Regional Travel Options
2004-05 Program Evaluation

Final Report

July 12, 2006

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Background

The Regional Travel Options (RTO) program has gone through significant changes in the past three years and will continue to do so over the next few years. This is an important time to assess past accomplishments to help shape the program in the near and long term. The program went through a strategic planning process in 2003 that is due for a re-examination and refinement. The *Regional Travel Options Program 5-Year Strategic Plan* stated the following:

> Regional travel options include all of the alternatives to driving alone – carpooling, vanpooling, riding transit, bicycling, walking and telecommuting. In order to increase the number of people using these travel options, the region needs to
>
> > develop a marketing message and communications plan that supports local program implementation
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> > develop regional policies that support more people using travel options
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> > evaluate program impacts that can be used to refine programs and marketing strategies, and
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> > identify new funding sources that can be used to expand the travel options program over the next five years.
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> The Regional Travel Options program is primarily a marketing program that works directly with people to find the best option for them for any number of trips they make throughout the day. The focus in the past ten years has been reducing drive alone commute trips, specifically working with ECO employers to reduce commute trips as required by the ECO Rules. The TDM Subcommittee would like to take a new direction to more actively market travel options through a unified regional marketing program. (p. 1)

The program has made significant progress with this shift in objectives. However, there is much more to do in order to meet regional travel objectives for non-single occupant vehicle (SOV) trips.

Evaluation Overview

This evaluation covers the 2004-05 fiscal year. During that time, program management started to shift from TriMet to Metro. That transition is nearly complete in 2005-06. The evaluation covers the following programs that received RTO funding:

TMA Program

- Clackamas Regional Center TMA
- Lloyd TMA
- Gresham Regional Center TMA
- Westside Transportation Alliance

Swan Island TMA

Troutdale TMA

Region 2040 Initiatives

Lloyd TMA/Lloyd District Pedestrian Program

SMART Wilsonville Walking Program

City of Portland/CarpoolMatchNW

Swan Island Vanpool Program

Gresham TMA Bike Program

WTA Carfree Commuter Challenge

RTO Core Program

TriMet Regional Vanpool Program

TriMet Regional Evaluation

TriMet Employer Program

SMART TDM Program

Metro Collaborative Marketing

Metro Regional Rideshare Study

RTO subcommittee management/strategic planning

Regional MTIP funds

City of Portland Interstate TravelSmart

Each program was evaluated separately, with the results appearing in the Appendices. Those results are summarized in the main document. For each program evaluation, Portland State University's (PSU) Center for Urban Studies (CUS) evaluators attempted to answer the following questions:

What services or activities were provided? *How does this compare to the work plan in the 5-year Strategic Plan?*

What was the level of participation in the services or activities?

What was the level of satisfaction with the services or activities?

To what extent did participants use travel options? *How does this compare to the work plan in the 5-year Strategic Plan? How does this compare to the RTP modal objectives? How does this compare to programs in other regions?*

To what extent does the program support the RTO objectives? *Reduce drive-alone trips and encourage alternative modes; Regional coordination and communication; Include all trips, not just commute trips; Connections to other goals (2040 centers; corridors; transit-oriented development; TriMet transit investment; community health; air quality; and water quality).*

Key Findings

Some key positive outputs and outcomes during 2004-05 include the following:

- Nearly 900 work sites with over 200,000 employees participated in the Employer Outreach Program. This level of work site participation appears to be high compared to some programs in other regions examined.

- For 2005, non-SOV mode share for commute trips to sites conducting surveys was 33%, up from 31% in 2003 and 26% in 1996.

- For commute trips, employers in downtown Portland that survey employees are close to meeting the overall RTP modal targets for downtown of 70% non-SOV modes. However, it may be necessary to exceed the target for commute trips in order to meet the target for all trips. Lloyd District employers participating in the Passport program are also making progress in meeting non-SOV mode share targets.

- About 4,800 people are registered on the CarpoolMatchNW website for carpool matching. Use of the website has steadily increased since its inception. Targeted marketing events, particularly Cool to Carpool, significantly increased registrations. From 5-20% of the registrants have formed carpools as a result of the service.

- TMAs introduced and continued targeted activities such as Carfree Commuter Challenge led by WTA and SMART's WalkSmart program. Ridership on the Swan Island evening shuttle increased significantly. Several TMAs are expanding efforts beyond commute trips.

- The individualized marketing project in the Interstate area demonstrated a significant net shift from driving to transit, walking, and bicycling.

- Staff from the programs are generally optimistic about the changes being made to the RTO program and Metro's leadership.

- Most programs implemented their specific output objectives. When objectives were not met it was often due to lower than expected funding or staff turnover during 2004-05. The latter problem appears to be resolved in all cases.

Despite these positive outcomes, there are several findings that need to be addressed by the RTO program:

- The share of commute trips to sites conducting surveys made in carpools and vanpools has declined steadily since 1996 to an all time low of 8.5% in 2005. Shares of bicyclists and walkers are not increasing significantly to these sites.

- Employers outside of downtown Portland and the Lloyd District have a long way to go to meet the RTP modal targets for 2040. Only about one-quarter of work trips to surveyed sites in the remaining area are made in non-SOV modes. The targets for 2040 range from 40% to 55%.

- A significant share of the people registered on the CarpoolMatchNW website (probably at least 20% and perhaps much higher) do not appear to be interested in forming a carpool. This diminishes the quality of the program for all participants.

- The vanpool program is not performing as projected and is significantly smaller in scope than programs found in other regions.

- Some of the TMAs are implementing programs that may not be consistent with the RTO objectives. It is unclear whether RTO funds are used for these activities. For example, TMAs may be interested in improving infrastructure for freight access, providing input on new road or highway projects unrelated to alternative modes, or moving the demand for employee parking to other locations rather than reducing the demand for parking. While such objectives might be appropriate for a broad-based TMA, the objectives may not be consistent with the RTO objective of reducing SOV use.
- Some of the programs do not have clear output objectives and many do not have clear quantified outcome objectives against which to measure progress. Some of the end outcome objectives that do exist were based upon what appear to be overly optimistic assumptions. Programs with no or a shorter track record were more likely to have unrealistic outcome projections.
- Few programs are systematically tracking outcomes in a meaningful way.
- There is a need for more education and technical assistance, particularly for some TMA programs.

Several activities are already underway that will help address many of these concerns.

Key Recommendations

- Though the time frame for the *5-Year Strategic Plan Work Plan* is not yet complete, RTO should, in a collaborative process, develop a new work plan that includes specific, quantified output and outcome objectives.
- RTO staff and the Subcommittee should work together to develop consistent and reasonable methods to track and measure outputs and outcomes. For some programs this will likely require some additional funding to implement.
- RTO staff should work on developing consistent methods for converting data collected by programs to measures of effectiveness, such as VMT reduction, mode share, and new non-SOV participants.
- Evaluation efforts should include outputs (activities/services provided), intermediate outcomes (program participation and satisfaction), and end outcomes (actions).
- Programs should collect data on participant's travel mode prior to making a change.
- RTO staff should work at enabling data from different programs to be linked and made available to other program staff. In addition, RTO staff should approach agencies that collect potentially useful data. An example is working with TriMet to determine whether the automatic passenger counting and GPS systems on the transit vehicles would be useful in tracking program outcomes.
- Consider conducting an annual, regional survey of residents to track overall trends in mode share. This will help account for the overlap between programs, particularly regional collaborative marketing. In addition, current sources, such as employer ECO surveys, are not

comprehensive. Such a survey would also allow for a consistent methodology, enabling more accurate comparisons over time, and would not be dependent upon employers' survey efforts.

- RTO should require that programs collecting data as part of an RTO-funded project provide, upon request, the original data for independent analysis.
- The RTO program should collect dollar amounts for all funding sources (including estimates of in-kind donations and equipment) used by programs to implement the RTO projects to demonstrate whether the RTO funds leverage other sources and to develop more accurate estimates of cost-effectiveness.

Background

Regional Travel Options Program

Regional Context

In 1995 Metro adopted the 2040 Growth Concept, a long-range growth management strategy intended to shape the region for the next 50 years. The strategy encourages growth within existing centers and corridors, along with some expansion of the urban growth boundary. The future success of the plan relies, in part, on significantly increasing the use of alternative modes of transportation, including transit, walking, bicycling, carpooling, and telecommuting. These are generally referred to as non-single-occupant vehicle (non-SOV) modes. Encouraging the use of non-SOV modes is a form of transportation demand management (TDM). One objective of TDM is to reduce demand for roadways (i.e. driving), thus reducing the need to expand infrastructure.

The *Regional Transportation Plan* (RTP), currently under an update process, provides the blueprint for the region's transportation system for a 20-year time horizon. Looking towards 2040, the RTP sets non-SOV modal targets for three categories of areas in the region. For regional centers, town centers, main streets, station communities and corridors the non-SOV modal target for all trips to and within those areas is 45-55%. The target for the central city is 60-70%. For other areas the target is 40-45%. The plans and policies in the RTP aim to support reaching these targets. The projects in the RTP are funded from a variety of sources.

In 1992, Metro's Transportation Policy Advisory Committee (TPAC) established a TDM Subcommittee to help oversee projects supported by the Congestion Mitigation and Air Quality (CMAQ) funds distributed to the region by the federal government. The mission of the subcommittee was to "reduce the need to drive by advocating TDM in the region, developing funding and policy recommendations to TPAC and coordinating regional TDM programs."[1] At this time, the TDM program at TriMet was expanded. The program evolved further in 1997 when the Department of Environmental Quality (DEQ) adopted the Employee Commute Options (ECO) rule. Other partners were added to the overall program, including C-TRAN, SMART/Wilsonville,[2] the City of Portland's new Transportation Options Division, and other cities and counties. Metro also established a Transportation Management Association (TMA) Assistance Program in 1999, providing funding for existing and new TMAs.

Given the expansion of efforts in the 1990s, the TDM Subcommittee saw a need to revise its mission to connect with the changing needs of the program. In December 2003, the *Regional Travel Options Program 5-Year Strategic Plan* was approved by consensus of the members of the renamed Regional Travel Options (RTO) Subcommittee. The *Plan* was adopted by the Metro Council in January 2004. The *Strategic Plan* included detailed work plans for most of the anticipated TDM projects and programs that would receive funding through the Metropolitan Transportation Improvement Program (MTIP), which includes the programming of CMAQ funds. Specifically, the *Plan* stated the following:

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[1] *Regional Travel Options Program 5-Year Strategic Plan*, December 2003, p. 1.
[2] Wilsonville is not part of the TriMet service district.

> Regional travel options include all of the alternatives to driving alone – carpooling, vanpooling, riding transit, bicycling, walking and telecommuting. In order to increase the number of people using these travel options, the region needs to
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The *Plan* emphasized collaboration and integration to produce a program with "measurable results and tangible impacts."

2004-05 RTO Program

In 2004-05, the RTO program included funding for six TMAs, six specific projects funded through the Region 2040 Initiatives program, and four programs funded with CMAQ funds (Table 1). In addition, CMAQ funds were used for evaluation, a rideshare study, and subcommittee management and strategic planning. During 2004-05, program management started to shift from TriMet to Metro. That transition is nearly complete in 2005-06.

Table 1: 2004-05 RTO Projects and Funding

Organization	Amount ($)	Percent
TMA Program		
Clackamas Regional Center TMA	24,750	1.6%
Lloyd TMA	24,750	1.6%
Gresham Regional Center TMA	24,750	1.6%
Westside Transportation Alliance (WTA)	24,750	1.6%
Swan Island TMA	24,750	1.6%
Troutdale Area TMA	67,500	4.3%
Subtotal: TMA Program	*191,250*	*12.3%*
Region 2040 Initiatives		
Lloyd TMA/Lloyd District Ped Program	a	
SMART Wilsonville Walking Program	16,000[b]	1.0%
City of Portland/CarpoolMatchNW	60,000	3.9%
Swan Island Vanpool Program	12,500	0.8%
Gresham TMA Bike Program	14,950	1.0%
WTA Carfree Commuter Challenge (2005)	35,653	2.3%
Subtotal: Region 2040 Initiatives	*139,103*	*9.0%*
RTO Core Program		
TriMet Regional Vanpool Program	171,088[c]	11.0%
TriMet Regional Evaluation	100,000	6.4%
TriMet employer program	350,000	22.5%
SMART TDM program	55,000	3.5%
Metro Collaborative Marketing	54,639	3.5%
Metro Regional Rideshare Study	77,940	5.0%
RTO subcommittee management/strategic planning	113,786	7.3%
Subtotal: RTO Core Program	*922,453*	*59.4%*
Regional MTIP funds		
City of Portland Interstate TravelSmart	300,000	19.4%
TOTAL	1,552,806	100.0%

Source: Except as noted, figures provided by Metro RTO staff.
[a] data not available
[b] Local match of $4,000 not included in this amount.
[c] Calculated from data provided by TriMet, not including 10.27% local match.

Evaluating RTO

The *Strategic Plan* places an emphasis on evaluation of the program to demonstrate results. The last RTO evaluation was adopted in December 2004 and covered 2003. That evaluation, conducted by TriMet and Metro and adopted by the RTO Subcommittee, used the results of surveys conducted by employers to comply with ECO to demonstrate that the share of work trips made in non-SOV modes increased from 26% in 1996 to 31% in 2003. Most of the improvement was due to increased transit and walking/bicycling. Carpooling went down over that time. Given the *2040 Growth Concept's* focus on regional centers, the evaluation also presented an in-depth analysis of the Beaverton regional center and basic analyses of 21 centers.

Evaluation Methodology

This evaluation focuses on the individual projects and programs that were identified by Metro staff as part of the RTO program in 2004-05. Each program was evaluated separately, with the results appearing in the Appendices. Those results are summarized in the next section by grouping the programs as follows:

Regional programs

Collaborative marketing

TriMet Employer Outreach

Regional vanpool program

CarpoolMatchNW

Smaller area programs

SMART/Wilsonville Travel Options Program (including SMART walking program)

Lloyd TMA (including Lloyd District pedestrian program)

Swan Island TMA (including vanpool program)

Clackamas Regional Center TMA

Gresham Regional Center TMA (including bike program)

Westside Transportation Alliance (including Carfree Commuter Challenge)

Troutdale Area TMA

Special projects

TravelSmart Interstate in North and Northeast Portland

Supportive Oregon Department of Energy projects

Telework

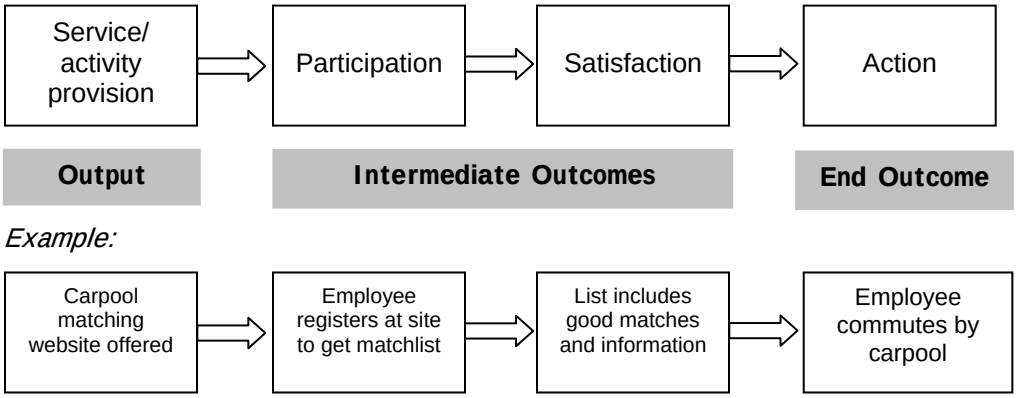
Business Energy Tax Credit (BETC) Program

In any ex post evaluation of a program the key questions are: What was done? What were the impacts? Why did the impacts occur? Did the program succeed? In the case of RTO, there are several steps between implementation of a project or program (what was done?) and the intended result of reducing drive alone trips (what were the impacts?). First, the program offers the planned service or activity. This includes things such as staffing an information booth at an employee event or providing a website for people to find carpool partners. Next, people participate in the activity – employees visit the booth and pick up transit schedules and people

log on to the website and register to get a list of potential carpool partners. If they receive satisfactory information, they may then act on the information and change their travel mode. To understand why impacts may or may not have occurred and if the program succeeded, it is useful to examine each of these steps: service provision, participation, satisfaction, and action.

Another important concept in this evaluation is the distinction between "outputs" and "outcomes."[3] Outputs refer to the activity undertaken and the products that are produced or provided as a result. In the examples from above, the information booth and the website are outputs. Outcomes are the result, effect, or consequence of the activities that are undertaken. In the steps outlined above, the participation, satisfaction, and action are all outcomes. Participation and satisfaction could be viewed as intermediate outcomes, leading to the end outcome of action – people changing modes from drive alone. These concepts are shown in Figure 1.

Figure 1: RTO Evaluation Framework and Example



There are several reasons it is useful to evaluate both outputs and outcomes:

- The end outcomes of the RTO programs often overlap, making it difficult to distinguish the outcomes of a single program. For example, an employee who forms a carpool using the CarpoolMatchNW website may work for an employer participating in TriMet's Employer Outreach program and be located within a TMA.
- Several of the programs are new and have not developed the capacity to measure outcomes yet. Moreover, funding may not have been available to measure outcomes accurately.
- Understanding the outputs can help explain whether the program was the reason for the outcomes or something else. Non-SOV mode use could go up for reasons beyond the programs that are implemented, such as gas prices or improved transit service. They could also go down for similar reasons. If improvements in end outcomes are measured without knowing the outputs and intermediate outcomes, it would not be clear what may have caused the improvements. While it is nearly impossible to ever "prove" that the

[3] The U.S. Environmental Protection Agency (EPA) uses these concepts in the grant programs and includes definitions of the terms (http://www.epa.gov/ogd/grants/assistance.htm).

programs cause the outcome, making the link between outputs and outcomes help explain what may have happened.

Finally, with any evaluation it is important to establish criteria by which to judge success. Comparisons are usually made to the intended objectives, outputs, or outcomes, to a previous point in time, to an accepted standard, and/or to other comparable programs. In this case, the work plans in the *RTO 5-Year Strategic Plan* included objectives for each program. The work plans always included outputs and sometimes included projected outcomes, such as the vehicle miles traveled (VMT) reduced. The *Plan* also includes overall objectives for the RTO program. In addition, Metro's *Regional Transportation Plan* includes overall outcome objectives for modes of travel.

Applying this framework, for each program, PSU CUS evaluators attempted to answer the following questions:

What services or activities were provided? ***How does this compare to the work plan in the 5-year Strategic Plan?*** These questions focus on *outputs*, such as holding transportation fairs, meeting with employers, and marketing efforts.

What was the level of participation in the services or activities? This question addresses the fact that people may participate in the activities provided without necessarily participating in a travel option. For example, people may attend a transportation fair or see an advertisement, but may or may not decide to use transit as a result.

What was the level of satisfaction with the services or activities? This question attempts to address how satisfied participants were with the activities, which may influence the likelihood of success in moving participants to travel options.

To what extent did participants use travel options? ***How does this compare to the work plan in the 5-year Strategic Plan? How does this compare to the RTP modal objectives? How does this compare to programs in other regions?*** These questions get at the primary objective of the RTO program – encouraging the use of options to traveling in a single-occupant vehicle (SOV). To the extent possible, consistent measures (e.g. mode share, vehicle miles traveled (VMT) reduced, and dollars per VMT reduced) and methods are used, relying upon data supplied by the program. When possible, results are compared to the objectives in the *Strategic Plan Work Plan*, the modal objectives in the *Regional Transportation Plan* (RTP), and programs in other regions in the U.S. or Canada. The RTP sets modal targets for three categories of areas in the region. For regional centers, town centers, main streets, station communities and corridors the non-SOV modal target for all trips to and within those areas is 45-55%. The target for the central city is 60-70%. For other areas the target is 40-45%. These objectives are for the year 2040; it is not expected that programs would have achieved these targets in 2004-05. Rather, the comparison provides an idea of how far programs must progress in the following 35 years.

To what extent does the program support the RTO objectives? ***Reduce drive-alone trips and encourage alternative modes; Regional coordination and communication; Include all trips, not just commute trips; Connections to other goals (2040 centers; corridors; transit-oriented development; TriMet transit investment; community health; air quality; and water***

quality). This question takes a broader view of the program's activities, linking back to outcome objectives identified in the *5-Year Strategic Plan*.

The evaluation is based upon the following sources:

- *Evaluation reports submitted to Metro.* On February 9, 2006, Metro staff requested information for this evaluation from each program. Reports were due March 3, 2006. By the end of March, Metro forwarded the reports that they received to the evaluation team.

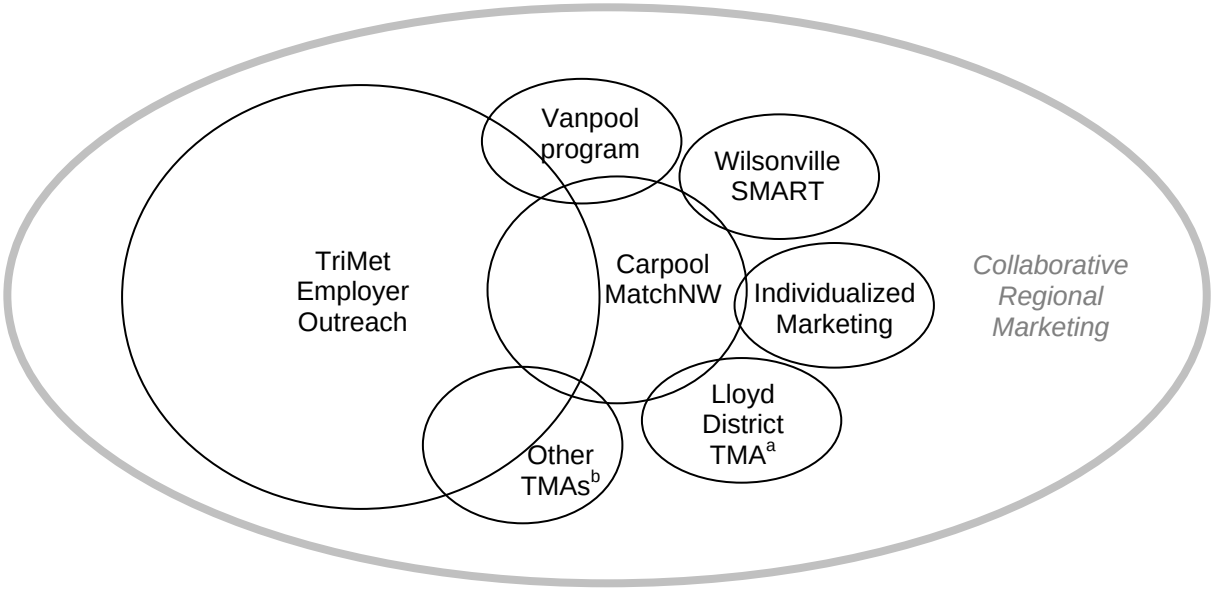
- *Interviews*. The evaluation team conducted an interview with one or more staff members from each program. In addition to following up on information from the evaluation report submitted, the interview covered a standard set of questions about each program and RTO in general. The interviews are listed in Appendix M.

- *Data analysis*. If the program collected data from an activity, PSU CUS evaluators requested an electronic copy of the original data and then performed an independent analysis of the data. This included results from employee surveys submitted to TriMet (at the work site level) and surveys of participants in the CarpoolMatchNW ridematching service.

Findings

Overall

Most of the program achieved most or all of their output objectives. Several of the programs were able to demonstrate outcomes, including mode share changes and VMT reduction. However, the overall amount and quality of data available makes it impossible to develop an accurate overall estimate of the impacts of the programs. Figure 2 attempts to show how the outcomes of the various programs, as currently measured, may overlap. For example, people using the CarpoolMatchNW website may have gone there because of an individualized marketing program, efforts of a TMA, or TriMet's Employer Outreach program. The Collaborative Regional Marketing Program, when implemented, should have impacts extending throughout all of the programs. The diagram also helps highlight the linkages between the programs and need for regional coordination.



Note that the size of the programs and overlapping areas between programs are for conceptual purposes only and are not an estimate of the real amount of impacts or overlap.

[a]While a few employers within the Lloyd District are included in TriMet's employer database, the program outcomes are generally measured separately.

[b]There is likely some overlap in outcomes between some TMAs (e.g. Swan Island) and the Vanpool Program.

Figure 2: Conceptual Diagram of Overlapping Outcomes of RTO Programs

Regional Programs

Background

Four RTO programs were regional in scope:

- Collaborative Marketing Campaign
- TriMet Employer Outreach
- Regional Vanpool Program
- CarpoolMatchNW

What services were provided?

With the exception of the Collaborative Marketing Campaign, the regional programs offered all or most of the services that were called for in the *5-Year Strategic Plan Work Plan*. The Collaborative Marketing Campaign was delayed. During 2004-05 a consultant was chosen to conduct a two-year campaign, which started in 2005-06 ("Drive Less Save More"). Table 2 summarizes the key findings and outcomes of the evaluation of the three other regional programs. TriMet worked with over 950 worksites, representing about 210,000 employees, and met or exceeded most of their activity targets from the *Work Plan*. The Regional Vanpool Program (organized by TriMet) funded 20 traditional vanpools and five vanpool shuttles. This included 14 vanpools that started in 2004-05, about half of the target in the *Work Plan* (30 new vanpools). Rather than expanding the program during 2004-05, TriMet awaited the results of a regional vanpool market study that was completed in August 2005. During 2004-05, CarpoolMatchNW was supposed to make various improvements to the website, along with marketing efforts to increase the number of registrants. Most of the improvements were made, though the marketing efforts were not at the level planned for. Despite this, the total number of registrants by the end of 2004-05 met the target.

Table 2: Activities of Regional Programs in 2004-05 Compared to 5-year *Strategic Plan Work Plan*

	TriMet Employer Outreach	CarpoolMatchNW	Regional Vanpool Program
Key targets in Work Plan for 2004-05	868 sites 212,000 employees	Various website improvements Outreach and marketing 4,830 registrants	Conduct vanpool study One new shuttle 30 new vanpools
Were targets met?	Most targets met	Most targets met. Less outreach and marketing than planned.	Study – Yes New vanpools – No
If not, why not?	Downturn in employment	Less funding than expected. Waited for status of regional program.	Waited for results of study to expand program
Projected program impact from Work Plan for 2004-05	166,000 employees impacted and surveyed 39 million VMT reduced	1,059 new carpools 11 million VMT reduced	30 new vanpools 7 million VMT reduced
Was program impact achieved?	Likely	Unlikely	Unlikely
If not, why not?	Not applicable	Optimistic projections and assumptions. Fewer registrants formed carpools than projected.	Waited for study to expand program. Most vanpools are smaller and traveled shorter distances than projected.
Projected funding from Work Plan for 2004-05	$385,649	$345,520	$361,140, including $150,000 for study
Actual RTO funding in 2004-05	$385,649	$135,000	$157,217 for vanpools $77,940 for study

What was the level of participation in the services?

As shown in Table 2, both the TriMet Employer Outreach and CarpoolMatchNW programs reached the intended number of participants – 868 sites and 212,000 employees for TriMet and 4,830 registrants for CarpoolMatchNW. TriMet's Employer Outreach activities reached *approximately* one-quarter of the worksites with 50 or more employees and perhaps half of the largest (500 or more employees) work sites.[4]

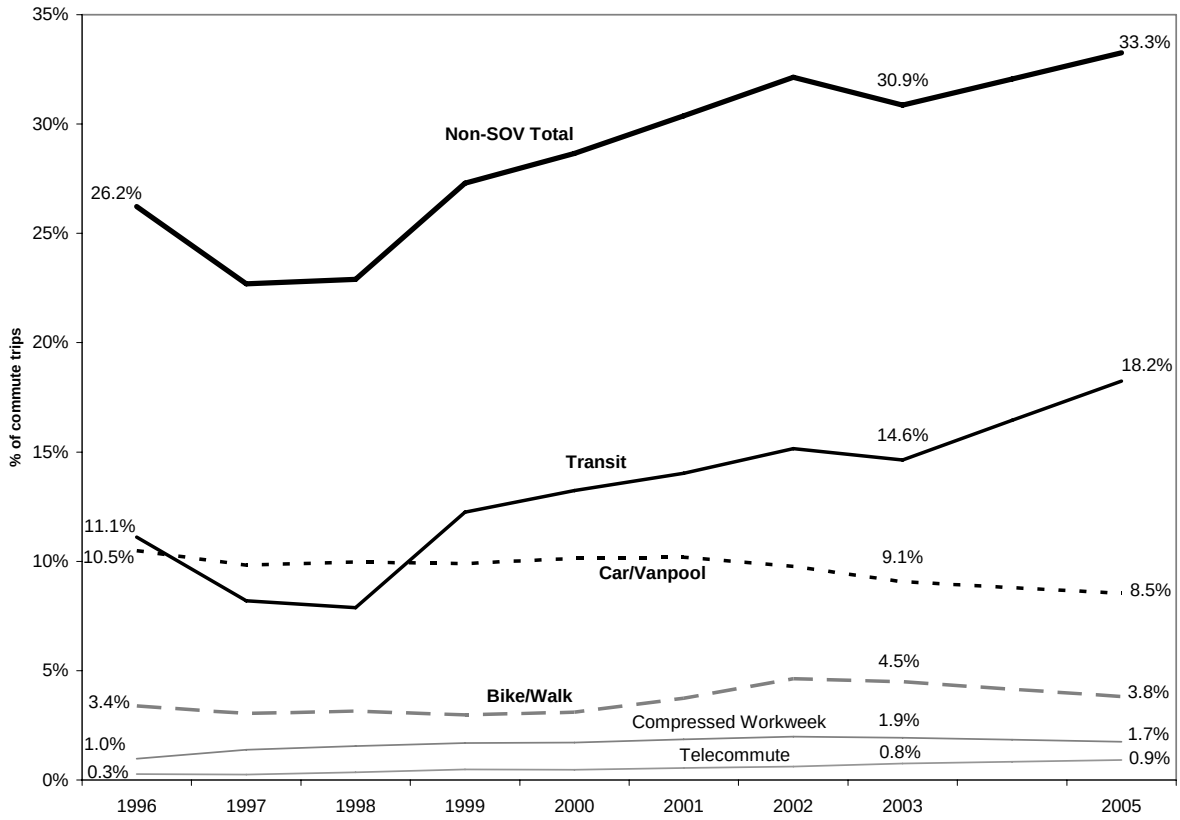
[4] There is no readily-available source of data on the number of worksites by size (number of employees) within the Metro area. The Census provides data on employers by size for each county. However, employers with multiple worksites in one county may be reported to the Census as a single employer, whereas TriMet would have each worksite as a separate entity in their database, often referred to as an "employer."

What was the level of satisfaction in the services?

Data on levels of satisfaction were only available for the CarpoolMatchNW participants. People using the CarpoolMatchNW website who completed a survey generally rated the service as excellent. One exception, however, was with the quality of matches. Fifteen percent of those surveyed rated the quality of matches as poor and 10% rated them as fair. Also of concern is the 19% who stated that the quality of matched was "not applicable." This, along with other survey data, indicates that a significant share of the participants are not seriously interested in forming a carpool. This raises questions about the quality of the service for other participants.

To what extent did participants use travel options?

An increasing share of commute trips to work sites participating in TriMet's Employer Outreach program are being made by non-SOV modes (Figure 3). In 2005, one-third of the commute trips were made in non-SOV modes, up from about 31% in 2003. The improvement is due to increased transit use. Rates of carpooling and vanpooling continue to decline overall.



Sources: 1996-2003 figures are from TriMet and were included in the 2003 RTO Report. 2005 figures were calculated using original data from TriMet.

Figure 3: Non-SOV Commute Trips (1996-2005)

Rates of walking and bicycling have also declined slightly in recent years, such that the overall increase since 1996 is only 0.4 percentage points. This seems to conflict with data from the City of Portland's counts of bicycles crossing the bridges into downtown that show numbers increasing greater than population. One explanation may be that the TriMet employer survey

database may not include many downtown employers that are not required to survey for the ECO rule or the Passport program.

Figure 5 shows the progress that is necessary to meet the RTP modal targets for 2040, with interim projection every five years. Sites outside of downtown Portland and the Lloyd District require the greatest rate of improvement. These projections probably understate what is necessary to achieve the targets for at least two reasons. First, the RTP modal targets apply to all trips *to and within* the areas, while this figure only includes commute trips. It is sometimes easier to increase non-SOV mode shares for commute trips than other types of trips. Therefore, it may be desirable to achieve higher non-SOV mode shares for the commute trips included. Second, the figure only includes worksites that participate in TriMet's Employer Outreach program. These employers may have higher non-SOV mode shares than other employers.

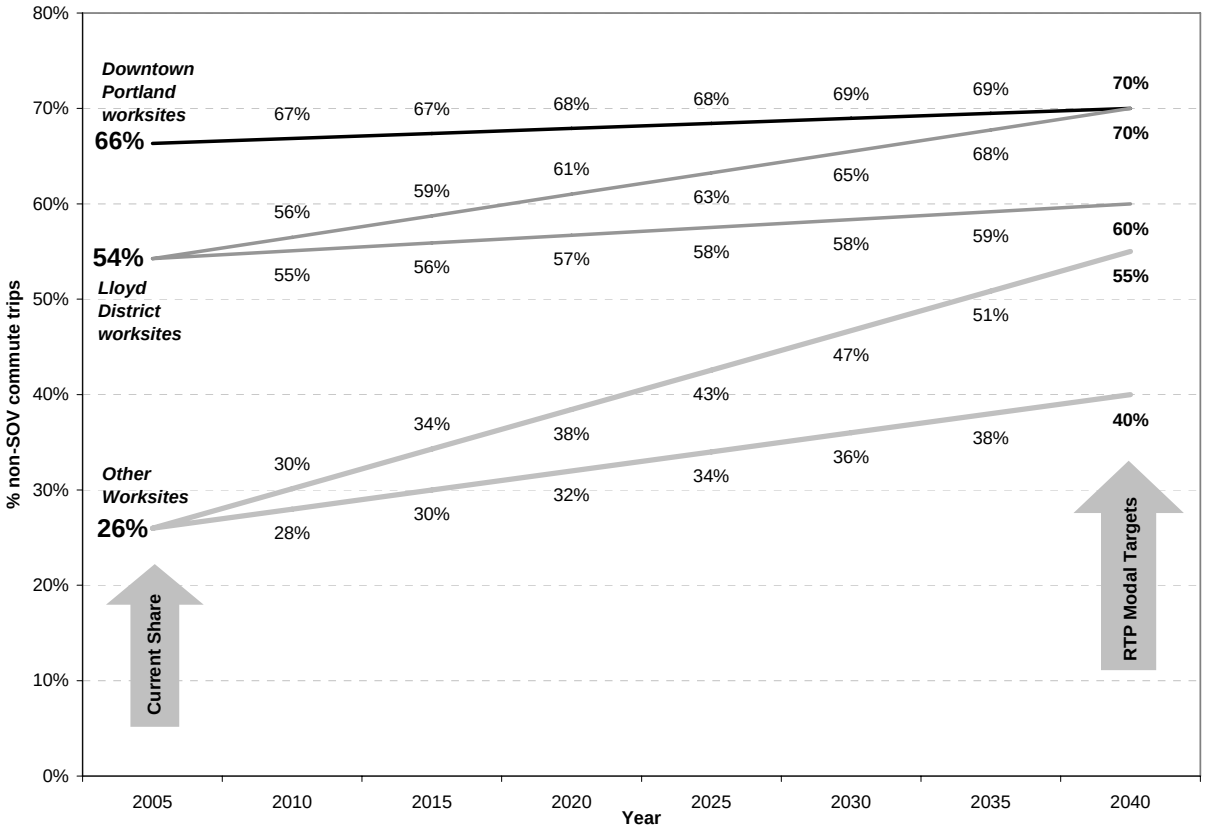


Figure 4: Non-SOV Commute Mode Share - Actual (2005) and RTP Targets (2040)

A significant share of the participants in the three active programs did use travel options for commuting, resulting in a reduction in VMT in 2004-05. The estimated outcomes are shown in Table 3. Readers are cautioned about making direct comparisons between the programs or adding the impacts together for at least two major reasons:

- The survey data for TriMet Employer Outreach and CarpoolMatchNW is collected at various dates. The most recent survey is used to estimate mode share and VMT reduction,

even if that survey was completed prior to 2004-05. Therefore, the calculations assume that people using non-SOV modes prior to 2004-05 continued to do so in 2004-05. For vanpools, the estimates are only based upon the vanpools that operated in 2004-05.

- Results from individual programs may be counted twice, as shown in Figure 2. For example, people who formed carpools through CarpoolMatchNW who work for employers that work with TriMet may be counted in both programs. In addition, at least half of the traditional vanpools go to sites in the TriMet database that reported high levels of vanpooling in their most recent survey. All of the vanpool shuttles go to sites in the TriMet database. However, the impact double-counting between the traditional vanpool program and TriMet's Employer Outreach is probably not significant, given the size of the vanpool program in 2004-05.[5] The amount of overlap between the CarpoolMatchNW program and TriMet's Employer Outreach may be larger, but was not estimated.[6]

Also note that the cost-effectiveness estimates (dollars per VMT reduced) use the RTO funding levels for the program for 2004-05. These estimates should not be compared to ones found in analyses of similar types of programs which may include all funding sources. In addition, the estimates for TriMet Employer Outreach and CarpoolMatchNW assume that outcomes measured in previous years were sustained in 2004-05, yet the program costs from those previous years are not included.

Table 3: Travel Outcomes of Regional Programs

	TriMet Employer Outreach	CarpoolMatchNW	Vanpool Program (traditional)	Vanpool Program (shuttles)
Number of participants	177,000 at sites with surveys 210,000 at all sites	4,800	~125	~175
Estimated % of participants using non-SOV modes for commuting	33%	~20% in carpool formed via program (high)	100%	100%
Estimated VMT reduced in 2004-05[a]	27,358,500 (low) 45,980,700 (high)	1,237,000 (low) 6,902,800 (high)	844,300 (low) 1,162,800 (high)	98,200 (low) 216,500 (high)
RTO $/VMT reduced	$0.01[b]	$0.02 - 0.12	$0.13 – 0.18	$0.16 – 0.35

[a]The estimated VMT reduction for TriMet and CarpoolMatchNW assumes that participation in non-SOV modes measured in previous years continued to 2004-05.
[b]A portion of program outcomes measured here may be the result of other RTO programs, e.g. CarpoolMatchNW, TMA efforts, etc.

[5] If all vanpool trips were eliminated from the TriMet survey data, the estimate of VMT reduction would fall by about 1%.
[6] This could be done by matching the worksites of the carpoolers with the TriMet database, but would take some effort and is beyond the scope of this evaluation.

The *Strategic Plan Work Plan* included projections for program impacts for most programs for each year. The TriMet Employer Outreach program appears to have met its projected program impact, while CarpoolMatchNW and the Regional Vanpool Program did not (Table 2). This does not necessarily mean that the programs were not successful, however. Our analysis raised many questions about how the projections were made. Some of the projections used optimistic assumptions. In addition, funding levels were sometimes lower than expected in the *Work Plan*.

To what extent do the programs support the RTO Objectives?

The regional programs generally supported the RTO program objectives of reducing drive alone trips while encouraging alternative modes (Table 4). The programs were defined as regional in scope, thus supporting the RTO objective of regional coordination and communication. However, our interviews with staff at RTO programs indicate that improvements could be made at marketing these programs regionwide. The programs were designed to focus on work trips and thus may only indirectly affect other trip types. Commuters that use non-SOV modes to get to work may use other modes for mid-day trips (e.g. to lunch). They may also be more inclined to use these modes for other purposes, if they have a TriMet Passport pass, for example. Finally, CarpoolMatchNW added a component to allow matching for one-time trips, which are more likely to be non-commute trips.

Table 4: Regional Programs and RTO Objectives

	TriMet Employer Outreach	CarpoolMatchNW	Regional Vanpool Program
Reduce drive-alone trips and encourage alternative modes	Yes	Yes	Yes
Regional coordination and communication	Yes, but may be improved	Yes, but may be improved	Yes, but may be improved
Include all trips, not just commute trips	Indirectly	Indirectly	Indirectly
Connections to other goals:			
2040 centers and corridors	Indirectly	Indirectly	Indirectly
Transit-oriented development	Indirectly	No effect	No effect
TriMet transit investment	Yes	Unclear	Yes (shuttles)
Community health[a]	Yes	Unclear	Unclear
Air and water quality	Yes	Yes	Yes

[a]Community health in this context focuses on increasing physical activity. Health benefits from reducing pollution are accounted for under "Air and water quality."

Smaller area programs

Background

The RTO program supports seven programs that cover specific smaller geographic areas, six of which are transportation management associations (TMAs):

- SMART/Wilsonville Travel Options Program (including SMART walking 2040 project)
- Lloyd TMA (including Lloyd District pedestrian 2040 project)
- Swan Island TMA (including vanpool 2040 project)
- Clackamas Regional Center TMA
- Gresham Regional Center TMA (including bike 2040 project)
- Westside Transportation Alliance (including Carfree Commuter Challenge, a 2040 project)
- Troutdale Area TMA

These programs share many features, but also differ significantly, as shown in Table 5. Of the TMAs, Lloyd TMA (LTMA) has been in existence the longest, since 1994. The LTMA is the only program that covers an area that does not have free parking. It also has the highest density of employment of the seven areas. Both the LTMA and Swan Island TMA cover areas where almost all of the land area is non-residential. For lack of a better definition, the WTA is defined in this analysis as all of Washington County within the urban growth boundary. As a result, nearly half of that land area and 85% of the taxlots are residential. However, WTA focuses their activities in employment areas. The TMAs in Troutdale and Clackamas have specific boundaries, but still include a large share of residential land. This reflects the lower density nature of these areas.

Because of these differences in land uses and employment characteristics, direct comparisons between the programs are not always possible. Activities in some areas may not be appropriate for others. The effectiveness of programs will be influenced by characteristics of the area, including the price and availability of parking, the quality of the pedestrian and bicycle infrastructure, levels of transit service, types of land uses, and other urban design features.

Table 5: Characteristics of Smaller Area Programs

	SMART	Lloyd TMA	Swan Island TMA	WTA[a]	Clackamas RC TMA	Gresham RC TMA	Troutdale Area TMA
Year formed	1989[b]	1994	2000	1997	2002	2001	2004
# of members (employers & organizations)	n.a.	69	12	16	--	11[c]	--
Approximate area covered (square miles)	8	<1	2	110	10	1	2
Taxlots							
% Commercial	4%	53%	46%	3%	7%	43%	6%
% Industrial	3%	0%	6%	1%	5%	0%	0%
% Multi-family residential	10%	22%[d]	0%	6%	5%	4%	8%
% Single family residential	71%	3%	22%	79%	70%	33%	67%
Land Area[b]							
Non-residential	79%	97%	99%	55%	66%	81%	66%
Residential	21%	3%	1%	45%	34%	19%	34%

[a]For this analysis, WTA is defined as all of Washington County within the Urban Growth Boundary.
[b]Year Wilsonville transit agency service started.
[c]Includes members of the board of directors only.
[d]Note that individual condominiums count as separate taxlots.

What services were provided?

The level of activities and services provided by the programs varied significantly. This reflects, in part, the differences in the level of maturity of the programs. The older programs tend to have more overall funding, as they have developed their membership and other sources of funds. Programs that have been in existence longer tended to have more objectives in the *Strategic Plan Work Plan* and the objectives were more specific and measurable. Several of the programs experienced staff turnover that negatively affected activities, including WTA and the Clackamas Regional Center TMA.

Table 6: Activities of Smaller Area Programs in 2004-05 Compared to 5-year *Strategic Plan Work Plan*

	SMART	Lloyd TMA	Swan Island TMA	WTA
Key targets in Work Plan for 2004-05	• Various general outreach, employer outreach, and planning & coordination • WalkSmart program	• Sell 5,000 Passport passes • Increase bike accessibility and events • Plan for 1-5 underpass	• Increase transit ridership and Passport sales • Double shuttle ridership • Increase vanpools • Increase ped/bike access • Encourage home ownership near workplace	• Expand TMA representatives • Expand membership • Produce news flash, newsletter, and fairs • CarFree Commuter Challenge (CCC) • Education program
Were targets met?	Many were met.	Yes	Yes	Some were met, including CCC
If not, why not?	Budget and staff time constraints	Wayfinding signs scheduled for 2006	n.a.	Staff turnover
Projected program impact from Work Plan for 2004-05	Not projected	58 members 8,075 employees 52% non-SOV 3.8 million VMT reduced	15 members 7,000 employees 25% non-SOV mode split	32 members 27,000+ employees
Was program impact achieved?	No impact projected	Likely, among employers participating in Passport	Almost. 12 members 24% non-SOV for participating employers	Unlikely. 16 members. Unknown # employees reached.
Projected RTO funding from Work Plan for 2004-05	$89,700	$25,000	$25,000	$25,000 $52,500 (2040)
Actual RTO funding in 2004-05	$55,000 (travel options) $16,000 (2040 for WalkSmart)	$24,750	$24,750 (TMA) $12,400 (2040 for vanpools)	$24,750 (TMA) $35,653 (2040 for CCC)

Table 6 (continued): Activities of Smaller Area Programs in 2004-05 Compared to 5-year *Strategic Plan Work Plan*

	Clackamas RC TMA	Gresham RC TMA	Troutdale Area TMA
Key targets in Work Plan for 2004-05	• Shuttle service • Reach employees through newsletter • Monthly fairs • Participate in CCC • Brochure and newsletter • Grow membership 5% • Radio spot	• Promote carpooling • Work to improve transit service and pedestrian access • Monthly meetings • Customer first program for parking • Education program • 2040 project: Bike art racks, bike safety program, kiosks, and brochure	• Provide transportation advisory services • Become transit fluent, determine bus shelter and access needs, provide transit and negotiate to sell bus passes • Promote bicycling • Develop brochure and logo • Develop list and meet with employers
Were targets met?	Most targets met, except shuttle	Most targets met	Most targets met
If not, why not?	Shuttle discontinued; Staffing turnover reduced outreach events	Unclear	Not enough demand to sell transit passes; unclear on meeting with employers
Projected program impact from Work Plan for 2004-05	20 members 4,000 employees	172 members 2,658 employees 19.8% non-SOV 6,613 VMT reduction	Not projected
Was program impact achieved?	Unclear	Unlikely. Member target not met.	Not applicable.
Projected funding from Work Plan for 2004-05	$25,000	$25,000	Not included
Actual RTO funding in 2004-05	$24,750	$24,750 (TMA) $14,950 (2040)	$67,500

What was the level of participation in the activities and services?

The level of monitoring of participation in program activities also varied significantly, usually in relationship to the maturity of the program and scope of services provided. For example, the Lloyd TMA keeps track of employers participating in the Passport program, and the Swan Island TMA keeps counts of shuttle riders. In both programs, participation rates met or exceeded objectives in the *Strategic Plan Work Plan*.

The *Strategic Plan Work Plan* projected membership levels for five of the TMAs. It appears that only Lloyd TMA met this target. Swan Island nearly met their target of 15 members. WTA lost membership. The TMAs in Clackamas, Gresham, and Troutdale did not keep clear counts of membership. The Gresham Regional Center TMA counted members of its Board as TMA members.

What was the level of satisfaction in the services?

The programs did not provide any data on levels of satisfaction. Anecdotally, most of the programs indicated that satisfaction is growing among participating employers and organizations.

To what extent did participants use travel options?

With the exception of Lloyd and Swan Island TMAs, the programs did not collect data on participation in travel options. The Lloyd TMA keeps track of commute mode shares using surveys of employees at employer work sites that offer the Passport program. At these sites, the share of commute trips made driving alone fell by 2.8 percentage points in 2005 compared to 2001. In 2005, about 57% of the commute trips to these sites were made in non-SOV modes. LTMA estimates that their program has reduced VMT by about 3.9 million annually over a baseline of 1997. Swan Island TMA also saw a reduction in drive along work trips from 2001-02 to 2004-05 (2.3 percentage points). About 24% of the commute trips made by employees surveyed are by non-SOV modes. This represents over 100,000 VMT reduced annually. The shuttle program operated by Swan Island may reduce VMT by 76,000-166,600 more annually. The WTA did keep track of people participating in the Carfree Commuter Challenge (CCC) and estimated that the event reduced VMT by 235,000 in 2004-05.

Any attempt to estimate VMT reductions for the other programs would be questionable, because of the lack of data collected. Given the level and types of activities undertaken by the Gresham, Clackamas, and Troutdale TMAs, it is unlikely that significant VMT reduction or changes in non-SOV mode share occurred as a result.

To what extent do the programs support the RTO Objectives?

The programs generally supported the RTO program objectives (Table 7).

Table 7: Smaller Area Programs and RTO Objectives

	SMART	Lloyd TMA	Swan Island TMA	WTA	Clackamas RC TMA	Gresham RC TMA	Troutdale Area TMA
Reduce drive-alone trips and encourage alternative modes	Yes	Yes	Yes	Yes	Yes	Yes, somewhat	Yes, somewhat
Regional coordination and communication	Yes	Yes	Yes	Yes	Yes	Yes	Unclear
Include all trips, not just commute trips	Yes	Yes[b]	Limited	Yes	Yes	Yes	Yes
Connections to other goals:							
2040 centers and corridors	Yes	Yes	n.a.	Yes	Yes	Yes	Yes
Transit-oriented development	No effect	Yes	No effect	Unclear	Unclear	No effect	No effect
TriMet transit investment	n.a.	Yes	Yes	Yes	Yes	Yes	Limited
Community health[a]	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Air and water quality	Yes	Yes	Yes	Yes	Yes	Yes	Yes

[a]Community health in this context focuses on increasing physical activity. Health benefits from reducing pollution are accounted for under "Air and water quality."
[b]Indirectly, and through infrastructure improvements in area.

Individualized Marketing

Background

The City of Portland commissioned Socialdata America, an independent consultant, to use their TravelSmart® individualized marketing techniques to promote non-SOV use in neighborhoods along the new Interstate MAX corridor. The new light rail line opened on May 1, 2004. The project received $300,000 in MTIP RTO funding in 2004-05.

What activities were provided?

The program met all of its objectives. All households in the target area were initially contacted to assess their interest in using non-SOV modes. People that were interested were provided customized information and incentives. They could also request a home visit for additional assistance. The project also included an evaluation of results. Before surveys were conducted in April and May 2004. After surveys were conducted a year later to detect behavioral changes associated with the individualized marketing. In-depth before and after interviews were also conducted. The surveys and interviews included people within the target area and within nearby "control" neighborhoods.

What was the level of participation in the services?

The first phase of the marketing included direct contact with 14,446 people in the target area. This is 43% of the estimated number of people living in the target area. Of those, 2,620 received customized information and 108 received a home visit.

What was the level of satisfaction with the services?

Overall, participants were satisfied with the services provided.

To what extent did participants use travel options?

The before and after surveys indicate that residents in both the target and control groups reduced the share of trips they made in non-car modes (Table 8). The target group increased the share of trips made by foot, bicycle, or transit from 20% to 30%, a 10 percentage point increase.[7] The control group saw a four percentage point increase (18% to 22%). The net difference is a six percentage point increase. The use of a control group helps account for changes that would have happened without the individualized marketing program, which includes the opening of Interstate MAX light rail, new bus service, and associated improvements to pedestrian and bicycle infrastructure in the area. The net increase (change in target minus change in control) in transit use was one percentage point. The net increase in walking and bicycling was five percentage points. The surveys indicated that people made an average of 3.2 trips per day, traveling 17 miles (after, 18 miles before). The share of trips made within the target area was higher after the marketing (35% versus 25%). This may indicate the people substituted local walking and bicycling trips for longer vehicle trips. Socialdata America estimated that the distance traveled in cars went down from 15.1 to 13.6 miles per car per day, a 9.3% decrease.

[7] Figures for the evaluation is from Socialdata America, *City of Portland Transportation Options Contract No. 35189 Portland Interstate Large-Scale Individualized Marketing – TravelSmart Project Final Report*, December 2005. Original data was not available for independent evaluation or analysis.

Table 8: Mode Share Changes During Interstate Individualized Marketing

	Before (% of all trips)		**After** (% of all trips)	
Mode	**Control**	**Target**	**Control**	**Target**
Walk/bike	12%	13%	14%	20%
Transit	6%	7%	8%	10%
Car	82%	80%	78%	70%
Non-car	*18%*	*20%*	*22%*	*30%*

Source: Socialdata America, *Final Report,* December 2005.

The Socialdata America report includes an estimate of VMT reduction of 6.8 million miles per year or 14% (p. 51). This includes a 6% reduction that the control group achieved. The remaining 8% reduction represents about 3.9 million VMT per year. The exact method used to estimate the VMT reduction is unclear. PSU CUS made a more conservative estimate of the annual VMT reduction using the mode share changes and other data from the report. The result was a 2.0 million VMT reduction in a year. Both calculations assume that the benefits of the program extend a few months beyond when the participants were surveyed. A summary of the travel outcomes is in shown in Table 9.

Table 9: Travel Outcomes of Individualized Marketing

	Interstate Individualized Marketing
Number of participants	14,446
Estimated % of trips made using non-SOV modes	20% walk/bike 10% transit 19% ride in carpool
Estimated VMT reduced in 2004-05	2.0 – 3.9 million VMT per year
RTO $/VMT reduced	$0.08-0.15

To what extent does the program support the RTO objectives?

The individualized marketing program implemented in 2004-05 either directly or indirectly supporting the RTO objectives (Table 10). In particular, the program focuses on all trips rather than just commute trips.

Table 10: Individualized Marketing and RTO Objectives

RTO Objective	Supportive?
Reduce drive-alone trips and encourage alternative modes	Yes.
Regional coordination and communication	Indirectly.
Include all trips, not just commute trips	Yes. The program specifically focuses on all trips.
Connections to other goals:	
2040 centers and corridors	Yes. The project included a corridor.
Transit-oriented development	Indirectly.
TriMet transit investment	Yes. A new MAX light rail line operates within the project area. Additional bus service in area.
Community health	Yes, to the extent that participants choose to walk or bike.
Air and water quality	Yes, to the extent that trips and VMT are reduced

Supportive Programs

Business Energy Tax Credit Program

The Business Energy Tax Credit (BETC) program is administered by the Oregon Department of Energy (ODOE) and provides a state tax credit to Oregon businesses that have projects that reduce energy used in transportation or invest in cleaner burning transportation fuels. Non-profits and government agencies in Oregon can transfer their tax credit eligibility to a business or individual with Oregon tax liability. Eligible projects include: bicycle projects, car sharing project, commuter pool vehicle, financial incentive programs, parking cash out, research development and demonstration project, telework, transit passes, transportation demand management service fees, and transportation services.

BETC has been a program within the ODOE for over 25 years. In 2005, BETC had 2,500 projects for over $30,000,000 statewide. Of the four major project categories listed above, transportation services had the highest number of projects (70) and received the most tax credits at $18.2M, transit passes (42) were next at $8.6M, followed by commuter pool vehicles (26) at $1.3M and car sharing (1) at $1.2M. When eligible, BETC provides business dues tax credits to a TMA on behalf of a member which then funds a project for the TMA. Both Lloyd and Swan Island TMAs have participated in this aspect of the program.

Metro BETC projects having been growing over the past three years. In addition to the TMA dues, transit pass subsidy and Flexcar are major recipients of the credits in the Metro area. One concern raised is that there may not be sufficient staff to process the number of projects and accurately measure program impacts.

Telework

Telework (also called telecommuting) is working at home or a satellite office, telework center, or telecommunity center near home one or more days a week -- instead of commuting to the main office or place of business. The Oregon Department of Energy supports telework in Oregon,

because it conserves fuel, relieves traffic congestion, and improves air quality -- and because it makes good business sense (ODOE website).

Teleworkers represent a small but significant part of the workforce. Telework is believed to reduce the number of automobile trips, and thus conserve energy, relieve congestion, and improve air quality. Telework is defined as working at home or at an office near home one or more days of the week instead of commuting to a primary place of work. For the past 13 years, the Oregon Department of Energy (ODOE) has provided technical assistance and outreach services on telework to organizations in the Portland region (from OOE Telework Program Evaluation, UO Community Planning Workshop, 2003).

Largely because of limited staff time, Telework promotion by the ODOE has suffered over the past couple of years. In 2005, BETC funding for Telework programs was only $36,763 compared to $464,695 for 2004 and $621,911 for 2003. ODOE staff expect to be focusing Telework promotion in the coming fiscal year on state employees as a way to re-energize the program.

Conclusions

Some key positive outputs and outcomes during 2004-05 include the following:

- Nearly 900 work sites with over 200,000 employees participated in the Employer Outreach Program. This level of work site participation appears to be high compared to some programs in other regions examined.
- For 2005, non-SOV mode share for commute trips to sites conducting surveys for was 33%. Up from 31% in 2003 and 26% in 1996.
- Employers in downtown Portland that survey employees are close to meeting RTP modal targets of 70% non-SOV modes for commute trips.
- About 4,800 people are registered on the CarpoolMatchNW website for carpool matching. Use of the website has steadily increased since its inception. Targeted marketing events, particularly Cool to Carpool, significantly increased registrations. From 5-20% of the registrants have formed carpools as a result of the service.
- TMAs and area programs introduced and continued targeted activities such Carfree Commute Challenge, SMART's WalkSmart, and Swan Island TMAs' efforts to promote local housing to employees. Several TMAs are expanding efforts beyond commute trips.
- The individualized marketing project in the Interstate area demonstrated a significant net shift from driving to transit, walking, and bicycling.
- Staff from the programs are generally optimistic about the changes being made to the RTO program and Metro's leadership.
- Most programs implemented their specific output objectives. When objectives were not met it was often due to lower than expected funding or staff turnover during 2004-05. The latter problem appears to be resolved in all cases.

Despite these positive outcomes, there are several findings that need to be addressed by the RTO program:

- The share of commute trips to sites conducting surveys made in carpools and vanpools has declined steadily since 1996 to an all time low of 8.5% in 2005. Shares of bicyclists and walkers are not increasing significantly to these sites.

- Employers outside of downtown Portland and the Lloyd District have a long way to go to meet the RTP modal targets for 2040. Only about one-quarter of work trips to surveyed sites in the remaining area are made in non-SOV modes. The targets for 2040 range from 40% to 55%. However, it should be noted that a 25% non-SOV mode share is good for suburban areas with free and available parking. On the other hand, the employers in these areas that conduct surveys are likely to have higher non-SOV mode shares than those that do not survey, because they are more likely to offer trip reduction programs and incentives to employees.

- A significant share of the people registered on the CarpoolMatchNW website do not appear to be interested in forming a carpool. This diminishes the quality of the program for all participants.

- The vanpool program is not performing as projected and is significantly smaller in scope than programs found in other regions. This region's vanpools are generally undersubscribed (about half have five or fewer riders) and not meeting their VMT reduction objectives. However, the lack of a high-occupancy vehicle (HOV) lane network eliminates one of the factors that help other regions build large vanpool programs – a significant time savings.

- Some of the TMAs are implementing programs that may not be consistent with the RTO objectives. It is unclear whether RTO funds are used for these activities.

- Some of the programs do not have clear output objectives and many do not have clear quantified outcome objectives against which to measure progress. Some of the end outcome objectives that do exist were based upon what appear to be overly optimistic assumptions. Programs with no or a shorter track record were more likely to have unrealistic outcome projections.

- Several programs were not using the *Strategic Plan Work Plan* to guide their activities.

- Few programs are systematically tracking outcomes in a meaningful way.

- There is a need for more education and technical assistance, particularly for some TMA programs. Several program staff mentioned the need for training, networking, and professional development opportunities for employee transportation coordinators (ETCs) and other TDM professionals. Some TMAs expressed an interest in a set of standard materials prepared at the regional level to use when working with employers.

- The success of many programs, particularly those focused on downtown and the Lloyd District are aided by parking pricing and supply constraints. Without such cost or time

advantages for non-SOV modes (e.g. with HOV lanes), significant increases in non-SOV mode shares will be difficult to achieve in more suburban environments.

Several activities are underway that will help address many of these concerns:

- A market analysis for vanpools and carpools was completed during 2004-05 that will help shape the future vanpool program (UrbanTrans June 2005 report).
- The RTO staff and Subcommittee are working on revisions to the vanpool program that should improve effectiveness.
- The RTO staff are exploring new carpool matching software systems and program management options.
- An RTO staff member was hired to focus on evaluation.
- Most program staff interviewed welcomed the idea of having methods to measure outcomes.

Recommendations

- Though the time frame for the *5-Year Strategic Plan Work Plan* is not yet complete, RTO should, in a collaborative process, develop a new work plan that includes specific, quantified output and outcome objectives, using the categories in the framework presented above. The outcome objectives should be based upon the RTP modal targets and the new RTP update. They should push programs to increase the effectiveness of their activities in reducing SOV trips. Output objectives should clearly be consistent with the RTO objectives.
- RTO staff and the Subcommittee should work together to develop consistent and reasonable methods to track and measure outputs and outcomes. For some programs this will likely require some additional funding to implement. This could include standard questions for surveys.
- RTO staff should work on developing consistent methods for converting data collected by programs to measures of effectiveness, such as VMT reduction, mode share, and new non-SOV participants. The methods will need to include assumptions similar to those employed in this evaluation, such as days per year and trips lengths.
- Evaluation efforts should include outputs (activities/services provided), intermediate outcomes (participation and satisfaction), and end outcomes (actions). Measures of program satisfaction are not collected as often as other outcomes and outputs. These should not be ignored.
- Programs should collect data on participant's travel mode prior to making a change. This will allow the program to measure net benefits of the program, e.g. new people switching to non-SOV modes. The program should develop standard question wording to collect this information consistently.

- RTO staff should work at enabling data from different programs to be linked and made available to other program staff. For example, the CarpoolMatchNW website includes a list of employers. If those employers were identified in the database by the identification numbers used by TriMet in their database, both programs and RTO staff could better evaluate outcomes. For example, TriMet could track whether carpool registrations go up at sites where marketing programs were undertaken. Similarly, the employer survey data could be used by TMAs to help in their evaluation and programming efforts.

- RTO staff should approach TriMet to determine whether the automatic passenger counting and GPS systems on the transit vehicles would be useful in tracking program outcomes. For example, the transit data could indicate the number of passengers that got on and off a bus at a certain stop. Data from stops located near a single employer or for an entire TMA area could be a good indicator of program outcomes.

- Consider conducting an annual, regional survey of residents to track overall trends in mode share. This will help account for the overlap between programs, particularly regional collaborative marketing. In addition, current sources, such as employer ECO surveys, are not comprehensive in that they do not include all employers and only track commute trips. Such a survey would also allow for a consistent methodology, enabling more accurate comparisons over time, and would not be dependent upon employers' survey efforts.

- RTO should require that programs collecting data as part of an RTO-funded project provide, upon request, the original data for independent analysis.

- The RTO program should collect data on all funding sources used by programs to implement the RTO projects to demonstrate whether the RTO funds leverage other sources and to develop more accurate estimates of cost-effectiveness.

- Examine similar programs in other regions for new ideas. For example, some regional employer outreach programs award employers levels (e.g. platinum, gold, etc.) based upon their efforts at promoting alternative modes.

Appendices

Appendix A: Collaborative Marketing Campaign

Program Background

According to the *Strategic Plan* Work Plan (p. 1)

> The RTO Collaborative Marketing Campaign is the number one priority for the next three years. The Campaign will work to coordinate all marketing and outreach efforts of the regional partners to create a broader public awareness of the travel options available to people travelling around the region. The regional Campaign will support the projects & messages currently being implemented by the partners and will be a clearinghouse of information that helps people learn about and access the options available to them.

The *Strategic Plan* Work Plan included seven action items as part of the broad-based campaign:

1. Create a RTO Marketing manager position at Metro to coordinate RTO marketing efforts, raise awareness about travel options and measure the degree to which awareness is increasing.
2. Develop a region-wide RTO image and message delivery strategy that more actively engages the general public and enhances local and regional program implementation activities.
3. Create a series of position papers that explain the connection between travel options and health, transit, development patterns, air and water quality, and getting to school, work and shopping destinations throughout the region.
4. Develop a unified RTO presence at special events, conferences and school events.
5. Create a regional clearinghouse that includes a staffed informational hotline, an interactive website and a mobile program information unit.
6. Develop a Regional Transportation Education Program over the next five years that works directly in schools throughout the region.
7. Integrate Travel Smart as a one on one home-based marketing program in key regional centers.

The *Strategic Plan* Work Plan projected $485,000 in funding in 2004-05 for the Campaign. Actual funding was $54,639 for collaborative marketing and $113,786 for RTO subcommittee management and strategic planning. Some of the activities of the latter may have helped implement the action items in the *Strategic Plan* Work Plan.

Evaluation

Data Sources

In addition, to conducting interviews with RTO staff, PSU CUS reviewed monthly reports provided by Metro.

What activities were provided?

Table 11 summarized the activities for 2004-05. During that year the major accomplishment was an agreement to transfer $850,000 in federal funding from ODOT to Metro to fund the program for two years. With that agreement, Metro issued an RFP for a consultant and selected one from eight proposals.

How does this compare to the Strategic Plan Work Plan for 2004-05?

The program was delayed significantly from the *Strategic Plan* Work Plan, but appears to be back on track in 2005-06.

Table 11: 2004-05 Collaborative Marketing Campaign Activities

Objective		2004-05 Outputs & Outcomes
Create a Regional Marketing Program manager position at Metro to coordinate creation of identity package and regional marketing campaign.		Not implemented in 2004-05. Program Manager started in Fall 2005.
Create an RTO identity package including program name, logo, position papers, slogan and media messages and incorporate into other materials • Research and analyze attitude and awareness surveys, TravelSmart results and other marketing data gathered in the region. • Conduct Focus Groups to determine which messages resonate with the general public and measure awareness • Finalize identity package		
Launch a two-year Travel Options campaign in conjunction with the Community Media Project's Zig Zag, Real Stories, New Angles • Create timeline of all events that partners are involved in over the next two years • Launch Campaign Spring 2004 • Create a resource center guide • RTO Booth at events/conferences/schools • Create an RTO design award (like billboard program) • Solicit radio, tv and print ad media using position papers in identity package. • Conduct a pre and post survey to measure the impact of the campaign.		Metro and ODOT agreed to transfer $850,000 in federal funds to the RTO marketing campaign. RFP issued for a 2-year contract. Consultants interviewed and selection made.
RTO budget	$485,000	$54,639
Program impact	Not projected	Not estimated
Cost/VMT reduced	Not projected	Not estimated

What was the level of participation in the services?

Not applicable, because the program did not undergo any new marketing efforts in 2004-05.

In the future, participation could be measured by estimating the number of impressions. Random phone surveys can be used to estimate the share of the public that has heard the campaign's message. Multiple phone surveys, conducted over time would be most useful in measuring changes in level of awareness.

What was the level of satisfaction with the services?

Not applicable, because the program did not undergo any new marketing efforts in 2004-05.

To what extent did participants use travel options?

Not applicable, because the program did not undergo any new marketing efforts in 2004-05.

In the future, the use of travel options could be measured through a random phone survey that asks questions about whether the person heard the campaign message and their travel behavior. However, separating the effects of the marketing campaign from the effects of other RTO programs will be difficult. The campaign, by definition, is considered an "umbrella" activity that supports the other programs.

How does this compare to the work plan in the 5-year Strategic Plan?

Not applicable.

How does this compare to the RTP modal objectives?

Not applicable.

How does this compare to programs in other regions?

Not applicable for 2004-05.

A survey of Florida residents found that 33% were aware of carpool/vanpool related advertising messages.[8] The rates ranged from 27% to 43% in the four metropolitan areas. A survey of residents in the Atlanta region found that the level of awareness of advertising related to alternative modes increased after the launch of a regional campaign from about 40% to over 65%.[9] Levels of awareness declined over time, until the program was re-launched about a year later. A survey of 1,800 Washington state residents found that 5-38% were aware of specific ads that were part of the state's "Relax" advertising campaign to help support its Commute Trip Reduction program in 1999.[10]

[8] Center for Urban Transportation Research, University of South Florida, *Statewide Commuter Assistance Program Evaluation Report General Public Survey Final Report*, Prepared for Department of Transportation State of Florida, December 2001.

[9] Southern Coalition for Advanced Transportation, *Evaluation of the Effectiveness of Programs Contained in the "Framework for Cooperation to Reduce Traffic Congestion and Air Quality" Phase Two*, GDOT Research Project Number 9906, FY2001 GDOT Final Report, March 2002.

[10] Robinson Research, Inc., *Washington State Department of Transportation Advertising Awareness Study Executive Summary Report*, July 1999.

To what extent does the program support the RTO objectives?

RTO Objective	Supportive?
Reduce drive-alone trips and encourage alternative modes	Yes. The Collaborative Marketing Campaign, though not launched in 2004-05, focuses on the broad message of driving less.
Regional coordination and communication	Yes. The Campaign was coordinated through the RTO Subcommittee.
Include all trips, not just commute trips	Yes. The Campaign includes all trips and does not distinguish between commute trips and other trips.
Connections to other goals:	
2040 centers and corridors	Indirectly
Transit-oriented development	Indirectly
TriMet transit investment	Yes, to the extent that people use transit more in response to the campaign
Community health	Yes, to the extent that people increase physical activity by walking and biking more in response to the campaign
Air and water quality	Yes, to the extent that trips and VMT are reduced

Conclusions

While the Collaborative Marketing Campaign did not accomplish its original objectives in 2004-05, the program did negotiate and enter into a contract for a $840,000 two-year campaign that started in 2005-06.

Recommendations

- Measurement of the effectiveness of the regional marketing campaign should focus on levels of awareness ("participation in the program") using random phone surveys conducted at multiple points in time. The surveys should collect demographic and travel behavior information. However, attributing behavior change to the campaign will be difficult.

- RTO program managers should consider adding questions to other program surveys (e.g. employee commute surveys) about campaign awareness. A standard set of questions could be developed. These results could demonstrate whether the effectiveness of the program varies among different audiences. However, a direct comparison to a phone survey is not possible because of the different media used to administer the surveys.

Appendix B: TriMet Employer Outreach

Program Background

TriMet has been working with employers since the 1980s to encourage increased transit use among employees. The program evolved when the State adopted its Employee Commute Options (ECO) rule, which became effective in 1996. TriMet targets employers affected by ECO, but will work with any interested employer. The program includes one-on-one assistance to employers, transportation coordinator training, transportation fairs, promotional events in the community, and publications and materials. In addition, TriMet works with employers to offer their Passport program and other programs that provide transit passes to employees, sometimes subsidized by the employer.

Evaluation

Data Sources

In addition to the report TriMet submitted to Metro and the interview, TriMet provided their database of 814 employers who are currently participating in the program and who have surveyed their employees. This database included survey results for the most recent survey and a baseline survey, in addition to basic information about the employer and worksite. The average length of time between the baseline and latest survey was 5.1 years. TriMet also provided a database listing all of the worksites that participate in their outreach services and the number of employees at each worksite. This database is larger than the survey database because it includes sites without survey data. Unless otherwise noted, data presented here is from our analysis of the survey database or larger employer list.

What services were provided?

TriMet provided a wide range of outreach services to employers, as shown in Table 11 and listed below.

How does this compare to the 5-year Strategic Plan Work Plan?

With a few exceptions, TriMet met or exceeded their objectives. The program met or exceeded the objectives for the following activities from the *Strategic Plan* Work Plan:

- Calls and correspondence (12,919 achieved vs. objective of 8,300)
- Enroll sites in TDM program (977 sites and 210,000 employees vs. 868 sites and 212,000 employees)
- Support sites with ECO planning (542 vs. 400)
- Circulate quarterly newsletters (2,138 vs. 1,800)
- Distribute brochures (22,000 vs. 10,000)
- Conduct transportation fairs (95 fairs and 13,034 employees vs. 100 fairs and 10,000 employees)
- Distribute new employee kits (4,015 vs. 4,000)
- Host visits to employer website (2,682+ vs. 900)
- Attend events (162 vs. 140)

The program did not reach the objectives in the *Strategic Plan* Work Plan in the following areas:

- Face-to-face meetings (355 vs. 525)
- Train transportation coordinators (33 vs. 72)
- Enroll transportation coordinators in incentive program (activity dropped because of ineffectiveness)
- Provide sites with ECO survey assistance (301 vs. 470)
- Maintain employees in emergency ride home program (70,000 vs. 71,000)

TriMet believes that the downturn in the economy and employment contributed to not meeting some of these objectives.

Table 12: 2004-05 TriMet Employer Outreach Activities

	Objective	2004-05 Outputs & Outcomes
From 5-Year Strategic Plan		
Make calls/correspondence	8,300	12,919
Conduct face-to-face meetings	525	355
Enroll sites on a Transportation Demand Management program	868 sites 212,000 employees *Note: Program Impact projections indicate 283,000 employees impacted, conflicting with above.*	977 worksites 210,000 employees
Train Transportation Coordinator Representatives	72	33 attendees to trainings
Enroll Transportation Coordinator Incentive Program Members	370	Determined ineffective in supporting goal
Provide sites with ECO survey assistance	470	301
Support sites with ECO planning	400	542
Circulate quarterly "To Work" newsletters	1,800	2,138
Distribute employer/employee brochures	10,000	22,000**
Conduct Transportation Fairs	100 (10,000 employees)	95 (13,034 employees)
Distribute "New Employee Kits"	4,000	4,015
Host visits to Employer Website	900	2,682 total visits in Apr/May/Jun 2005***
Maintain Employees Emergency Ride Home/Guaranteed Ride Home Programs	71,000 eligible employees	70,000
Attend Chamber, Business Association, and TMA meetings and other events	140	162
Total Number of Employees Surveyed	166,000	102,327
Annual VMT Reduction*	39,000,000	27,358,500-45,980,700 *(based upon our calculations, discussed below)*
Program Cost (RTO funding)	$385,649	$392,289
Cost per VMT Reduced	$0.01	$0.01

Source: Unless otherwise noted, information is from report submitted by TriMet to Metro.
Notes from TriMet:
*Uses most recent survey from past 2 years (from 7/1/2003 to 6/30/2005) since ECO rules and Passport rules permit surveying every other year in certain cases.
**New method that counts one-on-one interactions at Transportation Fairs and assumes 70% of visitors pick up literature, averaging 2.8 pieces each. These averages are based on experience working in the field and not on scientific study. This summary no longer includes the "To Work" newsletter (included under quarterly newsletter).
***The original plan - 900 visits in the year – has been surpassed by even quarterly figures. Quarterly figures are a better method of counting visits because it allows for possible changes to the main Employer Outreach web page URL and allows the web traffic level to be reported at the end of the fiscal year.

What was the level of participation in the services?

There are 814 worksites participating in the program with commute survey data, with 177,073 ECO-eligible employees[11]. All sizes of employers are participating in the program. About one-quarter of the sites have 50 or fewer employees, which is below the ECO threshold (Table 13). However, these sites only represent three percent of the ECO-eligible employees. Nearly half of the ECO-eligible employees (47%) are at the 53 worksites with 500 or more employees.

The 814 sites with survey data represent about one-quarter of the employers with 50 or more employees in the region (Table 14). There are about 160 employers that participate in the program that do not survey employees about their commute modes, most likely because they are not required to by the ECO rule. This could be because they are located in an exempted area (e.g. Downtown or Lloyd Center) or have fewer than 51 eligible employees. Including these employers in the table would increase the participation rate closer to 30%.

Table 13: Size of Worksites Participating in TriMet's Employer Outreach Program

# ECO-eligible employees	# sites		# ECO-eligible employees		
	#	%	Total #	%	Cumulative %
50 or fewer	213	26%	4,663	3%	3%
51-99	195	24%	14,232	8%	11%
100-199	207	25%	29,623	17%	27%
200-499	146	18%	45,471	26%	53%
500+	53	7%	83,084	47%	100%
Total	814	100%	177,073	100%	

[11] ECO-eligible employees refers to employees affected by the ECO rules: "The count of employees at a work site must include:
(1) Employees from all shifts, Monday through Friday, during a 24-hour period, averaged over a 12-month period;
(2) Employees on the employer's payroll for at least six consecutive months at one work site; and
(3) Part-time employees assigned to a work site 80 or more hours per 28-day-period; but
(4) Excludes volunteers, disabled employees (as defined under the Americans with Disabilities Act), employees working on a **non-scheduled work week,** and employees required to use a personal vehicle as a condition of employment."
(Source: OAR 340-242-0060 http://www.deq.state.or.us/nwr/ECO/ECO_Rules.pdf)

Table 14: Estimated Participation Rate for Employers in the 3-County Area

Size of employer	Employers in 3-County area[a]	Worksites in TriMet's Outreach Program			
		Sites with survey data	Estimated Participation Rate[b]	All sites	Estimated Participation Rate[b]
up to 50	43776	213	< 1%	400	1%
50 or more[c]	2507	601	24%	567	23%
50-99[c]	*1426*	*195*	*14%*	*197*	*14%*
100-499	*968*	*353*	*36%*	*310*	*32%*
500+	*113*	*53*	*47%*	*60*	*53%*
Total	46283	814		967	

[a]Data from Census County Business Patterns, 2003. The data includes employers in Multnomah, Clackamas, and Washington Counties, which will include some employers outside of Metro and the TriMet service area.
[b]This is an *estimate for comparative purposes only*. The number of employees working for an employer, as reported by the Census, is not always the same as the number of employees at a worksite, the number used to categorize participating employers. Employers with multiple worksites may be represented once in the Census data with all employees, but multiple times in the TriMet data, for each site.
[c]The Census data divided employers in categories of 1-49 and 50-99, etc. For the analysis of the TriMet data, the categories were made as 1-50 and 51 and higher to be consistent with the ECO rule.

What was the level of satisfaction with the services?

Data was not available on levels of satisfaction with the services, either the employers or employees.

To what extent did participants use travel options?

Over 30% of the commute trips made by ECO-eligible employees to the worksites surveyed are made in non-SOV modes. The share of trips made driving alone was 68.2%, compared to 74.1% in the baseline surveys.[12] Transit use and walking/bicycling also went up. The share of trips made in carpools and vanpools fell. There was an increase in the use of compressed work week schedules and telecommuting, which eliminates a commute trip altogether.

[12] The dates of the baseline surveys vary, depending upon when the worksite started working with TriMet.

Table 15: Commute Trip Mode Share for TriMet Employer Outreach Participant Worksites

Mode	% of weekly commute trips[a]		
	Baseline	Latest	Percentage point change
Drive Alone	74.1%	68.2%	-5.9
Transit	11.1%	16.7%	+5.6
Carpool/Vanpool	9.8%	8.8%	-1.0
Walk/Bike	3.5%	3.7%	+0.2
Compressed work week	1.2%	1.5%	+0.3
Telecommute	0.3%	0.8%	+0.5
Total	100.0%	100.0%	

aThe survey collects data on commute trips for each day for an entire week.

Using the change in mode shares in Table 15 for the 814 worksites in the database, TriMet estimated an annual VMT reduction of 45,980,700. This calculation used the following explicit assumptions:

- Average one-way commute distance of 8.45 miles (based upon Metro travel demand model)
- Same mode used to travel to work (from survey) was used to travel home
- 261 work days per year
- Survey non-respondents commute the same as respondents

All of these assumptions are reasonable. The average survey response rate was 84%, indicating that the responses are likely representative of the population. The survey asks employees to indicate how they got to work, not how they returned. Some employees might use another mode home. For example, they might carpool to work, but drive alone home. In this case, the VMT reduction would be over estimated by assuming the same mode is used in both directions. On the other hand, an employee might do the opposite – drive alone to work and carpool home. It is highly unlikely if someone drove alone to work that they took transit, walked, or biked home, or vice versa. People are more likely to take transit one direction and walk or bike the other direction. But, these mode changes would not change the VMT reduction calculation. Therefore, the only likely times when using a different mode to and from work would matter is between driving alone and carpooling. There is no data available to indicate the extent to which this might be happening, but it is unlikely to be significant. Moreover, it seems reasonable to think that would happen about equally in each direction – people driving to work and carpooling back and vice versa. The commute distance is based upon outputs from the Metro travel demand model, which is a very reasonable source. The only assumption that might be optimistic is the 261 work days per year. The survey captures when employees take off for less than the entire week. However, if they took the entire week off, they may complete the survey for the previous week that they worked. Therefore, the survey is not capturing entire weeks of vacation or other

absences. Assuming 251 work days per year, the annual VMT reduction is 44,219,000, or 3.8% lower than the original estimate. This may be a reasonable adjustment to make.

Another potential concern with this survey data is the date of the latest survey, upon which these calculations are made. For about half (51%) of the sites, the latest survey was conducted before July 2004, and for 36% of the sites the latest survey was conducted before July 2003 (Table 16). Therefore, this calculation assumes that these commute mode shares were sustained since the date of the survey. PSU CUS has no data to indicate whether this is a reasonable assumption. The lack of a more recent survey may indicate that the employer is less active in implementing its trip reduction program, which could lead to an increase in SOV commuting. On the other hand, some employers may only plan to survey every two years, even as they actively promote alternative modes. An examination of the mode shares for sites with older surveys did not reveal any clear patterns, e.g. higher or lower SOV rates. If there is some backsliding at worksites with older surveys, this would reduce the VMT reduction estimate. About 30% of the employees are at sites that surveys before July 2002. If it is assumed that the effectiveness of the trip reduction programs declined at these sites, such that their share of employees using each mode was half-way between the latest survey and baseline survey data, the overall VMT reduction would fall by 15%, to 39,083,600. This calculation is a "back of the envelope" estimate to provides a more conservative estimate. There is no evidence that this rate of backsliding has occurred.

Table 16: Employers by Latest Survey Date

	Worksites		Employees	
Follow-up Survey Year	**Number**	**Percent**	**Number**	**Percent**
Before July 2001	138	17%	41,803	24%
2001-02	71	9%	8,241	5%
2002-03	82	10%	13,644	8%
2003-04	128	16%	30,176	17%
2004-05	371	46%	78,906	45%
2005-06	24	3%	4,303	2%
Total	814		177,073	

Finally, the VMT reduction estimate assumes that all of the mode shift measured by the surveys is due to the Employer Outreach program. In reality, some of the improvement may be due to other factors, such as improvements in transit service. Without a control group of employers who do not participate in the program, it is difficult to accurately estimate the share of improvement that should be assigned to the program. The low estimate in Table 12 assumes that 70% of the VMT reduction is related to the program and 30% is due to other factors.[13]

Most of the sites experienced an increase in transit use and a decline in drive alone rates.[14] Overall, 60% of the worksites experienced an increase in the share of work trips made on transit (Table 17). The largest worksites (500 or more employees) were most likely to see an increase

[13] This is based upon the change in drive-alone rate seen between the 1990 and 2000 Census for the region, assuming that that amount of change would happen with our without the program.

[14] If the mode share increased or decreased by one-half of a percentage point (0.5%) or more, that was considered a change. Mode shares that changed by less than one-half of a percentage point were categorized as not changing.

in transit use. Sites with 100-499 employees were most likely to see a decline in the drive alone rate.

Table 17: Change in Mode Share by Worksite Size

# ECO-eligible employees	Transit Mode Share		Drive alone Mode Share	
	% of sites with decline	% of sites with increase	% of sites with decline	% of sites with increase
50 or fewer	32%	59%	42%	48%
51-99	31	56	45	54
100-199	30	61	57	42
200-499	27	62	60	36
500+	13	74	53	43
All sites	29%	60%	51%	45%

How does this compare to the work plan in the 5-year Strategic Plan?

The *Strategic Plan* Work Plan projected an annual VMT reduction of 39,000,000 in 2004-05. The program appears to have exceeded that projection.

How does this compare to the RTP modal objectives?

The *2004 Regional Transportation Plan* sets modal targets (to be met by the year 2040) for three categories of areas in the region. For regional centers, town centers, main streets, station communities and corridors the non-SOV modal target for all trips to and within those areas is 45-55%. The target for the central city is 60-70%. For other areas the target is 40-45%. Overall, 32% of the work trips were made by non-SOV modes. Almost one-third of the worksites (30%) meet the non-SOV modal target of 45%. However, this is largely because of worksites located in downtown Portland and the Lloyd District. Outside of that area less than 10% of the sites meet the 45% non-SOV target.

Table 18: Distribution of TriMet Employer Outreach Participant Worksites by Non-SOV Mode Share

Non-SOV mode share	% of worksites	% of ECO-eligible employees	% of worksites in downtown Portland	% of worksites in Lloyd District[a]	% of other worksites
45.0% & higher	30%	23%	88%	66%	9%
35% - 44.9%	9%	8%	5%	12%	10%
25% - 34.9%	12%	14%	4%	11%	15%
15% - 24.9%	24%	36%	3%	8%	32%
Under 15%	25%	19%	0%	3%	34%
Total	100%	100%	100%	100%	100%
n	814	177,073	168	65	581

[a]This data may not be consistent with data from the Lloyd TMA.

Figure 5 shows the progress that is necessary to meet the RTP modal targets for 2040, with interim projection every five years. Sites outside of downtown Portland and the Lloyd District require the greatest rate of improvement. These projections may understate what is necessary to achieve the targets for at least two reasons. First, the RTP modal targets apply to all trips *to and within* the areas, while this figure only includes commute trips. It is sometimes easier to increase non-SOV mode shares for commute trips than other types of trips. Therefore, it may be desirable to achieve higher non-SOV mode shares for the commute trips included. Second, the figure only includes worksites that participate in TriMet's Employer Outreach program. These employers may have higher non-SOV mode shares than other employers because of their participation in the program.

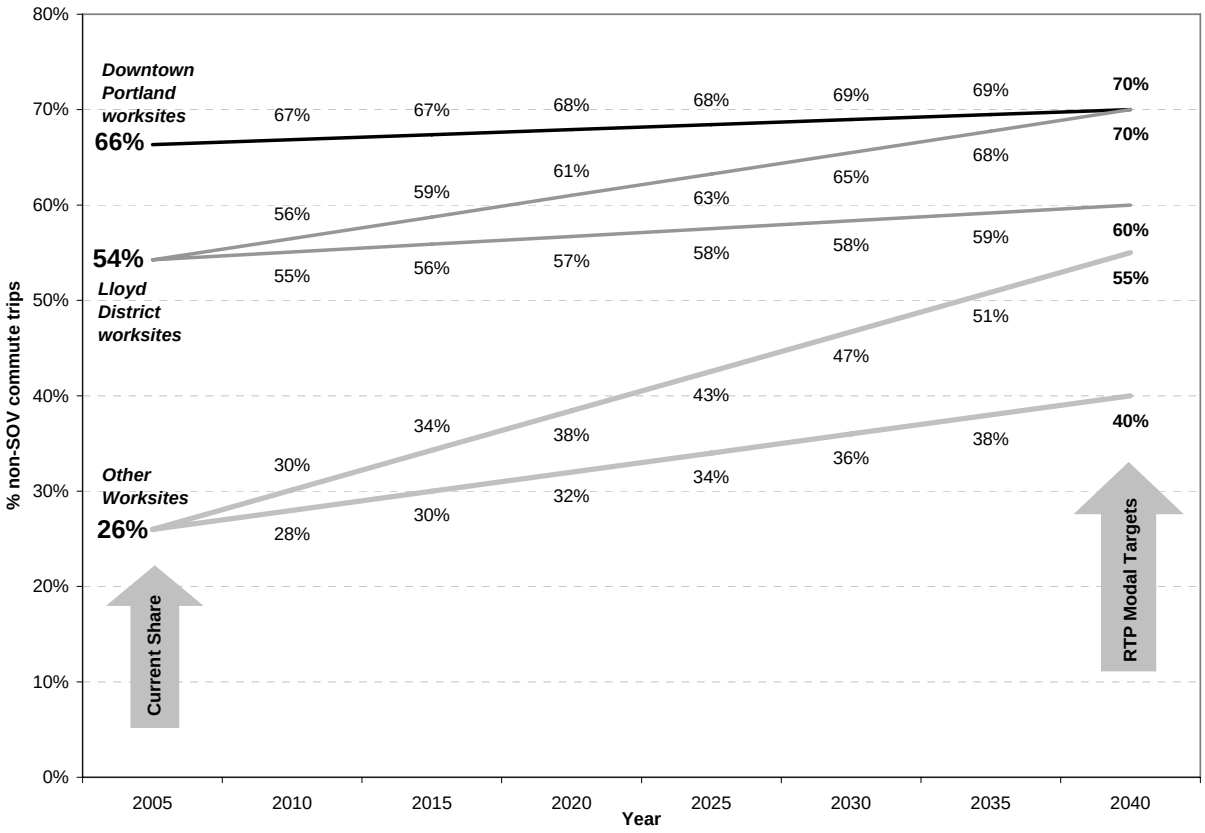


Figure 5: Non-SOV Commute Mode Share - Actual (2005) and RTP Targets (2040)

How does this compare to programs in other regions?

There is limited comparable data for other regions. The Atlanta region has an employer outreach program that includes levels of partnership ranging from "participant" to "platinum." In 2001 they had 615 employers participating.[15] The Atlanta region had at least twice as many workers as the Portland region in 2000. The Washington DC region had a similar program with levels of involvement. In 2002 there were 567 employers at the silver, gold, or platinum levels.[16] As with Atlanta, Washington DC is a much larger region than Portland, indicating that Portland may have been more successful at involving employers in its program.

[15] Southern Coalition for Advanced Transportation, *Evaluation of the Effectiveness of Programs Contained in the "Framework for Cooperation to Reduce Traffic Congestion and Improve Air Quality" Phase Two*, Georgia Department of Transportation Research Project #9906, March 2002.

[16] Metropolitan Washington Council of Governments, *FY2005 Work Program for the Commuter Connections Program for the Greater Washington Metropolitan Region*, March 7, 2004.

To what extent does the program support the RTO objectives?

RTO Objective	Supportive?
Reduce drive-alone trips and encourage alternative modes	Yes. The program's primary objective is to reduce SOV commuting. Some interviewees expressed concern that the program focused too much on transit and not other alternative modes.
Regional coordination and communication	Yes. The program is regional by definition. However, it is unclear how the program is coordinated with the TMAs in the region, with the exception of LTMA, and Wilsonville.
Include all trips, not just commute trips	Indirectly. The program focuses on commute trips. To the extent that employees try other modes for commuting, they may be open to using other modes for other trip purposes.
Connections to other goals:	
2040 centers and corridors	Indirectly
Transit-oriented development	Indirectly
TriMet transit investment	Yes. The largest shift to non-SOV modes was to transit.
Community health	Yes. Walking and bicycling commuting increased slightly at the worksites. Employees using transit may walk to access transit.
Air and water quality	Yes, to the extent that trips and VMT are reduced

Conclusions

The Employer Outreach Program appears to have met its target for reducing trips and VMT in 2004-05. Employers with survey data showed significant increases in transit commuting and modest gains in walking, bicycling, compressed work week, and telecommuting. However, there was a decline in car/vanpooling. This may reflect the fact that the program is operated by TriMet, the region's transit agency. Some interviewees expressed concern that the program focused too much on transit, at the expense of other modes. On the other hand, transit is often the best alternative mode for many commuters, and service was expanded during the timeframe examined. There are also clear transit incentive programs for employers to use, such as Passport, that are effective at increasing transit use. In other words, there is a "product" to offer employers. Except for the vanpool subsidies, there is not a comparable "product" to offer to employers to promote carpooling, walking, or bicycling. CarpoolMatchNW provides matching services, but not an economic incentive, beyond gas savings. The City of Portland does offer discounted parking for carpools in the central city area.

Recommendations

- Effort should be made to collect updated survey data from employers with surveys over three years old.

- Evaluate the employee survey questionnaire to identify what additional information could be collected. For example, collecting the employee's nearest intersection, rather than just home zip code, could provide better information on commute distance and mode choices.

- Collect data from employers participating in the program regarding their satisfaction with the services provided.

- Consider conducting an annual regional phone survey of residents to collect commute information. RIDES for Bay Area Commuters (San Francisco) has conducted an annual survey of commuters for over ten years. Such a survey can show changes over time in commute modes, as well as awareness of and participation in programs.

Appendix C: Regional Vanpool Program

Program Background

In the Metro region vanpools are used in two ways to provide travel options: (1) "traditional" vanpools where employees at a worksite commute together in a van from a pick-up location to/from work each day; and (2) vanpools that operate as shuttles between a MAX light rail station and a worksite. At the start of the *Strategic Plan* Work Plan, TriMet operated six vanpool shuttles and two traditional vanpools. C-TRAN operated nine traditional vanpools and one shuttle. In 2004-05, TriMet ran the regional vanpool program with CMAQ funding. Rider fares cover 30-35% of the vanpool costs for most traditional vanpools. Shuttles are fully subsidized. The vans are leased from one of three private vendors.

Evaluation

Data Sources

In addition to the report TriMet submitted to Metro and the interview, TriMet provided a spreadsheet with data on each vanpool, including operating dates, ridership, roundtrip mileage, and costs.

What services were provided?

During 2004-05 there were 20 traditional vanpools that operated for all or part of the year that received funding through CMAQ (Table 19). Of these, 14 were started during 2004-05. Of these, 10 originate in Vancouver, WA and one originates in Battle Ground, WA. These 11 new vanpools were created in response to C-TRAN service cutbacks. Two of the new vanpools travel to OHSU from Portland and Milwaukie, in response to TriMet service cutbacks over the Sellwood Bridge due to new vehicle weight restrictions. The other new vanpool travels between Salem and Portland. Of the other six vanpools, two stopped operating sometime during 2004-05. TriMet expects that the two new vanpools to OHSU will stop operating sometime during the current fiscal year, 2006-07. In addition, TriMet operated five vanpool shuttles between transit stations and employment sites during 2004-05 using CMAQ funding (Table 20). Jobs Access Reverse Commute (JARC) funding was used to operate a sixth shuttle, not included in this evaluation.

Table 19: Traditional Vanpools Operating in 2004-05

Destination - Company	Origin - City	Start Date	3-Year End
Farmers Insurance	Vancouver	7/1/2004	6/30/2007
Farmers Insurance	Vancouver	7/1/2004	6/30/2007
Farmers Insurance	Vancouver	7/1/2004	6/30/2007
Farmers Insurance	Vancouver	7/1/2004	6/30/2007
Fred Meyer	Salem	8/1/2004	7/31/2007
Fred Meyer	Vancouver	5/1/2004	4/30/2007
Intel	Salem	4/1/2002	3/31/2005
Intel	Vancouver	9/1/2004	8/31/2007
OHSU	Milwaukie	1/1/2005	12/31/2007
OHSU	Portland	1/1/2005	12/31/2007
OHSU	Salem	8/1/2001	7/31/2004
Swan Island TMA	Battle Ground	12/1/2004	11/30/2007
Swan Island TMA	Brush Prarie/Hazel Dell	6/1/2004	5/31/2007
Swan Island TMA	Orchards	6/1/2004	5/31/2007
Swan Island TMA	Vancouver	10/1/2004	9/30/2007
Swan Island TMA	Washougal	6/1/2004	5/31/2007
Tektronix	Vancouver	7/1/2004	6/30/2007
VA Hospital	Vancouver	11/1/2004	10/31/2007
VA Hospital	Vancouver	11/1/2004	10/31/2007
VA Hospital	Vancouver	11/1/2004	10/31/2007

Table 20: Vanpool Shuttles Operating in 2004-05

Destination – Company	Origin – MAX station	Start Date	3-Year End
Sitel	Orenco Station	9/1/2001	8/31/2004
LSI Logic	Gresham City Hall Station	9/1/2001	8/31/2004
Credence Systems Corp	Hawthorn Farm Station	9/1/2001	8/31/2004
OHSU West Campus (Primate Research Center/OGI)	Willow Creek TC	5/1/2002	4/30/2005
Depaul Industries	Jantzen Beach Mall	5/1/2004	4/30/2007

How does this compare to the 5-year Strategic Plan Work Plan?

There was a net increase of 12 traditional vanpools during 2004-05. This is below the objective of creating 30 new vanpools. The funding level in 2004-05 was also lower than planned for in the *Strategic Plan Work Plan*. The *Plan* anticipated $361,140, including $105,000 for a study and evaluation, leaving $256,140 for subsidizing vanpools, about $85,000 more than was provided.

Table 21: 2004-05 Regional Vanpool Program Activities

	Objective	2004-05 Outputs & Outcomes
From 5-Year Strategic Plan		
Hire consultant for study		UrbanTrans study completed August 2005
Ongoing investment in TriMet Vanpool Shuttle program	One new shuttle per year	
Evaluate initial Clark County project		
New vanpools	30	14 (12 net)
Reduced trips/year	78,600	See Table 22 and Table 23
Annual VMT reduction	7,074,000	See Table 22 and Table 23
RTO funding for 2004-05	$361,140	$188,658 $153,868 for traditional vanpools $34,790 for shuttles Both figures include 10.27% match from TriMet $77,940 for regional vanpool/rideshare study
Cost per VMT reduced	$0.06	$0.13 - $0.18 for traditional vanpools $0.16 - $0.35 for shuttles

Source: Unless otherwise noted, information is from report submitted by TriMet to Metro.

What was the level of participation in the services?

The 20 traditional vanpools averaged a total of 124 riders per day. The shuttles provided an average of 174 trips per day. This probably represents 85-100 people per day that use transit to get to work. Overall, this is a small share of the commuters in the region. Traditional vanpools subsidized through the regional vanpool program serve seven employment sites (including Swan Island TMA as one site). This is a small fraction of the large employment sites in the region.

What was the level of satisfaction with the services?

There is no data on the level of satisfaction with the vanpool services.

To what extent did participants use travel options?

Each day they operated, the vans had about 124 riders. The vanpools in the program are generally small. Half of them only average five or fewer riders per day (Figure 6). Based upon the original number of riders projected in the van (provided by TriMet), many of the vans are undersubscribed. The average number of riders per day was 72% of the original number of riders per day. Of the 20 vans operating in 2004-05, 11 had fewer than 75% of the original number of riders riding each day.

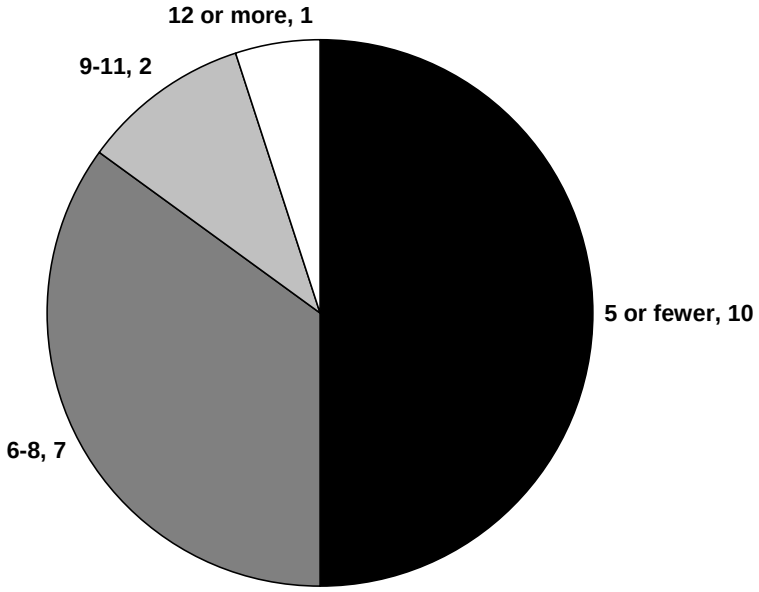


Figure 6: Vanpool Size (number of riders per day)

The estimated number of trips and vehicle miles reduced due to the traditional vanpools is shown in Table 22. The estimates use a set of high (optimistic) and low (conservative) assumptions. For example, if all of the riders would have driven alone to work without the vanpool, the 20 vanpools eliminated 104 round-trips per day, accounting for the vanpool trip itself. Assuming that all riders would drive alone otherwise is optimistic. Some riders would carpool or take transit. If only 80% of the riders would have driven alone without the vanpool, the daily trip reduction is 83. The total number of trips reduced in 2004-05 accounts for the fact that some vanpools only operated for part of the year. The vanpools eliminated about 17,600-22,100 commute round-trips in 2004-05. The annual VMT reduction in 2004-05 was between 844,300 (low estimate) and 1,162,800 (high estimate).

Table 22: Estimated VMT Reduction for Traditional Vanpools

Item used to calculate estimate	Source	Low	High
Commute trips and VMT reduced			
Average number of rides per day	Data from TriMet	4 – 12 (specific to vanpool, 6.2 average)	4 – 12 (specific to vanpool, 6.2 average)
Length of vanpool trip (roundtrip) *Assumed to be the commute distance if not vanpooling*	TriMet (from vanpool estimate and calculations using mapping website)	8 – 166 miles (specific to vanpool, 44.4 average)	9 – 166 miles (specific to vanpool, 48.8 average)
% of vanpool commute trips that would have been made driving alone instead of vanpool	Assumption	80%	100%
Daily trips reduced	Calculated: Average number riders – 1 (for the van)	83	104
Days/year of operation	Assumption	261	261
Annual trips reduced	Calculated accounting for dates of operation/funding provided by TriMet	17,600	22,100
Program costs			
Subsidy (CMAQ and TriMet match)	Calculated from TriMet data, accounting for dates of operation	$153,868	$153,868
Estimated VMT reduction in 2004-05		**844,300**	**1,162,800**
Cost-effectiveness		**$0.18/mile**	**$0.13/mile**

Notes: Estimates of annual trip and VMT reduction rounded to nearest 100.
The VMT estimates do not include miles that might be driven by each rider to access the park-and-ride location where many vans originate. It is assumed that if the vanpool did not exist, about the same number of miles would be driven to access a transit stop or carpool pick-up point or as part of the drive all the way to work.

These estimates are lower than TriMet estimated in their report submitted to Metro for this evaluation (140 trips per day and 1,650,000 VMT). Some of the difference is likely due to accounting for vans only operating during part of the year. On average, the 20 vans operated for 9.5 months during 2004-05.

The estimated number of trips and vehicle miles reduced due to the vanpool shuttles is shown in Table 23. The estimates are made assuming that the shuttles allow people to use transit (MAX) instead of another mode. A set of low and high (optimistic) assumptions lead to an estimate of VMT reduction in 2004-05 of 98,200-216,500.

Table 23: Estimated VMT Reduction for Vanpool Shuttles

Item used to calculate estimate	Source	Low	High
Commute trips and VMT reduced			
Average Rides per Month (total)	Data from TriMet	3,784	3,784
Total rides on shuttles in 2004-05	Data from TriMet, accounting for dates of operation/funding	20,423	20,423
Length of commute trip made on transit	Metro travel model, as reported to TriMet	6.4 miles one-way 12.8 miles roundtrip	10.1 miles one-way 20.2 miles roundtrip
% of transit commute trips that would have been made driving alone instead of transit	Assumption	80%	100%
% of shuttle riders that use shuttle both ways (used to convert shuttle trips to transit trips)	Assumption	100% 2 shuttle trips = 1 transit trip	80% 1.8 shuttle trips = 1 transit trip
Annual trips reduced	Calculated from above	8,200	11,400
Shuttle trips and VMT added			
Shuttle trips per day	TriMet staff estimate	8	4
Round-trip shuttle miles	TriMet calcuations using mapping website	1.16 – 6.3 miles (specific to shuttle)	1.16 – 6.3 miles (specific to shuttle)
Program costs			
Subsidy (CMAQ and TriMet match)	Calculated from TriMet data, accounting for dates of operation	$34,790	$34,790
Estimated VMT reduction in 2004-05		**98,200**	**216,500**
Cost-effectiveness		**$0.35/mile**	**$0.16/mile**

Notes: Estimates of annual trip and VMT reduction rounded to nearest 100.

How does this compare to the work plan in the 5-year Strategic Plan?

The number of trips and VMT reduced is significantly lower than projected in the *Strategic Plan* Work Plan. This is primarily due to two factors: (1) far fewer vanpools operating; and (2) the Work Plan assumed 90 miles round trip mileage per vanpool. This is about twice the actual average.

How does this compare to the RTP modal objectives?

Not applicable.

How does this compare to programs in other regions?

Portland's regional vanpool program is significantly smaller than what is found in some other regions. Nationally, an estimated 0.3% of commute trips are made in vanpools.[17] About 0.1% of the work trips made by employees at sites in the TriMet employer survey database were in carpools or vanpools with six or more people. A sample of vanpool programs provided by transit agencies is shown in Table 24. In most cases the sizes of the vanpools are also much larger than those in the regional program (6.2 riders per day). Characteristics of 20 vanpool programs operated by employers in 1985 are shown in Table 25. These programs average over ten riders per van.

Table 24: Sample of Transit Provider Vanpool Programs (2001)

	Vanpools	Riders per day	Riders per van
King County, Seattle, WA	700		
Pace, Chicago, IL	380	3,420	9.0
"The T," Fort Worth, TX	286	3,750	13.1
Pierce Transit, Tacoma, WA	261	1,700	6.5
Community Transit, Lynnwood, WA	239		
Ben Franklin Transit, Richland, WA	140	1,200	8.6
METROVan, Houston Metro, TX	111	900	8.1
Space Coast Area Transit, Brevard Co., FL	100	860	8.6
Kitsap Transit, Bremerton, WA	92		
Intercity Transit, Olympia, WA	65	500	7.7
Traffix, Hampton Roads, VA	40	670	16.8
Metro Transit Authority, Nashville, TN	33	450	13.6
Island Transit, Coupeville, WA	30		
Whatcom Transit, Bellingham, WA	13	130	10.0

Source: Transit Cooperative Research Program (TCRP), *Report 95, Chapter 5 Vanpools and Buspools*, 2005, Table 5-6.
Notes: Riders per van calculated by author.

[17] Transit Cooperative Research Program (TCRP), *Report 95 Traveler Response to Transportation System Changes, Chapter 5 Vanpools and Buspools*, 2005.

Table 25: Characteristics of 20 Case Study Employer Vanpool Programs (1985)

Number of employees	**Number of Vanpools**	**Vanpool Riders**	**Riders per van**	**Vanpool share**
12700	115	990	8.6	7.8%
7000	92	1120	12.2	16.0%
35000	70	525	7.5	1.5%
14000	54	518	9.6	3.7%
6000	54	750	13.9	12.5%
2000	38	400	10.5	20.0%
16000	37	385	10.4	2.4%
3000	25	240	9.6	8.0%
4800	24	240	10.0	5.0%
2200	20	180	9.0	8.2%
200	8	80	10.0	40.0%
1300	8	70	8.8	5.4%
1000	5	50	10.0	5.0%
250	4	30	7.5	12.0%
3100	4	62	15.5	2.0%
700	2	21	10.5	3.0%
110	2	25	12.5	22.7%
70	1	9	9.0	12.9%
180	1	8	8.0	4.4%
165	1	15	15.0	9.1%
Average			10.4	10.1%

Source: Transit Cooperative Research Program (TCRP), *Report 95, Chapter 5 Vanpools and Buspools*, 2005, Table 5-2.
Notes: Riders per van calculated by author.

To what extent does the program support the RTO objectives?

RTO Objective	Supportive?
Reduce drive-alone trips and encourage alternative modes	Yes. The program's primary objective is to reduce SOV commuting.
Regional coordination and communication	Yes. The program is regional by definition. During 2004-05 it is unclear how well the program was marketed throughout the region. However, this was due, in part, to waiting for the results of the market analysis.
Include all trips, not just commute trips	Indirectly. The vanpool program focuses on commute trips. However, traditional vanpool and shuttle riders may then use other modes for mid-day trips, e.g. walking to lunch rather than driving. The program may also enable some riders to avoid owning an additional personal vehicle, which could affect non-commute trips.
Connections to other goals:	
2040 centers and corridors	Indirectly. Some vans go to employers located within centers.
Transit-oriented development	No effect
TriMet transit investment	Yes. The vanpool shuttles support riders using TriMet's MAX system.
Community health	Unclear. The program may have a small impact on encouraging walking, in that vanpool riders can not drive personal vehicles to lunch or other errands during the day. On the other hand, some shuttle riders might ride a bike or walk to the station if the shuttle were not provided.
Air and water quality	Yes, to the extent that trips and VMT are reduced

Conclusions

The program clearly supports the objective of reducing drive alone trips and encouraging alternative modes. However, the overall impact of the program is currently very small. The program did not expand significantly in part because it was conducting a market analysis, as called for in the *Strategic Plan Work Plan*. The resulting document, *Rideshare Program Market Research and Implementation Plan* (August 2005), prepared by UrbanTrans Consultants, Inc. provided an in depth analysis of which markets could be targeted to increase the program. Metro is currently in the process of transitioning the traditional vanpool program from TriMet to Metro and intends to implement many of the recommendations from the UrbanTrans report.

Recommendations

- Collect data from vanpool riders on previous commute mode.
- Collect data on vanpool mileage, for both shuttles and traditional vanpools, to use for calculations.
- Survey program participants on satisfaction with program. For example, RIDES for Bay Area Commuters has conducted surveys of vanpool drivers to assess their levels of satisfaction, along with collecting data on vanpool characteristics.

Appendix D: CarpoolMatchNW

Background

CarpoolMatchNW.org is a self-serve Internet based service that links riders and drivers. The program allows registered users to enter relevant information about their commute (e.g. destinations and travel times), then view a map which displays the locations of other registered users who share their commute. The program was initiated in 2001 by the City of Portland, with help from a grant from the Climate Trust Fund. The site started in 2002. The City's Department of Transportation (PDOT) continues to operate the program. Initially, customer service for the program was provided by a staff person at TriMet. That responsibility was shifted to PDOT and will move to Metro this in 2006-07.

Evaluation

Data Sources

In addition to an annual report prepared by the City of Portland and the interview conducted, the City provided the raw data from the surveys conducted of people registered with CarpoolMatchNW. The database included 4,780 people who registered with the website before July 2005, covering three full fiscal years (2002-03, 2003-04, 2004-05). There were also data for registrants for partial years before July 2002 (March through June 2002) and 2005-06 (July 2005 through April 2006). Unless otherwise noted, any data presented below regarding registrants of the CarpoolMatchNW website is from our analysis of this database and includes registrants from March 2002 through June 2005 (end of the 2004-05 fiscal year). CarpoolMatchNW sends surveys to registrants 30 days and one year after they register. About 30% of the registrants respond to the 30-day survey.

What services were provided?

The City of Portland operated and maintained the CarpoolMatchNW website in 2004-05. Since 2004 there have been significant staff disruptions, which have delayed some planned improvements to the system and new marketing efforts (Table 11). During 2004-05 this included a leave of absence of the project manager during fall, the loss of a technical support person at the City, and the loss of staff at C-TRAN. Since then, the long-time project manager retired; the current project manager took over in early 2006. In addition, the customer service staff position, previously at TriMet, is now housed at the City. Despite the turnover, during 2004-05 the City was able to add the one-time trip component and an intranet option for employers, in addition to other internal improvements. The program did undertake some significant outreach and marketing activities, including Cool to Carpool, which involved 85 companies and the TMAs. The program partnered with KISN FM, which ran radio ads and included CarpoolMatchNW materials in their summer street marketing efforts.

How does this compare to the *Strategic Plan Work Plan* for 2004-05?

For the most part, despite some staff disruptions, the program was able to achieve their *Strategic Plan* Work Plan technical and customer service objectives. It does not appear that the program did all of the marketing and outreach activities hoped for in the *Strategic Plan* Work Plan,

probably due to staff disruptions and lower than expected funding levels. However, they did reach the number of registrants indicated (discussed below).

Table 26: 2004-05 CarpoolMatchNW Activities

	Objective	2004-05 Outputs & Outcomes
From 5-Year Strategic Plan		
Technical		
Project management, site maintenance, monitoring & verification	Ensure site runs well and is accessible	Staff turnover may have disrupted. Various technical problems solved. Partnership with C-TRAN in limbo because of funding cuts.
Site improvements: one-time trip component, improving administrative tools, translation, etc.		One-time trip component added. Intranet option added for matching within employers. Translation not added because of unknown status of regional program.
Customer service	Keep database current and maintain existing 1,700 users	Customer service staff person housed at TriMet during 2004-05
Outreach and Marketing		
One-to-one outreach, e.g. transportation coordinator campaigns, t-fairs, promotions to users, outreach to magnet schools	2,630 registrants	Cool to Carpool outreach in February 2005, including 85 companies. Worked with 3 companies in Rivergate area.
General public marketing, e.g. bus backs, drive time sponsorships, promoting translated site	5 major sponsors 2.5 million impressions 800,000 people driving alone	Partnership with KISN FM in summer 2004.
Partnership development	500+ registrants	Unclear what was intended in work plan.
RTO funding for 2004-05	$345,520	$135,000 $15,541 local match $18,299 carryover from 2003-04
Program impact	1,059 new carpools 1,800 trips/day reduced 11,224,080 annual VMT reduction	See Table 31
Cost/VMT reduced	$0.03	See Table 31

What was the level of participation in the services?

During 2004-05, 1,685 people registered at the site. This was a slight decline from the 1,884 registered in 2003-04. By the end of 2004-05, there were about 4,800 people registered in the database.[18] The *Strategic Plan* Work Plan set objectives of maintaining 1,700 users, adding

[18] About 12% of these people were registered for the one-trip option. These are not included in the estimates of carpools formed and VMT reduction (Table 31)

2,630 registrants through marketing and adding 500 registrants through partnership development. This totals 4,830 registrants, about what was achieved by the end of June 2005. The number of people registering each month has increased steadily since June 2002 (Figure 7).

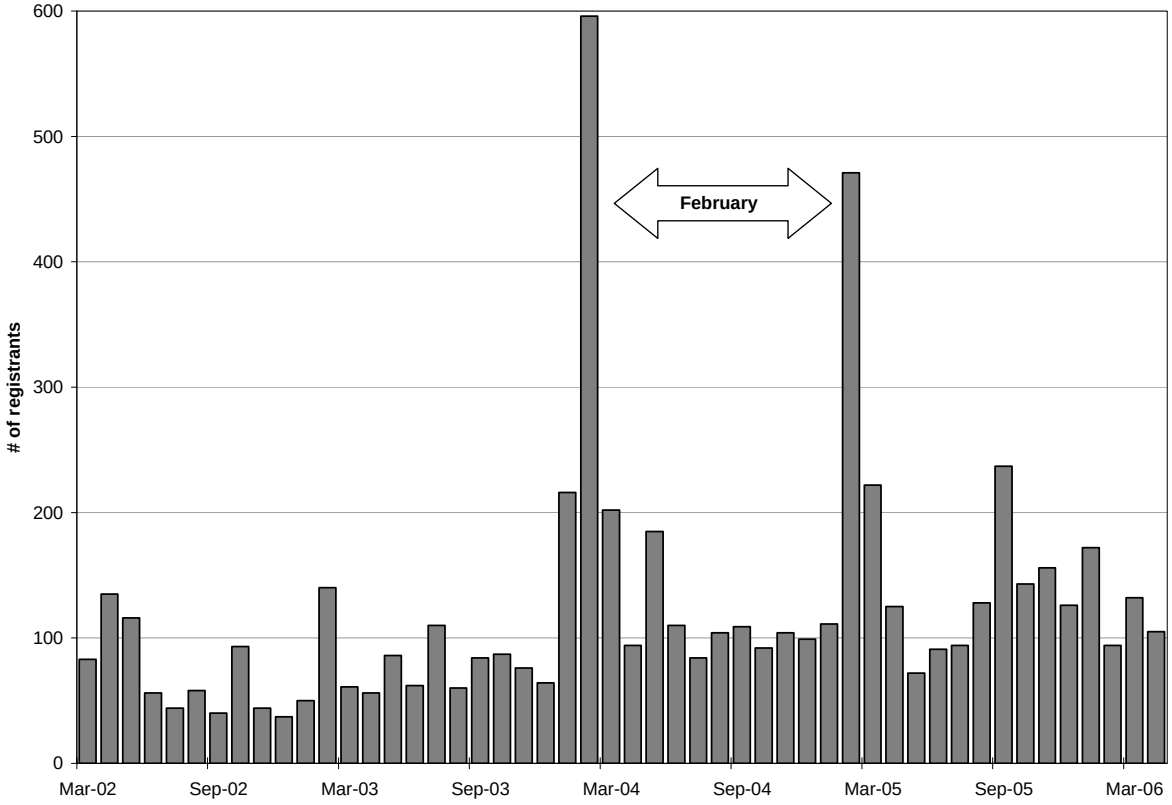
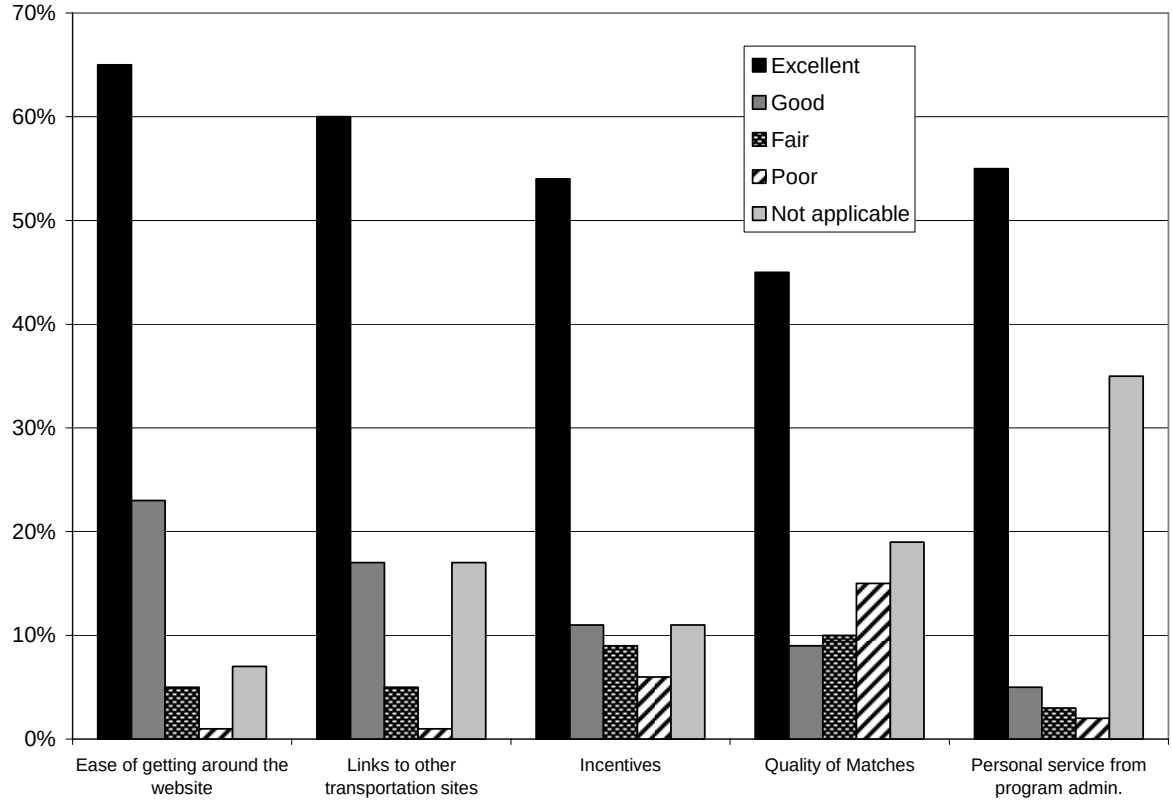


Figure 7: Monthly Registrants on CarpoolMatchNW Website

The Cool to Carpool marketing campaign held in February of 2004 and 2005 generates a significant share of the registrants in the database. There are 365 people in the database provided that registered during the campaign in 2005, which ran from February 14th to 25th, representing 22% of all registrants in 2004-05. This number is more than the 342 that are in the database that registered during the campaign dates in 2003. However, it is less than the number claimed in the program's annual report (515). The difference may be due to registrants asking to be removed from the database after the campaign, but before May 2006, when PDOT provided the database.

What was the level of satisfaction with the services?

Most registrants in the database rate the service as excellent or good (Figure 8). The annual survey asked registrants for the level of satisfaction with five aspects of the program. Over 75% of the respondents rated the "ease of getting around the website" and the "links to other transportation sites" as excellent or good. The lowest satisfaction rating was for the quality of the matches, with 15% of the respondents rating them poor and only 55% rating them excellent or good. In addition 19% rated the matches as "not applicable," perhaps indicating that they were using the site for other purposes.



Note: Figure includes data from 521 registrants from March 2002 – June 2005.

Figure 8: CarpoolMatchNW Registrant Satisfaction

Satisfaction levels have increased over time, with 2004-05 registrants giving the service the highest rating, compared to the previous two years (Figure 9). Half of the registrants from 2004-05 rated the quality of matches as excellent, compared to 47% of registrants from 2002-03. This probably reflects the increasing size of the database.

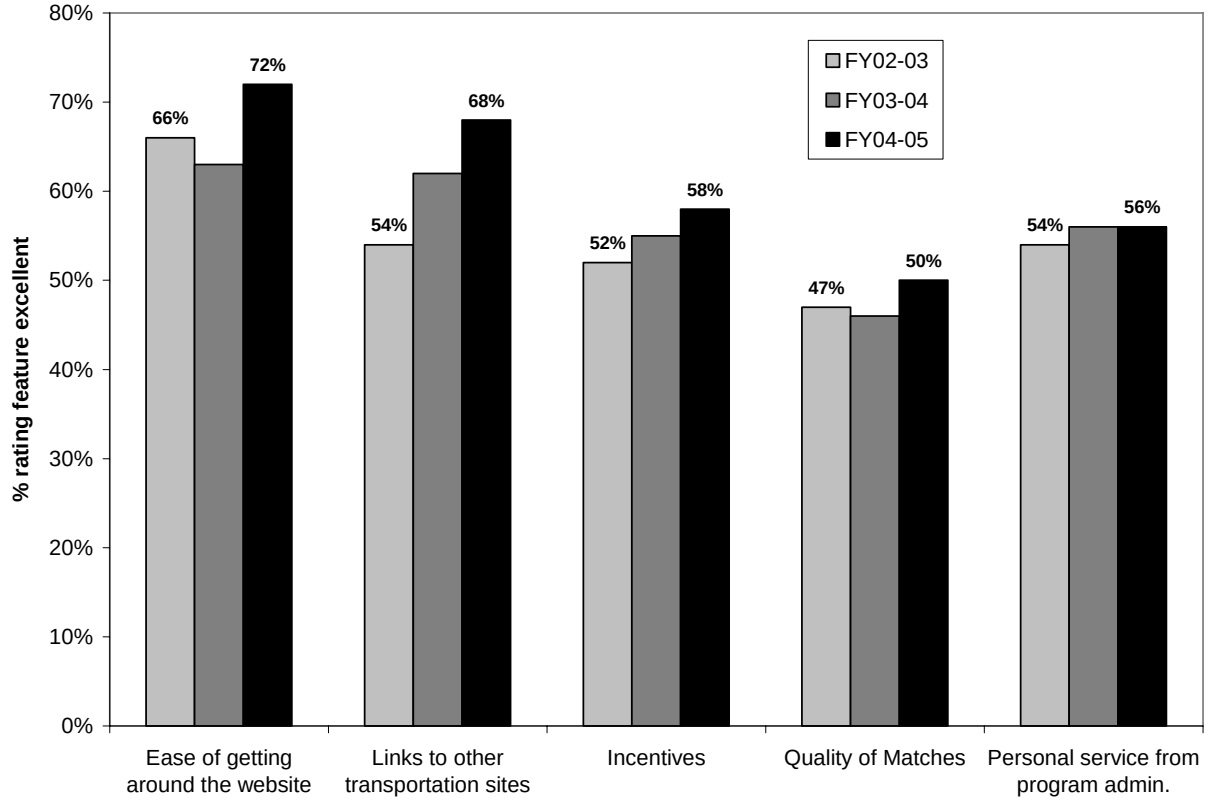


Figure 9: CarpoolMatchNW Registrant Satisfaction Over Time

A significant share of the registrants may not be committed to finding carpool partners. This may explain the lack of satisfaction with the quality of the matches. Both the 30-day and annual survey ask registrants "Do you want to stay in the program?" Only 14% of the respondents to the 30-day survey who registered in 2004-05 said that they wanted to stay in the program. This lack of interest in staying with the program may indicate that many registrants are just testing out the website or were enticed to use it for reasons other than finding a carpool partner. The rate is much higher for respondents to the annual survey (43% for 2004-05). Presumably, people who were not interested in staying in the program either did not respond to the annual survey or asked to be removed from the database, resulting in the higher rate in the follow up survey. In addition, some people may change their mind. Of the 2004-05 registrants that completed both surveys (n=72), 62 indicated that they did not want to stay in the program after 30 days. In the annual survey, half of those (31) indicated that they did want to stay in the program. Another concern with the responses to this survey question involves the wording of the question. Some respondents may not fully understand what is meant by the question. Is "the program" the carpool matching database, the Cool to Carpool campaign, the person's employer commute options program, or something else?

Table 27: CarpoolMatchNW Registrants that Want to Stay in Program

Registration Year	Do you want to stay in the program?			
	30-day survey		Annual survey	
	percent	total # respondents	Percent	total # respondents
2004-05	14%	407	43%	98
2003-04	14%	460	34%	213
2002-03	17%	267	55%	134

People who register during the Cool to Carpool campaigns are less interested in staying with the program. Of those that registered during either the 2004 or 2005 campaign and responded to the 30-day survey, only 11% wanted to stay with the program, compared to 23% who registered at other times. The difference in rates was similar in the annual survey (29% and 48%, respectively). However, the reasons for the lower rate of interest are less clear. First, some people may be enticed to join the site because of the campaign and the incentives offered, but they aren't serious about finding a carpool partner or other travel options. Of those that responded to the 30-day survey and registered during Cool to Carpool, 20% indicated that they wanted help finding other transportation options, compared to 28% of the people who registered during other times of the year, a statistically significant difference. Second, more Cool to Carpool registrants may have found partners and don't need the service any more. Of the 30-day survey respondents, 31% of those that registered during a Cool to Carpool campaign indicated that they were in a carpool or vanpool formed by CarpoolMatchNW, compared to 17% of other registrants. For the annual survey the rates were 30% and 20%, respectively. In both cases the differences were statistically significant. This difference in success rates is confirmed by a higher level of satisfaction with matches; 58% of the Cool to Carpool registrants rated the quality of matches excellent, compared to 44% of other registrants. In 2005, the Cool to Carpool campaign worked with over 80 employers. This targeted marking may have resulted in a higher concentration of registrants going to the same work places.

To what extent did participants use travel options?

At least 20% of the survey respondents indicated that they were in a carpool or vanpool formed at CarpoolMatchNW (Table 28). The rates are about the same for 2004-05 and 2003-04, but higher than in 2002-03, indicating that the growth of the database may be improving its success rate. While the survey response rate for the 30-day survey was relatively high – 31% overall and 27% for 2004-05 registrants – the responses may be biased towards people who were genuinely interested in forming a carpool and those that succeeded. Moreover, the response rate for the annual survey is much lower, 6% in 2004-05 and 11% overall.

Table 28: CarpoolMatchNW Registrants that Form Carpools/Vanpools

Registration Year	Are you in a carpool or vanpool formed at CarpoolMatchNW?			
	30-day survey		Annual survey	
	Percent	total # respondents	Percent	total # respondents
2004-05	20%	407	24%	98
2003-04	24%	460	25%	213
2002-03	13%	267	20%	134

Overall, only half of the registrants that responded to the annual survey drive alone to work (Table 29). Excluding the people who commute by a car/vanpool formed via CarpoolMatchNW, 64% drive alone to work. This indicates that participants are already inclined to use alternative modes and do so at a fairly high rate. This also means that some of the carpools formed through the site are not reducing VMT because they are drawing people from transit and other alternative modes. However, there is no data to estimate what share of participants this might be.

Table 29: Commute Mode of CarpoolMatchNW Registrants

Commute Mode	% of respondents to annual survey	
	Including carpools/vanpools formed via site	Respondents who did not form or sustain car/vanpool
Drive Alone	50%	64%
Carpool/vanpool formed via CarpoolMatchNW	22%	
Bus or MAX	15%	20%
Carpool/vanpool	12%	16%
Drive alone to Park & Ride, bus or MAX	7%	8%
Bike	7%	9%
Walk	4%	5%
Drive with others to Park & Ride, bus or MAX	1%	1%
Total respondents (n)	521	407

Note: Percentages do not total 100% because multiple responses allowed.

The typical carpool/vanpool formed through CarpoolMatchNW has two or three people and travels 25-30 miles round trip at least four days a week. Over all three full years of data, the average carpool/vanpool size is 2.5 people according to respondents of the 30-day survey and 2.2 people according to respondents of the annual survey. The difference is largely explained by a larger share of respondents to the annual survey indicating only one person in their carpool, including themselves. Either people do not understand the question, or they are being honest, after previously falsely or mistakenly indicating that they were in a carpool. In the annual survey

47% of respondents indicated that there was one person in their carpool or vanpool, compared to 14% of respondents in the 30-day survey.

Table 30: Characteristics of Car/Vanpools formed through CarpoolMatchNW

	30-day survey			Annual survey		
Registration Year	Mean # people	Median Roundtrip miles	Mean Days per week	Mean # people	Median Roundtrip miles	Mean Days per week
2004-05	2.6	25	4.3	1.8	32	4.0
2003-04	2.6	27	4.2	2.2	30	4.4
2002-03	2.0	27	4.4	2.4	30	3.8
Overall	2.5	25	4.2	2.2	30	4.2

Note: Median distance used for roundtrip miles instead of mean because of a small number of very high estimates.

The estimated number of trips and vehicle miles reduced due to the car/vanpools formed through CarpoolMatchNW in 2004-05 is shown in Table 31. The estimates use a set of high (optimistic) and low assumptions. For example, for the number of car/vanpools formed, the low estimate is the actual number of people indicating in the 30-day survey that they formed a carpool. This assumes that none of the non-respondents formed a car/vanpool as a result of CarpoolMatchNW.[19] This is a very conservative estimate. The high estimate assumes that non-respondents formed car/vanpools at the same rate as respondents to the 30-day survey. The assumption of 2.5 people per pool is based upon the three-year average from the 30-day survey. This is slightly lower than the assumption used by in the *Strategic Plan Work Plan* of 2.7 people per carpool. The round-trip mileage is the midpoint between the 30-day and annual survey three-year median values. This distance (27.5 miles) is longer than what was assumed in the *Strategic Plan Work Plan* (about 24 miles) and what is assumed by Metro in their regional travel modeling (about 18 miles). Because the assumption is higher than other sources, PSU CUS did not apply a factor of 1.3 to the user's estimated distance, as CarpoolMatchNW did in their annual report. The factor is supposed to account for people's underestimation of mileage and is used by other rideshare agencies. The assumption of 4.2 days per week is based upon the survey average. Applying this to 52 weeks results in about 218 days per year, lower than the assumption of 262 workdays per year in the *Strategic Plan Work Plan*.

These assumptions were applied to the two previous years as well. The results are shown in Table 32. The total for the three years optimistically assumed that carpools formed in previous years continued through 2004-05.

[19] The numbers were not adjusted down to account for any potential double-counting – survey respondents being in the same carpool.

Table 31: Estimated VMT Reduction for CarpoolMatchNW in 2004-05

Item used to calculate estimate	Source	Low	High
Commute trips and VMT reduced			
% of survey non-respondents forming carpools	30-day survey responses	None	Same rate as 30-day survey respondents
Number of carpools formed	Calculated from above	81	300
Length of carpool trip (roundtrip) *Assumed to be the commute distance if not vanpooling*	Survey data (see Table 30)	27.5 miles	27.5 miles
% of carpool commute trips that would have been made driving alone instead of carpool	Assumption, based on data from Table 29	60%	100%
Days per week	Survey data (see Table 30)	4.2	4.2
Weeks per year	Assumption	52	52
Annual trips reduced	Calculated, including trip for the carpool	15,900	98,200
Program costs			
RTO Subsidy (CMAQ and PDOT match)	Provided by PDOT	$150,451	$150,451
Estimated VMT reduction in 2004-05		**437,000**	**3,022,000**
Cost-effectiveness		**$0.34/mile**	**$0.06/mile**

Notes: Estimates of annual trip and VMT reduction rounded to nearest 100.

Table 32: Estimated VMT Reduction for CarpoolMatchNW for Three Years

Registration Year	Number of Car/vanpools		Annual VMT Reduction	
	Low estimate	High estimate	Low estimate	High estimate
2004-05	81	300	437,000	2,701,000
2003-04	112	362	605,000	3,264,000
2002-03	36	104	195,250	937,750
Total	229	766	1,237,000	6,902,750
Cost (RTO funds & match) per VMT reduced[a]			$0.12	$0.02

[a]Assuming carpools formed in previous years continued in 2004-05.

How does this compare to the work plan in the 5-year Strategic Plan?

The estimated impacts of the program shown in Table 31 and Table 32 are significantly lower than projected in the *Strategic Plan Work Plan*. The *Work Plan* projected 882 new carpools in 2003-04 and 1,059 in 2004-05 and every year after. It is difficult to tell whether the *Work Plan*

projections are cumulative each year. If they are not, the total number of new carpools projected for 2001-02 through 2004-05 would be 2,823. Either way, the program has fallen short of that projection. The annual VMT reduction projection for 2004-05 was 11,224,000, significantly higher than even the optimistic estimate made here. The level of funding expected for the program was more than twice what was actually provided. This undoubtedly had an impact on program effectiveness.

How does this compare to the RTP modal objectives?

A comparison to the RTP modal objectives is not appropriate because the participants in the CarpoolMatchNW website are self-selected and more motivated to use non-SOV modes than the general population.

How does this compare to programs in other regions?

Comparisons to different regions are difficult because programs calculate and report measures of outcomes differently. The Atlanta regional ridematching program placed about 13% of their database registrants into carpools.[20] Slightly less than half (5.6% of registrants) shifted to carpooling after receiving assistance from the program. This is about the same as the low estimate for CarpoolMatchNW. A survey of carpool database applicants in the Washington DC area found that 27% changed modes and continued with that new mode, but of those 62% had used a different alternative mode before.[21]

After adjusting for the difference in sizes of the regions, Portland's database may be relatively small. The matching program in the San Francisco Bay Area enlisted about 13,500 registrants in 2003-04.[22] Atlanta's program generated 17,665 ridematch applications in 2001-02.[23] Mid-Valley Rideshare, covering the Salem area, has about 2,750 people in its database.[24]

[20] Southern Coalition for Advanced Transportation, *Evaluation of the Effectiveness of Programs Contained in the "Framework for Cooperation to Reduce Traffic Congestion and Improve Air Quality" Phase Two*, Georgia Department of Transportation Research Project #9906, March 2002.
[21] Metropolitan Washington Council of Governments, *Transportation Demand Management Evaluation Project TDM Analysis Report Fiscal Year 2005 Placement Survey*, May 17, 2005.
[22] Metropolitan Transportation Commission (MTC), *Project Performance Report – 2004, Regional Operations and Technical Assistance Programs for the San Francisco Bay Area Fiscal Year 2003-04*, April 2005.
[23] Southern Coalition for Advanced Transportation, op. cit., March 200.
[24] Personal communication with Robin E. Rolls, Transportation Options Planner, Cherriots Rideshare, Salem, Oregon.

To what extent does the program support the RTO objectives?

RTO Objective	Supportive?
Reduce drive-alone trips and encourage alternative modes	Yes. The program's primary objective is to reduce SOV commuting. However, a share of the new carpoolers are switching from other alternative modes.
Regional coordination and communication	Yes. The program is operated by the City of Portland, but allows and includes participants from anywhere. It is unclear how well the website was promoted outside of Portland.
Include all trips, not just commute trips	Indirectly. The program focuses on commute trips, but now includes a one-trip trip component. Carpool riders may use other modes for mid-day trips, e.g. walking to lunch rather than driving because they don't have a car available. The program may also enable some riders to avoid owning an additional personal vehicle, which could affect non-commute trips.
Connections to other goals:	
2040 centers and corridors	Indirectly, to the extent that participants work and/or live in centers and corridors.
Transit-oriented development	No effect?
TriMet transit investment	Unclear
Community health	Unclear
Air and water quality	Yes, to the extent that trips and VMT are reduced

Conclusions

The program met its 2004-05 objectives for the number of participants (registered users), despite not conducting all of the outreach activities planned. The number of registered users has also been climbing steadily over time. However, the effectiveness in forming carpools and reducing VMT was significantly less than expected. This may be due to the size of the database (not enough potential matches) and the quality of the matches. The survey responses indicate that a significant share of the registered users are not very serious about forming a carpool. These issues may be overcome by increased marketing and improved database management methods to purge the database of people not interested in forming a carpool.

Recommendations

- Revise the follow-up survey forms to provide more accurate information.
- Ask new users to indicate their current commute mode when they first register on the site. This information is necessary to estimate changes in mode share and new non-SOV users.
- Improve survey response rates through follow-up.
- Develop and implement procedures for regularly purging the database of people who are not interested in forming a carpool.

Appendix E: SMART/Wilsonville Travel Options Program

Program Background

SMART Options is the transportation demand management arm of Wilsonville's SMART Transit and provides services to area employers to help their employees find the best way to get to work, whether it's by bus, carpool, vanpool or bicycling. SMART Option's boundaries are those of the Wilsonville city limits for the TDM outreach, with transit service provided to other areas in the region. SMART Options has provided a number of programs to employers, school children and residents of Wilsonville.

In 2004-2005 SMART TDM programs received $55,000 in CMAQ RTO core program funding. SMART also received a 2040 grant of $16,000 to implement the "Walk Smart" program over two years from 2004-2006. SMART contributed $10,295 in matching funds.

Evaluation

Data Sources

The evaluation is based upon reports submitted by Wilsonville to Metro and an interview with Jen Massa, program manager.

What activities were provided?

As noted in Table 33, over the 2004-2005 program year many of the activities SMART provides have to do with encouragement and raising awareness of transportation and parking options in the area. On a regional coordination level, SMART staff participated in TMA director meetings, the CarpoolMatchNW service, wrote newsletter articles, and maintained an up-to-date website. Art on the Bus and Walk Smart are but two of the more innovative programs SMART completed in 2004-05. Art on the Bus is a community event where middle school children compete to have their artwork painted on SMART buses.

Walk Smart (funded from a Region 2040 grant) engaged employees, school children and seniors in walking to different activities. The program provides a pedometer and other promotional materials and asks participants to log the number of steps that they take for a year. The program's Quarterly Report for January – March 2005 included these highlights:

- The senior participants at the Community Center formed a walking group.
- Employees at Xerox and Tyco Electronics participate in friendly competitions within the company and are in the process of organizing a friendly competition between the two companies. The transportation coordinators indicated that the program boosted morale and energy for many employees.
- The teachers at Wood Middle School reported that not only does wearing a pedometer help teach students about ways to be active in their daily lives, but it teaches them about different ways to get around other than riding in a car or bus.

During 2004-05, SMART developed and distributed 100 employer transportation information packets, provided training to 50 transportation coordinators and held eight of the 12 scheduled

transportation fairs. SMART also provided outreach efforts to the schools including the previously mentioned Art on the Bus program which engaged 250 students.

SMART staff worked closely with city planners toward the development of a TDM ordinance, in addition to ensuring TDM is included in all city planning efforts.

How does this compare to the *Strategic Plan Work Plan* for 2004-05?

The services provided compare favorably with the *Work Plan* (Table 33). Most of the activities were accomplished, with some exceptions.

What was the level of participation in the activities?

See Table 33 for details. The employer outreach program worked with six employers to develop TDM plans and reached an estimated 3,500 employees through work site transportation fairs.

By the end of March 2005, 712 people had signed up for the Walk Smart program.

What was the level of satisfaction with the activities?

According to the reports, SMART program participants reported a high level of satisfaction.

To what extent did participants use travel options?

The program did not collect data on the impacts of the general TDM efforts. The TriMet employer database included four Wilsonville employers. For these sites, 84-92% of the commute trips were made driving alone.

The WalkSmart program did collect information from participants. After nine months of the program, participants had reported walking 125,544,000 steps or approximately 62,770 miles. The participants indicated that about 5% of these steps replaced car trips, for about 3,150 miles. However, it is unclear how accurate this estimate is. The program manager questioned whether participants understood the form correctly and whether they always completed this portion of the form.

How does this compare to the work plan in the 5-year Strategic Plan?

The *Strategic Plan Work Plan* did not include specific trip or VMT reduction objectives for this program.

How does this compare to the RTP modal objectives?

There is no data to accurately assess whether the program is close to meeting the modal objectives from the RTP.

How does this compare to programs in other regions?

Not applicable.

Table 33: 2004-05 SMART/Wilsonville Activities

	Objective	2004-05 Outputs & Outcomes
From 5-Year Strategic Plan		
General Outreach		
Design, produce, and distribute program materials, including brochures and flyers	Increase public awareness of TDM program. Distribute 1,000 per year. Target: General public/ employers	Achieved goals.
Walk to Lunch Event. Restaurants provide discounts for people who walk to lunch and are wearing a *Walk to Lunch* button. Additional publicity from press coverage	Employees and residents who walk to lunch. 250 participants per year. Target general public and employers for participation.	Did not host this event due to budget and staff time constraints.
Booth at Clackamas County Fair. Primarily focused on promoting transit and CarpoolMatchNW, but also providing information on bicycling and walking, and connections to other transit systems (SMART, Canby Area Transit, TriMet, Ctran and Salem Area Transit)	Increase use of transit and CarpoolMatchNW. 75 additional bus riders and 50 additional carpool sign-ups. Target: General Public.	Provided 275 rides to and from the fair on the SMART trolley. Talked with over 400 people about SMART options. 74 people registered on the CarpooMatchNW website with either origins or destinations in Wilsonville. If 20% of these formed carpools (an optimistic assumption), that would be about 7-10 new carpools.
Write articles for Boones Ferry Messenger about TDM program activities, events, and opportunities.	Public awareness of employer efforts and TDM program. 12 articles per year. Target: General Public	6 articles
Create and maintain SMART TDM Webpage with information on individual transportation options and employer programs	Provide general and employer TDM information and links to other services, such as CarpoolMatchNW. 50 hits per month.	Average hits per day to www.ridesmart.com: 1,630 Average visits per day: 157 Average length of visit: 6.44 minutes
New resident welcome meetings.	Provide new residents with information on transportation alternatives before they get into the habit of driving alone. Four events per year, with 120 new residents attending.	Achieved goals
Create new resident welcome packets to distribute to apartment managers.	Same as above. Distribute 250 packets per year.	100 packets per year
Create informational displays for Chamber of Commerce, Library, and City Hall	Six displays per year. General public/ employers.	Goal not met due to budget and staff time constraints.
Walk Smart program - approved by RTO for $40k over 2 years FYs 2005 & 2006	Estimated 1500 participants 3 groups - Empoyees, Elders, middleschool children	FY 2005/06 because of RTO funding delays
Employer Outreach		
Contact employers by visiting the worksites and calling them to let them know about the TDM program.	150 personal contacts and 200 phone contacts per year.	50 contacts and 50 phone calls.
Organize employer transportation meetings. Employers get together to discuss transportation issues that affect their worksites.	Gain a clear understanding of the transportation issues that concern employers. Create the opportunity for employers to work together on solutions. Four meetings per year with 25 employers participating.	Did not achieve goal due to budget and staff limitations.
Hold transportation fairs at worksites to provide information on all transportation alternatives.	12 per year, reaching 5,000 employees.	8 per year, reaching 3,500 employees.

Table 34 (continued): 2004-05 SMART/Wilsonville Activities

	Objective	2004-05 Outputs & Outcomes
Assist employers in developing and implementing TDM plans for their worksites	6 TDM plans per year.	Goals met.
Create and distribute employer information packets.	100 per year.	Goals met.
Compile and create training and reference materials for transportation coordinators in Wilsonville.	50 per year.	Did not achieve goal due to budget and staff limitations.
Promotion of regional and community events, such as Carfree & Carefree, Bike Commute Challenge, Earth Day etc.	500 employees per year participate in the events	Helped promote "It's Cool to Carpool", Carfree/ Carefree, Bike Commute Challenge.
Guaranteed Ride Home program. Reach agreement with taxi company, print guidelines, distribute to employers.	Sign up 10 employers per year.	SMART offers GRH for those who use transit, but there is no official program as of yet.
SMART Employer of the year award program.	Reward one employer for outstanding efforts in their TDM program. Get additional publicity from media release.	Did not offer award
School Outreach		
Art on the Bus competition in the schools. Children create artwork that illustrates the importance of transportation options. The three winning art works are incorporated into a bus wrap.	Get children to think about transportation options by describing them in drawings. Create community awareness of transportation options via the traveling artwork on the bus. 150 elementary and middle school participants per year	250 students participated.
Develop school outreach program based on existing successful programs and pilot programs.	Involve teachers and students in solving real-life transportation problems in the context of math, science, and other curricula. 500 students per year participate.	No program due to staff time restraints and budget.
Planning and Coordination		
Ensure that TDM provisions are included in development conditions for new developments in Wilsonville.	All new developments in Wilsonville are required to support TDM at their worksites by posting information, submitting TDM plans, and providing adequate facilities for bicyclists, pedestrians, and transit.	Staff working with Planning department to create a TDM ordinance.
Work with Wilsonville Planning staff to ensure that TDM is supported in the planning process.	Ensure that Transportation Systems Plan amendments, code amendments, and pedestrian/bike plans adequately support TDM.	Goals met. The Transit Master Plan update also supports TDM measures for Wilsonville.
Coordinate program activities with other regional groups, transit districts and jurisdictions.	Create a unified message, coordinate activities, and prevent unnecessary duplication of effort.	Goals met.
Write articles for weekly "FYI" newsletter to the Wilsonville City Council.	Ensure that City Councilors are aware of TDM issues and activities. 30 articles per year.	15 articles per year.
Overall		
RTO funding	$89,700	$55,000 for general TDM program $16,000 for Walk Smart $10,295 in local match
Program impact	Not projected	Not enough data to estimate At least 3,150 VMT reduced from WalkSmart program
Cost/VMT reduced	Not projected	Not enough data to estimate

To what extent does the program support the RTO objectives?

RTO Objective	Supportive?
Reduce drive-alone trips and encourage alternative modes	Yes.
Regional coordination and communication	Yes. Program manager coordinates with other TMAs and participates in regional programs such as CarpoolMatchNW, "It's Cool to Carpool", Carfree/Carefree Challenge, and Bike Commute Challenge.
Include all trips, not just commute trips	Yes. In particular, the WalkSmart program targets all trips. The outreach programs include seniors and school children, in addition to employees.
Connections to other goals:	
2040 centers and corridors	Wilsonville is a center.
Transit-oriented development	Unclear
TriMet transit investment	Not applicable?
Community health	Yes. The WalkSmart program focuses on physical activity.
Air and water quality	Yes, to the extent that trips and VMT are reduced

Conclusions

SMART completed nearly all of the tasks laid out in the work plan for the 2004-05 fiscal year. The program is well established in the community and has had some success with promotions like the Art on the Bus and Walk SMART programs. They have also had success with the employer outreach and coordinating with city transportation planning efforts and other regional programs. However, SMART's popularity and wide variety of programs may stretch limited staff thin. For the projects and programs not undertaken, lack of staff time was often attributed as one of the causes.

Recommendations

- Collect more data on the end outcomes of the programs, including employee survey data at sites where outreach is conducted.

Appendix F: Lloyd TMA

Project Background

The Lloyd TMA (LTMA) was formed in 1994 to manage parking and transportations issues for the Lloyd District. The LTMA's long-standing focus is the economic vitality and livability of the district. The area's high concentration of employment and shopping raised concerns from retailers about maintaining a parking supply for customers. The District, in partnership with the City of Portland, eliminated on-street free parking in 1997 by installing parking meters.

LTMA programs and membership have continued to grow over the last 12 years and include bicycling, walking and transit incentives to achieve the 2015 mode-split goals it set for itself. The Lloyd Center is exempt from the State's ECO rule requirements. Nevertheless, LTMA still conducts annual surveys to member employers to determine the mode-splits and gauge the success of their efforts.

The mission of the LTMA is to support and promote the economic vitality and livability of the Lloyd District through cooperative business supported programs promoting efficient, balanced transportation systems and land use patterns (LloydTMA Annual Report, 2006). Goals set by the LTMA Board for 2005 were:

- Increase employee use of transit to 32% of all commute trips (all businesses).
- Increase employee use of transit to 45% of all commute trips (Passport members)
- Increase number of bicyclists to Lloyd District by 5% annually.
- Increase the number of pedestrian commuters to the Lloyd District by 3.3% annually.
- Maintain existing level of employee use of car/vanpooling as a commute option (10% commute mode split)
- Continue efforts to fund lighting, safety and amenity improvements throughout Lloyd District's pedestrian environment.
- Increase employee and employer awareness of Lloyd District transportation options.
- Continue to develop an organization that effectively supports and advocates the long-term economic vitality and livability of the Lloyd District.

The Lloyd District is committed to attracting and locating nearly 17,000 net new employees (total 34,000) and 4,000 new housing units by the year 2015.

LTMA's longevity and success has helped it to diversify its funding sources. Funding for the 2005 fiscal year totaled $401,000. LTMA membership (via Business Improvement District) accounted for $90,000, with $75,000 from the share of parking meter revenues, $36,000 from TriMet Passport sales commissions, and $200,000 from BETC Tax Credit Partnerships. The funds from the BETC Tax Credit program go to fund a "Transportation Opportunity Fund (TOF)" where the LTMA provides partial or full funding for various projects in the District. Some of the TOF projects slated for 2005 included: transit shelter improvements, transit tracker expansion, outreach and communications, Multnomah/I-5 pedestrian underpass, small business Passport rebate and security cameras for MAX platforms (LloydTMA Annual Report, 2006).

LTMA received $24,750 in Metro RTO CMAQ monies for 2004-05 to augment existing transit, bicycling and pedestrian programs.

Evaluation

Data Sources

The evaluation is based upon LTMA annual reports and an interview with Rick Williams, Director.

What services were provided?

LTMA activities, objectives and outcomes are displayed in Table 35.

How does this compare to the 5-year Strategic Plan Work Plan?

The LTMA achieved the objectives related to programs funded through the RTO grant (Table 35)

Table 35: 2004-05 Lloyd Center TMA Activities

	Objective	2004-05 Outputs & Outcomes
Transit Increase employee use of transit to 32% of commute trips for all businesses and 45% for Passport participants.	Work with TriMet to achieve new Passport pricing	Successfully negotiated new Passport rate
	Sell 5,000 Passport passes to Lloyd District businesses	Sold 5,485 Passports; est. 6 new business accounts
	Ensure continued employee access from Vancouver	
	Summarize trip data from 2004 LD employee survey	Developed new commuter choice survey, compiled results for all member businesses
Bicycling Increase number of bicyclists to the Lloyd District by 5% each year.	Increase the number of bike accessible sites in the LD	Provided racks and cages and programming assistance to 3 additional buildings
	Increase employee awareness by hosting at least 10 bike events.	Hosted 12 bike committee meeting, bike commute challenge, 3 brown bag lunches, 3 month long summer cycling events/drawings
	Develop education and encouragement campaign for LD commuters	Purchased 120 "Let's Ride" kits from PDOT Options program
Pedestrian	Continue to plan and identify funding for I-5 underpass	$242,000 of $400,000 identified. Agreement w/PDOT for LTMA to manage project
	Wayfinding signage program	Scheduled installation Spring 2006
RTO funding	$25,000	$24,750
Program Impact	58 members 8,075 employees 52% non-SOV mode split 3.8 million annual VMT reduction	69 members 9,000 employees 57% non-SOV mode split (Passport employers) 3,879,900 (estimated by LTMA)
Cost/VMT reduced	$0.01	Not estimated

Note: The activities above are only those receiving partial funding from the Metro RTO program.

What was the level of participation in the services?

The LTMA area includes about 650 businesses and 20,000 employees.[25] Sixty-nine businesses are members of the TMA, representing approximately 9,000 employees (45%). Membership grew by eight employers in 2004-05. About two-thirds of the members participate in the Passport program.

[25] Lloyd TMA Annual report 2006.

What was the level of satisfaction with the services?

PSU CUS did not have data on levels of satisfaction with the services, either the employers or employees. However, the growth in membership indicates a high level of satisfaction.

To what extent did participants use travel options?

Over half of the commute trips made to employers that participate in the Passport program are made in non-SOV modes (Table 36). This is a significant change from 1997, when an estimated 60% of commute trips were made in SOVs. Between 2003 and 2005 the share of trips made by most modes stayed about the same, though bicycling declined. The LTMA suspected that part of this may have been due to changing the survey from June to May. Since 2001, transit and carpooling increased, while the drive alone rate fell.

Using the same methodology the TriMet used to calculate VMT improvements for their Employer Outreach Program, these employers reduced VMT in 2005 by 506,100-526,200 compared to 2001. However, the TriMet calculations used baseline data that extended earlier than 2001. PSU CUS did not have baseline data for Lloyd TMA before 2001. Therefore, this VMT reduction estimate only accounts for improvements made since 2001 and not a "true" baseline. In addition, the estimate only includes the employers participating in the Passport program. The LTMA estimates that annual VMT was reduced by 3,879,900 over a baseline of 1997.

Table 36: Commute Trip Mode Share for Lloyd TMA Employers

	% of weekly commute trips[a]				
Mode	**2001**	**2003**	**2005**	**Percentage point change over 2001**	**2015 Goals**
Drive Alone	45.5%	42.5%	42.7%	-2.8%	33%
Transit	36.0%	39.3%	39.1%	3.1%	40%
Carpool/Vanpool	10.4%	10.5%	11.5%	1.1%	10%
Walk	2.4%	1.8%	2.3%	-0.1%	10%
Bicycle	3.7%	4.3%	3.3%	-0.4%	5%
Compressed work week	1.2%	0.9%	0.9%	-0.3%	2%
Telecommute	0.7%	0.7%	0.8%	0.1%	0%
Total	100.0%	100.0%	100.0%		100%

aThe survey collects data on commute trips for each day for an entire week.
Source: Report submitted by LTMA to Metro and 2001 Annual Report (www.lloydtma.org)
Note: The survey includes employers participating in Passport, not all TMA members.

How does this compare to the work plan in the 5-year Strategic Plan?

The non-SOV mode share for the Passport employers (57%) was higher than the target in the Plan (52%). It is unclear what the mode share for other employers in the LTMA was in 2004-05.

How does this compare to the RTP modal objectives?

The *Regional Transportation Plan* sets modal targets for three categories of areas in the region. For regional centers, town centers, main streets, station communities and corridors the non-SOV modal target for all trips to and within those areas is 45-55%. The target for the central city is 60-70%. The LTMA had a 57% non-SOV mode share for commute trips to Passport employers.[26] This is close to the target for the central city and exceeds the target for regional centers.

How does this compare to programs in other regions?

The LTMA had 69 members in 2004-05, placing it in the 30% of TMAs nationwide.[27]

To what extent does the program support the RTO objectives?

RTO Objective	Supportive?
Reduce drive-alone trips and encourage alternative modes	Yes.
Regional coordination and communication	Yes.
Include all trips, not just commute trips	Yes. The program focuses on commute trips to the center. However, the infrastructure improvements that are implemented by LTMA can affect all trips. In addition, Passport users can use their passes for all types of trips.
Connections to other goals:	
2040 centers and corridors	Yes. The LTMA is located in a center.
Transit-oriented development	Yes.
TriMet transit investment	Yes. There are several MAX stations in and near the LTMA.
Community health	Yes. LTMA activities promote walking and bicycling. Employees using transit may walk to access transit, particularly within the Lloyd Center area.
Air and water quality	Yes, to the extent that trips and VMT are reduced

Conclusions

The Lloyd TMA accomplished its objectives for 2004-05 and has demonstrated a reduction in SOV use over time.

Recommendations

- Develop methods to measure outcomes beyond the Passport employer surveys.

[26] The worksites in the TriMet database indicate a 54% non-SOV mode share.

[27] Center for Urban Transportation Research, *2003 Transportation Management Association (TMA) Survey Final Report*, April 2004.

Appendix G: Swan Island TMA

Program Background

The Swan Island TMA (SITMA) was formed in June 2000, to manage parking and transportations issues for the Swan Island industrial area. The focus is on improving transportation options on Swan Island. The mission statement below was adopted in January 1998, by the Swan Island Business Association Transportation Committee, and continues to guide SITMA's activities:

> In order to facilitate the continuing growth and success of Swan Island and Mock's Landing businesses, the Transportation Committee works to improve the movement of people, products, services and freight in the most effective way by increasing the area's transportation options. (SITMA Annual Report, 2005)

Businesses recognize that keeping the area's only access--Going Street--from becoming congested, is vital to the economic well being of Swan Island. As SITMA director Lenny Anderson, stated in a recent interview, "for every two cars we're able to get off the road, there's room for another truck."

One of the major challenges for SITMA when presenting transportation options to island employees is that all employers currently provide free parking. While a change in this policy is not likely in the foreseeable future, the amount of land in this close-in finite industrial area given over to parking is significant and could hinder future business expansion. Recognizing these issues, the SITMA, the second oldest TMA in the Metro region, has continued to grow its outreach and programs.

Goals set by the SITMA for 2005 included:

1. Expand number of area employees eligible to receive a transit subsidy
2. Double transit ridership over 2004.
3. Double bicycle ridership over 2004.
4. Increase access to Swan Island for bicyclists and pedestrians.

SITMA's total expenses for FY 2005 were $86,000, with income of $107,947. The program received $24,750 in regional TMA funds and $12,500 from a Region 2040 grant to increase vanpools from Clark County, Washington. Other funding included $30,000 in membership dues ($6,000 in-kind), and $14,000 in pass through BETC funds.

Evaluation

Data Sources

The evaluation is based upon the report submitted to Metro, an interview with Lenny Anderson, SITMA Director, shuttle ridership data provided by SITMA, and data from the TriMet employer survey database.

What activities were provided?

As noted in Table 37, many of the activities SITMA provides have to do with encouragement and raising awareness of transportation and parking options in the area. On a regional coordination level, SITMA manager Lenny Anderson was elected to be the TMA representative on the RTO subcommittee. SITMA members utilized the CarpoolMatchNW service, worked with TriMet to increase frequency on the Rose Quarter shuttle and existing bus routes. TMA staff met with TriMet on a number of issues over the course of the year including possible development of a fareless square in the district, a shuttle to/from Gresham Station and the downtown, increased service and identifying access issues.

How does this compare to the Strategic Plan Work Plan for 2004-05?

The services provided compare favorably with the work plan (Table 37).

Table 37: Swan Island TMA 2004-05 Activities

	Objective	2004-05 Outputs & Outcomes
Transit Increase employee use of transit	Increase ridership on # 85 Swan Island Express	2004 – 380 rides per day 2005 – 450 rides per day
	Increase ridership on # 72 Killingsworth from Interstate Max	80 trips per day to Swan Island
	Increase number of employers selling Passport passes	2 employers offer Passport to employees, 3 others offer transit subsidy
	Double Rose Quarter shuttle riders	Service expanded, ridership avg. 400 per week (twice that in 2003)
Vanpools *Region 2040 Initiative*	Increase number of vanpools to/from Clark County	Increased vans from 3 to 5.
		Hosted "vanpool to lunch" event June 2005
Bicycling/Pedestrian	Double bicycling/walking mode split	2005 – 4% An increase from 2001/02 (2%) but drop from 2004 (9%)
	Increased bike/ped access to Swan Island	Waud Bluff Trail – Bridge connection from University of Portland to Basin Drive in design.
		Going RR overpass – better maintenance. More bridge replacement/improvements
		Met with Friends of North Portland Greenway
Location Efficient Living	Encourage home ownership close to workplace	Employer van tour of North Portland in July 2005.
RTO funding	$25,000 from TMA fund	$24,750 from TMA fund $12,500 from Region 2040 grant
Program Impact	15 members 7,000 employees 25% non-SOV mode split 1,000,000 annual VMT reduction	12 members 24% non-SOV mode split for 7 participating employers
Cost/VMT reduced	$0.23/VMT	Not estimated

What was the level of participation in the activities?

As of the end of 2005, there were 12 members, representing over half of the employees in the area.

What was the level of satisfaction with the activities?

Not measured.

To what extent did participants use travel options?

The share of commute trips made in SOVs declined from 2001-02 to 2004-05 at SITMA work sites that surveyed employees (Table 38). The greatest increase was seen in walking and bicycling. SITMA's mode split data are derived from ECO surveys, which in 2005 were completed by seven employers in the industrial area. In 2001-02, 1,875 employees were surveyed with 1,400 surveys returned for a 75% rate of return. In 2004-05, 1,943 employees were surveyed with 1,544 surveys returned for an 80% rate of return.

Using the same methodology that TriMet used to calculate VMT improvements for their Employer Outreach Program, these employers reduced VMT in 2004-05 by 106,000-110,200 compared to 2001-02.

The VMT reduction from the vanpools is included in Appendix C: Regional Vanpool Program.

Table 38: Commute Trip Mode Share for Swan Island Worksites

	% of weekly commute trips[a]		
Mode	**2001-02**	**2004-05**	**Percentage point change**
Drive Alone	78.5%	76.3%	-2.3%
Transit	5.8%	6.6%	0.8%
Carpool/Vanpool	11.3%	11.5%	0.2%
Walk/Bike	1.9%	4.2%	2.3%
Compressed work week	1.1%	1.4%	0.3%
Telecommute	1.3%	0.0%	-1.3%
Total	100.0%	100.0%	

[a]The survey collects data on commute trips for each day for an entire week.
Source: Report submitted by SITMA to Metro.

Average daily ridership for the 85 Swan Island Express bus route increased from 380 rides per day in Fall 2004 to 450 rides per day a year later. Average daily ridership on the Evening Shuttle increased significantly in 2004 and 2005 (Figure 10). Using the same methodology as for the vanpool shuttles, the estimated reduction in VMT in 2005 due to the Evening Shuttle was 76,000-166,600, not accounting for the shuttle miles. To the extent that the shuttle riders are

accounted for in the employer surveys, this estimate overlaps with the reduction estimated based upon that data. Not all of the shuttle riders, however, work at the seven sites surveyed.

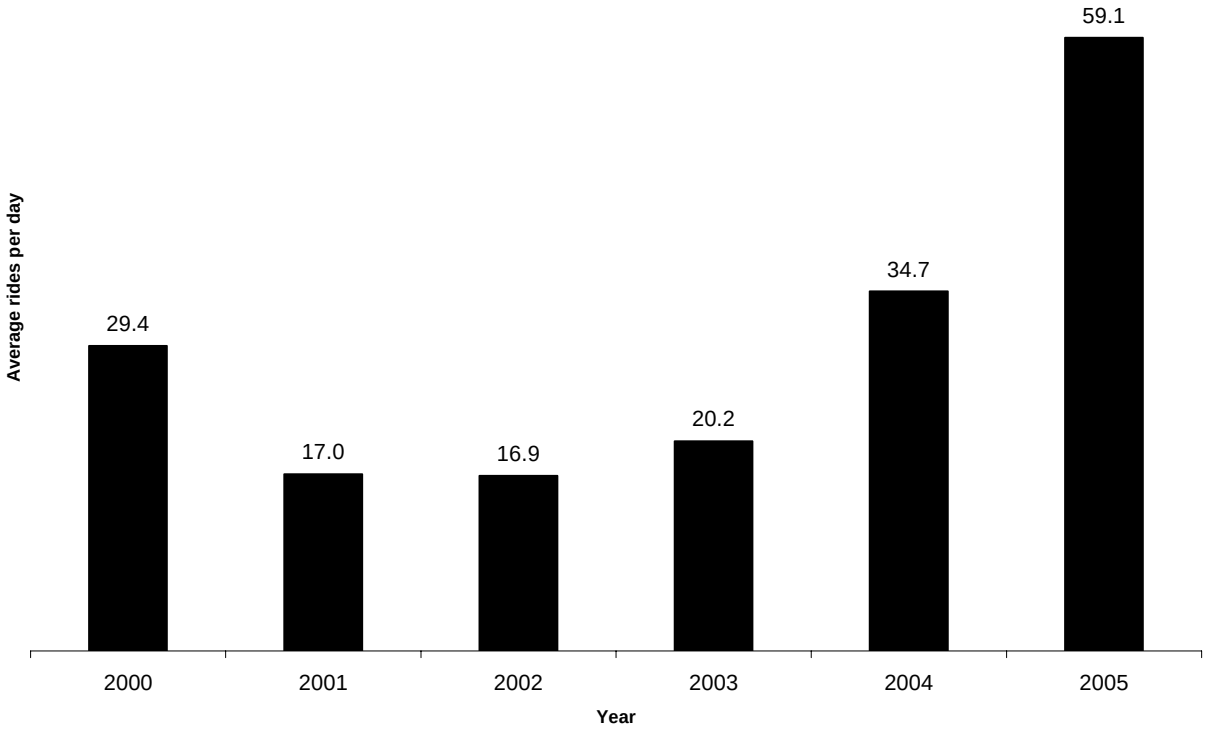


Figure 10: Swan Island TMA Evening Shuttle Ridership

Table 39: Estimated VMT Reduction for Swan Island Shuttle for 2005

Item used to calculate estimate	Source	Low	High
Commute trips and VMT reduced			
Average rides per day	Data from TMA	59.1	59.1
Length of commute trip made on transit	Metro travel model, as reported to TriMet	6.4 miles one-way 12.8 miles roundtrip	10.1 miles one-way 20.2 miles roundtrip
% of transit commute trips that would have been made driving alone instead of transit	Assumption	80%	100%
% of shuttle riders that use shuttle both ways (used to convert shuttle trips to transit trips)	Assumption	100% 2 shuttle trips = 1 transit trip	80% 1.8 shuttle trips = 1 transit trip
Annual trips reduced	Calculated from above	5,900	8,200
Shuttle trips and VMT added			
Shuttle trips per day		??	??
Round-trip shuttle miles		??	??
Estimated VMT reduction in 2005		**76,000** (does not account for shuttle miles)	**166,600** (does not account for shuttle miles)

Notes: Estimates of annual trip and VMT reduction rounded to nearest 100.

How does this compare to the work plan in the 5-year Strategic Plan?

The non-SOV mode share for commute trips to the seven surveyed sites was 24%, just below the 25% target in the *Strategic Plan Workplan*. However, these results only represent a small portion of the employees on Swan Island. If the act of surveying indicates a higher level of support for commute trip reduction programs, the surveyed sites may have better non-SOV rates than the rest of Swan Island employers.

How does this compare to the RTP modal objectives?

The TriMet employer survey database included 15 work sites within the SITMA area. Of these, about three-quarters had a non-SOV mode share of less than 25% (Table 40).

Table 40: Distribution of Swan Island Worksites by Non-SOV Mode Share

Non-SOV mode share	% of worksites
45.0% & higher	0%
35% - 44.9%	13%
25% - 34.9%	13%
15% - 24.9%	40%
Under 15%	33%
n	15

Source: TriMet employer database.

To what extent does the program support the RTO objectives?

RTO Objective	Supportive?
Reduce drive-alone trips and encourage alternative modes	Yes.
Regional coordination and communication	Yes. The SITMA director works with other TMAs and the regional program.
Include all trips, not just commute trips	Limited. Swan Island is primarily an employment center.
Connections to other goals:	
2040 centers and corridors	Not applicable. Swan Island is not identified as a center or corridor.
Transit-oriented development	Unlikely.
TriMet transit investment	Yes. The SITMA is involved in shuttles connecting to TriMet service.
Community health	Yes, to the extent that participating employees choose to walk or bike.
Air and water quality	Yes, to the extent that trips and VMT are reduced

Conclusions

The Swan Island TMA accomplished most of its intended activities for 2004-05. The activities have helped decrease the share of commute trips made in SOVs, though there are still many employers that do not meet the 25% target. Ridership in the evening shuttle has increased significantly.

Recommendations

- Improve measurement of outcomes at sites that do not conduct regular employer surveys with TriMet.

Appendix H: Westside Transportation Alliance

Program Background

Founded in 1997, Westside Transportation Alliance (WTA) is a TMA supported by businesses, public agencies, and event sponsorship. The mission of the WTA is to work with an association of businesses and public agencies that value vibrant economic development supported by transportation and land use decisions that create a vital quality of life in Washington County, Oregon. The WTA offers workplace services and programs that help employees commute to work by transit, carpool, vanpool, walking and biking. WTA's boundaries include all of Washington County and some of the region's larger employers such as, Nike, Intel and Tektronix. WTA's executive director, Karen Frost was hired in January 2006. The previous executive director left in August 2005 and two of the WTA Board members managed the organization in the interim.

In 2004-05 WTA received $24,750 in RTO TMA funds and $35,653 from a Region 2040 grant for the Carfree Commuter Challenge.

Evaluation

Data Sources

The evaluation is based upon the report submitted to Metro, an interview with Karen Frost, WTA Director, and data from the TriMet employer survey database.

What activities were provided?

As noted in Table 41, the most successful and measurable result from the 2005 program year was the Carfree Commuter Challenge. Metro has provided funding for WTA to help other TMAs in the region coordinate and stage the event regionwide in 2006. Efforts to implement other programs in the *Strategic Plan Work Plan*, such as the expansion of TMAs in Washington County regional centers, were mixed. A reciprocal agreement was developed with the Hillsboro Chamber of Commerce, but a TMA in Washington Square was sidelined. The new executive director and Board participated in a strategic planning exercise and completed operations over the first quarter of FY 2006. Focus in the coming year will be on building membership and employer programs.

How does this compare to the Strategic Plan Work Plan for 2004-05?

WTA activities provided compared with the work plan had mixed results which can be attributed to the personnel changes at WTA over the course of the year (Table 41). The former executive director left WTA in August 2005. There were few records of activities in 2004-05. The WTA identified the Carfree Commuter Challenge as its most successful program.

Table 41: Westside Transportation Alliance Activities for 2004-05

	Objective	2004-05 Outputs & Outcomes
From 5-Year Strategic Plan		
Expand TMAs in Regional Centers		
Add a TMA representative to Washington Square	Leverage Commuter Rail Investment	Delayed due to board turnover
Add a TMA representative to Hillsboro (planned for 2005-06)	Leverage regional center development	Created reciprocal membership with Hillsboro Chamber of Commerce
Ongoing WTA Activities and Programs		
Expand Membership Distribute outreach materials	15 new members - 3 years	Membership down form 31 in 2001to 28 in 2003 to 16 in 2005 Prepared and distributed brochure.
Produce Bi-weekly newsflash for all ETCs	Reach 150 ETCs on record	Only used during Carfree Commuter Challenge
Produce Bi-monthly newsletter	200 distribution	Latest two issues on website and sent via e-mail list of 110 ETCs.
Produce ETC T-Fair	150 ETCs on record	At least one fair conducted.
Carfree & Carefree Commuter Challenge	Reduce VMT by 20,000 miles per year	The Carfree Commuter Challenge was held in 2005 as a regionwide competition. 68 companies and 2,000 employees participated. WTA estimated that the Challenge reduced 30,000 trips and 235,000 VMT.
Education Grant		
Develop Education program	Educate Washington County Employers on strategies of TDM and reduce VMT	No special projects or program were developed for this goal
RTO funding	$24,750 RTO TMA fund $52,500 Region 2040	$24,750 from RTO TMA fund $35,653 from Region 2040 grant $12,245 in cash & in-kind donations for Carfree Commuter Challenge
Program Impact	32 members 27,000+ employees Non-SOV mode split not measured Annual VMT reduction not measured	16 members WTA estimates that they reach 29,000 employees
Cost/VMT reduced	Not measured	Not estimated

What was the level of participation in the activities?

Participation rates in all programs were not measured. There were 16 member employers and the WTA e-mail list includes 110 employer transportation coordinators (ETCs). The TriMet employer survey database includes 176 sites in Washington County. The e-mail list represents over 60% of this figure. But, this also indicated that less than 10% of the employers that are engaged in some trip reduction activities are members of WTA.

The 2005 Carfree Commute Challenge involved 68 employers and about 2,000 employees regionwide. This represents 7-8% of the work sites that TriMet works with through the Employer Outreach Program and about one percent of the employees.

What was the level of satisfaction with the activities?

No data collected.

To what extent did participants use travel options?

Program impacts were not comprehensively measured during 2004-05. The WTA did not collect employer survey data. The data from the TriMet employer survey database for Washington County appears in Table 42.

WTA estimated that the Carfree Commuter Challenge involved 2,000 employees, reducing 30,000 vehicle trips and 235,000 VMT. The basis for these estimates is unclear, but they may be reasonable. The calculation assumes 15 trips reduced per participating employee, with each trip averaging 7.8 miles. That distance is a reasonable assumption for one-way commute distance. Each employee would be switching from driving alone to transit for 7-8 commute days to reduce 15 trips each. If employees carpooled instead of driving alone, they would need to make the change for more days, depending upon the carpool size.

How does this compare to the work plan in the 5-year Strategic Plan?

The *Strategic Plan Work Plan* estimated that the Carfree Commuter Challenge would reduce 20,000 VMT each year. The event appears to have exceeded that target. The *Work Plan* did not have overall mode split or VMT reduction objectives.

How does this compare to the RTP modal objectives?

About 5% of the Washington County employers in the TriMet survey database meet the objective of 45% non-SOV use.

Table 42: Distribution of Washington County Worksites by Non-SOV Mode Share

Non-SOV mode share	% of worksites
45.0% & higher	5%
35% - 44.9%	9%
25% - 34.9%	11%
15% - 24.9%	40%
Under 15%	35%
N	176

Source: TriMet employer database.

To what extent does the program support the RTO objectives?

RTO Objective	Supportive?
Reduce drive-alone trips and encourage alternative modes	Yes. WTA encourages alternative modes through its website and events such as the Carfree Commuter Challenge (CCC) and employer fairs.
Regional coordination and communication	Yes. The CCC is regional. WTA staff attend regional RTO meetings and communicate regularly with other TMA directors
Include all trips, not just commute trips	Yes. In the past, the program has focused on commute trips. The WTA now brings this message in its outreach materials
Connections to other goals:	
2040 centers and corridors	Yes. Several centers and corridors are located within the WTA's area.
Transit-oriented development	Unclear.
TriMet transit investment	Yes. There are several MAX stations in the WTA's area.
Community health	Yes, to the extent that participating employees choose to walk or bike.
Air and water quality	Yes, to the extent that trips and VMT are reduced

Conclusions

Personnel turnover in 2005 contributed to a loss of focus for WTA. With the new executive director on board and an operations plan to focus efforts, WTA is poised to get back on track. Under WTA's guidance, the CCC event is growing in popularity as a way to promote and celebrate transportation options. This program appears to have exceeded its target to reduce VMT in 2005.

Recommendations

- Implement a comprehensive program to track activities (outputs) and outcomes.
- Use the TriMet employer survey database to target and track participation.

Appendix I: Troutdale Area TMA (TATMA)

Program Background

The TATMA was formed in April 2004, as a Division of the West Columbia Gorge Chamber of Commerce with regional CMAQ funding from the RTO program. Prior to TATMA's formation there was a feasibility study conducted over a 10-month period starting in September 2002. As a part of the feasibility study, the Stakeholder Working Group (SWG) identified five action items for the TATMA:

1. Improve and enhance linkages to Regional Transportation System/TDM

2. Mitigate or eliminate circulation impediments – physical barriers.

3. Mitigate or eliminate congestion impediments – internal and external accessibility

4. Establish an urban renewal district in Troutdale.

5. Establish a committed leadership group to set a consensus transportation vision for Troutdale and advocate for that vision.

The TATMA's mission statement developed during the feasibility study is "To develop an association that will increase the awareness of transportation issues in the Troutdale area, by area businesses and their employees."

Funding from the RTO TMA fund for the 2004-2005 fiscal year totaled $67,500. The West Columbia Gorge Chamber of Commerce provided $24,750 in matching funds

Evaluation

TATMA's role as an advocate for transportation improvements and options was perhaps best realized through their participation on the committee that worked to form a Troutdale Urban Renewal District (approved May 2006), which was a goal in the TMA feasibility study. Transportation-related projects included in the urban renewal plan provide for better connectivity from downtown to the outlet mall.

Data Sources

Baseline program goals were taken from the *Troutdale Area TMA Feasibility Study* and the current work plan. Additionally, in-person interviews were conducted with Allyson Thompson (Transportation and Business Office Manager) and Diane McKeel (Chamber Executive Director).

Activities

The action items in the feasibility study served to inform the TATMA annual work plan, and guide activities. Table 43 illustrates the activities, objectives and outcomes for 2005. Many of the services TATTMA provides have to do with encouragement and raising awareness of transportation and parking options in the Troutdale area.

How does this compare to the Strategic Plan Work Plan for 2004-05?

The TATMA was not included in the *Strategic Plan Work Plan*. The activities performed compare favorably with the objectives outlined in the *Feasibility Study*.

Table 43: Troutdale Area TMA Activities 2004-05

	Objective	2004-05 Outputs & Outcomes
Organization To develop an association that will increase the awareness of transportation issues in the Troutdale area, by area businesses and their employees.	Provide transportation advisory services	Served in transportation advisory capacity to committee for Urban Renewal District
Transit To increase employer/employee awareness of existing services available to them through TriMet.	Become transit fluent	Worked with TriMet on express bus option (Max quicker), rode the two area buses
	Determine access and bus shelter needs	Performed bus shelter assessment made recommendations to TriMet
	Provide transit info	Brochure rack and transit info available at TATMA offices
	Negotiate ability to sell bus passes	Project dropped - not enough current demand
Bicycling To promote bicycling activities through Troutdale and the Columbia Gorge.	Promote bicycling in and through Troutdale and Columbia Gorge	Purchased bicycle helmets for bicycle rental shop. Businesses putting up racks
General Business Outreach To increase the awareness of transportation options and programs	Develop brochure and logo	Logo
	Develop TATMA website by July 2006	Not yet available
	Develop target employer list – meet with 4 businesses per month	Unknown
	Plan and participate in Business, Industry Tourism showcase	Held in May 2005

What was the level of participation in the activities?

As planned in the *Feasibility Study*, meetings with the Stakeholders Working Group (SWG) were held monthly during 2004-05. Recently they were switched to quarterly. Local businesses are encouraging bicycling by putting up bike racks. TATMA worked with TriMet to identify stops for shelters and whether an express route to downtown was feasible. Other outreach efforts were successful but not measured, except as noted in table one.

What was the level of satisfaction with the activities?

Not measured.

To what extent did participants use travel options?

Not measured. Based upon the activities undertaken, there was likely little change in travel modes as a result in 2004-05.

How does this compare to the work plan in the 5-year Strategic Plan?

Not included in *Strategic Plan Work Plan. Feasibility Study* did not include objectives for participation in travel options.

How does this compare to the RTP modal objectives?

There is only one employer in the TriMet survey database in the Troutdale area. The TATMA likely has a long way to go to increase non-SOV mode share to 45%.

To what extent does the program support the RTO objectives?

RTO Objective	Supportive?
Reduce drive-alone trips and encourage alternative modes	Somewhat. The objectives for increasing travel options are modest and not quantified.
Regional coordination and communication	Unclear.
Include all trips, not just commute trips	Probably.
Connections to other goals:	
2040 centers and corridors	Yes. Troutdale is a center.
Transit-oriented development	Unlikely.
TriMet transit investment	Limited transit available.
Community health	Yes, to the extent that residents and employees choose to walk or bike in the future.
Air and water quality	Yes, to the extent that trips and VMT are reduced in the future

Conclusions

TATMA is the newest startup TMA in the region and has struggled somewhat with a learning curve. Nevertheless, TATMA achieved most of the goals set out for it in the *Feasibility Study* and has succeeded in raising awareness of transportation issues and options in the Troutdale area. In the past two years TATMA has grown from a conceptual idea in a TMA feasibility study to an organization that continues to build recognition in the Troutdale community. Due to the startup aspect of TATMA and the low density suburban land uses in far eastern Multnomah County, identifying measurable objectives is challenging. Startup TMAs by their very nature, spend most of their resources "getting started" and becoming known in their communities.

Recommendations

- Implement a comprehensive program to track activities (outputs) and outcomes.
- Develop specific outcome objectives. Ensure that TMA objectives are consistent with RTO objectives, to the extent that RTO funds are used.

Appendix J: Clackamas Regional Center TMA

Program Background

The Clackamas Regional Center Transportation Management Association (CRC-TMA) was started in February 2002 following a feasibility study and was funded with region's CMAQ TMA funds. The TMA was established to address the growing transportation and transit accessibility needs of the Clackamas Regional Center business community. The mission of the CRC-TMA is to provide education to increase the awareness of commute options and promote all forms of alternative transportation, thus decreasing the traffic congestion and providing reasonable access to the Clackamas Regional Center (CRC-TMA website). One of the programs first projects was a shuttle van to/from employers and the regional transit center. Wilda Parks, the Chamber CEO, had been acting director through 2005. Bruce Erickson was hired as the TMA director in early 2006, but was a contractor starting in fall 2005.

In 2004-05 the CRC-TMA received $24,750 from the RTO TMA fund.

Evaluation

Data Sources

The evaluation is based upon the report submitted to Metro, an interview with Wilda Parks, TMA Director during 2004-05, and data from the TriMet employer survey database.

What activities were provided?

As noted in Table 44, over the 2004-05 program year many of the services CRC-TMA provided have to do with encouragement and raising awareness of transportation and parking options in the area. On a regional coordination level, CRC-TMA participated in TMA director meetings, the CarpoolMatchNW service, and developed a newsletter and distributed a TMA brochure to local businesses in the area.

Projects for 2005 that went well according to the CRC-TMA included the transit fairs, updated website and the partnership with WTA on the Carfree Commuter Challenge. Business involvement also worked well including financial support and recognition from the business community. Another focus this year has been to improve the walk-ability to/from the transit center, Kaiser Hospital and the Promenade.

How does this compare to the Strategic Plan Work Plan for 2004-05?

The CRC-TMA accomplished many of the outreach activities in the Work Plan. However, the shuttle was discontinued and transportation fairs were not held as frequently as planned.

Table 44: Clackamas Regional Center TMA Activities for 2004-05

	Objective	2004-05 Outputs & Outcomes
From 5-Year Strategic Plan		
Administration Implementation		
Director, Clerical support	Office Space, work station, printing support	Ongoing
Regional Coordination		
Participate in regional TDM meetings	Achieve a *true* regional TDM program	Attended meetings
Employer Programs		
Shuttle service	75-100 trips per day	Discontinued. Being re-evaluated
Develop online newsletter	Reach all 8,000 employees in service area	2005 edition online
Maintain website	Keep Current	Could use updating
Monthly T-Fairs	12 per year	Quarterly
CarFree/Carefree Sponsorship	Participate in program expansion	Assisted in promotion
Develop brochure	Mailed to 1,600 employers (?)	Completed
Newsletter	Quarterly	Latest on website, Sept. 2002
Grow TMA membership	5% per year	Not reported
Communication program	radio spot	Weekly 3 min radio spot at 6:57 am
RTO budget	$24,750 RTO TMA fund	$24,750 RTO TMA fund
Program impact	20 members 4,000 employees No estimate for non-SOV mode split or VMT reduction	Not measured
Cost/VMT reduced	Not estimated	Not measured

What was the level of participation in the services?

According to the CRC-TMA, the transit fairs were well attended and business recognition and support is up.

What was the level of satisfaction with the services?

Financial support from businesses is up, otherwise not measured.

To what extent did participants use travel options?

Not measured.

How does this compare to the work plan in the 5-year Strategic Plan?

Unknown.

How does this compare to the RTP modal objectives?

There were 36 worksites in the TriMet employer survey database that are within the boundaries of the CRC-TMA. Two of these sites (6%) met the non-SOV target of 45% according to their last survey (Table 45). However, most sites (56%) had fewer than 15% of commute trips being made on non-SOV modes.

Table 45: Distribution of CRC-TMA Worksites by Non-SOV Mode Share

Non-SOV mode share	% of worksites
45.0% & higher	6%
35% - 44.9%	0%
25% - 34.9%	14%
15% - 24.9%	25%
Under 15%	56%
N	36

Source: TriMet employer database.

To what extent does the program support the RTO objectives?

RTO Objective	Supportive?
Reduce drive-alone trips and encourage alternative modes	Yes. However, the objectives for increasing travel options are not quantified.
Regional coordination and communication	TMA staff met with regional TMA directors and attended RTO meetings. The Director would like to see a regional handbook developed that could be personalized by each TMA.
Include all trips, not just commute trips	The CRC-TMA would like to include programs that address non-work trips to and from destinations such as the Kaiser Hospital, Clackamas Town Center and Promenade shopping areas.
Connections to other goals:	
2040 centers and corridors	Yes. The TMA includes a center.
Transit-oriented development	Unclear.
TriMet transit investment	Future MAX stations will be located within the TMA. CRC-TMA is poised for the growth of the area by promoting transit and the new light rail line to be constructed along the I-205 corridor.
Community health	Yes, to the extent that residents and employees choose to walk or bike in the future.
Air and water quality	Yes, to the extent that trips and VMT are reduced in the future

Conclusions

As noted, CRC-TMA completed many of the tasks laid out in the work plan for 2004-05. The TMA has established itself in the region and has had some success with transit fair promotions. They have also had success building business support and recognition.

Recommendations

- Implement a comprehensive program to track activities (outputs) and outcomes. This can include use of the TriMet employer surveys.
- Develop specific outcome objectives. Ensure that TMA objectives are consistent with RTO objectives, to the extent that RTO funds are used.
- Increase efforts to work with large employers with good transit access.

Appendix K: Gresham Regional Center TMA

Program Background

The Gresham Regional Center TMA (GRC-TMA) was formed and received its first three-year grant in August of 2001. It is managed by the Gresham Downtown Development Association (GDDA) who has committed to a local match and partners with the City of Gresham and TriMet. Kathy Everett, the executive director of the GDDA, has been with the program for over five years and also serves as the executive director of the GRC-TMA on a 50/50 time allocation.

The program fits well as a partner with the GDDA because the original impetus for forming the TMA was better management of parking for the economic development of the downtown. The GRC-TMA boundaries include the historic downtown, Gresham Town Fair, Gresham Square and Gresham Station which includes City Hall.

The mission of the GRC-TMA as reported on the website is "To bring together a coalition of local businesses, public agencies and citizens dedicated to improving access options for employees and customers of the Gresham Regional Center (GRC) and enhancing the GRC as the economic engine of East Multnomah County."

GRC-TMA is funded through the RTO program ($24,750 annually) and receives matching funds from the City of Gresham and the Gresham Downtown Development Association. Additionally, the GRC-TMA received a two-year (2004-2006) Region 2040 grant for $29,900, with and local match of $9,800 to promote bicycling in the area.

Evaluation

Data Sources

The evaluation is based upon the report submitted to Metro, an interviews with TMA staff, and data from the TriMet employer survey database.

What activities were provided?

As noted in Table 46, over the 2004-2005 program year many of the activities GRC-TMA provides have to do with encouragement and raising awareness of transportation and parking options in the area. On a regional coordination level, GRC-TMA participated in TMA director meetings, the CarpoolMatchNW service, and distributed a TMA brochure to local businesses in the downtown.

TMA staff met with TriMet on a number of issues over the course of the year including possible development of a fareless square in the district, a shuttle to/from Gresham Station and the downtown, increased service and identifying access issues. Pedestrian pathways and sidewalk plans and projects were developed in conjunction with the city for along the MAX line from Ruby Junction to Cleveland Avenue.

The TMA also worked with the City of Gresham and developed parking inventories, as well as assessing parking usage during different times of day/week. Customer First, a parking management program developed by the TMA to ensure parking for customers was expanded to include the Gresham Station area. It is unclear whether the program emphasized using

alternative modes to reduce employee parking or focused on shifting the location where employees parked their vehicles.

How does this compare to the Strategic Plan Work Plan for 2004-05?

The services provided are shown in Table 46.

Table 46: Gresham Regional Center TMA Activities for 2004-05

	Objective	2004-05 Outputs & Outcomes
Program Development		
Regional TDM coordination	Maintain	Would like meetings to be more often (monthly) with programmatic piece
Promote CarpoolMatchNW	Increase carpools by 10%	Not measured by TMA. 12 registrants with Gresham destinations added to CarpoolMatchNW in 2004-05. This would optimistically result in 1-2 new carpools.
Work to improve transit frequency /accessibility	Improve performance and efficiency of local transit	Working on downtown/center shuttle, inventoried access challenges
Coordinate w/ City, TriMet, local businesses	On a monthly basis	Director sits on city Transportation committee
TMA Business Climate survey development and report	Once a year	As part of GDDA efforts
Monthly meetings with TMA action committee	Increase number of monthly participants by 10%	Increased Board (GDDA) size from 7 to 11 – monthly meetings
Strategic Planning Effort w/GDDA Board	Develop Three-year revolving work plan	Completed
Work with City, Town Fair and East Hill Church to develop access routes for pedestrians	Develop two access routes	Inventoried access challenges
Customer First program	Expand reach of program, to larger regional center by 10% per year	Used in new leases where City has land control
Develop education/awareness program to communicate alternative options	Increase local awareness of transportation options for 250 people	Distributed brochures throughout the TMA area.
Develop a work plan and implementation strategy with the City to maintain downtown parking supplies	Assume operational and maintenance control of downtown public parking supply.	Performed inventory and survey of downtown parking
RTO funds	$24,750 RTO TMA	$24,750 RTO TMA
Program Impact	172 members 2,658 employees represented 19.8% non-SOV mode split 6,613 annual VMT reduction	Membership did not reach 172 Unlikely that other program impacts were achieved.
Cost effectiveness	$3.26/VMT reduced	Not estimated
Region 2040 Initiative – ABCs of Changing Attitudes 2004-2006		
Bike Art Racks	Design and install 4 racks	Installed in downtown
Children's Bike Safety Program	Held in conjunction w/children's week to reach 6,000 children	Second year for connection to children's bike parade
Information Kiosks	Install 2	In development
Marketing Brochure	Develop and distribute	Distributed at Kids week bike parade
RTO funds		$14,950 Region 2040 $9,800 local match

What was the level of participation in the activities?

Monthly TMA action committee meetings were held and well attended. Membership in the Board (the GDDA serves as the TMA action committee) was increased from seven to eleven members. Participation in the bike events and projects funded through the 2040 CMAQ grant was high, according to the GRC-TMA. Other outreach efforts were successful according to the TMA, but they not measured, except as noted in Table 46.

What was the level of satisfaction with the activities?

Not measured.

To what extent did participants use travel options?

Not measured.

How does this compare to the work plan in the 5-year Strategic Plan?

Though data was not collected by GRC-TMA on commute travel, it is unlikely that the program impacts anticipated in the *Strategic Plan Work Plan* were achieved. The *Plan* projected 172 members, a level that was not achieved.

How does this compare to the RTP modal objectives?

There were only seven work sites in the TriMet employer survey database that are within the TMA's boundaries. Of these, all had a non-SOV mode share of 25% or lower.

To what extent does the program support the RTO objectives?

RTO Objective	Supportive?
Reduce drive-alone trips and encourage alternative modes	Yes, to some extent. GRC-TMA encourages alternative modes through the distribution of brochures, events and identification of need capital improvements for sidewalks and transit access. Unclear how the Customer First promotes non-SOV modes.
Regional coordination and communication	Yes. GRC-TMA meets regularly with TriMet and the City. Director would like to see TMA meetings (monthly) re-instated as well as receive a regular report from TMA representative to the RTO sub-committee.
Include all trips, not just commute trips	Yes, to some extent. 2040 bike project included all trips.
Connections to other goals:	
2040 centers and corridors	Yes. The TMA covers a center.
Transit-oriented development	Yes.
TriMet transit investment	Yes. MAX operates within the TMA.
Community health	Yes, to the extent that residents and employees choose to walk or bike in the future. The Region 2040 grant project focused on bicycling and children.
Air and water quality	Yes, to the extent that trips and VMT are reduced in the future

Conclusions

As noted, GRC-TMA completed many of the tasks laid out in the work plan for the 2004-05 fiscal year. The TMA has established itself in the community and has had some success with promotions like the Kids Bike Parade and other bicycle projects for encouraging bicycle use. They have also had success with the Customer First program and working with the city and TriMet to identify and assess sidewalk and access issues. However, it is unclear how well the Customer First program promotes non-SOV options. Overall, the GRC-TMA compares favorably with other startup TMAs in the region. However, GRC-TMA is only two years younger than Swan Island TMA, and while they have done a good job raising awareness of TDM programs, GRC-TMA could develop better ways to measure results.

Recommendations

- Implement a comprehensive program to track activities (outputs) and outcomes. This can include use of the TriMet employer surveys.

- Develop specific outcome objectives. Ensure that TMA objectives are consistent with RTO objectives, to the extent that RTO funds are used.

- Increase efforts to work with large employers with good transit access.

Appendix L: Individualized Marketing – Interstate

Program Background

The City of Portland commissioned Socialdata America, an independent consultant, to use their TravelSmart® individualized marketing techniques to promote non-SOV use in neighborhoods along the new Interstate MAX corridor. The new light rail line opened on May 1, 2004.

Evaluation

Data Sources

The evaluation used a Socialdata America final report submitted to the City of Portland in December 2005. PSU CUS did not have access to the original survey data.

What activities were provided?

All households in the target area were initially contacted to assess their interest in using non-SOV modes. People that were interested were provided customized information and incentives. They could also request a home visit for additional assistance. The project also included an evaluation of results. Before surveys were conducted in April and May 2004. After surveys were conducted a year later to detect behavioral changes associated with the individualized marketing. In-depth before and after interviews were also conducted. The surveys and interviews included people within the target area and within nearby "control" neighborhoods. The project received $300,000 in MTIP funding in 2004-05.

How does this compare to the Strategic Plan Work Plan for 2004-05?

This project was not in the *Strategic Plan Work Plan*.

Table 47: Interstate Individualized Marketing Activities in 2004-05

	Objective	2004-05 Outputs & Outcomes
From Evaluation Report		
Demonstrate the effectiveness of TravelSmart® in reducing car use and promoting travel options in the Interstate area of Portland	Contact 14,000 persons (net) for participation in the IndiMark® (TravelSmart®) project.	Contacted 14,446 people in 6,281 households
	Conduct 'Before' and 'After' surveys to determine the effects of the marketing campaign	Done
	Conduct a series of in-depth interviews (400 persons net) shortly following the conduct of the 'Before' and 'After' surveys to measure attitudes concerning transportation issues and potentials for using alternative modes of transportation.	467 residents interviewed
	Consult with the Office of Transportation Project Managers on the appropriate personalized marketing materials and incentive items.	Yes
	Personally deliver (by bicycle) transit, walking, cycling and other travel options informational materials to interested households.	2,620 personalized packages containing over 37,400 items requested and delivered
	Schedule home visits to be conducted by transit, cycling, and walking specialists.	108 home visits conducted
	Analyze the survey responses to produce a statistically robust measure of the changes in travel behavior.	Analysis provided in final report
	Analyze the responses from the in-depth interviews to identify the potentials for using sustainable travel modes.	Analysis provided in final report
RTO budget	$300,000	$300,000
Program Impact		2.0 – 3.9 million VMT reduced over one year
Cost effectiveness		$0.08 – 0.15/VMT reduced

What was the level of participation in the services?

The first phase of the marketing included direct contact with 14,446 people in the target area. This is 43% of the estimated population. Of those, 2,620 received customized information and 108 received a home visit.

What was the level of satisfaction with the services?

Overall, participants were satisfied with the services provided; 94% said they were satisfied with the materials and overall service. A lower share (78%) were satisfied with the bike trip plan they received. This may reflect the quality of the infrastructure in the area. Almost all respondents (97%) wanted the project continued in the future.

To what extent did participants use travel options?

The before and after surveys indicate that residents in both the target and control groups reduced the share of trips they made in non-car modes (Table 48). The target group increased the share of trips made by foot, bicycle, or transit from 20% to 30%, a 10 percentage point increase. The control group saw a four percentage point increase (18% to 22%). The net difference is a six percentage point increase. The use of a control group help account for changes that would have happened without the individualized marketing program, which includes the opening of Interstate MAX and associated improvements to pedestrian and bicycle infrastructure in the area. The net increase (change in target minus change in control) in transit use was one percentage point. The next increase in walking and bicycling was five percentage points. The surveys indicated that people made an average of 3.2 trips per day, traveling 17 miles (after, 18 miles before). The share of trips made within the target area was higher after the marketing (35% versus 25%). This may indicate the people substituted local walking and bicycling trips for longer vehicle trips. Socialdata America estimated that the distance traveled in cars when down from 15.1 to 13.6 miles per car per day, a 9.3% decrease.

Table 48: Mode Share Changes During Interstate Individualized Marketing

	Before (% of all trips)		**After** (% of all trips)	
Mode	**Control**	**Target**	**Control**	**Target**
Walk/bike	12%	13%	14%	20%
Transit	6%	7%	8%	10%
Car	82%	80%	78%	70%
Non-car	*18%*	*20%*	*22%*	*30%*

The Socialdata America report includes an estimate of VMT reduction of 6.8 million miles per year or 14% (p. 51). This includes a 6% reduction that the control group achieved. The remaining 8% reduction represents about 3.9 million VMT per year. The exact method used to estimate the VMT reduction is unclear. PSU CUS made a more conservative estimate of the annual VMT reduction using the mode share changes in Table 48 and other data from the report.[28] The result was a 2.0 million VMT reduction in a year. Both calculations assume that the benefits of the program extend beyond when the participants were surveyed.

How does this compare to the work plan in the 5-year Strategic Plan?

Not applicable.

How does this compare to the RTP modal objectives?

After the marketing program and MAX opening, participants made 30% of their trips on foot, bicycle, or transit and 19% in a car as a passenger. This is close to the 45-55% non-SOV target for station area communities.

[28] 18 miles per person per day is reduced by 6% or 1.08 miles per day. This is applied to 36% of the 14,446 people initially contacted. This is the share of people who were not already regular users of alternative modes but were categorized as interested in changing modes.

How does this compare to programs in other regions?

This particular technique is new to the U.S.

To what extent does the program support the RTO objectives?

RTO Objective	Supportive?
Reduce drive-alone trips and encourage alternative modes	Yes.
Regional coordination and communication	Indirectly.
Include all trips, not just commute trips	Yes. The program specifically focuses on all trips.
Connections to other goals:	
2040 centers and corridors	Yes. The project included a corridor.
Transit-oriented development	Indirectly.
TriMet transit investment	Yes. A new MAX line operates within the project area.
Community health	Yes, to the extent that participants choose to walk or bike.
Air and water quality	Yes, to the extent that trips and VMT are reduced

Conclusions

The project achieved all of its specified objectives and increased non-SOV mode share among participants compared to a control group. The project included extensive data collection and analysis. However, the final report was not always clear about how data was used to estimate outcomes and impacts.

Recommendations

- Continue to collect detailed data on individualized marketing programs. Consider conducting additional follow-up data collection to see if results are sustained beyond the time of the first follow-up survey.
- Make original data available for independent analysis by the RTO program.

Appendix M: List of Interviewees

Interviewee/s: Lenny Anderson
Title: Program Manager
Program: Swan Island TMA
Date: 11 May 2006
Location: Metro Lobby
Interviewer/s: Jennifer Dill & Chuck Fisher

Interviewee/s: Rick Wallace & Gloria Yan
Program: Oregon Department of Energy
Date: 15 May 2006
Location: ODOE – Salem Offices
Interviewer/s: Chuck Fisher

Interviewee/s: Karen Frost
Title: Executive Director
Program: Westside Transportation Alliance
Date: 18 May 2006
Location: PSU
Interviewer/s: Jennifer Dill & Chuck Fisher

Interviewee/s: Wilda Parks
Title: Executive Director
Program: Clackamas Regional Center TMA
Date: 11 May 2006
Location: North Clackamas Chamber of Commerce
Interviewer/s: Jennifer Dill & Chuck Fisher

Interviewee/s: Allyson Thompson & Diane McKeel
Title: TMA Program Manager & Chamber Executive Director
Program: Troutdale Area - TMA
Date: 18 May 2006
Location: West Columbia Gorge Chamber of Commerce
Interviewer/s: Chuck Fisher

Interviewee/s: Kathy Everett
Title: Executive Director
Program: Gresham Regional Center TMA
Date: 18 May 2006
Location: Gresham
Interviewer/s: Chuck Fisher

Interviewee/s: Jen Massa
Title: Project Coordinator
Program: SMART
Date: 12 May 2006
Location: PSU
Interviewer/s: Jennifer Dill & Chuck Fisher

Interviewee/s: Rick Williams
Title: Executive Director
Program: Lloyd TMA
Date: 23 May 2006
Location: Lloyd TMA
Interviewer/s: Jennifer Dill & Chuck Fisher

Interviewee/s: Dan Bower & Hannah Kuhn
Organization: City of Portland Department of Transportation
Program: CarpoolMatchNW.org
Date: 9 May 2006
Location: PDOT
Interviewer/s: Jennifer Dill & Tomoko Kanai

Interviewee/s: Caleb Winter and Tom Mills
Organization: TriMet
Program: Employer Outreach and Regional Vanpool
Date: 18 May 2006
Location: TriMet offices
Interviewer/s: Jennifer Dill and Tomoko Kanai