

# STATE OF WASHINGTON TRANSIT CAPITAL NEEDS ASSESSMENT

Joint Transportation Committee

June 26, 2019

**N** NELSON  
NYGAARD



# INTRODUCTION



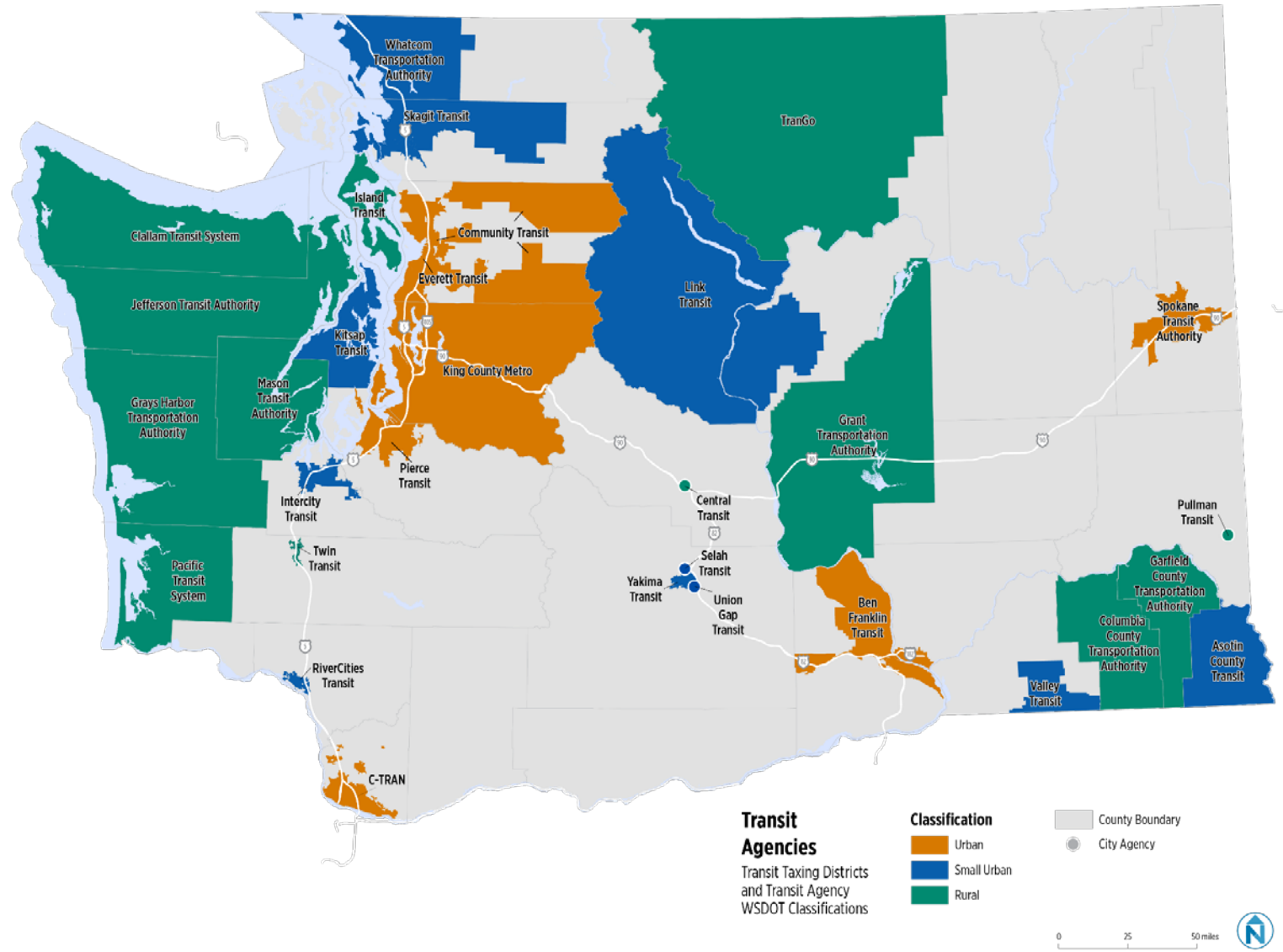
# WHAT IS THE TRANSIT CAPITAL NEEDS ASSESSMENT?

- Initiated by the State of Washington Joint Transportation Committee
- Intended to inform the policy discussion on transit capital needs and funding
- Project Proviso includes:
  1. An inventory of each agency's vehicle fleet
  2. An inventory of each agency's facilities, including the state of repair
  3. The replacement and expansion needs of each agency's vehicle fleet, as well as the associated costs, over the next 10 years
  4. The replacement and expansion needs for each agency's facilities
  5. The source of funding planned to cover the cost of the bus and facilities replacement and expansion needs
  6. The amount of service that could be provided with the local funds currently required for each agency's total capital needs



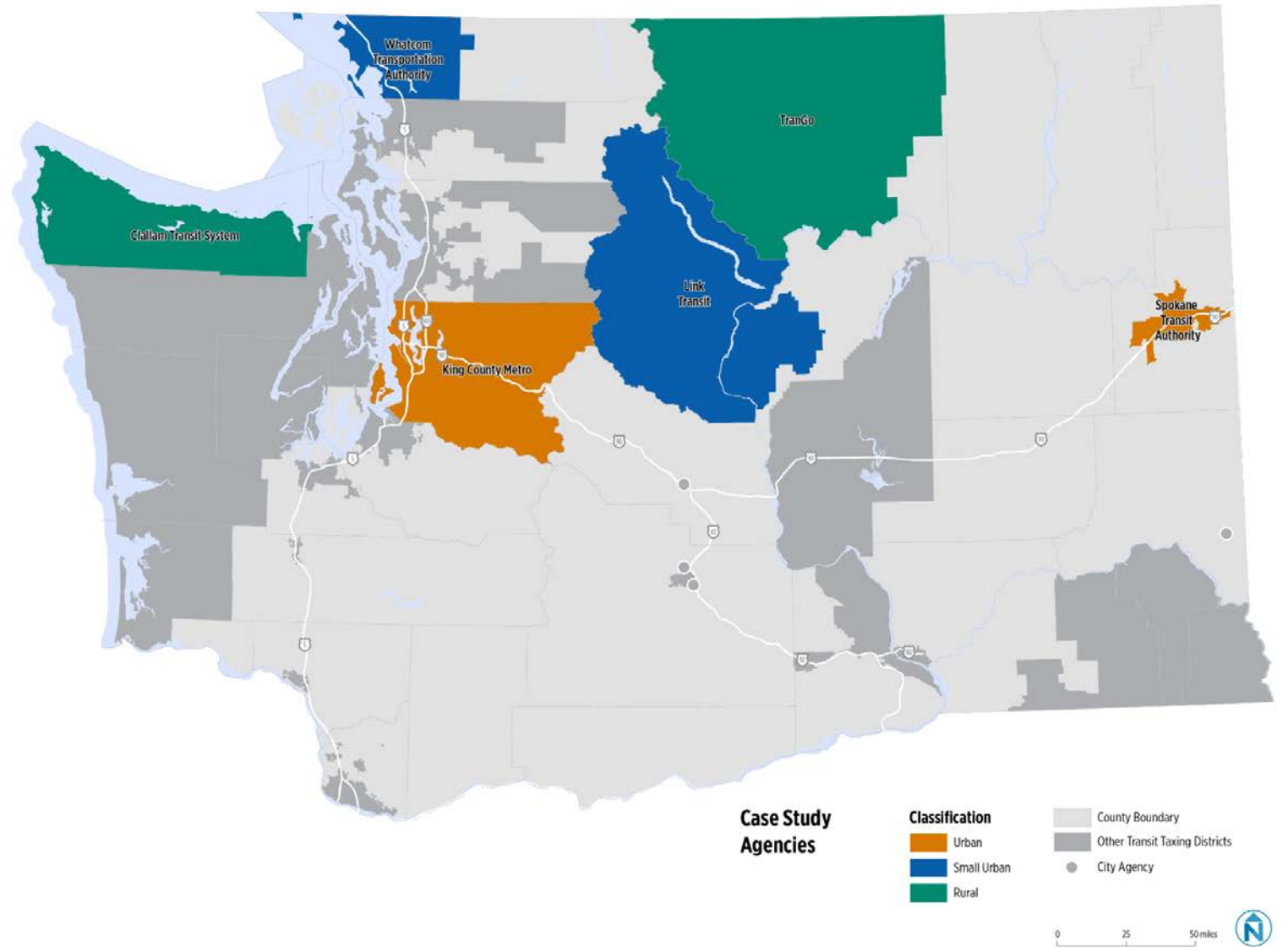
# WHAT DOES THIS ASSESSMENT INCLUDE?

- 31 transit agencies
  - Specifically excludes Sound Transit, Ferries, Tribal Transportation, and non-profit transportation
- Projections for replacement and expansion needs over the next 10 years
  - 2019-2028



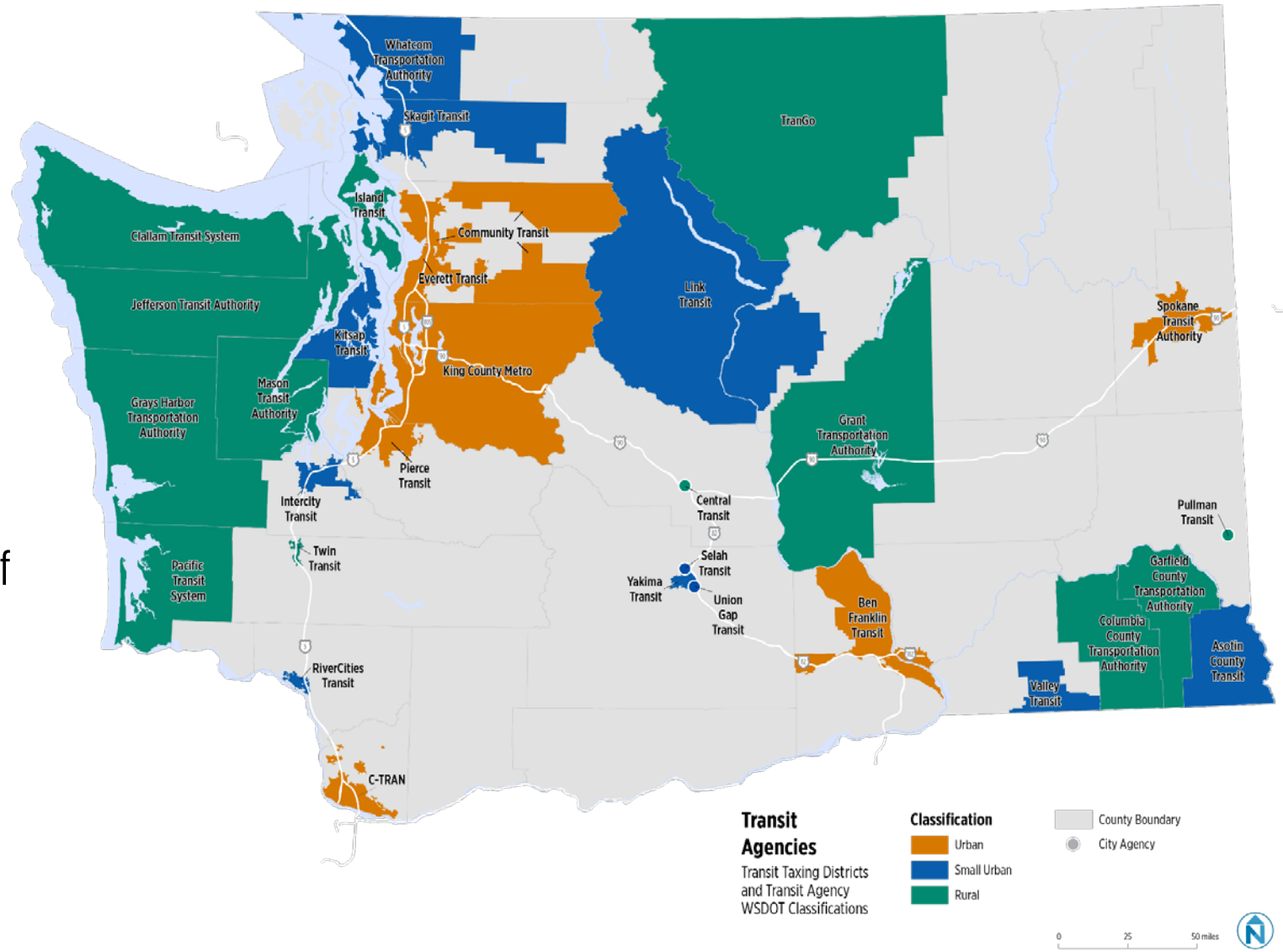
# WHAT DOES THIS ASSESSMENT INCLUDE?

- Case studies of six agencies that represent a variety of broader agency characteristics within the state
- Identification and analysis of **potential revenue sources** to meet capital needs



# WASHINGTON'S TRANSIT NETWORK

- **WSDOT classifications:**
  - **Urban** – Service population more than 200,000. Often serving a central city and a loosely-settled urban fringe
  - **Small Urban** – Service population from 50,000 to 200,000. Often serving small cities and broader urbanized areas.
  - **Rural** – Service population less than 50,000. Typically outside of a designated urbanized area
  
- **King County Metro is separated into its own category in this report**



# TERMS AND DEFINITIONS



- **ULB – Useful Life Benchmark**

- The age and level of usage at which an asset is expected to be replaced



- **Percent Remaining Useful Life**

- Measure used to better understand asset age and predict impending capital needs

- **SGR – State of Good Repair**

- Condition ranking for facilities between 1 (poor) and 5 (excellent). Assets rated 3, or better, considered to be in a State of Good Repair
- For vehicles indicates general state of wear and tear and safe versus unsafe
- $SGR \neq ULB$  – asset past ULB costs more to maintain SGR





**WHY IT MATTERS**

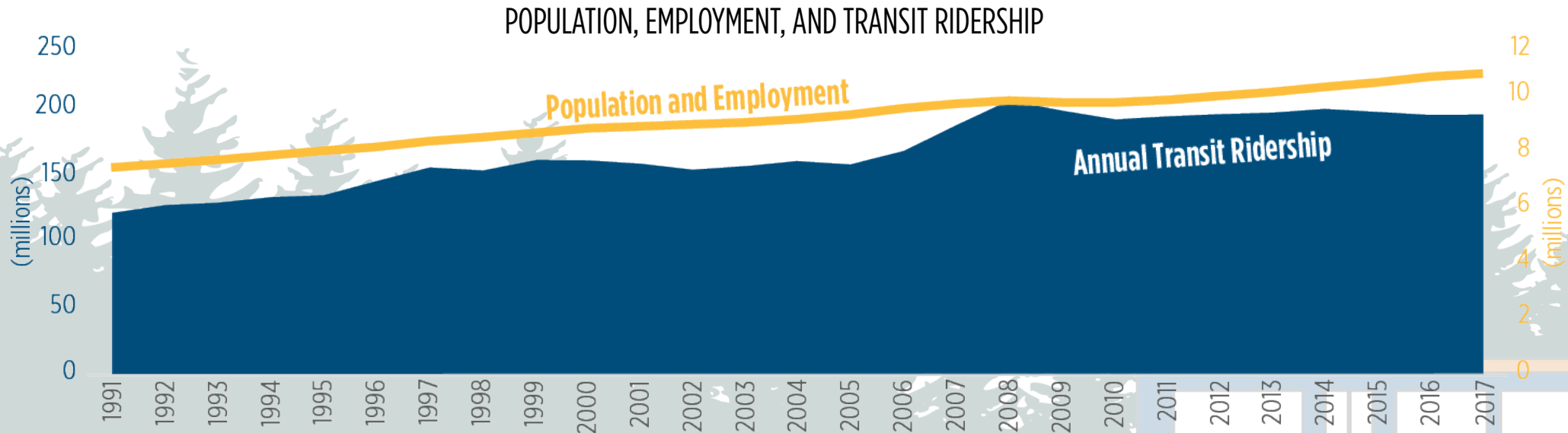


# STATE'S ROLE IN TRANSIT

## ■ Public Transportation Challenges Identified by WSDOT:

- *“The demand for access to jobs, schools, services, and community is growing, but public transportation providers’ ability to meet this demand has never been more constrained”*
- *“Congestion is hurting our economy and quality of life, and we must find ways to move more people with even greater efficiency”*
- *“Traditional methods for funding transportation are increasingly unsustainable”*
- *“Emerging technologies and business models are redefining how people communicate, work, and conduct trade”*

*(Washington State Public Transportation Plan, 2016, pg. 14)*

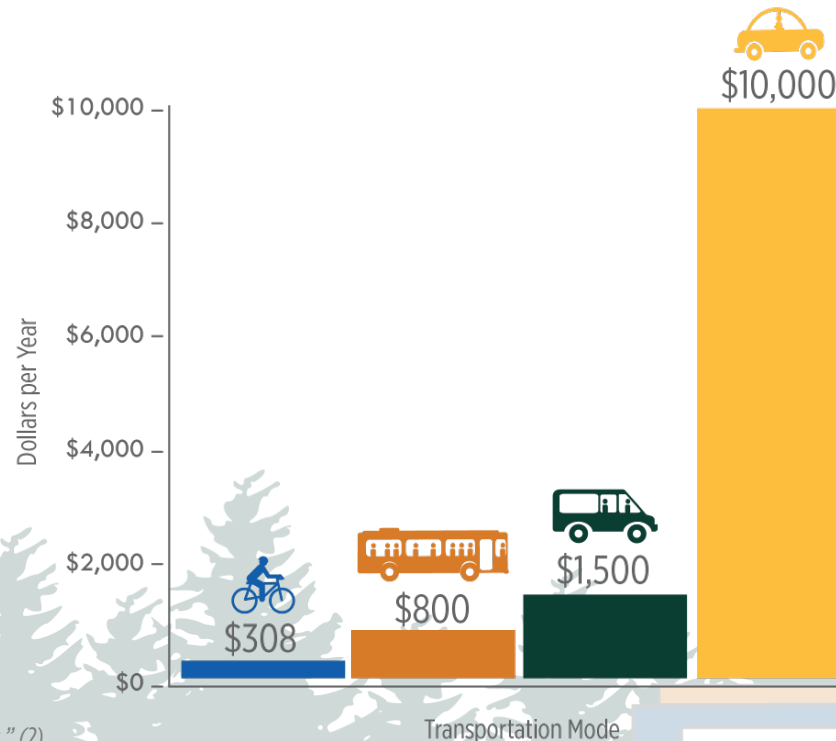


Source: NTD, 2017. US Census Bureau, 2017.

# THE BENEFITS OF TRANSIT

- Transit improves efficient use of roadway capacity and reduces emissions
- Advances equity by providing lower cost transportation option
- Lifeline for people with disabilities, older residents, and people without access to vehicles

ANNUAL PERSONAL COST COMPARISON BY MODE



ROAD CAPACITY BY MODE

## MOVING CARS



28.4 People  
PER BLOCK

## MOVING TRANSIT



225 PEOPLE  
PER BLOCK

## MOVING PEOPLE



1,000 PEOPLE  
PER BLOCK

Sources: (1) Biking: The League of American Bicyclists and the Sierra Club. "The New Majority: Pedaling Towards Equity." (2) Transit: Based on an average of annual transit pass costs in five metropolitan areas (Salem-Keizer, Bend, Portland, Eugene-Springfield, and Rogue Valley). (3) Driving: American Automobile Association. "Your Driving Costs." 2013 (4) Evaluating Transportation Land Use Impacts," Victoria Transport Policy Institute (2014). (5) National Household Travel Survey Summary of Travel Trends (2009).



# KEY FINDINGS

# KEY FINDINGS



## ESTIMATED CAPITAL COSTS

between 2019 and 2028:

- Fleet and Facilities Replacement - \$2.10 billion
- Service Restoration - \$3.97 billion
- Planned Expansion - \$5.98 billion



Agencies could provide  
**707,000 ADDITIONAL**  
revenue hours per year

- 14.6 million additional passenger trips
- 11% increase in service, equivalent to 37 high-frequency bus routes
- Assumes 100% of local capital funding is reallocated to service provision



Potential alternative  
**FUNDING SOURCES**  
include:

- New dedicated transit taxes
- Transit share of new revenue package



# KEY FINDINGS



Funding for transit is primarily from

**LOCAL SALES TAX**

- Reliance on volatile sales taxes reduces agencies' ability to plan in the long-term

- Funding is not evenly distributed geographically; there are Status Quo funding gaps for Small Urban and Rural agencies



**\$503 MILLION**

in vehicle value is overdue for replacement

- Deferred capital investments due to the Great Recession have produced a backlog of 2,090 vehicles currently beyond useful life



**SERVICE EXPANSION**

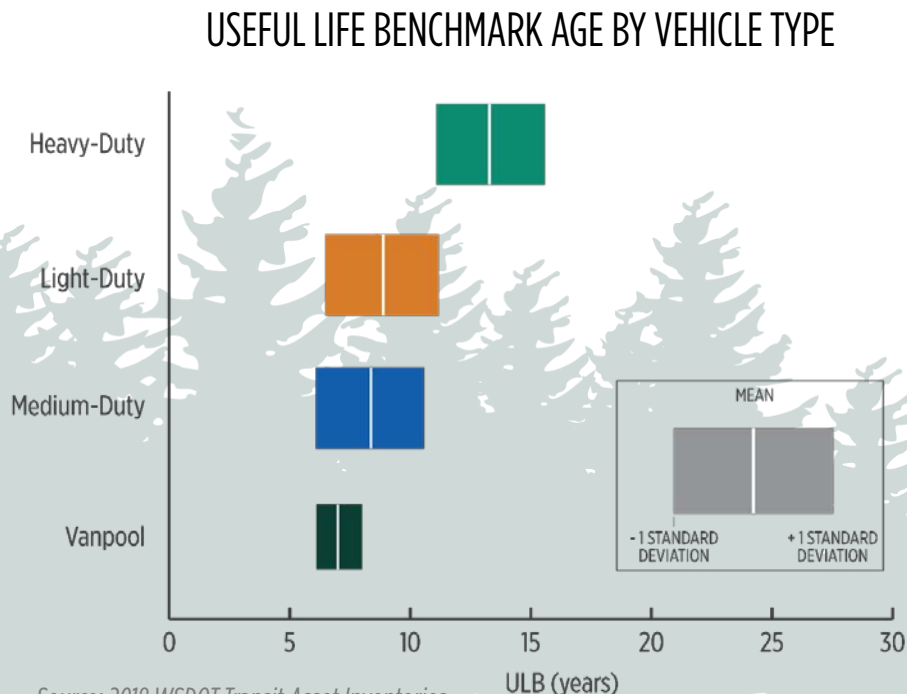
is limited by capacity constraints and unreliable funding sources

- Most agencies unable to catch or keep up with economic activity in their communities
- Capacity constraints in maintenance and operations facilities limit the ability to expand fleet size and provide additional service

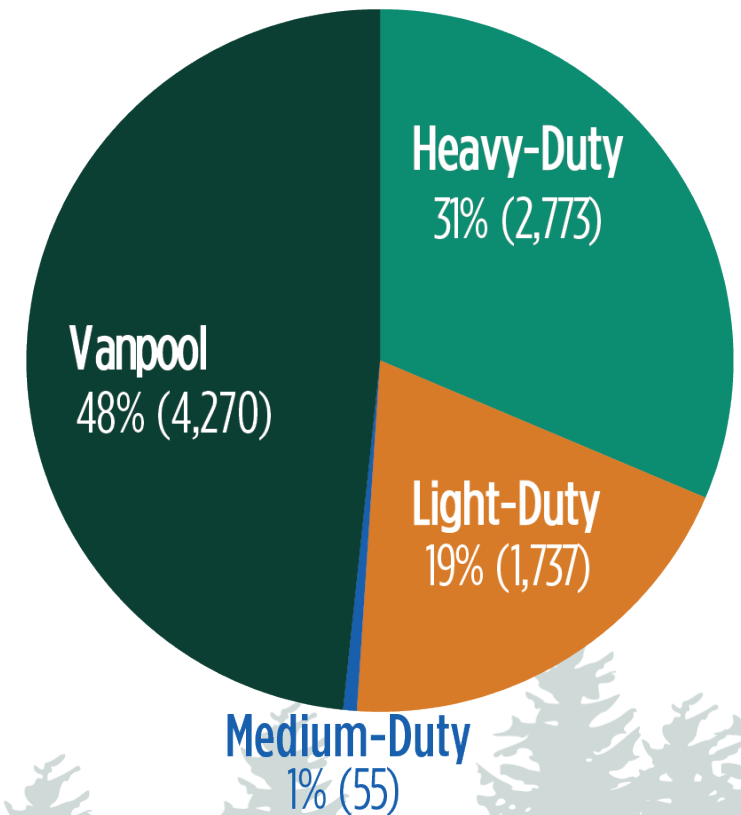
# SUMMARY OF FINDINGS

# FLEET INVENTORY

- Nearly 9,000 transit vehicles statewide
- Allowing agencies to set their own Useful Life Benchmarks ensures they are responsive to local context



STATEWIDE FLEET BY VEHICLE CLASSIFICATION

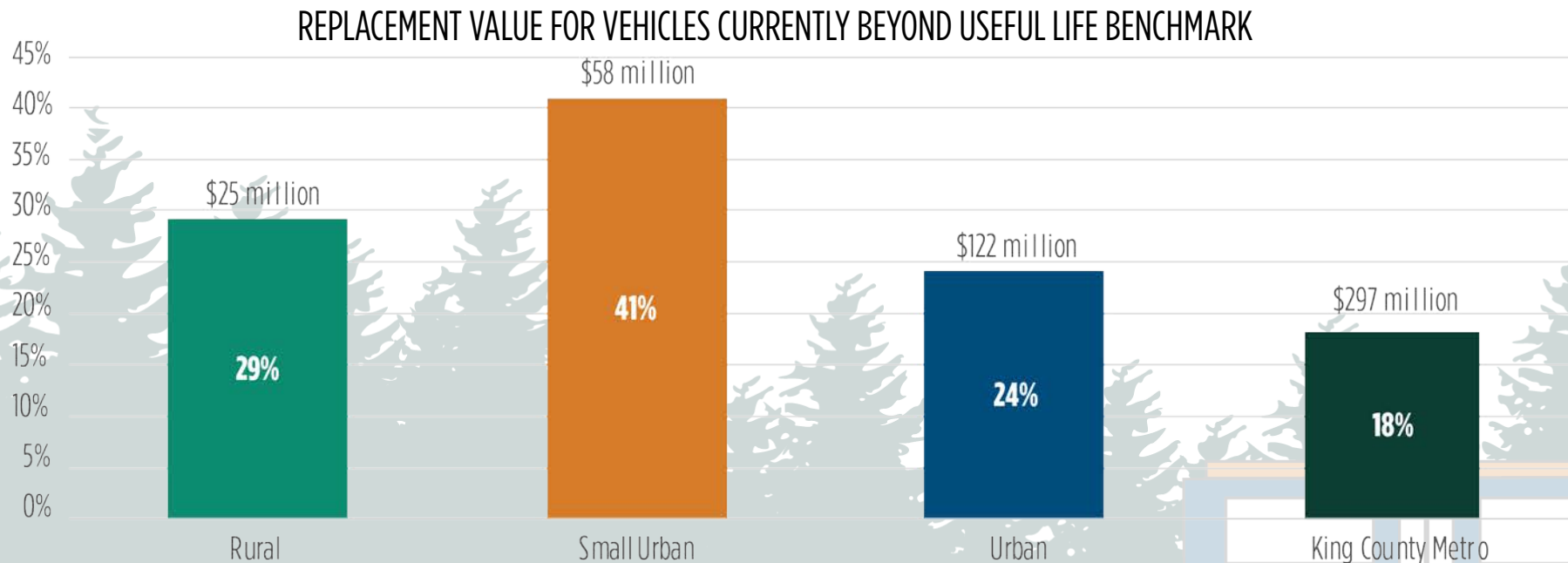


Source: 2018 WSDOT Transit Asset Inventories



# AGING FLEET AND REPLACEMENT BACKLOG

- Deferred capital investments have created a replacement backlog
  - **2,090** vehicles currently beyond Useful Life Benchmark
  - Replacement cost of **\$503 million**
- **Average Percent of Remaining Useful Life is 34%**
  - Best practice is **45 to 55%** Remaining Useful Life



Source: 2018 WSDOT Transit Asset Inventories



# FACILITIES INVENTORY

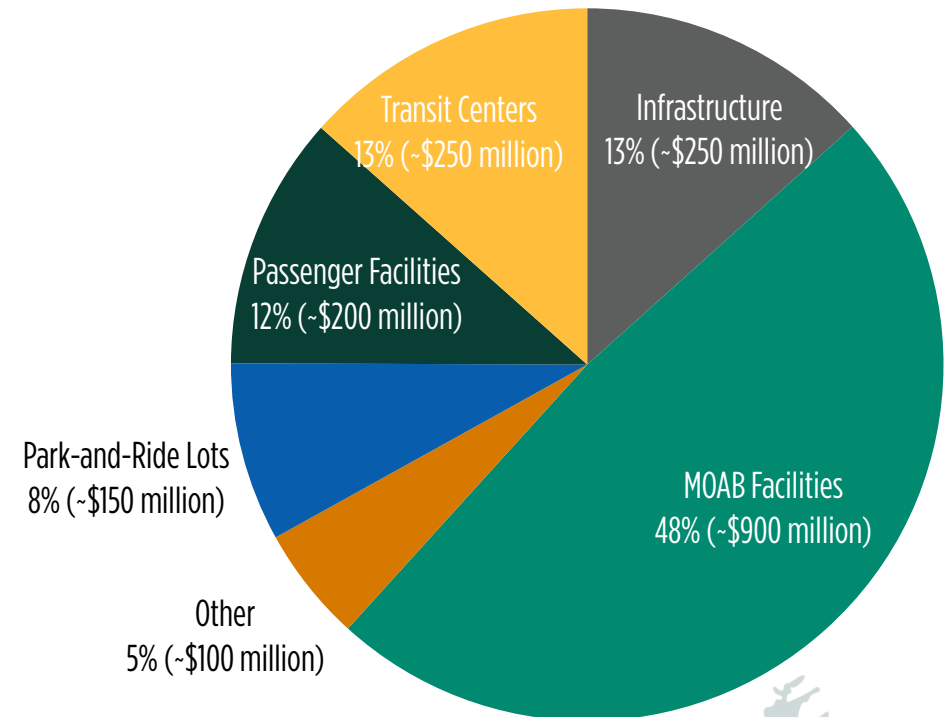
- Statewide facilities have a value of \$1.85 billion
- Facilities are generally in an “adequate” or better State of Good Repair
  - As vehicles and facilities age, they are more expensive to maintain in SGR
  - Tradeoff between full replacement and maintenance costs

FACILITY CONDITION RATING

| Rating          | Percent of Statewide Facilities with Rating |
|-----------------|---|
| 5.0 – Excellent | 16%   |
| 4.0 – Good      | 28%   |
| 3.0 – Adequate  | 28%   |
| 2.0 – Marginal  | 6%  |
| 1.0 – Poor      | 1%  |

Facilities inventory and replacement values are identified by facilities reported in each agency’s Transit Asset Management Plan and Transit Asset Inventory

STATEWIDE FACILITY REPLACEMENT VALUE BY TYPE



Source: 2018 WSDOT Transit Asset Inventories



# RIDERSHIP AND SERVICE

- In 2017, agencies provided:
  - Over **193 million rides**
  - **26 rides annually** for every person in the state
  - **9.5 million hours of service**
- Some agencies are just now catching up to service levels provided before the Great Recession
- Agencies could provide nearly 15 million more rides if they could reallocate existing local funding spent on capital to providing service

## REVENUE HOUR COMPARISON

**1** ADDITIONAL REVENUE HOUR 

=

**20** ADDITIONAL RIDERS 

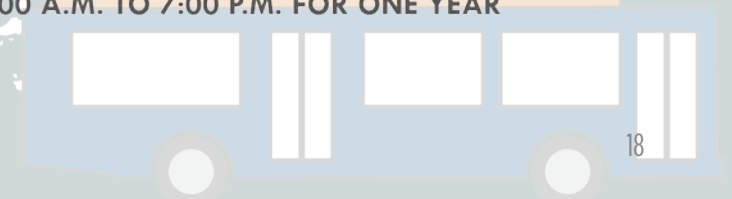
BASED ON 2017 STATEWIDE TRIPS PER REVENUE HOUR

**19,000** REVENUE HOURS 

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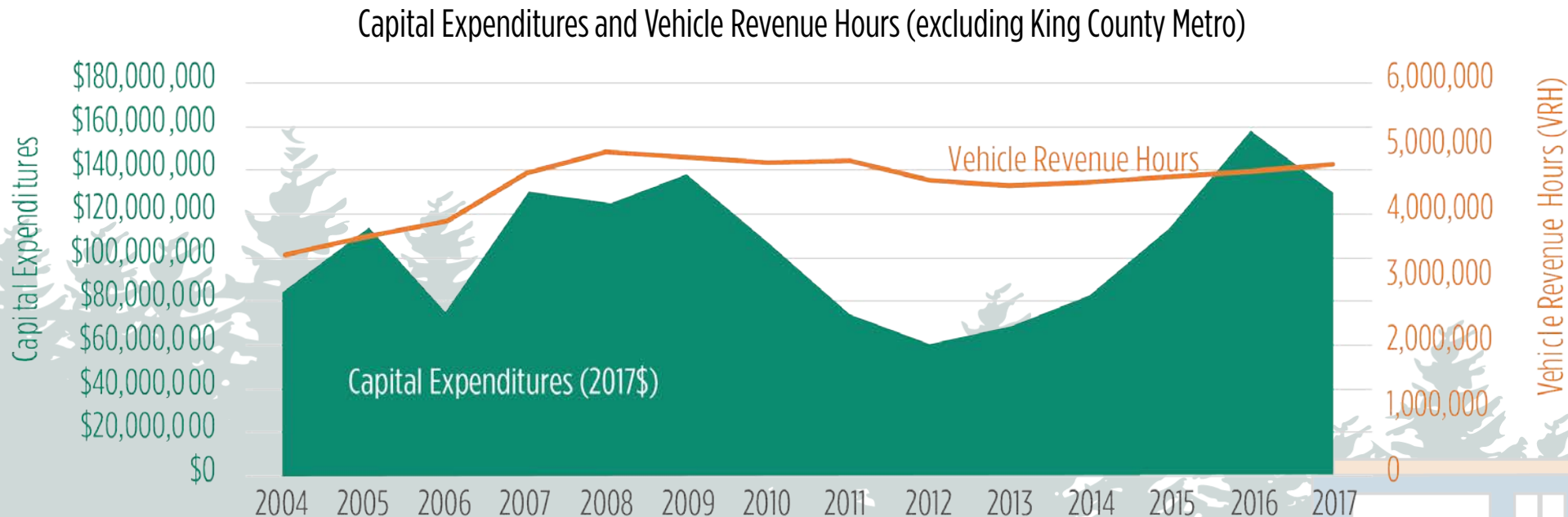
**1** WEEKDAY BUS ROUTE 

OPERATING EVERY 10 MINUTES FROM 7:00 A.M. TO 7:00 P.M. FOR ONE YEAR



# MANAGEMENT IN THE FACE OF ADVERSITY

- Transit agencies scaled back capital expenditures to maintain service levels due to Great Recession funding declines
- Resulted in lingering unmet capital needs
- Also delayed needed expansions to meet growing population and employment demands



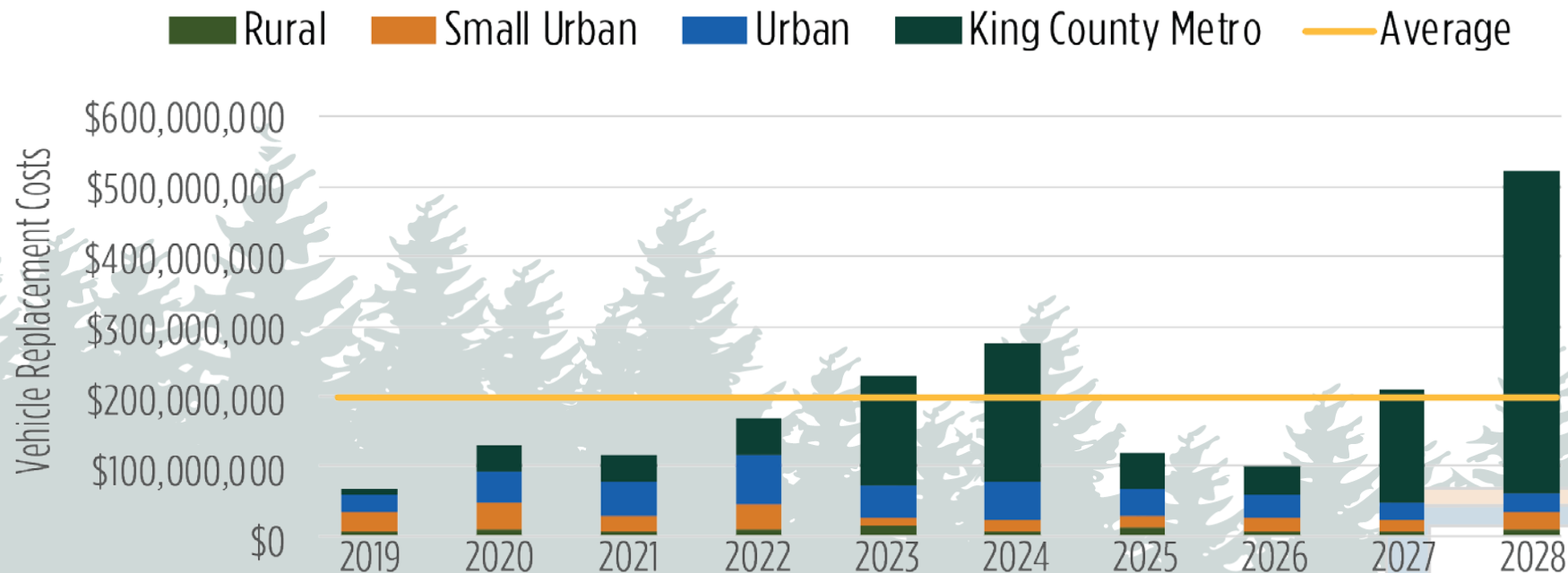
Source: NTD, 2017.

With an operation that is orders of magnitude greater than the other agencies in the state, King County Metro's capital expenditures did not follow a similar pattern through the recession and were not included in this chart

# FLEET REPLACEMENT NEEDS

- Fleet replacement costs average about **\$200 million** annually
  - Replacement Need is Continuous
    - Vehicles scheduled for replacement will continue to age and surpass their ULB
    - Meanwhile, agencies budget to replace vehicles currently beyond ULB
    - Result is higher maintenance costs to maintain older vehicles in SGR

## FLEET REPLACEMENT COSTS

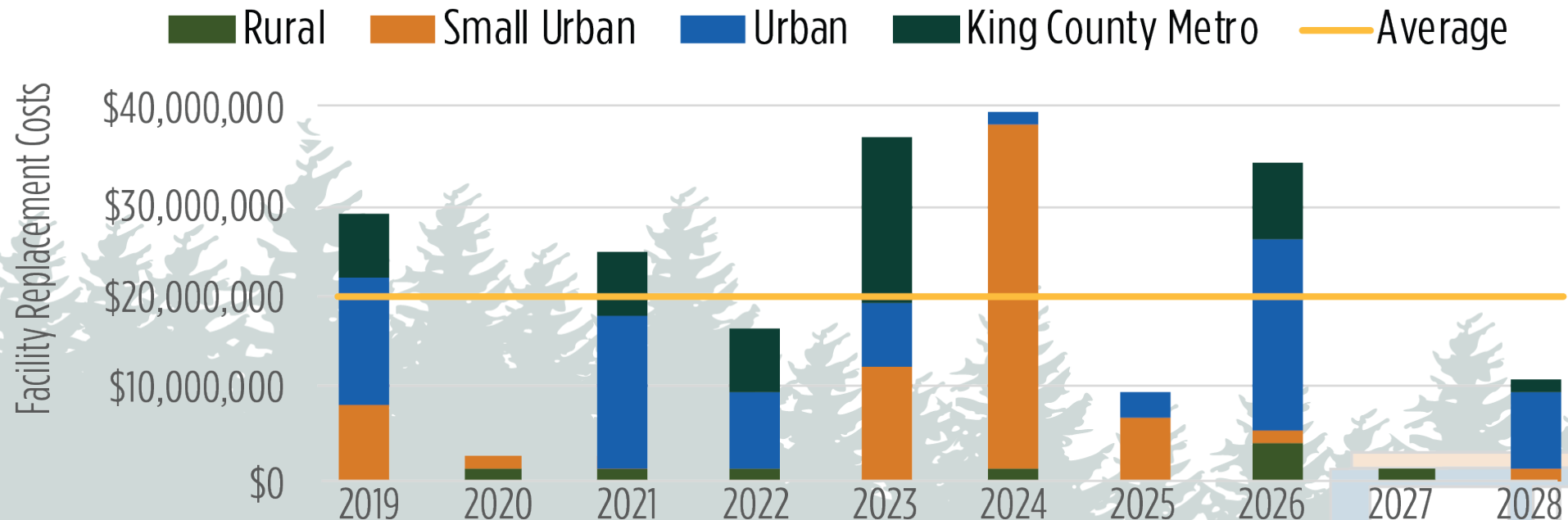


Replacement schedule and costs based on Transit Asset Management Plans, Transit Asset Inventories, and Agency defined Useful Life Benchmark

# FACILITIES REPLACEMENT NEEDS

- Facilities Replacement costs average about **\$20 million** annually
  - Facilities expenditures are less consistent year-to-year
  - Calculation is only for replacement and does not include preservation costs classified as “capital” and necessary to extend useful life or maintain SGR

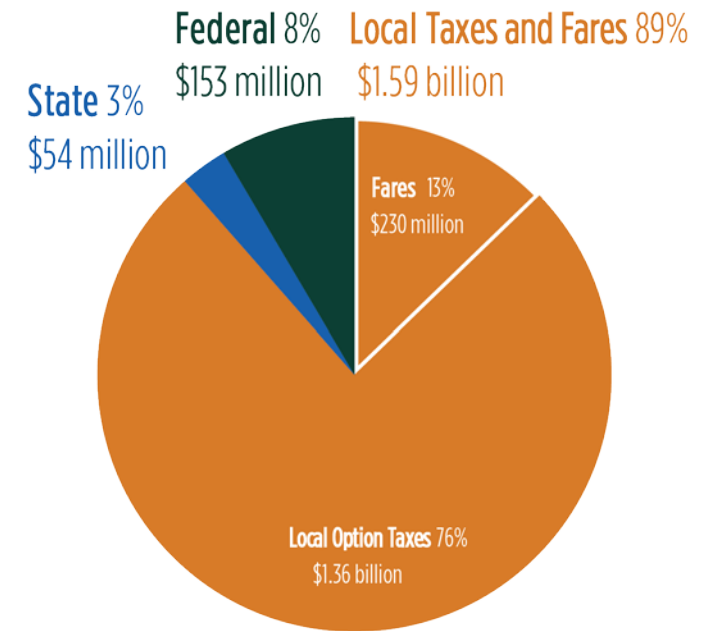
## FACILITIES REPLACEMENT COSTS



# LOCAL TAXING AUTHORITY

- Local funding sources comprise **89%** of total transit funding in the state
  - Fares account for 13%
  - Local tax revenues are 76%
- Statewide, local sales taxes are generating **80%** of their statutorily enabled limit
  - \$278 million** in remaining annual capacity, not evenly distributed across agency types, and only available when voter authorized

TOTAL TRANSIT FUNDING BY SOURCE (OPERATIONS AND CAPITAL)



Source: WSDOT Summary of Public Transportation Reports, 2014-2017.

LOCAL TRANSIT REVENUE AND REMAINING AUTHORIZED CAPACITY (IN MILLIONS OF DOLLARS)

| Agency            | 2017 Revenues        | Remaining Capacity   | Percent of Capacity Used |
|-------------------|----------------------|----------------------|--------------------------|
| King County Metro | \$579 million        | \$0                  | 100%                     |
| Urban             | \$377 million        | \$137 million        | 73%                      |
| Small Urban       | \$141 million        | \$102 million        | 58%                      |
| Rural             | \$45 million         | \$39 million         | 53%                      |
| <b>Statewide</b>  | <b>\$1.4 billion</b> | <b>\$278 million</b> | <b>80%</b>               |

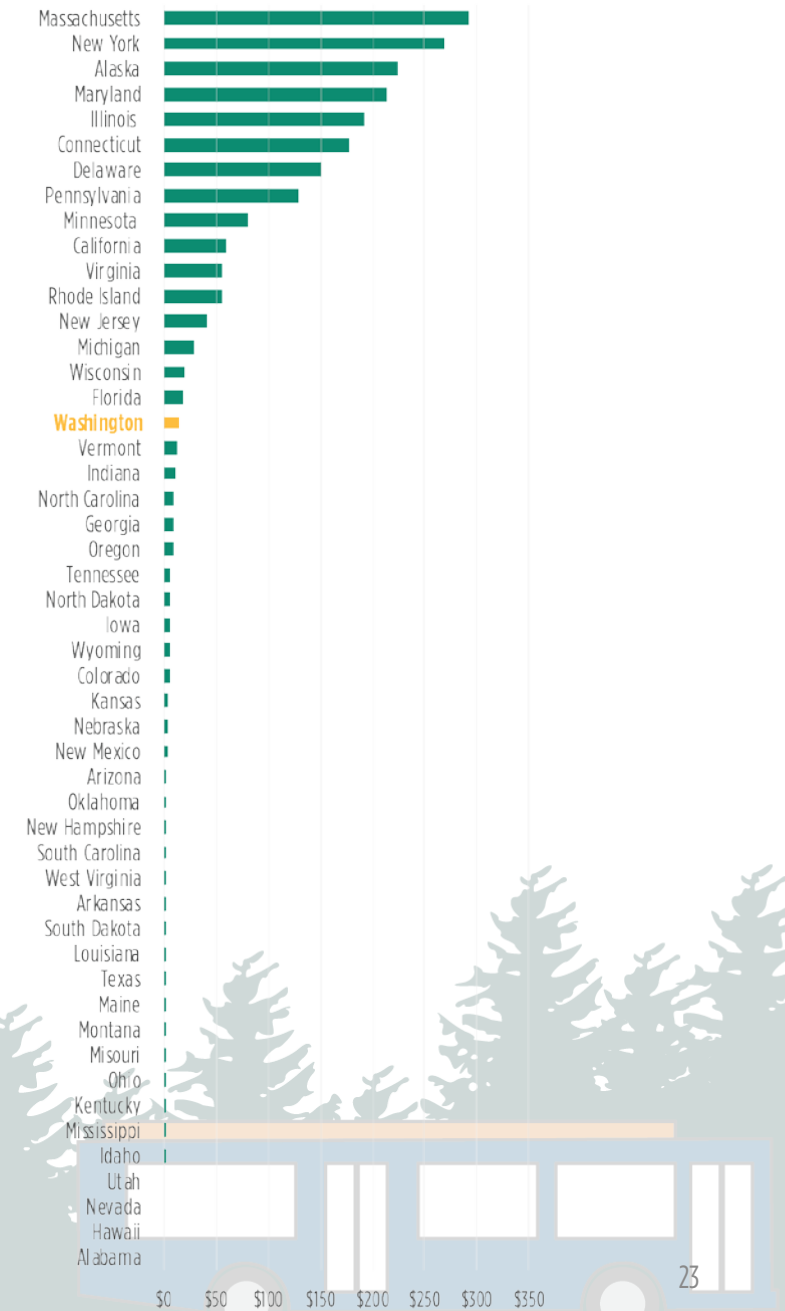
Source: Washington State Department of Revenue, ECONorthwest calculations 2019.

# STATE FUNDING FOR TRANSIT

- State funding accounts for **3%** of total transit funding in Washington
- Washington ranks **17<sup>th</sup>** in state funding per capita
  - \$14.07 per capita in Washington
  - National average is \$42.11 per capita

Source: AASHTO 2019 Survey of State Funding for Public Transportation – Final Report  
Data is based on survey responses by State DOTs and may include regional transit agencies, ferries, rail, and non-capital funding

## STATE FUNDING FOR TRANSIT PER CAPITA



# CASE STUDIES & SITE VISITS: COMMON ISSUES

- Regardless of agency size, there are unmet capital needs
- Impacts of Great Recession and deferred capital investments are still being felt
- Capacity constraints in facilities limit expansion
- Agencies are cautious of relying too heavily on volatile funding mechanisms



King County  
**METRO**



Spokane Transit





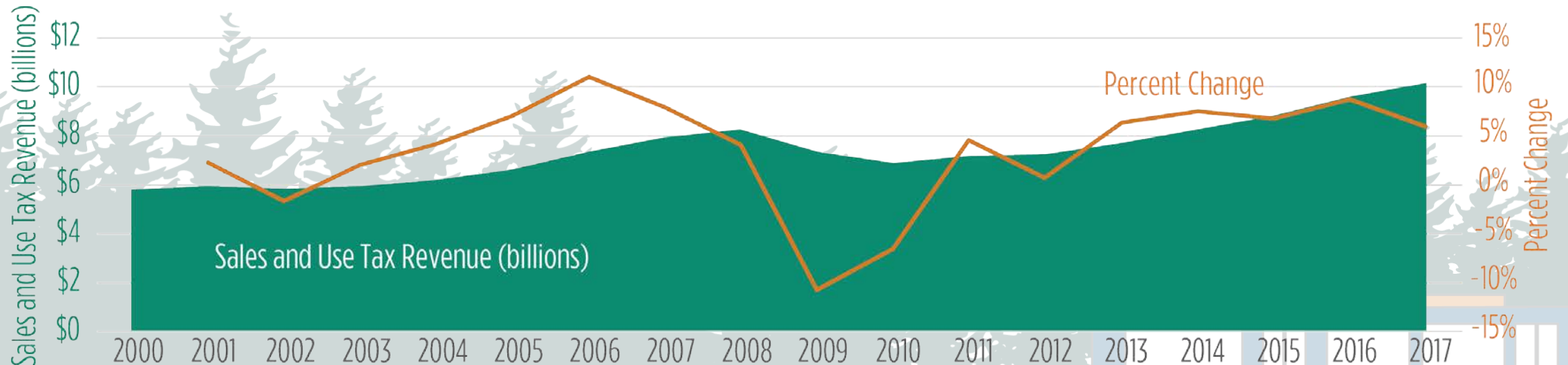


# FUNDING & CAPITAL NEEDS

# FUNDING CHALLENGES

- **Local sales taxes:**
  - High reliance on sales tax funding
  - Economic fluctuations create reliability concerns
  - Agencies cautious about service expansion in absence of reliable funding
- **Distribution of funding is not uniform**
  - Challenge for systems with smaller tax bases, like Small Urban and Rural agencies
- **Changes in federal discretionary programs and elimination of earmarks have been a challenge**
- **Sustainable, reliable funding is key for long-term service investments**

WASHINGTON STATE SALES AND USE TAX REVENUE



Source: Washington State Department of Revenue 2017.

# STATUS QUO FUNDING

- Anticipated local, state, and federal revenues dedicated to capital funding over the next 10 years - **\$3.379 billion**
  - Assumes stable funding and no economic downturn
  - Does not separate funding dedicated to capital expansion/service expansion
  - Voter-approved expansions
    - Funding initiatives approved for capital expansion, service expansion, or specific projects
    - Overestimates available revenues for replacement
    - Sufficient resources for estimated status quo, but no “extra” dollars

Projected Status Quo Funding (2019-2028)

| Agency Classification | Projected Status Quo Capital Funding |
|-----------------------|--------------------------------------|
| King County Metro     | \$2,011                              |
| Urban                 | \$1,011                              |
| Small Urban           | \$259                                |
| Rural                 | \$97                                 |
| <b>Statewide</b>      | <b>\$3,379</b>                       |

*In millions of 2017 dollars*

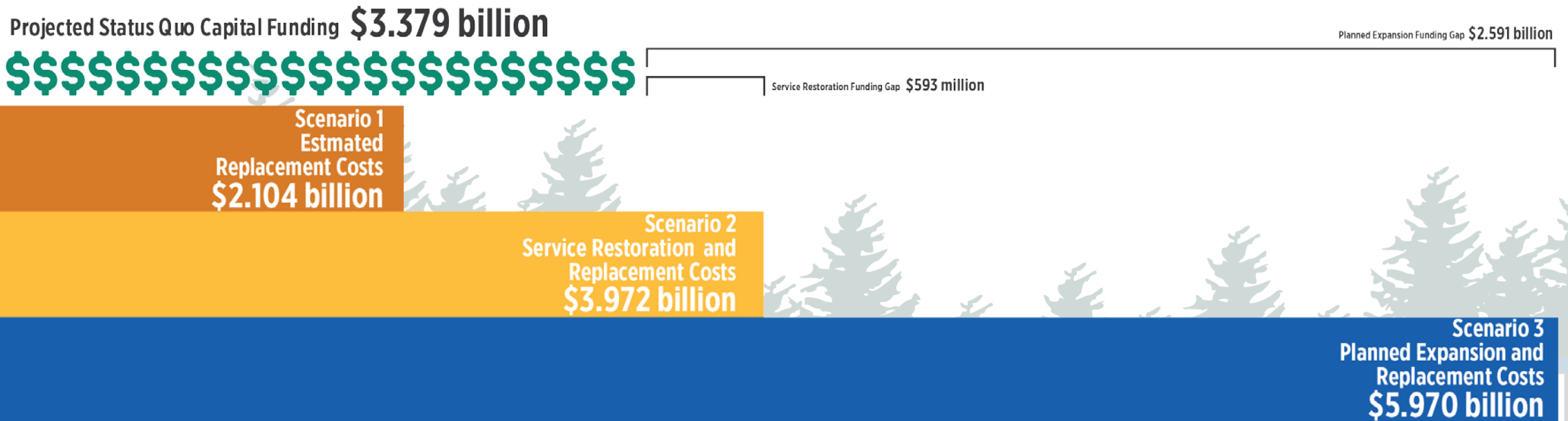
Example agencies with voter-approved funding initiatives



# TEN-YEAR CAPITAL FUNDING NEEDS

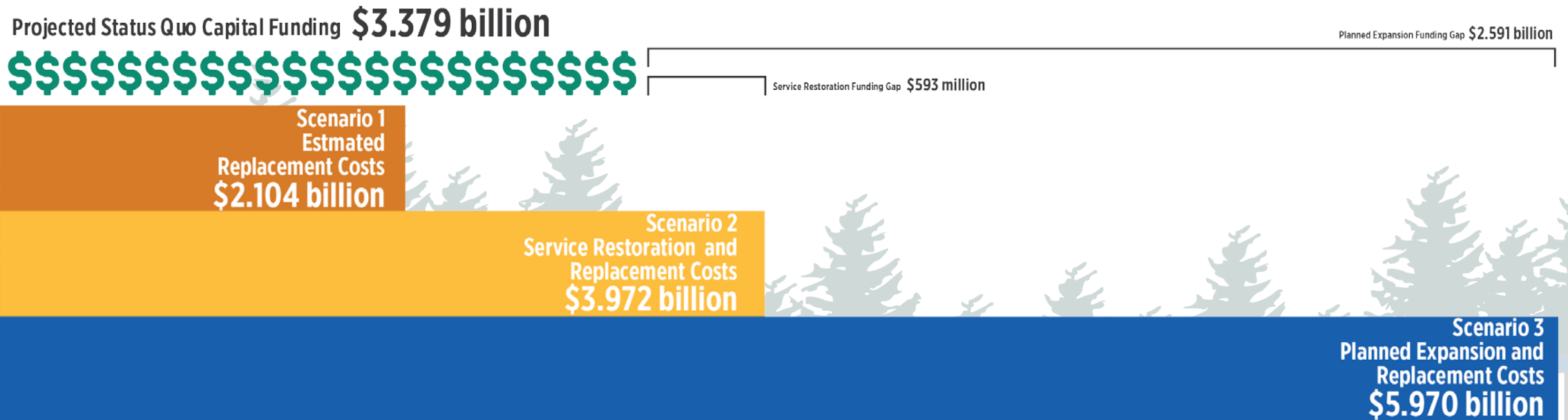
- Anticipated funding appears sufficient to meet replacement needs for King County Metro and Urban agencies\*
- Replacement funding gap exists for specific agency classifications:
  - Small Urban - **\$13 million gap**
  - Rural - **\$5 million gap**
  - Does not account for all capital needs in rural systems due to non-profit agency contracting

*\*Assumes stable federal funding and local sales tax revenue, no economic downturn, and no service improvements to meet additional growth that has occurred over the last 10 years*



# TEN-YEAR CAPITAL FUNDING NEEDS

- Service Restoration funding gap - **\$593 million**
  - Estimated capital needs for agencies to catch up to and maintain growth equivalent to state economic growth, does not include potential service costs
- Planned Expansion funding gap - **\$2.59 billion**
  - Capital needs identified in agency development plans, does not include service expansion costs

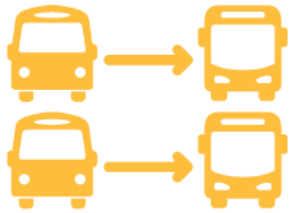


# FUNDING OPPORTUNITIES

- Viable alternative funding sources include Legislative transportation package and new dedicated taxes, such as carbon fee and payroll tax

| REVENUE TOOL                                     | LEGISLATIVE CONTEXT                    | CAPACITY                  |                             |                     |                   | EFFICIENCY |             |           | FAIRNESS                       |                   |                |
|--|--|---------------------------|-----------------------------|---------------------|-------------------|------------|-------------|-----------|--------------------------------|-------------------|----------------|
|  |  | STATUS QUO                | REPLACE VEHICLES BEYOND ULB | SERVICE RESTORATION | PLANNED EXPANSION | TIMING     | ADMIN. EASE | STABILITY | VERTICAL AND HORIZONTAL EQUITY | GEOGRAPHIC EQUITY | ECONOMIC COMP. |
| EXPAND LOCAL SOURCES THROUGH FUNDING TOOLS       | Sales and Use Tax                      | No Action Needed          |                             |                     |                   |            |             |           |                                |                   |                |
|  | Household Excise Tax                   | Legislative Action Needed |                             |                     |                   |            |             |           |                                |                   |                |
|  | Employee Excise Tax                    | Legislative Action Needed |                             |                     |                   |            |             |           |                                |                   |                |
| INCREASE STATE SOURCES THROUGH DEDICATED TAXES   | Carbon Fee or Tax                      | Legislative Action Needed |                             |                     |                   |            |             |           |                                |                   |                |
|  | For-Hire Trans. Tax                    | Legislative Action Needed |                             |                     |                   |            |             |           |                                |                   |                |
|  | Payroll Tax                            | Legislative Action Needed |                             |                     |                   |            |             |           |                                |                   |                |
| INCREASE STATE SOURCES THROUGH ALLOCATED FUNDING | Fund Transit in Transportation Package | Legislative Action Needed |                             |                     |                   |            |             |           |                                |                   |                |

# TEN-YEAR CAPITAL NEEDS KEY FINDINGS



- Statewide, existing funding sources appear to meet Replacement needs for Urban agencies and King County Metro
  - Funding gaps exist for Small Urban and Rural agencies



- Service Restoration and Planned Expansion have significant funding gaps – transit agencies falling further behind statewide growth



- Rolling stock beyond ULB deficit detracts from expansion capability
- If economy digresses - high likelihood that replacement deficit will deepen and service will fall further behind population and employment growth



# THANK YOU!



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