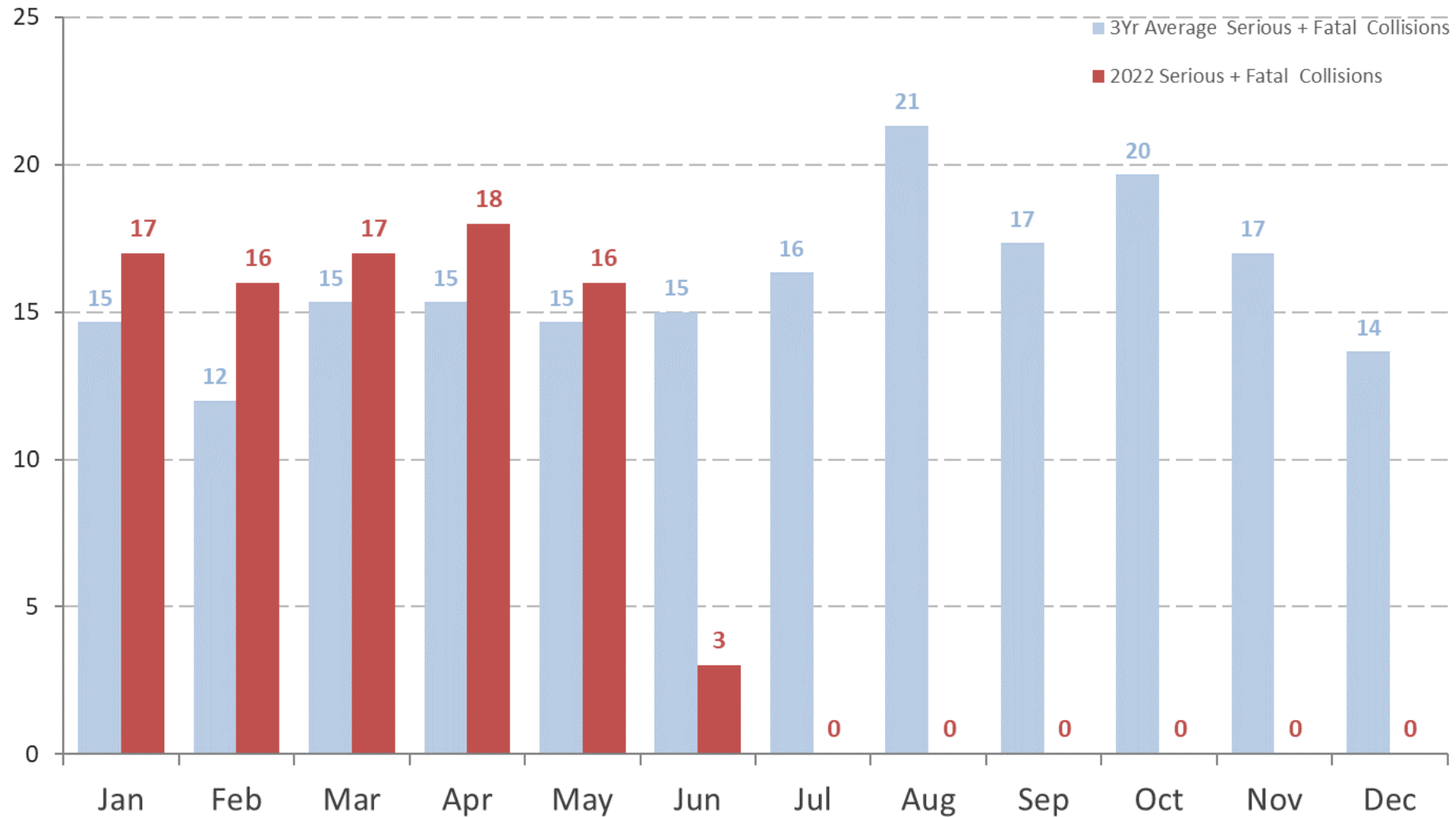
Where we're headed



2022 fatalities by mode (year to date)



Serious and fatal collisions (3 yr avg vs current yr)



Note: 2022 data as of June 12

Who is most affected by fatal crashes

- People walking, rolling, and biking are involved in 7% of total crashes, yet comprise 61% of fatalities
- Average age: 52 years old
- People experiencing homelessness (27% of 2021 fatalities)
- Black people disproportionately affected by fatal crashes

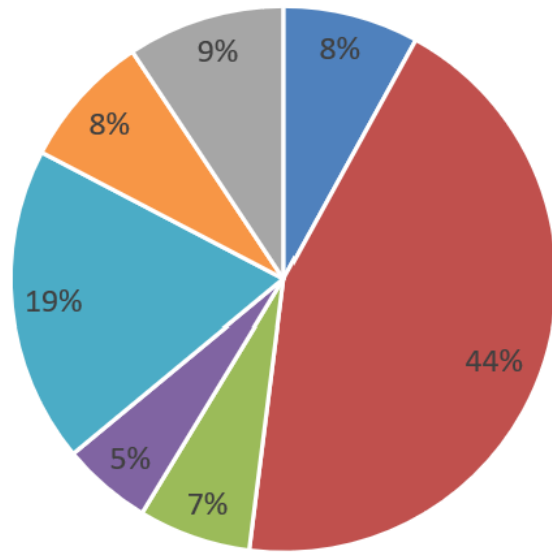
Vehicle safety continues to improve, mainly for people inside of vehicles.

People not protected by the shell of a vehicle are more vulnerable to death and injury.

Reducing speeds and reducing opportunities for conflict between people inside and outside of vehicles enhances safety for everyone.

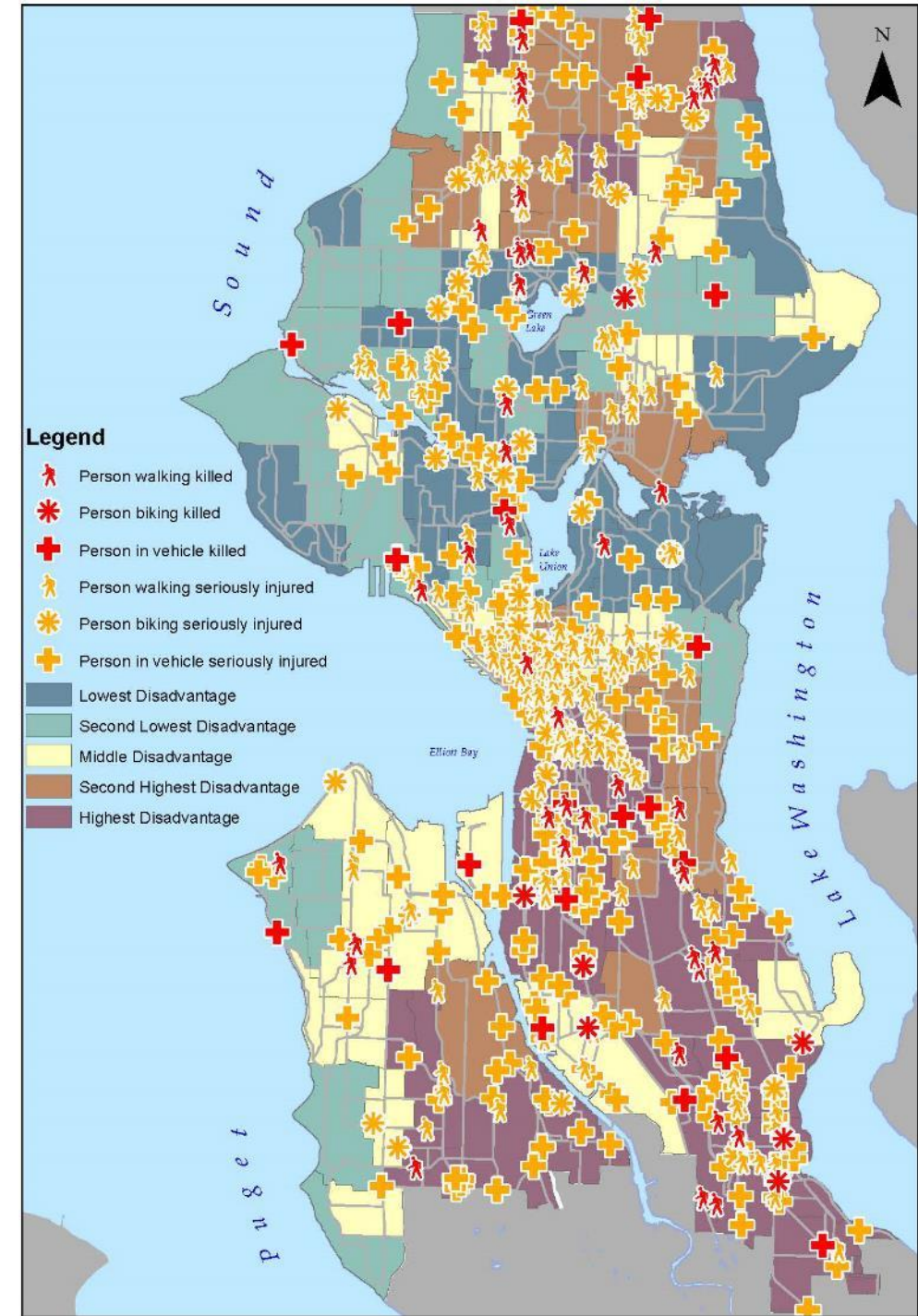
Where are fatal and serious crashes occurring?

2019-2021 fatalities
by Council District



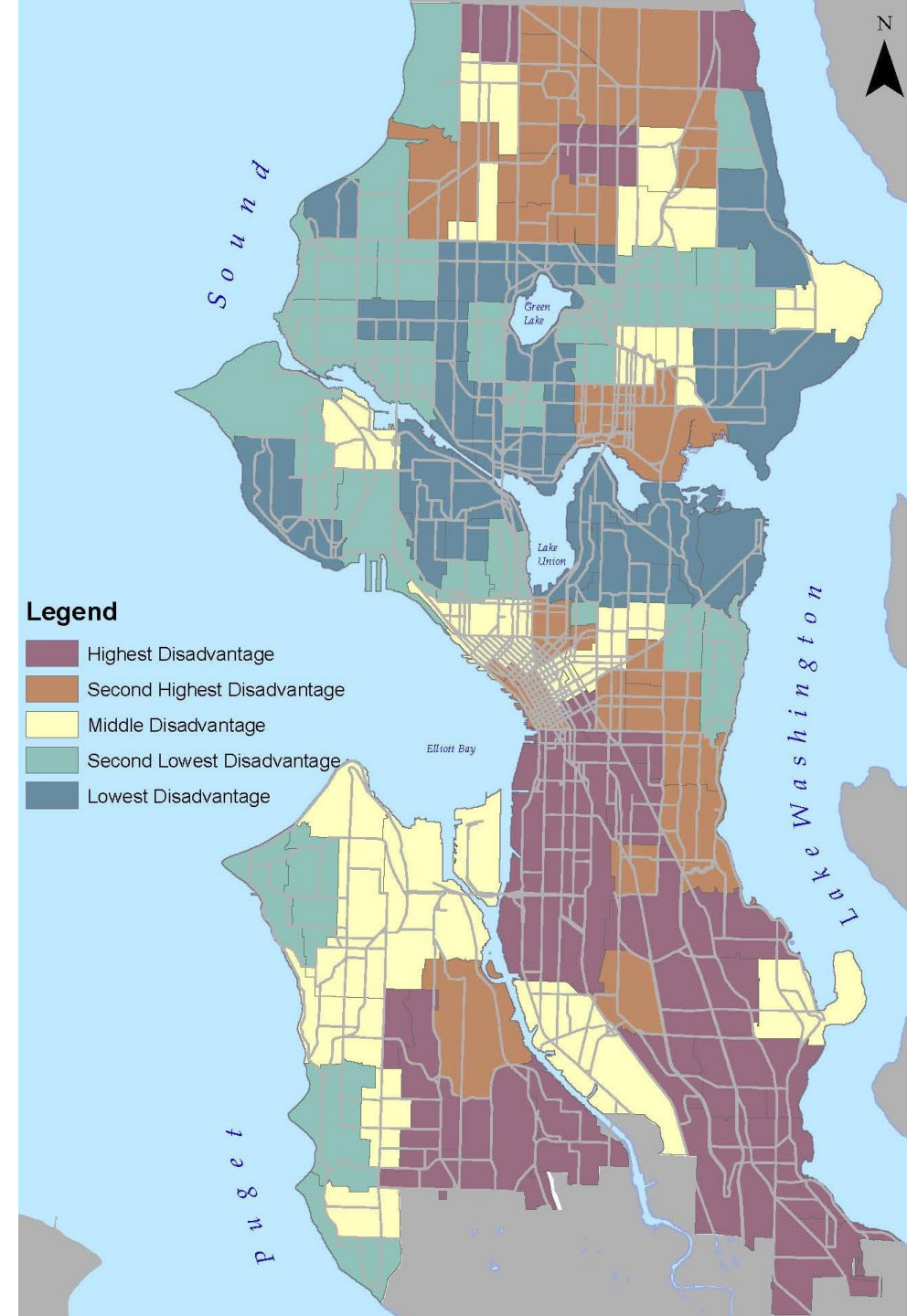
■ Dist 1 ■ Dist 2 ■ Dist 3 ■ Dist 4 ■ Dist 5 ■ Dist 6 ■ Dist 7

Last 3 years, nearly half of fatal crashes occurred in District 2. In 2021, 56% were in D2.



Using the Race and Social Equity Index as a measure

- Reviews all neighborhoods across Seattle and splits into 5 equal groups from Highest Disadvantage to Lowest Disadvantage
- Higher disadvantage =
 - Higher rates of people of color
 - Lower rates of native English speakers
 - Higher rates of foreign-born individuals
 - Higher rates of poverty
 - Lower rates of college education
- [Link to interactive map](#)



Vision Zero focus areas

To advance safety and equity, we prioritize investments in areas of highest need.

High Injury Network

- **Darker orange** = higher priority
- Reactive and targeted approach based on fatal and serious injury crash history and equity

Bicycle and Pedestrian Safety Analysis

- Guides proactive investments to prevent crashes, based on crash risk for most vulnerable

2022 High Injury Network Map



Multiple factors, multiple threats

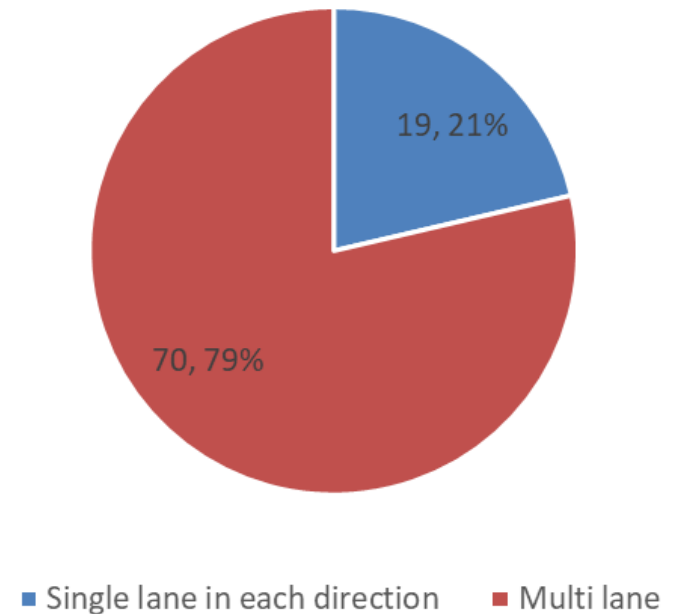
93% of pedestrian fatalities occurred on arterials

- 80% of these were multilane (more than 1 lane in each direction)
- Multilane streets make up 35% of all Seattle arterial streets

40% of serious and fatal pedestrian collisions occur at signalized intersections

More than 80% of people killed while biking happened where no bike lanes were provided

Roadway type where people walking were killed



2015 - June 2022 data

Redesigning streets to calm speeds

More lanes → higher volumes, fewer crossing opportunities and longer crossings (more exposure and risk), and higher speeds. Changing the physical design of the street is a proven way to calm speeds and significantly reduce injury crashes. How?

- Shorter pedestrian crossings reduce exposure to harm
- Reduce or convert travel lanes to transit, bike, or parking
- Calm turn movements and change corners
- Add directional ADA ramps
- Increase visibility for all travelers

This creates more steady and predictable movement that keeps everyone safer on the street.

Proven safety treatments



Rainier Ave S (Columbia City and Hillman City)

- Injury collisions **down 30%**
- Collisions with people walking and biking **down 40%**
- Top-end speeding **down 75%**

Shorter crossing distances, reduced exposure, increased visibility, increased walk time, and slower turning vehicles are a few ways to enhance safety for people walking and rolling.



Paint and post curb bulbs, 24th and Yesler



SDOT team installing speed cushions along the W Seattle Neighborhood Greenway



Rectangular Rapid Flashing Beacon crossing at SW Henderson and 17th Ave SW



Hardened centerline, Rainier and Massachusetts



New sidewalks, curb ramps on Lake City Way



Rainier Ave Phase 2, transit lanes as part of redesign



12th Ave S protected bike lane



New curb ramps, upgraded sidewalks near Wing Luke Elementary

Separated places for people to walk, roll, and bike are proven safety treatments and can increase predictability and safety for everyone. Transit lanes improve reliability and are one way to reallocate space when redesigning a street.

Putting people first - leading pedestrian intervals

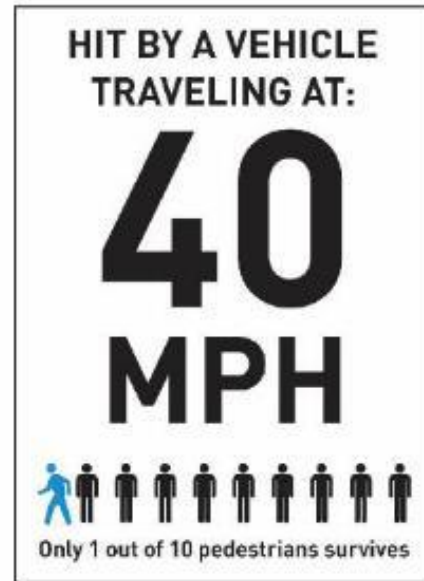
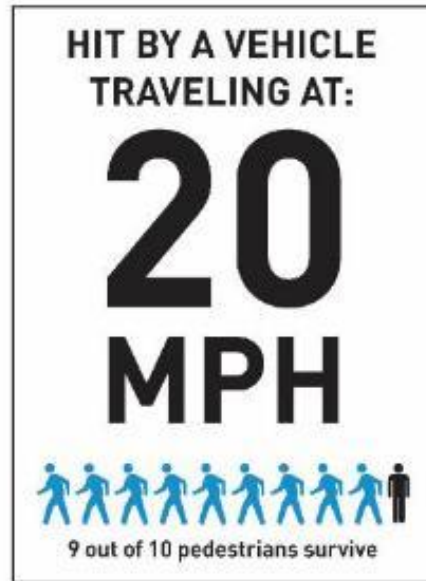
Since 2019, we've added leading pedestrian intervals (LPIs) to nearly half our ~1,000 traffic signals. This gives people walking and rolling a 3-7 second head start at the intersection.

Benefits:

- 50% reduction in pedestrian turning collisions
- 35% reduction in serious and fatal collisions



Slowing down to save lives



Since 2015, we've lowered citywide speed limits. More than 90% of Seattle arterials are 25 MPH. All non-arterials are 20 MPH.

We've made significant progress on our speed reduction work and have more to do. Lower speed limits and signs are a start. As we focus and build out our efforts to redesign high speed arterial streets, we need your support. We need people driving to slow down.

Current areas of focus

To advance safety and equity, we prioritize investments in areas of highest need.

- Aurora corridor engagement, analysis, and design
- Downtown pedestrian safety
- SODO safety improvements
- Georgetown to South Park connection
- Georgetown to Downtown coming soon
- West Marginal Way Safety Project
- MLK protected bike lanes
- Safety Corridor Projects: Rainier Phase 3, Sand Point Way, 23rd Ave, Lake City Way
- Reconnect West Seattle: SW Roxbury St improvements, Homes Zones

Traffic calming and pedestrian safety improvements via Reconnect West Seattle



Annual work plan highlights

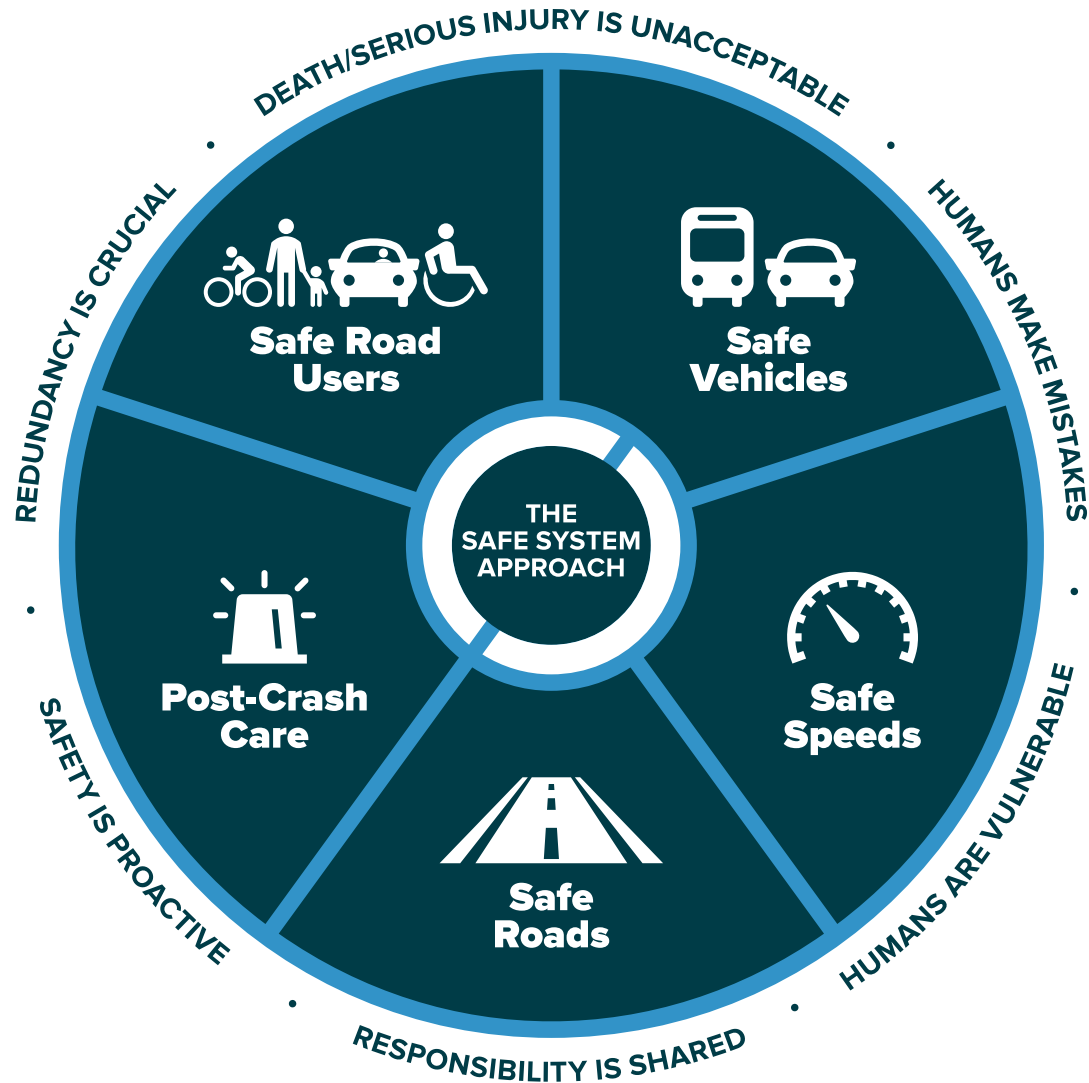
- High Injury Network: 2-3 corridors
- 20+ blocks of new sidewalks
- 9-12 Safe Routes to School projects
- Minimum of 1,250 annual curb ramps
- 1,500 crosswalks repainted annually
- 10+ bike/ped spot improvements
- ~11 miles of bike facilities





Achieving Vision Zero will require more of these types of design changes. Supporting this work are efforts in education and partnership development. As we move forward, we are committed to taking a systemic approach and connecting our work in safety to our work in advancing transportation justice and equity.



A new mentality for roadway safety: safe system approach



 Secretary Pete Buttigieg 
@SecretaryPete

We would never tolerate 3,000 deaths per month on America's airlines or subways, but on our roads we act like it's normal.

It's time for a new mentality for roadway safety.

7:45 AM · Jan 31, 2022 · Twitter Web App

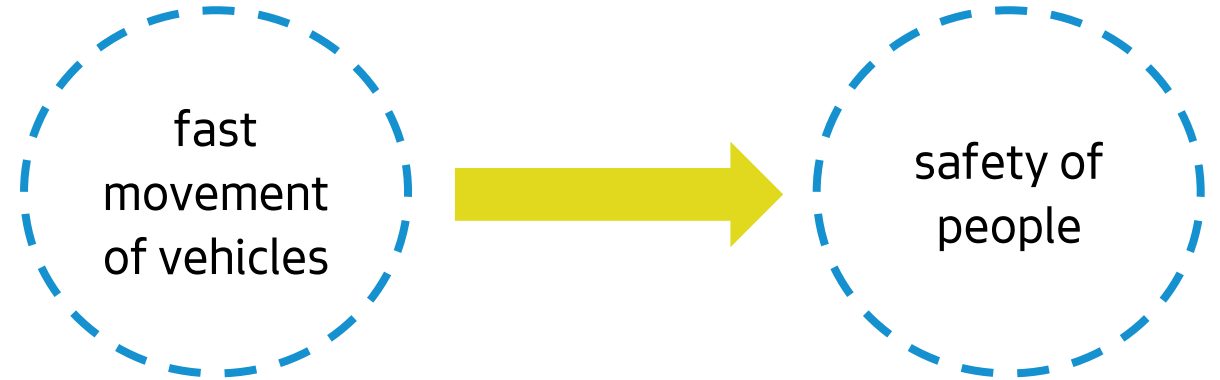
657 Retweets 74 Quote Tweets 4,763 Likes

More than a slogan

Requires a paradigm shift.

We must move toward prioritizing the safe movement of human beings, rather than the fast movement of vehicles.

- Safety of people as the top priority
- Slow down to the speed of life
- Reallocate street space



- Alignment across all levels of leadership
- Need community support and partnership

If we want different outcomes, we need a different approach

Traditional

Prevent crashes



Improve human behavior



Control speeding



Individuals are responsible



React based on crash history



Safe System

Prevent deaths and serious injuries

Design for human mistakes/limitations

Reduce system kinetic energy

Share responsibility

Proactively identify and address risks

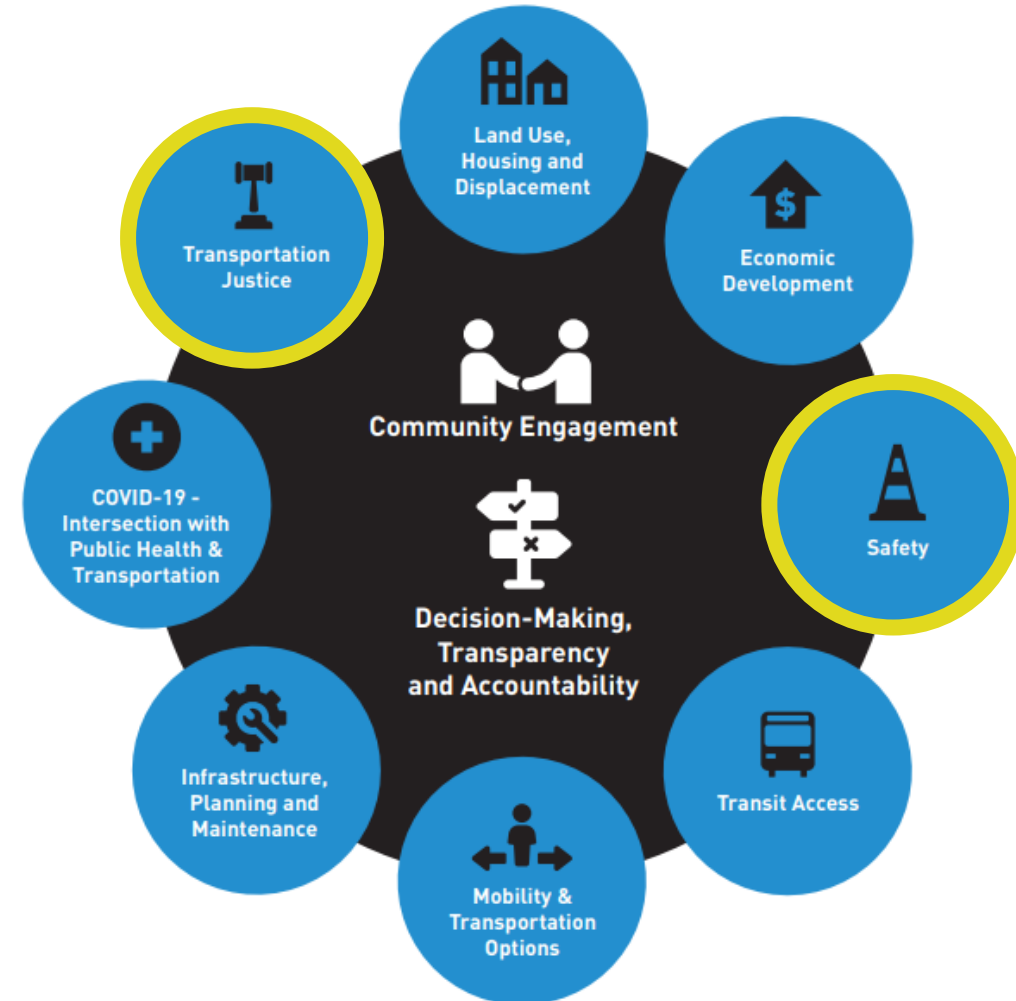
Connections to Transportation Equity Framework

Related tactics

42.1: Co-develop a working definition for "safety" with Transportation Equity Workgroup and other BIPOC community members

19.2 Identify opportunities to repurpose some travel lanes for transit, biking, and also smaller, lighter-weight vehicles and devices to create more travel options with the Seattle Transportation Plan.

43.4 Review SDOT policies, practices, standards, and funding allocation strategies to elevate / give priority to access and use of right-of-way (ROW) for people of all ages and abilities - people recreating, shopping, walking, rolling, riding bikes and transit.



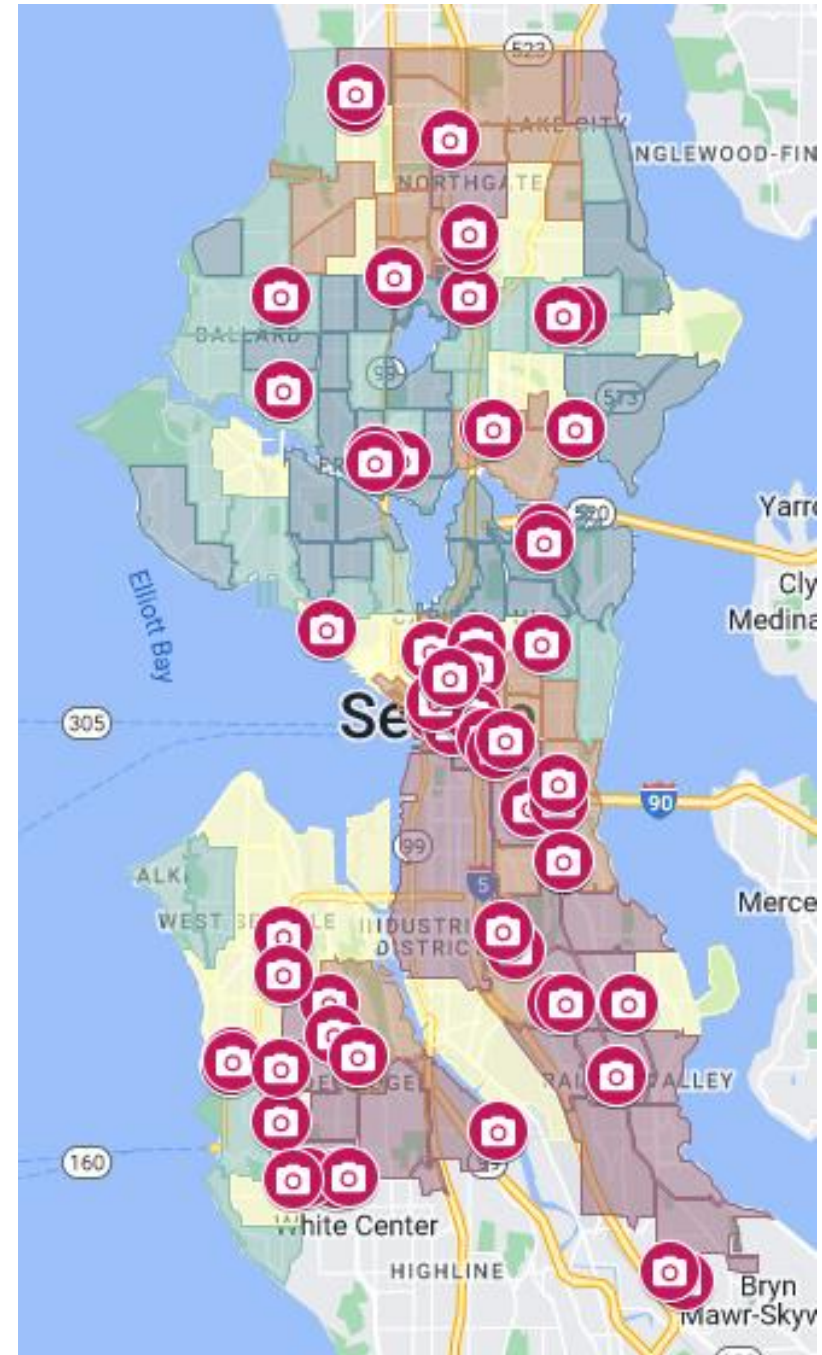
The [Transportation Equity Framework](#) is SDOT's road map for advancing a more equitable transportation system

Enforcement and the Transportation Equity Framework

43.6 and 44.1: Conduct racial equity analyses of in-person traffic enforcement and automated enforcement cameras

42.2 Identify existing non-punitive alternatives to traffic violation fines & fees; coordinate with community-based organizations to recommend new or revised non-punitive alternatives such as restorative justice measures, community service options, or online traffic safety classes; review opportunities to reward positive safety-related behaviors.

Map shows red light and school zone camera locations with City's Race and Social Equity Index scores



Education

Safe Routes to School Let's Go Program



Photo c/o Seattle Public Schools, students at Louisa Boren STEM K-8 students taking in the Let's Go program

WA Traffic Safety Commission grant-funded education campaigns for 25 MPH speed limit and stopping for pedestrians

Coming soon!

Partnerships

Working across agencies and with community organizations is key to building awareness and making collective change.

Partner
spotlight:
East African
Community
Services



Fitting youth with free helmets in New Holly (summer 2021)



East African Community Service Vision Zero youth cohort (spring 2022)

This involves everyone...

Look Out
for Each Other

seattle.gov/visionzero

VISION
ZERO
SAFER STREETS FOR SEATTLE

Seattle
Department of
Transportation

ALL INTERSECTIONS
ARE CROSSWALKS

Stop for me!

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Looking ahead

- Speed Limits Phase 2: Arterial Traffic Calming
- Federal funding opportunity: Safe Streets and Roads for All proposal development
- Statement of Legislative Intent responses (MLK corridor, safety data and analysis)
- Vision Zero updated action plan
- Bicycle and Pedestrian Safety Analysis 3.0
- Seattle Transportation Plan



Summary

- Speeding matters and is directly related to street design
- Reducing speeds and separating people inside and outside of vehicles through time (signals) and space (separated facilities) is key
- Where we make these changes, we see progress
- Making more of these changes will help us shift trends
- Vision Zero is achievable – it takes all of us working together

Questions?

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www.seattle.gov/visionzero



Back pockets

Connecting to the Transportation Equity Framework

Safety value statement: We believe our transportation system should be safe regardless of one's age, ability, location, income, language, race and/or how they choose to get around.

Transportation justice value statement: We believe transportation must be affordable, accessible, and just as it is an essential right for all people. We believe transportation laws and penalties are also a result of structural racism that has historically harmed, caused death, and inflicted poverty on our BIPOC communities. We must also move towards decriminalizing transportation by redesigning existing laws and implementing non-punitive policies.

<https://www.seattle.gov/transportation/projects-and-programs/programs/transportation-equity-program/equity-workgroup>

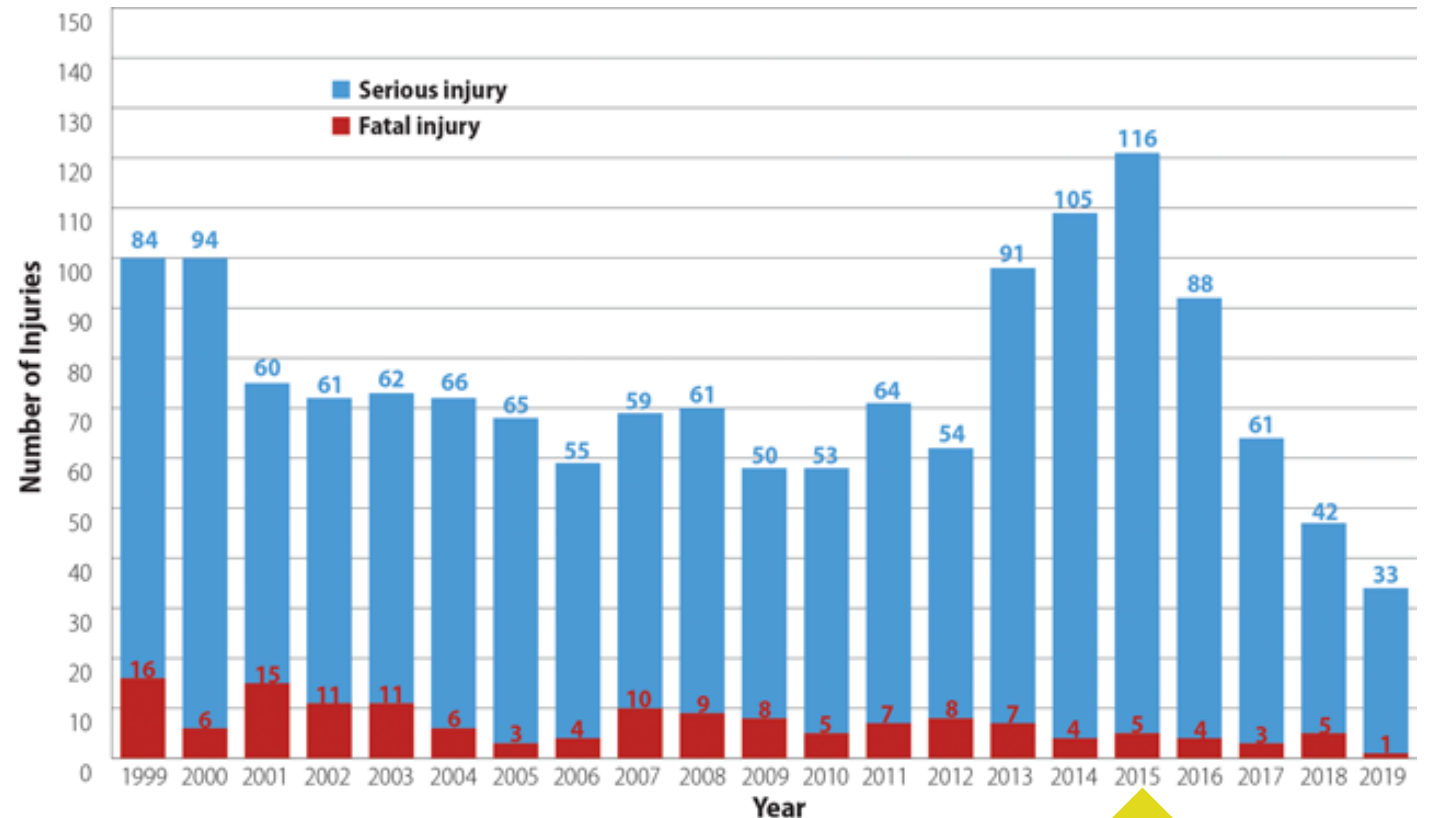
Vision Zero *is* possible: Oslo, Norway

2015: Oslo City officials and transportation staff **shifted the paradigm**, from car-centric to people-centric, tying safety and climate goals together.

Key actions

- Car-free downtown
- Lower speed limits
- Expanded bike network

Serious injury and fatal collisions in Oslo



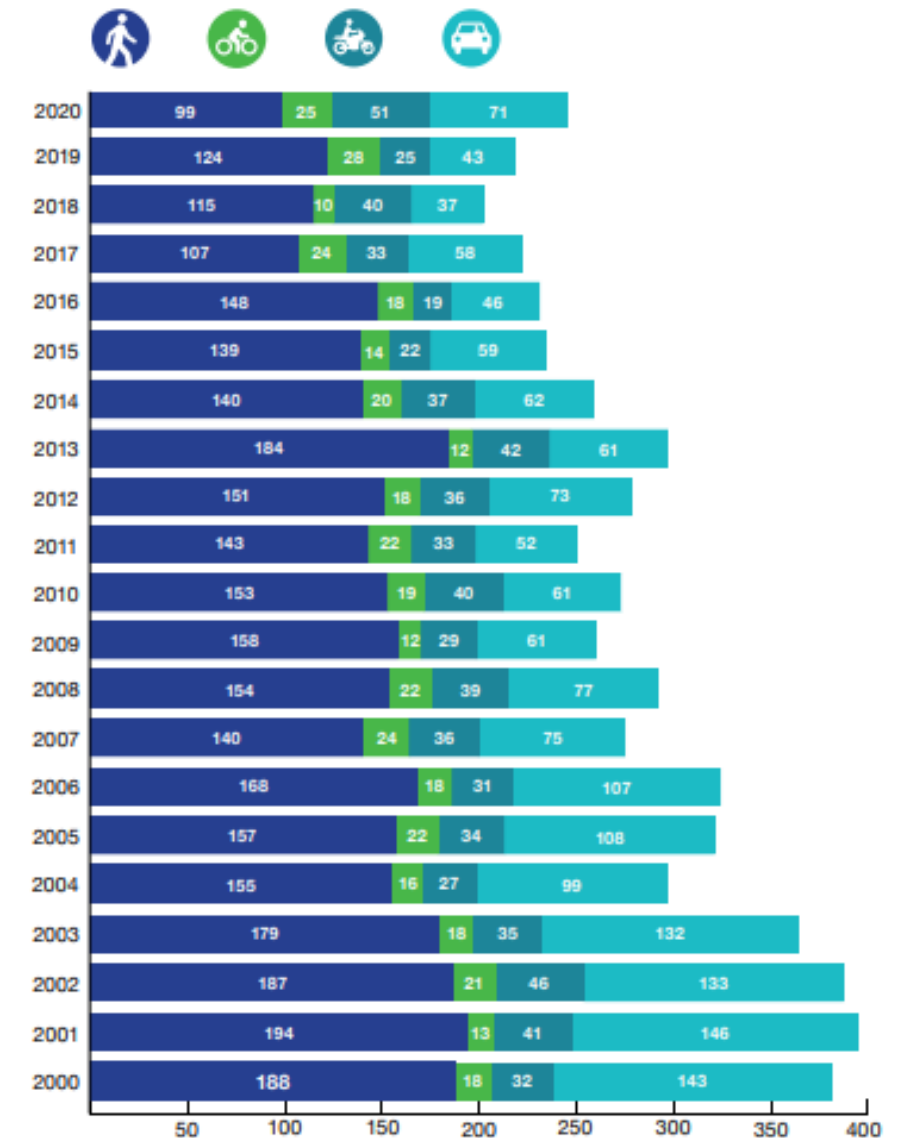
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Vision Zero is possible: New York City



On Queens Blvd, NYC DOT added pedestrian islands, widened crosswalks, protected bike lanes, and extended medians. As a result, the roadway on which 18 pedestrians died in 1997 saw zero pedestrian fatalities between 2014 and 2017.

Traffic fatalities by mode (2000 - 2020)



Vision Zero *is* possible: Hoboken, NJ

Zero traffic deaths in the last 4 years



A raised intersection at Ninth and Grand streets along with new crosswalk with wide stripes and reflective paint. Photo: City of Hoboken

"Hoboken is a pedestrian-oriented city. There are so many ways that you can get around without driving, some people have stopped driving in Hoboken."

Ryan Sharp,
Hoboken's director of transportation



From the entire SDOT Team:
Thank you!