

Making Transit Count

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VANCOUVER, BC + TRANS LINK

SEATTLE + KING COUNTY METRO

PORTLAND + TRIMET VANCOUVER, WA

HALIFAX

MONTRÉAL

BURLINGTON

MINNEAPOLIS + METRO TRANSIT

TORONTO

SOMERVILLE

CAMBRIDGE

BOSTON

GRAND RAPIDS

DETROIT

HOBOKEN

NEW HAVEN

HARRISBURG

NEW YORK + MTA

OAKLAND
SAN FRANCISCO
PALO ALTO
SAN JOSÉ
CUPERTINO

SACRAMENTO

SALT LAKE CITY

FORT COLLINS

CHICAGO + CTA

PITTSBURGH

PHILADELPHIA

BALTIMORE

BOULDER
DENVER

INDIANAPOLIS

ARLINGTON

WASHINGTON, DC

SAN LUIS OBISPO
WEST HOLLYWOOD

VENTURA
SANTA MONICA
LONG BEACH
SAN DIEGO

PASADENA

LOS ANGELES + METRO

PHOENIX

ST LOUIS

LOUISVILLE

RALEIGH

NASHVILLE

CHARLOTTE

MEMPHIS

CHATTANOOGA + CARTA

ATLANTA

CHARLESTON

NACTO

EL PASO

AUSTIN

SAN ANTONIO + VIA

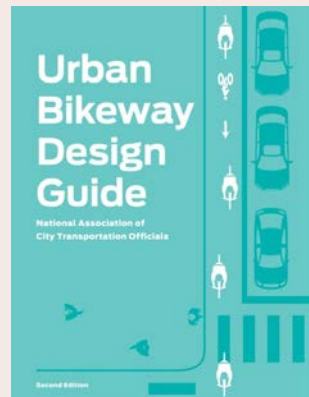
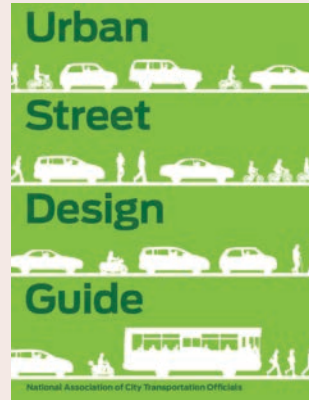
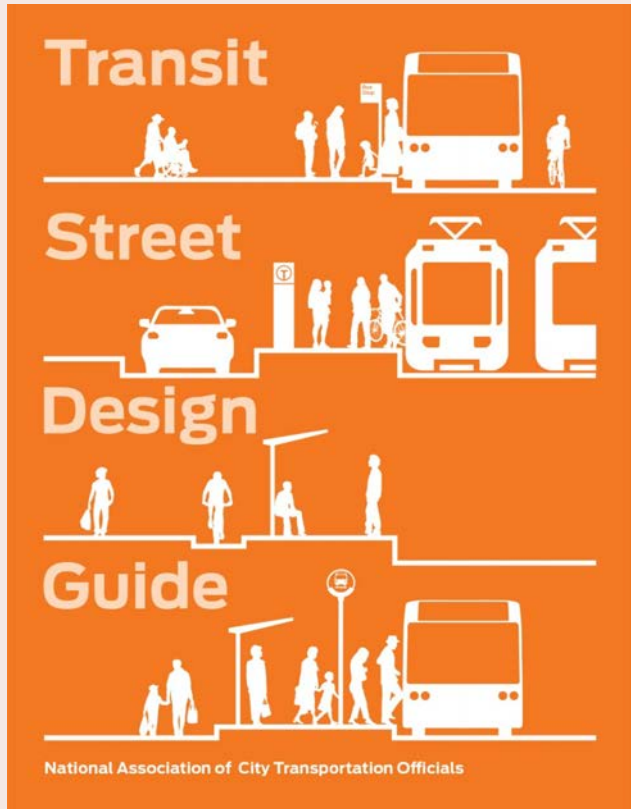
HOUSTON + METRO

ORLANDO

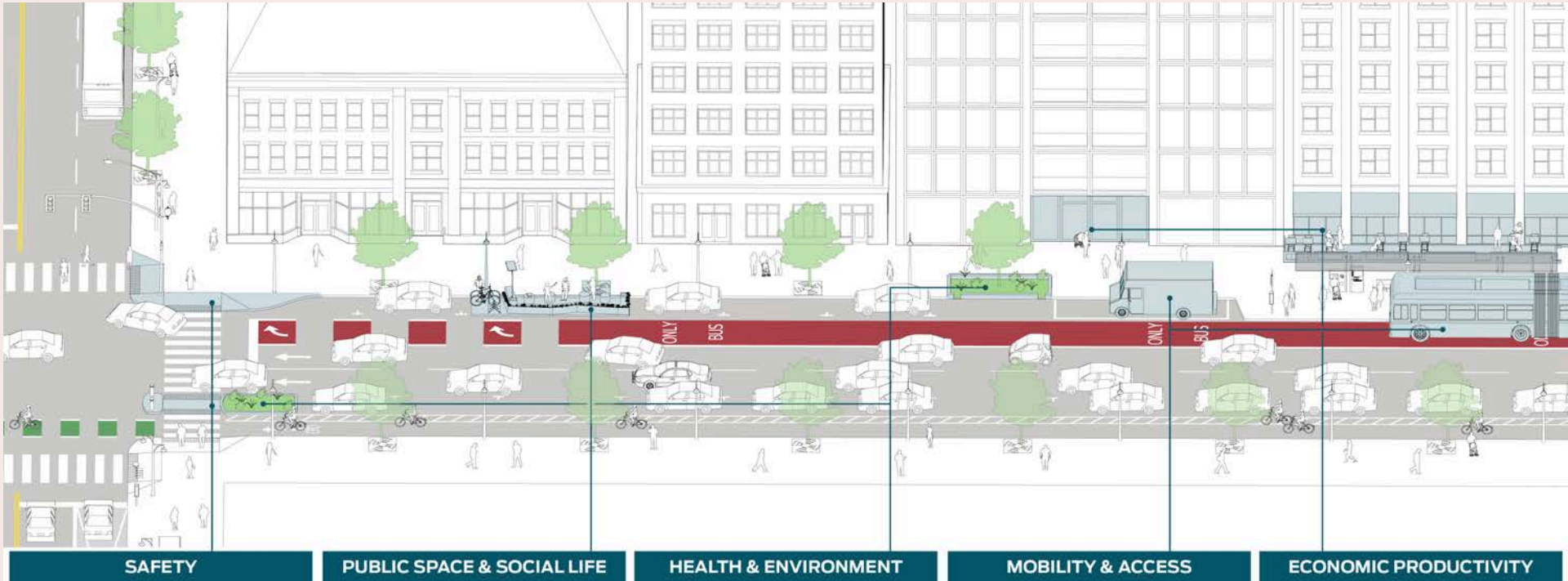
WEST PALM BEACH
FT LAUDERDALE
MIAMI
MIAMI BEACH

HONOLULU

NACTO Design Guides



Measuring the Street



SAFETY

PUBLIC SPACE & SOCIAL LIFE

HEALTH & ENVIRONMENT

MOBILITY & ACCESS

ECONOMIC PRODUCTIVITY

Mobility

Safety

Walkability

Efficiency

Reliability

Equity

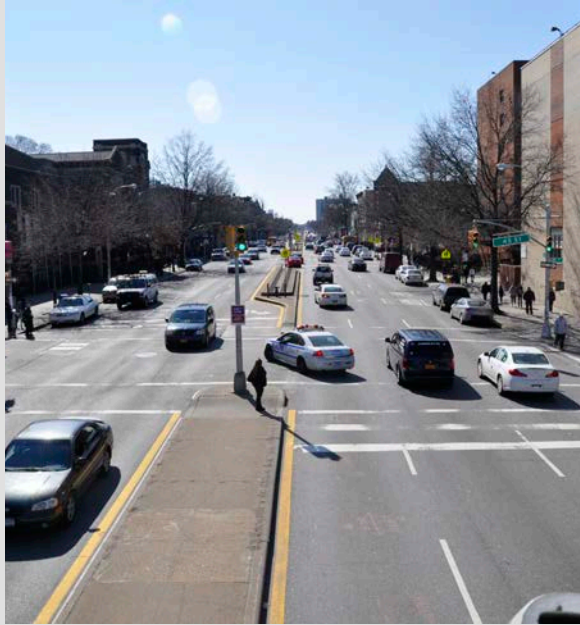
Quality

Vitality

Data, data everywhere...

What do we measure?

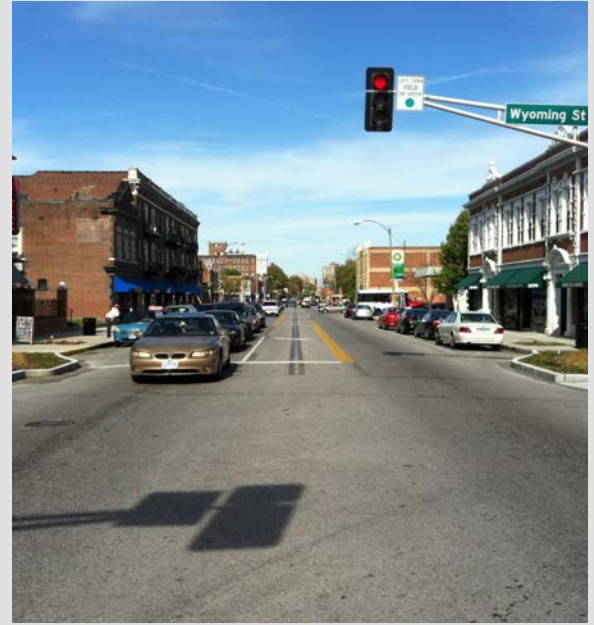
Moving Vehicles



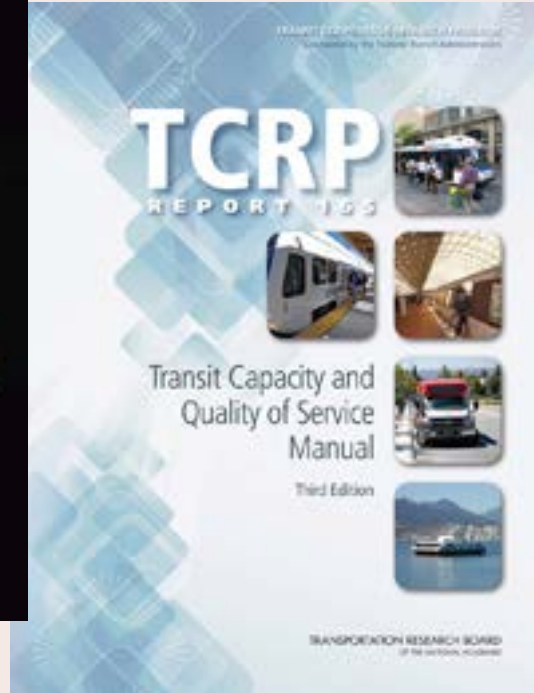
Reducing Collisions



Minimizing Delay



The Guidance Gap



Making Transit Count



NACTO
National Association of
City Transportation Officials

NACTO TRANSIT LEADERSHIP
RESOURCE PAPER
APRIL 2018

MAKING TRANSIT COUNT

**PERFORMANCE MEASURES THAT
MOVE TRANSIT PROJECTS FORWARD**

Tell a better story about streets & transit.

Good data powers transit programs. Cities that succeed at implementing transit improvements, and make their streets safer and more efficient for people, do so because they prioritize collecting and leveraging data that emphasizes rider experience and service quality. Performance measures should reflect the daily experience of people riding the bus. This will help cities realize better designs, better projects, and better management of streets.

While every agency has an embedded set of practices for performance reporting, many agencies stop at collecting standardized, vehicle-based data points that are missing many of the most pressing needs for riders. Metrics that prioritize the movement of people—rather than just car traffic—enable cities and operators to refocus investments on improving service for customers and retrofitting streets to move more people. New metrics also allow agencies to tell a better story, often simply using existing data in new ways. Drawing from case studies and best practices in North American cities, this document offers example performance metrics and proposes ways to use these metrics to connect technical solutions to the daily bus trip.

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- Use data to tell a clear & compelling story
- Vehicle-focused metrics undermine transit goals
- Transit-focused metrics advance better outcomes

3 False Narratives

1. “But Traffic is already bad.”

2. “It Will Hurt
Small Business.”

“Nobody Takes
The Bus”

“Transit Ridership is
Dropping Anyway”

“AVs Will
Solve It”

“The Bus Lane
is Always
Empty”

“It’s
Impossible”

“Nobody Takes
The Bus”

“The Bus Lane
is Always

3. “We don’t need to
invest in transit.”

“AVs Will
Take Over”

“It’s
Impossible”

Answering hard questions.

“Will it get safer or more dangerous?”

“What kinds of traffic pattern changes should we anticipate?”

“What about all our other goals?”

Answering the Hard Questions

What can we measure?

Moving People



Systemic Safety



Reliable Travel



What can we measure?

Walk & Bike Access



Vibrant Public Space



Economic Vitality



1. “But Traffic is Already
Bad”

“You’re taking away a lane???”



“You’re taking away a lane???”



Measure Reliable Travel, not Delay

- ✓ Transit Travel Time
- ✓ Transit Reliability
- ✓ Excess Wait Time / Journey Time
- ✓ Systemic Safety

Riders Care About Reliability, Not The Schedule*



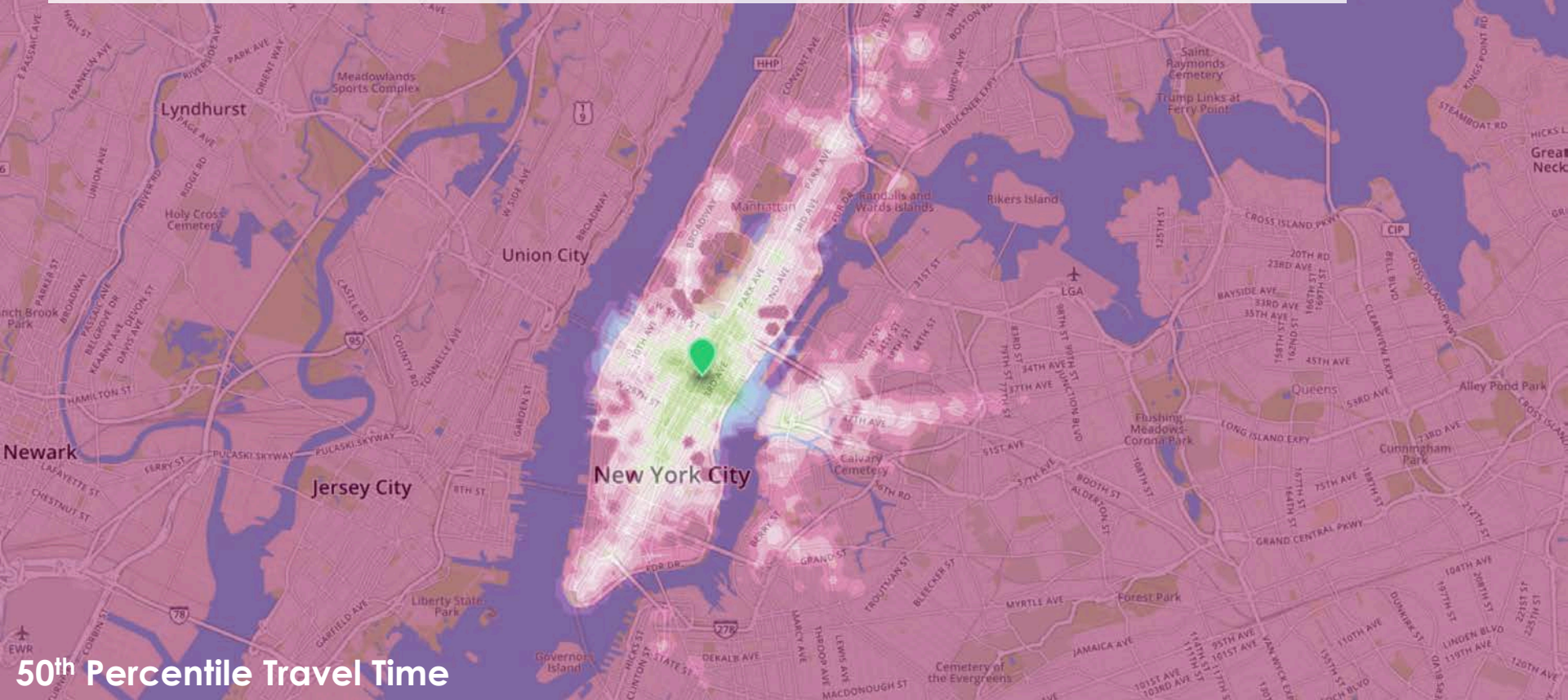
*On frequent routes

Riders Care About Reliability, Not The Schedule*



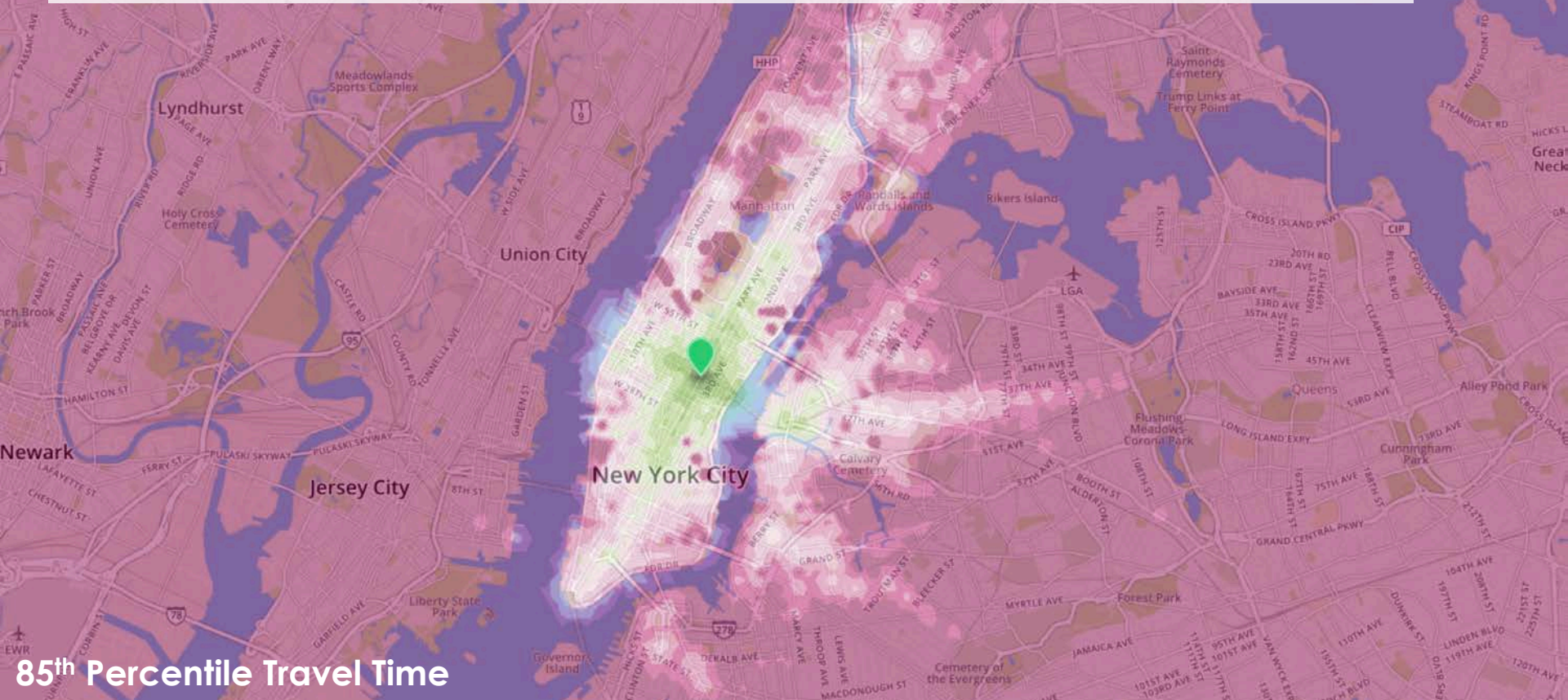
*On frequent routes

The big picture of reliability



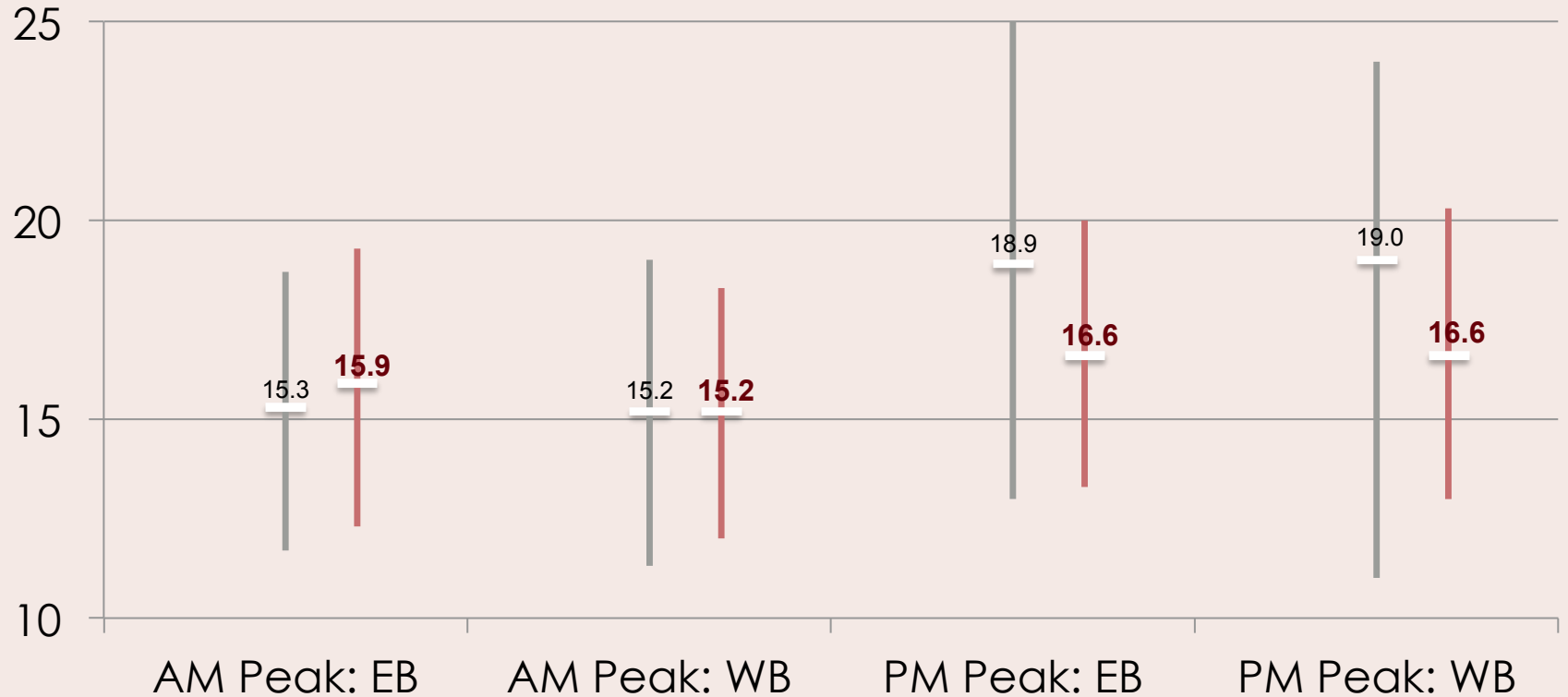
50th Percentile Travel Time

The big picture of reliability



85th Percentile Travel Time

Travel Time Range



Use metrics that value riders.



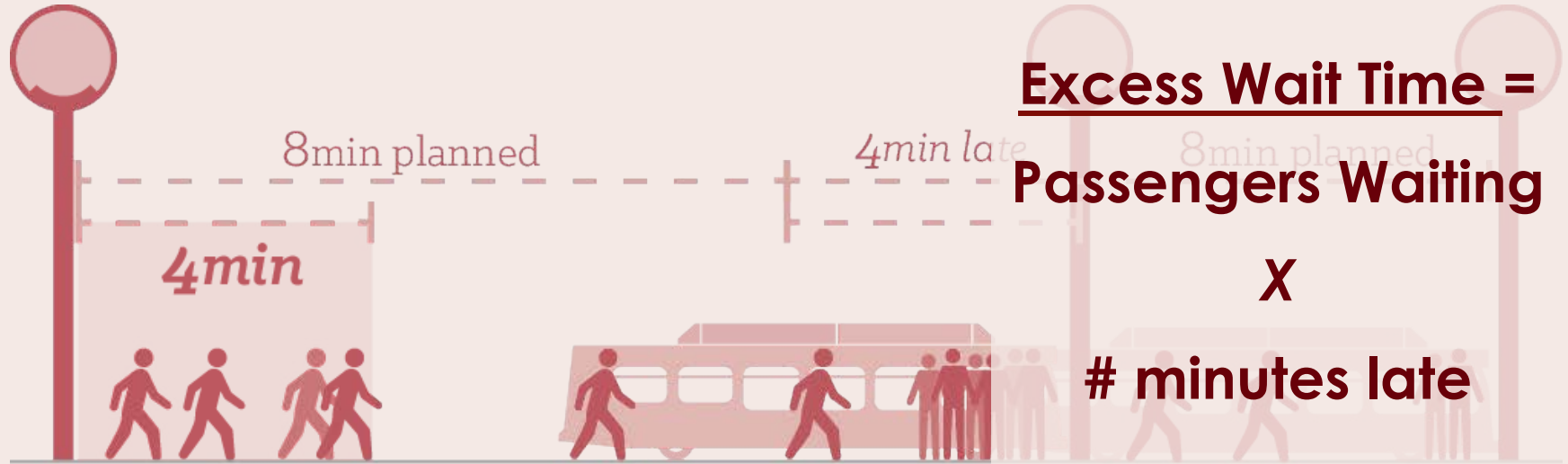
*On frequent routes

Excess Wait Time



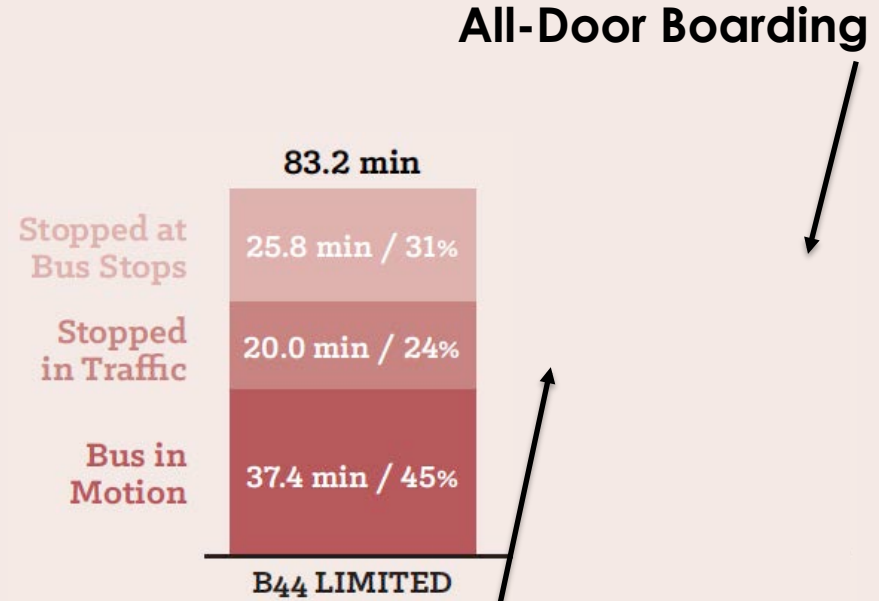
*On frequent routes

Excess Wait Time



*On frequent routes

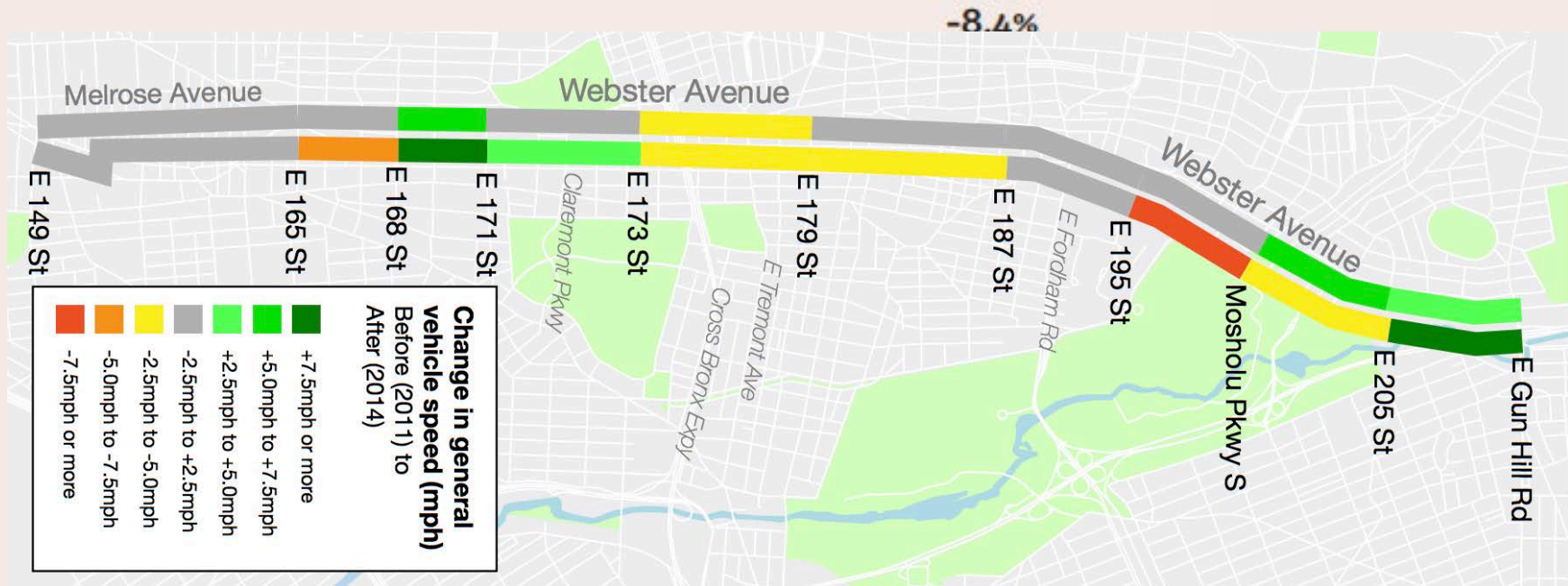
Break down components of delay.



Source: Metropolitan Transportation Authority

Bus Lanes & TSP

Reliable Traffic Movement, not LOS

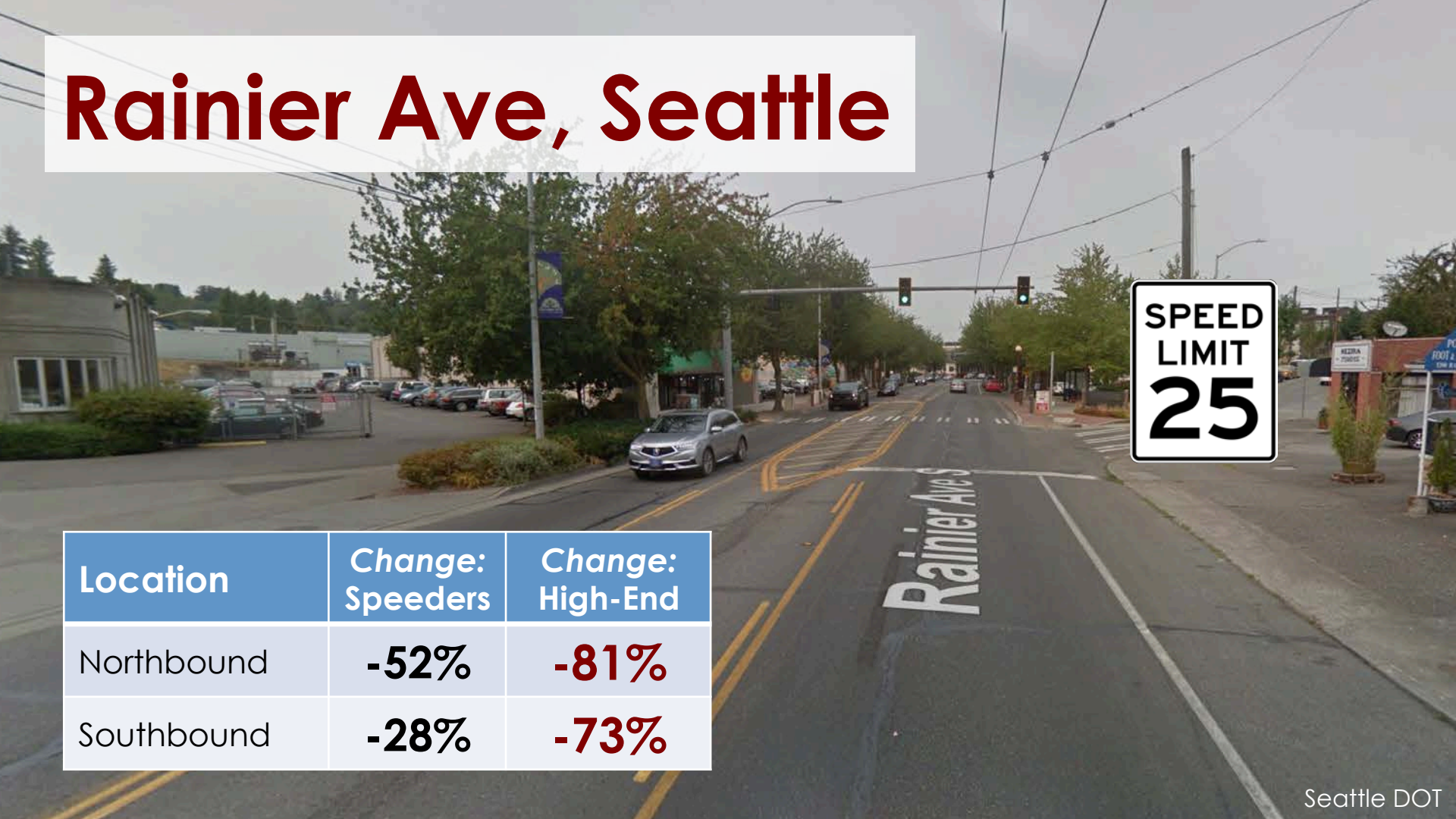


Rainier Ave, Seattle

SPEED
LIMIT
30

Location	Speeders	High-End Speeders
Northbound	84%	4%
Southbound	82%	6%

Rainier Ave, Seattle



Location	Change: Speeders	Change: High-End
Northbound	-52%	-81%
Southbound	-28%	-73%

Rainier Ave, Seattle

A photograph of a city street scene on Rainier Ave in Seattle. Two women are walking across a crosswalk with a small, fluffy dog. A silver car is in the foreground on the left, and a black car is further down the street. The street is lined with trees and buildings. The sky is blue with some light clouds.

Before:

9 injury crashes
per year

After:

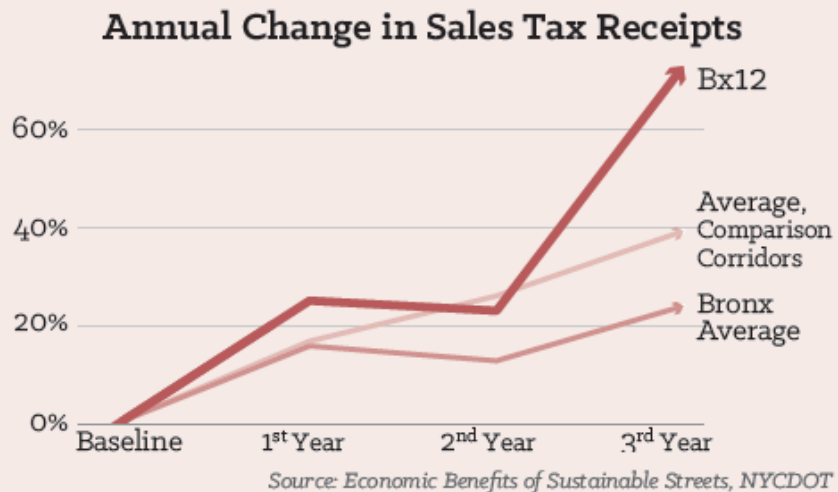
0 injury crashes
in 2016

2. “It Will Destroy My
Small Business”

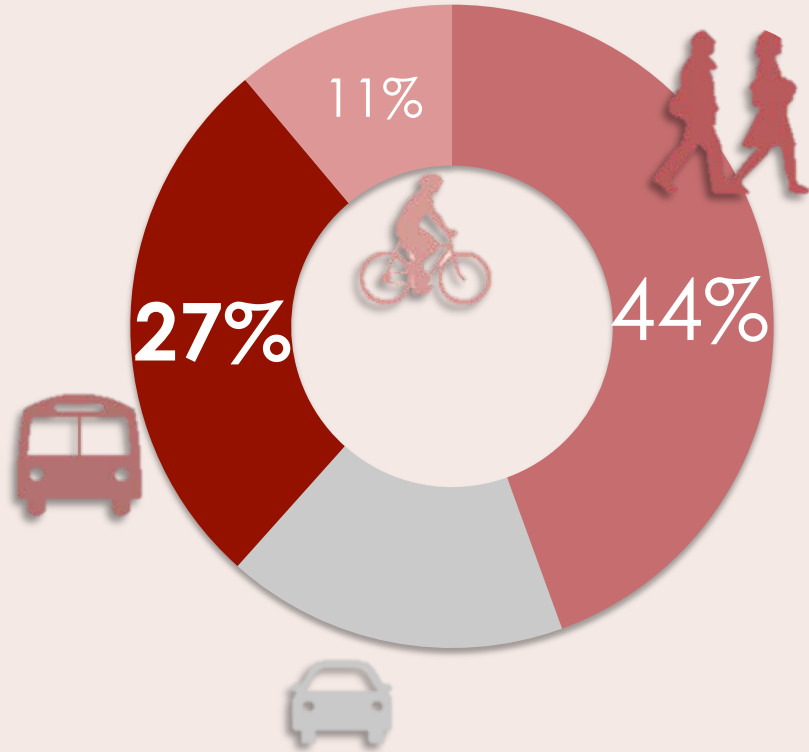
Truth vs. “Truthiness”

- ✓ Retail Sales & Vacancy
- ✓ Arrivals by Mode to Local Business
- ✓ Arrivals by Location to Local Business

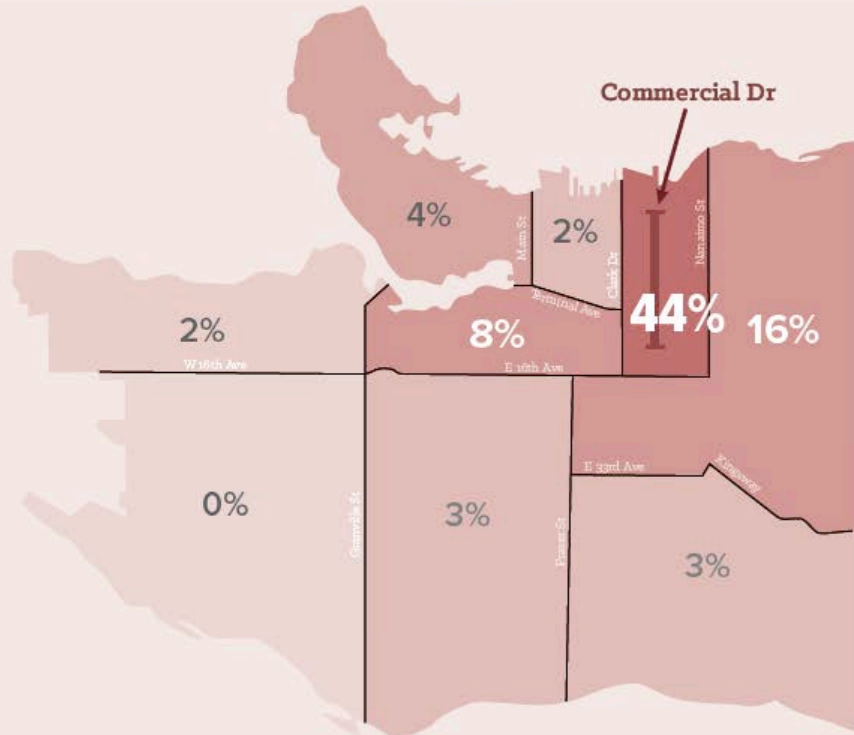
Transit sustains Main Street ...



... when more people can arrive.



... when more people can arrive.



Intercept Surveys

- Mode of arrival
- Trip Origin
- Travel time
- Frequent travel behavior

nacto.org/interceptsurveytoolkit



Bike Share
Intercept Survey Toolkit

“Nobody Takes
The Bus”

“Transit Ridership is
Dropping Anyway”

“AVs Will
Take Over”

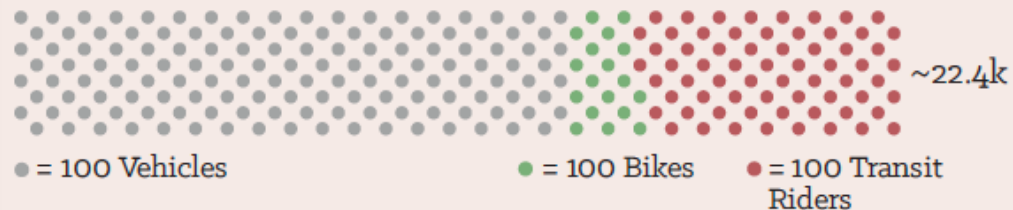
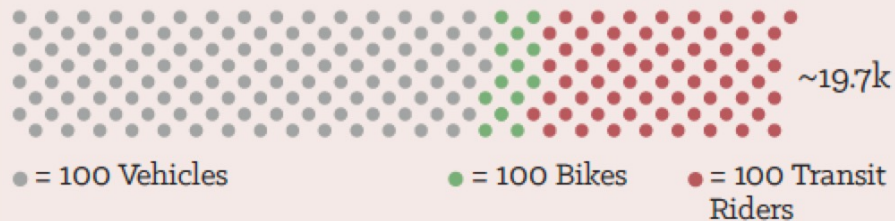
“The Bus Lane
is Always
Empty”

“It’s
Impossible”

Measure People, not Traffic

- ✓ Total Person Throughput
- ✓ Transit Ridership Growth
- ✓ Cross-Section Allocation
- ✓ Multi-modal movement

The Street Moves More People Now



+14%

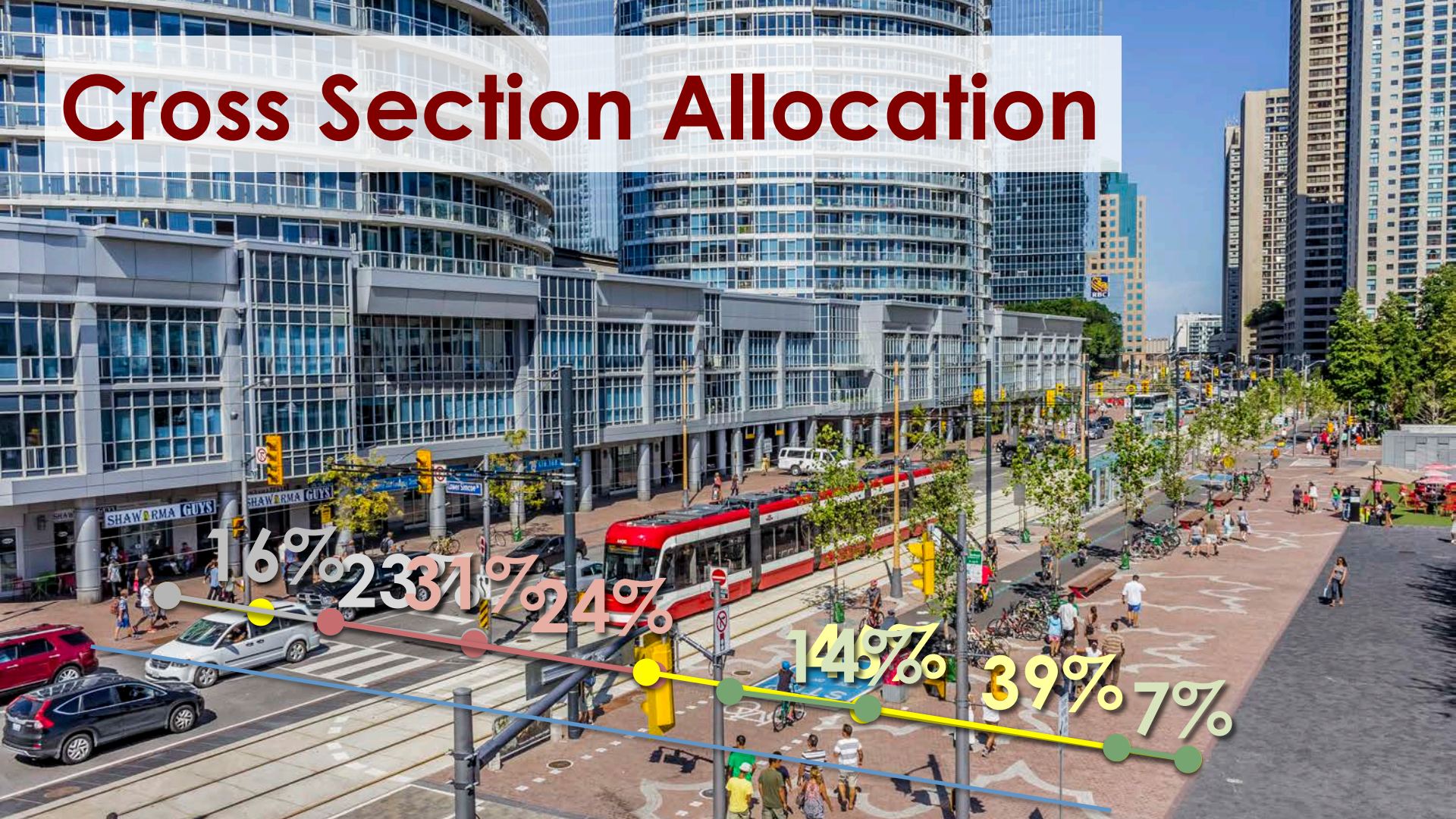
Total Person Throughput

Source: Seattle Department of Transportation and King County Metro

Cross Section Allocation



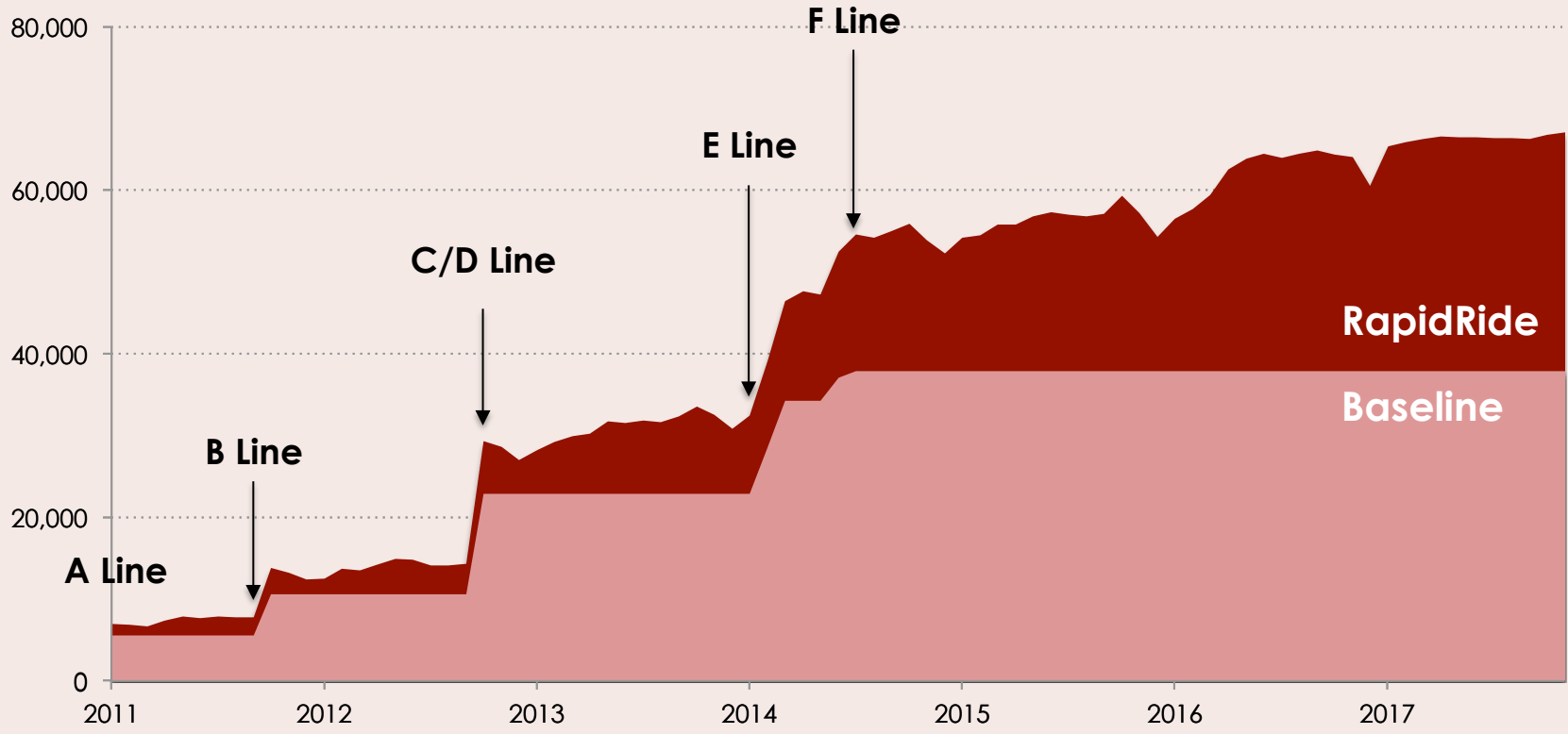
Cross Section Allocation



Ridership increases when service improves



Ridership increases when service improves



Thanks!

[nacto.org/tsdg/
making-transit-count](https://nacto.org/tsdg/making-transit-count)



The image shows the cover of a resource paper. At the top left is the NACTO logo (National Association of City Transportation Officials). At the top right, it says 'NACTO TRANSIT LEADERSHIP RESOURCE PAPER APRIL 2018'. The main title 'MAKING TRANSIT COUNT' is in a large white font on a dark red background. Below it, a subtitle 'PERFORMANCE MEASURES THAT MOVE TRANSIT PROJECTS FORWARD' is also in white on a dark red background. The background image is a night street scene with a blurred bus and a colorful bicycle rack in the foreground.

Tell a better story about streets & transit.

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LOS ANGELES

DESIGNING CITIES 2018

October 1 - 4, 2018

nacto.org/conference

