Seattle Congestion Pricing Study

Preliminary Findings

Phase 1 Briefing
July 2019

City of Seattle

Our mission, vision, and values

Mission: deliver a transportation system that provides safe and affordable access to places and opportunities

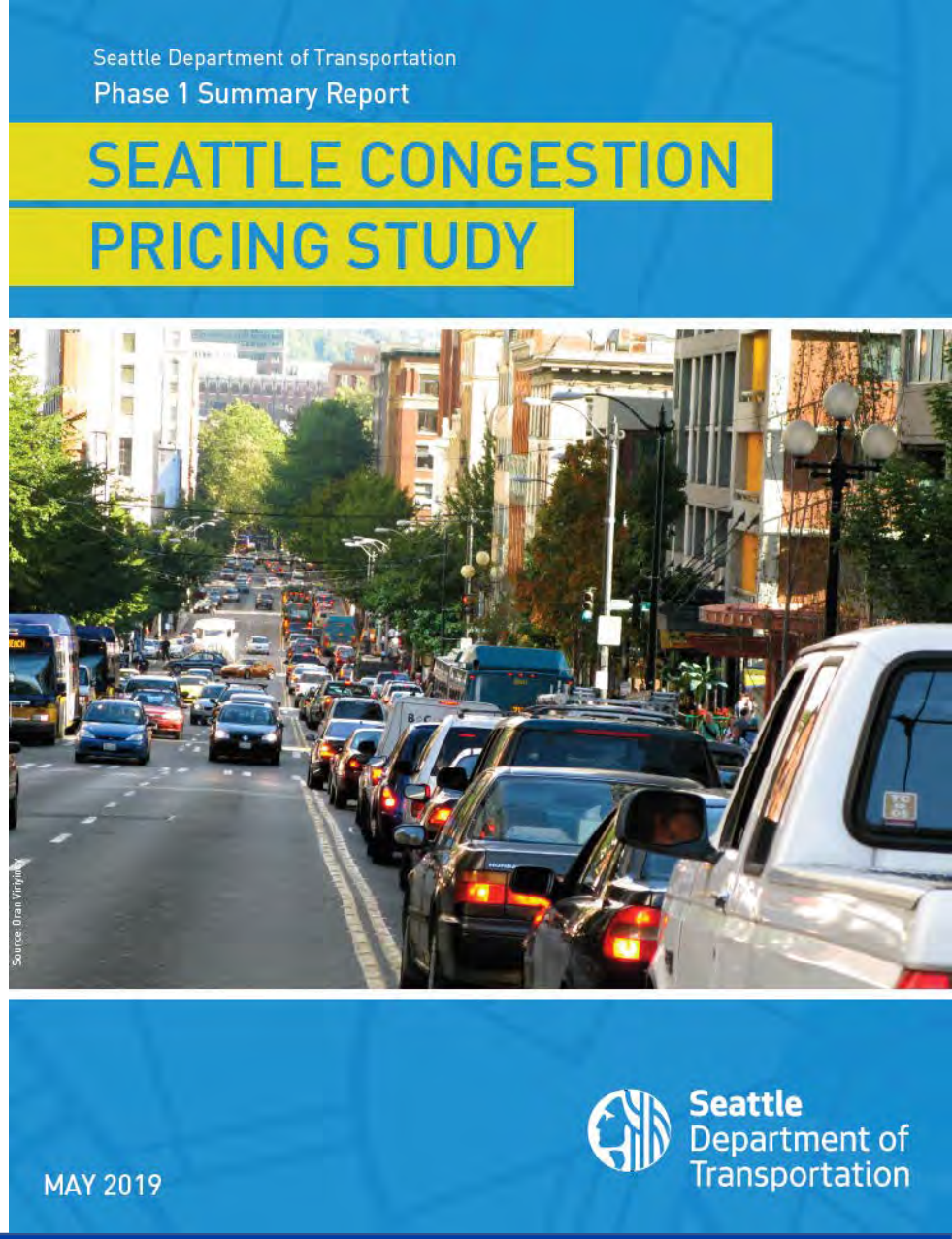
Vision: Seattle is a thriving, equitable community powered by dependable transportation

Values:

- Equity
- Safety
- Mobility
- Sustainability
- Livability
- Excellence

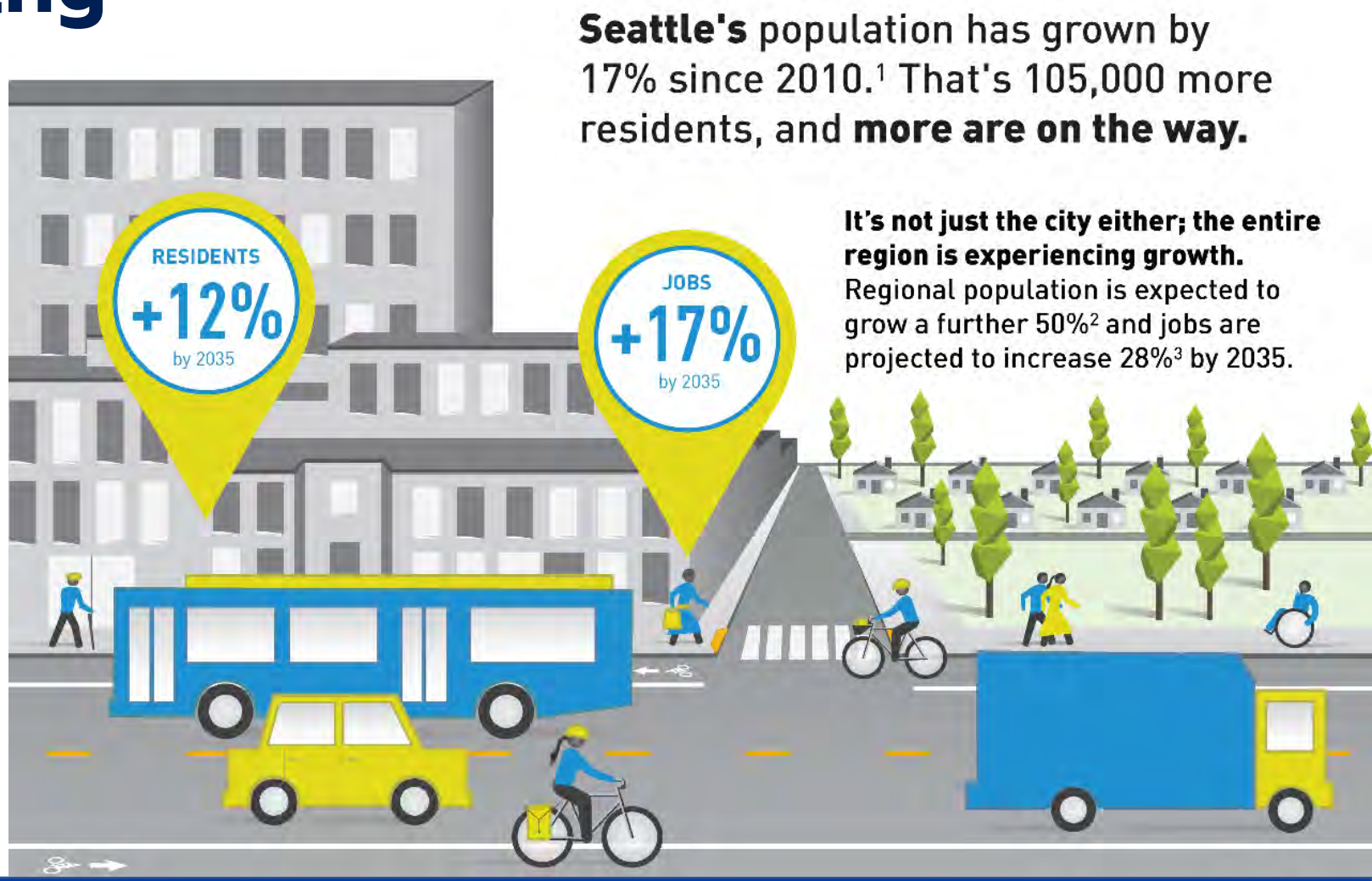
Presentation overview

- Background
- Study overview
- Key findings
- Next steps



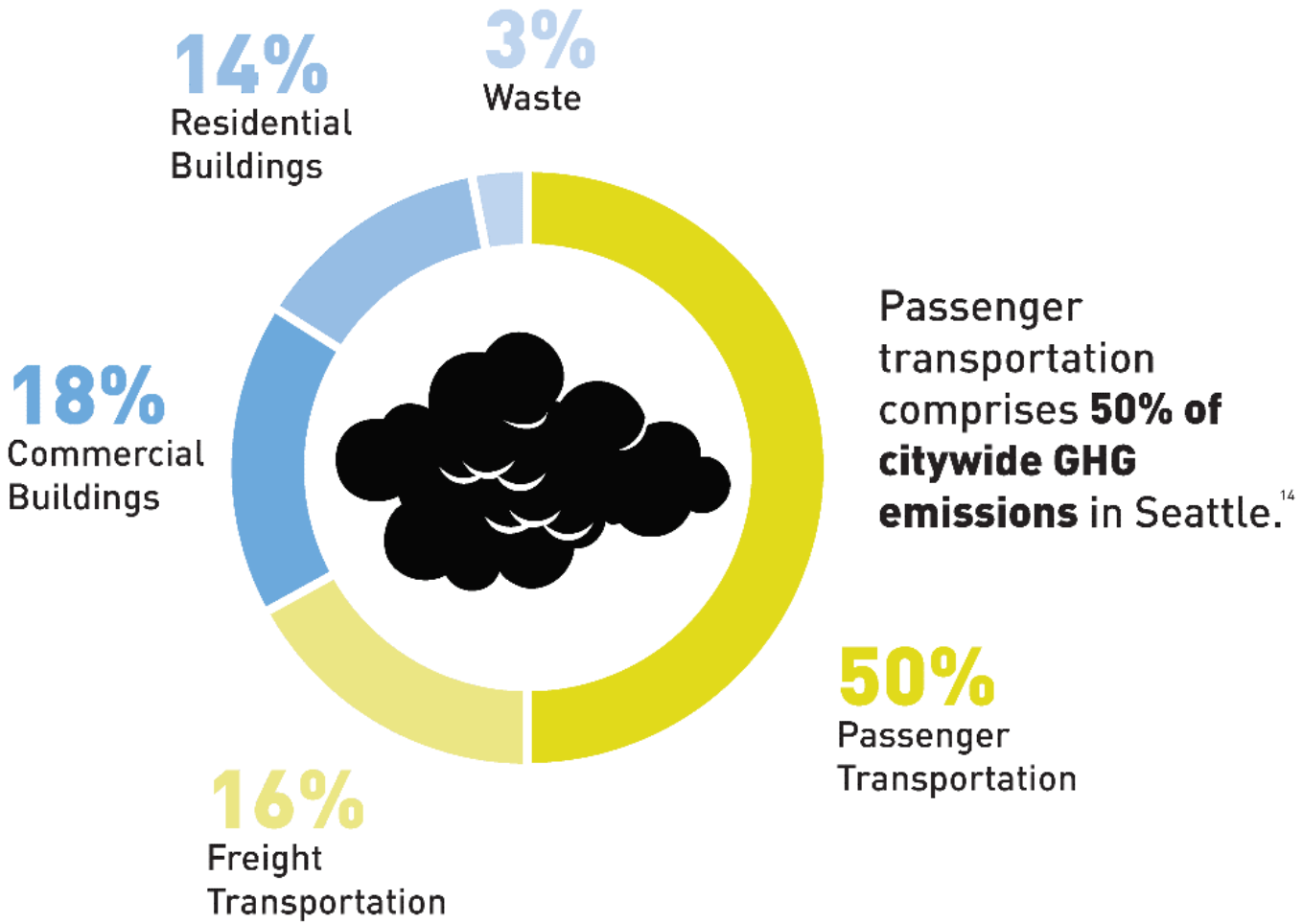
Seattle is growing

- Seattle has ranked among the top four U.S. cities for growth for the past five years
- We must move more people and goods in the same amount of space



Climate change is accelerating

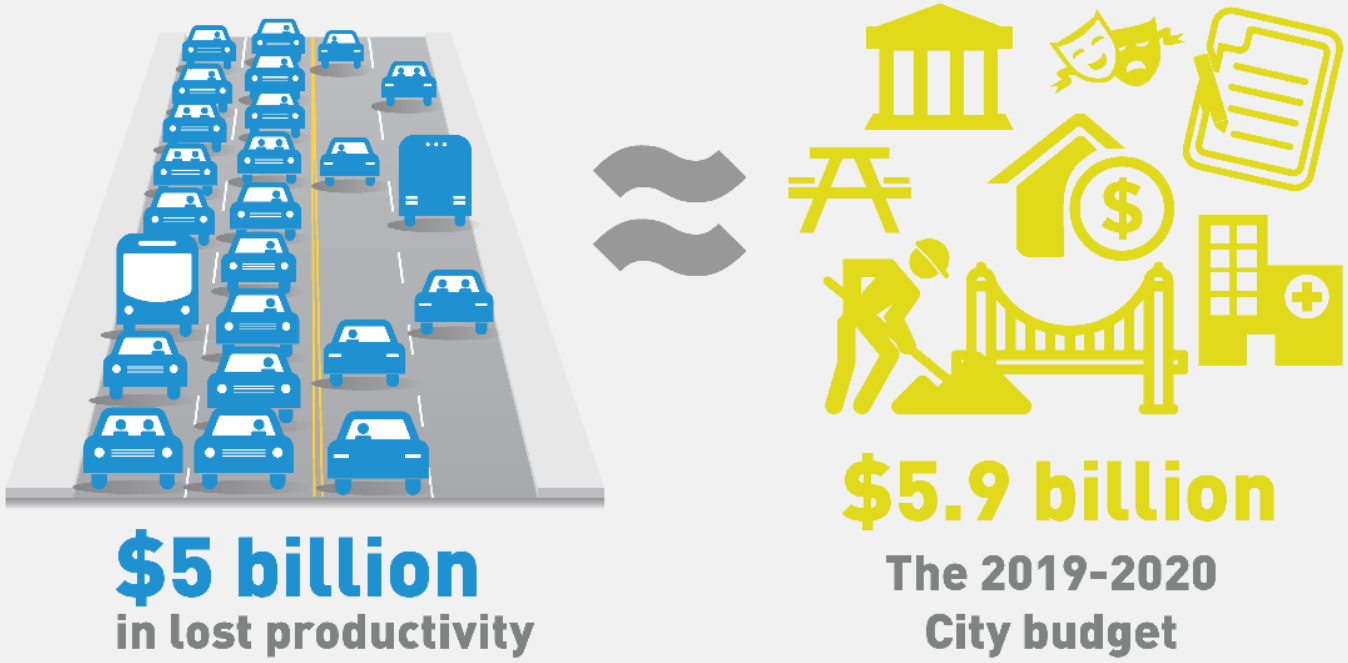
- 66% of emissions citywide come from transportation
- We must act now to curb emissions



Our streets are more congested

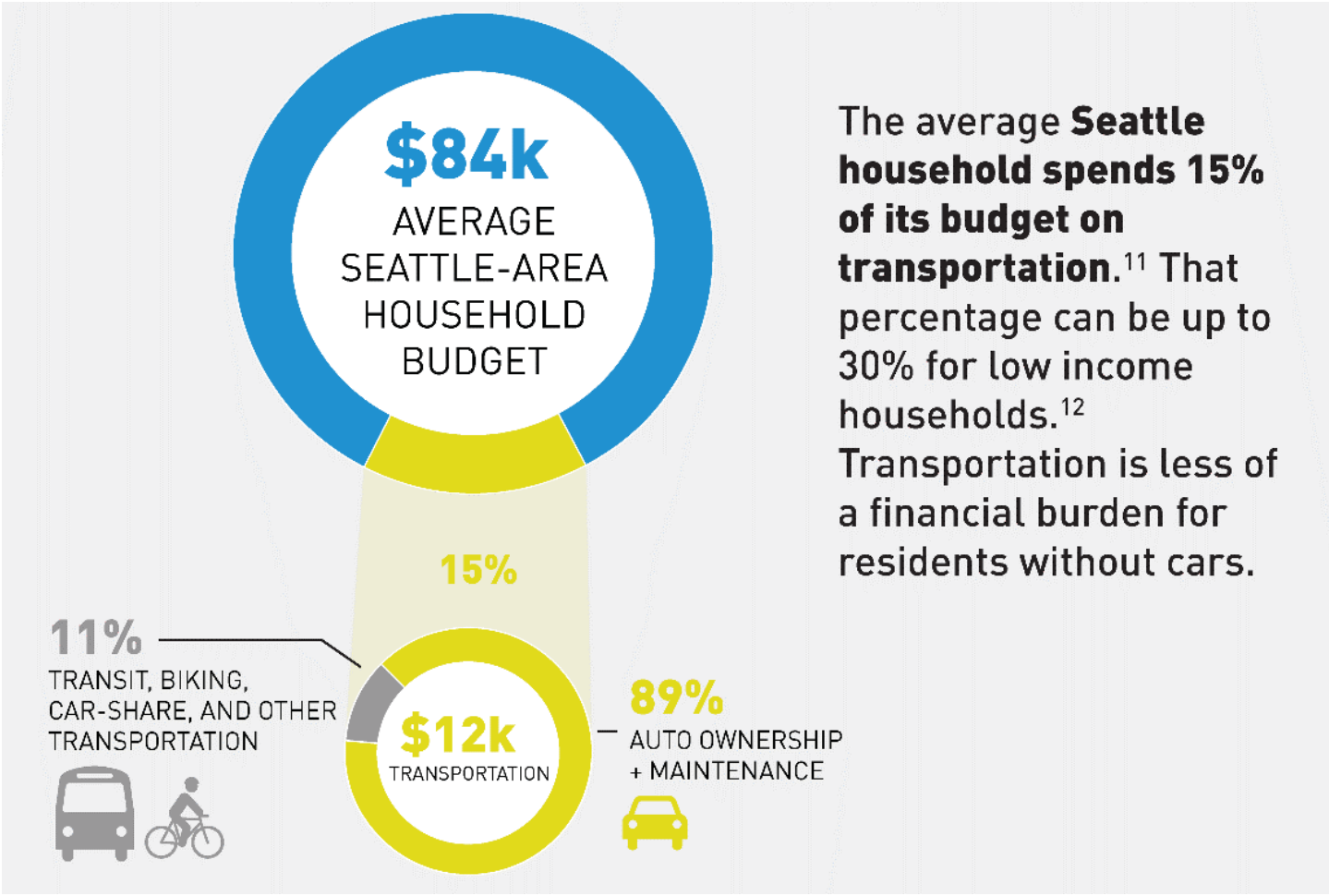
- We are one of the most congested U.S. cities
- People and goods spend 55 hours a year in Seattle traffic
- We must reduce the economic cost of congestion, especially for our most vulnerable residents

In 2017, the time spent in Seattle traffic is estimated to have cost **$5 billion in lost productivity.**[9] That is **nearly as much as the entire City of Seattle budget** for 2019-2020.



Our current system is inequitable

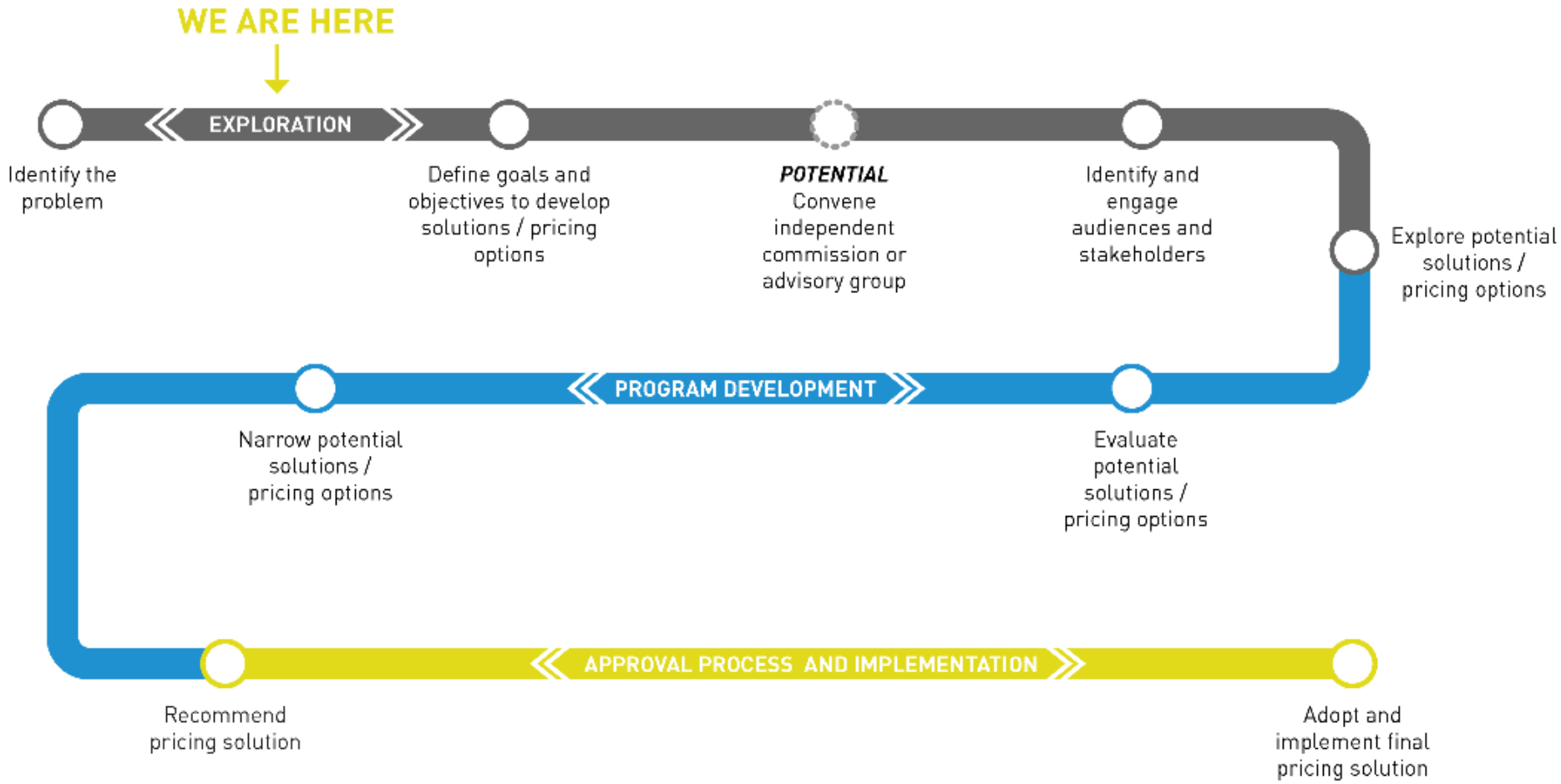
- Growth is causing pressures on housing and affordability
- People with hourly wage jobs or more than one job are most impacted by unreliable traffic patterns
- We must make our transportation system work better for everyone



Study overview

- Council provided initial funding
- Seattle's 2018 Climate Action Plan calls for study of congestion pricing
- Initial exploratory study launched in summer 2018
- Focus areas included peer review, equity, pricing tools, and initial impacts and benefits

Developing a policy



What is congestion pricing?

A strategy to address congestion and transportation emissions through pricing. It involves pricing city streets to encourage alternatives to single occupant vehicle trips, and to improve travel reliability, reduce travel times, and improve safety.

Seattle Climate Action Strategy, April 2018

Who is pricing now or studying pricing?

What have we learned?

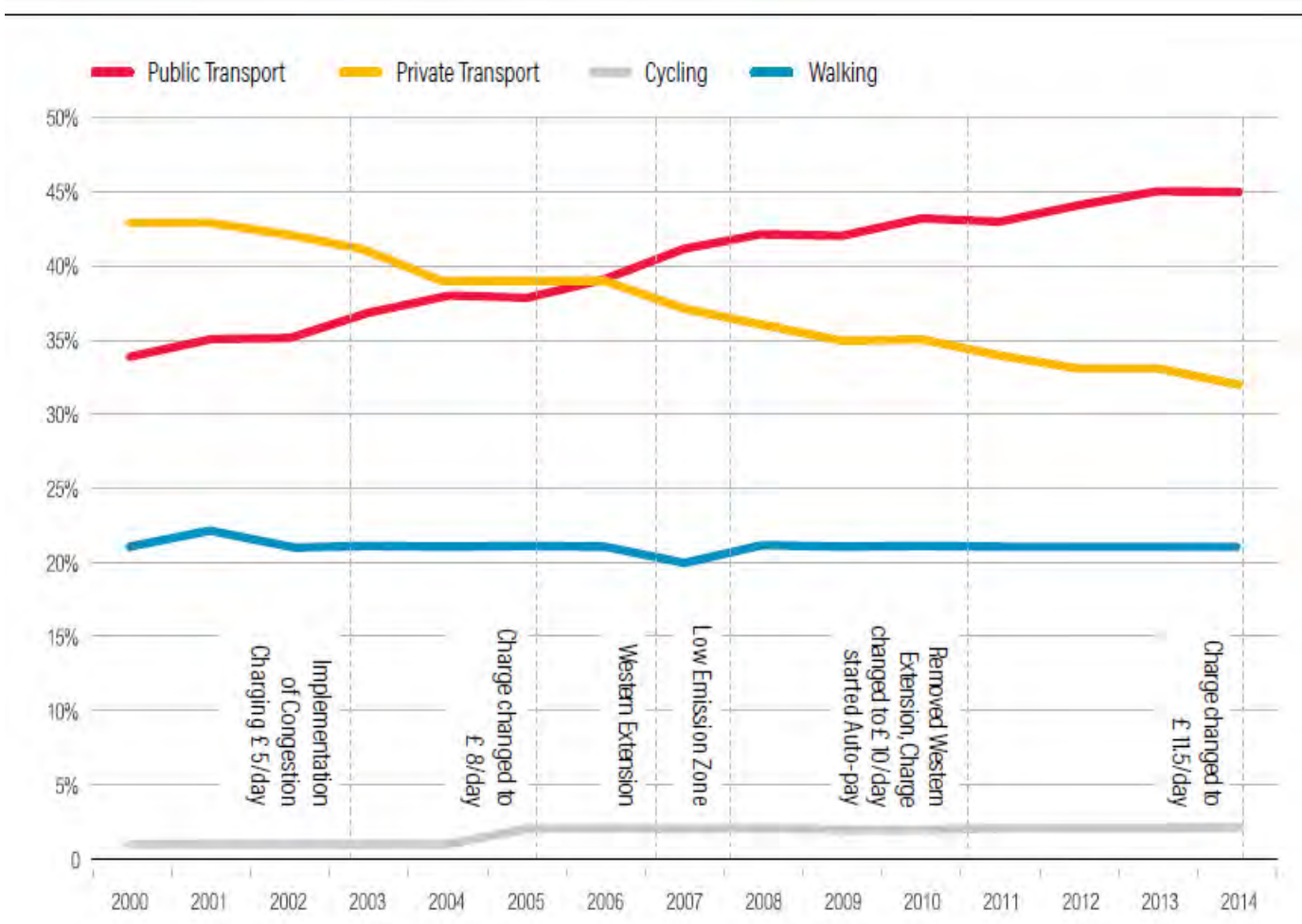
- All cities that have implemented congestion pricing built on aggressive **transportation demand management** programs
- All congestion pricing programs implemented to date have been with the intention to **reduce congestion and/or emissions**
- Most programs have provided a **positive revenue stream** that funds additional transportation options and services
- Public and business **acceptance has risen dramatically** post implementation

What are the benefits?

	Stockholm	London	Singapore	Milan	Gothenburg
Trip Reduction	-22%	-16% all -30% charged	-15% with new technology -44% in 1975	-34%	-10%
GHG Benefit	-14% CO2	-17% CO2	-15% CO2	-22% CO2	-2.5% CO2
Travel Time Results	-33% delays	-30% delays	Managed by price for 45-65 km/h (expressways) 20-30 km/h (other roads)	-30% delays	-10% to 20% travel time in corridors
Net Annual Revenue	$150M	$230M	$100M	$20M	$90M

What are the benefits?

- In every case, congestion pricing has reduced vehicle trips, reduced CO2 emissions, and lowered travel times
- Businesses have seen economic benefits
- Programs have evolved to meet new challenges



What are the benefits?

- London has invested revenues in new buses and active transportation projects
- Road space has been prioritized to move more people
- Traffic collisions have fallen by 40%

What are potential tools?

- Cordon pricing
- Area pricing
- Fleet / vehicle class pricing
- Road user charge
- License plate-based restriction zone
- On-street parking pricing
- Off-street parking pricing
- Arterial toll roads
- Arterial express lanes
- Connected / AV zone
- Fossil fuel free zone

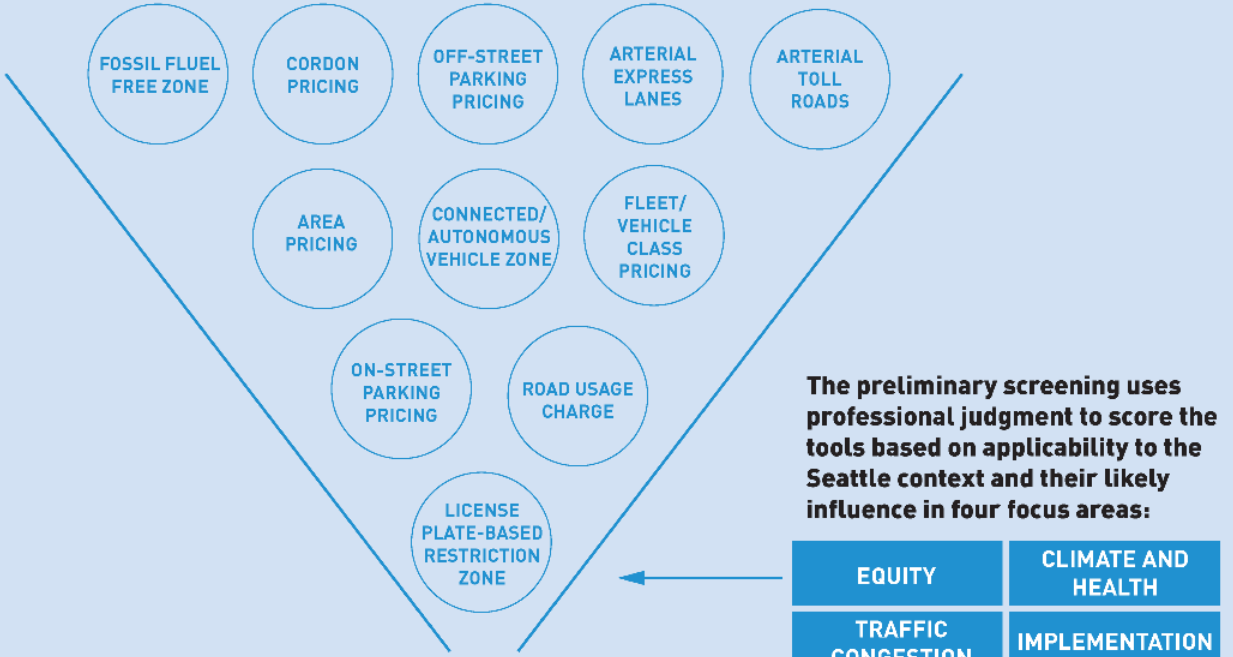
These tools are described in detail on pg. 20-21 of the Summary Report.

What about technology?

- Pricing systems must include:
  - Vehicle ID devices
  - Roadside detectors and enforcement equipment
  - Back office
- Technology considerations include:
  - Maturity
  - Infrastructure footprint
  - Cost
  - Market penetration and interoperability
  - Scalability and flexibility
- Privacy protections would include:
  - Personally identifiable information
  - Surveillance Ordinance review

How were these evaluated?

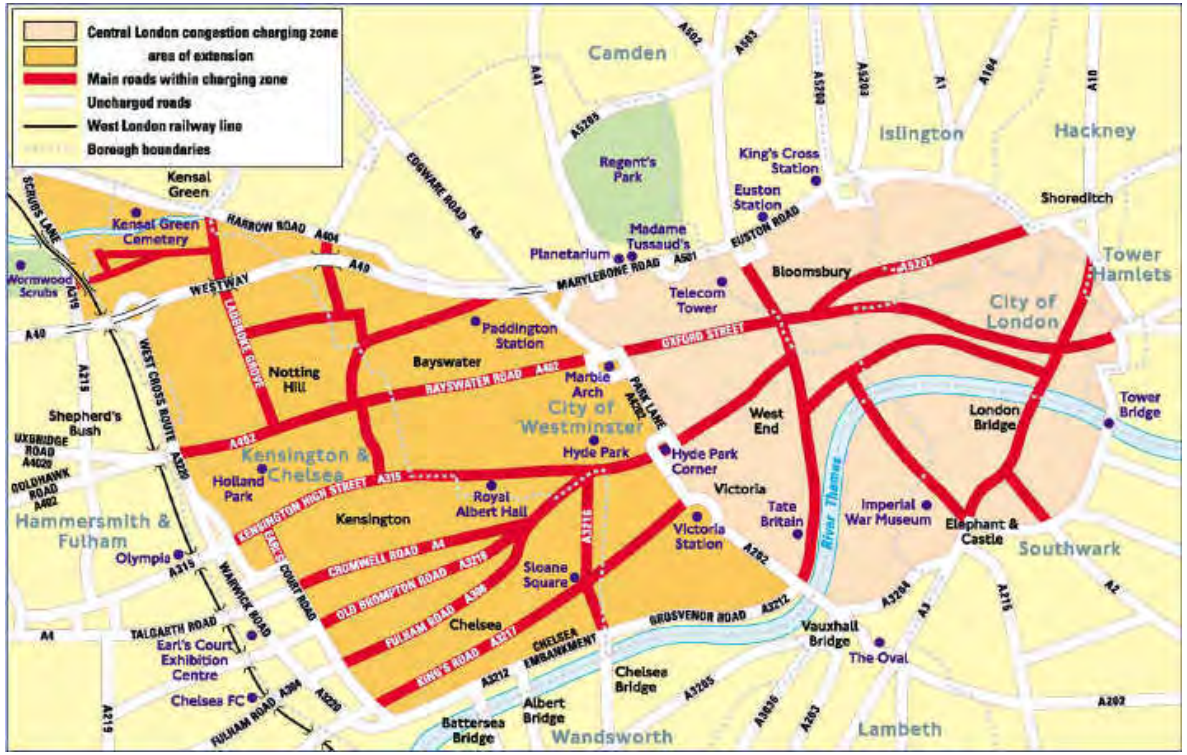
- Initial qualitative screening across four focus areas
- Rated tools based on applicability to Seattle and likely influence
- All are valuable and could be used to meet other goals



This process is described in detail on pg. 22-23 of the Summary Report.

Which tools are most promising?

Cordon Pricing



Area Pricing

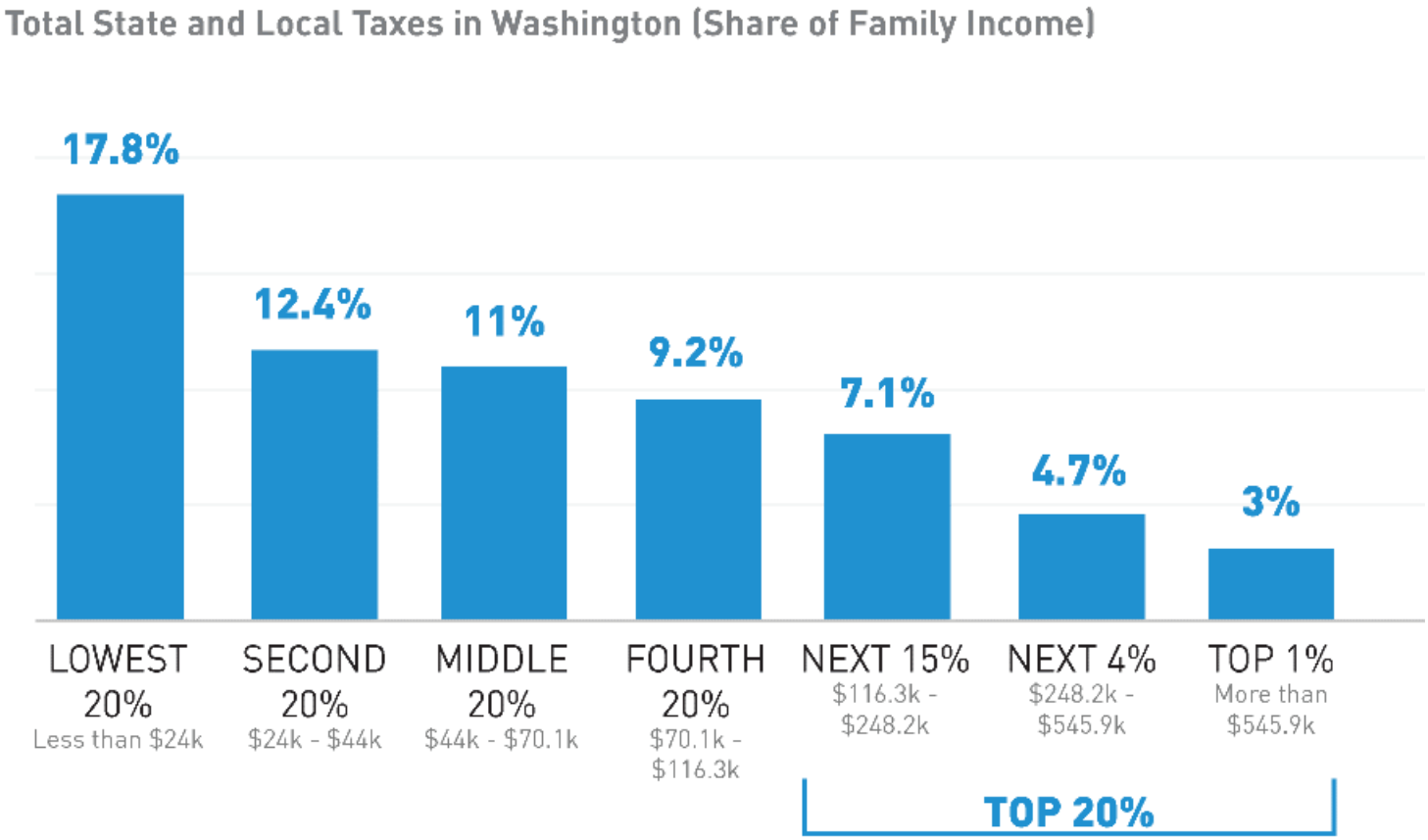
Which tools are most promising?

Fleet Pricing

Road User Charge

Centering equity

- Our existing systems, including how we pay for transportation, are inequitable
- A well-designed pricing program can be a tool to advance equity
- This requires a full understanding of impacts and tailored solutions

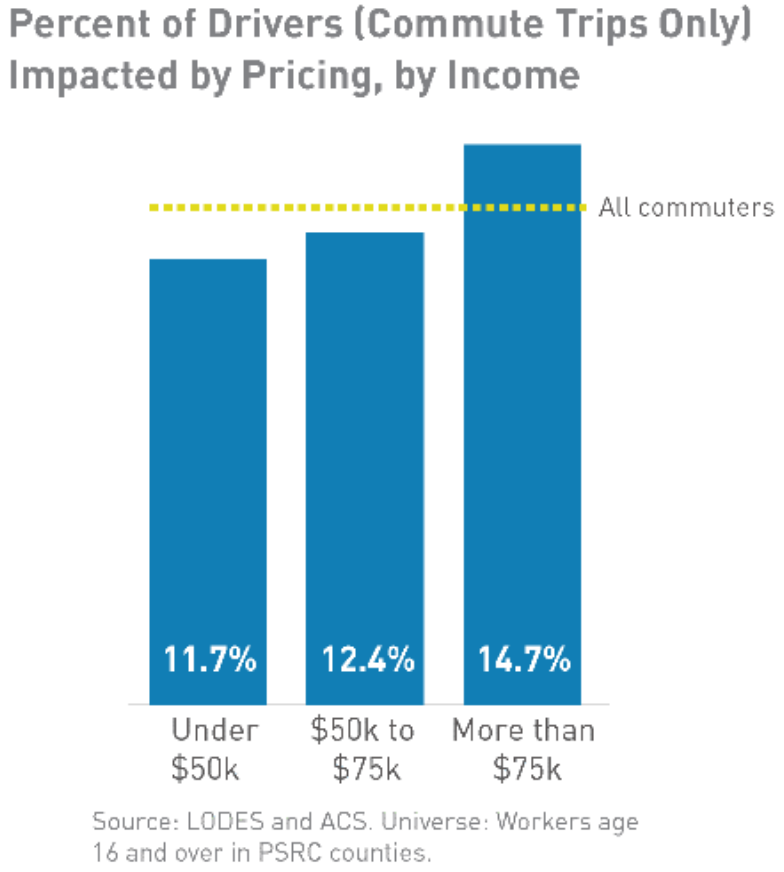


Creating an equitable pricing program

- Existing data about travel behavior are limited, but LODES data provide a high-level understanding of potential impacts
- We focused on commute data at the regional level, as a potential pricing program would affect people beyond Seattle residents
- The data include people over age 16 who drive to work, whether they drive into downtown or live in downtown
- We assumed an all-day area pricing program for the purposes of this analysis, but no decisions about program design have been made
- And we looked specifically at race and income to understand whether different groups might be more or less impacted by a potential pricing program compared to the general population

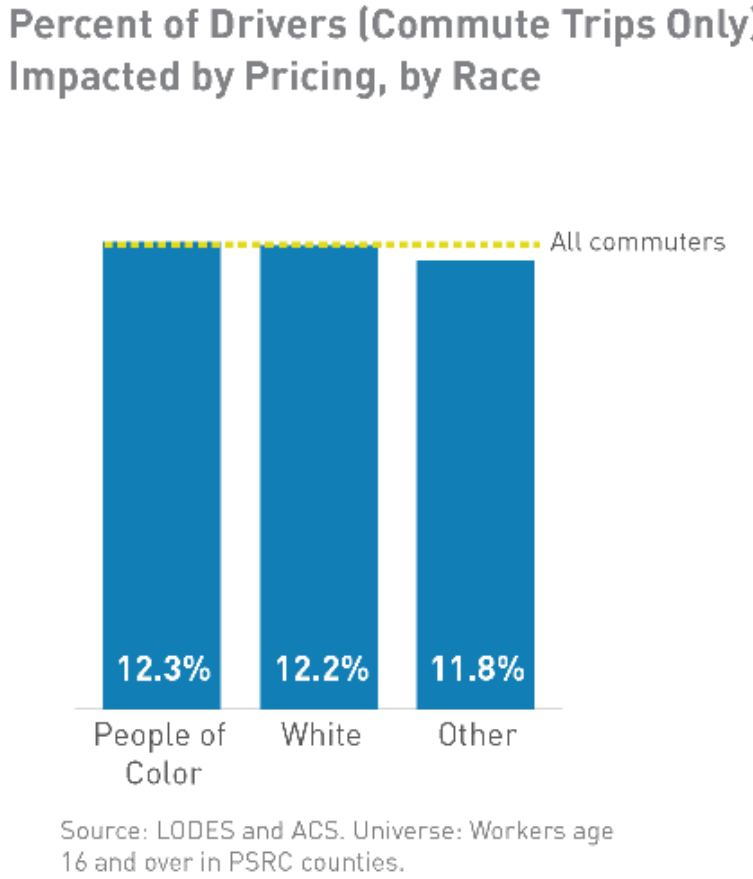
Creating an equitable pricing program

- Existing data are limited
- LODES data indicate **approximately 13% of workers who drive in the region would be impacted** by a downtown pricing program
- Of these drivers, more higher-income people would be affected



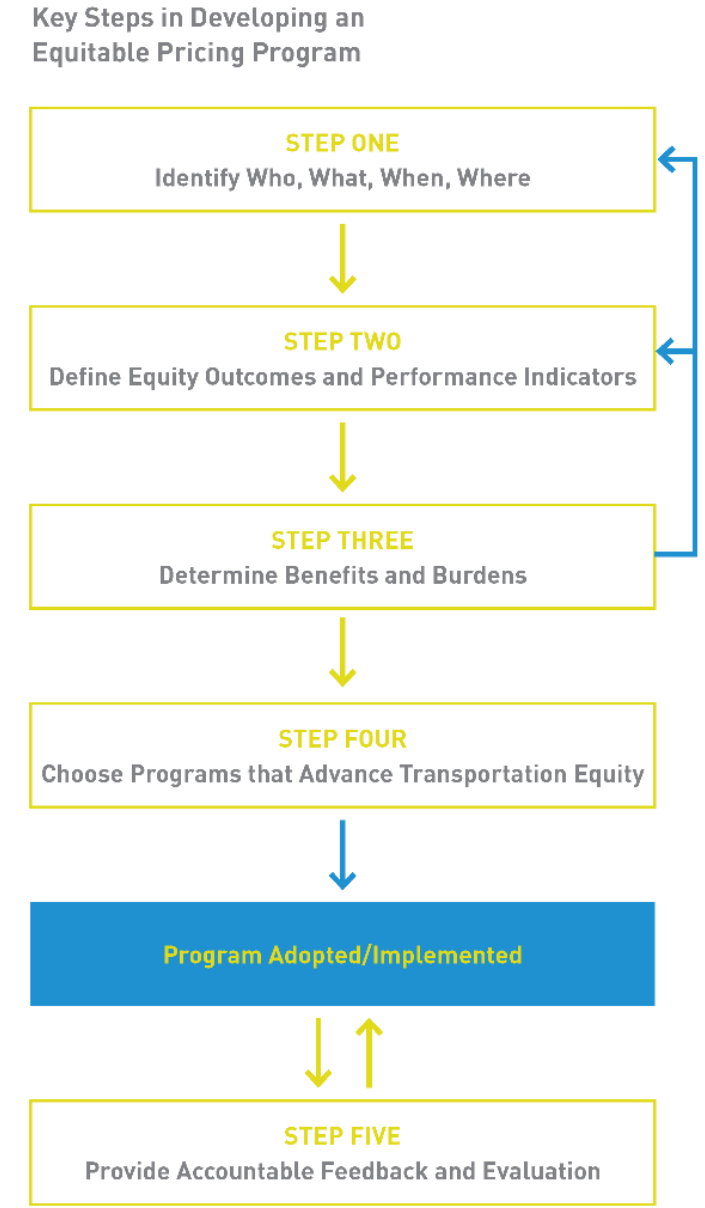
Creating an equitable pricing program

- Of these drivers, people of color who drive and white drivers would be affected at nearly the same rate
- We are committed to prioritizing racial and social equity



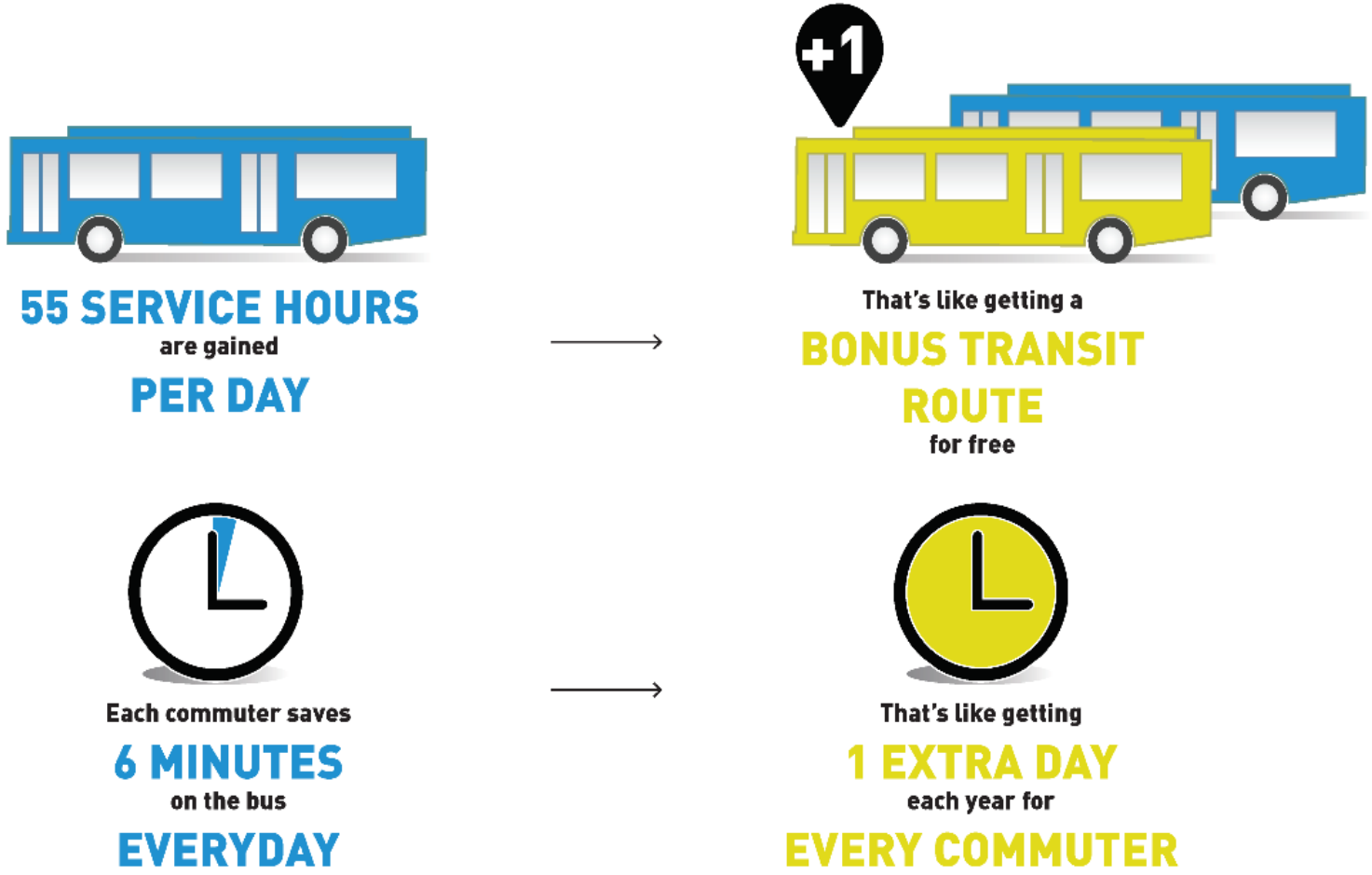
Strategies to advance an equity agenda

- Program design has the greatest potential to improve outcomes
- Reinvesting revenue with an equity focus is also critical
- Programs such as caps, discounts, and exemptions can also help to address impacts



Benefits for public transit

- Benefits for transit could include reduced travel times
- May have a positive impact on regional equity based on demographics of existing riders



Climate benefits

Congestion Pricing Approach	Change in VMT		Change in Road GHG Emissions	
	From Baseline	From 2035 Control (Low – High)	From All Seattle 2014 Baseline	From All Seattle 2035 Control (Low – High)
Area Pricing: Center City	**-14.3% – -23.1%**	**-22.0% – -30.0%**	**-6.1% – -9.9%**	**-9.8% – -13.3%**

Moving forward

As we consider congestion pricing in Seattle, we are committed to prioritizing racial and social equity, and to exploring how a pricing program might improve access to opportunities and reduce current inequities.

Moving forward

- Developing an equity strategy
- Beginning public engagement
- Refining and prioritizing goals
- Continuing impacts and benefits analysis
- Identifying supportive projects and programs
- Understanding implementation
- Building a tool to test various scenarios

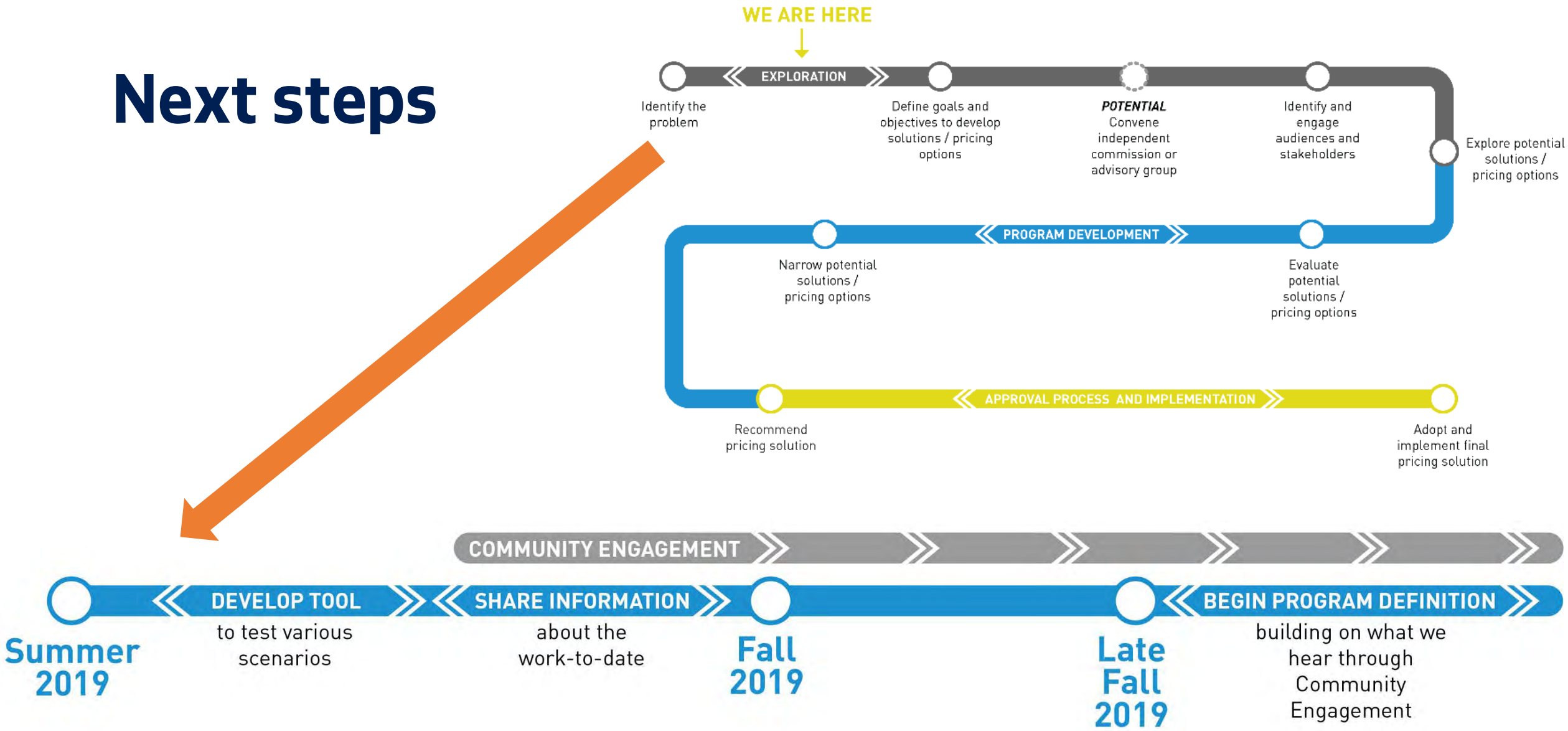
Building a tool to test scenarios

- Analyze a potential area pricing program using different geographies, prices, and policy levers
- Understand program's effects on congestion, greenhouse gas emissions, travel mode, and travel time
- Use recent data regarding vehicle and bicycle volumes, transit ridership, shared mobility, and parking
- Build in demographic and traveler data to further explore costs and benefits for specific groups of people

		Calculations operate off plan chosen in 'Results' worksheet, Cell I9.					
		Excel copies values from selected column to Col. K, whence they enter the "bloodstream" of the model.					
Input Parameters	Some details about parameter values	Baseline	Plan A	Plan B	Plan C	Plan D	Plan E
		Toll levels below apply to inbound CBD crossings. For them to also apply outbound, Row 29 must be set to BOTH (so toll is charged both ways).					
1 Is toll charged to cross cordon?		NO	YES	YES	YES	YES	YES
2 Is cordon toll charged inbound only, or also outbound	Values: IN or BOTH	IN	IN	IN	BOTH	BOTH	BOTH
		If "BOTH" is selected, tolls shown below are charged twice (once each way) .					
3 Share of trips whose drivers elect to be subject to cordon toll (rather than area toll)	Values:						
For autos	Any % from 0 - 100	0%	50%	60%	75%	85%	100%
For traditional taxis	Any % from 0 - 100	0%	0%	0%	0%	0%	0%
For Ubers & other FHV's	Any % from 0 - 100	0%	0%	0%	0%	0%	0%
For 2-axle trucks	Any % from 0 - 100	0%	50%	60%	75%	85%	100%
For buses	Any % from 0 - 100	0%	0%	20%	40%	60%	80%
4 Weekday Cordon Auto Toll	Weekday Toll Intervals	Toll intervals are 60-minute periods beginning at times shown in Column D.					
	Midnight	$0.00	$5.00	$0.00	$3.00	$0.00	$3.00
Values shown may be supplemented or superseded by area tolls, based on cordon vs. area toll percentages selected in previous array of inputs.	1 a.m.	$0.00	$5.00	$0.00	$3.00	$0.00	$3.00
	2 a.m.	$0.00	$5.00	$0.00	$3.00	$0.00	$3.00
	3 a.m.	$0.00	$5.00	$0.00	$3.00	$0.00	$3.00
	4 a.m.	$0.00	$5.00	$0.00	$3.00	$0.00	$3.00
	5 a.m.	$0.00	$5.00	$5.00	$3.00	$2.50	$5.00
	6 a.m.	$0.00	$5.00	$10.00	$3.00	$5.00	$7.50
	7 a.m.	$0.00	$5.00	$10.00	$3.00	$5.00	$7.50
	8 a.m.	$0.00	$5.00	$10.00	$3.00	$5.00	$7.50
	9 a.m.	$0.00	$5.00	$10.00	$3.00	$5.00	$7.50
	10 a.m.	$0.00	$5.00	$10.00	$3.00	$5.00	$7.50
	11 a.m.	$0.00	$5.00	$10.00	$3.00	$5.00	$7.50
	Noon	$0.00	$5.00	$10.00	$3.00	$5.00	$5.00
	1 p.m.	$0.00	$5.00	$5.00	$3.00	$2.50	$5.00
	2 p.m.	$0.00	$5.00	$5.00	$3.00	$2.50	$5.00

Illustrative Sample Only

Next steps


WE ARE HERE
EXPLORATION
Identify the problem
Define goals and objectives to develop solutions / pricing options
POTENTIAL
Convene independent commission or advisory group
Identify and engage audiences and stakeholders
Explore potential solutions / pricing options
PROGRAM DEVELOPMENT
Narrow potential solutions / pricing options
Evaluate potential solutions / pricing options
APPROVAL PROCESS AND IMPLEMENTATION
Recommend pricing solution
Adopt and implement final pricing solution
COMMUNITY ENGAGEMENT
DEVELOP TOOL
to test various scenarios
SHARE INFORMATION
about the work-to-date
BEGIN PROGRAM DEFINITION
building on what we hear through Community Engagement
Summer 2019
Fall 2019
Late Fall 2019

Questions?

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www.seattle.gov/transportation