

2017 TRAVEL AND AWARENESS SURVEY

Choosing and using travel options

An analysis of survey results to support the Regional Travel Options program and partners

oregonmetro.gov/travel-options-research

Metro respects civil rights

Metro fully complies with Title VI of the Civil Rights Act of 1964 that requires that no person be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination on the basis of race, color or national origin under any program or activity for which Metro receives federal financial assistance.

Metro fully complies with Title II of the Americans with Disabilities Act and Section 504 of the Rehabilitation Act that requires that no otherwise qualified individual with a disability be excluded from the participation in, be denied the benefits of, or be subjected to discrimination solely by reason of their disability under any program or activity for which Metro receives federal financial assistance.

If any person believes they have been discriminated against regarding the receipt of benefits or services because of race, color, national origin, sex, age or disability, they have the right to file a complaint with Metro. For information on Metro's civil rights program, or to obtain a discrimination complaint form, visit www.oregonmetro.gov/civilrights or call 503-797-1536.



Metro provides services or accommodations upon request to persons with disabilities and people who need an interpreter at public meetings. If you need a sign language interpreter, communication aid or language assistance, call 503-797-1700 or TDD/TTY 503-797-1804 (8 a.m. to 5 p.m. weekdays) 5 business days before the meeting. All Metro meetings are wheelchair accessible. For up-to-date public transportation information, visit TriMet's website at www.trimet.org.

Metro is the federally mandated metropolitan planning organization designated by the governor to develop an overall transportation plan and to allocate federal funds for the region.

The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and to make recommendations to the Metro Council. The established decision-making process assures a well-balanced regional transportation system and involves local elected officials directly in decisions that help the Metro Council develop regional transportation policies, including allocating transportation funds.

The preparation of this report was financed in part by the U.S. Department of Transportation, Federal Highway Administration, and Federal Transit Administration. The opinions, findings, and conclusions expressed in this report are not necessarily those of the U.S. Department of Transportation, Federal Highway Administration, and Federal Transit Administration.

Survey Purpose

The Metro Regional Travel Options (RTO) program helps residents make transportation choices with marketing, travel information, incentives, and small capital improvements.

Every few years, Metro conducts the RTO Travel and Awareness Survey. The purpose of the survey is to gain insight into current regional trends in transportation choices, examine willingness of drivers to start using sustainable travel modes (bike, walk, public transit, or carpool), and focus RTO program efforts that will work for Metro residents and maximize results. The research objectives of the 2017 Travel and Awareness Survey are to:

- Measure awareness of and participation in travel options and supportive programs, in addition to other transportation trends throughout the Metro region
- Advise marketing, education and outreach strategies by identifying potential audiences for promoting RTO programs, partners, and resources
- Inform the RTO Strategy and Transportation System Management and Operations plan, as well as various other efforts within Metro's Planning and Development Department

Methodology

DHM Research consulted with Metro on the telephone survey, which was conducted September 14 - 21, 2017. DHM collected responses from 601 residents in Multnomah, Clackamas, and Washington Counties, with 50% reached by cell phone. The survey averaged 20 minutes, and respondents were offered entry in a drawing to win one of ten \$50 gift cards. Respondents were asked a variety of questions about their awareness and use of various types of transportation modes and travel information. If provided, home addresses and work intersections of respondents were geocoded for additional analysis. The margin of error is $\pm 4.0\%$ (the amount that the results could differ from the actual population due to sampling error).



Introduction

Over the last decade, the Metro region has experienced rapid changes. That trend is likely to continue into the coming decade. With those changes come some growing pains, especially when it comes to accessing housing and transportation—the two largest household expenses. Travel options can help ease the burden of rising housing costs and reduce the personal stress experienced on congested streets, whether it's commuting by bike, taking public transit for errands, or simply taking a walk to a neighborhood library on the weekend. Measuring regional trends in housing, employment, transportation, and technology is important to providing equitable travel options to all residents in the region.

This report first lays out the 2017 survey demographics and locations of respondents (Figure 1). Following is an exploration of how residents are currently getting around the region, including the characteristics and habits of people who ride transit, bike, or walk as one of their two main modes of transportation. Next, the report explores the interest in using travel options and potential messages that resonate with residents about driving less. Finally, a cluster analysis teases out opportunities to serve residents who are interested in using travel options more often, either by choice or necessity.

This report is one in a series of two. More results from the 2017 Travel and Awareness Survey are available in the [Mobility and Technology Trends](#) report, which covers awareness of RTO programs, use of new transportation services, technology trends around travel information and more.



Survey Demographics

Quotas were set by gender, age, and county using the US Census (2010), with increased effort for a representative sample across household income and race or ethnicity. Percentages may add up to under or over 100 due to rounding.

Gender

Female	51%
Male	49%
Non-Binary or Gender Non-Conforming	0%

Age

16-29	23%
30-44	27%
45-64	32%
65+	13%
Refused	5%

County

Clackamas	23%
Multnomah	46%
Washington	31%

Race or ethnicity

African	1%
Asian/Pacific Islander	6%
Black/African American	1%
Hispanic/Latino	4%
Middle Eastern/ North African	<1%
Native American/ American Indian	1%
Slavic	<1%
White/Caucasian	85%
Other response	3%
Refused	1%

Allows for multiple responses. Census categories differ.

Household income

<\$25,000	6%
\$25-50,000	15%
\$50-75,000	14%
\$75-100,000	16%
\$100,000+	26%
Refused	23%

Education

<High School	4%
GED/HS	11%
Trade/2-Year	28%
Bachelor's/4-Year	37%
Graduate Degree+	19%
Refused	1%

Persons per household

1	2	3+
14%	29%	54%
Refused	3%	

Years living in metro region

<5	10%
6-10	8%
11-20	31%
20+	48%
Refused	3%

Respondent Locations

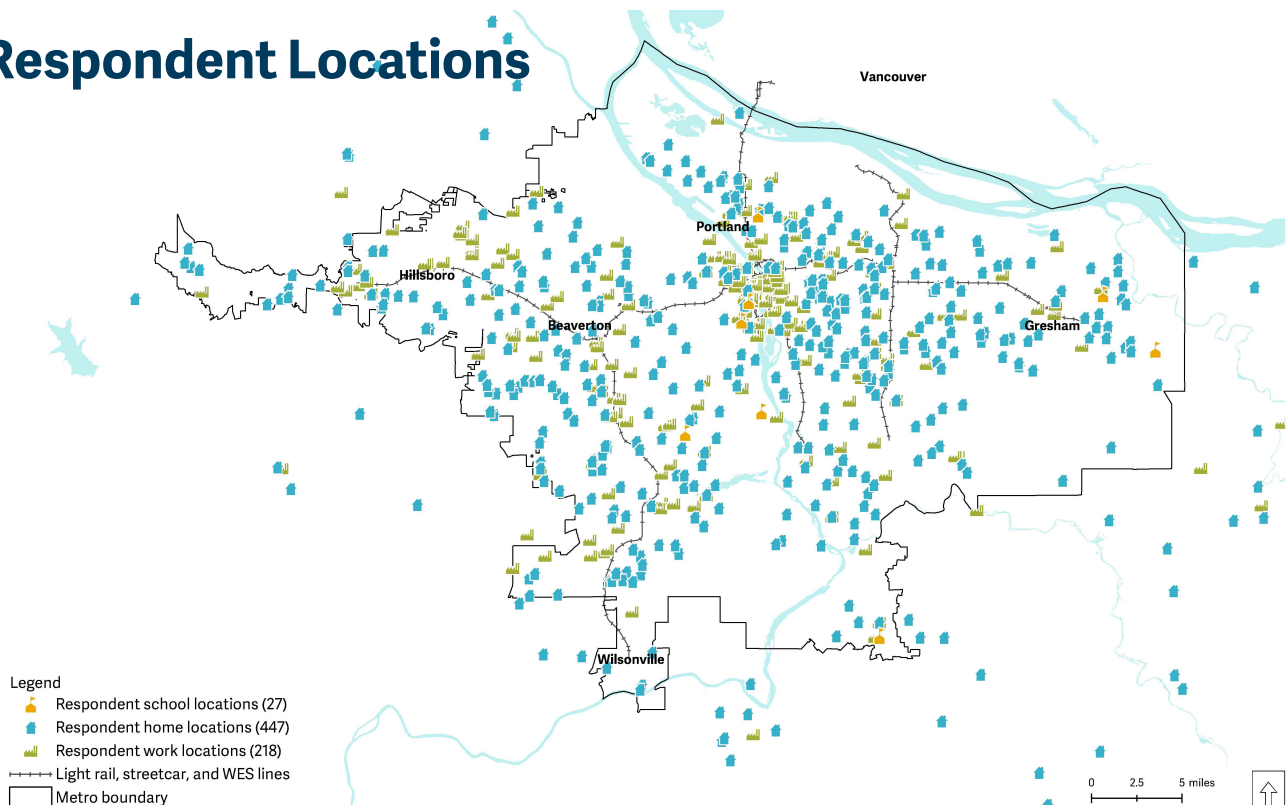


Figure 1: School, home and work locations of respondents. Locations that repeat, such as apartments without unit numbers, large work facilities, or schools are included in the feature counts. Locations outside the map view are not included in the feature counts. Map: 2017 RTO Survey Data, RLIS, Metro Data Resource Center.

Travel Choices

Driving remains popular among residents from all three Metro counties. Overall, 92% of residents say they drive at least monthly (Table 1). Nearly as many (89%) say that driving is one of their top two modes of transportation. Those who were more likely to never drive include seniors (15%), residents with household incomes under \$50,000 (14%), residents with a high school education or less (12%), or residents who were the sole member of their household (15%). One in six residents combines modes to travel and are most likely to drive in combination with public transit (57%, n=98). Those who drive as one of their two main modes and are either employed or a student were asked about carpooling further into the survey, and approximately 7% of driving commutes were reported as carpools (n=389).

Table 1: Percentages of responses to mode choice and mode frequency. Q3 through Q6 asks "Over the course of this year, how often did you (drive a car/bike for transportation/walk for transportation/ride public transit)?" If a respondent reported three or more modes used monthly, they were prompted by Q9 to pick the two used most frequently to keep the survey time under 20 minutes. Monthly or more is composed of the sum of respondents who answered daily, weekly or monthly. Totals or percentages may add up to under or over their sum or 100 due to rounding or respondents choosing multiple modes.

Response Category (n=601)	Driving	Biking	Walking	Riding Transit
Monthly or more	92%	11%	36%	24%
Daily	67%	3%	10%	5%
A few times a week but not every day (Weekly)	20%	3%	14%	7%
Several times a month (Monthly)	4%	4%	12%	12%
Rarely	3%	11%	16%	30%
Never	5%	78%	47%	47%

Eleven percent of residents travel by bike at least monthly. All residents who bike, even rarely, are more likely to be under 30 (32%), have a graduate degree (32%), or live in Multnomah County (30%). Men are also more likely to ride a bike for transportation than women (27% to 19%, a difference of 8 percentage points), but that gap has shrunk by 3 percentage points since 2014 (previously 35% to 24%, a difference of 11 percentage points).

Twenty-four percent of residents ride transit at least monthly. Transit riders tend to be well-educated (63% have graduate degrees), younger (one in four are under 30), have lower household incomes (62% under \$50,000), or live in Multnomah County (60%). Half of transit riders who use public transit as one of their top two modes reported using MAX most frequently (53%, n=105). However, this differs from TriMet's average weekly boarding numbers during the same time period, which shows MAX rides accounting for approximately 38% of boardings and bus boardings accounting for over half of all transit rides.¹ This difference may show that the survey results are more about preference towards using MAX than actual ridership.

Thirty-six percent of residents walk for transportation at least monthly. Those who walk are most likely to have household incomes of less than \$50,000 per year (41%, n=128). Forty-seven percent of residents with graduate degrees walk for transportation at least once a month—more than any other demographic group (n=114). Daily walking for transportation is more common among residents under 30 (14%) and those 45-64 (13%).

Washington County residents are the least likely to walk, with 55% reporting they never do so for transportation.

Overall, biking, walking, and riding transit have seen minor shifts in the percentage of residents who use the mode for daily, weekly, or monthly use since the previous Travel and Awareness survey was conducted in 2014. These shifts are almost always within the margin of error, with the exception of residents who say they bike, walk, or ride transit rarely or never. Since 2014, the percentage of residents who **rarely bike, walk or ride transit has decreased** by 6-8 percentage points (Figure 2). The percentage of residents who **never bike, walk, or ride transit has increased** by 7-10 percentage points. The survey results do not explain why these shifts are occurring. Further research could help answer whether there is a definitive downward trend in residents who use travel options rarely, if they are never using travel options instead or perhaps shifting to using a few different modes more often, and why these changes may be occurring.

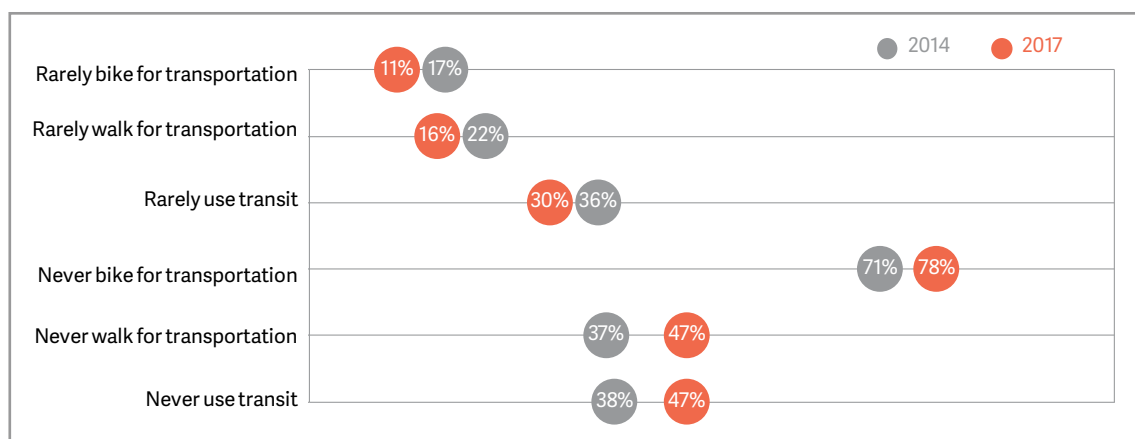


Figure 2: Comparison of 2014 and 2017 percentages for mode choice of bike, walk and transit and mode frequency of rarely and never. Totals or percentages may add up to under or over their sum or 100 due to rounding or respondents choosing multiple modes.

Trip purpose

In previous surveys, follow-up questions were asked of all modes a respondent used at least monthly. In the 2017 survey, follow-up questions were focused on a different subset of users. This is due to the increased number of questions around new modes and travel information, which would make the survey time too long for those who are frequently multimodal. Rather than asking follow-up questions for modes that a respondent might rely on less frequently, questions on trip purpose were only asked for the two modes the respondent used most.

Table 2: Percentages of responses to mode purpose. Q16/21/28/31 asks "Select all of your purposes of (driving/cycling for transportation/walking for transportation/taking public transit). Any others?" Response categories were randomized and respondents were prompted to select all that apply. Totals or percentages may add up to under or over their sum or 100 due to rounding or respondents choosing multiple modes and purposes.

Response Category	Driving n=534	Biking n=38	Walking n=180	Riding Transit n=105
To get to work	63%	44%	21%	40%
To get to school	11%	28%	6%	16%
For shopping or errands	85%	54%	56%	36%
For leisure activities, like going to a restaurant or movie	79%	57%	72%	54%
I work for Uber or Lyft	2%	--	--	--
None of the above	2%	8%	7%	11%

Trip purpose remains consistent from 2014. Those who drive tend to do so for shopping and errands more than commute trips (Table 2). Travel options remain popular for leisure trips and shopping or errands. To get to school, biking is most popular, and those who walk or ride transit do so most often for leisure trips. A few demographic differences stood out for trip purpose, especially when it comes to walking trips. Overall,

walking is a less common choice for commuting, as compared to other primary modes of transportation. However, walking to work is more common among Multnomah County residents than Clackamas or Washington County residents (29%, compared to 14% each). Those under 30 are more likely than older residents to walk to work, school, or for errands than for other types of activities. Residents 30-64 are more likely to walk for leisure activities than younger or older residents (78%, n=104).

Six percent of all residents say that riding a bike is one of their two main modes of transportation. However, bicycle ownership remains at 63% for the region's residents, as in 2014. This difference demonstrates the large gap in those who use a bike to get around, even for short leisure trips or small errands, despite owning a bike. This may be partially due to demographics, as groups less likely to own a bike are residents with household incomes of less than \$50,000 per year (45%, compared to 56-76%) and seniors (29%, compared to 62-71%). This may be an area for research in the future, which could explore how to help bike owners of all types make small steps to ride for transportation, even occasionally for leisure trips or around their neighborhood.

Travel Options Interest

Currently, 37% of residents who are employed or attend school say their commute is worse than it was a year ago (Figure 3). Nearly half of residents from Clackamas County reported an increasingly difficult commute, which is significantly more than the other two counties. The number of residents who say their commutes are worse than the year before has more than doubled from 2014, likely due to attitudes about increased congestion. However, this frustration creates an opportunity for travel options to provide relief from stressful drive-alone car trips.

To gauge potential growth for travel options, residents were asked about their general interest in using travel options more than they do now. Overall, 48% of residents are interested in using a travel option (bike, walk, or public transit) more, with 25% of all residents selecting at least two options they were interested in using more. Public transit has the most interest at 32%, walking at 28%, and bicycling at 22%. Those who replied that they were not interested in using a travel option more may also feel they already use options to their maximum. By age group, residents 30-64 tend to be the most interested in walking and biking more. Residents under 30 have about average interest, but this group already walks and bikes frequently.

Messaging

When asked about potential motivators for driving less, residents' top motivator would be to avoid traffic (28%)(Figure 4). In 2014, the top motivator was to save money. This is likely because the 2014 survey did not include avoiding traffic as a response option.

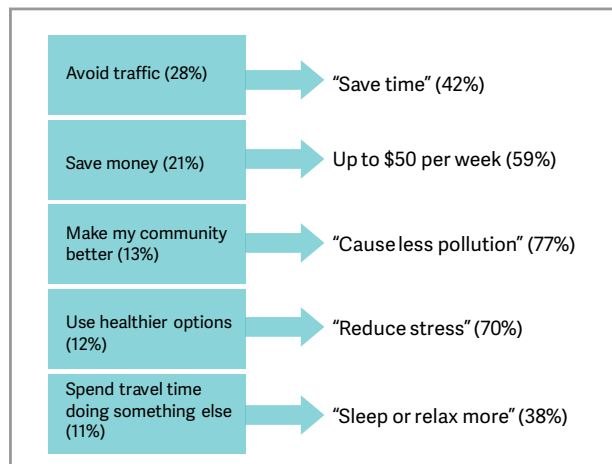


Figure 4: Results of Q77 (n=569), which asks "Let's say you're planning to reduce the amount you drive in general. Which one statement best describes your main motivation for reducing your driving?" Response categories were randomized and respondents were prompted to select one (left column). Fifteen percent responded that they did not know what their potential motivator would be. Follow-up questions (Q79-84) were open-ended and common responses were grouped together (right column). Between one and four percent responded they did not know how they might benefit from their motivator. Totals or percentages may add up to under or over their sum or 100 due to rounding.

There were few significant differences by demographic, but among 30-44-year-olds, saving money on parking and vehicle expenses was especially motivating (29%, n=157).

When asked a follow up open-ended question about the potential benefits of reducing driving, common responses were to cause less pollution, reduce stress or relax more. Those who selected saving money as a potential motivator were asked how much they think they could save per week by reducing their driving. Fifty-nine percent said they think they would save up to \$50 per week, and 37% said they think they would save \$50 or more per week (n=120). Washington County residents thought they would see a larger benefit with more than half saying they would likely save \$50 or more (51%). Those who are interested in biking more are also more likely to believe they will save \$50 or more (56%, compared to 32% of those who are not interested).



Figure 3: Comparison of 2014 and 2017 responses for Q51 (n=429), broken down by overall region and county. Q51 asks "In general, would you say that your commute is easier, the same, or more difficult now as it was one year ago?" In 2017, two percent responded they did not know. Totals or percentages may add up to under or over their sum or 100 due to rounding.

Cluster Analysis

Cluster analysis is an exploratory tool that identifies natural groupings in a dataset. Clustering reveals patterns of responses across multiple questions and respondents who share similar attitudes and behaviors and then groups them into distinct clusters. The overall purpose of conducting cluster analysis is to give the RTO program and partners insight into residents' preferences and behaviors, which leads to more effective, efficient, and targeted messaging and outreach. In order to be included in the analysis, respondents had to provide age and their motivation to drive less, resulting in 454 people classified into five clusters using the following variables:

- Age of respondent
- Frequency of modes (drive, walk, bike, transit)
- Motivation to drive less
- Interest in biking, walking, or using transit more
- Four geographic Context Scores based on bike lane density, sidewalk density, urban living infrastructure, and public transit density²

Metro's Context Tool assigns numerical values (Context Scores) to geographic locations by using data on the availability of various travel options and goods and services in the region. The scores are reclassified from a large range of values to a scale of zero to three using natural breaks in the data. The higher the score, the better the availability and accessibility of these resources near the respondent's location. A score of zero indicates little to no resources nearby (within a 1/4 mile), a score of one to two is considered moderate resources nearby, and a score of three is considered excellent resources available.

To organize and describe the clusters, each has been named as a "transportation ecosystem" based on the availability of resources found in that ecosystem. For example, a tundra ecosystem tends to have little resources available, so the Northwest Tundra exhibits limited resources for travel options nearby. Savannah ecosystems require migration, so the Suburban Savannah exhibits limited resources within walking distance. The Urban Rainforest has plentiful travel options resources, similar to the resource richness of a rainforest ecosystem.

The distribution of the 454 residents in each cluster is displayed in Figure 5. Figure 6 shows the cluster analysis results by respondent home location. Each transportation ecosystem is described in a callout box, identifying what makes the cluster group unique.

It is important to note that these clusters should not be seen as descriptive of all residents, neighborhoods, interests, or demographics, as the Metro region is much more complex than can be described here.

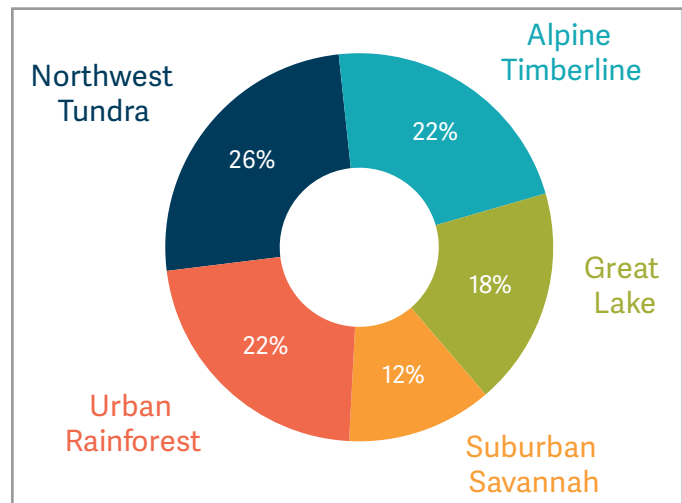


Figure 5: Five clusters and their distribution among 454 respondents.

Transportation Ecosystems

Great Lake

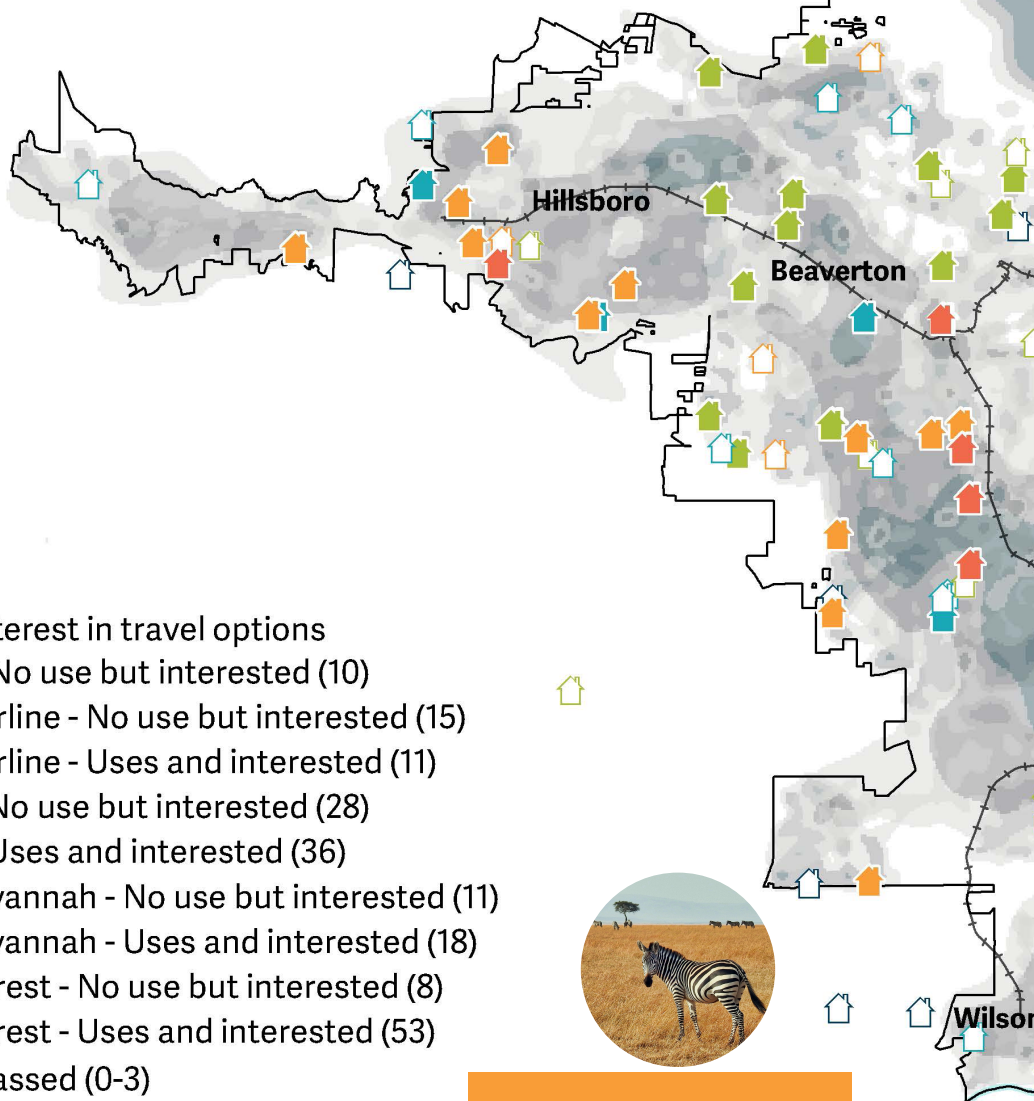
More likely to be under 45 and upper income

Limited bike, walk and transit resources

Combine driving with walking

Walk and use public transit several times a month

Would drive less to be healthier and improve community

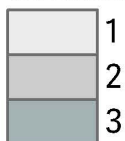


Legend

Cluster - Use and interest in travel options

- NW Tundra - No use but interested (10)
- Alpine Timberline - No use but interested (15)
- Alpine Timberline - Uses and interested (11)
- Great Lake - No use but interested (28)
- Great Lake - Uses and interested (36)
- Suburban Savannah - No use but interested (11)
- Suburban Savannah - Uses and interested (18)
- Urban Rainforest - No use but interested (8)
- Urban Rainforest - Uses and interested (53)

Context scores reclassified (0-3)



Light rail, streetcar, and WES lines

Metro boundary

Suburban Savannah

Moderate bike, walk, and transit resources

Limited urban resources within walking distance

Currently using travel options often

Would drive less to avoid traffic

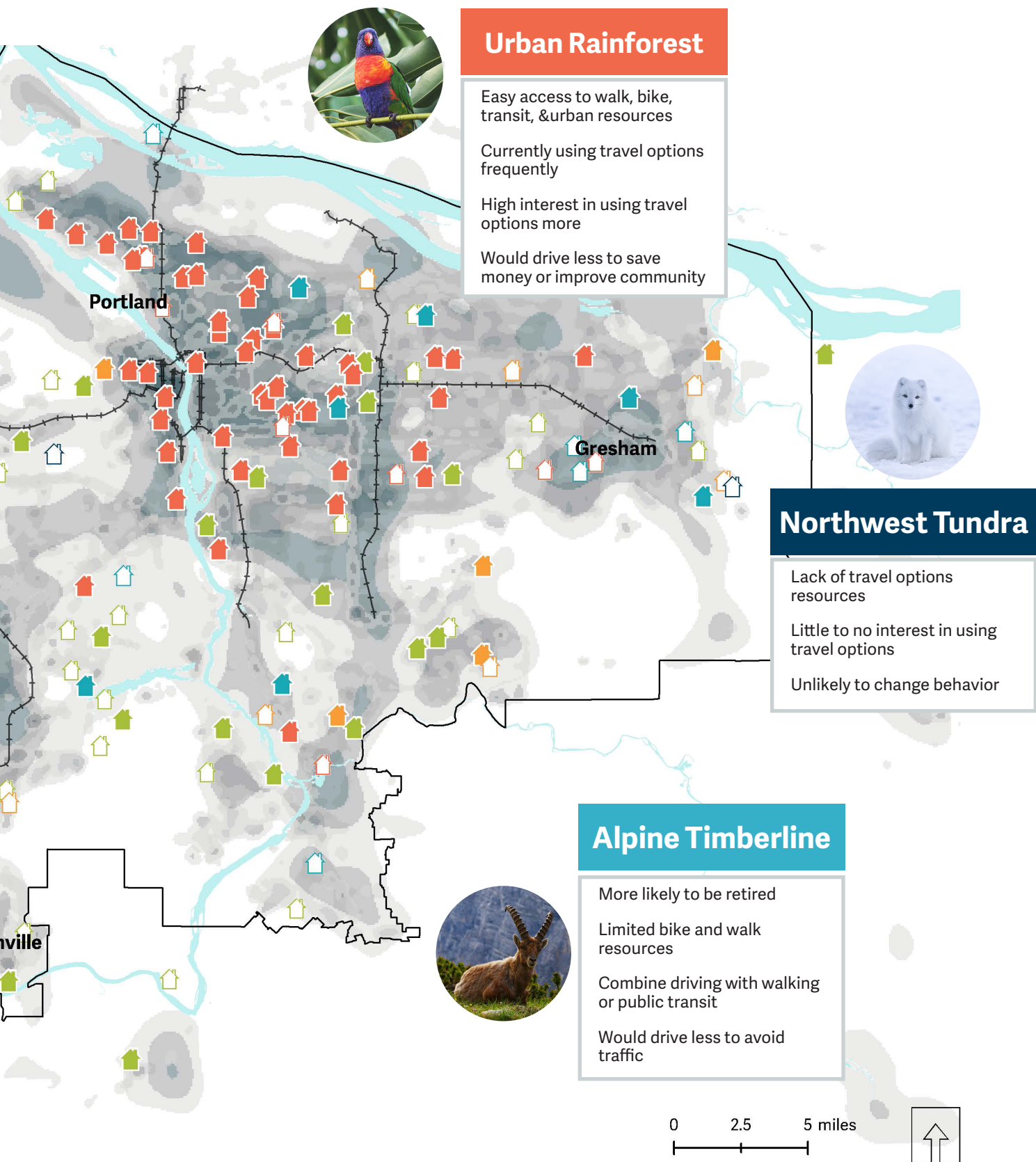


Figure 6: Home locations of respondents included in the cluster analysis (n=454), displayed by "transportation ecosystem" and travel options interest. Those who did not express interest in using travel options more are not included in this map, nor those who are outside the map view. Outlined symbols indicate no travel options use (bike, walk, transit) but an interest in using them more. Filled symbols indicate current travel options use and an interest in using them more. See legend for further detail. The basemap includes a combined layer of four individual Context Scores on bike path access, sidewalk density, urban living infrastructure, and public transit access for the Metro region. Map: 2017 RTO Survey Data, RLIS, Metro Data Resource Center. Cluster images via Unsplash.

Transportation ecosystems trends

The cluster analysis identified groups of residents that are currently ideal for engagement. The majority of Great Lake residents are interested in walking (85%), biking (80%), and riding transit (67%), much more than any other cluster. Urban Rainforest residents use travel options more than any other cluster, and at least one-third are interested in using each travel option (bike, walk, transit) more than they do currently. Suburban Savannah residents overwhelmingly express interest in walking more often (52%). Not surprisingly, most Northwest Tundra residents don't use travel options, likely due to low access, and they have little interest in using travel options more. At most, 22% of Northwest Tundra residents express interest in riding transit.

A moderate or better Context Score (from 1-3) indicates greater access to travel options resources. Residents with moderate or better access are those who have greater ability to utilize travel options from their neighborhood. For example, thirteen percent of Alpine Timberline residents have moderate or better transit access, but only 4% use transit weekly or more (Figure 7). In comparison, only 3% of the multimodal Great Lake residents have moderate or

better transit access, but 5% are using transit weekly or more. Further research could identify the lessons to be passed from Great Lake residents, who are typically transit underserved, yet utilize transit anyway.

Residents from all clusters could increase their biking, especially Alpine Timberline residents. Ninety-two percent have moderate or better bike path access, yet no Alpine Timberline residents bike for transportation weekly. The initial assumption is that this is due to lack of urban amenities to bike to. However, no Suburban Savannah residents have moderate or

better urban amenities nearby, yet 13% still bike weekly or more. Forty-four percent of Suburban Savannah residents also walk weekly or more, despite the very limited urban amenities nearby (Figure 8). These residents may provide some insight into incorporating both biking and walking beyond the neighborhood, especially to Alpine Timberline and Great Lake residents, who could potentially walk more. Only 9% of Alpine Timberline residents are walking weekly, compared with 26% of Great Lake residents. However, 76% of Alpine Timberline and 47% of Great Lake residents have moderate or better sidewalk density.

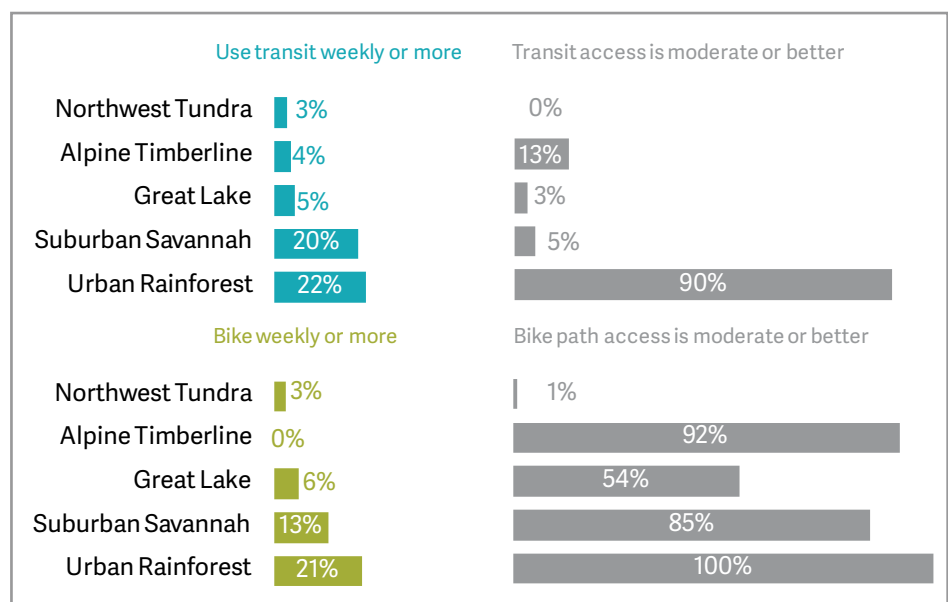


Figure 7: Results of weekly travel options activity (transit, bike) by cluster. Weekly activity is compared to the percentage of residents in the cluster with a context score of moderate or better (1, 2, or 3) for bike path access and public transit access.

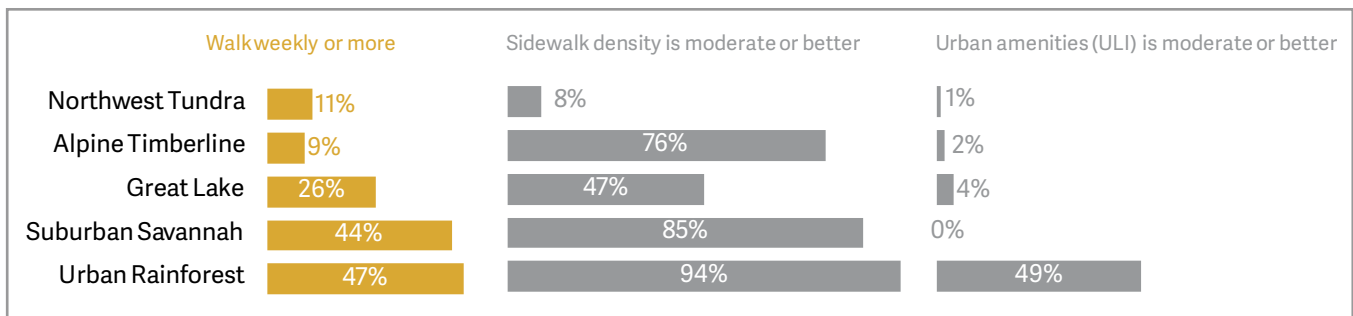


Figure 8: Results of weekly travel options activity (walk) by cluster. Weekly activity is compared to the percentage of residents in the cluster with a context score of moderate or better (1, 2, or 3) for sidewalk density and urban living infrastructure.

Using Survey Results

RTO recommends using the survey results as insight into residents' preferences and behaviors, and as a starting point for future projects or research to support travel options. When combined with community partnerships and engagement, quality research can lead to more relevant projects and efficient outreach programs that meet the needs of communities. Looking forward, diversifying the types of research and projects conducted among partners will be crucial to capturing the needs and behaviors of all residents.

This survey measures travel options use and interest by capturing a large snapshot of residents in the region. This method helps identify regional trends and can be more cost-effective. However, as with any survey, there are limitations and potential for error. Respondents may overestimate, underestimate, or not feel comfortable giving accurate responses. Respondents may also believe they might behave in one manner, but choose differently in reality. Additionally, telephone surveys, while excellent at capturing large audiences, only capture those who are willing and able to participate. Residents without a telephone, the time, or the willingness to participate would be left out of the potential sample.

Conclusion

These results teach a few lessons about the Metro region. First, while driving is still relied upon for all sorts of activities, travel options play an important role in residents' lives—especially those who are younger or low-income. Second, residents choose the most convenient option when planning a trip, and perhaps are willing to spend a bit more money or sacrifice a bit of comfort for the sake of a convenient trip. The increase in residents who say their commutes are worse might play more of a role in trip planning or travel choice as well. Most importantly, 47% of residents are using travel options, and an additional 48% are interested in using them more.

Overall, the 2017 Travel & Awareness Survey shows that there are plenty of opportunities to increase travel options use, through education as well as improving access and availability. For those who express interest in using travel options more, RTO will continue to invest in diverse programs and create marketing that meet the needs of communities throughout the Metro region.

For more information

Whether you are on your way to work or school, to meet friends or go to the store, there are convenient and inexpensive ways to get there by walking, biking, taking transit, sharing a ride or sharing a car. To learn about travel options in your community, visit:

oregonmetro.gov/tools-living/getting-around

You can find additional research at: oregonmetro.gov/travel-options-research

What are your research needs? Contact us at:

rto@oregonmetro.gov or 503-797-1757.



Footnotes

1. September 2017 Monthly Performance Report. (2017). TriMet. Available from <https://trimet.org/about/pdf/2017/2017-09.pdf>

2. Metro Context Tool - State of the Centers. (2017). Available from <https://gis.oregonmetro.gov/cistool/>

All images via Metro Transportation Planning & Development Flickr unless noted otherwise. Available from <https://www.flickr.com/photos/metrorto>



If you picnic at Blue Lake or take your kids to the Oregon Zoo, enjoy symphonies at the Schnitz or auto shows at the convention center, put out your trash or drive your car – we’ve already crossed paths.

So, hello. We’re Metro – nice to meet you.

In a metropolitan area as big as Portland, we can do a lot of things better together. Join us to help the region prepare for a happy, healthy future.

Metro Council President

Tom Hughes

Metro Councilors

Shirley Craddick, District 1

Betty Dominguez, District 2

Craig Dirksen, District 3

Kathryn Harrington, District 4

Sam Chase, District 5

Bob Stacey, District 6

Auditor

Brian Evans

