PSRC Modeling & Analysis Tools

Transportation Operators Committee
December 4, 2024

Puget Sound Regional Council

We are leaders in the region to realize equity for all. Diversity, racial equity and inclusion are integrated into how we carry out all our work.

psrc.org/equity

Background

PSRC is updating it tools for the 2026-2050 Regional Transportation Plan. The focus of the update is on:

- Updating the base year of the model to Spring 2023. This includes:

  - Roadway & Transit networks

  - Performance data for validation from Apr-May

- Focused update for travel behavior from the Spring 2023 Regional Household Travel Survey.

Future Land Use is not changing

- Recent growth trends between 2018 and 2024 are within 3% of forecasts despite the pandemic.

- The Latest post-pandemic growth projections are within 5% of previous forecasts for 2050 and show the region hitting 5.8m people and 3.3m jobs around 2053.
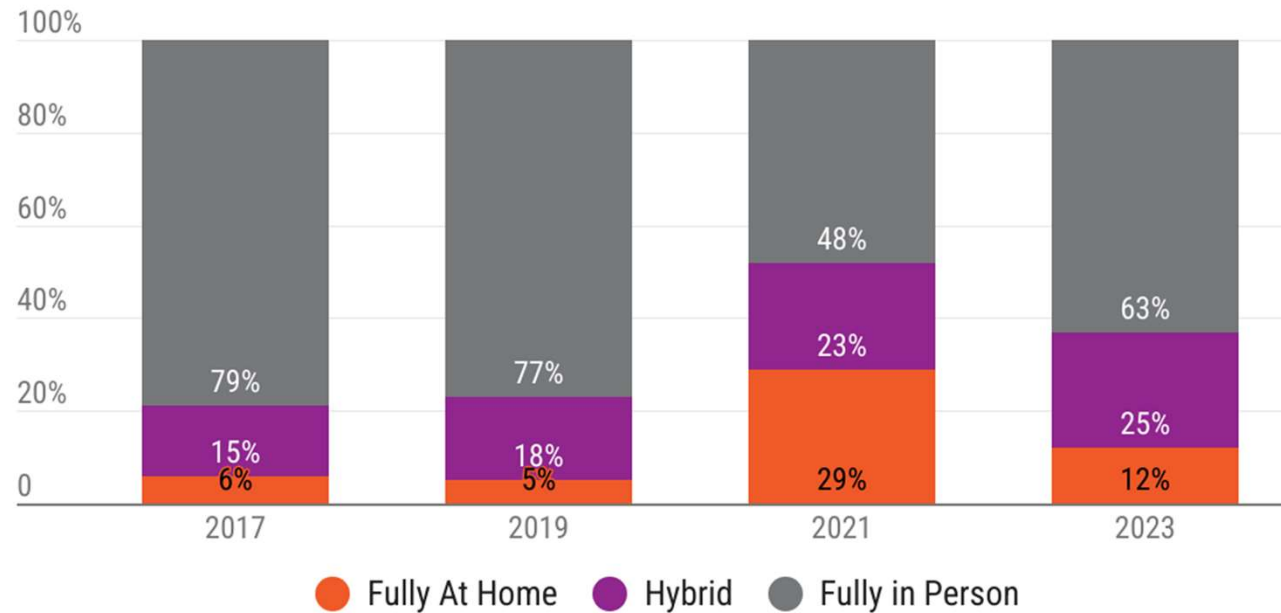
To remain consistent with Comprehensive Plans, the RTP will use the same 2050 forecasts as VISION 2050.

Key Travel Behavior Differences: Flexible Work

Work from home levels are still fluctuating but hybrid work looks to be stabilizing. Fully at home is around 12%
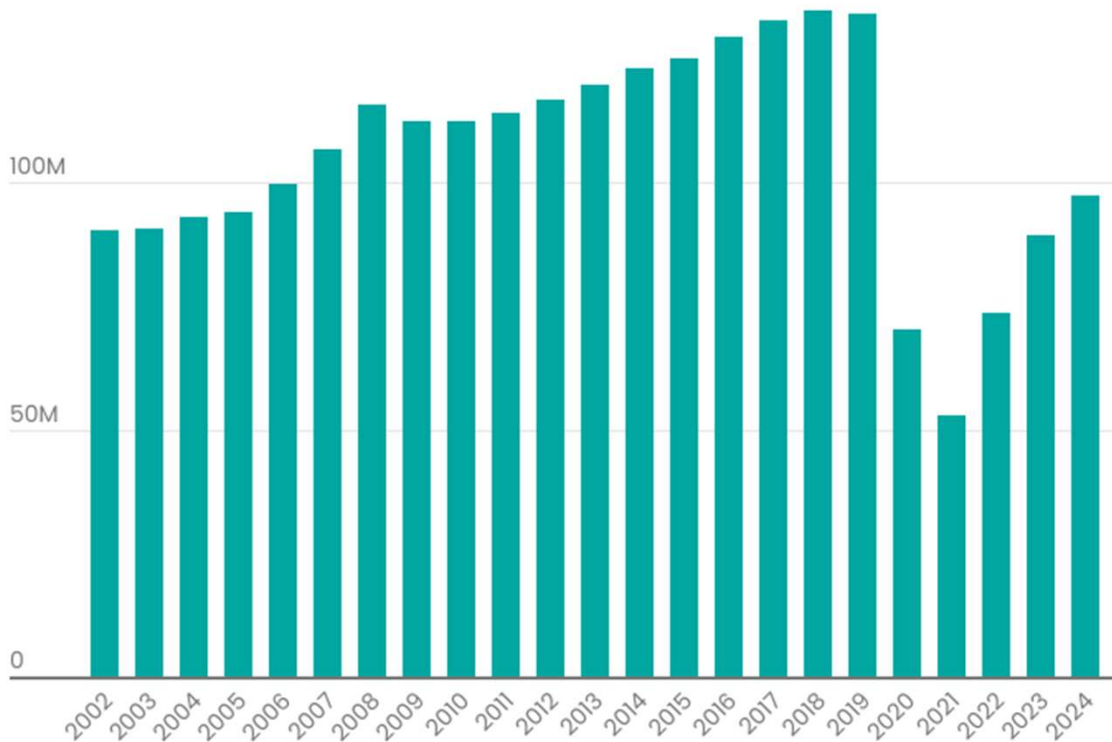
Work from Home Status

Source: PSRC Regional Household Travel Survey 2017, 2019, 2021 & 2023

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Key Travel Behavior Differences: Transit is growing

Jan-July Total Boardings, 2002-2024

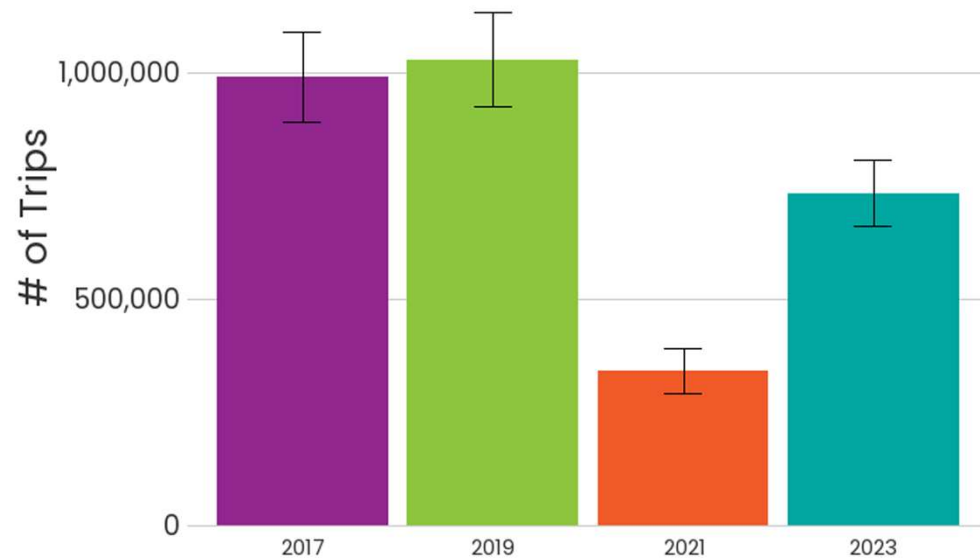Source: USDOT Federal Transit Administration National Transit Database

There were approximately 98 million boardings from January to July 2024 on the Region's transit system (73% of 2019 ridership)
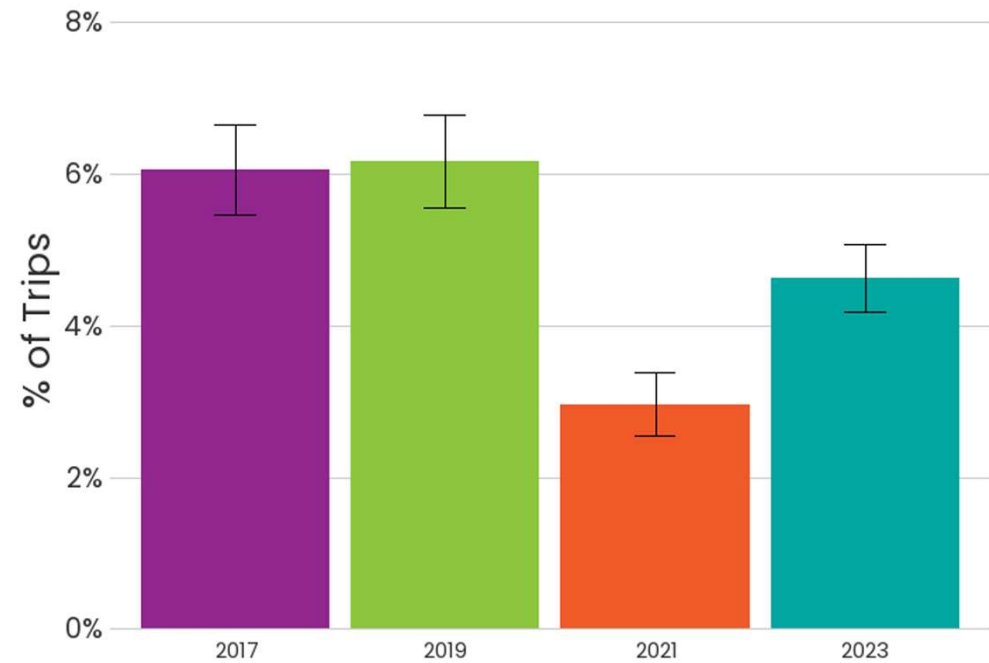
Key Travel Behavior Differences: Transit is growing
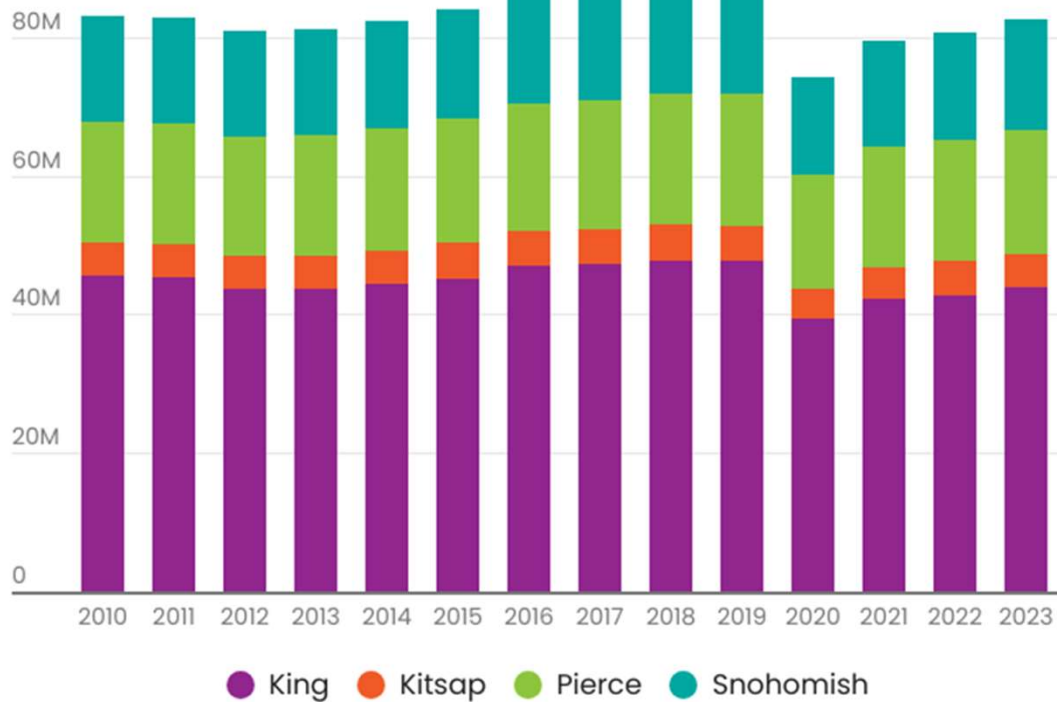
Transit trips from HHTS

Transit Trips – Count

Transit Trips – Share

Key Travel Behavior Differences: VMT is slowly growing

Daily Vehicle Miles Traveled, 2010-2023

People in the region drove about 82.5 million miles a day in 2023 – about the same as people drove in 2014.

Source: WSDOT Highway Performance Monitoring System (HPMS)

Model Update: Flexible Work

Model Updates for Flexible Work

Soundcast now includes a Telecommute Model:

- Model is a new sub-model in Daysim:

  - Predicts if a worker with an out of home work location is a telecommuter.

  - Results used downstream in Day Pattern model, which predicts the type and number of activities each person will do.

  - Telecommuters are still able to make work tours, but they do so at a lower rate.

Worker Types

- **Commuter**: never works from home (~75% of workers)

- **Telecommuter**: works from home 3+ days/week (~10%)

- **WFH**: reported work location same as home (~14%)

workers by worker type
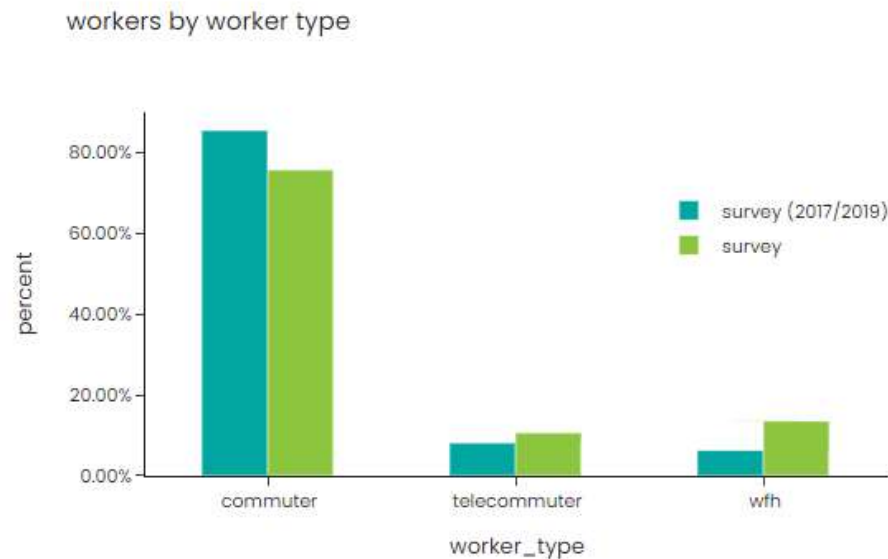
Work Tours by Worker Type
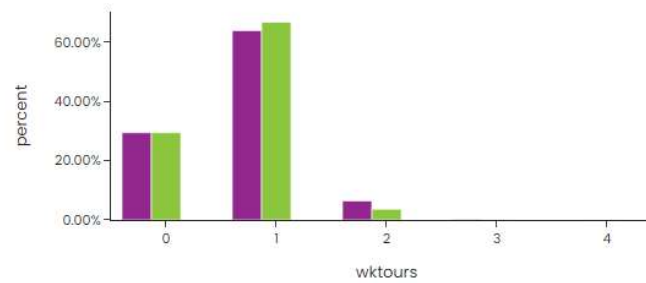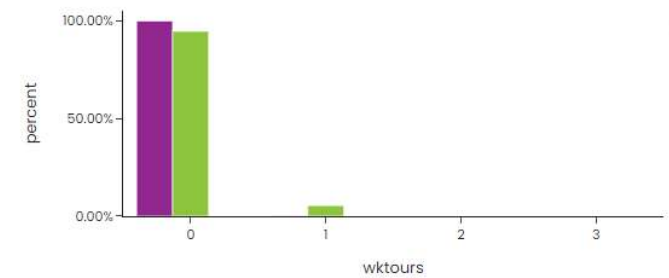
Model Update: Transit

Transit Modeling / Validation Slides

Validation data (how we are trying not to limit it too much as we have grown since 2023

Model Update: Other Travel Behavior

Mode Calibration and Data Refresh

- Re-estimation/calibration of work location, mode choice, destination choice, day pattern to 2023 survey

- Updated external travel with 2023 LEHD LODES commute patterns
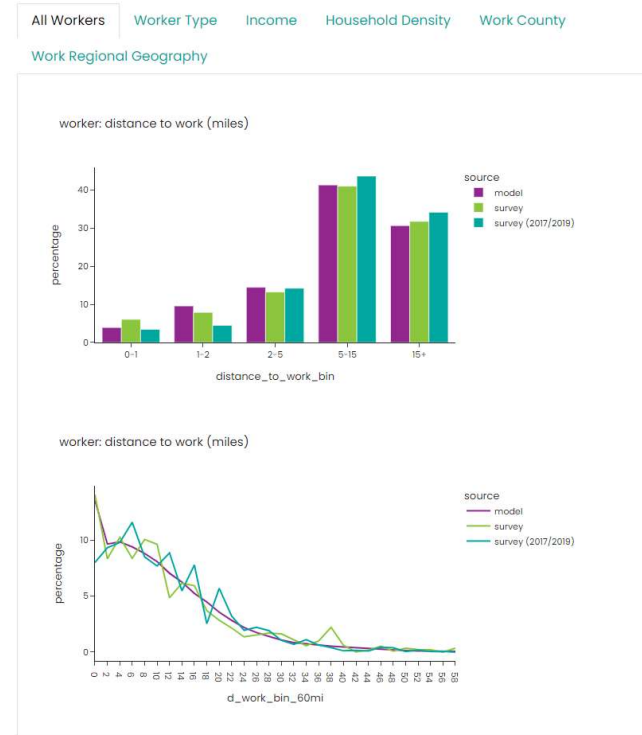
Schedule & Next Steps

- Base Year model calibration and validation will be complete in early 2025:

  - 2050 Transit networks will be available in April 2025

  - Roadway projects will follow in May 2025

- Scenarios and sensitivity test modeling will begin in the summer of 2025 and wrap up in the fall.

- Draft Plan will be released in early 2026 for public comment

Thank You!

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