

Bringing It All Together:

The Potential of Transit-Oriented Development and Bus Rapid Transit

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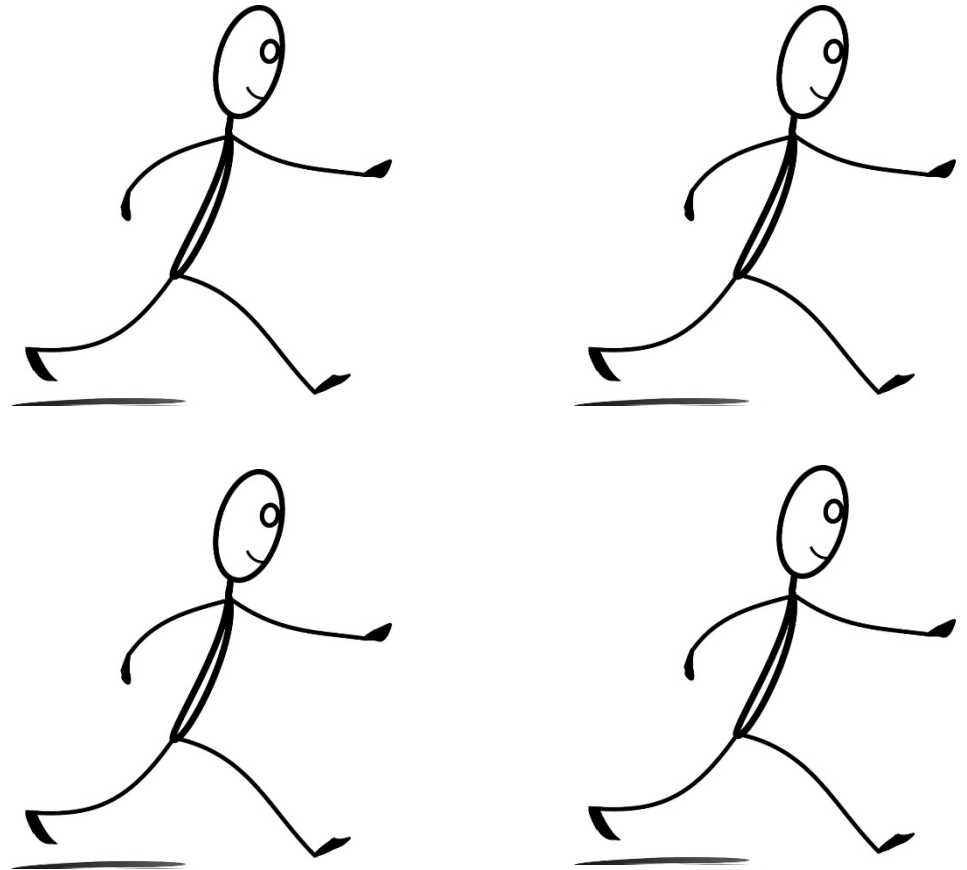
Puget Sound Regional Council



A growing region – the King County perspective

Population & economic growth continues

Since 2010 King County's population has increased by 258,951. That's the equivalent of almost four net new people moving into King County every hour!



Travel times continue to grow

Commute times are increasing

- In 2008, mean commute time was 26.8 minutes
- In 2017, mean commute time in King County was 30.0 minutes

And, more of us are commuting longer

- In 2008, 7.4% of commuters traveled more than 60 minutes each way
- In 2017, 10.1% of commuters traveled more than 60 minutes each way

And transit use has been growing— 40% increase in use among commuters since 2000

- 13% of workers use transit to get to work

Record high transit ridership in 2018

- Metro Transit: averages 423,000 weekday boardings
- Sound Transit: averages 167,800 weekday boardings

Housing affordability a major challenge

- King County's population **growth has been greater than housing** production since 2011
- **Wages** have not kept up with rising **housing costs**
- More than **100,000 low-income households** pay more than half their income for housing costs
- **Renters** are twice as likely as owners to pay half their income for housing costs
- **People of color** are significantly more likely to be paying more than half their income on housing

Affordable housing demand is growing



**11,600 People
Experiencing
Homelessness**

9,700



**122,700 Severely
Cost-Burdened
Households**

75,700



**167,400 Cost-
Burdened
Households**

70,200

290,100 Households &
11,600 Experiencing
Homelessness

Required

156,000

Homes in 2017

**ADD GROWTH
2017-2040**

88,000

Households @
80% AMI or lower



Requires

244,000

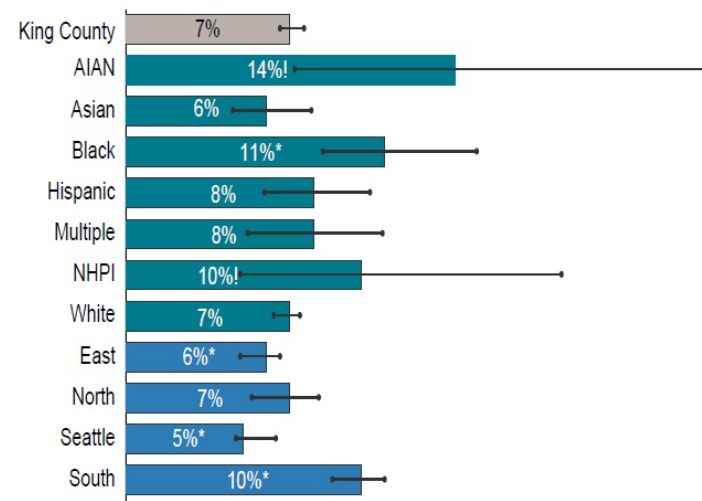
Homes by 2040

Social disparities are notable and persistent

South King County are more likely to have diabetes – a disparity that has not changed since 2013

Diabetes (adults)

King County (average: 2011-2015)

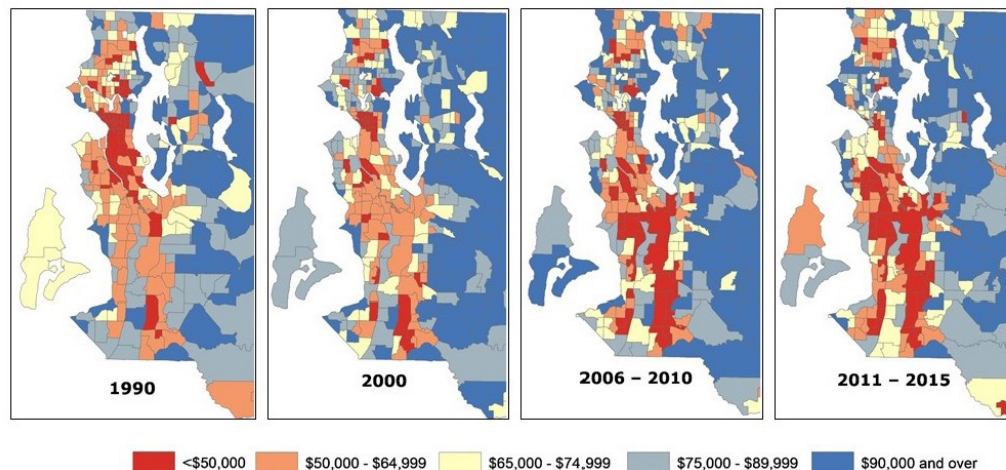


Source: Behavioral Risk Factor Surveillance System

* Significantly different from King County average

! Interpret with caution; sample size is small, so estimate is imprecise

Median household income by King County neighborhood, 1990-2015



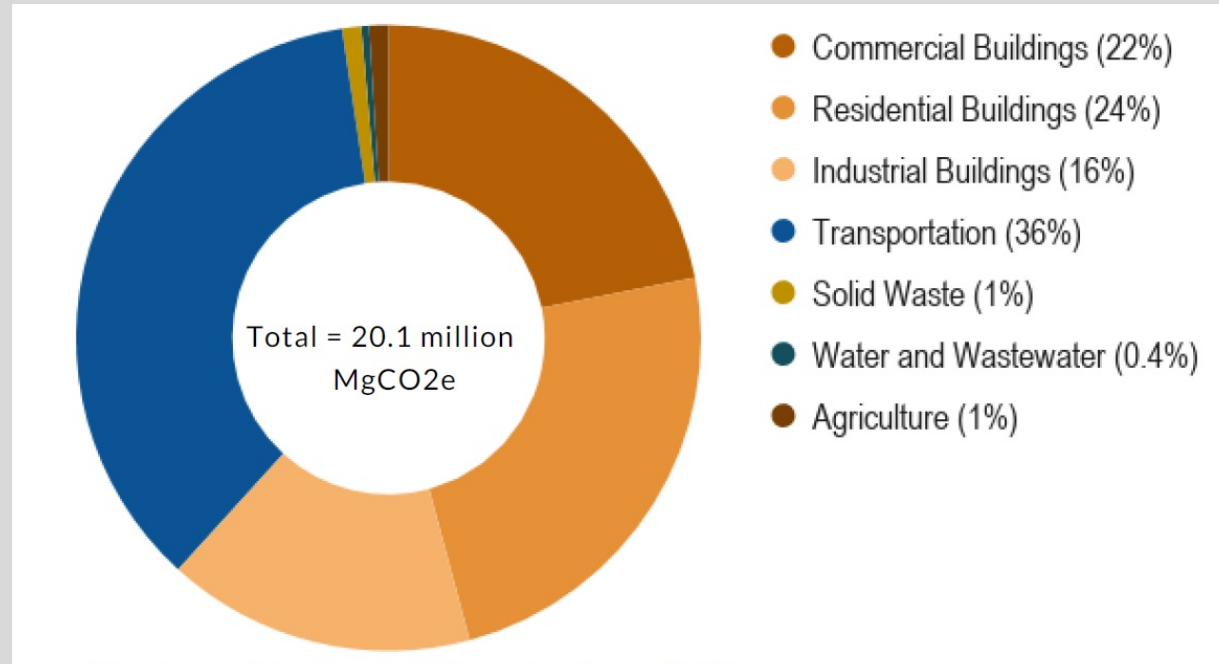
Data sources: US Census Bureau, 1990 & 2000 censuses; American Community Survey (2006-2010, 2011-2015)

Environmental Challenges

Climate change

*The Intergovernmental Panel on Climate Change released a special report in October 2018 concluding **humans may only have until 2030 to limit global warming to one and one-half degrees Celsius***

County-wide GHG Emissions 2017



Source: GHG Emissions in King County: 2017 Inventory Update (2019) King County

- Washington's carbon budget features transportation more than most

Building Blocks



Solutions must address all aspects of our challenges

Transit-oriented development is one key to creating opportunities in an integrated way

Making progress with transit system expansion

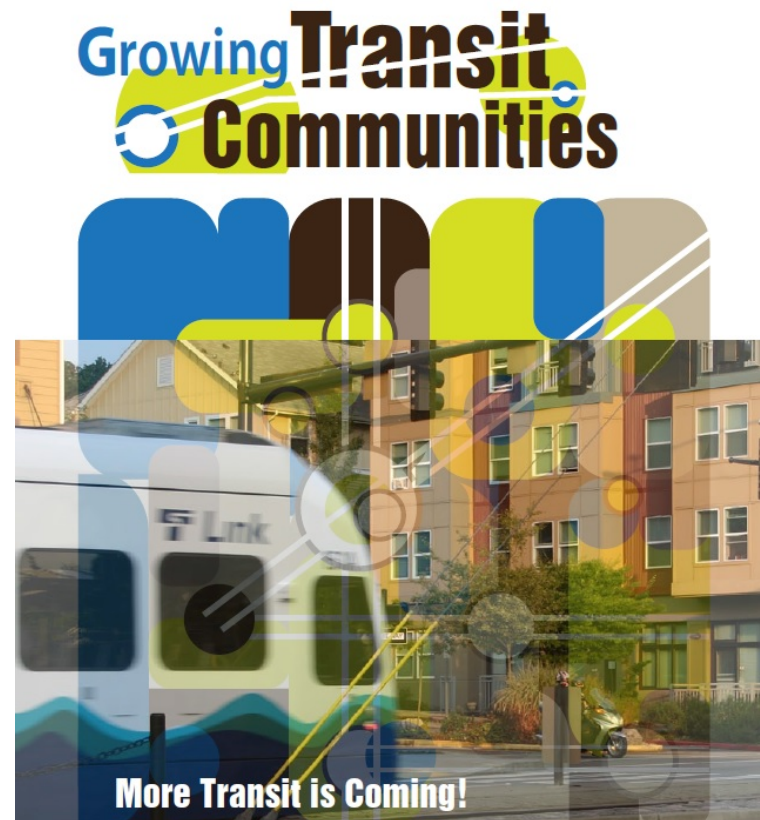
20 years into the 50-year vision to remake transportation in the Puget Sound region



Transit expansion through the early 2040s

When complete transit projects in PSRC region will include:

- 116 mile light rail network with more than 80 stations serving 16 cities
- Expanded and more frequent Sounder commuter rail, which will serve 12 cities
- Bus Rapid Transit region wide will total 42 routes, if funding available



What is Bus Rapid Transit?

“Bus Rapid Transit (BRT) is a high-quality bus-based transit system that delivers fast, comfortable, and cost-effective services at metro-level capacities. It does this through the provision of dedicated lanes, with busways and iconic stations typically aligned to the center of the road, off-board fare collection, and fast and frequent operations.”

-Institute for Transportation & Development Policy



Quito, Ecuador (image: ITDP)

What is Bus Rapid Transit?



KEY FEATURES

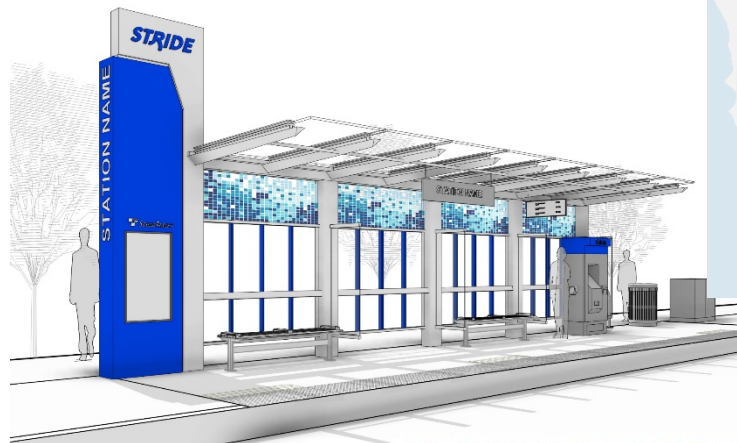
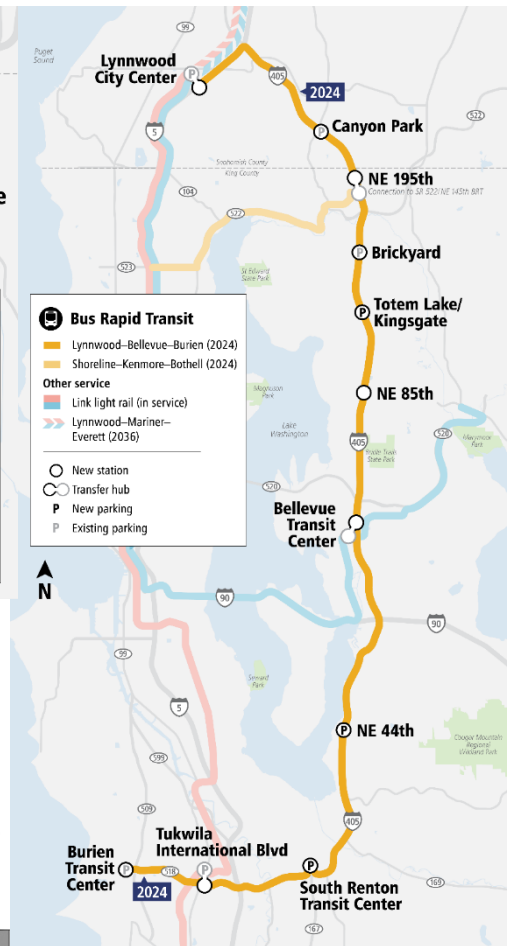
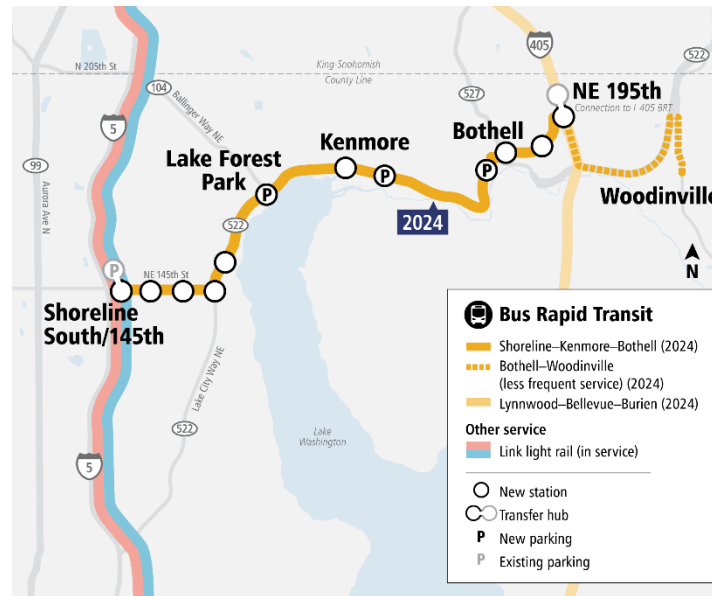
1. Dedicated ROW
2. Busway Alignment
3. Off-board Fare Collection
4. Intersection treatments
5. Platform-level boarding

*** Many BRT alignments that have an assortment of these features, but not all

Sound Transit Stride

Service for both lines expected to begin in 2024

- Lynnwood to Bellevue in 33 minutes
- Bothell to Shoreline/145th Station in 22 minutes



AM Peak hour travel times to Bellevue

ST Express (existing)	57 MIN
ST3 representative project	50-55 MIN
I-405 BRT proposed refined project	46-51 MIN
I-405 BRT with express toll lanes	33-38 MIN

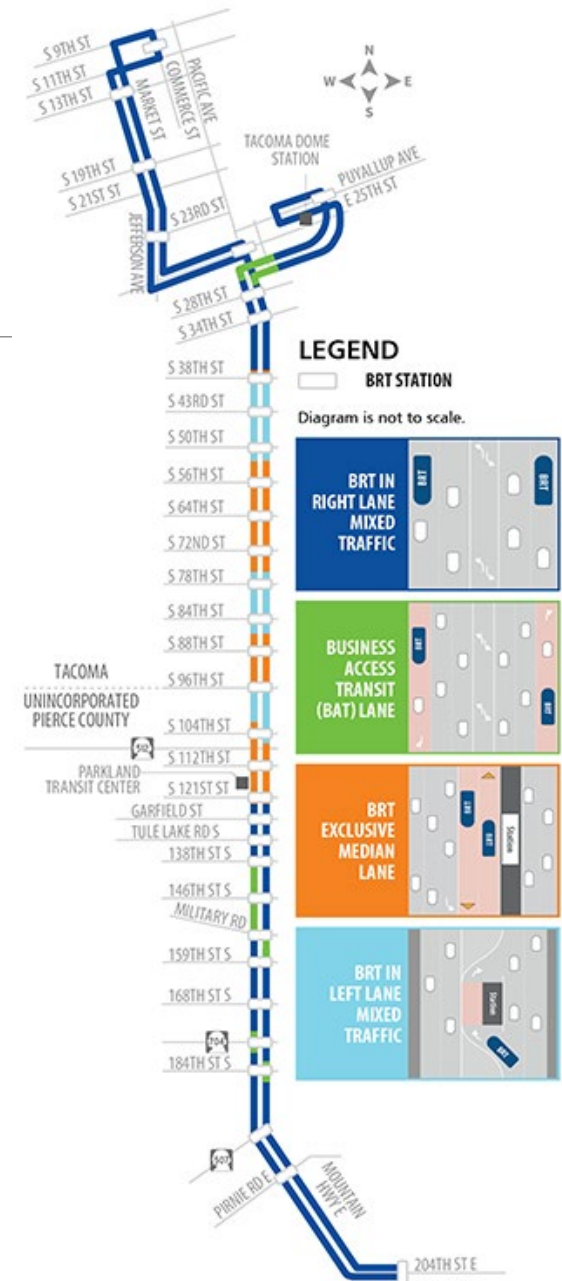
A GROWING NETWORK COUNTYWIDE

-
- RapidRide Routes Existing and Planned**
- Existing RapidRide route
○○○○○○
 - RapidRide Route to be implemented by 2025
G, H, 1013, 1027, 1033, 1071
 - RapidRide Route to be implemented after 2025
40, 1009, 1010, 1031, 1052, 1056, 1061
 - Sound Transit BRT to be implemented by 2025
 - Link light rail & existing station: Existing (black dot), Planned (green dot)

Pierce Transit BRT

NEW SERVICE ALONG PACIFIC AVENUE & SR 7

- 14.4 mile BRT line from Tacoma to Spanaway
- Improves transit along Pierce Transit's highest ridership corridor
- Connects transit centers, UW Tacoma, PLU and multiple activity centers together
- Includes ST3 funds (\$60M) and applying for Small Starts to fund remainder of \$120 million cost
- Anticipated completion in 2023



Community Transit's Swift Network

Expanding Network & Frequent Service



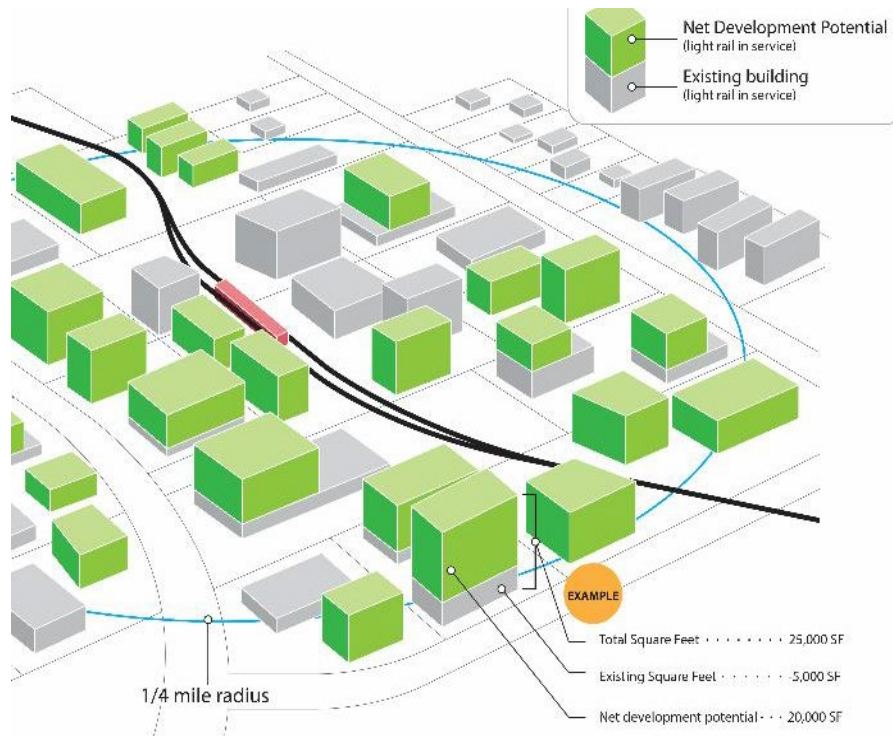
Locating Housing Near Transportation

Transit oriented
development and affordable
housing



REGIONAL
AFFORDABLE HOUSING
TASK FORCE

Transit creates opportunity



Land use patterns are changing because of transit expansion

Building transit isn't just about moving people from place to place...

It's also about building place

Better transportation options can improve economic mobility

“In a large, continuing study of upward mobility based at Harvard, commuting time has emerged as the single strongest factor in the odds of escaping poverty. The longer an average commute in a given county, the worse the chances of low-income families there moving up the ladder.”

- “Transportation Emerges as Crucial to Escaping Poverty,” New York Times, May 7, 2015

Executive Summary, April 2015

The Impacts of Neighborhoods on Intergenerational Mobility Childhood Exposure Effects and County-Level Estimates

Raj Chetty and Nathaniel Hendren, Harvard University

To what extent are children's opportunities for upward economic mobility shaped by the neighborhoods in which they grow up? We study this question using data from de-identified tax records on more than five million children whose families moved across counties between 1996 and 2012. The study consists of two parts. In part one, we show that the area in which a child grows up has significant causal effects on her prospects for upward mobility. In part two, we present estimates of the causal effect of each county in the United States on a child's chances of success. Using these results, we identify the properties of high- vs. low-opportunity areas to obtain insights into policies that can increase economic opportunity.

Part 1: Do Neighborhoods Matter for Economic Mobility?

In previous work (Chetty, Hendren, Kline, and Saez 2014), we documented substantial variation in rates of upward income mobility across commuting zones (aggregations of counties analogous to metropolitan areas) in the United States. This geographic variation could be driven by two very different sources. One possibility is that neighborhoods have *causal effects* on upward mobility: that is, moving a given child to a different neighborhood would change her life outcomes. Another possibility is that the observed geographic variation is due to systematic differences in the types of people living in each area, such as differences in race or wealth. Distinguishing between these two explanations is essential to determine whether changing neighborhood environments is a good way to improve economic mobility or whether policy makers should focus on other types of interventions.

The ideal experiment to test between these two explanations and identify the causal effects of neighborhoods would be to randomly assign children to different neighborhoods and compare their incomes in adulthood. We use a quasi-experimental approximation to this experiment that relies on

How to harness government, business & community to accelerate to meet the demand of 244,000 homes by 2040?

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Future Northgate TOD

TOD adjacent to light rail

- Perception of larger walkshed
- Strong sense of permanence



Northgate TOD

Spring District/OMFE



- Leverage agency property acquisition

TOD adjacent to bus/BRT



- Less leverage because less capital intensive, less land acquisition

How can we make BRT more attractive?

- Perception of smaller walkshed
- Weaker sense of permanence, compared to rail



A Regional Mobility Framework

Building a successful marriage of land use and transportation for the future

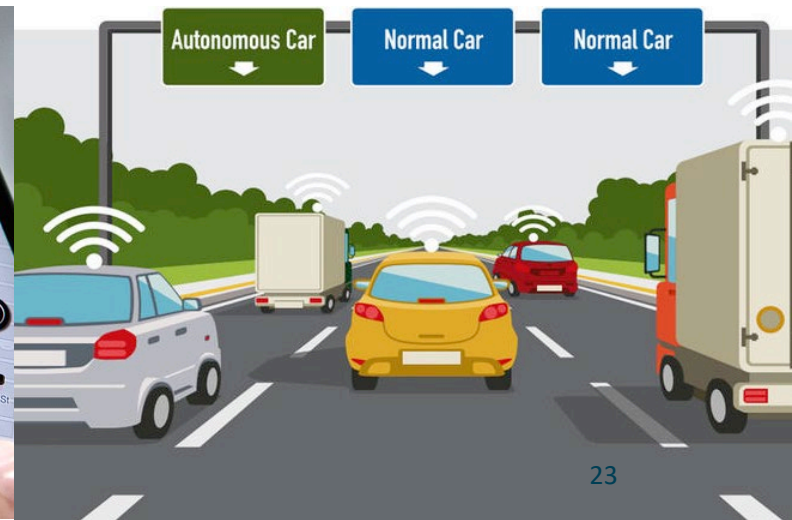
Creating a people-first transportation system, centered around transit.

Land use decisions around transit.

Smarter allocations of right of way.

Dramatically improve access to transit.

Making transit equitable and accessible to all.



Creating a people-first transportation



Tukwila International Boulevard Station

Mulberry St. in New York City



Land use decisions and smarter allocations of right of way

Minneapolis 1953



Minneapolis 2014

Life without electric cars



Life with electric cars



COPENHAGEN
HAGEN
IZE
EU



Access to Transit

Walk, Bike, Roll, Park

Getting people to transit



- Scooter share – Bothell & Redmond
- Bike share in Bellevue and Mercer Island
- Metro Parking Management at 10 P&Rs scheduled for fall 2019
- South Bellevue Park & Ride opening triples parking capacity to 1500 stalls
- Ride2 serves Eastgate Park & Ride
- Sound Transit 3 includes approximately \$350 million to improve access to transit, plus thousands of new parking stalls

Transportation Equity

- Regional mobility framework
- Fare enforcement reform
- Income-based fares
- Improving ORCA Card accessibility
- Facilitating more TOD & affordable housing





Regional Trail Expansion

Growing active transportation and connecting communities and transit across the Eastside

Trails are pathways for opportunity

A GROWING SYSTEM

- 2019-2025 King County Parks Levy invests \$165.6 million to connect regional trails
- \$50.5 million for Eastrail
- \$32 million for East Lake Sammamish Trail
- New regional trails connect to new light rail & bus rapid transit stations, as well as residential & employment centers region wide
- New developments create opportunities for trail-oriented development along with transit



Putting it all together

- **Signal permanence of BRT investment** via land use decisions, surrounding investments
- **Right of way prioritization** is an emerging issue for transit, and BRT in particular – how can agencies and local jurisdictions to partner to make it happen?
- **Affordable housing**, and more housing in general, is necessary. Coupling it with fast, frequent and reliable transit improves upward mobility.
- **Proactively addressing emerging trends in transportation** to put people first in an equitable way will require agencies to “**move out of their lanes**” to facilitate new partnerships.



Questions?



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