

Managing Demand: Why More Mobility Choices Matter



MID-OHIO REGIONAL
MORPC
PLANNING COMMISSION

Pete Costa, AICP, PTP
October 20, 2022

HNTB

Discussion Topics

Regional Outlook

What is TDM?

Design Matters

Thinking Ahead

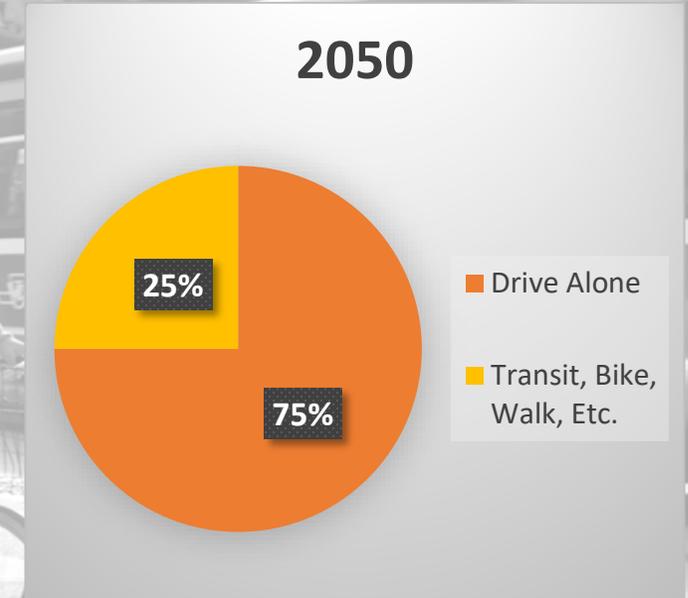
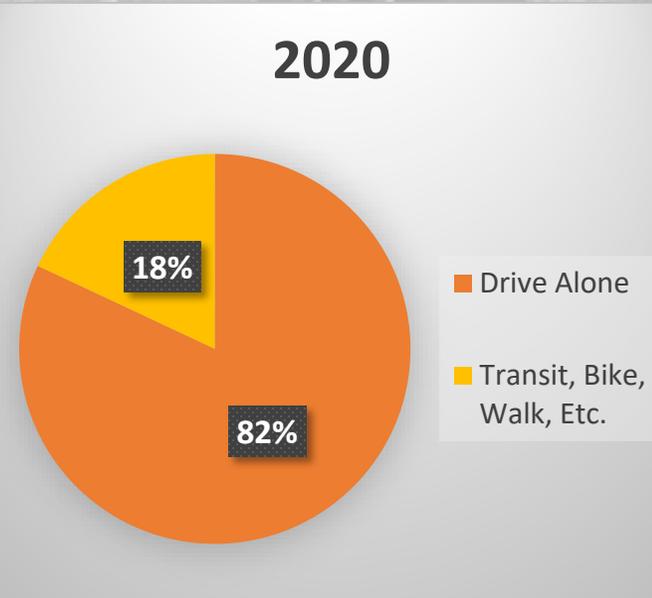


Regional Outlook



Advancing Regional Goals

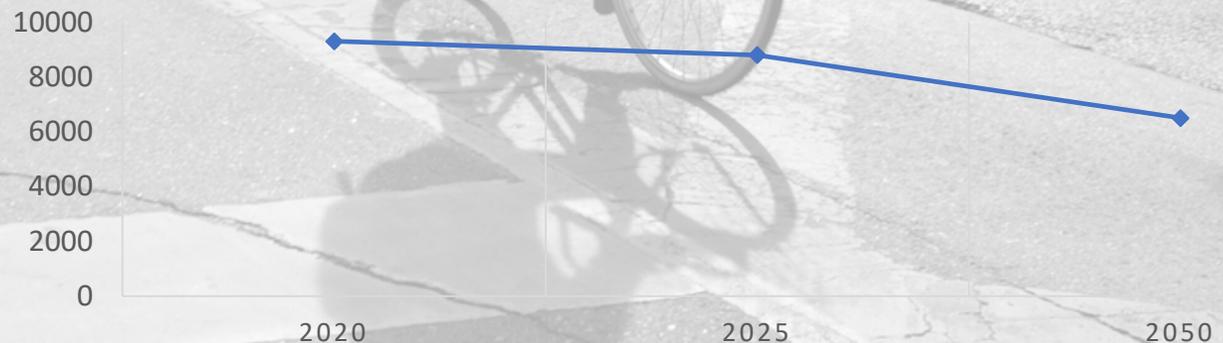
Goal to achieve 25% non-auto/transit mode share by 2050



Goal to reduce VMT per Capita by 30% by 2050



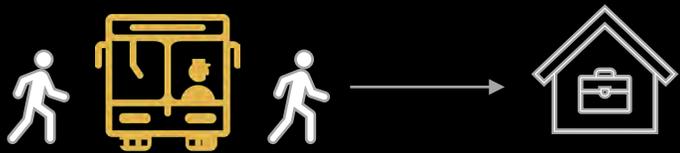
VMT PER CAPITA (2020 – 2050)



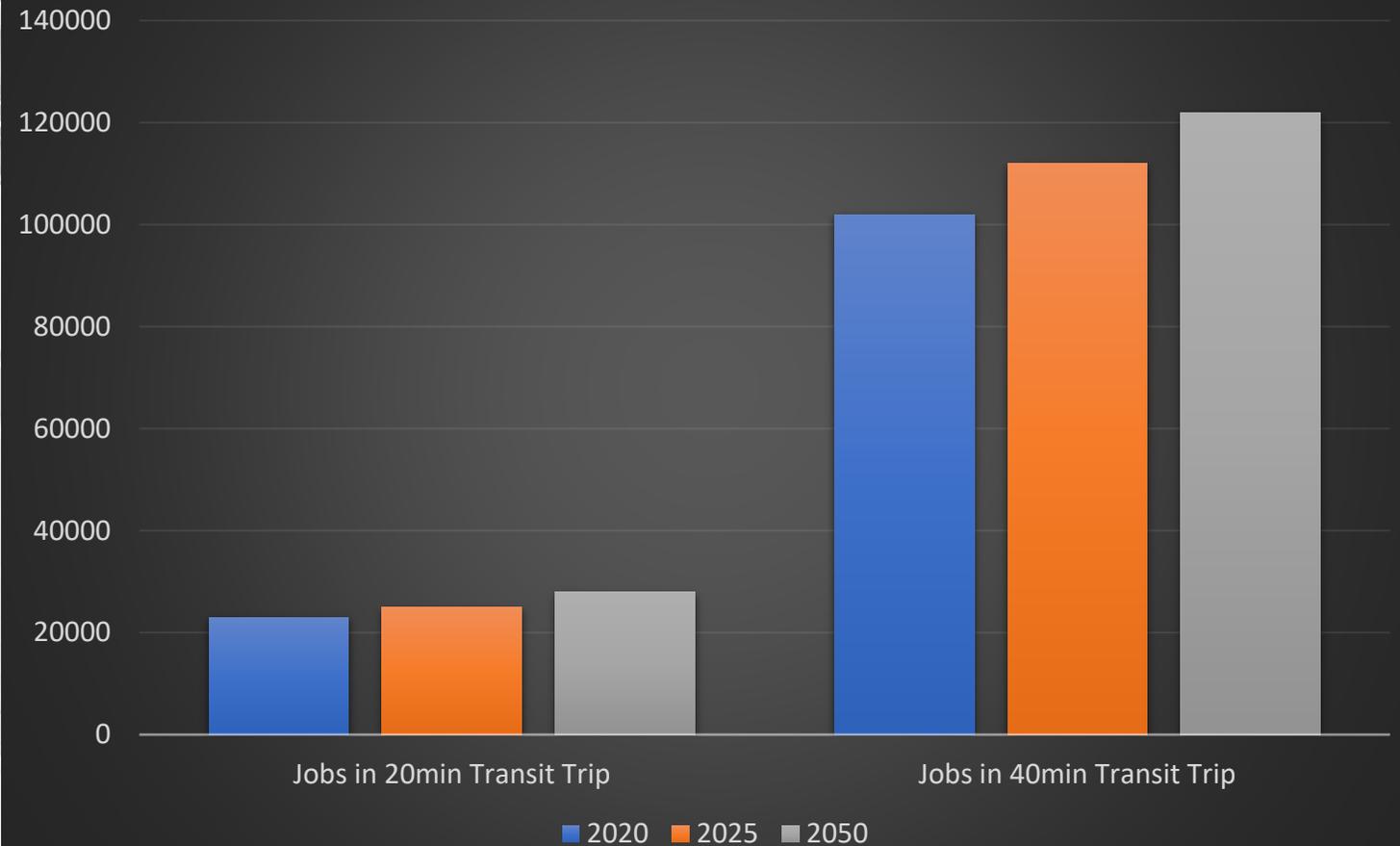
Advancing Regional Goals

Making Transit the FIRST Mode Choice to Jobs

- 22% increase within 20 min trip
- 20% increase within 40 min trip



Taking Transit to Jobs (2020 – 2050)

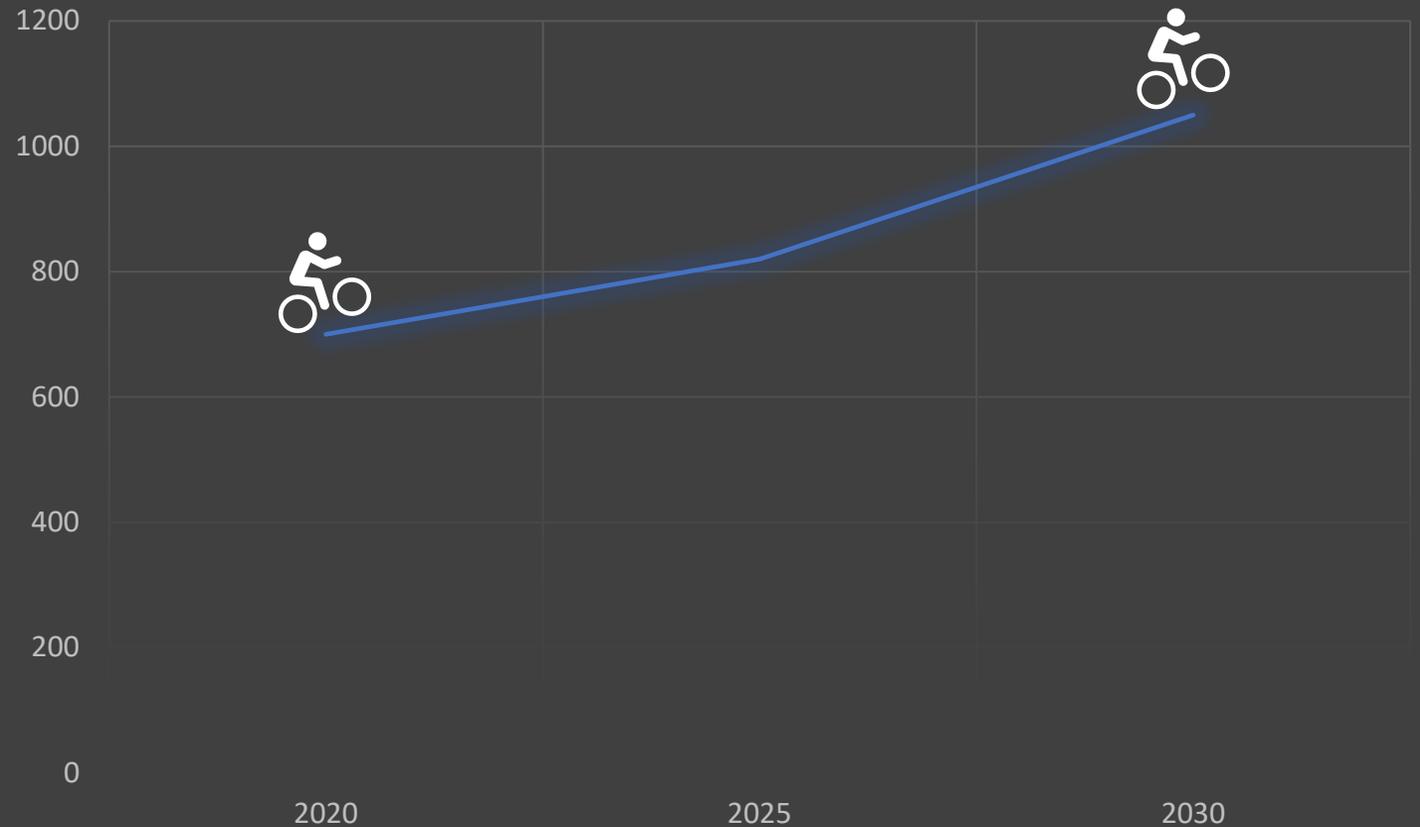


Advancing Regional Goals

Grow from **14%** to **100%** MORPC member communities to adopt Complete Streets Policies

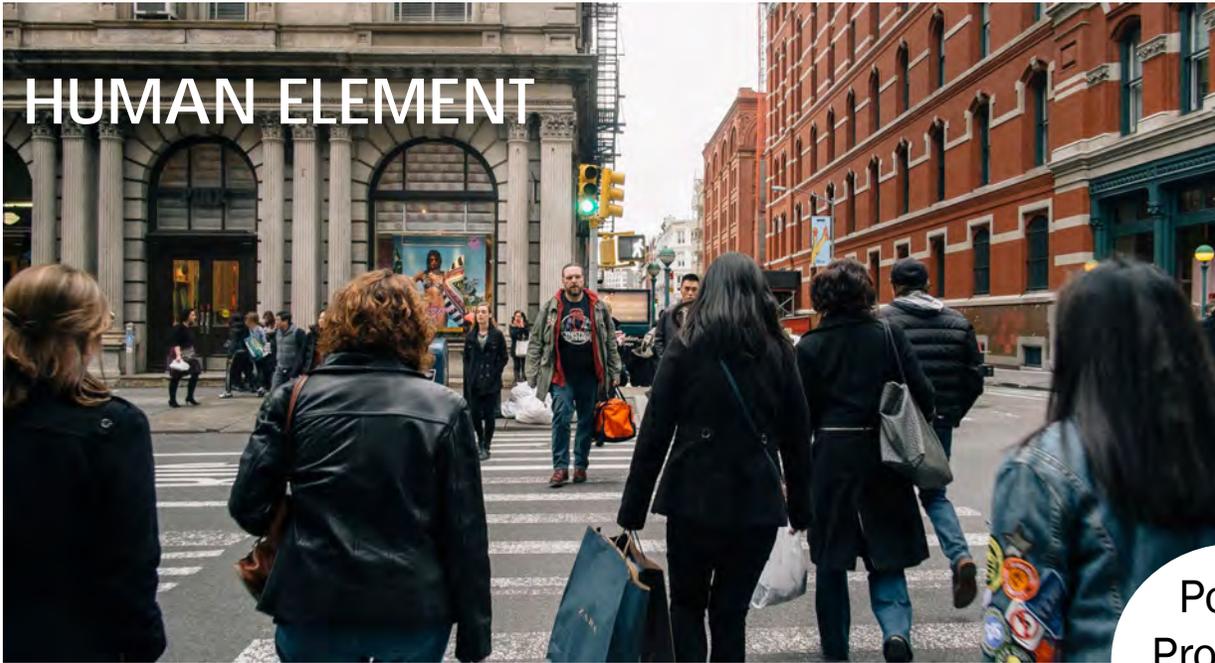
Increase bike miles from 700 to **1,050** by 2050
Increase sidewalk on arterials and collectors from 40% to **85%** by 2050

Expanding Regional Bike Network



A photograph of a crowded bus stop. In the foreground, a person with a large grey backpack is pushing a bicycle. To the left, a woman in a light-colored jacket stands near the bus door. In the center, a man with headphones looks towards the camera. To the right, a man in a blue patterned shirt and a man in a grey hoodie with a bright yellow waistband are visible. The bus is white with blue lights, and the scene is set in an urban environment.

What is TDM?



Policy
Program
Physical





Transportation Demand Management

- Forges mobility justice
- Maximizes existing resources
- Builds partnerships
- Manages capital costs
- Setting and achieving sustainable, equitable goals
- Supports active, affordable living
- More mobility choices

A group of people dressed as Elvis Presley are riding bicycles down a city street. They are wearing white jumpsuits with gold and red accents, black pompadour hairstyles, and sunglasses. The bicycles have white baskets on the front. The background shows a city street with buildings and a large archway. The text "TDM is about Creating Opportunities" is overlaid in the center of the image in white font on a black background.

TDM is about Creating
Opportunities

My friends are waiting for me a few blocks away...but the roads are slammed!



Good idea my boss gave me a bikeshare membership!



So many errands to run today but my brother can't pick me up today...

PHARMACY

GROCERY STORE

POST OFFICE



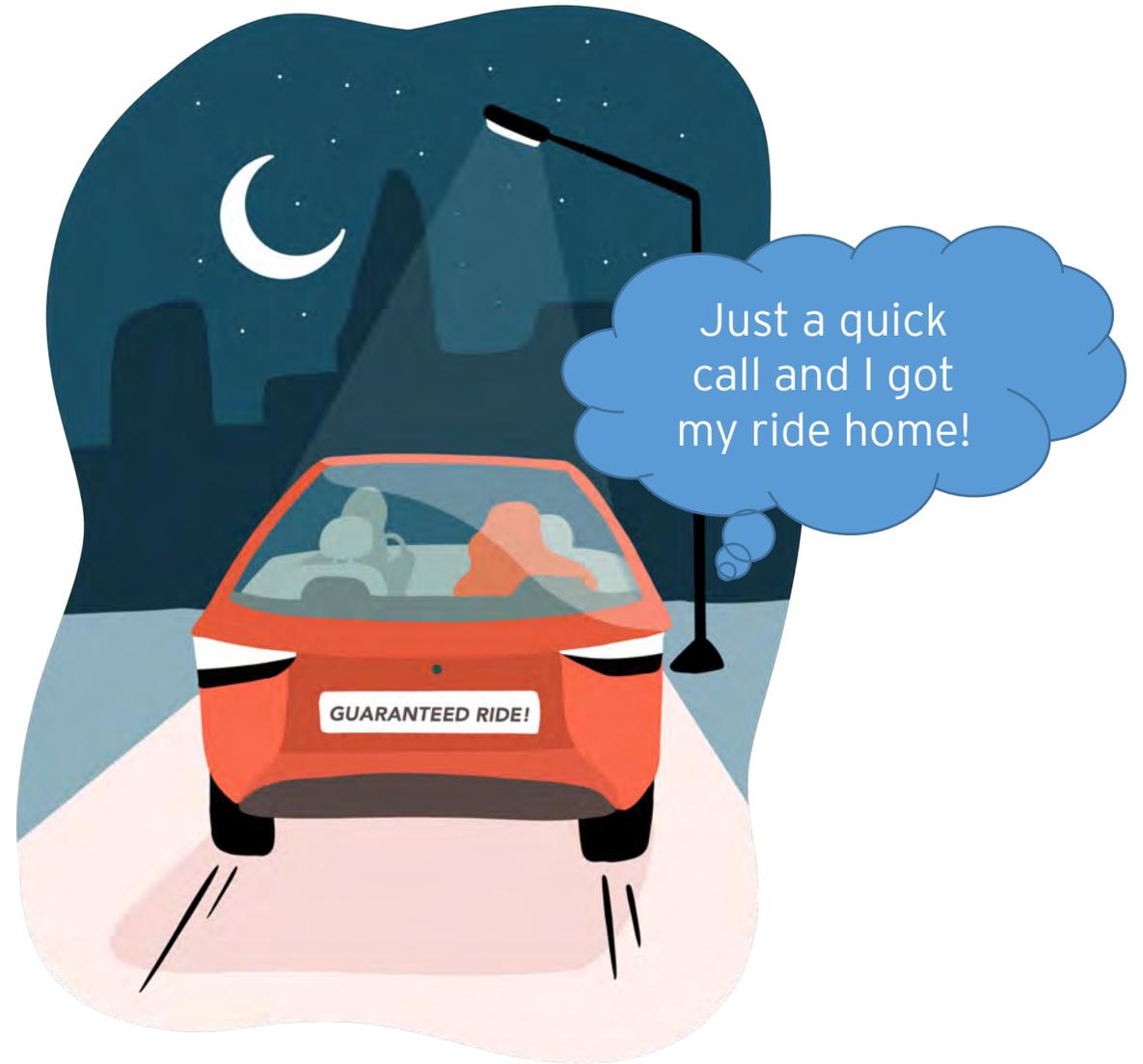
So glad I heard about this microtransit service!



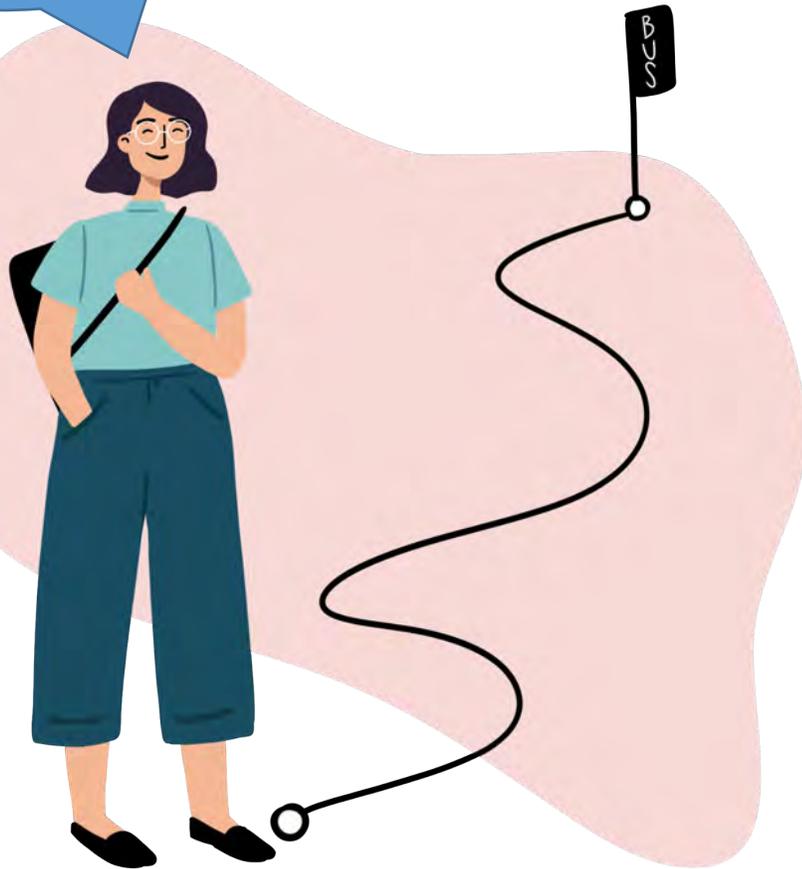
Started third shift
and there is no
late-night service
to get me back
home!!



Just a quick
call and I got
my ride home!



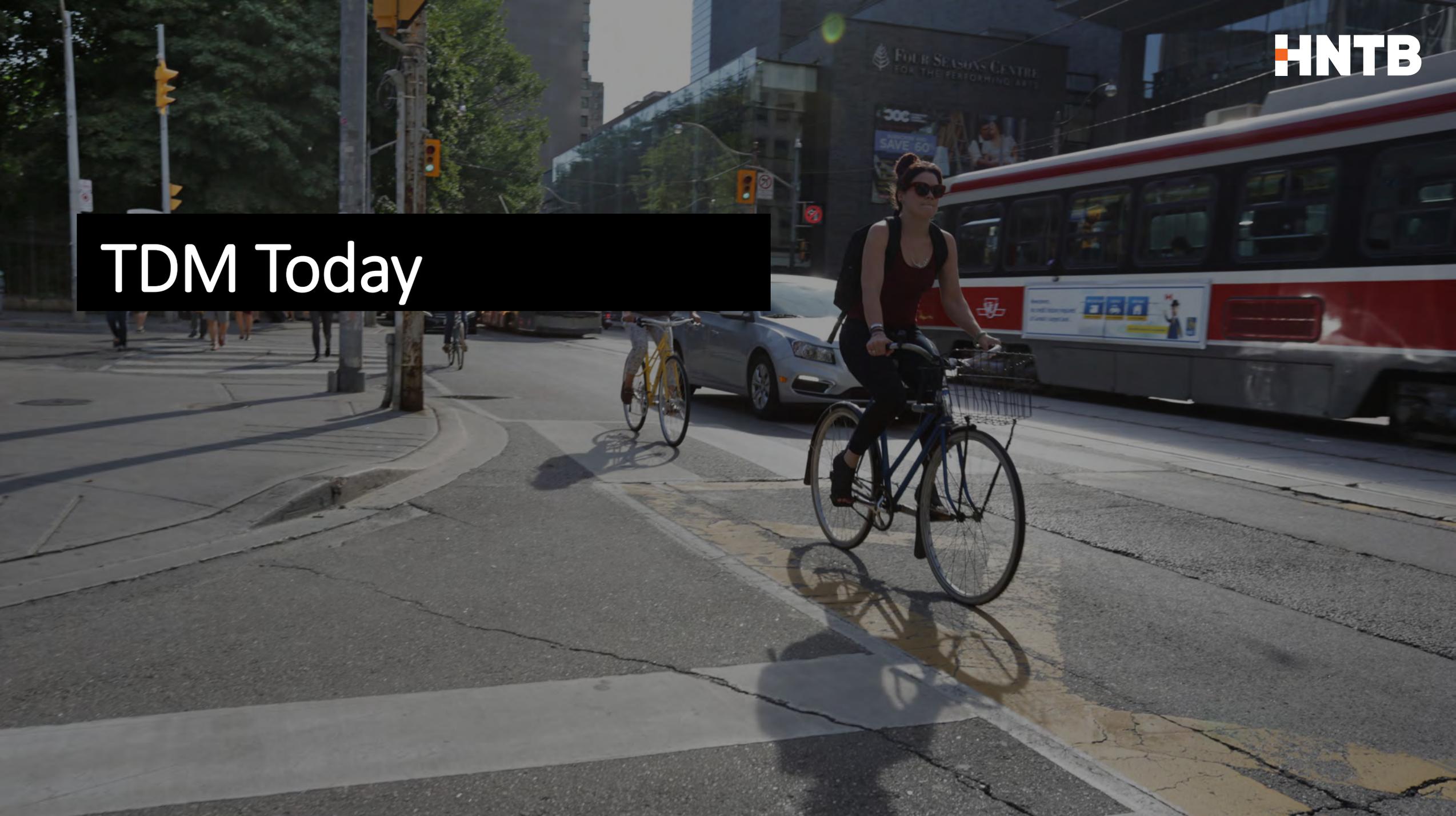
Just moved here
and I don't want
to own a car...The
bus stop is over a
mile away!

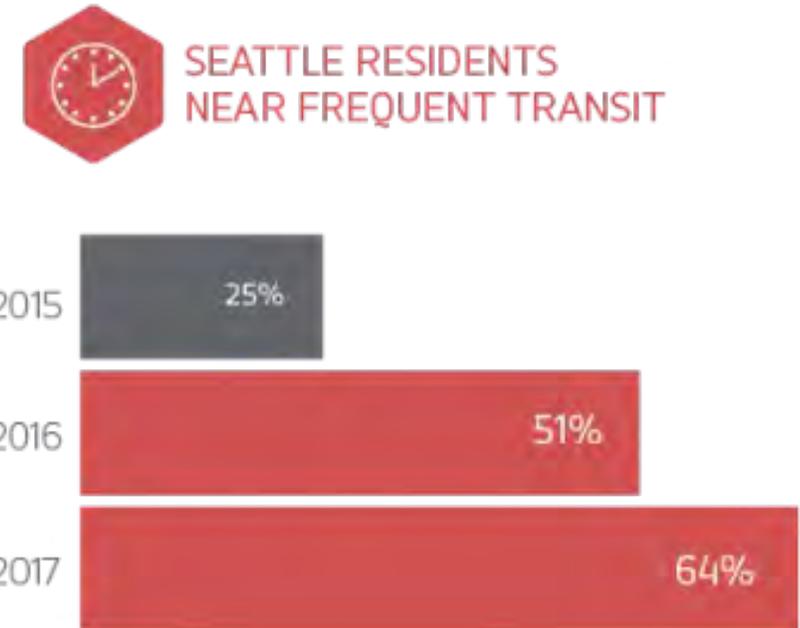
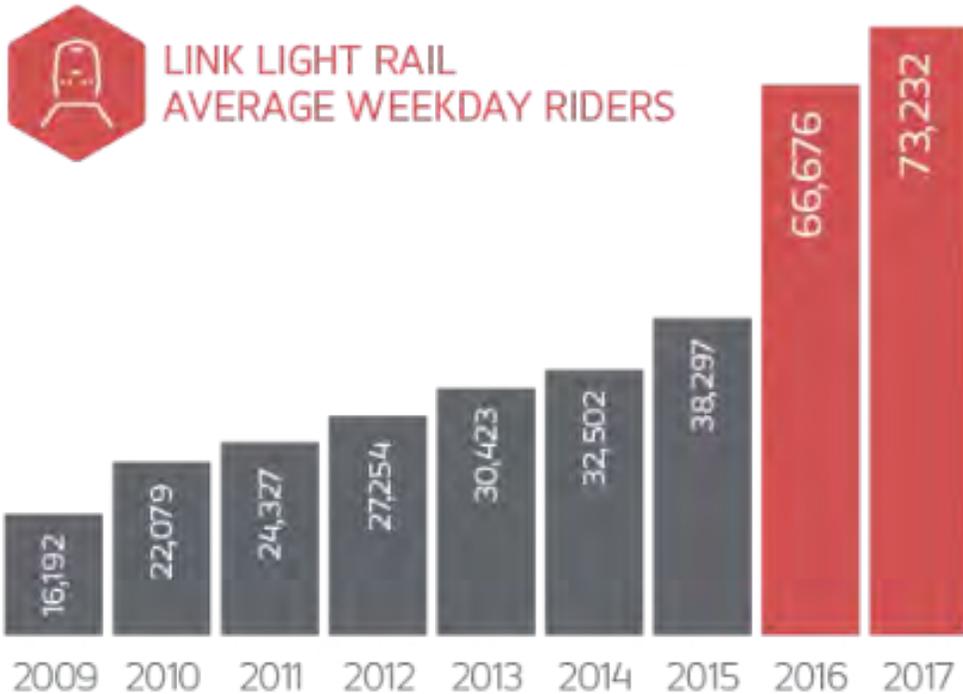


Wow this new bike
lane makes it fun
to get to my bus!

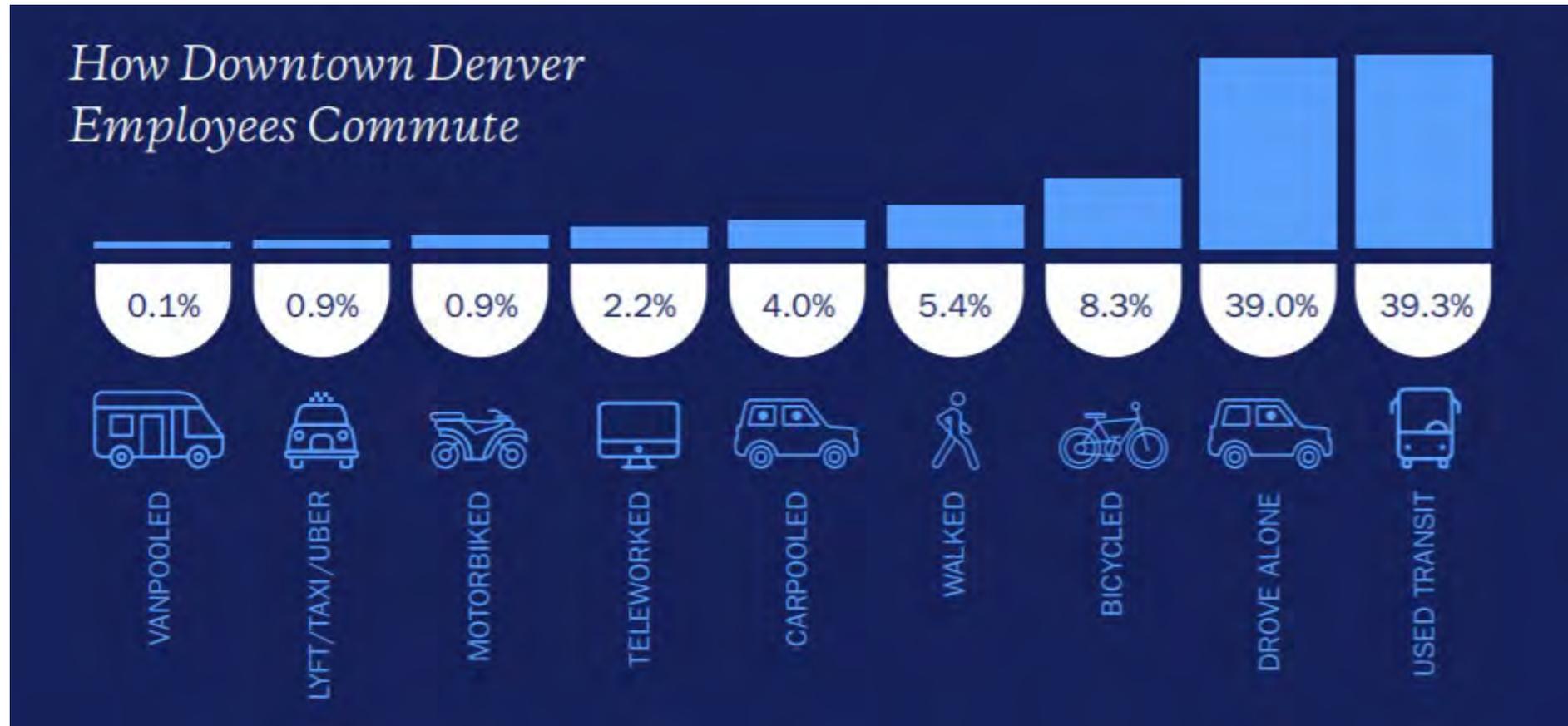


TDM Today





Seattle's invested in transportation toolkits for employers, transit card integration, more frequent transit, and expansive bikeshare program leading to a **91%** jump in ridership since 2015



Business Improvement District (BID) invested in walkability, safety, and streetscape improvements to decrease SOVs in the area leading to downtown employment to grow over **20%** since 2010



City of Boulder



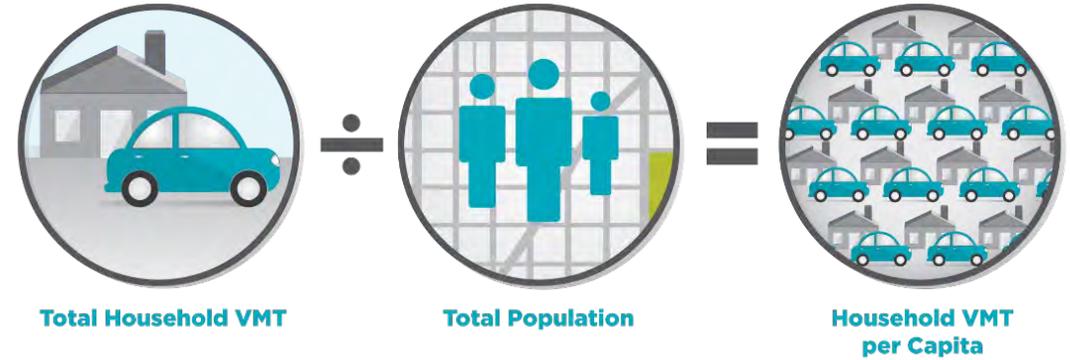
RESULTS:
Drive Alone: 53% to 36%
Parking Demand: ▼ 850+ spaces

City of Boulder adopted the "Eco-Pass" program to cover the cost of employee transit use resulting in major mode shift changes

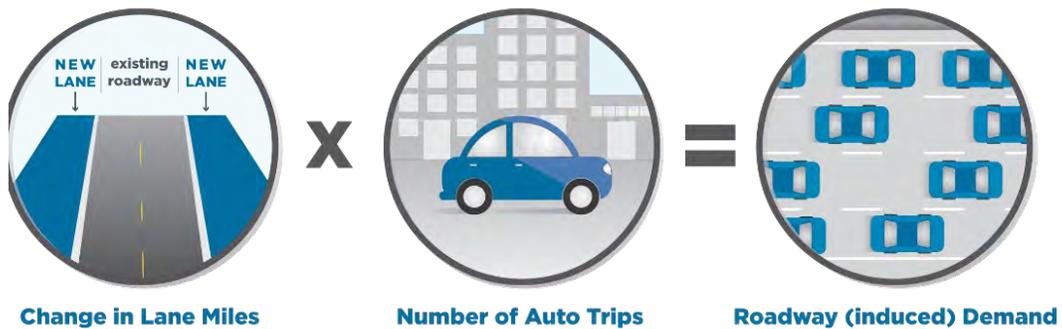
CASE STUDY



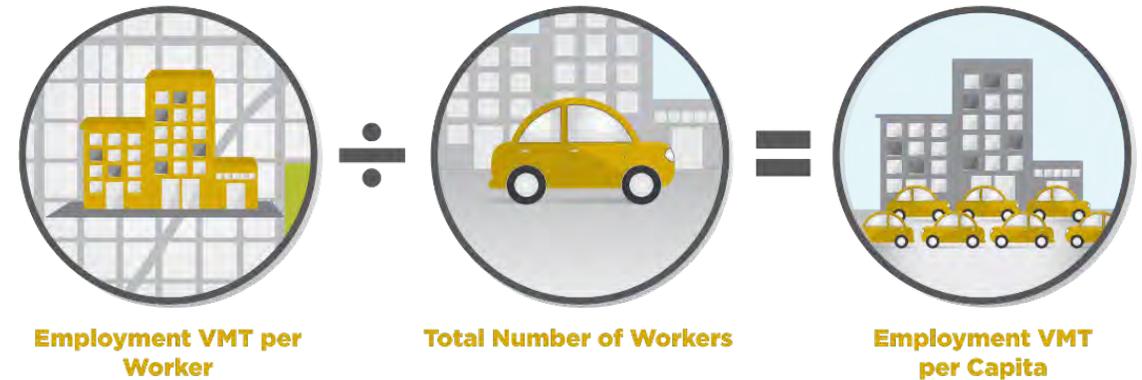
Calculating Household VMT per Capita



Calculating Roadway (Induced Demand) VMT



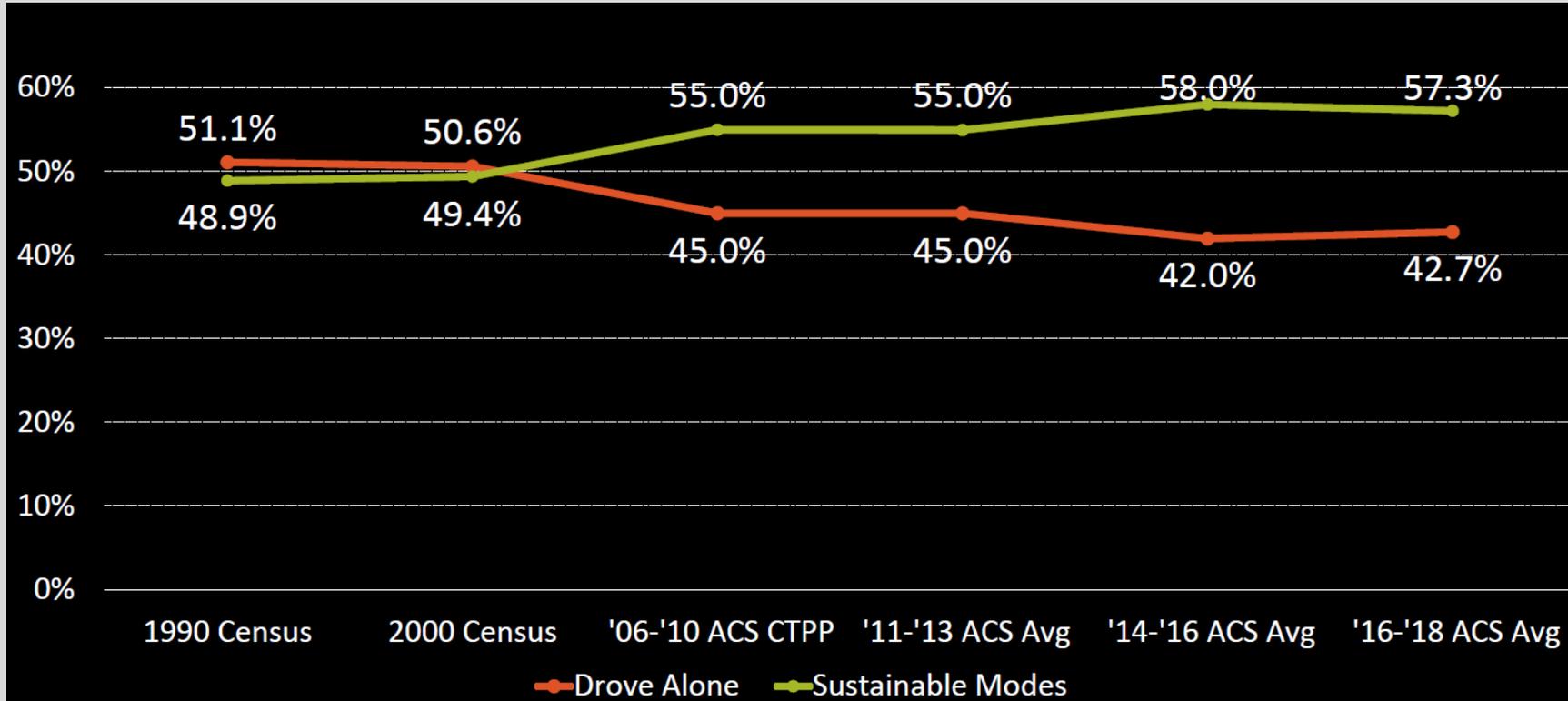
Calculating Employment VMT per Capita



Oaklands TIA guidelines eliminated traditional Level of Service (LOS) Analysis to prioritize safety and performance of circulation and require TDM measures to construct projects



Cambridge made significant employee mode split changes through implementing a parking & TDM ordinance



Development projects in Cambridge...

60% charged employees for parking

85% provided transit subsidy

53% provide pre-tax transit benefit

CASE STUDY



Allows you to view all station locations and the number of available bikes and docks, purchase a pass, unlock a bike, and ride right away!



A robust, interactive transit map that shows metropolitan DC's complete bike network. From bike-friendly roads to dirt paths and trails, this handy tool will help you get going on two wheels.



The ultimate transport app that uses open data, mobile, and payment technology to make transport sustainable and hassle free; particularly useful for bike and dock availability.



Helbiz is your new urban mobility partner. Simply tap to instantly unlock, ride, and leave your e-bike anywhere for the next person to use.



You'll be able to get real-time information for all your mobility options anywhere and everywhere you go. Data is sorted by what's most useful at the exact time and moment you open the app.



Web tool identifying bike parking locations throughout the Washington, DC region.



FREE RIDE

Get a FREE pre-loaded SmarTrip card or single Capital Bikeshare ride from goDCgo!



DC PARKING CASHOUT LAW

The DC Parking Cashout Law, also known as the DC Transportation Benefits Equity Act of 2020, requires businesses in DC with 20 or more employees that lease* their parking to either offer a Clean Air Fringe Benefit to employees receiving a free or reduced-cost parking space at work, develop a transportation demand management plan, or pay a Clean Air Compliance fee.

All DC employers with 20+ employees must report to DDOT every other year, regardless of how they handle their parking. *For employers currently leasing parking, the compliance requirements of this Act go into effect once your lease is up (regardless of possible extensions). You must report your temporary exemption to DDOT.

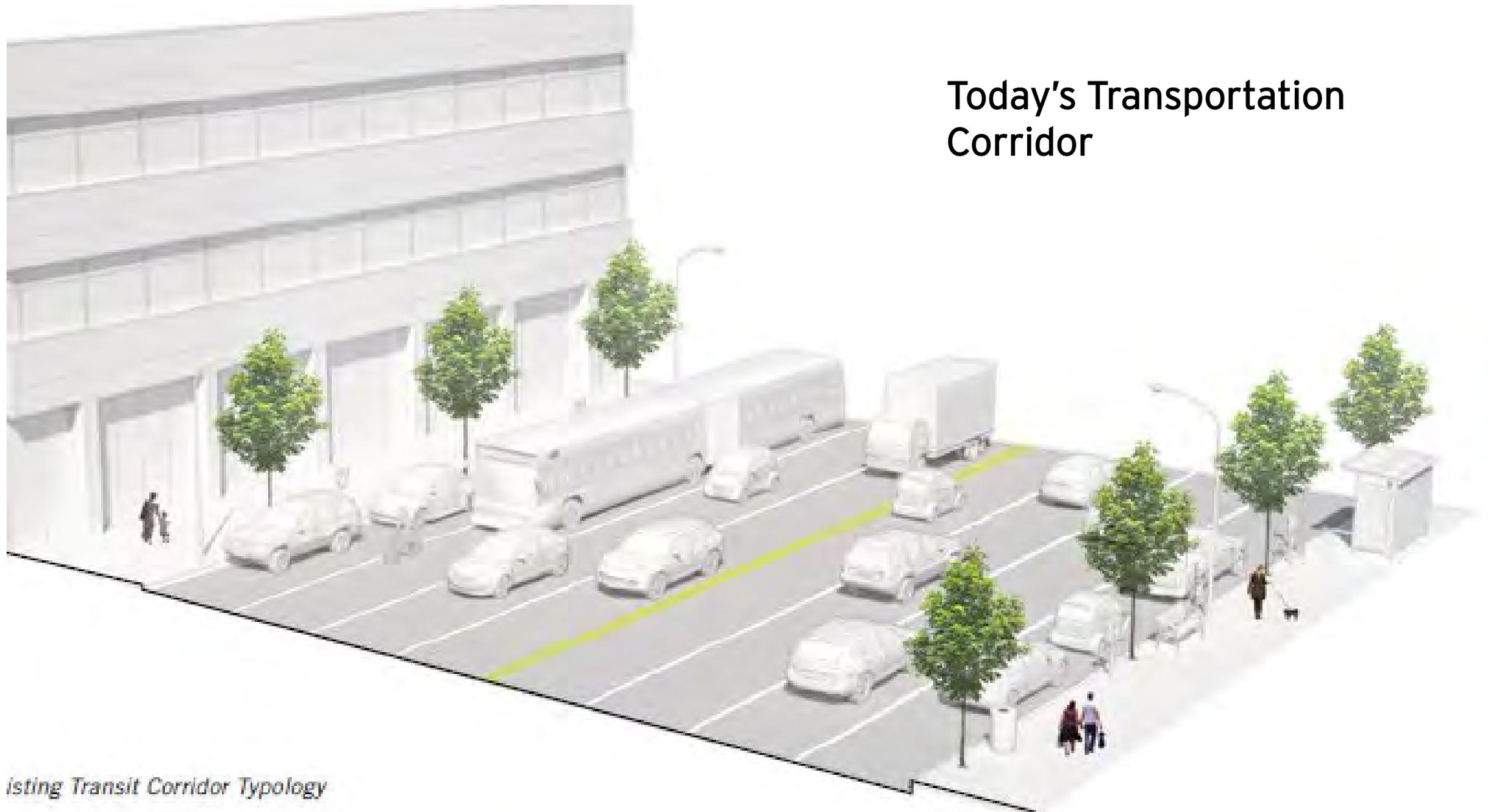


Design Matters

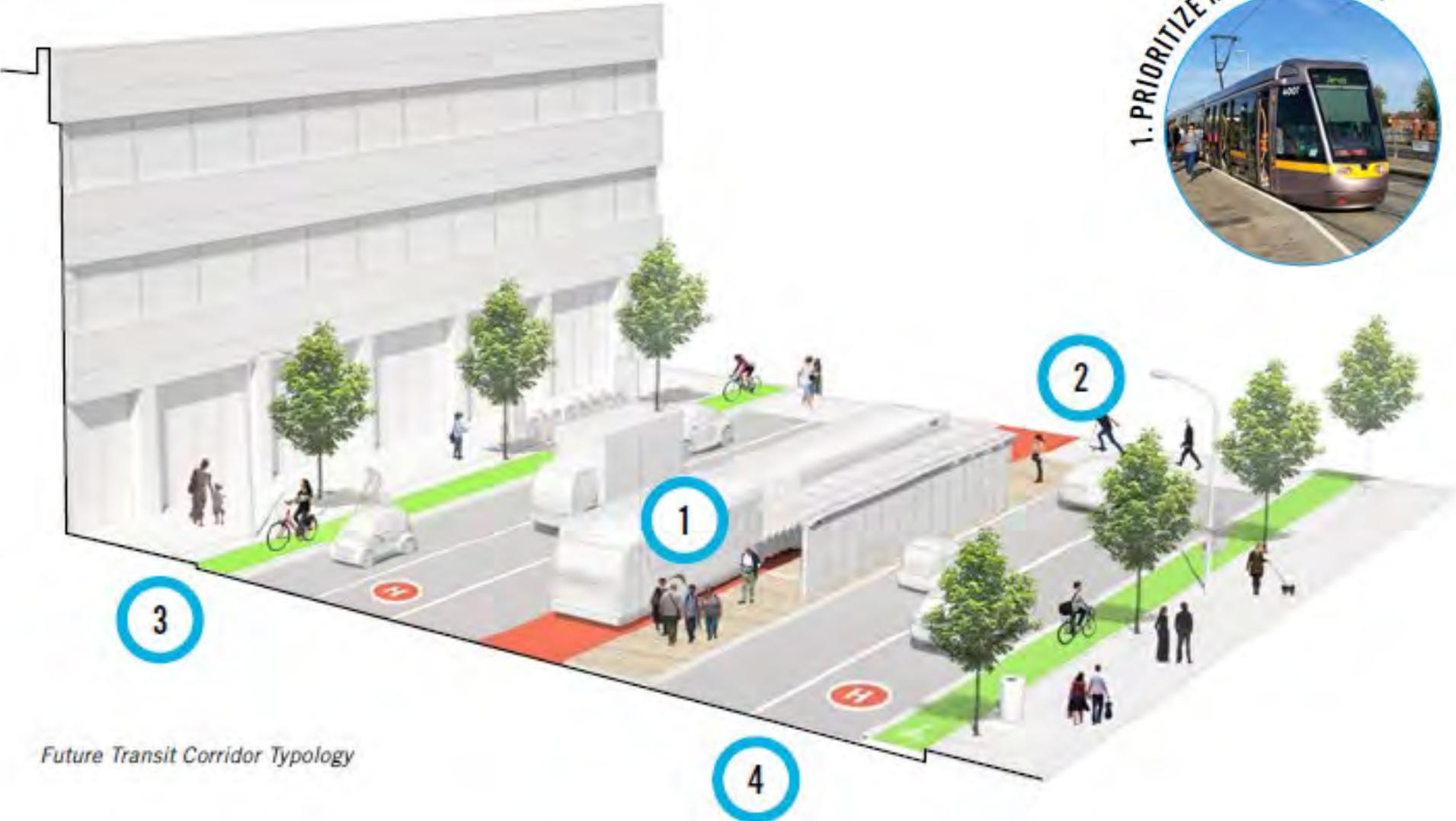
Space Allocation: Streets are a “Public” Resource (Public = for All)



Today's Transportation Corridor



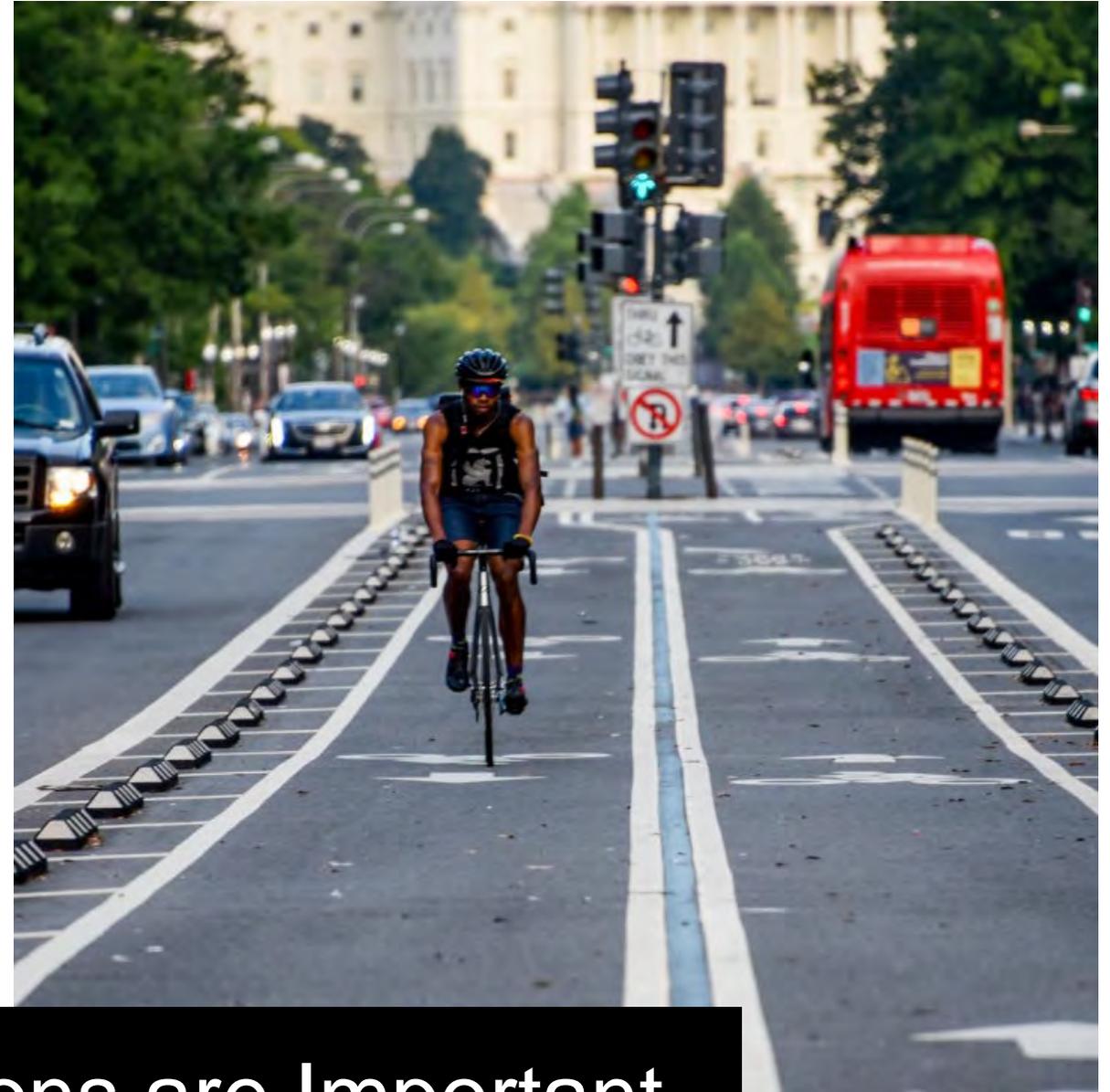
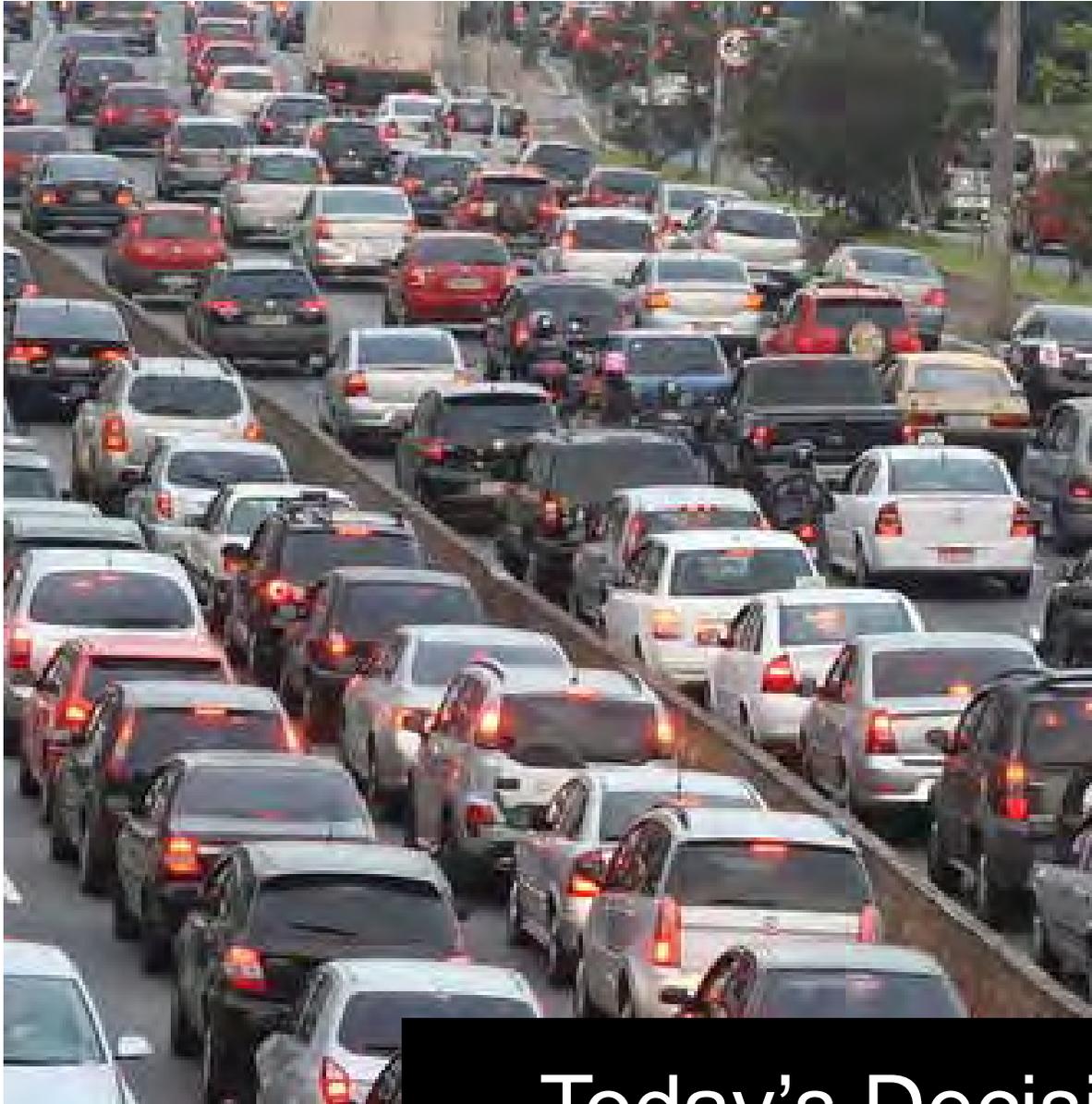
Existing Transit Corridor Typology



Future Transit Corridor Typology



Source: Designing for Future Mobility (Perkins+Will)



Today's Decisions are Important



CARS



ELECTRIC CARS



AUTONOMOUS CARS

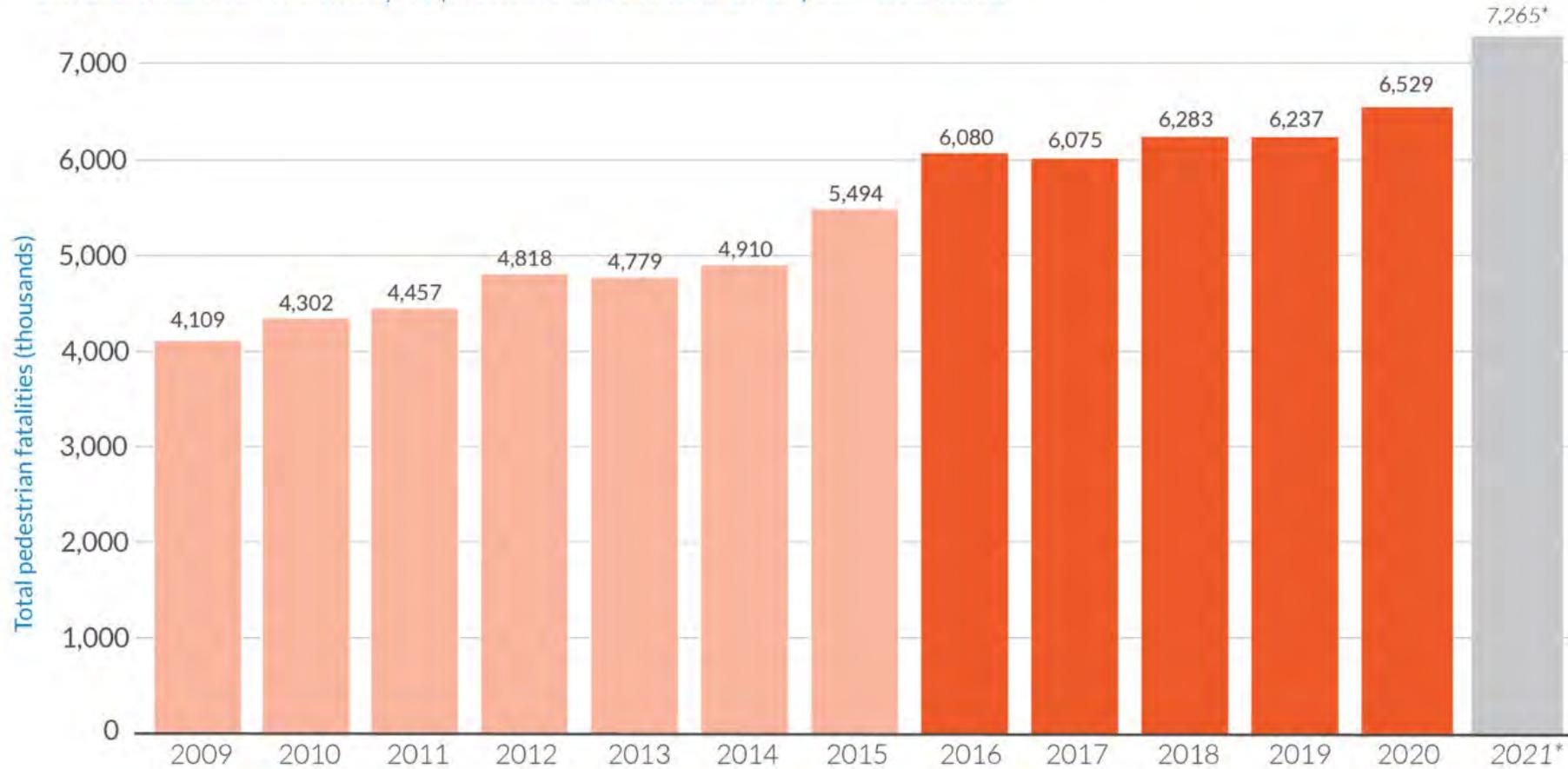


UBER/LYFT CARS

Today's Decisions are Important

Need to Combat Safety Issues

Driving went down in 2020, but deaths of people walking increased 4.7%
2021 deaths will likely represent a historic one-year increase

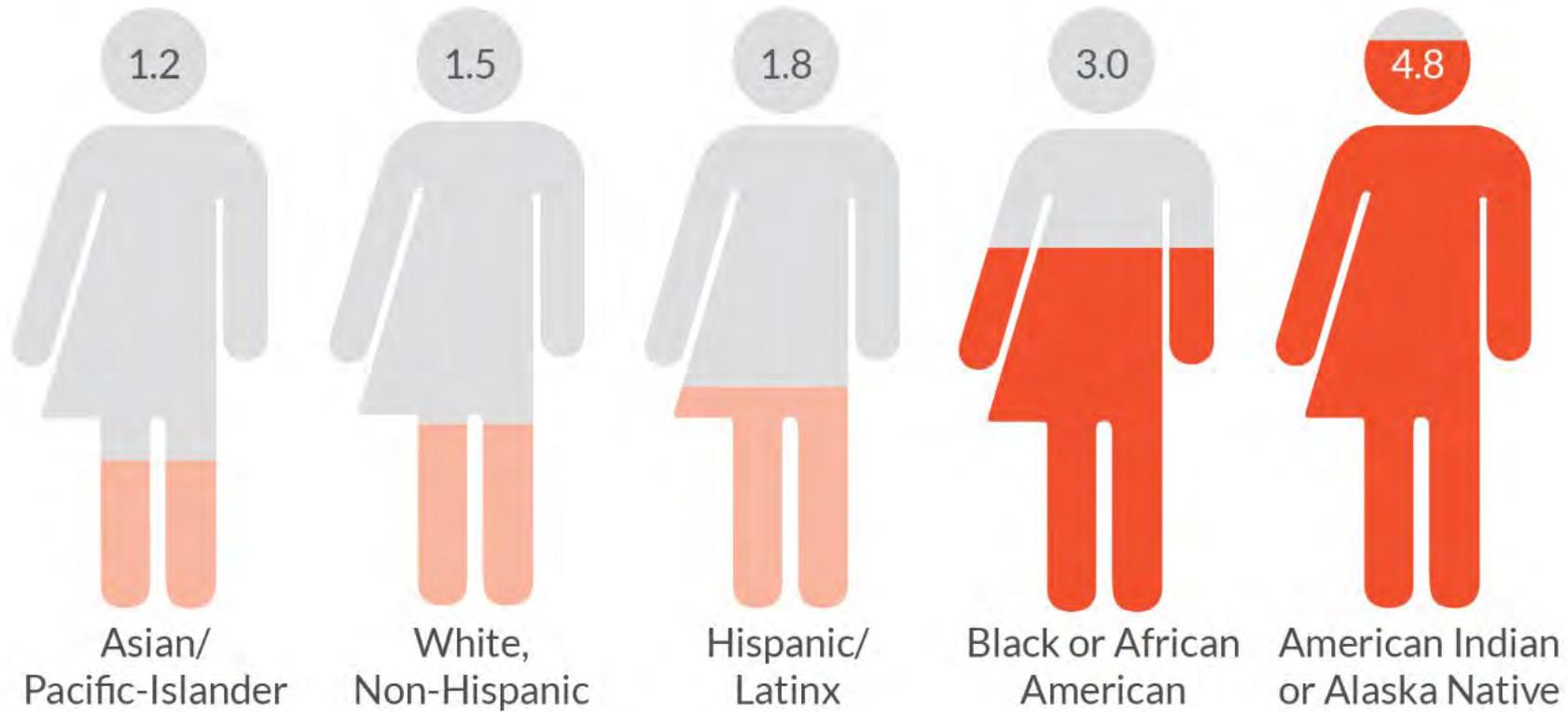


**This estimate for 2021 is produced by applying the 11.5 percent increase for 2021 projected by the Governors Highway Safety Administration (GHSA) to the federal FARS data for 2020 used in this report.*

Need to Redress Inequities

People of color, particularly Native and Black Americans, are more likely to die while walking than any other race or ethnic group

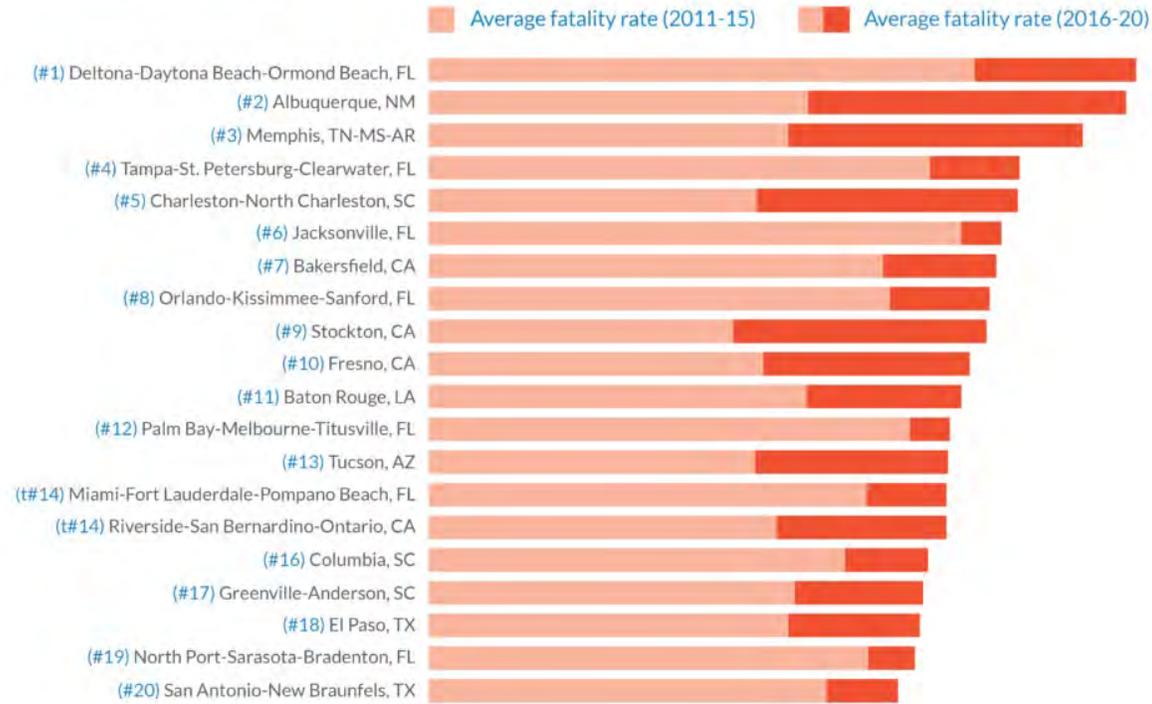
Pedestrian deaths per 100,000 by race & ethnicity (2016-2020)



Need to Move Forward in a Positive Direction

No metros in the top 20 are improving

All have gotten significantly more deadly



*Dangerous by Design 2022 rank in parentheses

THE TOP 20

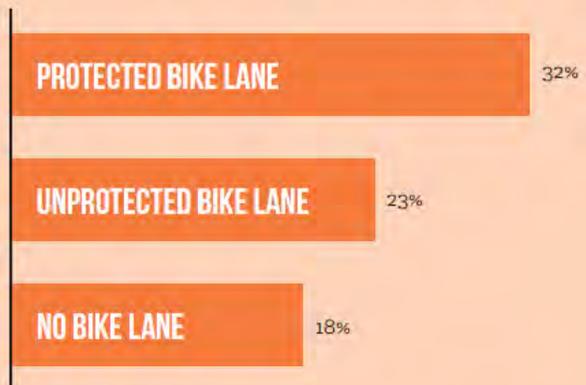
Most dangerous metropolitan areas for pedestrians (2016-2020)





Bike share riders prefer protected lanes.

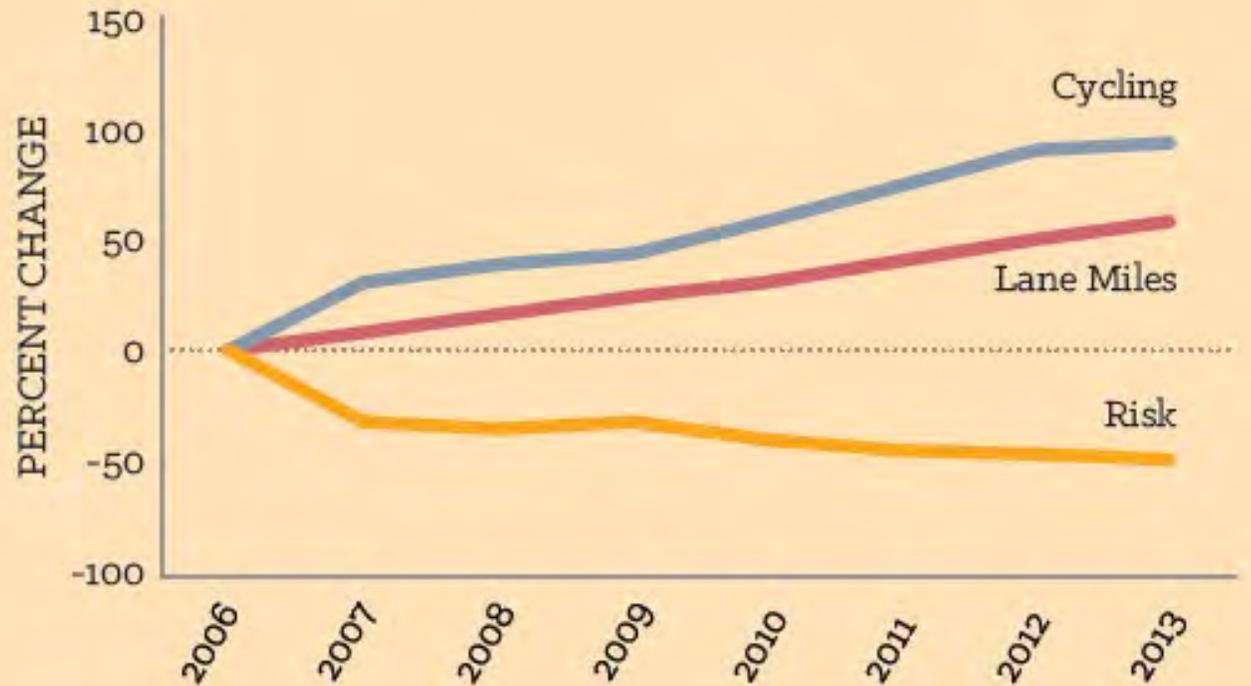
Citi Bike riders as a percent of total riders by lane type:



Source: Peter Tuckel and William Milczarski, CUNY (2014)

Cycling is getting safer as more people ride.

Aggregate data from Chicago, Minneapolis, New York City, Philadelphia, Portland, OR, San Francisco and Washington, D.C.



Source: NACTO (2016)

Biking is Better for Business

- Numerous academic studies indicated:
- Bikeways increased sales at local businesses due to increased biking activity (NY East Village)
- Car drivers spent more money on single visits at supermarkets and restaurants, but people arriving via foot, bicycle, or public transit visited these locations more often. (Portland, OR)
- Broad Avenue Art District street transformation generated \$6M+ and sparked over 60 stores since 2010 (Memphis)



Which are the 3 Most Important Areas for Improving Transit Service?



Source: TransitCenter Who's On Board 2019



Physical Activity & Exercise



Exercise is an essential component of a healthy lifestyle. Moderate exercise like pedal and e-biking, and light exercise like riding an e-scooter, have powerful, measurable effects on health.

North Americans gained almost **30 million hours** of additional physical activity through shared micromobility, by creating new trips and replacing motorized trips:

- 13.1 million hours** on pedal bikes
- 1.4 million hours** on e-bikes
- 15.2 million hours** on e-scooters

INCREASED ACCESS TO JOBS

Studies conducted by the Micromobility Coalition and DePaul University show that access to shared micromobility substantially increases the number of jobs that people can access without a car within a 45 minute commute. For example, Boston residents could access 436,000 jobs in 45 minutes or less through transit and/or walking. However, that number increases by 60% to 696,000 when shared micromobility is added as an option. Below are the increases for a number of other cities.

City	Without Shared Micromobility (Walking and Transit)	With Shared Micromobility (Walking, Transit, and Shared Micromobility)	Increase
Boston	436,000	696,000	60%
Brookline	461,000	721,000	56%
Cambridge	611,000	823,000	35%
Chicago	366,397	385,570	5%
Miami	281,000	394,000	40%
Miami Beach	142,000	176,000	24%
Nashville	46,000	97,000	111%
Seattle	283,000	382,000	35%
Somerville	460,000	775,000	68%



Thinking Ahead

TDM: Housing + Mobility



**Oak Street
Lofts
(Portland, ME)**

**0.22 spaces/unit +
Shared Parking**

10-ride Metro Pass

**Paid Bikeshare + Carshare
Membership**



**Boulder
Junction
(Boulder, CO)**

**Trip Caps (<45% daily
vehicle trips)**

Free RTD EcoPass

**Subsidized Bikeshare +
Carshare Membership**



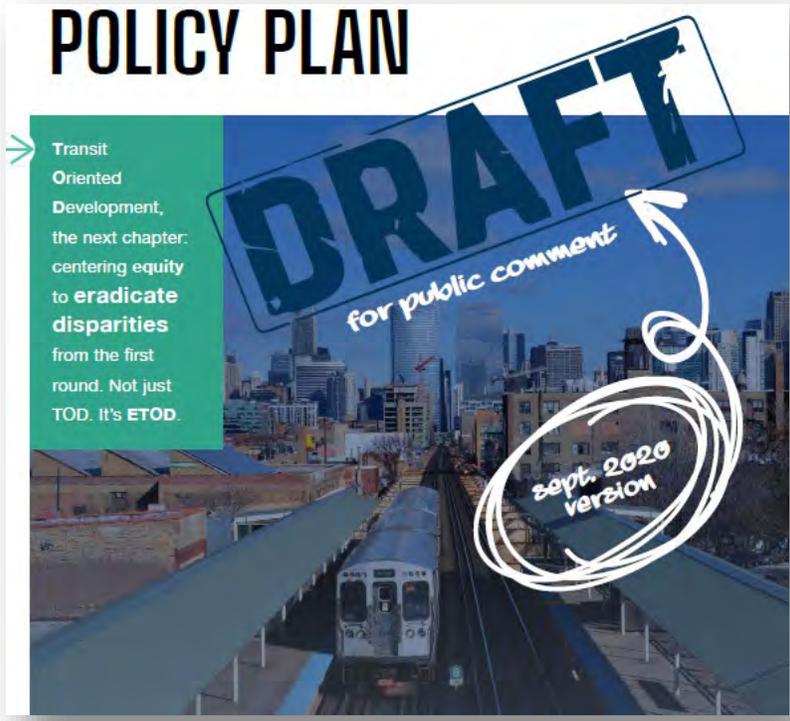
**Lloyd District
(Portland, OR)**

**TMA funded by BID +
Metro, Parking Revenue**

**SOV Mode Drop
60% - 40% over 20yrs**

**Incentives for District
residents and employees**

TDM: **Equity** + Housing + Mobility

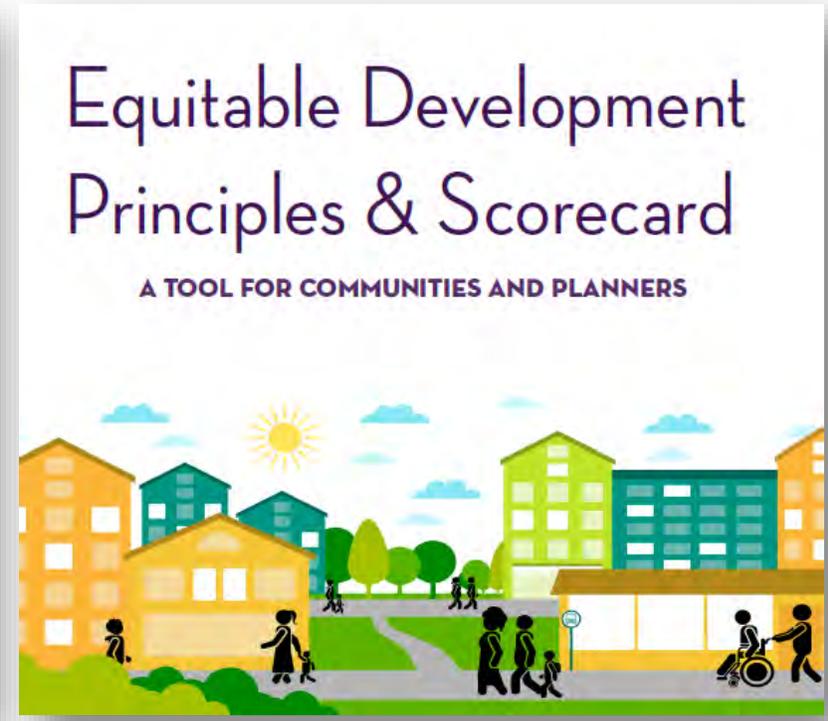


Chicago ETOD Policy Plan

Amendment to City TOD Ordinance

Make ETOD required and easier to implement

Flexible design requirements and prioritize transit, active mode choices

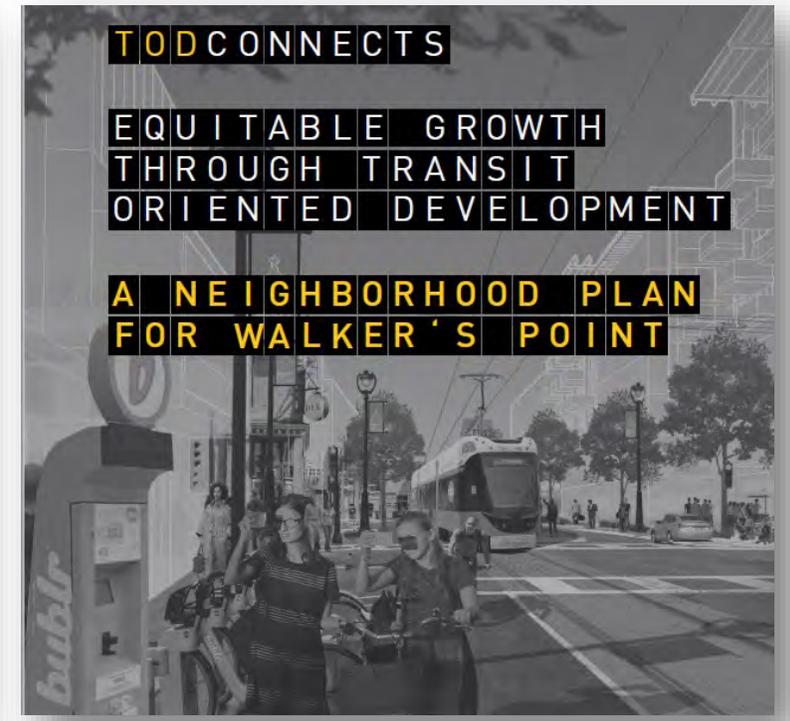


Twin Cities Equitable Development Principles & Scorecard

Guideline for Developers to evaluate projects

Applied to West Side Community Plan (St. Paul)

Elevates community input and direction before approval



Milwaukee ETOD + Neighborhood Plan

Spur new TOD opportunities along streetcar

Preserves current residents, businesses

Catalyst for new mobility options along alignment



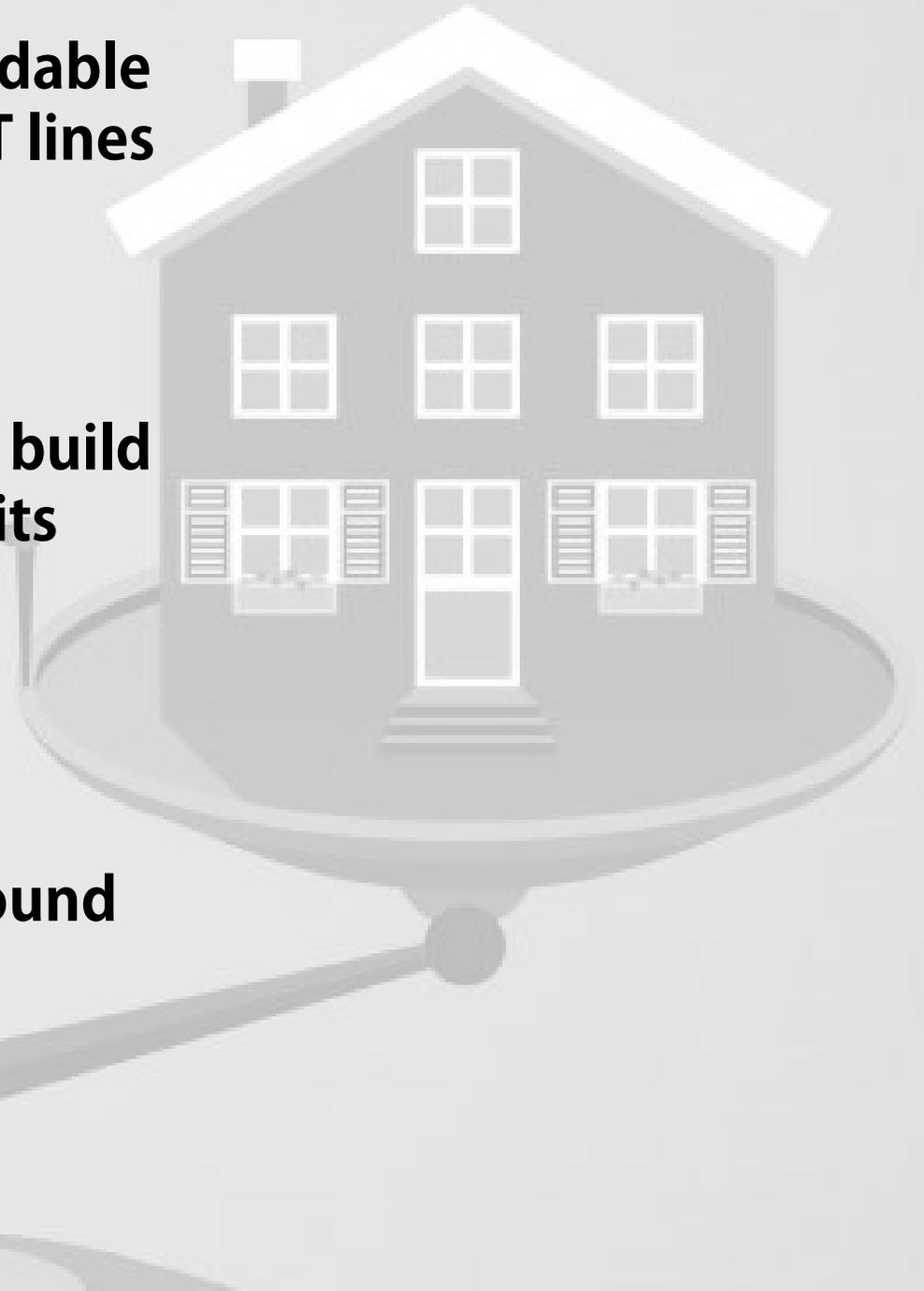
Commits \$6.35M to affordable housing along future BRT lines



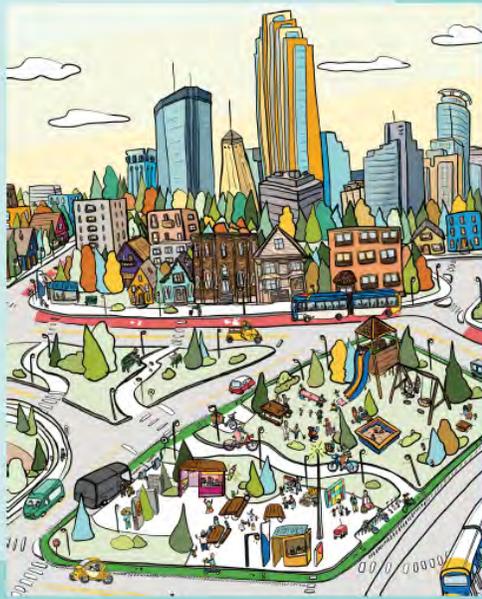
Transit-Oriented Fund to build over 1,000 affordable units along key corridors



Dedicated \$300M to Anti-Displacement support around TOD corridors



TDM: Mobility Hubs



2019 Minneapolis Mobility Hubs Pilot



IMPACT

Throughout the pilot, the project team conducted events where they conducted intercept surveys to gather feedback and evaluate the pilot.

64% of users reported that pilot improvements make them more likely to use the transportation options at the hub.

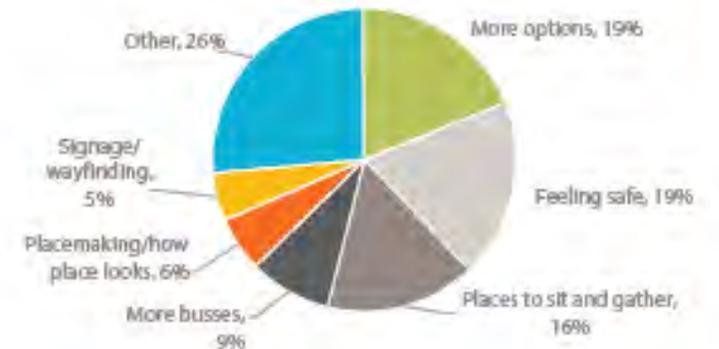
Three key themes emerged when users were asked what would be most important to improve their trip:

- » Access to more transportation options
- » Feeling safe
- » Places to sit and gather

Engagement events held at mobility hubs provided opportunity to distribute information on access and appropriate use of shared mobility, which included 285 helmets distributed, 60 test rides given, and over 200 flyers about low income programs distributed.



What was most important to making your trip better?



TDM: Partnerships



lyft Lyft Divvy Bikeshare
(Chicago, IL)



Caribou Coffee
Bus Shelters
(Minneapolis, MN)



Shared Transit
Stop Pilot
(Seattle, WA)



Equity + Micromobility

2020 E-SCOOTER PILOT EVALUATION



CITY OF CHICAGO — MAYOR LORI LIGHTFOOT
MAY 2021

Household Income	E-Scooter Riders	Chicago Residents
Less than \$50,000	29.4%	42.3%
\$50,000 - \$100,000	35.9%	25.4%
\$100,000 - \$150,000	16.3%	14.7%
More than \$150,000	18.5%	17.6%

Race and Ethnicity	E-Scooter Riders	Chicago Residents
White, not Hispanic or Latino	59.0%	33.3%
Black or African American	11.0%	29.6%
Hispanic or Latino	16.0%	28.8%
American Indian or Alaska Native	1.0%	< 1%
Asian	8.0%	6.6%
Native Hawaiian or Pacific Islander	1.0%	< 1%

540,035

Total mobility trips
for analysis

4,391

Avg daily trips

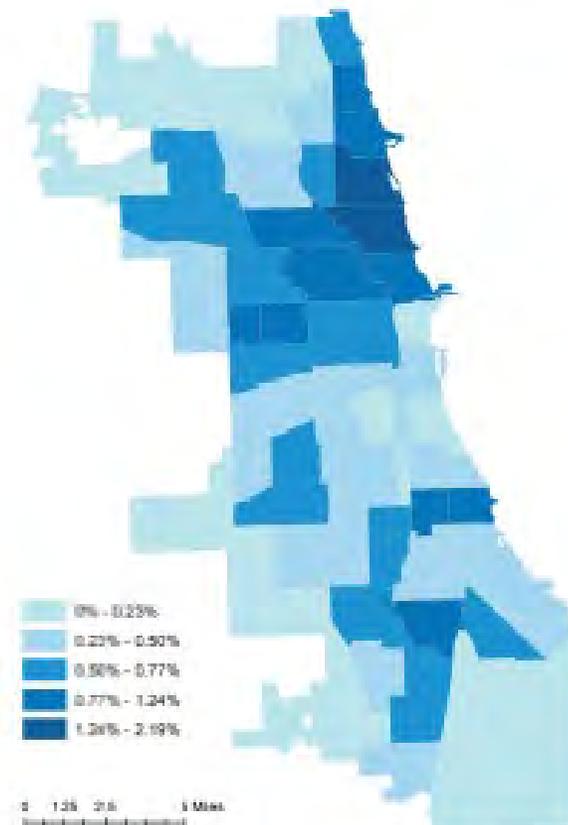
10,735

Most trips in a
single day (Sept 5)

23.4%

Share of trips in
Equity Priority Area

Share of Devices Deployed (per square mile),
by Community Area



Equity Performance Metrics

Fleet Size Bonuses to Companies who serve Low-Income Neighborhoods

Establishing Operating & Equitable Practices (e.g., customer service)

Reduced or Free Start-Up Memberships

Advanced Street Design & Safety Standards



Creating a Culture of Choices

Fast cash commuters

Maximize your benefits by giving up your parking space. We've got you covered with taxi and parking coverage for emergencies or early starts.

A Free bike*

*Receive \$600 to choose a new bike at a local shop.

Log 60 bike commutes in one year to earn the bike.

B \$5 daily*

Bike/walk/teletele

*Earn \$5 cash each day you log your sustainable commute.

Free bike participants are not eligible to enroll until completion of option A.

C Free bus

Receive free monthly taxi coverage up to \$100.

Log 16 bus commutes per month to qualify for free passes.



Flexible commuters

Keep your Sorios parking permit and earn perks on the days you can commute sustainably.

A Free bike*

*Receive \$600 to choose a new bike at a local shop.

Log 40 bike commutes in one year to earn the bike.

B \$2 daily*

Bike/walk/skate/carpool/motorcycle

*Earn \$2 cash each day you log a sustainable commute.

Free bike participants are not eligible to enroll until completion of option A.

C Free bus

Receive free 10-ride passes.

Log a bus trip each time you use a free pass.



“15 Minute City”



Pete Costa, AICP, PTP

pcosta@hntb.com

<https://www.hntb.com/>

LinkedIn: <https://www.linkedin.com/in/peter-costa-aicp-ptp-40734925/>

