NACTO Transit Street Design Training

Aaron Villere Senior Program Associate NACTO

January 29-30, 2019



OVANCOUVER, BC + CLITTIES Leading Change

PORTLAND + TRIMET VANCOUVER, WA

HALIFAX O

MONTRÉALO OBURLINGTON TORONTO MINNEAPOLIS + O BOSTON METRO TRANSIT **GRAND RAPIDS** HOBOKEN ONEW HAVEN DETROIT 0 HARRISBURG ONEW YORK + MTA CHICAGO + CTAO PITTSBURGH **OPHILADELPHIA** SALT LAKE CITY OAKLAND **O**SACRAMENTO COLUMBUS OBALTIMORE **OFORT COLLINS** SAN FRANCISCO ARLINGTON OO WASHINGTON, DC PALO ALTO SAN JOSE CUPERTINO INDIANAPOLIS O **ALEXANDRIA** ST LOUIS **OLOUISVILLE** SAN LUIS OBISPO WEST HOLLYWOOD VENTURA Om PASADENA ORALEIGH NASHVILLEO SANTA MONICA CLOS ANGELES + METRO **O**CHARLOTTE **OCHATTANOOGA + CARTA** LONG BEACH MEMPHIS O **OPHOENIX ATLANTAO OCHARLESTON** O DALLAS O EL PASO **NEW ORLEANS** AUSTINO OORLANDO SAN ANTONIO + VIAO HOUSTON + METRO WEST PALM BEACH HONOLULU **T** FT LAUDERDALE MIAMI CO MIAMI BEACH



Why NACTO?

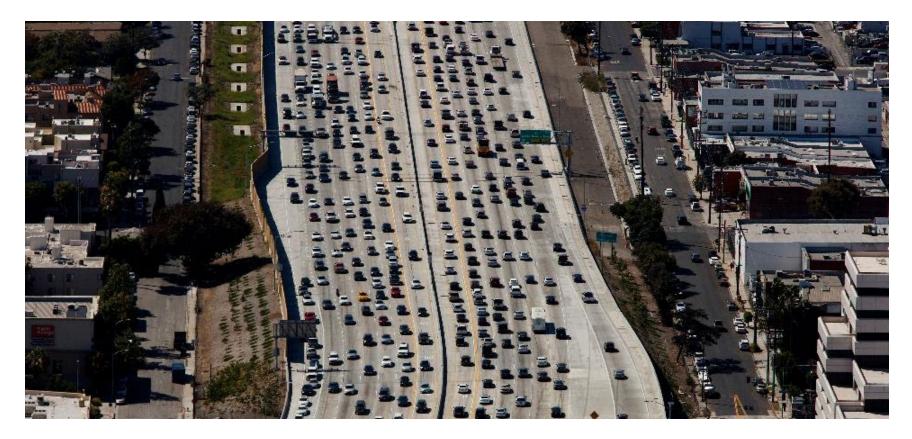
→ Sharing a Vision for Safe, Sustainable,
& Equitable Transportation

→ Closing the Guidance Gap

 \rightarrow Advancing the State of the Practice

A Vision for Urban Transportation

What is our business?



The New York Times

TheUpshot

IMPORTANCE OF PLACE

Transportation Emerges as Crucial to Escaping Poverty

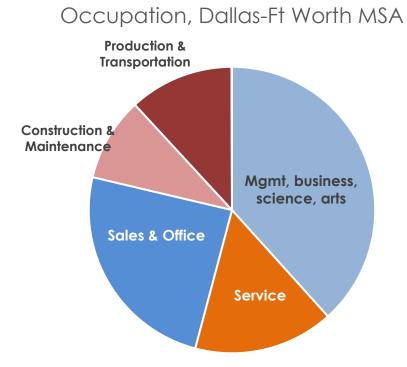
By Mikayla Bouchard

May 7, 2015

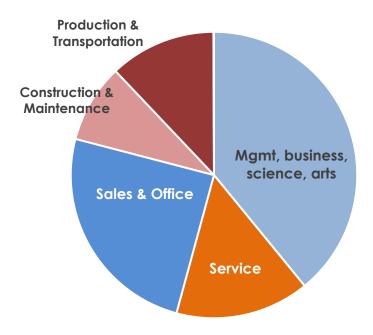
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James Baker was pedaling to work along a slick, snow-covered road in Frederick County, Md., when a traffic light changed abruptly. He braked and skidded to the ground, unhurt but making a mess of his clothes before a long day of work and school.

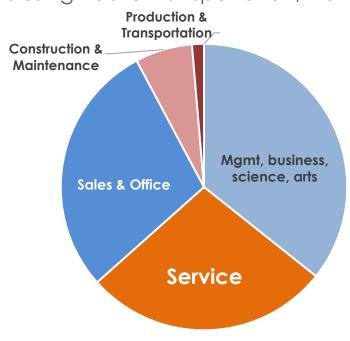
He was on his bicycle that snowy morning last December, about an hour northwest of Washington, because the bus service in Frederick was so erratic. Routes were far apart and the buses often late, making



Commuters who Drive Alone by Occupation, Dallas-Ft Worth MSA



Commuters using Public Transportation, Dallas-Ft Worth MSA

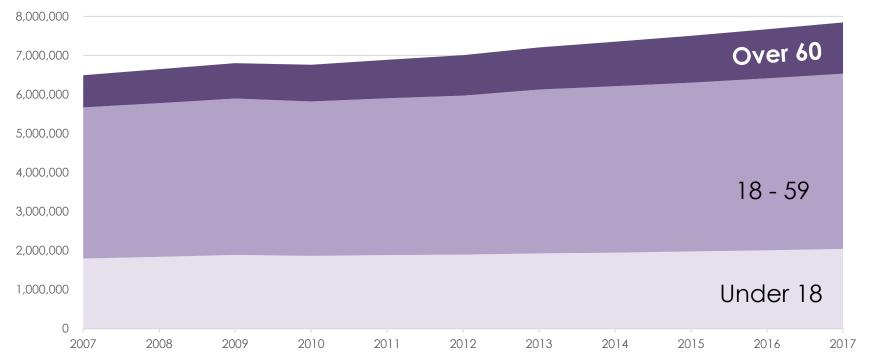


Mobility is ... Independence



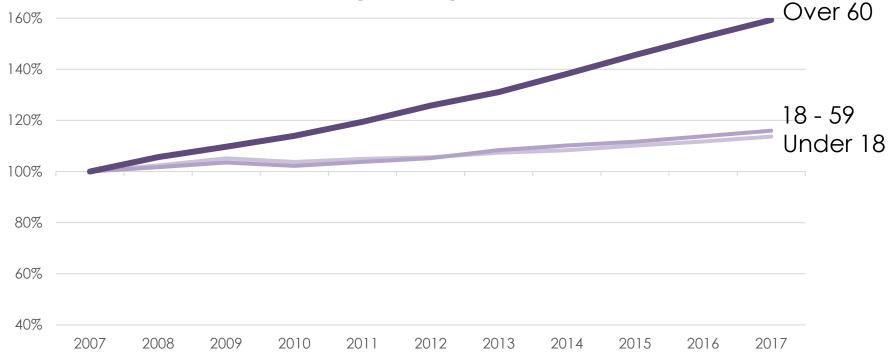
Mobility is ... Independence

Population by Age, Dallas-Ft Worth



Mobility is ... Independence

Population Change by Age, Dallas-Ft Worth



Mobility is ... Power





Closing the Guidance Gap

Existing Guidance

HCM2010

HIGHWAY CAPACITY MANUAL



Geometric Design of Highways and Streets

AASH

2011 6th Edition Manual on Uniform Traffic Control Devices

LEFT

ROAD CL OSED for Streets and Highways

2009 Edition

ONLY

EXPRESS

LANE

ENTRANCE

The Best Tool for the Job?





Advancing the State of the Practice

Why Transit Streets Matter





Better Streets, Better Service Transit Creates Urban Places A Mobility Service For The Whole City

Why Transit Streets Matter







Growth Without Congestion Safe Movement At A Large Scale

Permanent Economic Benefits



Cambridge, MA

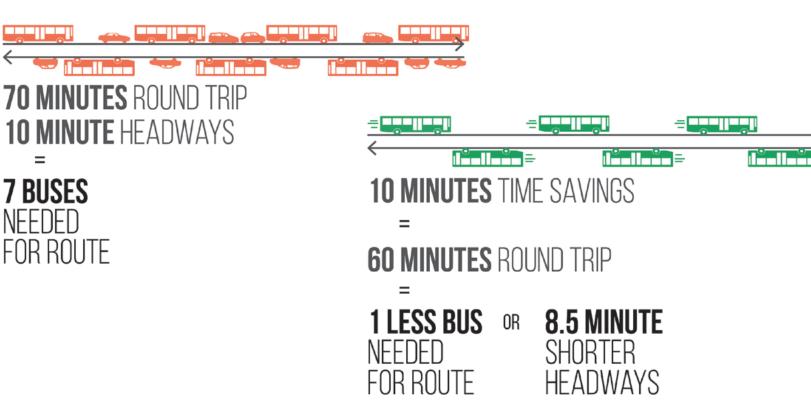
Better Streets, Better Service







1st and 2nd Avenues, New York City



Transit Streets Create Urban Places

Dallas, TX

And Andrew City

CA 49819

ELECTRIC

illos TX

without

Bronx, NY

Congestion

an

400

Websier SEA FAAAA

SUPERMARKET

42

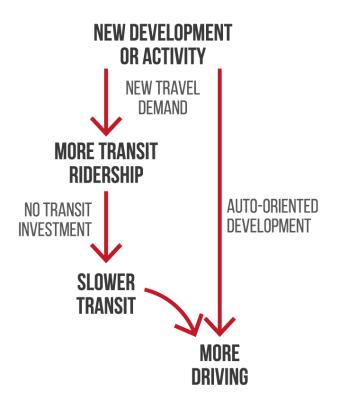
Growth without Congestion

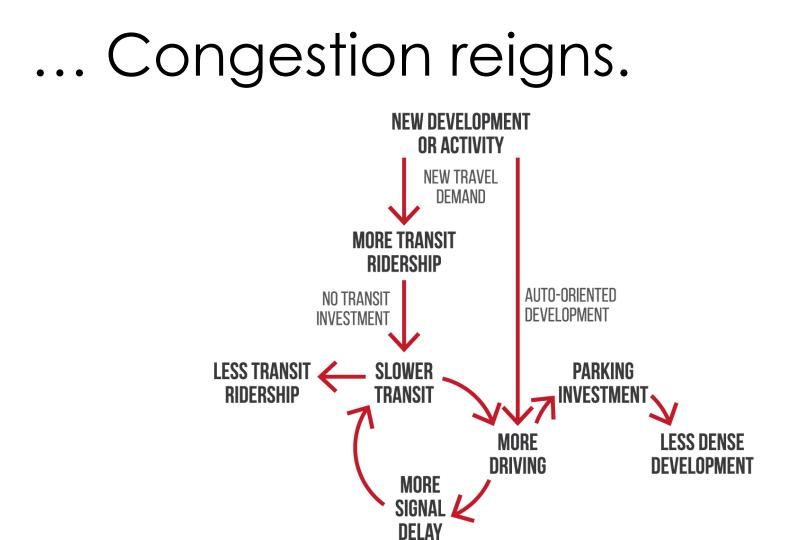
Mega Seafood II

What kind of growth?

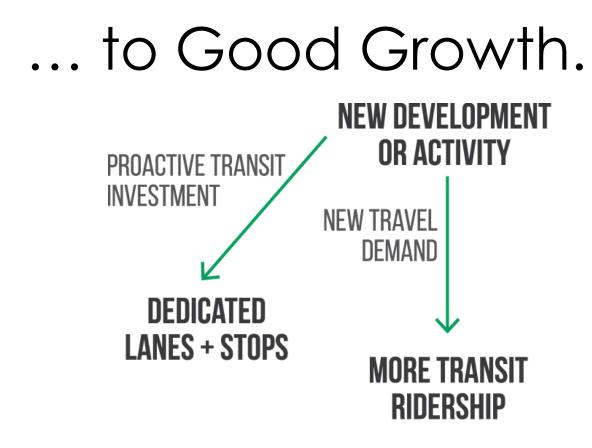
NEW DEVELOPMENT OR ACTIVITY NEW TRAVEL DEMAND MORE TRANSIT RIDERSHIP

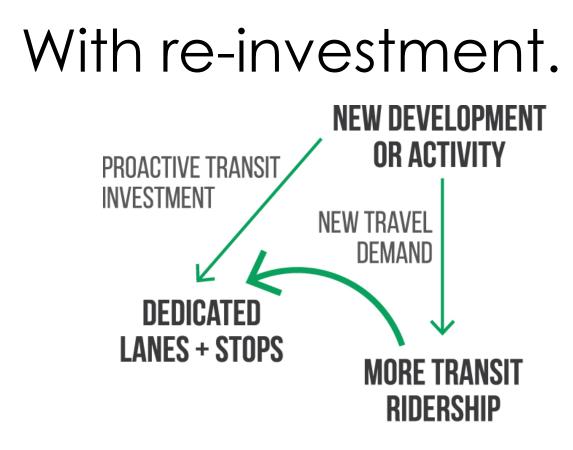
Without Transit Policy & Design...

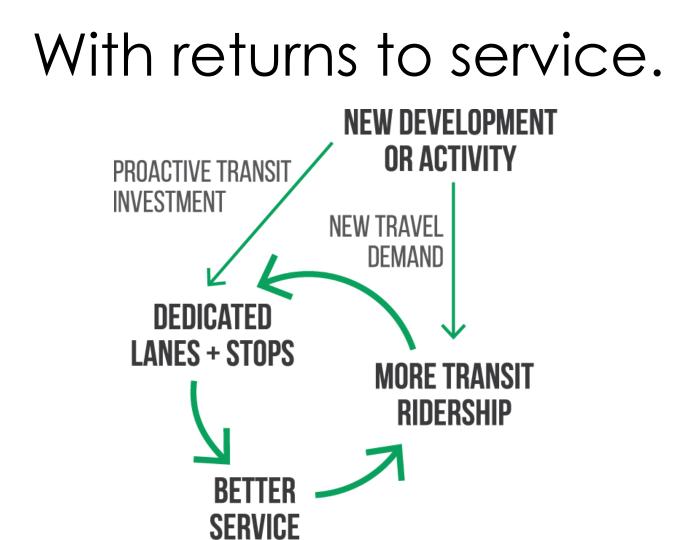


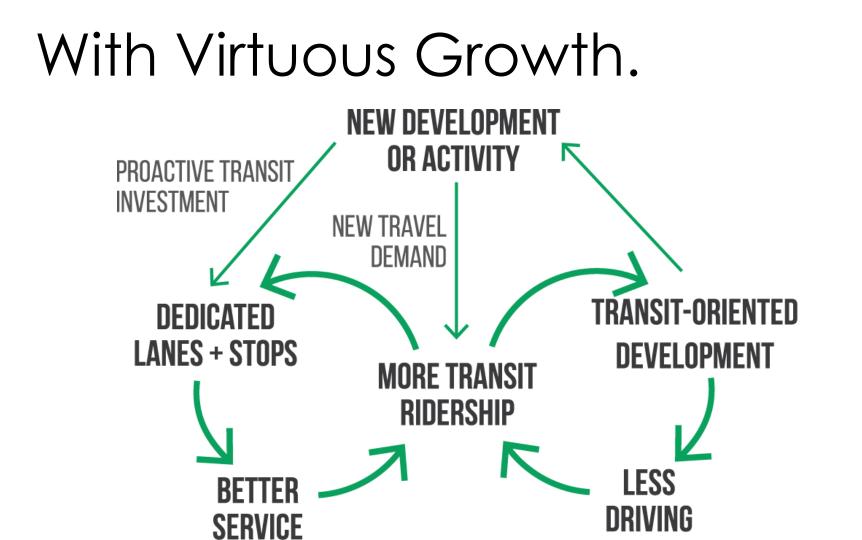


From Bad Growth ... NEW DEVELOPMENT **OR ACTIVITY NEW TRAVEL** DEMAND MORE TRANSIT RIDERSHIP AUTO-ORIENTED NO TRANSIT DEVELOPMENT INVESTMENT LESS TRANSIT **SLOWER** PARKING **TRANSIT** INVESTMENT RIDERSHIP MORE LESS DENSE LESS DRIVING DEVELOPMENT TRANSIT MORE ROAD SERVICE SIGNAL INVESTMENT DELAY









Portland, OR

Safe Movement at a Large Scale

Safe Movement at a Large Scale **ON-STREET TRANSITWAY, BUS OR RAIL SIDEWALK** <u>፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟፟</u> 9,000/HR DEDICATED TRANSIT LANES 4.000-8.000/HR TWO-WAY PROTECTED BIKEWAY 7.500/HR **MIXED TRAFFIC WITH FREQUENT BUSES** 1,000-2,800/HR **PRIVATE MOTOR VEHICLES** 600-1.600/HR



Permanent

Economic

Benefit

WAY

Lemmon East



Why the Hell Not?!

Dallas, TX

"Innovations" in Street Design



"Innovations" in Street Design



Transit moves cities.



Transit sustains growth.



Transit creates destinations.



Transit anchors communities.



Agenda

Transit Street Design Street Typologies Transit Lanes & Transitways **Design** Controls 10 min Break Intersection Design **Crossing Types & Treatments Transit Priority Signalization**

9:15am

11:00am

Agenda Lunch Transit Stops Stop Configurations Bikes, Pedestrians, & Transit Transit System Strategies **Operations**, meet Streets Networks & Service Planning

12:00pm 12:30pm

1:15pm

Agenda

Design Charrette Intro to Site Work in Breakout Groups Report Back

1:45pm

4:00pm

Close at 4:30