Travel Behavior Barriers and Benefits Research

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PEOPLE PLACES • OPEN SPACES

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Executive Summary

In order to target effective and efficient outreach that results in behavior change, the Regional Travel Options Program sought to understand the real and perceived barriers and benefits to changing travel behavior for all types of trips. In response to this need the PRR team designed and implemented a three-phase research approach starting in September 2004 and ending in later November 2004.

Phase 1 was a literature review of relevant articles, reports and studies dealing with the benefits and barriers to changing travel behavior. This review included reports from other communities, database searches, trade publications, academic articles, and a review of attitudes and marketing research performed by the project partners over the last 10 years. The results of the literature review provided direction for the Phase 2 qualitative research involving focus groups. The results of the focus groups provided direction for Phase 3, a more broad-based telephone survey of those who use and do not use alternative travel modes in the Portland metropolitan region.

QUALITATIVE RESEARCH

In cooperation with the Portland Metro team the PRR team developed, organized, and moderated two focus groups discussing the issues, barriers and benefits identified in the literature review. One focus group was composed of those who use alternative travel modes at least 3 days a week on a regular basis. The other group was composed of those who do not use alternative travel modes.

The major findings from the focus groups included:

- People know much of their travel is not work related and they're proud of their trip-chaining
- Time and ability to trip-chain influence travel mode choice
- Alternative modes are seen as less comfortable and less safe, but some think it's worth it
- Make it safe, fast, reliable, easy and cheap if more people are to use transit
- Not a big demand for more information about alternative travel modes

QUANTITATIVE RESEARCH

The PRR team developed a survey instrument with Metro's review and approval and fielded the survey to a representative sample of the metropolitan region's residents. The survey was designed to obtain statistically valid information on current attitudes and behaviors regarding travel options. Another major goal of the survey was to determine what factors distinguish those who use alternative travel modes from those who do not, as well as identify those who would respond positively to motivators designed to increase alternative travel mode use.

When comparing the two groups in this survey (those that use alternatives to driving alone at least two times each week, and those that don't use alternatives) there was no significant difference between them in the percent that commute nor in the amount of time it takes to commute or in the distance of their commute. Both groups were similar in the frequency with which they change their travel plans to avoid traffic congestion (about 40%) and they also have similar flexibility in the time they can commute to or from work/school (40-45% have no flexibility; 25%-30% have ½ hour flexibility). Lastly there was no difference between these two groups when it comes to trip-chaining that is connected with their commuting.

Overall, it was found that households with more members are less likely to use alternative modes of travel. Households with more members 15 years-of-age or younger are also less likely to use alternative travel modes. In general, older respondents are less likely to use alternative travel modes.

The following items highlight what initially motivated those who use alternative travel modes:

- Cost of parking
- Higher gas prices
- Parking hard to find
- Traffic congestion
- Reduced stress by not driving alone
- Enjoyment of traveling with others

These results indicate an emphasis on three general types of motivators: cost, convenience (less hassle), and social.

When both sample groups were asked if a series of 26 potential motivators "would actually get you to drive alone one less day per week," the results once again pointed to the importance of three major motivating factors: cost, convenience (less hassle) and safety. The following lists the 26 potential motivators, as well as each motivator's target market based on the analysis results:

- ***Financial incentives*** appear to be most effectively targeted to younger, less-affluent people, including students.
- ***Carpool matching services*** appear to be most effectively targeted to less-affluent workers and students who commute longer distances. Women seem more interested than men.

- ***Preferred parking for carpoolers*** appears to be most effectively targeted to less-affluent workers. It is not a powerful motivator and may have the unintended consequence of encouraging people to shift from transit to carpools.
- ***Selling parking passes at work (or school)*** appears to be most effectively targeted to less-affluent workers and students. Women seem more interested than men.
- ***Less expensive transit passes*** appear to be most effectively targeted to less-affluent people, including students. Women seem more interested than men.
- ***Providing company vanpools*** appears to be most effectively targeted to less-affluent workers. Women seem more interested than men.
- ***More express buses*** appear to be most effectively targeted to workers and students.
- ***Free travel options consultation*** appears to be most effectively targeted to less affluent people with less education. It does not appear to be a powerful motivator, especially for people who do not already use alternative modes. Those with more education may feel that they can figure it out for themselves. It is also possible that, to more adequately assess its impact as a motivator, the nature of this motivator needs to be explained to respondents further than was possible in this survey.
- ***Guaranteed rides home*** appear to be most effectively targeted to less affluent and younger workers and students. More-affluent workers may see taxis as a viable guarantee.
- ***Reduced crowding on transit*** appears to be most effectively targeted to people with lower incomes and less education.
- ***Improved safety on transit*** appears to be most effectively targeted to women and to people with lower incomes and less education.
- ***Information about how transit saves you money*** appears to be most effectively targeted to people with lower incomes and less education
- ***Information about health benefits of using alternative travel modes*** appears to be most effectively targeted to everyone, though people with less income or who live near where they work may be more likely to actually reduce drive-alone trips.
- ***Information about how air quality is improved*** appears to be most effectively targeted to people with lower incomes and less education.
- ***More bike lanes*** appear to be most effectively targeted to younger people with lower incomes and more education. People who already bike are especially likely to respond (and to be younger, with lower incomes and more education), as are people who live within five miles of work.
- ***Safer bike lanes*** appear to be most effectively targeted to people between 25 and 54 with lower incomes. People who already bike are especially likely to respond, but younger bikers are less concerned with safety.
- ***Covered, secure bike storage*** appears to be most effectively targeted to younger people with lower incomes. People who already bike are especially

likely to respond (and to be younger, with lower incomes), as are people who live within five miles of work.

- ***Shower facilities*** appear to be most effectively targeted to workers and students who are between 25 and 54. Older students and people who live within five miles of work are most likely to respond.
- ***More marked crosswalks*** appear to be most effectively targeted to people with children under 15. It may be that walking children to school or allowing children to walk to school, rather than driving them would be the primary source of reduced driving.
- ***Safer pedestrian crossings*** appear to be most effectively targeted to people with lower incomes. It may be that people with lower incomes live in areas with less-safe pedestrian crossings. Women are more likely to respond.
- ***Better directional signs*** appear to be most effectively targeted to people with lower incomes.
- ***Discounts on biking and walking gear*** appear to be most effectively targeted to people with lower incomes. People who already bike or walk are especially likely to respond, as are people who live within five miles of work.
- ***Improved lighting at bus stops*** appears to be most effectively targeted to less-affluent people with less education. Women are more likely to respond.
- ***Shelters at bus stops*** appear to be most effectively targeted to people likely to use the bus (younger people with lower incomes).
- ***The ability to use transit passes for discounts*** appears to be most effectively targeted to budget-conscious people (people with lower incomes and with children under 15) who are likely to use transit. Women are more likely to respond. Those with post-graduate degrees are less likely to respond.
- ***The ability to work at home*** appears to be most effectively targeted to workers under 54 with long commutes. Women are more likely to respond.

In addition, a cluster analysis was performed in order to identify major market segments to target for particular motivators, and also to determine what groups to avoid. The following targeted groups, or clusters were identified as those to emphasize:

- Urban cost/safety conscious
- Citywide professionals
- Suburban commuters

There are two other groups that seem unresponsive to most of the motivators offered in the survey. It may be that the market penetration for these groups has been maximized since they may already use alternative transportation and are simply less likely to use it more or differently. These groups are:

- Older Urbanites
- Poorer Elders

The last part of the survey asked respondents how they would prefer to be informed about alternative ways to travel, and if they would be interested in more information about specific alternative travel options. Those who do not use alternative travel modes currently get their travel related information through newspapers, followed by radio. Those who do use alternative travel modes are more likely to get their travel-related information on websites, followed by newspapers.

When asked what types of alternative travel modes they would like more information about, those who do not use alternatives are most interested in MAX and bus, whereas those who do use alternatives are interested in these modes as well as bicycling and walking.

STRATEGIES FOR CHANGE

Community-based social marketing (CBSM) stresses direct contact with people at the community level to promote behavioral change. It has been demonstrated that this approach can produce higher levels of success per contact than traditional media advertising.

While this may be true, CBSM is often espoused as a distinct alternative to media advertising. However, successful marketing often combines a number of disciplines. CBSM can often be best served when combined with media advertising, earned media and other techniques that reinforce the message. A strong brand established in multiple media will provide a convincing backdrop for effective CBSM efforts.

Portland Metro and its partner agencies' initiative to market transportation options provides an excellent opportunity to support a pervasive CBSM effort. If the message is consistent and coordinated, the overall effect will be maximized.

The scope of work for this project involves identifying benefits and barriers to changing travel behavior and suggesting strategies to address these benefits and barriers. This is a very broad, general objective, versus something more specific (i.e. increasing ridership on a specific transit route). Therefore, suggested strategies and tactics must be somewhat general as well. Keep in mind that many of the motivators identified in research are suggestions for improvements in public transportation facilities or operations (improved safety on public transportation, improved light at bus stops, more marked crosswalks, reduced crowding on public transportation, etc.). Where these motivators/barriers are perceptual only, they might be changed through community-based social marketing. Otherwise, they cannot be addressed through marketing activities without the necessary accompanying facility and operational changes.

The PRR team is recommending 9 strategy approaches:

1. Employer/Employee Outreach
2. Neighborhood Outreach
3. Neighborhood Interventions
4. Rideshare Parties
5. Street Teams
6. Fairs and Festivals
7. Special Day Promotions
8. Partnerships
9. Special Event Shuttles

Introduction & Purpose

After 10 years of implementing transportation demand-management programs in the Portland metropolitan region and in response to changing travel behaviors, Metro and partner agencies are seeking to restructure programs to be more collaborative and effective in marketing alternatives to driving alone. In order to develop effective and efficient outreach strategies that change behavior, the Regional Travel Options Program has conducted research to identify the real and perceived barriers and benefits to changing travel behavior for all types of trips. In response to this need, the PRR team developed a research approach that included the following overall tasks.

LITERATURE REVIEW

A literature review was conducted of articles, reports and studies addressing the benefits and barriers to changing travel behavior. It is included in the first part of this report and full bibliographic references are found in Appendix A. This review includes case studies, database searches, trade publications, academic articles, and a review of attitudes and marketing research performed by the project partners over the last 10 years. The literature review provided direction for qualitative research involving focus groups, which in turn provided direction for a more broad-based telephone survey conducted in November regarding usage of alternative travel modes in the Portland metropolitan region.

QUALITATIVE RESEARCH

In cooperation with the Portland Metro team, the PRR team developed, organized, and moderated two focus groups during the month of October. The focus groups covered the issues, barriers and benefits identified in the literature review. One focus group was composed of those who use alternative travel modes at least 3 days a week on a regular basis. The other group was composed of those who do not use alternative travel modes.

QUANTITATIVE RESEARCH

With Metro's review and approval, the PRR team developed a survey instrument and fielded the survey to a representative sample (n = 608) of the metropolitan region's residents. The survey was designed to obtain statistically valid information on current attitudes and behaviors regarding travel options. Another major goal of the survey was to determine what factors distinguish the use of alternative travel and identify those who might respond positively to incentives for increased use of alternative travel modes.

The following report details the findings of each of these tasks, followed by community-based social marketing recommendations and strategies to motivate people in the Portland Metro area to use alternative modes of transportation.

Literature Review

PROBLEM: THREE-FOURTHS OF AMERICANS DRIVE ALONE.

Since 1960, an increasing number of Americans have driven to work alone. The 2000 Journey to Work census information showed 76 percent of the workers in the United States drove alone to work (A). In Oregon and Washington this number is only slightly smaller, with 73 percent of workers driving alone.

The same data show that in Oregon only 12 percent of all travelers making trips to or from work carpooled, 4.2 percent used public transportation, 3.6 percent walked, 1.9 percent used a motorcycle or bike, and 5 percent worked at home (A), similar to the national rates.

Findings from other transportation-related studies are similar. A Wenatchee, Washington transportation study found that 83 percent of workers drive alone (3). In a study on the use of Lake Washington bridges in the Puget Sound area, over 80% of the participants indicated they were driving alone to and from work (5). In a 2003 Portland public opinion survey about the MAX line, 71 percent of the participants said they drive to work alone (9). It is clear that driving to work alone is a strong trend in the Northwest, as well as nation-wide.

WHY DO SO MANY DRIVE ALONE?

With so many transportation options available, why do so many people drive alone? Research points to the following factors:

- Employer-provided free parking
- Freedom of coming and going
- Inflexibility of public transportation
- Perceived inconvenience of public transportation
- Public transportation perceived as stressful and unsafe
- Some just like driving their cars

Employer-provided parking

In several studies, free parking proved to be a significant barrier to motivating people to not drive alone. One study in particular (22d) found that when employer parking is free, 76% of the workers drive alone vs. 4.8% using transit. When the parking is not free 39% of the workers drive alone, vs. 42% using transit.

Freedom of coming and going

People like being able to come and go as they please. They want the flexibility they feel they can get from their cars (2, 3, 30, 5, 22b, 22c,). They often feel transit does not accommodate their commuting needs, such as dropping off/picking up children from daycare and school, going to appointments before and after work, and running household errands before and after work (22c). They have a need to be able to drive other places throughout their workday and typically trip-chain, especially during weekdays.

Inflexibility, inconvenience, and stress of using public transit

Studies in the Portland area have found that those who ride the Max approve of it and they strongly support new lines being built, but 70% still drive their cars alone (8). Studies in the Seattle area produced similar findings; in general people support and favor the idea of mass transit, they just don't plan to use it themselves (4).

When asked why they drive alone, the most common responses are because public transit is inflexible, it is confusing, there are not enough bus stops, it doesn't meet their irregular work schedule, and they don't always feel safe (2, 3, 30, 5).

People in the Portland tri-county area said they would like to see the current Max line have additional service, reduced crowding, more seats, and more security present (9). Others have indicated that taking public transportation in the Portland tri-county area takes twice as long to get from one place to another than if they just drove alone (10). Overall, people feel like using public transportation would use more time, and time is something people feel they can't waste.

HOW CAN PEOPLE BE MOTIVATED TO USE ALTERNATIVE TRAVEL MODES?

Encouraging and motivating people to use their cars less and reduce driving alone is the main challenge of most transportation agencies and municipalities. There is substantial literature on programs that have been somewhat effective, or not effective at all. The following summary will provide a brief description of some of the most effective programs and why they might be working.

Free public transportation

The most extreme motivational technique to encourage people to use transit services was in Belgium (7f). A mayor chose to close a major "ring-way" (i.e. beltway) instead of spending money to expand and repair it. After closing the major ring-way he announced that all public transportation was free. This action improved the use of public transportation by 800%, and the mayor felt that the money used to support free public transportation was less expensive than repairing and expanding the roadways.

Neighborhood bus passes and allowing community to design the system

Some 60% of Boulder, Colorado residents have a bus pass (7b). The city of Boulder was able to achieve this success by allowing residents significant input in all aspects of the design of public transit service. The community was able to influence the size and design of the buses, what kind of music would be played, the routes, even the interior design.

The city of Boulder also gave employers free passes for their employees, with a safe and guaranteed free emergency ride home. The city encourages neighborhoods to pledge to buy bus passes at $50 dollars a year. Today, the city requires developers of new subdivisions to buy each household three years' worth of bus passes. Although two-thirds of the public transit dollars are paid through federal, state, and local dollars, the low investment of $50 gets people to buy the passes and commit to using them.

Individualized marketing

In Australia "individualized marketing" has been used to decrease solo drivers. Anyone can obtain free, personalized advice on alternative forms of transportation, including "housecalls" to educate residents on available transportation options (7a). One town in Australia that used this technique saw a 10% decrease in car usage with a shift to the use of public transit and cycling. This kind of motivation is starting to gain some recognition as a viable option for encouraging the increased use of public transit (14, 18). This kind of marketing can help people to see that perhaps other transportation options are not as inconvenient, inflexible, or as confusing as they thought they were.

Employer-provided bus passes, or transportation subsides

Convincing employers to encourage their employees to use alternative forms of transportation has also proven successful. A Seattle program enrolled 425 employers that would provide transportation subsidies to employees. This incentive program increased the number of carpool, vanpool and transit trips from 4.7 million to 6.7 million (22g). Some employers achieved additional success with their employees by providing pre-tax commuter benefits or by paying them not to drive to work (7n). In some cases, this kind of financial incentive resulted in a drop off from 89% to 54% solo drivers (7n).

Employer-provided subsidies, however, are not always this successful. Other studies have found that even when employers provide transportation subsidies, many employees do not take advantage of them (3, 5, 8, 22d). In the Portland tri-county area, only 37% took advantage of employer-offered transportation subsidies (8). Other studies found that when employers do not provide subsidies, single occupancy travel is around 71%. Of the 40% of employers in the area that do provide subsidies, the single-occupancy travel rate is still high at 63 % (22d). Even when alternative transportation is provided from employers at a reduced or free rate many people still drive to work alone.

Improve public transportation flexibility, convenience, and perception

In order to convince people that they should quit driving their cars alone, their perception of public transit is going to have to be changed. Research shows that the following factors would be effective motivators (1, 2, 3, 4, 8, 9, 10, 18, 21, 27, 28, 30):

- More bus routes
- More flexible bus schedules
- Guaranteed ride home
- Fewer bus transfers
- Reduced crowding
- Better security
- Equip transit for disabled individuals
- Provide better access to transit (parking, drop-offs at transit centers)

It is interesting to note, however, that even if a city may have already addressed these issues by increasing service and expanding schedules, the public is not necessarily aware of these changes. Geoff Noxon, an authority on decreasing the single occupant vehicle rate, suggested that it is first necessary to remove the external barriers associated with public transit (18). Then work on changing the perception of transit by establishing the use of transit as a "norm." One example of this is how, today, recycling is the norm in many major metropolitan areas (18).

Rideshare programs, carpooling, and vanpooling

In San Francisco, people percieve that carpool lanes save time. If the lanes suddenly disappeared, 66% of those who carpool would stop using them (22d). Much of the success of rideshare programs depends on rideshare data programs that help people connect with others with whom they can share a ride (14,18, 7l, 22g, 22L, 22K). The Internet has proven to be a particularly useful venue, as it allows individuals to visit a website, enter their home and work address, and find either others who may be able to share a ride,or an already established vanpool.

One very successful Internet ridesharing service (NuRide.com) helps people schedule rides with each other, but also offers reward miles for each ride trip they take as a driver or passenger. (22f). People can then redeem their rewards points at major retailers. About 30% of ride requests are being met through this program.

Employer subsidies for transportation alternatives have been shown to increase vanpooling usage by 22,000 trips annually. A Seattle program also found that bike racks on vanpool vans appealed to riders.

Programs for bicycles

King County Metro has installed bike racks on almost all buses, allowing cyclists to use these racks for free on a first-come, first-served basis (7n). This provides many who have to cross Lake Washington via a major roadway the option of still cycling to work.

Other cities have created pedestrian and bike-only zones (7h, 14). Individualized marketing programs have increased cycling usage just by educating people on the services available to cyclists, and creating support groups for those who ride their bikes to work (7a, 18). Other services for cyclist include work-provided shower facilities and guide maps that highlight the best routes for cyclist to use (2, 3, 14).

Motivate with messages about improving air quality and quality of life

Some have recommended more education and compelling messages about the environmental benefits of decreasing use of single-occupancy vehicles(10, 18), citing the success of recycling programs, particularly in the Pacific Northwest. Creating these same kinds of messages around air quality and the use of alternative forms of transportation could be effective (18, 20).

In the Portland tri-county area, respondents of a survey indicated that environmental messages would motivate them to drive alone less frequently (9). It has also been suggested that marketing highlight quality of life benefits and financial savings from by using alternative forms of transportation (20). In many studies people indicate that when they drive alone, they face delays, congestion, traffic jams, increasing gas prices, and detours on a daily basis (1,2,3). Several campaigns have promoted how using alternative forms of transportation can help avoid these daily problems.

Encouraging "trial rides"

To break down perception barriers about public transit systems, several local governments have tried programs such as free bus passes for a month and "leave your car at home today" campaigns (14, 18, 7c, 29). A study in Seattle had families give up their 2nd car for several weeks to experience what using alternative forms of transportation was like (7c). The idea is that providing a temporary incentive encourages drivers to try public transportation and, therefore, overcome perceptions that transit is inconvenient, inflexible, or confusing.

Some marketing strategies have included securing a commitment from regular drivers to try other forms of transportation with a concomitant reward or incentive (18). For example, part of Boulder, Colorado's increased transit use success was brought about through the process of getting individuals to "pledge" to use their passes.

Financial incentives

Local governments have had some success paying people to use alternate forms of transportation. In Atlanta, drivers can earn up to $3 each day (total of $180 over 90 days) to use alternative forms of transportation (22e). So far the program has rewarded 2,200 people and 1.6 million cars have been eliminated from the roadways in about 5 months. A similar financial program was implemented in Alameda, California (7m) and is currently underway in King County, Washington.

Some employers have also tried paying employees to use alternative forms of transportation. CH2M Hill in Seattle offered their employees $40 a month if they walked (7n) to work. Ernst & Young offered pre-tax incentives for commuters to utilize other transportation options.

Qualitative Research

PURPOSE & METHODOLOGY

During mid-October, two focus groups were conducted to understand more fully the barriers and motivators to using alternative travel modes. Using the findings from the previous literature review, the PRR team developed a moderator guide which specifically investigated the following issues in regard to participants' travel in the Portland metropolitan region:

- Trip purposes
- How participants currently travel
- Why they do or do not currently use alternate travel modes
- Benefits of using alternative travel modes
- Motivators to increase their use of alternative travel modes
- Best ways to communicate the various travel options available in the Portland Metro area

This phase of the research consisted of two separate focus groups of nine participants each. Both groups were screened so that none of the participants had been in a focus group in the last six months or had anyone in their household that worked in the transit or transportation field. Participants were also recruited to represent a mix of age, gender, marital status, employment status, and income.

Group 1 consisted of nine participants who use the bus, MAX, streetcars, carpool, vanpool, Flexcar, or walk or bicycle (for non- recreational purposes) on a regular basis at least three days a week. Group 1 also included the following characteristics:

- All the alternative travel modes were available to them
- Half of those in the group owned bicycles
- All had sidewalks on the street where they lived

Group 2 consisted of nine participants who very seldomly or never use alternatives and typically use personal vehicles for travel. Group 2 also had the following characteristics:

- Most all the alternative travel modes were available to them
- They were familiar with all three alternative travel modes (with the exception of FlexCar)
- Half of those in the group owned bicycles
- Half of those in the group had sidewalks on the street where they lived

The groups were similar in that most of the participants do not have fitness club memberships; those who do aren't consistent users. Also, most have 1 or 2 vehicles, some 3. Participants from both groups were unlikely to reduce the number of vehicles they own. Many "love" their cars, the freedom that cars bring, and they use their cars as a form of recreation.

[1] See Appendix B for a copy of the moderator guide.

SUMMARY OF FOCUS GROUP FINDINGS

People know much of their travel is not work related and they're proud of their trip-chaining

In both groups participants did not immediately gravitate to reporting work-related trips. On the contrary, they initially recognized that much of their travel is for other purposes such as shopping, running errands, transporting children, attending recreational activities, etc. None-the-less, both groups were surprised to hear that only about 15-20% of the average person's travel is work-related.

Both groups actively practice trip-chaining, many because it saves time and gas. They have thought this out and seem proud of their management and how it allows them to save time and money.

In both groups, weekend travel is more recreation-oriented. These trips are longer, and less affected by time constraints. Participants are less likely to use public transportation on the weekends, but more likely to carpool with friends for recreational activities.

Time and ability to trip-chain influence mode choice

Both groups reported avoiding certain roads during heavy congestion times and using personal vehicles to come downtown, especially for big events.

As expected, Group 1 does lots of biking, walking, busing, and riding of the Max to get around the area. Much of this travel behavior is motivated by avoiding parking fees in downtown. In fact, when coming downtown both groups are especially likely to use alternatives to avoid parking fees and congestion. This is the case even though alternative travel modes can take longer.

Time plays a much bigger part in mode choice than costs. Many, especially in group 2 mentioned the large difference in travel time using one's vehicle versus public transportation. This is especially the case if transfers are involved.

Group 1 will use their cars when going shopping for larger purchases or when running multiple errands (alternative modes are not conducive to trip-chaining), and they will also use cars when there are time constraints. When it comes to shopping or running multiple errands, bikers and walkers in Group 1 have adopted this mode because their destinations are within biking and walking distance. Group 2 uses cars for similar reasons, but also because they perceive alternatives as creating problems with transfers and the amount of time it takes to travel. Also as expected, Group 2 is aware of and has occasionally used some of the alternatives, but mostly when coming downtown.

Participants from both groups don't see the hidden costs of car ownership, such as car loan interest, car payments, car insurance costs, vehicle servicing costs, etc. When they think of the costs of vehicle ownership they tend to focus on the more immediate fuel and parking costs. Participants are also very comfortable owning a car that they don't use very much.

Carpooling or vanpooling is off the radar screen for most. Carpooling is not used for work commutes by either group because they believe no one they know is going their way. Carpooling is avoided due to concerns about being able to leave work when they need to and not being able to run errands on the way home. However, neither group was familiar with the rideshare services to connect potential carpoolers.

If they had to give up driving for a two-week period, some people would actually welcome the change. If they had to give up driving for two weeks, most would adjust by changing their travel plans, getting a ride with people they know, or using public transportation. If they had to permanently give up driving, those in Group 2 who live further away said they would have to move to the city since their current situation makes them very vehicle-dependent.

Overall, participants reported that they are unlikely to change their travel behavior. Those in Group 2, who are more likely to use personal vehicles, would need some changes (either in their personal circumstances or in transit) if they were to change. A few people in Group 2 said they might be more likely to drive to a MAX station and take the train.

Alternative modes are less comfortable and less safe, but some think it's worth it

Similar to what was discovered in the literature review, our participants avoided use of alternative modes of travel because they perceive them as inconvenient, unsafe, inflexible, and stressful. Some of the specific barriers mentioned by participants included:

- Trips take longer
- Dealing with unsafe people on transit
- Transfers are confusing
- Dealing with inclement weather
- Not conducive to trip-chaining
- People don't know how to use the options

The experience of taking the bus is described by both groups as bumpy, having too many stops, not enough routes, and taking too long because there are not enough express buses. Many also felt they had to deal with unsafe people on the buses and at the bus stops. The experience with the streetcars is that they are too slow. However, most everyone who had used MAX agreed that they liked taking it.

Only one person from Group 1 had used FlexCar, but most in both groups were unfamiliar with FlexCar. Those who bike like it because it is good exercise, but they also feel it is dangerous because drivers are rude and because not all bikers follow the rules of the road.

Participants perceived the overall benefits of using alternative travel modes as stress-reducing, providing cost savings on parking, and getting exercise from walking and biking. They also recognized the benefit of creating community by connecting with others so they are not so socially isolated.

Make it safe, fast, reliable, easy and cheap

Participants in both groups were asked to individually write down measures that would motivate them to use alternative travel modes more frequently. These ideas were then discussed as a group. They reported several things that would motivate them. More transit flexibility such as more bus routes, fares that are easier to pay (whole dollar amounts or fares requiring fewer coin combinations), and faster service would be motivators. Also increased reliability in the bus service would be preferred. Being that safety is a barrier, many mentioned that they would be more motivated if they felt safer using public transportation. Lastly, reduced transit fees or financial incentives for not using their vehicle would possibly motivate participants to use alternate modes of travel.

After participants provided unaided motivators for using alternative travel modes on their own, they were asked to individually indicate if a series of factors would motivate them. For Group 1 the motivators that received the highest percentage of "yes" responses were company vanpool, better bus scheduling, fewer bus transfers, improved security on public transit, and more marked crosswalks. After further discussion they also stated they would be motivated by:

- Safe, clean, comfortable buses; covered and lighted bus stops
- More bike lanes, safer bike lanes
- Subsidizing alternative mode costs in a variety of ways
- Reducing overcrowding on buses
- More bus routes, fewer transfers
- Clear bus schedules at stops
- Variety of incentives to make alternative modes more attractive such as tax breaks, reimbursement, or elimination of free parking

For Group 2 the motivators that received the highest percentage of "yes" responses were bus passes sold at a reduced rate, lower transit prices in general, receiving a stipend for using public transportation, more bike lanes, and covered, secure bike storage facilities. With further discussion of motivators Group 2 also stated they would be motivated by:

- More bus routes, fewer transfers
- More designed communities with work, shopping, recreation within walking distance
- Increased safety on buses
- Reduced bus fares
- Safer bike lanes
- Variety of incentives to make alternative modes more attractive such as tax breaks, reimbursement, or elimination of free parking

Both groups also indicated they would be motivated by employer provided subsidies for carpooling, taking transit, biking, or walking.

Not a big demand for more information about alternative travel modes

Because those in Group 1 already think they have all the information they need, they reported no particular need for additional information about alternate travel modes in the Portland metropolitan region. But even in Group 2 there was not a big demand for this type of information. The participants in both groups felt if they needed this type of information they would look to the Internet because that is where they get most of their information for travel and transportation issues.

Suggestions made by participants for improving the communication about alternative travel modes included:

- Make it available in public libraries, supermarkets, etc.
- Get employers more involved in communicating and supporting the use of alternatives for their employees
- Have newspapers do feature stories on the options
- Radio ads
- Give free give-aways to induce people to try the options
- Be able to call a live person and get information
- Educate school children who will spread the word to parents

Quantitative Research

PURPOSE & METHODOLOGY

To assess the applicability of information gathered during the focus groups on the general population and on market clusters, a 12-minute telephone survey was conducted of a representative sample of Portland area residents.[2] The questionnaire was developed by the PRR team, in collaboration with Metro, to understand the following concepts:

- Travel behavior
- Trip purposes
- Motivators to use alternative travel modes
- Ways to communicate information about alternative travel options

Sampling

Random digit dialing was used to account for unlisted telephone numbers and random digit dialing numbers were generated for telephone exchanges within zip codes that had good access to the following alternative travel modes:

- Buses
- MAX light rail
- Streetcars
- Carpools
- Vanpools
- Flexcar
- Bicycling (for non-recreational purposes)
- Walking (for non-recreational purposes)

The survey was fielded to a disproportionate stratified random sample of 608 households. Respondents were 16 years of age or older. The sample was stratified by travel modes, with 305 respondents being those who had used alternatives to single-occupancy vehicles at least two days in the previous week. The remaining 303 respondents did not use any alternative travel modes during the previous week. Within these two major-sample segments, households were sampled proportionate to household percentages from three counties:

- Multnomah County (58%)
- Washington County (28%)
- Clackamas County (14%)

To control for sampling bias, at least ten attempts were made to contact each randomly selected household at different times of the day and different days of the week. Overall, a 48% cooperation rate was achieved, well beyond the typical 25% cooperation rate for telephone surveys.

[2] To review the actual survey see Appendix C.

Statistical analysis

In addition to descriptive statistics such as percentages and means, the analysis was designed to determine the extent to which various attributes of the respondents affected the likelihood that a respondent would use a particular alternative mode or would respond to a particular motivator[3]. This information allows the choice of motivators and marketing efforts to be targeted to those most likely to respond.

Two analytical techniques were used in this analysis:

1. A market-segmentation method called logistical regression or a logit model was used to predict the likelihood of making a discrete choice (e.g., to answer "yes" or "no" to a survey question), given a set of attributes of the person making the choice or the nature of the choice, as well as the impact of individual attributes on a particular choice. We chose attributes for which sufficient numbers of respondents provided information and that potentially could be used to target marketing efforts.

2. Another market segmentation method called cluster analysis was used to identify distinct clusters of customers who offer greater market potential with more targeted marketing

SURVEY RESULTS

Travel characteristics

To understand current travel behavior, respondents were asked a series of questions about how often they use certain travel alternatives, the purposes of their trips, errands or activities they conducted while traveling, how close they live to alternatives such as bus or MAX stops, why they might drive alone, etc. For comparison purposes they were also asked questions about their employment status, whether they commute to work or school, the distance between their home and where they commute, and the flexibility they have in their commute.

Overall, of the sub-sample that uses alternative travel modes, about 58% of the respondents use alternative travel modes at least two days a week, and 42% use alternative travel modes three or more days a week.

When comparing the two groups in this survey (those that use alternatives to driving alone at least two times each week, and those that don't use alternatives) there is no significant difference between them in the percent that commute, in the amount of time it takes to commute, nor in the distance of their commute. Both groups are similar in the frequency with which they change their travel plans to avoid traffic congestion (about 40%) and in their flexibility in the time they can commute to or from work/school (40-45% have no flexibility; 25%-30% have ½ hour flexibility). Lastly there is no difference between these two groups when it comes to trip-chaining that is connected with their commuting.

[3] All reported results are at the .05 level of statistical significance, unless otherwise specified.

Overall, households with more members are less likely to use alternative modes of travel. Households with more members 15 year-of-age or younger are also less likely to use alternative travel modes. In general, older respondents are less likely to use alternative travel modes.

For analysis purposes, we examined how the attributes of the respondent affect the likelihood that they would already be using each of the alternative modes. The following section outlines these findings.

- ***Bus***
  Being under 25, having income less than $50,000, being a student, and living within five miles of work all significantly increased the likelihood of using the bus.
- ***MAX Light Rail***
  Being under 25, having income less than $50,000, and being a student significantly increased the likelihood of using the train. Being over 54 significantly reduced the likelihood of using the train.
- ***Streetcar***
  No attribute significantly increased or reduced the likelihood of using the streetcar. It should be noted that the streetcar currently serves only a part of downtown Portland and a part of northwest Portland. To determine which attributes affect the likelihood of using the streetcar, we would have to know which respondents could have used the streetcar.
- ***Carpool***
  Being under 25 and being a student significantly increased the likelihood of using a carpool. No attribute significantly reduced the likelihood of carpooling.
- ***Vanpool***
  No attribute significantly increased or reduced the likelihood of using a vanpool. Many respondents may be unfamiliar with the concept of a vanpool, and some of those reporting vanpool use may have actually carpooled in a minivan.
- ***FlexCar***
  Only four reported using a FlexCar at least once in the prior week. All four FlexCar users had at least a college education and three of the four had incomes over $50,000. No users were under 25. FlexCars may not be available to drivers under 25 for insurance reasons.
- ***Bicycle (non-recreational)***
  Being under 55 and being male significantly increased the likelihood of using a bicycle.
- ***Walking (non-recreational)***
  Being under 55, living alone, being a student, and living within five miles of work significantly increased the likelihood of walking.

Motivators to using alternative travel modes

A major focus of this research project is to learn what motivates people to use alternative modes of travel, specifically in the Portland metropolitan region. Thus, respondents that had used alternative modes regularly at least two days a week were asked what their top three motivators *initially* were for doing so. All respondents were then asked whether a series of twenty-six potential motivators would *actually* get them to not drive alone at least one more day per week. Respondents could answer either "yes" or "no" to each motivator. After being asked about all twenty-six motivators they were asked to name the two motivators that would motivate them the most.

The following items highlight what motivated those who already use alternative travel modes:

- Cost of parking
- Higher gas prices
- Parking hard to find
- Traffic congestion
- Reduced stress by not driving alone
- Enjoyment of traveling with others

These results indicate an emphasis on three general types of motivators: cost, convenience (less hassle) and social.

The following table provides a summary of which motivators were the most compelling for both sample sub-groups. The results in Table 1 also indicate the importance of three major motivating factors: cost, convenience less hassle) and safety.

Table 1: What Would Motivate People to Drive Alone One Less Day Per Week?*

Motivators	Use alternative modes	No alternative mode use
Company or school vanpool	39%	31%
Employer or school provided financial incentive for using alternative travel modes	63%	31%
Ability to work at home one day per week	55%	30%
Guaranteed ride home from work in emergencies	54%	28%
Transit passes sold at a reduced rate, such as $50 per year	61%	25%
More express buses	50%	23%
Shelters at bus stops	51%	22%
Improved safety on public transportation	46%	22%
Safer pedestrian crossings	41%	21%
Ability to use transit passes for discounts at local shopping	50%	20%
Transit passes sold at work or school	45%	20%
Carpool matching service	30%	19%
Information on how air quality is improved	33%	19%
Safer bike lanes	41%	19%
Improved lighting at bus stops	46%	18%
Information on how using public transportation saves you money	37%	17%
Preferential parking at work or school for carpoolers	41%	16%
More marked crosswalks	34%	16%
Better directional signs for bike and pedestrian routes	33%	16%
Discounts for bicycles, bicycle equipment, walking shoes and raingear	44%	16%
Covered, secure bike storage facilities	37%	15%
Reduced crowding on public transportation	45%	14%
More bike lanes	39%	14%
Information on how your health can be improved by biking and walking	29%	13%
Shower facilities at work or school	26%	11%
Free consultation service to learn all your 'personal' transportation options	34%	11%

*Displayed in descending order of those who did not use alternative modes in previous week; items in italics show no significant difference between the two groups.

DETAILED STATISTICAL ANALYSIS OF MOTIVATORS

An analysis was conducted of the relationship between attributes of the respondents and each of the 26 motivators listed in the survey. Respondents were asked to indicate whether each of the potential motivators would actually get them to not drive alone at least one more day per week. In general, those attributes that did not have a statistically significant relationship to a particular motivator are not discussed. Our purpose here is to look at motivators for increased market share. Those for whom there is already a large market share would not require additional motivators.

Employer-provided financial incentive for using transit, carpooling, walking or biking

Financial incentives appear to be most effectively targeted to younger, less-affluent people, including students.

- Being under 25, being a student, having less than $50,000 in income, and living within five miles of work all significantly improved the odds of answering "yes."
- Being over 54 significantly lowered the odds of answering "yes."
- Of the 450 workers and students, 246 already used an alternative mode at least 2 days a week. Of those, 156 answered "yes," and only having an income of less than $50,000 significantly increased the odds of answering "yes." Being over 54 significantly lowered the odds of answering "yes."
- For the 204 who do not use any alternative mode, 63 answered "yes," including almost all who were under 25 or were students. Having income under $50,000, living in a two-adult household, and living within five miles of work also significantly increased the odds of answering "yes." No attribute significantly lowered the odds of answering "yes."

Carpool matching service

Carpool matching services appear to be most effectively targeted to less-affluent workers and students who commute longer distances. Women seem more interested than men.

- Being a worker significantly improved the likelihood of answering "yes," and by a large amount (tripling the odds). Having income under $50,000, being a student, and being female also significantly increased the odds of answering "yes." Living within five miles of work significantly reduced the odds of answering "yes." Living alone decreased the odds of answering "yes," but that result is significant only at the 86% confidence level.
- For the 305 who already used an alternative travel mode. Of those, 90 answered "yes." Again, being a worker significantly increased the odds of answering "yes," as did being female. Living alone and living within five miles of work significantly reduced the odds of answering "yes."

- For the 303 who do not use any alternative mode, 58 answered "yes." Being a worker and being under 25 significantly increased the odds of answering "yes;" no attribute significantly reduced the odds.
- Of the 55 respondents who already used carpools, 23 said a matching service would cause them to drive alone less. Being a worker or student significantly increased the likelihood of answering "yes" and having a post-graduate education significantly reduced the likelihood of answering yes.

Preferential parking at work for carpoolers

Preferred parking for carpoolers appears to be most effectively targeted to less-affluent workers. It is not a powerful motivator and may have the unintended consequence of encouraging people to shift from transit to carpools.

- Having less than $50,000 in income significantly improved the odds of answering "yes." No attribute significantly lowered the odds of answering "yes."
- Of the 450 workers and students, 246 already used an alternative mode at least 2 days a week. Of those, 101 answered "yes," and only having an income of less than $50,000 significantly increased the odds of answering "yes." Living alone significantly lowered the odds of answering "yes."
- For the 204 who do not use any alternative mode, 33 answered "yes." No attribute significantly increased or reduced the odds of answering "yes."
- Of the 47 workers and students who already use carpools, 25 indicated that preferential parking would lead them to carpool more often. No attribute significantly increased or reduced the odds of answering "yes."

Transit passes sold at work

Selling parking passes at work (or school) appears to be most effectively targeted to less-affluent workers and students. Women seem more interested than men.

- Having less than $50,000 in income, being a student, and being female significantly improved the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes."
- Of the 450 workers and students, 246 already used an alternative mode at least 2 days a week. Of those, 110 answered "yes," and only having an income of less than $50,000 significantly increased the odds of answering "yes." Living alone significantly lowered the odds of answering "yes."
- For the 204 who do not use any alternative mode, 40 answered "yes." Having an income of less than $50,000 significantly increased the odds of answering "yes." No attribute significantly reduced the odds of answering "yes."
- Of the 147 workers and students who already use transit, 84 indicated that passes sold at work would lead them to ride more often. Being a student significantly increased the odds of answering "yes." No attribute significantly reduced the odds of answering "yes."

Transit passes sold at a reduced rate, such as $50 per year

Less expensive transit passes appear to be most effectively targeted to less-affluent people, including students. Women seem more interested than men.

- Having income under $50,000, being a student, living alone, and having kids significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes."
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 187 answered "yes." Having income under $50,000 significantly increased the odds of answering "yes." No attribute significantly reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 76 answered "yes." Being a student significantly increased the odds of answering "yes." Living in a household with more than two adults, but no children under 15, significantly reduced the odds.
- Of the 172 respondents who already use transit, 126 said cheaper passes would cause them to drive alone less. No attribute significantly increased or reduced the likelihood of answering "yes."

Company vanpool

Providing company vanpools appears to be most effectively targeted to less-affluent workers. Women seem more interested than men.

- Being under 25, having less than $50,000 in income, and being female significantly improved the odds of answering "yes." Being over 54, having no college, or having a post-graduate education significantly reduced the odds of answering "yes."
- Of the 450 workers and students, 246 already used an alternative mode at least 2 days a week. Of those, 95 answered "yes," and having an income of less than $50,000 and being female significantly increased the odds of answering "yes." Having no college or having a post-graduate education significantly reduced the odds of answering "yes."
- For the 204 who did not use any alternative mode, 63 answered "yes." Having children under 15 significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes."

More express buses

More express buses appear to be most effectively targeted to workers and students.

- Having children under 15, being a student, and being a worker significantly increased the odds of answering "yes." No attribute significantly reduced the odds of answering "yes."
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 154 answered "yes." No attribute significantly increased or reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 70 answered "yes." Being a worker significantly increased the odds of answering "yes." No attribute significantly reduced the odds.
- Of the 115 respondents who already use buses, 78 said more express buses would cause them to drive alone less. Having some college or a four-year college degree significantly increased the likelihood of answering "yes."

Free consultation service to learn all your "personal" transportation options

Free consultation appears to be most effectively targeted to less affluent people with less education. It does not appear to be a powerful motivator, especially for people who do not already use alternative modes. Those with more education may feel that they can figure it out for themselves. It is also possible that to more adequately assess its impact as a motivator, the nature of this motivator needs to be further explained to respondents than was possible in this survey.

- Having income under $50,000 significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes." The likelihood of answering "yes" was inversely correlated with education, but those results were statistically significant only at the 75% confidence level.
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 105 answered "yes." No attribute significantly increased or reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 32 answered "yes." Having income under $50,000 significantly increased the odds of answering "yes." No attribute significantly reduced the odds.

Guaranteed ride home from work in emergencies

Guaranteed rides home appear to be most effectively targeted to less affluent and younger workers and students. More-affluent workers may see taxis as a viable guarantee.

- Having income under $50,000, being a worker, and being a student significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes."
- Looking only at the 450 respondents who are workers or students, 214 answered "yes." Having income under $50,000 significantly increased the likelihood of answering "yes." Being over 54 significantly reduced the odds of answering "yes."
- Of the 450 respondents, 246 already used an alternative mode at least 2 days a week. Of those, 141 answered "yes." No attribute significantly increased reduced the odds of answering "yes."
- For the 204 who do not use any alternative mode, 73 answered "yes." No attribute significantly increased or reduced the odds.

Reduced crowding on public transportation

Reduced crowding appears to be most effectively targeted to people with lower incomes and less education.

- Having income under $50,000, having no college education, and being a student significantly increased the odds of answering "yes." No attribute significantly reduced the odds of answering "yes." Unlike most motivators, this one appealed more to people over 54, but the difference was not statistically significant.
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 137 answered "yes." No attribute significantly increased reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 43 answered "yes." Having no college education and being a worker significantly increased the odds of answering "yes." No attribute significantly reduced the odds.
- Of the 172 respondents who already use transit, 89 said less crowding would cause them to drive alone less. Having a post-graduate education significantly reduced the likelihood of answering "yes."

Improved safety on public transportation

Improved safety on transit appears to be most effectively targeted to women and to people with lower incomes and less education.

- Having income under $50,000 and being female significantly increased the odds of answering "yes." No attribute significantly reduced the odds of answering "yes."

- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 141 answered "yes." Having no college education significantly increased the likelihood of answering "yes." No attribute significantly reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 66 answered "yes." Being a worker and being female significantly increased the odds of answering "yes." No attribute significantly reduced the odds.
- Of the 172 respondents who already use transit, 87 said more safety would cause them to drive alone less. No attribute significantly increased the likelihood of answering "yes."

Information on how using public transportation saves you money

Information about how transit saves you money appears to be most effectively targeted to people with lower incomes and less education

- Having no college education significantly increased the odds of answering "yes." Having a post-graduate education significantly reduced the odds of answering "yes."
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 112 answered "yes." No attribute significantly increased the odds of answering "yes." Having a post-graduate education significantly reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 50 answered "yes." Having income under $50,000 significantly increased the odds.
- Of the 172 respondents who already use transit, 73 said information about saving money would cause them to drive alone less. Having a post-graduate education significantly reduced the odds of answering "yes."

Information on how biking and walking can improve your health

Information about health benefits appears to be most effectively targeted to everyone, though people with less income or who live near where they work may be more likely to actually reduce drive-alone trips.

- Having income under $50,000 significantly increased the odds of answering "yes." No attribute significantly reduced the odds of answering "yes." Those who lived within five miles of work were more likely to answer "yes," but that result was significant only at the 87% confidence level.
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 89 answered "yes." No attribute significantly increased or reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 39 answered "yes." Living within five miles of work significantly increased the odds.

- Of the 260 respondents who already walk or bike, 75 said information about health benefits would cause them to drive alone less. Having a post-graduate education and living alone significantly reduced the odds of answering "yes."

Information on how air quality is improved

Information about how air quality is improved appears to be most effectively targeted to people with lower incomes and less education.

- Having income under $50,000 significantly increased the odds of answering "yes." No attribute significantly reduced the odds of answering "yes."
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 102 answered "yes." No attribute significantly increased the odds of answering "yes." Having a post-graduate education significantly reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 58 answered "yes." Living within five miles of work significantly increased the odds of answering "yes." No attribute significantly reduced the odds.

More bike lanes

More bike lanes appear to be most effectively targeted to younger people with lower incomes and more education. People who already bike are especially likely to respond (and to be younger, with lower incomes and more education), as are people who live within five miles of work.

- Having income under $50,000, having a post-graduate education, being a student, and living within five miles of work all significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes."
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 118 answered "yes." Having income under $50,000 and being a student significantly increased the odds of answering "yes." Being single significantly reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 41 answered "yes." Having kids under 15 significantly increased the odds of answering "yes." No attribute significantly reduced the odds.
- Of the 55 respondents who already bike, 36 said more bike lanes would cause them to drive alone less. Having a post-graduate education, living within five miles of work, and being female significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes."

Safer bike lanes

Safer bike lanes appear to be most effectively targeted to people between 25 and 54 with lower incomes. People who already bike are especially likely to respond, but younger bikers are less concerned with safety.

- Having income under $50,000, having kids under 15, being a student, and living within five miles of work all significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes."
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 126 answered "yes." Having income under $50,000 and being a student significantly increased the odds of answering "yes." Being under 25 or being over 54 significantly reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 58 answered "yes." Having income under $50,000 significantly increased the odds.
- Of the 55 respondents who already bike, 38 said more bike lanes would cause them to drive alone less. No attribute significantly increased or reduced the odds.

Covered, secure bike storage facilities

Covered, secure bike storage appears to be most effectively targeted to younger people with lower incomes. People who already bike are especially likely to respond (and to be younger, with lower incomes), as are people who live within five miles of work.

- Having income under $50,000, having kids under 15, and living within five miles of work all significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes."
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 113 answered "yes." Having income under $50,000 significantly increased the odds of answering "yes." No attribute significantly reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 44 answered "yes." Living within five miles of work and having kids under 15 significantly increased the odds of answering "yes." No attribute significantly reduced the odds.
- Of the 55 respondents who already bike, 34 said covered, secure bike storage would cause them to drive alone less. Living within five miles of work significantly increased the odds of answering "yes." No attribute significantly reduced the odds of answering "yes."

Shower facilities at work/school

Shower facilities appear to be most effectively targeted to workers and students who are between 25 and 54. Older students and people who live within five miles of work are most likely to respond.

- Being a student and living within five miles of work all significantly increased the odds of answering "yes." Being under 25 or over 54 significantly reduced the odds of answering "yes."
- Of the 450 workers and students, 246 already used an alternative mode at least 2 days a week. Of those, 64 answered "yes." Being a student and living within five miles of work all significantly increased the odds of answering "yes." Being under 25 significantly reduced the odds of answering "yes."
- For the 204 who do not use any alternative mode, 22 answered "yes." Having no college education or having a post-graduate education significantly increased the odds of answering "yes." No attribute significantly reduced the odds.
- Of the 50 workers and students who already bike, 25 said shower facilities would cause them to drive alone less. Being in a two-adult household without kids significantly reduced the odds of answering "yes."

More marked crosswalks

More marked crosswalks appear to be most effectively targeted to people with children under 15. It may be that walking children to school or allowing children to walk to school, rather than driving them would be the primary source of reduced driving.

- Having income under $50,000 and having kids under 15 significantly increased the odds of answering "yes." No attribute significantly reduced the odds of answering "yes."
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 103 answered "yes." No attribute significantly increased or reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 48 answered "yes." Having kids under 15, living within five miles of work, and being female significantly increased the odds of answering "yes." No attribute significantly reduced the odds.
- Of the 244 respondents who already walk, 84 said more marked crosswalks would cause them to drive alone less. No attribute significantly increased or reduced the odds of answering "yes."

Safer pedestrian crossings

Safer pedestrian crossings appear to be most effectively targeted to people with lower incomes. It may be that people with lower incomes live in areas with less-safe pedestrian crossings. Women are more likely to respond.

- Having income under $50,000 and being female significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes."
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 126 answered "yes." Having income under $50,000 significantly increased the odds of answering "yes." No attribute significantly reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 64 answered "yes." Having income under $50,000, living within five miles of work, and being female significantly increased the odds of answering "yes." No attribute significantly reduced the odds.
- Of the 244 respondents who already walk, 106 said safer pedestrian crossings would cause them to drive alone less. Having income under $50,000 significantly increased the odds of answering "yes." No attribute significantly reduced the odds of answering "yes."

Better directional signs for bike and pedestrian routes

Better directional signs appear to be most effectively targeted to people with lower incomes.

- Having income under $50,000 significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes."
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 102 answered "yes." Having income under $50,000 significantly increased the odds of answering "yes." Being under 25 or over 54 significantly reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 47 answered "yes." No attribute significantly increased or reduced the odds.
- Of the 260 respondents who already walk or bike, 92 said better signs would cause them to drive alone less. Having income under $50,000 significantly increased the odds of answering "yes." Being under 25, being over 54, and living in a two-adult household without children significantly reduced the odds of answering "yes."

Discounts for bicycles, bicycle equipment, walking shoes and raingear

Discounts on biking and walking gear appear to be most effectively targeted to people with lower incomes. People who already bike or walk are especially likely to respond, as are people who live within five miles of work.

- Having income under $50,000, being a student, and living within five miles of work all significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes."
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 133 answered "yes." Having income under $50,000 significantly increased the odds of answering "yes." Being under 25 or over 54 significantly reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 47 answered "yes." Having income under $50,000, having a post-graduate education, and being female significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds.
- Of the 260 respondents who already bike or walk, 120 said discounts would cause them to drive alone less. Having income under $50,000, being a student and living within five miles of work significantly increased the odds of answering "yes." Being under 25 and living in a two-adult household without children significantly reduced the odds of answering "yes."

Improved lighting at bus stops

Improved lighting at bus stops appears to be most effectively targeted to less affluent people with less education. Women are more likely to respond.

- Having income under $50,000, having no college education, living alone, living within five miles of work, and being female significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes."
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 141 answered "yes." Having income under $50,000, having no college education, and being female significantly increased the odds of answering "yes." No attribute significantly reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 54 answered "yes." Being female significantly increased the odds of answering "yes." No attribute significantly reduced the odds.
- Of the 115 respondents who already use buses, 68 said improved lighting would cause them to drive alone less. No attribute significantly increased the likelihood of answering "yes." Being under 25 and having a post-graduate education significantly reduced the odds of saying "yes."

Shelters at bus stops

Shelters at bus stops appear to be most effectively targeted to people likely to use the bus (younger people with lower incomes).

- Having income under $50,000 significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes."
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 156 answered "yes." No attribute significantly increased the odds of answering "yes." Having a post-graduate education significantly reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 67 answered "yes." Having income under $50,000 and being female significantly increased the odds of answering "yes." Having no college education significantly reduced the odds.
- Of the 115 respondents who already use buses, 81 said shelters would cause them to drive alone less. No attribute significantly increased the likelihood of answering "yes." Being over 54, having income under $50,000, having a post-graduate education, and being a worker all significantly reduced the odds of saying "yes."

Ability to use transit passes for discounts at local shopping

The ability to use transit passes for discounts appears to be most effectively targeted to budget-conscious people (people with lower incomes and with children under 15) who are likely to use transit. Women are more likely to respond. Those with post-graduate degrees are less likely to respond.

- Having income under $50,000, having kids under 15, being a student, living within five miles of work and being female all significantly increased the odds of answering "yes." Being over 54 and having a post-graduate education significantly reduced the odds of answering "yes."
- Of the 608 respondents, 305 already used an alternative mode at least 2 days a week. Of those, 151 answered "yes." Having income under $50,000, having kids under 15, and living within five miles of work all significantly increased the odds of answering "yes." Having a post-graduate education significantly reduced the odds of answering "yes."
- For the 303 who do not use any alternative mode, 62 answered "yes." Having income under $50,000 and being female significantly increased the odds of answering "yes." Having a post-graduate education significantly reduced the odds.
- Of the 172 respondents who already use transit, 99 said discounts would cause them to drive alone less. Having kids under 15 and being female significantly increased the likelihood of answering "yes." Having a post-graduate education significantly reduced the odds of saying "yes."

Ability to work at home one day per week

The ability to work at home appears to be most effectively targeted to workers under 54 with long commutes. Women are more likely to respond.

- Looking only at those 416 respondents who work, 204 answered "yes." Being female significantly increased the odds of answering "yes." Being over 54 significantly reduced the odds of answering "yes."
- Of the 416 respondents who work, 215 already used an alternative mode for at least one trip. Of those, 128 answered "yes." No attribute significantly increased or reduced the odds of answering "yes."
- For the 201 workers who do not use any alternative mode, 76 answered "yes." Being under 25 and being female significantly increased the odds of answering "yes." Living within five miles of work significantly reduced the odds.

TARGETED CLUSTER ANALYSIS OF MOTIVATORS

In addition to the previous analysis, a cluster analysis was performed in order to identify specific-market segments that exhibited a measurable response to particular motivators. This analysis also identified market segments with limited motivational response. The following targeted groups, or clusters, were identified.

Potentially Responsive Clusters

We identified three market segments where specific and targeted programs might stimulate increased interest in alternatives to driving alone. These clusters represent 56.4% of all respondents to the telephone survey

Urban cost/safety conscious

This group of 111 people, 18% of the sample, is distinguished by living closer to their work (1.7 mi. compared to 6.8 mi.), having more children, yet fewer cars. They are generally younger (25-34 years of age), less educated, more likely to be female and have lower incomes.

They are by far the group most interested in taking advantage of alternatives to driving alone – responding to 50% of the potential motivators in the survey compared to the 30% average. They are the most responsive group to free consultations to learn about their "personal" transportation options (40% vs. 23% amongst all respondents). They were also the most responsive to transit passes sold at reduced rates (71% vs 43%). Their next most relevant motivator was the ability to use transit passes for discounts at local shops (67% compared to 35% amongst all individuals). Also, this group is twice as likely to react to employer-provided financial incentive for using alternatives (63% vs. 36%).

This group is more safety conscious and risk averse. They would respond to guaranteed ride home from work in emergencies (63% vs.41%), shelters at bus stops (63% vs. 37%), improved safety on public transportation (59% vs. 34%), and improved lighting at bus stops (58% vs. 32%).

This group is also amenable to walking or biking through discounts for bikes, bike equipment, walking shoes, raingear (56% vs. 30%); safer bike lanes (55% vs. 30%); covered, secure bike storage facilities (53% vs. 25%); and shower facilities at work (24% vs. 14%).

Citywide professionals

This group of 159 people, 26% of the sample, is characterized by being 1 mile further away from their work than the average of 6.8 miles. They have slightly smaller households (2.3 compared to 2.6) and are more likely to be male and more educated. Their incomes are noticeably higher than the average and are generally in the 45 to 54 year age range.

This group is somewhat more responsive to employer-provided financial incentives for using alternative modes (42% vs. 36%), as well as to company-sponsored vanpools (35% vs. 26%). This group is less likely to respond to discounts at local shops than other groups (28% vs. 35%).

Finally, this group appears to be more time conscious citing more express buses as a motivating factor (42% compared to 36%).

Suburban commuters

This group of 73 respondents, 12% of the sample, is differentiated from other responsive clusters by their long commutes to work. On average they commute 14.7 miles to work compared to the average 6.8. Suburban commuters have average-sized households but tend to have more drivers per household than average. Also, this group is more educated, has higher incomes and is equally likely to be male or female, typically in the 35 to 44 age range.

This group appears more responsive to employer-sponsored alternatives, showing interest in employer-provided financial incentives for using alternatives (44% vs. 36%) and for company vanpools (40% vs. 26%). Also, this group showed interest in transit passes sold at work (33% vs. 25%) and a carpool matching service (33% vs. 24%). For individuals working at larger companies, these options are more likely to be offered, but for individuals working at smaller companies there may be less of an opportunity to participate in such programs.

Generally this group is less worried about the safety conditions of the alternative modes responding in low numbers to improved lighting at bus stops (21% vs. 32%), safer pedestrian crossings (15% vs. 31%), covered, secure bike storage facilities (15% vs. 25%). They are also less likely to consider biking or walking, probably due to their longer commutes.

Clusters with Limited Market Potential

Two other groups seem less inclined to increase their current use of non-auto alternatives, registering a relatively low response to most of the motivators offered in the survey. Some respondents included in these clusters may already be using transit or alternative forms of transportation.

Older urbanites

This group of 99 respondents makes up about 16 percent of the sample. They are likely to be more educated with above-average incomes. However, their distinguishing features are both their short commutes (0.7 miles compared to the 6.8 mile average) and their older age (lower 50's on average compared to lower 40's on average).

Lower-income elders

This group is similar to the older urbanites because of their age (averaging slightly over 60 years) and distance to their work place; however, they constitute a different market segment because of having decidedly lower incomes and less education. Making up 17 percent of the sample (103 respondents), this groups also has fewer drivers, fewer children, and much smaller households. All of these factors are likely to be closely correlated with the age of the respondent.

PEOPLE WANT MORE INFORMATION ON MAX AND BUS, BUT THE COMMUNICATION MEDIUM NEEDS TO BE ON TARGET

The last part of the survey asked respondents how they would prefer to be informed about alternative ways to use travel, and if they would be interested in more information about specific alternative travel options.

As illustrated in Table 2, those who do not use alternative travel modes currently get their travel related information through newspapers, followed by radio. Those who do use alternative travel modes are more likely to get their travel-related information on websites, followed by newspapers.

Table 2: Primary ways now keep informed about travel in metro region:

	Use alternative modes	No alternative mode use
Websites	23%	11%
Newspaper	17%	22%
Television	14%	13%
Radio	6%	15%

When asked what types of alternative travel modes they would like more information about, those who do not use alternatives are most interested in MAX and bus, whereas those who do use alternatives are also interested in these modes, as well as bicycling and walking.

Table 3: Interest in more information about*:

	Use alternative modes	No alternative mode use
MAX light rail	29%	19%
Bus	28%	18%
Carpooling	17%	13%
Bicycling for non-recreational purposes	27%	13%
Walking for non-recreational purposes	27%	13%
Vanpool	17%	11%
Flexcar	19%	10%
Street cars	19%	8%

*Displayed in descending order of those who did not use alternative modes in previous week; items in italics show no significant difference between the two groups

Summary and Outreach Strategy Recommendations

Behavior is a driven by needs, both physical and psychological. How we meet those needs is influenced by barriers and benefits, both real and perceived.

The travel modes that we select are also driven by needs. These choices are influenced by barriers and benefits. These barriers and benefits vary in importance somewhat by region, demographic profile, and cultural factors, but are none-the-less found to be remarkably consistent in studies across the United States.

The literature review, focus groups, and telephone survey that the PRR team conducted in the fall of 2004 has identified a number of travel mode benefits and barriers which are charted below.

Barriers and Benefits to Non-SOV Alternative Travel Modes

Barriers	Benefits
1 Employer provided free parking	• Directly reduces out-of-pocket costs and contributes to reducing hidden costs, like the costs of car ownership, including car payments, maintenance and insurance. • Reduced mileage increases resale and trade-in values and helps extend life of owned vehicles. • Employers who provide subsidized transit passes need less employee parking. • Employers can provide preferential parking for carpools and vanpools.
2 Lack of freedom to come and go	• Users of alternative modes are less affected by traffic congestion and lack of parking.
3 Car is needed for family emergencies	• In a true emergency, other transportation options are usually available, including taxis, friends with vehicles, company-owned vehicles and “guaranteed ride home.”
4 Inflexibility of public transportation	• Public transportation is generally reliable and predictable. • Taxis can be used for emergencies. • Guaranteed Ride Home programs allow for late work day. • Bicycles, while slower, can avoid traffic congestion and are more flexible than cars.

5 Automobiles can't skirt traffic congestion	• Rail transit is separated from traffic congestion in many areas. • Buses, carpools and vanpool can take advantage of HOV lanes. • Bicycles and pedestrians can avoid traffic congestion.
6 Perceived inconvenience of public transportation and alternative modes	• Trip planning can make alternative modes more convenient • Public transportation is normally linked to major employment, shopping and recreational destinations. • Many employers are now providing bicycle racks
7 Perceived danger riding a bicycle	• According to some research, "responsible" biking is comparable in safety to driving an SUV.
8 Perception of public transportation as stressful and unsafe	• Most buses and rail cars are safe and comfortable. • Buses and trains are much safer than cars; less likely to be involved in accidents and less likely to produce fatalities. • Public transportation allows riders to read, socialize, operate laptops and listen to personal music.
9 Biking and walking exposes participants to the weather	• Weatherproof gear is commonly available for walking and biking. • Employers are increasingly providing showers, lockers and relaxed dress codes that allow for biking and walking.
10 Driving is pleasurable and fun	• Public transportation is less stressful. • Biking and walking are healthier. • Sharing the ride is an opportunity to socialize. • Alternative modes provide opportunities for families to bond. • Stress of driving on congested highways is eliminated.

11 Automobiles provide easy access to recreational opportunities	• Biking and walking provide unique recreational opportunities and exercise. • Transit can provide easy, inexpensive access to urban and suburban recreational destinations. • Transit and alternative mode recreational trips can provide family fun. • Transit and special event shuttles can provide more convenient access to crowded sporting events, fairs and other special events.
12 Public transportation fares and passes are expensive	• Transit passes are a relative bargain when the total cost of SOV travel is calculated. • Parking costs, especially in downtown areas, can be much more expensive than transit fares. • Federal law permits before-tax purchases of transit passes, thereby providing extra savings in federal income taxes at the taxpayer's marginal rate.
13 Fuel is still relatively cheap	• Users of alternative modes are less affected by rising energy costs. • Gas prices are at all time highs.
14 Automobiles are easier to use for trip chaining	• Walking and biking allow combining trips closer to home. • Public transportation is increasingly linked to major employment, shopping and recreational destinations.
15 Increased difficulty coordinating schedules and activities of families with children under 16	• Children and teenagers can often transport themselves by bus, bike or foot. • Children and teenagers can share the ride to activities when parents coordinate transportation. • Parents can better share time with children on public transportation than in an automobile.
16 Many drivers "love" their cars, trucks or SUVs	• Alternative modes of travel save wear and tear on treasured cars. • Cars can be better enjoyed for recreation, rather than commuting, chores and errands.

17 Public transportation is less frequent, with less routes on weekends	• Weekend travel can be more leisurely if planned ahead. • Commercial car rentals often offer reduced weekend rates and allow flexibility in matching the type of vehicle to the purpose of the journey.
18 Car ownership is necessary for trips that are not practical with public transportation, bikes or on foot	• Flexcar provides a practical option to car ownership.

STRATEGIES FOR CHANGE

Because of the nature of market segments identified in this research, it is recommended that community-based social marketing strategies be added to the "toolkit" for increasing market share for alternative modes of transportation. Community-based social marketing (CBSM) stresses direct contact with people at the community level to promote behavioral change. It has been demonstrated that this approach can produce higher levels of success per contact than traditional media advertising.

While CBSM is often espoused as a distinct alternative to media advertising, successful marketing often combines a number of disciplines. CBSM can often be best served when combined with media advertising, earned media and other techniques that reinforce the message. A strong brand established in multiple media will provide a convincing backdrop for effective CBSM efforts.

By way of offering an analogous historical perspective, the automobile became the most pervasive form of transportation in the United States over many decades of media advertising. It also benefited from community-based social marketing of its own—word-of-mouth, lifestyle accommodations to the automobile like drive-in restaurants, drive-in movies, cheap fuel, suburban malls, drive-through windows, and car styles to reflect the needs and personality of virtually any demographic group. Car buyers weren't just influenced by advertising; they spent time discussing cars in their neighbors' driveways, in school yards and at the office water cooler. As transit-oriented development and lifestyles more in tune with a denser urban form become more common, people will (re) discover the opportunities afforded by greater (though not necessarily complete) dependence on public transportation.

Portland Metro and its partner agencies' initiative to market transportation options provides an excellent opportunity to support a pervasive CBSM effort. If the message is consistent and coordinated, the overall effect will be maximized. It is also important to remember that real attitudinal changes take time and require continuous reinforcement.

The scope of work for this project involves identifying benefits and barriers to changing travel behavior and suggesting strategies to address these benefits and barriers. This is a very broad, general objective, versus something more specific (i.e. increasing ridership on a specific transit route). Therefore, suggested strategies and tactics must be somewhat general as well.

These strategies and tactics are guided by the research conducted for this study. Specific research indicators driving the strategies are highlighted in each strategy section. Keep in mind that many of the motivators identified in research are suggestions for improvements in public transportation facilities or operations (improved safety on public transportation; improved light at bus stops; more marked crosswalks; reduced crowding on public transportation; etc.). Where these motivators/barriers are perceptual only, they might be changed through community-based social marketing. Otherwise, they can not be addressed through marketing activities without the necessary accompanying facility and operational changes.

Strategy #1 - Employer/Employee Outreach

Literature Review	• Employers provide bus passes or transportation subsidies
Focus Groups	• Employer-provided transit or carpool subsidy • Employer-provided subsidy for walking or biking • Company vanpool • Get employers more involved in communicating and supporting the use of alternatives for their employees
Survey	• Employer or school provided incentive for using alternative travel modes • Transit passes sold at work or school • Guaranteed ride home from work in emergencies • Ability to work at home one day per week • Preferential parking at work or school for carpoolers • Shower facilities at work or school
Target Clusters	• Suburban commuters cluster (employer provided financial incentives for using alternatives modes; company vanpools, transit passes sold at work; carpool matching service) • Urban cost/safety conscious cluster (free consultations to learn about their "personal" transportation options; employer-provided financial incentives for using alternatives; covered, secure bike storage facilities; shower facilities at work; guaranteed ride home from work) • Citywide professionals (employer provided financial incentives for using alternative modes; company vanpools)

Transit agencies and transportation departments have often worked with major employers to reach commuters and provide opportunities for behavior change. Sometimes, this is voluntary; often, it can be tied to transportation demand management (TDM) regulations or to memoranda of agreement signed by developers of large buildings, business campuses or other employment sites that will help to mitigate or significantly reduce expected traffic levels. These measures have varying degrees of success, depending upon the degree of commitment from the employer or property manager.

A community based social marketing strategy suggests working with smaller companies that might not be affected by TDM. These smaller companies (10-50 employees) might be more approachable. While they probably don't employ or have the need for an assigned employee transportation coordinator (ETC), they probably have an owner, human resource manager, office manager or other staff member interested in transportation issues.

Strategy: Contact potential participatory companies for transportation options seminar. Identify a seminar coordinator at the company, and set up a 2-hour meeting, perhaps to include the lunch hour. This seminar could fit within an existing meeting format that the company already employs – all staff meetings to explain company policies, retirement accounts options, changes in healthcare benefits or simple social occasions.

Get a briefing on the company's specific situation before the seminar, working individually with the employer transportation staff coordinator. Ask questions:

- How is their company located with regard to public transportation?
- Could any employees commute together?
- Would they be willing to subsidize transit passes, vanpools, or car pool parking?
- Could they provide priority parking for vanpools and car pools?
- Could they provide bike racks, bike storage, showers and lockers?
- Would they provide taxi scrip or a guaranteed ride home for employees that have to work late?
- Could they provide company vehicles for employees to perform personal errands or doctor visits if needed during working hours?
- Could employees have opportunities to work at home?

Get a commitment from the company to upgrade transportation-related employee benefits before the meeting. Announcing one or more new benefits shows a commitment from the company, prompting employees to do the same.

During the seminar, lay out transportation options to employees, along with public agency, private organization and employer assistance available for each option. Provide leave behind materials for all options.

Be sure to address non-commute trip options as well, since these actually make up the majority of total trips.

Treat all objections and perceived barriers with respect. It may not be practical for all employees to participate. The objective is to get the employer and employees to take first steps.

Get the employer to sign a commitment form to promote transportation options. Ask interested employees to do the same, specifying what they are doing now, and new activities they might undertake in the future. Provide contact information for assisting employees to implement behavior change.

Periodically follow-up with the employee coordinator to address problems and challenges. Ask the coordinator to conduct a short survey at the end of one year to measure change.

Strategy #2 - Neighborhood Outreach

Literature Review	• Individualized marketing • Motivate with facts about improving air quality and quality of life • Provide incentives to try public transit temporarily
Focus Groups	• People don't know how to use the options • Some benefit to "connecting" with others, sense of community, reduce social isolation • Free giveaways to induce people to try the options
Survey	• Information on how air quality is improved • Information on how using public transportation saves you money • Information on how your health can be improved by biking and walking • Free consultation service to learn all you 'personal' transportation options • Ability to use transit passes for discounts at local shopping

Target Clusters	• Urban cost/safety conscious (free consultations to learn about their "personal" transportation options; ability to use transit passes for discounts at local shops) • Suburban Commuters (work with employers to identify geographic location of employees – possibly with METRO's GIS system) – and develop targeted strategies for carpooling, ridesharing and other desirable SOV reduction strategies) • Citywide Professionals (work with employers in urban centers and downtown employment clusters to identify areas of common household locations and evaluate the economics "micro-demand" of neighborhoods so identified for either public or private express bus or min-bus service)

Neighborhood outreach is the classic example of community-based social marketing. Outreach involves a tried and true sales tactic—door-to-door contacts in targeted neighborhoods to introduce behavior change.

Door-to-door sales are less prevalent than in the past. They have been replaced by direct marketing, mass media, for the most part. Even hosted parties for everything from health and beauty aids to kitchen accessories are now commonly used instead of door-to-door sales.

But direct political campaigning and canvassing for non-profit donations are still successfully accomplished door-to-door. While some people are put off by solicitors looking for money door-to-door, they may be more welcoming to someone simply looking to discuss an important social issue. Discussing transportation options with area residents and getting commitments for behavioral change is a viable CBSM option.

Strategy: Select neighborhoods that generate substantial traffic and have access to a wide array of transportation options. Door-to-door callers should concentrate on one neighborhood at a time, since saturating that neighborhood will make it easier to evaluate change.

Callers should ask for a few minutes of the resident's time to survey them on their transportation habits. A short survey can be taken that will provide valuable data to measure behavior change at a later date.

Based on the survey and conversation, the caller can suggest specific strategies for SOV trip reduction. A personalized kit can be left behind detailing each of these options. The resident can be asked to sign a commitment to implement one or more behavior changes. A copy of the commitment is made for both the caller and resident, including contact information for follow-up.

Incentives can be provided in the form of transit free-ride tickets and coupon books with discounts from partnering businesses.

Follow-up survey calls can be made at a later date to evaluate change, both for the individual households and for the overall neighborhood.

Strategy #3 - Neighborhood Interventions

Literature Review	• Neighborhood bus passes and allowing community to design the system • Individualized marketing • Improve public transportation flexibility, convenience and perception • Rideshare programs, carpooling and vanpooling • Motivate with facts about improving air quality an quality of life • Provide incentives to try public transportation temporarily • Financial incentives
Focus Groups	• Some benefit to connecting with others, sense of community, reduce social isolation • Incentives for not using their vehicles • Subsidizing alternative mode costs in a variety of ways • Variety of incentives to make alternative modes more attractive such as tax breaks, reimbursement, free parking eliminated • Receive a stipend for using public transportation • Use FlexCar
Survey	• Information on how air quality is improved • Information on how using public transportation saves you money • Information on how your health can be improved by biking and walking • Free consultation service to learn all you 'personal' transportation options
Target Clusters	• Suburban commuters (employer provided financial incentives for using alternatives modes; company vanpools, transit passes sold at work; carpool matching service) • Urban cost/safety conscious (free consultations to learn about their "personal" transportation options; ability to use transit passes for discounts at local shops; discounts for bikes, bike equipment, walking shoes, raingear)

Neighborhood interventions are similar to neighborhood outreach. The difference is that a much smaller, specific neighborhood is identified. It works best when confined to a small enough area where many of the residents may be familiar with one another. This could be as large as a few square blocks, or as small as a suburban cul-de-sac.

In contrast with the door-to-door approach of neighborhood outreach, a neighborhood intervention employs a group dynamic. Peer pressure is used to support and reinforce individual commitments to behavior change.

A representative program in Seattle, "One Less Car," offers an example of approach and benefits, although the program did not focus on a specific neighborhood. The program kicked off with 41 Seattle families that gave up their second car (and in some cases, their only car) to reduce trips. The car was normally sold, donated or simply not used for one year. Participants signed a "contract" or commitment form, then filled out an online report on a weekly basis to reinforce the commitment and record results. Incentives included Flexcar miles, discounts on bicycle club safe riding classes, a free bike club membership, and a subscription to *Frugal Environmentalist*.

Neighborhood interventions are also great fodder for earned media. Media like to interview participants in the smaller group, documenting the peer pressure and results. Neighborhood interventions also beg for follow-up media coverage at the end of the program.

Strategy: Identify a small, defined neighborhood, including a group of relatively close-knit neighbors. If they have been networked via a neighborhood block watch or similar program, all the better.

Find a host resident and schedule a neighborhood meeting. Make best attempts at 100% attendance. Lay out a number of transportation alternative strategies. Each household needs to commit to one or more strategies to participate. Get individuals to agree to a written commitment for behavior chance. Get the neighborhood to commit to a collective goal of SOV trip reduction.

Provide a number of incentives to increase participation—transit passes, Flexcar miles, bicycle classes and equipment discounts, and assistance with ridematching.

Implement a system for regular reporting of results. Invite the media to interview participants, and provide media with program results at defined intervals.

Build on success and add adjoining neighborhoods at a later time, or introduce interventions to other key neighborhoods.

Strategy #4 - Rideshare Parties

Literature Review	• Individualized marketing • Rideshare programs, carpooling and vanpooling • Financial incentives
Focus Groups	• Carpool • Some benefits of "connecting" with others, sense of community, reduce social isolation • Less expensive • Cost savings on parking is a big benefit • Reduced stress is a big benefit • Company vanpool • Use Flexcar
Survey	• Company or school vanpool • Carpool matching service • Discounts for bicycles, bicycle equipment, walking shoes and raingear • Free consultation service to learn all your 'personal' transportation options • Preferential parking at work or school for carpoolers
Target Clusters	• Suburban commuters (carpool matching service; company vanpools) • Urban cost/safety conscious (free consultations to learn about their "personal" transportation options, discounts for bikes, bike equipment, walking shoes, raingear) • Citywide professionals (company vanpool)

Ridesharing is a very viable strategy to reduce SOV trips, but has not normally been addressed with a CBSM approach. In the past, government agency assistance with ridesharing has often been limited to database management. Interested participants in carpools and vanpools list with the database and are provided with a list of potential matches. After that, they might be on their own to contact and organize a transportation pool.

An upgrade to the system provides personalized assistance in putting together a carpool or vanpool group. The agency might make the initial calls and coordinate the group, setting it in motion to eventually fend for itself.

Rideshare parties add a community-based social marketing element to forming a carpool or vanpool. Rideshare parties take the concept one step further by initiating the calls, but also coordinating a get together at one of the pool participant's residence.

Strategy: Identify a rideshare applicant willing to host a get-together for other potential pool members. Send an alternative transportation advisor to the event to help the participants network and set up an effective carpool or vanpool.

The key to the party is asking for commitments to reduce other SOV trips. Participants can be queried on their travel habits for non-commute trips. Alternatives can be introduced and explored. Incentives such as transit tickets, Flexcar miles, bicycle equipment discounts and transit agency retail partners can also be offered.

Follow up on commitments with surveys to measure, 1) The long-term success of the carpool or vanpool, and; 2) The adoption of other alternative transportation strategies by participants.

Strategy #5 - Street Teams

Literature Review	• Individualized marketing • Provide incentives to try public transit temporarily • Motivate with facts about improving air quality and quality of life
Focus Groups	• Take the MAX – most like it • Give free giveaways to induce people to try the options • Be able to call a live person and get information
Survey	• Information on how air quality is improved • Information on how using public transportation saves you money • Information on how your health can be improved by biking and walking • Free consultation service to learn all you 'personal' transportation options
Target Clusters	• Urban cost/safety conscious (free consultations to learn about their "personal" transportation options)

Street teams have been traditionally used by transit agencies to avoid the confusion of service changes and relocated bus stops. They rarely seek out new riders.

The same concept has been used by political campaigns and non-profits to reach potential voters and donors in high traffic urban business district or retail locations. New products are sometimes sampled this way. Newspapers, with decreasing circulation across the nation, are occasionally sampled on street corners as well.

Community-based social marketing stresses one-on-one contacts and personal contracts to promote behavior change. Street teams can do both.

Strategy: Street teams of transit agency staff or consultants can be introduced into high-traffic downtown urban areas or shopping centers. While longer engagements with street-teams might be more effective, 3-5 minutes per contact is probably the maximum. Lunch hour is probably the best time in downtown urban settings; weekends might be best in suburban malls, assuming the mall will sanction the activities.

Street teams can ask contacts about their current transportation habits and willingness to try new behaviors. A commitment form can be signed (with carbon copy for data entry). Contacts who make commitments could be surveyed later to see if they have followed through on their commitment.

Incentives will be an important part of this activity. Contacts who commit could receive free ride tickets on transit, and perhaps a package of discounts from transit agency partners.

Strategy #6 - Fairs and Festivals

Literature Review	• Individualized marketing • Financial incentives • Motivate with facts about improving air quality and quality of life. • Provide incentives to try public transportation temporarily
Focus Groups	• Free giveaways to induce people to try options • Be able to call a live person and get information • Educate school children who will spread the word to parents.
Survey	• Carpool matching service • Discounts for bicycles, bicycle equipment, walking shoes and raingear • Ability to use transit passes for discounts at local shopping • Information on how air quality is improved • Information on how using public transportation saves you money • Information on how your health can be improved by biking and walking • Free consultation service to learn all your 'personal' transportation options

Target Clusters	• Suburban commuters (carpool matching service; ability to use transit passes for discounts at local shops) • Urban cost/safety conscious (free consultations to learn about their "personal" transportation options, discounts for bikes, bike equipment, walking shoes, raingear)

Fairs and festivals provide a friendly setting to meet with area residents and discuss alternative transportation modes. In the past, transit agencies may have attended these events and hosted a booth to distribute information. But the community events also provide an opportunity to get commitments for behavioral change as well.

Neighborhood fairs and festivals, craft fairs and farmers markets are the best prospective events for this purpose. Large state fairs are too hectic and fast-paced, with too many big attractions and distractions to work as effectively one-on-one with residents.

Strategy: Construct an attractive booth for transportation options. Staff it with experts in a number of fields—transit, rideshare, biking and Flexcar. Provide an attractive draw, such as a "wheel of fortune" to distribute giveaway items from partner agencies and businesses. A drawing for a grand prize (bicycle or other transportation themed item) can also attract attention. Items and design elements that attract children are valuable to bring families to the booth.

Provide a sit-down area in the booth for one-on-one consultations with individuals and families willing to make behavior changes. Contacts could be entered into a rideshare database, if appropriate. Offer a commitment form, backed up with incentives from agency partners.

After the festival and fair season is over, follow-up with people who have signed commitment forms. Note which special events generated not only the most commitments, but the best net results.

Strategy #7 - Special Day Promotions

Literature Review	• Improve public transportation flexibility, convenience, perception • Rideshare programs, carpooling, vanpooling • Program for bicycles • Motivate with facts about improving air quality and quality of life. • Provide incentives to try public transportation temporarily

Focus Groups	• Free giveaways to induce people to try options • Carpool • Vanpool • Safer • Increased reliability of buses • Faster • Less expensive (reduced cost or free) • More routes • More bike lanes, safer bike lanes • Covered, secure bike storage facilities • Incentives for not using their vehicles • Educate school children who will spread the word to parents.
Survey	• Carpool matching service • Discounts for bicycles, bicycle equipment, walking shoes and raingear • Ability to use transit passes for discounts at local shopping • Information on how air quality is improved • Information on how using public transportation saves you money • Information on how your health can be improved by biking and walking
Target Clusters	• Suburban commuters (carpool matching service; ability to use transit passes for discounts at local shops) • Urban cost/safety conscious (discounts at local shops; safer bike lanes; covered, secure bike storage facilities; discounts for bikes, bike equipment, walking shoes, raingear; shower facilities at work) • Cluster 13 – Citywide professionals (company vanpool)

Special events can provide an outward expression of grassroots movements. They can bring media attention and attract participation from people inspired by a group movement. They can also become ingrained in our culture as annual or weekly events.

One popular event that can be leveraged for community-based social marketing is "Bike to Work Day," or "Bike to Work Week," staged in many parts of the country during National Bike Month in May. Currently, Bike to Work events are scheduled in places like Auburn (AL), Little Rock (AR), Santa Monica (CA), District of Columbia, Pensacola (FL), West Palm Beach (FL), Sun Valley (ID), Carmel (IN), Indianapolis (IN), Bloomington (IN), Louisville (KY), Bethesda (MD), Ann Arbor (MI), Concord (NH), York (ME), Los Alamos (NM), Albany (NY), New York City, Cincinnati (OH), Delaware County (PA), Houston (TX), Rutland County (VT), Alexandria/Arlington (VA), Seattle (WA), and Madison (WI). Many other cycling events are also held nationally during this month.

Sun Valley hosts the Smart Moves Community Challenge from May to September, a fun way for the whole community to reduce and replace car trips. The promotion includes an official "trip tracker" for participants who walk, pedal, carpool or ride the bus and keep track of their trips and quality to win prizes. Trip trackers are ostensibly a type of commitment form, or contract, to reduce trips.

Bicycle retailers in Portland distribute free commuting kits during National Bike Month, sponsored by the League of American Bicyclists and Shimano American Corporation. The Bicycle Transportation Alliance also promotes "Bike to Work Day" in May. And in September, BTA affiliated businesses and public agencies across the state engage in friendly competition to see which among them can tally the most bike commutes over the course of the month.

Other special event days can also be leveraged for CBSM purposes. Examples include:

- Take Your Daughter (or Son) to Work Day – This is a great opportunity to share work as well as a bike ride, bus ride, light rail or trolley ride with children.
- Casual Fridays – Many companies establish Fridays as the accepted day to dress casually. That also makes it a good day to bicycle or walk as well. It also promotes socializing – carpooling to work so that employees can socialize after work and designate a driver for the trip home.

Strategies: Work with the local bicycle clubs and the Bicycle Transportation Alliance to fully introduce community-based social marketing technique and personal commitments into "Bike to Work Days" and other biking events

Government transportation departments and transit agencies should take full advantage of these bicycle events. These events can be designed to include hospitality stations where information, specialty advertising items and refreshments can be distributed. Cyclists are usually in a hurry to get to work, but contacts could be made to get commitments from cyclists for increased levels of SOV trip reduction. Bicycle shops and event sponsors can distribute CBSM materials and generate contacts.

A weekly series of special days for alternative commute options could also be established. One example in the early 90's was "Oil Smart Wednesdays" established for a number years in Seattle. Oil Smart Wednesdays, supported by a coalition of government, transit agencies and the Bullitt Foundation, asked participants to get to work by foot, bicycle or transit over a full month of Wednesdays. It raised awareness working with employers. But it didn't ask for individual commitments, an element that could be incorporated into an effort to revive this worthy idea.

Partners might also be found for Take Your Daughter/Son to Work Day to introduce the alternative transportation element into the day. Local school districts could get the word out, or perhaps the Oregon Education Association could provide statewide sanction. Commitment forms could perhaps be distributed to parents via their children, teachers and schools.

Implementation of these strategies could be very involved, and would require their own marketing and implementation plans to fully detail.

Strategy #8 - Partnerships

Literature Review	• Improve public transportation flexibility, convenience perception • Motivate with facts about improving air quality and quality of life. • Provide incentives to try public transportation temporarily
Focus Groups	• Free giveaways to induce people to try options • Get employers involved in communicating and supporting the use of alternatives for their employees • Have newspapers to feature stories on options • Make information available in public libraries, supermarkets, etc. • Educate school children who will spread the word to parents.
Survey	• Discounts for bicycles, bicycle equipment, walking shoes and raingear • Ability to use transit passes for discounts at local shopping • Information on how air quality is improved • Information on how using public transportation saves you money • Information on how your health can be improved by biking and walking

Target Clusters	• Suburban commuters (employer provided financial incentives for using alternatives; ability to use transit passes for discounts at local shops) • Urban cost/safety conscious (employer provided financial incentives for using alternatives; discounts at local shops; discounts for bikes, bike equipment, walking shoes, raingear) • Citywide professionals (employer provided financial incentives for using alternatives)

Partnerships are key components of community-based social marketing strategies. The can provide the following benefits:

- Access to partner employees
- Access to partner customers
- Incremental promotion in the form of advertising tags, in-store signage and collateral
- Prizes for participation incentives
- Discounts for participation incentives
- Credibility with the private sector and consumers

Keep in mind that partnerships are two-way propositions. Private sector partners need to provide more than just incentive prizes. They should integrate program branding into their own advertising, marketing and promotion.

For their part, public agencies need to recognize that private sector partners are in business to make a profit. Any partnership should recognize this. Partnerships should incorporate discounting and product promotion that increase sales.

Strategy: Select appropriate partners for promotion of behavior change to alternative transportation. Good prospects include:

Retail Partners:

- Bicycle shops: Biking is a alternative transportation mode with exceptional growth potential. It is also complimentary to other modes, such as transit equipped with bike racks, or carsharing, carpooling and vanpooling where biking is not practical. Bike shops provide a leisurely environment where customers depend upon staff for technical advice and assistance. These staff can easily promote alternative travel modes, bicycling or otherwise.
- Coffee shops: Coffee shops are community gathering places. In neighborhoods, they are often frequented by bicyclists and walkers.
- Wireless phone companies: They've recognized non-SOV commuters as a viable market. They are often willing to give away equipment with high perceived value, since most of their profits are derived from service contracts.

- Drug stores: Drug stores, especially locally-owned establishments, are also gathering places where program information can be distributed.

Associations/Clubs/NGOs:
Many clubs and non-governmental organizations have a vested interest in promoting alternative modes of transportation. These include bicycle clubs, special interest groups and environmental groups.

Media
Media make ideal partners on social issues, since they normally see it as their mission to improve their community. Earned media (publicity versus paid advertising) is usually valued at 3.5 times the value of advertising of the same broadcast duration or print column inches, due to perceived credibility with the audience.

Strategy #9 - Special Event Shuttles

Literature Review	· Improve public transportation flexibility, convenience perception · Motivate with facts about improving air quality and quality of life. · Provide incentives to try public transportation temporarily · Free public transporatation
Focus Groups	· More routes · Faster · Less expensive · Increased reliability of buses · Increased safety on buses · More bus routes, fewer transfers · Reduced bus fares · Have newspapers to feature stories on options · Make information available in public libraries, supermarkets, etc. · Educate school children who will spread the word to parents.

Survey	• MAX light rail • Street Cars • More express buses • Improved safety on public transportation • Information on how air quality is improved • Information on how using public transportation saves you money • Information on how your health can be improved by biking and walking
Target Clusters	Not applicable

Special transit service to sporting events, community fairs and festivals is a great opportunity for active audiences to sample transit. These audiences might not normally consider transit, but are convinced to use available shuttle service due to scarce parking, traffic congestion and other factors they might ignore for their workday commutes.

Strategy: When shuttles have a centralized staging area (park and ride, transit station or private parking lot), tables can be set up to greet passengers as they get off and on the shuttle. In particular when they disembark, they can be approached to give their opinions of transit and whether they might consider using transit for workday commutes or other trips. Should they sign a commitment form, they could be given free ride tickets for a subsequent ride. Free ride tickets could be tracked as they are redeemed. Follow-up calls could discover if this sampling prompts these passengers to try additional transit travel.

Appendix A: Literature Review

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Appendix B: Focus Group Moderator Guide

1. Introduction (10 minutes)

- [Moderator introduces herself/himself.]
- [Explain:] A focus group is a group discussion where we can learn more in-depth about peoples' ideas and opinions (compared to telephone or written surveys).
- My job is to facilitate the discussion and make sure that everyone has an opportunity to speak **and to make sure that no one dominates the conversation**.
- [Mention facility, audio and video equipment (so I do not have to take notes), observers in separate room.]
- Housekeeping – Toilets and refreshments.
- [Mention ground rules.]
  - There are no right or wrong answers; we're interested in your honest and candid opinions and ideas.
  - One person speaks at a time. This will allow all of us to be heard by each other and by the recording equipment.
  - It is important to tell YOUR thoughts, not what you think others will think, or what you think others want to hear.
  - Your ideas and opinions will be kept anonymous.
  - Your stipend will be provided as you leave.
  - Relax and enjoy
- We're going to spend our time today talking about how you travel within the Portland metro region. Any questions about the purpose of our focus group or the ground rules before we begin?
- Let's start off by getting to know a little more about each other. I'd like us to go around the room and each person answer the following questions:
  - Your name
  - The part of the Portland metro region where you live
  - How far (in miles) it is from your home to where you work, go to school, and typically shop
  - What types of public transportation are available where you live
  - Do you own a bicycle
  - Are there sidewalks on the street where you live? Are there sidewalks on surrounding streets?
  - Do you have a fitness club membership?

2. Trip Purposes (10 minutes)

1. Let's start off thinking about the purposes for which you typically travel in the Metro region. Thinking of a typical weekday, what types of trips do you usually make? How many separate trips do you make on a typical weekday? (Mention that only 15-20% of all travel is work related and see if they come up with additional information.)

2. How about on the weekend? What types of trips do you usually make? How many separate trips? How is your travel on weekends different from that during the week? (Probe for more or fewer combined trips [trip-chaining] during the week or weekend?)
3. Do you find yourself avoiding certain travel situations? What are these and why do you avoid them?
4. Is there anything about your trip activity that surprises you?
5. Having looked at your trip activity, is there anything you think you might do differently? Why or why not?

3. How You Travel (15 minutes)

6. How often do you travel by means other than being the only person in the car (define this is bus, MAX, street car, FlexCar, carpool, vanpool, bike, walk)?
7. Which trips are you more likely to travel by means other than by yourself in a car? Why is that?
8. When you do drive alone what are the main reasons you do that?
9. Does the cost of traveling alone in your vehicle compared to the cost of using an alternative play a part in your mode choice? Why or why not?
10. Does the time of traveling alone in your vehicle compared to the time of using an alternative play a part in your mode choice? Why or why not?
11. Does traffic congestion play a part in your mode choice? If so, how?
12. If you had to give up driving your car say for a week or two, perhaps because your vehicle was being repaired, how would you get around? How would your daily travel change? How do you think your life would be improved? How do you think it would be degraded? What if you had to give up driving completely? How would your daily travel change?
13. How many vehicles in your household? Would you consider reducing the number of vehicles? Why or why not?

4. Barriers and Benefits of Travel by Other than Single Occupancy Vehicle (25 minutes)

(Have participants individually list what they see as barriers and benefits. Then open up to discussion. Probe deeply on what their experience has been or what they think it would be like using alternative modes. Be sure to get people thinking beyond their commute trip when you probe.)

14. Let's start off talking about the *benefits* of using means of transportation other than driving your car alone. Tell me which alternative modes you have used and what you see as the benefits. (Probe on commute trips and non-commute trips.)
15. Now, how about the *barriers* to using these alternative modes of travel? (Probe on commute trips and non-commute trips.)

16. Tell me more about what it's like to (for any that they haven't used, ask them to imagine what it would be like):
    - Take the bus
    - Take the MAX
    - Carpool
    - Vanpool
    - Take the street car
    - Use a FlexCar (most people won't know what this is, so you will need to define.)
    - Bike
    - Walk

ASK CLIENT IF THEY HAVE ANY ADDITIONAL QUESTIONS AT THIS POINT

5. Motivators to Increase Use of Alternative Travel Modes (40 minutes)

17. (First ask participants to individually list what it would take to get them to use alternative modes or to use them more frequently). Then open up the discussion with - So what would it take to get you to use alternative modes or use them more frequently? (Probe on cost, reliability, convenience, habit, outside influences (such as children), support from your employer, etc.)

18. (Then have participants individually complete a form rating the motivators listed below. Rate on a scale of 1 to 4, with 1 being "not motivating at all" and 4 being "that would get me to do it".) Then open up the discussion by focus in on the group's top 5 motivators and bottom 5 motivators.
    - Employer-provided transit or carpooling subsidy
    - Employer provided subsidy for walking or biking
    - Carpool matching service
    - Preferential parking at work for carpoolers
    - Bus passes sold at work
    - Bus passes sold at a reduced rate
    - Company vanpool
    - Better bus scheduling
    - More bus stops
    - Fewer bus transfers needed
    - Free consultation service (phone, email, in-home visit) to learn all your "personal" transportation options.
    - Personal bike route planning
    - Guaranteed ride home from work in emergencies
    - Elimination of free parking at your workplace/school
    - Neighborhood bus passes (only $50 year to have unlimited access to public transportation)
    - Free public transportation
    - Lower transit prices
    - Tolls for using major roadways
    - Taking current roads and making one lane a "bus only" lane to improve frequency and speed of bus service

- Receive a stipend for using public transportation (example offered $40 a month to not drive alone)
- Community input on the design and types of buses used. (i.e. types of buses, number of seats, seat fabric, colors, naming the buses, etc)
- Reduced crowding on public transportation
- Improved security on public transportation
- Provide statistics on how using public transportation saves you & your community money
- Provide statistics on how your health can be improved
- Provide statistics on how much money you can save
- Provide statistics on how air quality is improved
- Learn about how people in my community make alternatives to driving alone work for them
- Higher gas prices
- More bike lanes
- Safer bike lanes
- Covered, secure bike storage facilities
- Shower facilities at work/school
- More sidewalks
- Slower traffic speeds
- More marked crosswalks
- Safer pedestrian crossings
- More drinking fountains, public restrooms, places to sit and rest, etc.
- More street trees for shade
- Better directional signs for bike routes
- Better directional signs for pedestrians
- Discounts for bicycles, bicycle equipment and clothes
- Discounts for walking shoes, raingear and umbrellas

6. How Best to Communicate about Travel Options (10 minutes)

19. Is information about alternatives to driving your car alone in the Portland metropolitan region something you want information about? Why or why not?
20. If you wanted to find this type of information where would you be likely to look?
21. How do you usually get information about transportation/travel issues now?
22. Who do you think should be providing this type of information? Why?
23. How could the local transportation agencies (names these) do a better job of getting this type of information to you?

7. Wrap-up (5 min)

Any last thoughts or comments?

ASK CLIENT IF THEY HAVE ANY ADDITIONAL QUESTIONS

Appendix C: Telephone Survey

Hello, my name is _____ and I'm calling on behalf of Metro, Portland's regional planning agency. We're conducting a survey regarding travel within the Portland metropolitan region. I'd like to ask some questions on a strictly confidential basis. This will take no more than 12 minutes.

I need to speak to a person in your household who is 16 years of age or older and who travels within the Portland metropolitan region at least three days per week. Would that be you? (IF NO, ASK TO SPEAK WITH THE QUALIFIED PERSON)

Screener

What is your home zip code? (If not from our list TERMINATE)_____

Do you or does anyone in your household work in any of the following industries or organizations? (READ LIST – RECORD ALL THAT APPLY)

1 Advertising (TERMINATE)

2 Public relations (TERMINATE)

3 Market research (TERMINATE)

4 Oregon Dept. of Transportation (TERMINATE)

5 TriMet (TERMINATE)

6 City of Portland Office of Transportation (TERMINATE)

7 Metro regional government (TERMINATE)

DO NOT READ

7 None of the above (CONTINUE)

8 Don't know (TERMINATE)

9 Refused (TERMINATE)

Travel Behavior

1. How many days LAST WEEK did you use each of the following ways to travel in the Portland metropolitan region? (ROTATE AND READ) (Set quotas for 300 who use anything other than 1 or 2 below at least 2 days a week and 300 who do not use items 3-10 at all.)

1 Drive alone in your personal vehicle

2 Drive in your personal vehicle with other household members

3 Bus (other than school bus)

4 MAX light rail

5 Street car

6 Carpool

7 Vanpool

8 Flexcar

9 Bicycle for non-recreational purposes such as shopping, errands, picking up cleaning, etc.

10 Walking for non-recreational purposes such as shopping, errands, picking up cleaning, etc.

2. What were the main purposes of the trips you took by (insert each mode used in Q1 as a separate question) in the Portland metropolitan region last week? (DO NOT READ)

1 commute to and from work (ask q2a)

2 commute to and from school (ask q2a)

3 shopping

4 visiting friends or relatives

5 recreation

6 doctor, dentist or medical appointment

7 take children to school or activities

8 general errands such as such as picking up cleaning, going to the bank, etc.

9 other (please specify)

99 don't know/refused

2a When you commuted either to or from work or school did you do any of the following along the way?

1 Drop/Pick up kids at daycare/school

2 Shopping (errands such as groceries, banking, cleaners, etc)

3 Doctor, dentist, or medical appointment

4 Visit friends or relatives

5 Other (please specify)

2b Approximately how many miles is it to the nearest bus stop from your home?

2c Approximately how many miles is it to the nearest park & ride lot from your home?

2d Approximately how many miles is it to the nearest MAX station from your home?

(ONLY ASK Q3 OF THOSE WHO DID **NOT** ANSWER "ZERO DAYS" TO "DRIVE ALONE IN PERSONAL VEHICLE" IN Q1)

3. When you drove alone LAST WEEK what was the TOP MAIN REASON you drove alone? What was your next TOP MAIN REASON? What was your next TOP MAIN REASON? (Do Not Read. Check all that apply).

1. Irregular work schedule
2. Need car for work
3. Need car for day care/errands
4. Want to come and go as I please
5. Value my privacy
6. Too many transfers to use public transit
7. Need car for emergencies
8. Overcrowded public transit
9. Concerns about safety/security using public transit
10. Concerns about safety using bicycle
11. Save money
12. No public transit where I live
13. Public transit doesn't go where I need to go
14. Bad weather
15. Using public transit takes too long
16. Don't want to be dependent on others
17. Transit schedules difficult to understand
18. No one to carpool with
19. Other (please specify)

99 Don't know/refused

4. For how many trips LAST WEEK would you say you changed your travel plans to avoid traffic congestion in the Portland metropolitan region?

5. Which of the following best describes you? Would you say: (ROTATE AND READ 1-6; CHOOSE JUST ONE)

1 employed full-time (refer to 'work" in Q6-Q11a)

2 employed part-time (refer to 'work" in Q6-Q11a)

3 full-time student (refer to 'school" in Q6-Q11a)

4 part-time student (refer to 'school" in Q6-Q11a)

5 retired (SKIP TO Q12)

6 homemaker (SKIP TO Q12)

7 other (please specify) (SKIP TO Q12)

6. Do you commute to and from work or school?

1 No (SKIP TO Q12)

2 Yes

9 Don't know/refused (SKIP TO Q12)

Now I'm going to ask you about your commute to work or school.

7. First, how many minutes does it take you to commute ROUND TRIP to work or school?

8. What is the approximate one-way distance in miles between your home and your work or school location?

9. How much flexibility do you have as to when you commute TO work or school? Would you say:

1. No flexibility
2. Could leave up to a half hour earlier or later than you currently do
3. Could leave up to an hour earlier or later than you currently do
4. Could leave up to an hour and a half earlier or later than you currently do
5. Could leave up to two hours earlier or later than you currently do
6. Other (please specify)

10. And how much flexibility do you have as to when you commute FROM work or school? Would you say:

1. No flexibility
2. Could leave up to a half hour earlier or later than you currently do
3. Could leave up to an hour earlier or later than you currently do
4. Could leave up to an hour and a half earlier or later than you currently do
5. Could leave up to two hours earlier or later than you currently do
6. Other (please specify)

11. What is the zip code of your work or school DESTINATION? (If they don't know, ask 11a)

11a. What is the name of the city/town or section of town where your place of work or school is located?

Motivators To Use Travel Options

(ASK Q12 ONLY FOR THOSE WHO USE ALTERNATIVE MODES REGULARLY AT LEAST A TOTAL OF 2 DAYS A WEEK.)

12. Thinking back to when you first starting using alternatives to driving alone in the Portland metropolitan region, what were the TOP THREE THINGS that motivated you to use these alternatives? (DO NOT READ)

1. Employer-provided transit or carpooling subsidy
2. Employer provided subsidy for walking or biking
3. Carpool matching service
4. Preferential parking at work for carpoolers
5. Transit passes sold at work
6. Transit passes sold at a reduced rate
7. Company vanpool
8. Guaranteed ride home from work in emergencies
9. Parking hard to find
10. Cost of parking
11. Information on how using public transportation saves money
12. Information on how health can be improved by biking or walking
13. Information on how air quality is improved
14. Higher gas prices
15. More bike lanes
16. Secure bike storage facilities
17. Shower facilities at work/school
18. Traffic congestion
19. Safer pedestrian crossings
20. Better directional signs for bike routes
21. Better directional signs for pedestrians
22. Reduced stress by not driving alone
23. Enjoyed traveling with other people
24. Did not have access to a car
25. Could use pre-tax money to pay costs (such as Flexible Spending Account at work)
26. Other financial reasons
27. Other (please specify)

99. Don't know

13. Please tell me if the following things would ACTUALLY get you to not drive alone at least one more day per week. The first item is… (ROTATE AND READ; PROMPT EVERY THIRD ITEM WITH REMINDER THAT THIS IS ABOUT WHETHER IT WOULD ACTUALLY GET THEM TO NOT DRIVE ALONE AT LEAST ONE MORE DAY PER WEEK; No = 1, Yes = 2; DON'TASK ITEMS 1, 3, 4, 6, 18 IF Q5 = 5, 6, 0R 7)

1. Employer or school-provided financial incentive for using transit ,carpooling , walking or biking
2. Carpool matching service
3. Preferential parking at work or school for carpoolers
4. Transit passes sold at work or school
5. Transit passes sold at a reduced rate, such as $50 per year
6. Company or school vanpool
7. More express buses
8. Free consultation service to learn all your "personal" transportation options
9. Guaranteed ride home from work in emergencies
10. Reduced crowding on public transportation
11. Improved safety on public transportation
12. Information on how using public transportation saves you money
13. Information on how your health can be improved by biking and walking
14. Information on how air quality is improved
15. More bike lanes
16. Safer bike lanes
17. Covered, secure bike storage facilities
18. Shower facilities at work or school
19. More marked crosswalks
20. Safer pedestrian crossings
21. Better directional signs for bike and pedestrian routes
22. Discounts for bicycles, bicycle equipment , walking shoes and raingear
23. Improved lighting at bus stops
24. Shelters at bus stops
25. Ability to use transit passes for discounts at local shopping
26. Ability to work at home one day per week.

13a Please tell me which one of the things you said would motivate you would be the MOST motivating? (Only choose one)

13b What would be the next MOST motivating? (Choose One)

Communications

14. What is the PRIMARY way you now keep informed about ways to travel within the Portland metropolitan region? (DO NOT READ. CHOOSE JUST ONE.)

01 Radio

02 Newspaper

03 Television

04 Web sites

05 Co-workers

06 Friends or family

07 511 traveler information number

08 Other (SPECIFY)

09 I don't keep informed

99 Don't know/refused

15. Would you be interested in more information about the following travel options available in the Portland metropolitan area? (ROTATE AND READ; 1 = No, 2 = Yes, 9 = don't know)

1 Bus (other than school bus)

3 MAX light rail

4 Street car

5 Carpool

6 Vanpool

7 Flexcar

7 Bicycle for non-recreational purposes

8 Walking for non-recreational purposes

Demographics

Now I'd like to ask you a few questions about yourself and your household. Your answers will be combined with other respondents. Please remember that your answers are strictly confidential.

16. How many people live in your household?

17. How many of those people are 15 years of age or younger?

18. How many vehicles are in your household?

19. How many drivers are in your household?

20. Which of the following broad ranges includes your age?

16-18	1
19-24	2
34-34	3
44-44	4
54-54	5
64-64	6
65 or over	7
DK/REF	9

21. What is the highest level of education you have completed? Would you say:

1. Less than high school
2. High school
3. Some college
4. Associate degree
5. Bachelor degree
6. Post graduate work
7. Graduate degree

9 don't know/refused

22. Please stop me when I reach the category that best describes your annual household income from all sources:

1 Under $20,000

2 $20,000 - $34,999

3 $35,000 - $49,999

4 $50,000 - $74,999

5 $75,000 – 99,999

6 $100,000 -$114,999

7 $115,000 - $124,999

8 $125,000 and above

9 refused

23. IF REFUSED to Q22: Just for statistical purposes, can you tell me if your annual household income is greater than $50,000?

1 No

2 Yes

24. Enter gender:

1 Male

2 Female

That's all the questions I have. Thank you very much.