

Drive Less Save More:
MILWAUKIE

*Exploring Milwaukie, Oak Grove,
and beyond*



FINAL REPORT

DECEMBER, 2016

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01 EXECUTIVE SUMMARY



In 1893 the Portland Traction Company streetcar rolled into Milwaukie and transformed the isolated settlement and the way that it traveled—from river barge and horse and wagon, to efficient rail.

Those train tracks were ripped up long ago, but the remaining right-of-way is now the multi-use path Trolley Trail, bustling with families and daily commuters connecting from Gladstone to the southern end of Portland.

And there are new train tracks in town. Beginning September, 2015, TriMet's Orange Line MAX light rail whisks through Milwaukie—linking the small community to the rest of the region's transit system in a new way, but yet reflective of their past.

Close to downtown, close to jobs, and close-knit, Milwaukie is now looking toward its next chapter—based as ever on how it connects with the rest of the region. One year after the Orange Line reached Milwaukie, the *Drive Less Save More: Milwaukie* individualized marketing project is excited to have been a part of making it easier for Milwaukie residents to get around.

Individualized Marketing (IM) programs offer customized transportation information, resources, and events to interested households within a designated target area. The main goals of IM programs are to decrease drive-alone trips and increase shared-use and active transportation trips such as biking, walking, and transit. IM programs help build community support for transportation options through partnerships with city governments, non-profits, bicycling groups, senior centers, and other interested groups. Positive messages are communicated to target area households via newsletters and emails, which help normalize the use of transportation options throughout targeted neighborhoods. Custom and partner events further enhance IM program offerings by offering information and support for families and individuals who want to drive less.



Residents enjoyed the nature walk event that was held at Willamette View senior living center.

Neighborhoods within the City of Milwaukie and Oak Grove, Oregon, were identified through Metro's planning efforts as communities that would likely benefit from the personalized IM approach. TriMet's Orange Line MAX investment offered a unique opportunity for Metro to plan and implement an IM program along two light rail stations within the target area that were connected by the Trolley Trail—a newly completed multi-use path.

TriMet's Orange Line MAX Light Rail Line launched on September 12, 2015. The Orange Line connected the City of Milwaukie with the City of Portland via the newly built Tillikum Bridge, the only longspan bridge in the US dedicated solely to transit, bicycle, and pedestrian use. To ensure the success of the line, TriMet and local partners conducted unprecedented marketing along the Orange Line, including an opening day event that attracted over 100,000 people. The City of Milwaukie also conducted community outreach to build enthusiasm for the Orange Line MAX, in addition to promoting bicycle and pedestrian infrastructure improvements adjacent to the Orange Line MAX corridor.

To enhance marketing efforts lead by TriMet and the City of Milwaukie, Metro initiated an IM program in Milwaukie under the Drive Less Save More (DLSM) statewide transportation options umbrella campaign. The *DLSM: Milwaukie* IM program helped residents walk, take transit, bike, and carpool more often for daily trips and was a partnership between Metro, the City of Milwaukie, Clackamas County, TriMet, and North Clackamas Parks and Recreation. The program was primarily funded by the Oregon Department of Transportation (ODOT). *DLSM: Milwaukie* offered customized travel information packets, community events and outreach, and ongoing communications to the neighborhood target area. IM programs are unique in that they focus resources on households that are interested in receiving information about travel options.

The *DLSM: Milwaukie* target area included 5,674 households. A total of 4,464 households were assigned to a target group that was invited to participate in the program and 1,210 households were randomly assigned to a control group that did not directly receive any *DLSM: Milwaukie* program materials or communications. The control group was used to account for external influences such as the introduction of the Orange Line MAX and marketing/outreach efforts conducted throughout the target area by TriMet and the City of Milwaukie.

Of the 4,464 households in the target group, 980 (22%) participated in the program by ordering *Go Kits* (tote bags filled with customized transportation resources) that were offered online and also via a mail-back order form. Ninety-five additional *Go Kits* were distributed to event participants and households from outside of the target area.

The primary goal of *DLSM: Milwaukie* was to reduce the drive-alone mode share among target area residents for all types of trips. Pre- and post-program surveys conducted among target and control groups were used to evaluate

behavior change. Program surveys indicated a reduction in drive-alone trips in the target group after the program's completion. Over the course of the *DLSM: Milwaukie* program, the drive-alone mode share for the target group decreased 5.1% (absolute percentage points) and MAX use and walking increased 3.7% and 3.5%, respectively. Carpooling with adults and bicycling increased by very small amounts, 0.1% and 0.2%, respectively. Bus use in the target area decreased 2.8%, which was likely due to introduction of the Orange Line MAX and subsequent bus service changes across the target area. A total of 1,316,513 vehicle miles were reduced annually due to the reduction of drive-alone trips among target group participants across the entire target area.

It is important to note that the target group results were likely influenced by the introduction of the Orange Line MAX system and also from the marketing efforts led by TriMet and the City of Milwaukie. The net impact of the *DLSM: Milwaukie* program was calculated by subtracting target group mode shift changes from those in the control group. These results are presented in detail in the Evaluation section of the report.

Results from a supplemental, online participant feedback survey show:

- » **38% of respondents reported they are driving alone less often now than six months ago;** of those, 63% attribute their reduction in driving to access to better information about transportation options.
- » Participants changed their behavioral stage due to the program offerings; results showed a **16% increase** in the maintenance/support phase for using transportation options at least two days per week (“yes, and it was easy”) during the post survey evaluation.

- » **82%** reported that the *Go Kit* materials they received were useful.
- » **58%** tried a new way of getting around using transportation options while participating in the program.
- » **Over one-half (51%)** attended a *DLSM: Milwaukie* event. Of those, 90% said events were helpful for making more of their trips by walking, biking, carpooling, and/or transit.
- » **76%** of respondents said the program encouraged them to visit local shops, restaurants, and parks.
- » **82%** think there is in value continuing the program.

DLSM: Milwaukie outreach staff attended numerous events throughout the nine-month program, with eight of those being custom events planned and implemented for the *DLSM: Milwaukie* program. The program team, composed of staff from Metro and Alta Planning + Design, worked with City of Milwaukie staff and local partners to plan custom events and promote partner events near the target area. *DLSM: Milwaukie* events were well attended and helped residents and families try out transportation options for everyday trips.

DLSM: Milwaukie was successful at engaging residents and delivering transportation options information to residents' front doors. Outreach staff connected with hundreds of people throughout the target area to discuss local transportation issues and concerns. Participants expressed positive feedback about the program and were satisfied with the range of program offerings.



MAX riders wait to cross at the busy Milwaukie Main Street transit station.

02

PROGRAM BACKGROUND



IM programs have been implemented for over 30 years in many countries around the world, and they continue to demonstrate success in reducing drive-alone trips and increasing the frequency of trips made by other modes. Since 2006, IM programs have been successfully completed in the Oregon communities of Ashland¹, Astoria, Beaverton, Bend², Corvallis, Eugene, Gresham, Portland, Salem, Springfield, and Wilsonville.

DLSM: Milwaukie involved many different stakeholders and partners. The ODOT-funded project involved collaboration and partnership with Metro, the City of Milwaukie, Clackamas County, North Clackamas Parks and Recreation and TriMet. Alta Planning + Design was contracted to design and execute the program. Partners were involved with high-level strategy, decision making, review processes, and materials procurement. IM programs support the goals of Metro and local jurisdictions by reducing the number of single-occupant vehicle trips and increasing the number of trips taken by foot, bike, transit and carpooling. The *DLSM: Milwaukie* program positively engaged the public about transportation options and spread awareness of the statewide Drive Less Save More program.

“We took the Orange Line to the Milwaukie Farmer’s Market and ended up meeting a couple that lives 5 minutes away from us! We never would have met them if we had been in our car. Plus, we discovered a great new coffee shop next to the Main Street station too. Bonus!”

—PROGRAM PARTICIPANT

-
- 1 In partnership with Southern Oregon University
 - 2 In partnership with Oregon State University Cascades and Commute Options

TARGET AREA CHARACTERISTICS

Milwaukie is physically bounded on the west by the Willamette River and the Springwater Corridor multi-use path to the north. Railroad tracks for both freight and the MAX bisect Milwaukie and a portion of Oak Grove. Milwaukie and Oak Grove are dotted by parks, open space, multi-use trails, residential neighborhoods, and business areas. The target area comprised 5,674 households (including both target and control groups) near downtown Milwaukie and along commercial corridors in both Milwaukie and Oak Grove. The target area was chosen due to its close proximity to two new MAX Orange Line stations; Main Street and Park Avenue.

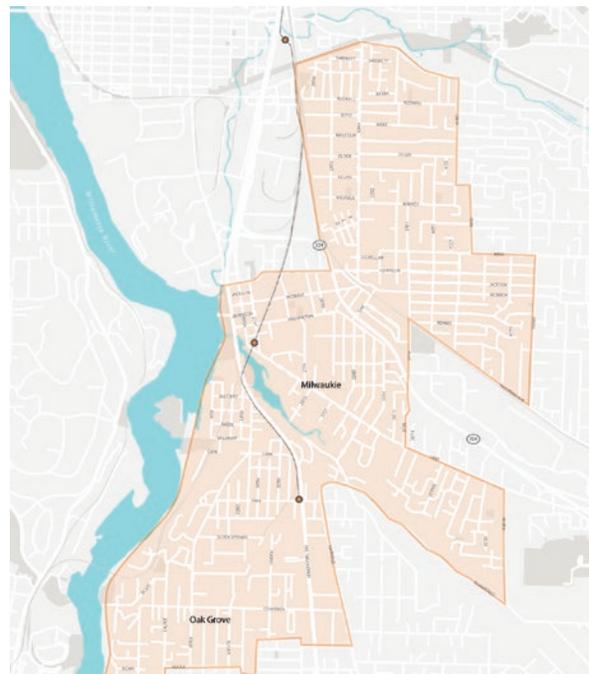


Figure 1: The *DLSM: Milwaukie* target area comprised 5,674 Households in Milwaukie and Oak Grove

Residences are a diverse mix of single-family homes, dense apartment complexes, and senior living complexes. Milwaukie has a long history of being a working-class community that was founded on shipbuilding, timber, and the milling industries. In the 1800's the Electric Interurban Rail service began and helped to shape the current growth of the city. The old rail line was abandoned in the mid-1900's and is now a multi-use path called the Trolley Trail that connects Milwaukie, Oak Grove, and Oregon City. The presence of new local businesses, improvements to pedestrian and bicycle access, and the Orange Line MAX have helped usher in a new wave of Milwaukie residents who respect the long history of Milwaukie while creating a new cultural identity.

PARTNERSHIPS

Local jurisdictions and transit service providers partnered with ODOT, Metro and Alta to design, implement, and evaluate the program. Metro and Alta directly managed the program and worked collaboratively with the following local partners:

- » Jason Wachs, Community Programs Coordinator for the City of Milwaukie
- » Mitch Nieman—Assistant City Manager for the City of Milwaukie
- » Karen Buehrig, Transportation Planning Supervisor for Clackamas County
- » Katie Dunham, Senior Planner for North Clackamas Parks and Recreation District
- » Janice Martin, Transportation Options Representative for TriMet

STAKEHOLDER OUTREACH

The local team conducted stakeholder outreach to the following community organizations:

- » Bike Milwaukie
- » Ardenwald-Johnson Creek Neighborhood District Association
- » Johnson Creek Watershed Council
- » ArtMOB (Milwaukie Arts Committee)
- » Oak Grove Community Council
- » Willamette View and Rose Villa retirement communities
- » Local businesses

The project team held a stakeholder meeting with key community members prior to launching the program to gather input and suggestions regarding communications and outreach strategies. The project team communicated regularly with stakeholders via email and recurring meetings. Communication included sharing program updates and photos, sending event reminders, and seeking stakeholder assistance in disseminating event information. The project team engaged new partners throughout the course of the project and partnered with them at various community events. For example, the team partnered with the Johnson Creek Watershed Council to host a “natural resources walk,” with artMOB to host two public art walks, and with Mayor Gamba of Milwaukie who lead the “Future of Milwaukie” walking tour that explored investments in multimodal infrastructure.

OUTREACH AMBASSADOR

The program team hired an Outreach Ambassador, Linn Davis, a native of Milwaukie and Master of Urban and Regional Planning student at Portland State University. Linn was a perfect fit for the program, based on his passion for using transportation options and his involvement with the Milwaukie community. Additionally, Linn's experience as a journalist and research assistant for Greater Portland Pulse gave him marketing and outreach experience.

The Transportation Outreach Ambassador assisted with program logistics, such as tracking orders in the database, order fulfillment, bike deliveries, event planning, and staffing events. One of Linn's duties included bicycle delivery of "Go Kits," which included customized packets of travel information and tools packaged in a tote bag. Bicycle deliveries are important for IM programs because they increase program visibility in the neighborhood (e.g., bike trailers full of Go Kits), and they are an efficient way to distribute information about transportation options.

The DLSM: Milwaukie project team was able to establish the fulfillment center in Milwaukie City Hall for the duration of the program. The location and accessibility of this site was crucial to the success of the program. The fulfillment center location also provided an opportunity for the program staff to interact with City staff and the community.



The Outreach Ambassador tabled frequently at City Hall, which was across the street from the popular Farmer's Market.



Linn Davis, the program's Outreach Ambassador, tabled extensively at DLSM: Milwaukie custom and partner events.

03 PROGRAM APPROACH



IM programs involve detailed planning and coordination among partners, funders, stakeholders and staff. The program approach included the following elements:

- » Target area selection
- » Survey development
- » Materials design and procurement
- » Database development and management
- » Event planning
- » Fulfillment and deliveries
- » Newsletters
- » Evaluation and reporting

A detailed work plan was also developed by the program team to ensure travel tools, resources, and printed materials were ordered and produced in a timely manner. The plan also allowed for review from Metro, the City of Milwaukie, and other partners.

“I think it [the program] was very helpful! I enjoyed the delivery of maps and a water bottle and have since explored the neighborhood. I love this town and I am excited to see a program based around driving less. Thank you so much!!”

–PROGRAM PARTICIPANT



Seniors participated in a “nia,” or gentle stretching class as part of a DLSP: Milwaukie event.



Event participants enjoyed a nature walk led by the Johnson Creek Watershed Council.

CUSTOM PROGRAM MATERIALS

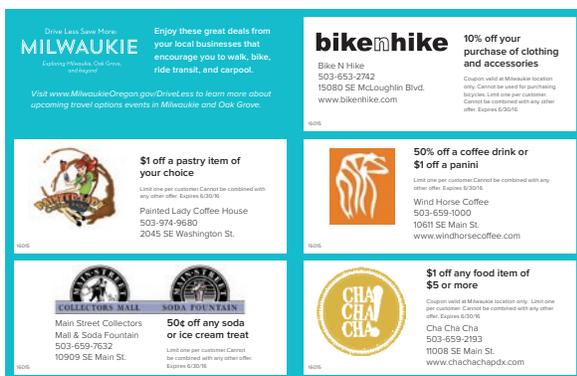
The following suite of evaluation and marketing materials were developed specifically for this program:

- » Pre-and post-program survey questionnaires
- » Custom logo and design
- » Pre-program postcard announcement
- » Milwaukie Go Guide (multimodal neighborhood map)
- » Combo mail-back order form and first newsletter
- » Welcome letter
- » Event posters and handouts
- » Local business coupon sheet
- » Reminder postcard
- » E-newsletters
- » Online action planning tool

All materials were developed using the *DLSM: Milwaukie* branding.



A custom, multimodal map of the target area was created for *DLSM: Milwaukie*.



A coupon sheet was offered in *Go Kits* to encourage participants to bike, walk, use transit, and carpool to nearby businesses in the target area.



The pre-program postcards were mailed to target group households and offered an opportunity to order *Go Kits* online.

GO KITS

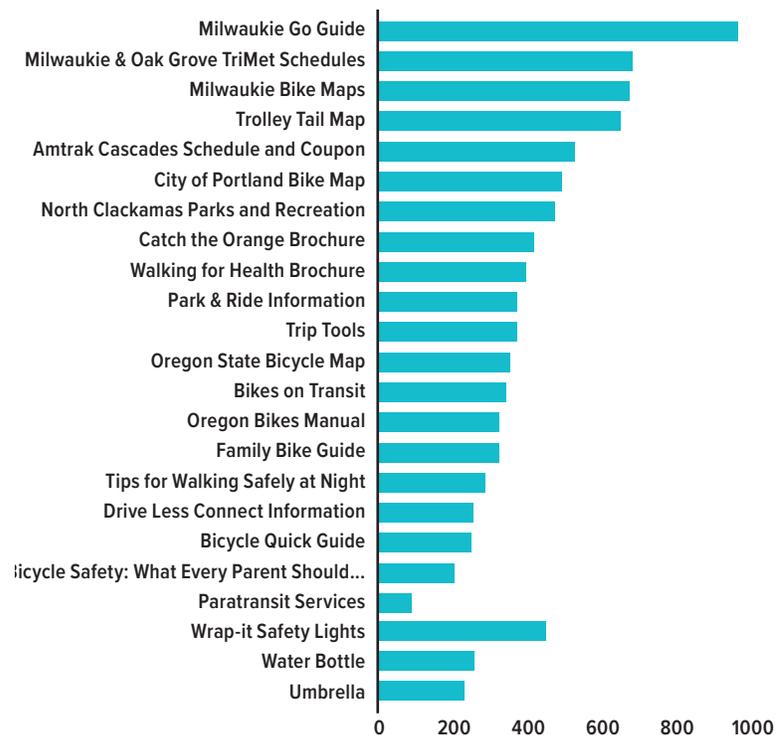
Providing customized transportation information in the form of *Go Kits* to residents is an excellent way to encourage greater use of transportation options among residents. As residents review the materials and maps, they are reminded how easy it is to make short trips by foot, bike, shared ride, or transit to nearby parks, shops, and restaurants.

Residents were mailed a pre-paid mail-back order form and invited to select from a variety of travel options materials, made available free of charge through Metro, ODOT, and other project partners. Participants were also encouraged to choose one of three free travel tools—a water bottle, pair of wrap-around bike safety lights, or an umbrella. The custom multimodal map and local business coupon sheet was included in every *Go Kit* order. Program materials were also available to order online through Alta’s database, and the link was provided in each newsletter. Figure 2 shows the number of resource items ordered by program participants.

Go Kits offered a wide variety of transportation resources.



Figure 2: *Go Kit Materials Ordered*





Go Kits were delivered by bicycle except for approximately 40 that were mailed to households located outside of the target area. The Outreach Ambassador and other delivery staff were trained to explain the contents of the bags to residents and also respond to questions about the materials or the program. If no one was home during the time of delivery, *Go Kits* were left in an inconspicuous place on the front porch. *Go Kits* were delivered within two weeks after orders were placed.



Alta and Metro staff helped deliver Go Kits during the beginning of the program

EVENTS

Outreach staff attended and tabled at eight community events during the active phase of the program. Events encouraged and educated residents about using active modes of transportation, in addition to providing an opportunity for neighbors to meet and discuss transportation topics.

- » **Milwaukie Sunday Farmers Market**, Sun. 8/23, 9:00 a.m. -2:00 p.m., Downtown Milwaukie, approximately 20 people engaged.
- » **Ardenwald Neighborhood Concert**, Thur. 8/27, 7:00-8:30 p.m., Ardenwald Park, 40 people engaged.
- » **Scott Park Concert**, Wed. 9/2, 12:00 – 1:00 p.m., Ledding Library Amphitheater, 25 people engaged.
- » **First Friday Milwaukie**, Fri. 9/4, 5:00-9:00 p.m. Downtown Milwaukie, 40 people engaged.
- » **Milwaukie Sunday Farmers Market**, Sun. 9/6, 9:00 a.m. -2:00 p.m., In front of City Hall, 20 people engaged.
- » **MAX Orange Line Grand Opening**, Sun. 9/12, 11:00 a.m. – 6:00 p.m., Downtown Milwaukie, 500 people engaged.
- » **Milwaukie Sunday Farmers Market**, Sun. 10/11, 9:00 a.m. -2:00 p.m., Downtown Milwaukie, 25 people engaged.
- » **Milwaukie Sunday Farmers Market**, Sun. 10/25, 9:00 a.m. -2:00 p.m., In front of City Hall, 20 people engaged.



DLSM: Milwaukie events promoted the trolley trail for bicycling to downtown events like the Farmer's Market and First Friday.



The Orange Line MAX opening day provided opportunities for Milwaukie residents to order Go Kits.

The program team also hosted eight custom events for Milwaukie residents. These included the following:

- » **First Friday Bike Ride** Fri. 11/4 5:30 p.m., Oak Grove Elementary School, two participants joined the ride, 30 people engaged via tabling at the First Friday Market.
- » **Future of Milwaukie Walk w/Mayor Gamba**, Sun. 9/6, 10:30 a.m., City Hall, 15 participants attended.
- » **Nature Walk** Sat. 10/3, 10:30 a.m., Milwaukie Riverfront Park, eight participants attended.
- » **Family Bike Ride to the Farmers Market** Sun. 10/11, 10:30 a.m., Oak Grove Elementary School, one person attended the ride, 25 people engaged via tabling at the Farmer’s Market.
- » **Public Art Walk** Sun. 10/25, 11:00 a.m., City Hall, 18 people attended.
- » **Be Seen Be Safe** Thur. 12/10, 6:30 – 8:00 a.m., Downtown Milwaukie and Tacoma MAX Stations, 200 people engaged.
- » **Willamette View Senior Stroll**, Fri. 4/15, 1:00 – 3:00 p.m., Willamette View Manor, 55 people attended.
- » **Milwaukie Art & Trivia Walk**, Sun. 5/22, 11:00 a.m., City Hall, 20 people attended.

“During the Nature Walk I was able to meet new neighbors in our area and learn about the Water Front Park area. It was great!”

–PROGRAM PARTICIPANT



Local artist Chris Haberman led two walks to showcase downtown art pieces and murals.



Mayor Gamba led the “Future of Milwaukie” walk to highlight new bicycle and pedestrian infrastructure improvements.

The *DLSM: Milwaukie* team also presented at several community meetings, events, and conferences:

- » **Milwaukie City Council Presentation – Introduction to Program**
Tue. 8/4, 5:30 p.m., Milwaukie City Hall.
- » **Kaiser Permanente Health & Economic Effects of Light Rail Research Team, Wed.**
9/30 1:30 – 3:30 p.m., Center for Health Research.
- » **Milwaukie City Council Presentation – Program Update**
Tue. 10/6, 6:00 p.m., Milwaukie City Hall.
- » **Washington State Ridesharing Organization (WSRO) Spring Conference, Mon. 5/2, 1 pm.,**
Tacoma, WA.



DLSM: Milwaukie partnered with the artMOB to lead an art and trivia walk.



Willamette View residents enjoyed the guided nature walk along the Willamette River.



Participants at Willamette View enjoyed a nia exercise class as part of a *DLSM: Milwaukie* custom event.

COMMUNICATIONS

Newsletters

A printed newsletter was mailed to target group households during the first month of the active phase of the program (August, 2015). This first newsletter was an introduction to the program and provided an order form with a pre-paid return envelope. After the first newsletter was sent, the program shifted to e-newsletters sent via MailChimp. E-newsletters—an important communication and messaging platform—were sent to participants who provided an email address on the order form. A total of six e-newsletters were sent to participants throughout the active (non-winter) months of the campaign. *DLSM: Milwaukie* e-newsletters contained the following information and resources:

- » Calendar of custom and partner events
- » Go Kit order form (and additional invitations to order Go Kits online in future newsletters)
- » Tips for using transportation options
- » Transportation options resource guide
- » Trip planning tools
- » Maps and resources for using TriMet bike lockers at MAX stations
- » Community resources, such as exploring the Trolley Trail
- » How to get involved with local transportation initiatives
- » Community spotlight – a special section that highlighted community groups and individuals that support transportation options
- » Event recaps

Table 1: Summary of Newsletter Exposure and Analytic Information

NEWSLETTER	DATE	NO. OF RECIPIENTS	OPEN RATE	CLICK RATE (to open imbedded links)
Newsletter 1 (paper version)	August 31, 2015	3289	N/A	N/A
E-Newsletter 1	September 23, 2015	615	44%	1.8%
E-Newsletter 2	November 18, 2015	734	32%	3.6%
E-Newsletter 3	February 18, 2016	732	33%	7.0%
E-Newsletter 4	March 31, 2016	725	30%	2.2%
E-Newsletter 5	May 5, 2016	773	29%	3.7%
E-Newsletter 6	June 1, 2016	770	24%	3.1%
Average (excluding Newsletter 1)		725	32%	4%

Table 2: MailChimp Communications Analytics

TOPIC	DATE	NUMBER OF RECIPIENTS	OPEN RATE	CLICK RATE (to open imbedded links)
Participant Survey (part 1)*	October 7, 2015	475	47.1%	23.1%
Survey Reminder	October 13, 2015	459	38%	10.6%
Participant Survey (part 2)	October 22, 2015	217	34.4%	15.6%
Survey Reminder	October 27, 2015	202	31.5%	11.7%
Survey Reminder	November 12, 2015	108	34.9%	17.9%
Final Survey Reminder	November 17, 2015	106	21.7%	4.7%
Willamette View Event Invite*	April 5, 2016	18	66.7%	N/A
Action Planning (Goals)	April 15, 2016	176	29.8%	4.8%
Action Planning (Action)	April 15, 2016	113	22.7%	4.5%
Action Planning (Intentions)	April 15, 2016	122	37.5%	6.7%
Action Planning (Goals) Reminder	April 26, 2016	161	25%	2.5%
Action Planning (Action) Reminder	April 26, 2016	104	22.3%	1.0%
Action Planning (Intentions) Reminder	April 26, 2016	118	29.1%	1.7%
Participant Survey (2016)**	June 7, 2016	54	N/A	N/A
Participant Survey (2016) Reminder	June 14, 2016	48	31.3%	12.5%

Email

The project team used MailChimp to send e-newsletters and emails to participants throughout the project. Above is analytic information about this outreach method.

*Due to the overwhelming response to the program the delivery team was unable to deliver all *Go Kits* before the Participant Survey launched on October 7. To capture more feedback, the survey was sent to two different sets of participants based on the delivery date of *Go Kits*.

**Residents of Willamette View Manor and Rose Villa Senior housing were specifically invited to the Senior Stroll event.

* The participant survey for 2016 participants was sent via the Drive Less Milwaukie Gmail account. Gmail was chosen to determine if participants would be more likely to respond to the survey through a personal email versus a Mail Chip email. Participation appeared to be lower using gmail.

Social Media

The program team encouraged partners to promote the program events and website via their respective social media networks, newsletters, and other communications channels throughout the program. Custom event invitations and graphics were provided to program partners for distribution. The program team found success using partners' already-established social media platforms to communicate events to neighborhoods within and adjacent to the target area.



Milwaukie's artMOB promoted DLSSM: Milwaukie events through their Facebook page.

"I invited friends to join me on a walk along the river and investigate the trolley trail. I helped a neighbor arrange for a trip to the train station using other transportation options than using a car, and took my nieces to Portland using the new Orange Line. Overall, this has helped me to look for more responsible ways to use my car less."

—PROGRAM PARTICIPANT



TriMet and the City of Milwaukie extensively marketed the Orange Line MAX service throughout the DLSP: Milwaukie target area.

TRIMET ORANGE LINE OUTREACH

TriMet and partners conducted extensive outreach in the target area prior to the launch of the Orange Line MAX. A safety outreach campaign for the Portland-Milwaukie Light Rail Transit Project began in 2014 and 2015, with 16,000 notices sent out regarding the electrification of overhead wires along the project's West Segment.

The safety campaign included the following community engagement and distribution of information pieces and engagement:



The Catch the Orange slogan was used by TriMet to promote the Orange Line.

- » **153,000** Community Newspaper inserts, in English and Spanish
- » **85,260** mailed postcards
- » **6,000** safety fact sheets (3,000 English; 3,000 Spanish)
- » **3,000** temporary tattoos with safety messaging (2,000 English; 1,000 Spanish)
- » **2,500** school fliers, termed “backpack stuffers” in English and Spanish
- » **1,650** students provided with guided Safety Rides
- » **19** print and electronic advertisements
- » **1,000** handbills regarding Bus Operator training
- » Social media messaging on TriMet and project channels
- » **33** Preview Rides involving **4,768** total riders
- » First and inaugural rides involving over **960** people

Employer Outreach

- » Over **200** employers received two sets of emails and three sets of fliers with upcoming Orange Line events
- » **4,000** Orange Line brochures were distributed to **200** employers
- » **509** employers received email information promoting the Orange Line grand opening

A total of 34 TriMet events were conducted between April and September, 2015. The opening event was TriMet's biggest light rail opening in its history with nearly 100,000 people attending. The day included free rides on the entire TriMet system and Portland Streetcar, and celebrations at stations throughout the 7.3 mile Orange Line, including a procession of members of the Confederated Tribes of Grand Ronde, multiple entertainment stages, and food vendors.

"I took my daughter on the new orange line on September 12 for her first MAX ride, she loved it. We realize how easy we can take the MAX into Portland and to OMSI now and plan on doing that regularly now!"

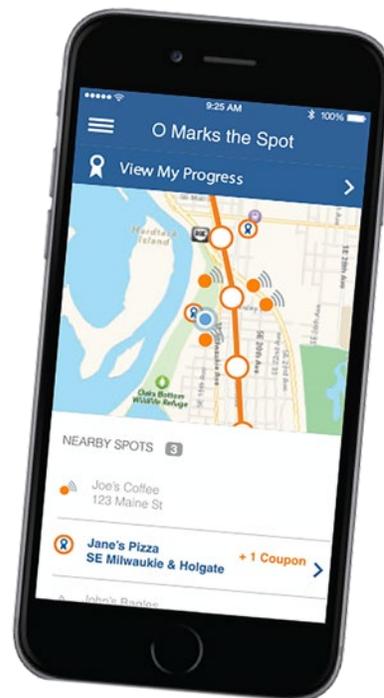
—PROGRAM PARTICIPANT

"I was surprised to discover that one of the Orange Line stops is close to where my grandson goes to first grade. I'm planning on riding the MAX to pick him up after school tomorrow."

—PROGRAM PARTICIPANT

Game App

A unique mobile scavenger hunt called "Orange Marks the Spot" was developed by TriMet and mobile app developer GlobeSherpa to encourage exploration and ridership along the Orange Line alignment. This game app gave TriMet the opportunity to develop and strengthen business partnerships, and created a connection between local businesses, the transit experience, and Orange Line riders. Brochures were printed and distributed by TriMet staff who visited over 100 businesses along the line to garner participation. In addition, posters were distributed to participating businesses the week before the game began in September, 2015. A total of 1,447 people played the game, resulting in approximately 4,700 visits to all MAX Orange stations. Local businesses received more than 25,000 visits from players.



The Orange Marks the Spot game app was popular along MAX Orange Line stations. Photo: TriMet.

04

AUDIENCE SEGMENTATION





The Trolley Trail is widely used and offers an important connection to Orange Line MAX stations in the target area.

The program team initially segmented participants by asking a question on the order form to determine the “behavioral stage” for each participant. The information was used to conduct an action planning/goal setting exercise to help participants move further along the behavior change continuum (i.e., shift from someone thinking about using transportation options to actually using those options two days per week).

ACTION PLANNING

The Stages of Change model is a well-accepted framework for understanding how behavior change happens. Program participants are categorized based on their mental attitude towards the desired behavior. The Stages of Change are based on how interested and willing people are in changing their own behavior. Fundamentally, the Stages of Change model suggests that only people who are interested in changing their behavior will successfully make that change. The model also suggests that the interventions (e.g., messages and activities) that are appropriate for someone in one stage are not effective for someone in another stage.

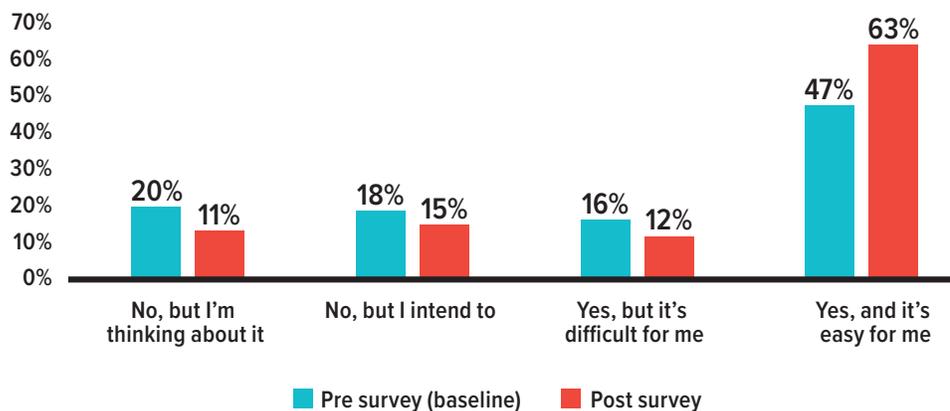
By answering a question on the *Go Kit* order form, participants were segmented according to their answer choices below that corresponded with their Stage of Change. The same question was asked in the participant feedback survey to determine any potential movement along the behavior change continuum due to the offering of *DLSM: Milwaukee Go Kits* and events (see Figure 3).

Thinking about all the trips you took last week, did you use transportation options at least two days?

- » **No, but I’m thinking about it**
(contemplation stage = thinking about changing behavior)
- » **No, but I intend to**
(preparation stage = commitment and intention to make the change)
- » **Yes, but it is difficult**
(action stage = occasionally and tentatively trying a new behavior)
- » **Yes, and it is easy**
(maintenance stage = habitual and confident use of a new mode)

Figure 3: Stages of Change Segmentation Results

Thinking about all of the trips you took last week, did you use transportation options at least 2 days? (N=139)



An action planning tool was developed using SurveyMonkey as the communications platform. Action planning is a technique that has been successfully used to change health behaviors (e.g., smoking cessation) by allowing participants to identify barriers to a desired behavior, think of ways to overcome them, and then write new goals in a working sentence. The *DLSM: Milwaukee* tool was emailed to 411 participants that were segmented into the contemplation, preparation, and action phases. Participants from the maintenance phase were not sent the action plan because they were already using travel options and only needed support or maintenance (and not an action planning exercise) to keep up their habits and not regress.

The action plan offered goal-setting assistance for one of three modes—walking, bicycling, or transit. The plan then identified a series of potential barriers in a drop-down menu for why the goal could not be met (e.g., weather, time, lack of gear) and how participants could overcome those barriers (e.g., leave early, plan ahead, purchase rain gear). The final part of the action plan asked participants to formulate a written statement to put their goal into action.

“I used maps to expand my bicycling knowledge and range.”

—PROGRAM PARTICIPANT



Residents of all ages enjoyed participating in the DLSP: Milwaukie Program.

The action planning concept is a new approach for changing transportation behaviors in the US and was piloted for the first time during the *DLSP: Milwaukie* program. A total of 37 participants used the action planning tool for a 9% response rate. Action planning participants received a

customized "thank you" email, along with a PDF copy of their action plan and a set of tools and resources (e.g., TriMet's trip planner tool, tips for winter cycling, gear recommendations) to help them overcome their barriers to using transportation options.

The top 3 common barriers for participants included:



Bicycling

1. Weather
2. Carrying items
3. Physical limitations



Walking

1. Weather
2. Motivation
3. Time



Transit

1. Time
2. Purchasing Tickets
3. Transferring

05 EVALUATION



TARGET AREA SURVEYS

To evaluate the effectiveness of the 2015-2016 *DLSM: Milwaukie* program in reducing drive-alone trips, the program team conducted pre- and post-program travel surveys to measure mode share in the target area. The post-survey was nearly identical to the pre-survey except for two additional questions about self-reported travel behavior change and a question in the control group survey asking if households ordered transportation materials through the *DLSM: Milwaukie* program. A \$100 grocery store gift card was offered as a prize drawing upon completion of the pre-survey and \$250 grocery store gift card was offered in post-program surveys. One reminder postcard was mailed to the target group and two postcards were mailed to the control group to increase post-survey response rates.

Pre-program surveys were mailed to 4,464 households in the target group and 1,210 residents in the control group. Post-program surveys were mailed to the same number of households in each group. Sample sizes were initially larger for the target and control groups, as some sample loss occurred in both groups during the mailings. The following table shows a summary of the survey response rates.

Table 3: Target Area Survey Response Summary

	PRE-PROGRAM SURVEY	POST-PROGRAM SURVEY
Mail Date	July 22, 2015	July 11, 2016
Number of Target Group Surveys Mailed	4,464	4,464
Number of Completed Target Group Surveys	966	933
Target Group Response Rate	22%	21%
Number of Control Group Surveys Mailed	1,210	1,210
Number of Control Group Surveys Returned	228	249
Control Group Response Rate	19%	21%

The survey included a one-day trip diary, as well as additional questions that captured information about general transportation behaviors and demographics. The pre-program survey was mailed on July 22, 2015, prior to any program press or outreach, and before the launch of the Orange Line MAX. The post-program survey was mailed to the same households on July 11, 2016 following the completion of all program activities and *Go Kit* deliveries.

The surveys asked respondents to report all trips, including purpose and mode, for trips made “yesterday.” When reporting on the purpose of their trip, respondents were asked “Where did you go?” Based on Oregon Household Activity Survey (OHAS) data, trip purpose options included the following:

- » Work
- » College
- » School (K-12)
- » Shopping
- » Recreation
- » Returned Home
- » Other

When reporting trip modes (responding to the question, “How did you get there?”), respondents could select from the following options:

- » Drove alone
- » Carooled with children only
- » Carooled with adults
- » Rode the bus
- » Rode the MAX
- » Walked
- » Bicycled
- » Other

The mode shift calculated from the survey data was used to estimate daily and annual vehicle miles reduced (VMR) among target area households. This calculation is made by multiplying the average number of trips made by each person per day for a particular trip purpose by the drive-alone mode share for that purpose, and by the corresponding average trip distance as estimated from Metro’s 2009 Oregon Household Activity Survey (OHAS) data.

Because trip diaries were returned for all seven days of the week and program activities lasted an entire year, annual VMT reductions are based on 365 days. Furthermore, travel behavior changes associated with IM programs have been shown to last at least one year.¹ The resulting calculated VMR per person for all trip purposes is extrapolated to represent the entire target area.

CONTROL GROUP

Control groups are beneficial for addressing the issue of causality, or direct influence of a program on behavior change. In the case of this program, randomly selected households in the control group did not directly receive *DLSM: Milwaukie* program materials or communications, but may have been exposed to the campaign from news articles, social media, and word of mouth from friends and neighbors. TriMet and the City of Milwaukie also conducted Orange Line marketing and outreach that reached households in the control group, which is the type of external influence the control group seeks to balance out. The exposure to this marketing, along with the introduction of the Orange Line MAX as a new travel option, influenced travel behavior among the control group. To help minimize the potential influence of the *DLSM: Milwaukie* program’s effect on the control group, the program team asked control group households in the post survey if they ordered *DLSM: Milwaukie* program materials; those that responded “yes” were considered participants (even if they were not in the initial target group) and were therefore pulled from the data set and not used in the analysis.

1 Dill, Jennifer and Mohr, Cynthia (2010). Long-Term Evaluation of Individualized Marketing Programs for Travel Demand Management. OTREC final research report, July 2010.

PARTICIPANT FEEDBACK SURVEY

In addition to the pre- and post-program trip diary surveys, the project team administered an online feedback survey to participants during several intervals throughout the year. A link to the electronic survey was emailed to program participants who provided an email address on the order form. Of the 980 participants who ordered materials, 945 provided an email address. A total of 221 participants completed the feedback survey for a response rate of 23.4%. In addition to gathering feedback about the program activities, the survey asked respondents about their transportation habits, satisfaction, and feedback regarding program activities. Results from the participant feedback survey are presented at the end of this report.

“Knowing that there is a whole community that is interested in exploring our new neighborhood is very heartening, especially just having moved here. The Orange Line is walking distance to our house, and we use it whatever chance we get. The bike route maps are very useful, and we will use them more next summer.”

–PROGRAM PARTICIPANT



DLSM Milwaukie participants enjoyed riding downtown during First Fridays.

06

TARGET AREA TRIP DIARY FINDINGS



Average Number of Trips

The average number of daily trips for survey respondents was 3.5 in the pre-program survey and 3.5 in the post-program survey, both of which are within a normal range. Further, the consistency between the pre- and post-program surveys is an indication that the datasets are comparable.

Mode Shift

The results indicate that target group residents decreased their drive-alone mode share 5.1% (absolute percentage points) and increased their MAX and walking mode share by 3.7% and 3.5%, respectively. Carpooling and bicycling increased by small amounts of 0.1% and 0.2%, respectively. The mode shift for bus decreased 2.8%, which was most likely due to bus service changes in the target area.

Table 4: Target Group Pre- and Post-Program Mode Share

MODE	PRE SURVEY (N=3,297 TRIPS)	POST SURVEY (N= 3,231 TRIPS)	CHANGE
Drive Alone	65.6%	60.5%	-5.1%
Carpool w/adults	18.7%	18.8%	0.1%
MAX	0.7%	4.4%	3.7%
Bus	5.7%	2.9%	-2.8%
Walk	6.6%	10.1%	3.5%
Bicycle	2.4%	2.6%	0.2%

“It has been fun to see/hear/watch my neighbors at our retirement center discover the MAX!”

—PROGRAM PARTICIPANT

Figure 4: Target Group Mode Share Results

Target Group Mode Share

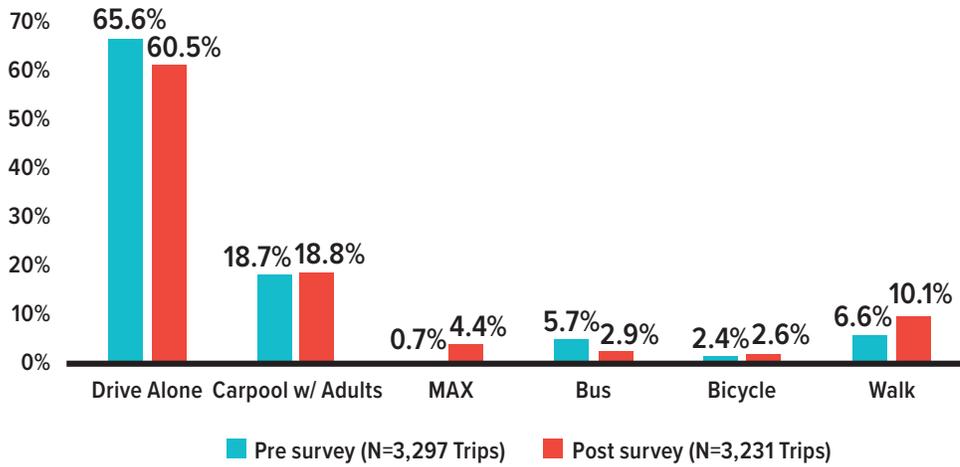


Figure 5: Target Group Mode Shift

Target Group Mode Shift

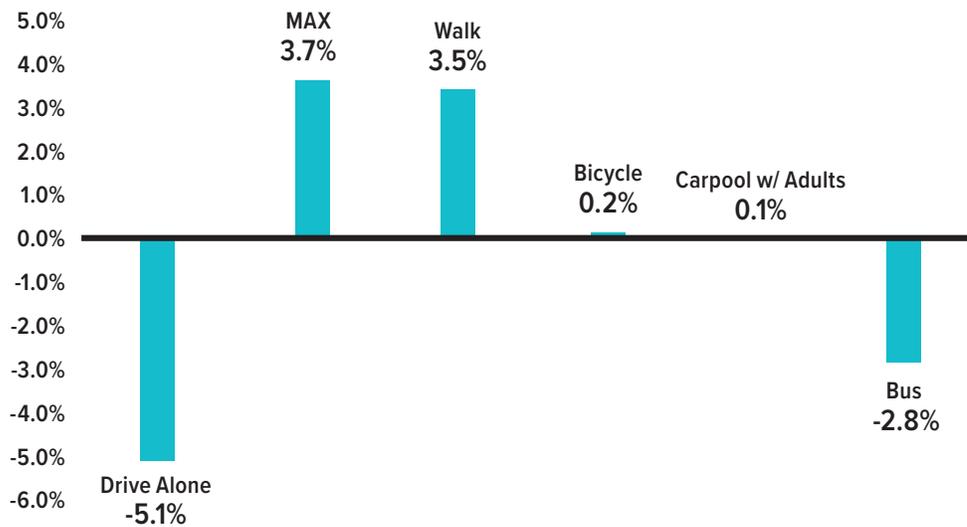
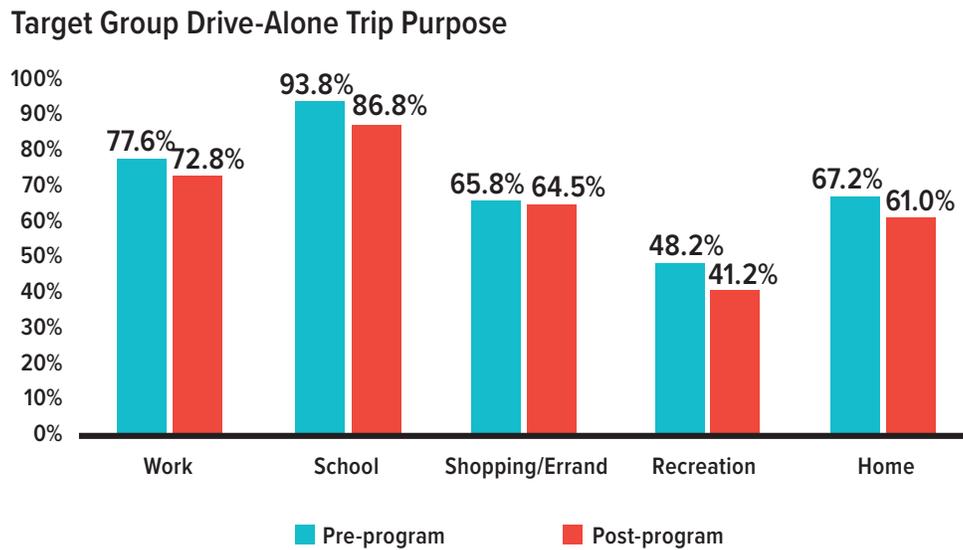


Figure 6: Drive Alone Trip Purpose



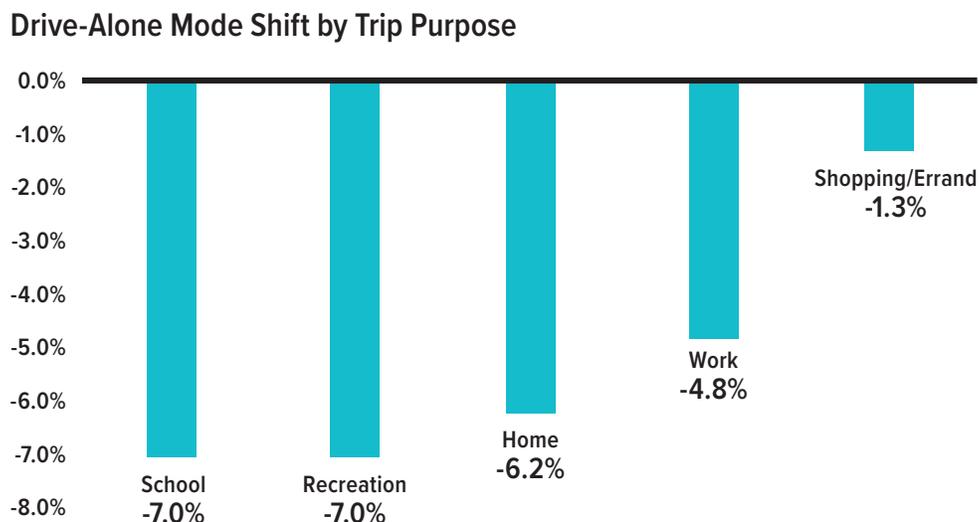
Drive-Along Trip Purpose

Figure 6 shows the distribution of drive-alone trip purpose reported by respondents in the pre- and post-program surveys. The distribution of trip purposes is similar between the two surveys, with some small variations. It is common for work, school, and shopping/errand trips to be among the most frequent drive-alone trips made.

Mode Shift by Trip Purpose

Mode shift can be evaluated by trip purpose to gain a better understanding of transportation behavior changes in the program area. As shown in Figure 7, drive-alone mode share decreased for all trip types.

Figure 7: Target Group Drive-Along Mode Shift By Trip Purpose



Vehicle Miles Traveled

Based on the demonstrated reduction in drive-alone trips, it is estimated that the average target area resident will drive 0.82 miles less per day following the program, which when applied to the entire target area is 3,650 fewer miles per day. Based on research in behavior change programs, the project team assumes this change in travel behavior will last for at least one year, for a reduction of 1,332,148 vehicle miles. A summary of this impact is shown in Table 5.

A VMT analysis was also applied to the control group panel sample, which yielded a decrease of 15,635 vehicle miles traveled in the target area. Subtracting that amount from the 1,332,148 annual miles reduced in the target group nets a VMT result of 1,316,513 for which the *DLSM: Milwaukie* program can take credit. This reduction in vehicle miles is equivalent to removing 98 cars from the road per year.⁴

Table 5: *Estimated Vehicle Miles and Carbon Dioxide Emissions Reduced**

	ESTIMATED VEHICLE MILES TRAVELED (Per Person)		ESTIMATED VEHICLE MILES TRAVELED (Among All 4,446 Households)		ESTIMATED VEHICLE MILES REDUCED IN TARGET AREA	ESTIMATED CARBON DIOXIDE EMISSIONS REDUCED (In Pounds)
	Pre-Program	Post-Program	Pre-Program	Post-Program		
Daily VMT	12.03	11.21	53,403	49,753	3,650	2,964
Annual VMT	4,390	4,090	19,491,933	18,159,785	1,332,148	1,081,948

* Carbon dioxide emission reductions are estimated based on VMT reduction calculations, as well as emission rates from the 2008 EPA Report 420-F-08-024, "Emission Facts: Average Annual Emissions and Fuel Consumption for Gasoline-Fueled Passenger Cars and Light Trucks."

⁴ The number of cars removed from the road per year was calculated by dividing the total vehicle miles reduced by the national total average annual of miles per driver (13,476), as calculated by the Federal Highway Administration (<https://www.fhwa.dot.gov/ohim/onh00/bar8.htm>).

Panel Analysis Findings

Households that participated in both the pre- and post-program surveys were included in both target and control group panel analyses. Results from the panel analysis, which included a smaller subset of all households in the sample, are consistent with the overall findings for the entire sample of respondents. This consistency validates the range of travel behavior changes that occurred across both panel and non-panel households. Both panel samples comprised the same households that completed the pre- and post-program surveys; therefore, the demographic makeup of survey respondents is consistent between both surveys and results can be analyzed with greater confidence, even with low sample sizes. For the target group panel results shown in Table 6, the drive-alone mode share decreased 3.5%, MAX increased 3.9%, walking increased 3.2%, and bicycling decreased 1.6%. The mode share for carpooling with adults decreased 0.3% and bus decreased 2.4%.

Table 6: Pre- and Post-Program Target Group Mode Share - Panel Only

MODE	PRE SURVEY (N=1,323 TRIPS)	POST SURVEY (N= 1,344 TRIPS)	CHANGE
Drove Alone	62.9%	59.4%	-3.5%
Carpooled	19.5%	19.2%	-0.3%
MAX	0.6%	4.5%	3.9%
Bus	6.1%	3.6%	-2.4%
Walked	7.2%	10.4%	3.2%
Biked	3.5%	1.9%	-1.6%

Figure 8: Target Group Panel Mode Share

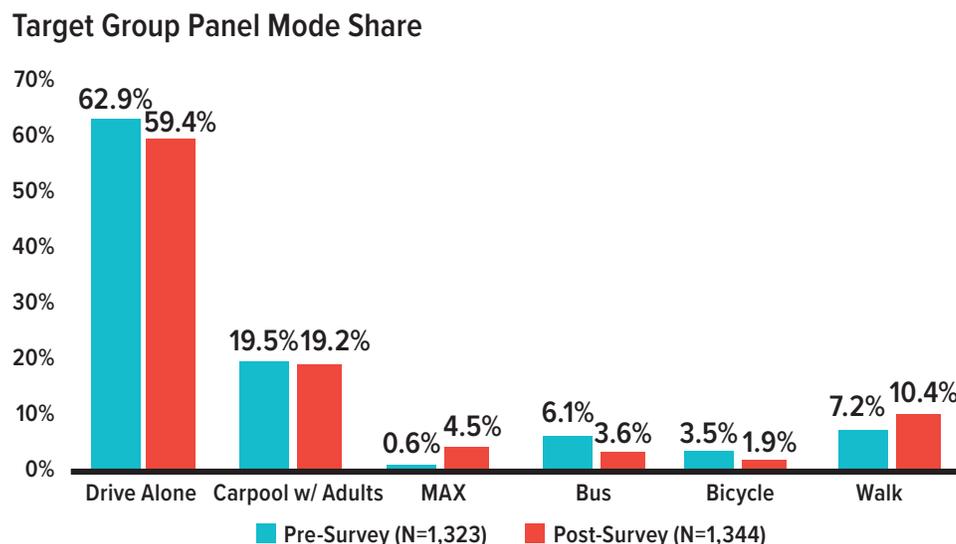
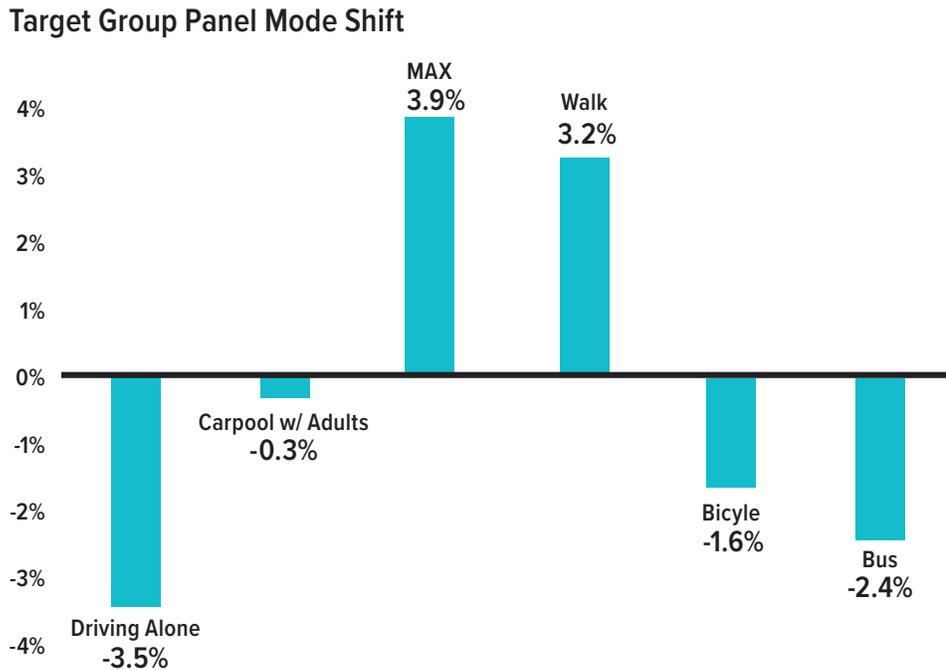


Figure 9: Target Group Panel Mode Shift



Pre-and post-program surveys for the control group panel sample were also analyzed. Figure 10 shows the mode share comparison and Figure 11 shows the mode shift results. Findings from the control group panel sample show a 0.6% reduction in drive-alone trips, a 4% decrease in adult carpooling, a 2.2% decrease in bus use, and a 0.3% decrease in bicycling. MAX trips increased 5.2% and walking increased 1.7%. The high MAX use in the control group panel sample was likely due to the group's exposure to Orange Line outreach conducted by TriMet and the City of Milwaukie.

It is important to note that the target group mode shift changes do not reflect the travel behavior effects from the *DLSM: Milwaukie* program alone. The pre-program survey was conducted just prior to the introduction of the MAX Orange Line and the post-program survey was conducted once the new transit infrastructure was in place for 10 months. Therefore, the introduction of the MAX Orange Line caused changes in travel behaviors among both control and target group households. A control group was implemented to measure the external influences that occurred independent of the *DLSM: Milwaukie* program.

Figure 10: Control Group Panel Mode Share

Control Group Panel Mode Share

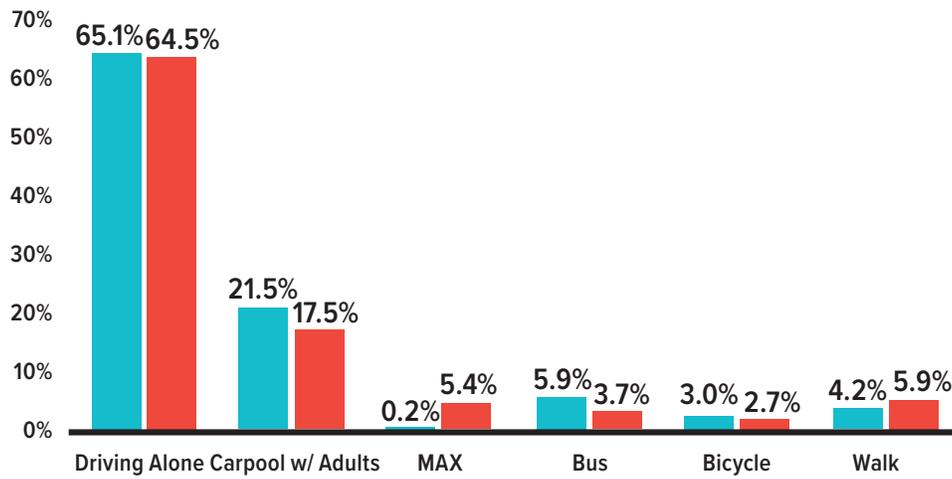
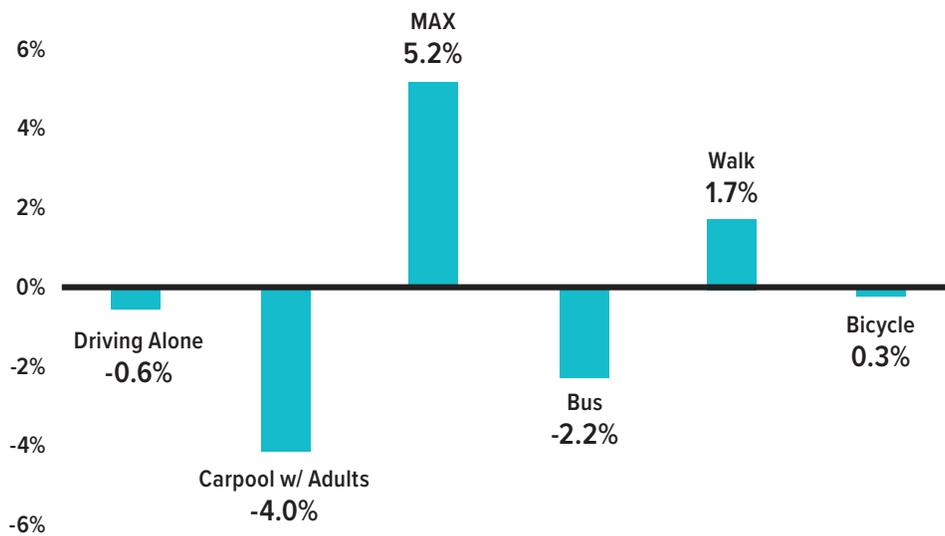


Figure 11: Control Group Panel Mode Shift

Control Group Panel Mode Shift

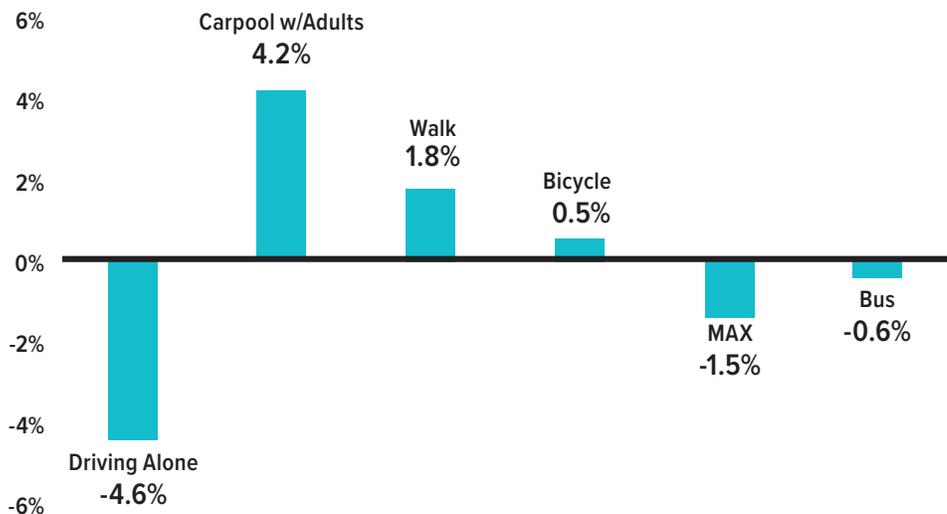


To ensure the *DLISM: Milwaukie* program only takes credit for behavior change resulting from the offering of information, events, and messaging to target-area households (e.g., IM-specific activities), results from the control group must be subtracted from those in the target group, which is called a control group effect. For this type of analysis, the program team used the control group panel results because the larger control group demographics varied greatly between households that took the pre- and post-program surveys. Both age and gender were skewed between the pre- and post surveys and weighting with Census Data could not be applied due to the small overall sample. Because the control group panel travel data was analyzed from the exact same households, this data set offered a better and more representative sample match (compared to the overall control group) to use for the control group effect.

With the control group effect applied, the *DLISM: Milwaukie* program can take credit for a 4.6% (absolute percentage point) reduction in drive-alone trips, a 4.2% increase in carpooling with adults, and a 1.8% increase in walking. MAX and bus use decreased slightly by 1.5% and 0.6%, respectively (see Figure 12). The overall decrease in MAX use from the control group effect was due to a large number of MAX trips taken among control group participants, which was likely influenced by outreach led by TriMet and the City of Milwaukie to increase Orange Line MAX ridership.

Figure 12: Target Group (Net) Mode Shift Compared to Control Group Panel Mode Shift

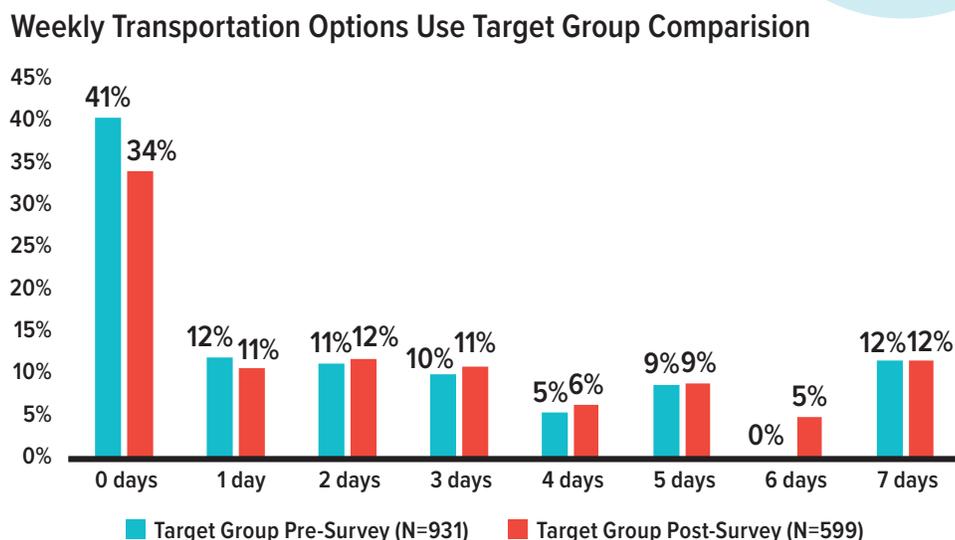
Target Group Mode Shift Compared to Control Group Panel Mode Shift



Self-Reported Behavior Change

The following question was asked in both the pre-and post-program surveys to compare the average weekly use of travel options before and after the program: “Thinking about last week, about how many days did you use travel options like walking, bicycling, transit, and/or carpooling for any type of trip you took?” Respondents could select between 0 and 7 days (in addition to “Don’t know/not applicable”) as answer choices. Capturing average mode use on a weekly basis helps confirm mode shift trends analyzed from the travel diaries. Results indicate *DLSM: Milwaukie* target group participants shifted their use of travel options toward more days per week as a result of the program. Figure 13 shows that target group participants in the post-program survey had a much lower occurrence of using travel options 0 days per week (34% compared to 41%). There was also a substantial increase in using transportation options 6 days per week, representing a 5% increase.

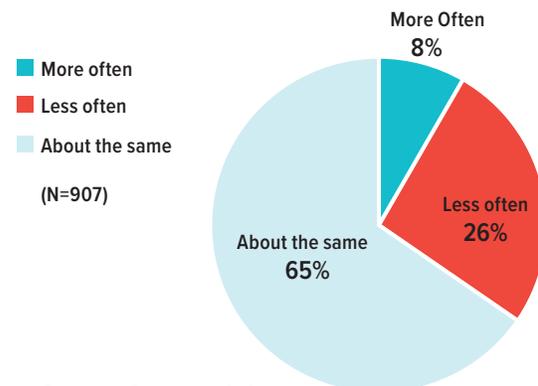
Figure 13: Weekly Transportation Options



To further support mode shift results from the trip diary analysis, respondents in the post-program survey were asked if they think they are driving alone to places more often, less often, or about the same as they were compared to one year ago. Figure 14 shows that over one-quarter of post-program survey respondents (26%) stated that they think they are driving alone less often. For those who reported they were driving less, when asked what contributed to the change, 17% pointed to access to better information about transportation options.

Figure 14: Reported Driving Behavior Compared to Six Months Earlier

Do you think you are driving more often, less often, or about the same compared to one year ago?



07

HEALTH IMPACT MODELING RESULTS



TRANSPORTATION OPTIONS HEALTH IMPACT ESTIMATOR MODEL

The Oregon Health Impact Assessment (HIA) program developed the TO Estimator model to help transportation planners and their stakeholders understand how travel demand management programs (TDM) that increase active travel (walking, biking, and transit) can impact community health. It is based on the Integrated Transport and Health Impact (ITHIM) model, a nationally and internationally accepted model for quantifying health impacts related to changes in transportation systems and behaviors. Costs are estimated using national cost of illness figures scaled to Oregon county populations and adjusted to 2010 dollars. ITHIM was developed by Dr. James Woodcock of the Centre for Diet and Activity Research at the University of Cambridge (see Woodcock et al. 2009).⁵ Health impacts are annual and assume that the changes in travel behaviors will last for an entire year.

A primary difference between the two models is that the TO Estimator assesses health impacts related only to changes in physical activity, whereas ITHIM assesses health impacts related to changes in physical activity, crash risk, and air pollution. The TO Estimator does not include health impacts related to air quality and crash risk in part because most TDM programs do not impact enough people to produce changes that the model can detect, but also because these components of the model require data inputs that TDM evaluation efforts typically do not provide.

The TO Estimator is designed to estimate health impacts based on changes in physical activity as measured by pre- and post-surveys designed to capture mode shift. In addition, if the surveys also gather information on the age of participants, it can also adjust health impacts based on the age-profile of the impacted population.

“Knowing that there is a whole community that is interested in exploring our new neighborhood is very heartening, especially just having moved here. The Orange Line is walking distance to our house, and we use it whatever chance we get. The bike route maps are very useful, and we will use them more next summer.”

—PROGRAM PARTICIPANT

⁵ Woodcock J, Edwards P, Tonne C, Armstrong BG, Ashiru O, Banister D, et al. 2009. Health and Climate Change 2 Public health benefits of strategies to reduce greenhouse gas emissions: urban land transport.

DATA INPUTS

Data inputs for ODOTs individualized marketing TDM program were provided by staff at Alta Planning + Design. These inputs included:

- » Pre- and post-program mode splits and trip purposes, gathered via pre- and post- travel diary surveys
- » Age profile of program participants from data gathered via the surveys
- » Average trip distances by mode and purpose, based on based on OHAS data.

Data for average walking distances for transit use were provided by TriMet: .25 miles for bus riders, and .5 miles for MAX riders.

HEALTH IMPACT RESULTS

Based on the above inputs, the program resulted in a 63% increase in the number of walking miles per person per week and a negligible change in distances traveled by bike (Table 8).⁶ Assuming that these changes are representative of the entire population exposed to the IM program (8,482 adult residents representing 4,464 households)⁷ and will last for one year, the TO Estimator estimates that the increase in physical activity resulting from the increase in walking would result in a 3.96 fewer Disability Adjusted Life Years (DALYs) per year in the program population, and one fewer premature death every 5 years. The annual value of these health improvements is \$191,800 based on avoided treatment and decreases in lost productivity (Table 9). The top five health outcomes that would be improved by the increases in physical activity are heart disease, stroke, diabetes, dementia, and depression (Table 10).

Table 7: OHAS-Based Average Trip Distances by Mode and Purpose Used for Milwaukie TO Estimator

SURVEY TRIP CATEGORY	OHAS TRIP CATEGORY NAME	WALK	BIKE	BUS	MAX	CARPOOL	DROVE ALONE
Home	“Home-Based Work”	0.8	4.1	6.4	11.7	6.6	8.6
Shopping	“Home-Based Shop”	0.5	1.5	5.2	11.7	3.8.	3.4
Work	“Home-Based Work”	0.8	4.1	6.4	11.7	6.6	8.6
Recreation	“Home-Based Recreation”	0.5	2.0	5.5	11.7	4.9	5.1
Other	“Home-Based Other”	0.5	1.9	5.6	11.7	4.7	5.1
School	“All Purposes”	0.5	2.3	5.6	11.7	4.3	5.6

6 The introduction of the Orange Line MAX and TriMet’s marketing efforts also contributed to the health impact findings.

7 The participant population was calculated using the total number of adults in the 4,464-household target area that were exposed to the individualized marketing program. Pre- and post-program surveys reported an average of 1.9 adults per households.

Table 8: Walking and Biking Miles Traveled by Mode*

	BEFORE	AFTER	% CHANGE
Walk [^]	1.84	2.99	63.1%
Bicycle	2.01	2.00	-0.7%

*Units are miles/person/week.

[^]Walking distances include trips to/from transit.

Table 9: Estimated Annual Physical Activity-Related Health Impacts Benefit per 8,482 Participants

CHANGE IN DALYS	-3.97 (-0.25%)
CHANGE IN MORTALITY (PRE-MATURE DEATHS)	-0.19 (0.25%)
COST SAVINGS	\$191,800



DLSM: Milwaukie participants were encouraged to commute by bike through program materials, communications, and events.

Table 10. Estimated Value of Changes in DALYs Per Year, Per 8,482 Participants

	YLL	YLD	DALYS (YLL+YLD)	VALUE/SAVINGS (\$)
Heart Disease*	-0.93	-0.29	-1.23	\$68,126
Diabetes	-0.39	-0.86	-1.26	\$68,365
Stroke	-0.32	-0.36	-0.68	\$14,955
Dementia	-0.16	-0.22	-0.38	\$26,120
Depression	0.00	-0.29	-0.29	\$9,851
Colon cancer	-0.04	-0.01	-0.05	\$2,261
Breast cancer	-0.01	-0.07	-0.8	\$2,161
TOTAL	-1.91	-2.05	-3.96	\$191,800

*Includes ischemic, inflammatory, and hypertensive heart diseases

08

PARTICIPANT FEEDBACK SURVEY



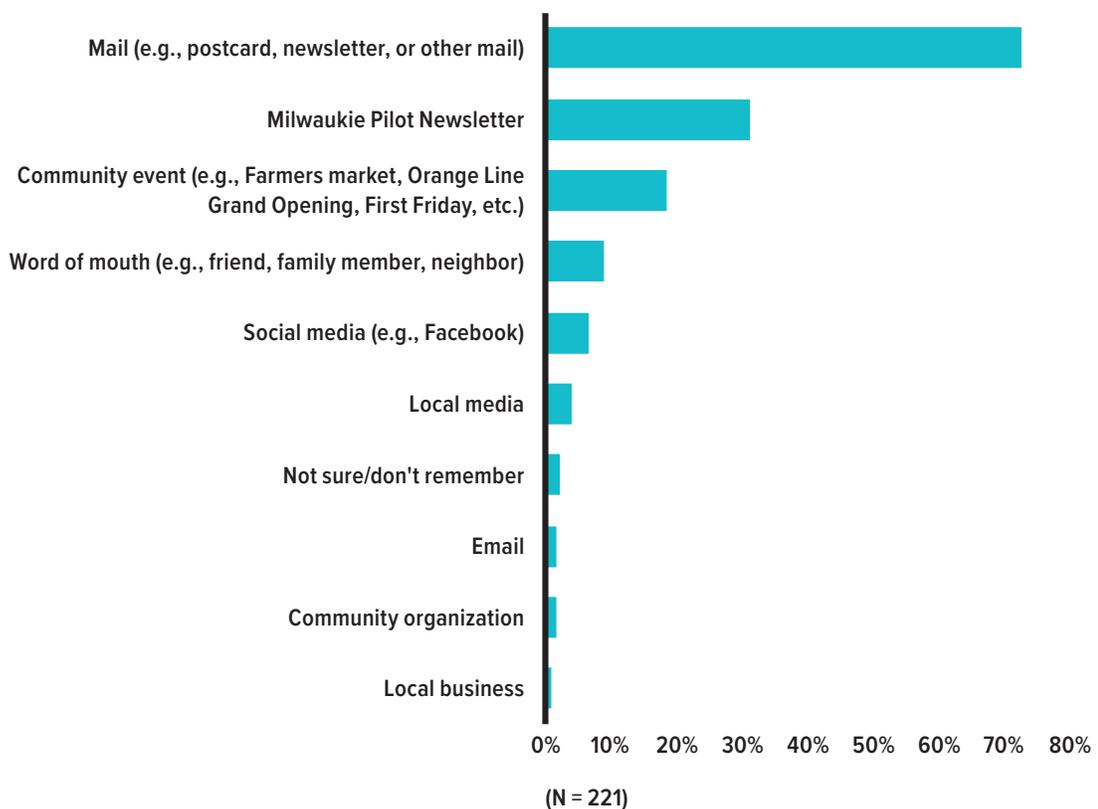
In addition to the pre- and post-program trip diary surveys, the project team administered a participant feedback survey in October 2015 and again in June 2016. The participant feedback survey did not include a travel diary and was sent by email only to residents who ordered program materials and listed a valid email address on the order form. The participant feedback survey asked a series of questions about self-reported travel behavior, satisfaction with the program, barriers to using transportation options, etc. Of the 980 participants who ordered materials, 945

provided an email address. Two-hundred and twenty-one participants completed the feedback survey for a response rate of 23%. The gender makeup of the participant-only survey was 62% women and 34% men.

As shown in Figure 15, most Milwaukie residents who took the feedback survey heard about the program through mail. The Milwaukie Pilot newsletter and community events were also important communication channels to spread the word about events and other program offerings.

Figure 15: *How Participants Heard About the Program*

How did you hear about the Drive Less Save More: Milwaukie Program?



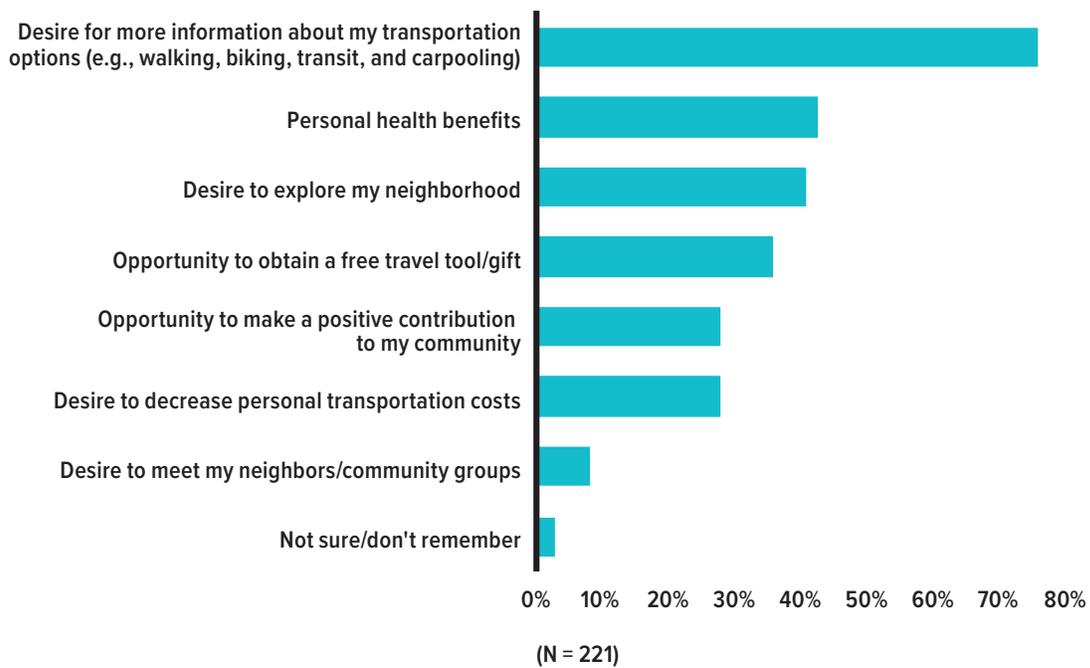
Participants were asked to select the top three reasons they decided to participate in the program. Figure 16 identifies the top reasons mentioned by participants:

1. Desire for more transportation information
2. Personal health benefits
3. Desire to explore my neighborhood
4. Opportunity to obtain a free travel tool/gift
5. Opportunity to make a positive contribution to my community

Responses indicate the program was effective in meeting the expectations of target area residents. The multimodal map and other relevant program materials helped participants explore parks, shops, and other destinations using transportation options. Coupons to local businesses were offered as part of the program to encourage multimodal trips within the target area. Business owners were excited to participate in the program and between 25 and 60 coupons were returned for each participating business.

Figure 16: Reasons for Participating

What are the top three reasons you decided to participate in the Drive Less Save More: Milwaukie Program?



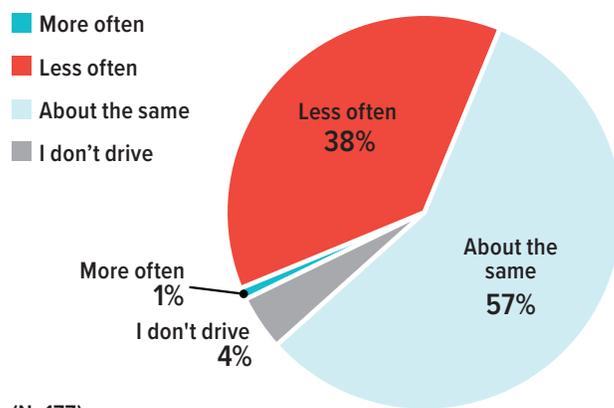
Participants were asked if they think they are driving more often, less often, or about the same since they participated in DLSP: Milwaukie. The same question was also asked in the target and control group post survey (see Figure 14). Among participants, 38% of respondents reported driving less, and of those, 63% pointed to access to better information about transportation options as a reason for the change (more than any other reason).



Mark Gamba, Mayor of Milwaukie, participated in bicycle deliveries of program materials.

Figure 17: Reported Driving Behaviors from the Participant Feedback Survey

Do you think you are driving more often, less often, or about the same amount since you participated in DLSP: Milwaukie?



Participants were asked if the information they received in *Go Kits* helped them increase their use of transportation options. Results are presented in Figure 18, which shows that 71% said the information helped them walk more, 69% said ride transit more, 41% said bicycle more, and 20% said the information helped them carpool more.

In more detailed questions that were asked about *DLSM: Milwaukie* events, 96% of participant survey respondents reported that program's events were either very or somewhat helpful in making more of their trips using transportation options (see Figure 19).

Participants were asked about their duration of residency in Milwaukie and Oak Grove. This information was used to assess the percentage of participants who were new residents versus long-time residents.

Figure 19: Helpfulness of Program Events

To what extent were the events helpful for making more of your trips by walking, biking, carpooling, and/or transit?

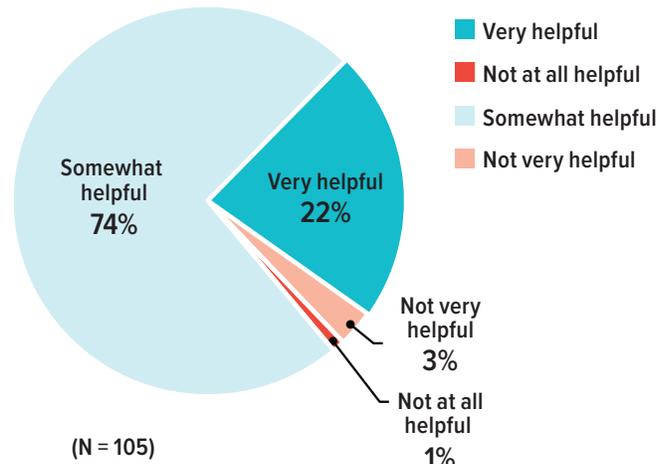
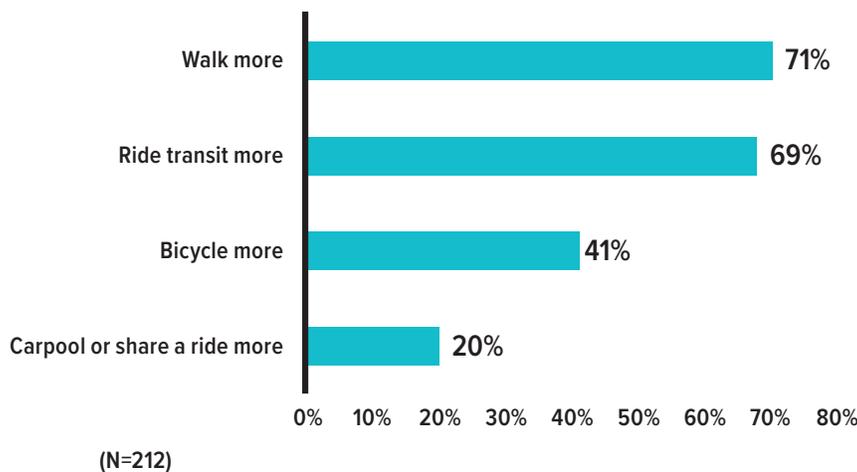


Figure 18: Helpfulness of Program Information

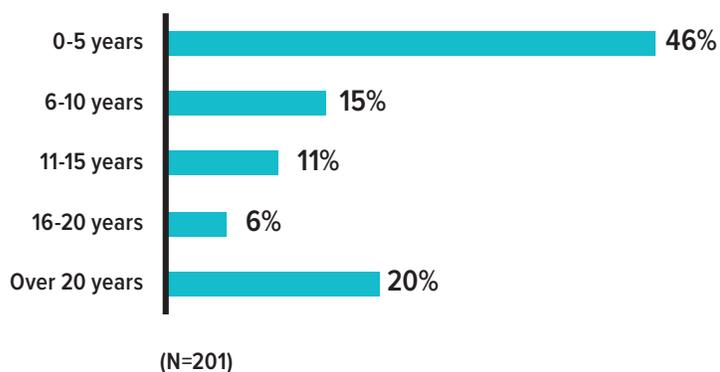
Has the Drive Less Save More: Milwaukie program helped you...?



According to the results presented in Figure 20, 53% of participants reported living in the target area for over 5 years, whereas 46% lived in the target area for 5 years or less.

Figure 20: *Years Living at Current Residence*

About how many years have you lived at your current residence?



Other qualitative results from the participant-only survey are summarized below. It is important to note a majority of survey participants thought the program was helpful, informative, and encouraging.

- » 55% of respondents tried a new way to get around by using travel options
- » 51% of respondents attended a *DLSM: Milwaukie* event
- » 90% said program events were either very (21%) or somewhat (69%) helpful for making more of their trips by walking, biking, carpooling, and/or transit
- » 76% percent mentioned the program encouraged them to visit local shops, restaurants, and parks
- » 82% think there is value in continuing the program

“I invited friends to join me on a walk along the river and investigate the trolley trail. I helped a neighbor arrange for a trip to the train station using other transportation options than using a car, and took my nieces to Portland using the new Orange Line. Overall, this has helped me to look for more responsible ways to use my car less.”

—PROGRAM PARTICIPANT

09

DEMOGRAPHICS



A series of demographic questions were asked in both the pre- and post-program survey questionnaires. Results show consistency between the pre- and post-program surveys conducted among the target group, which helps validate the overall survey results.

Figure 21: Age

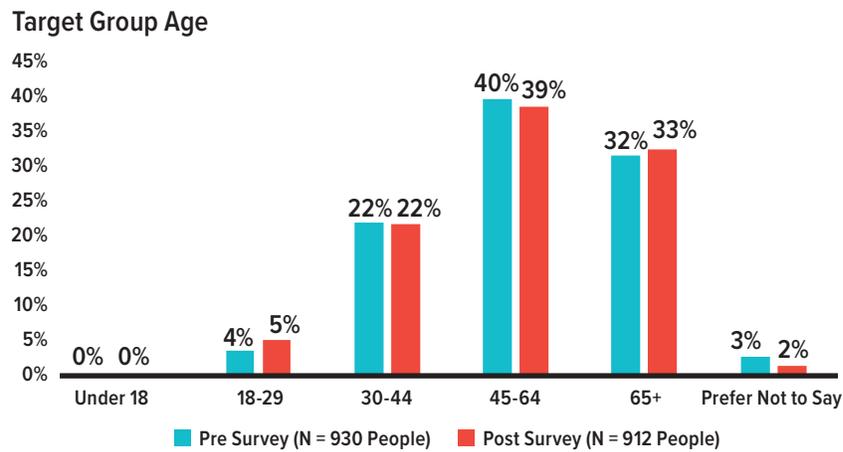


Figure 22: Gender

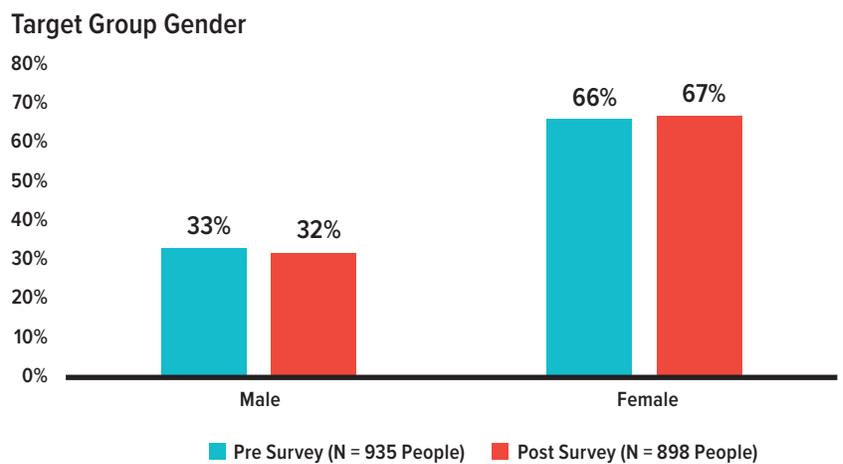


Figure 23: Income

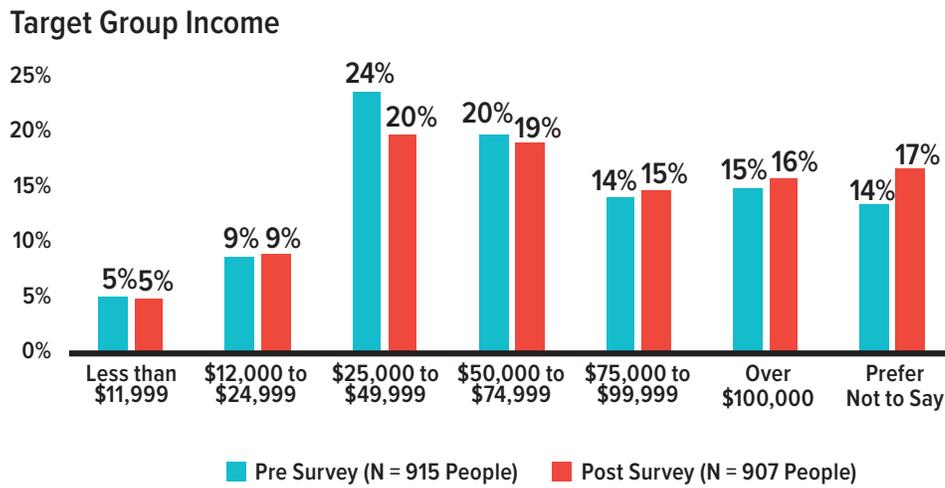


Figure 24: Adults Living in the Household

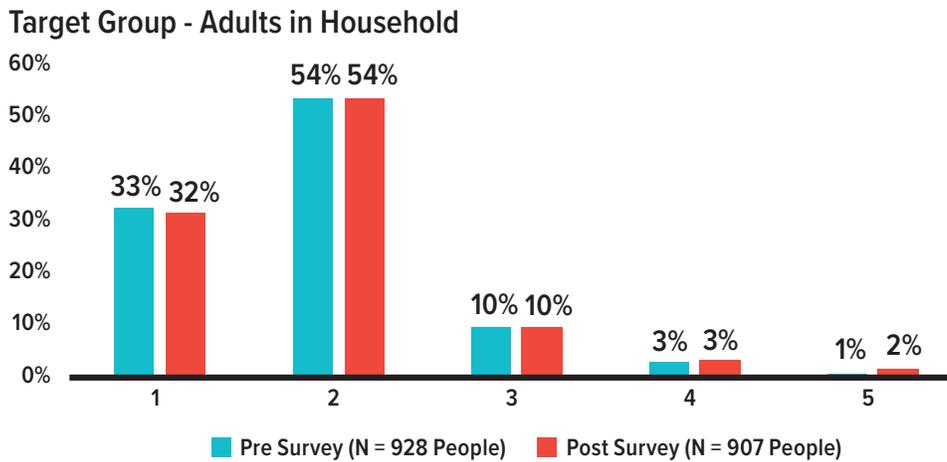


Figure 25: Number of Motor Vehicles in the Household

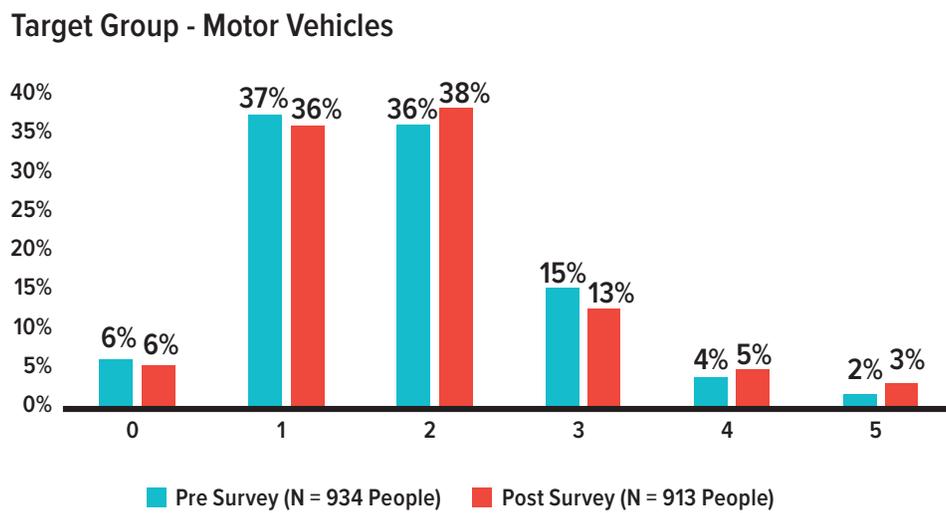
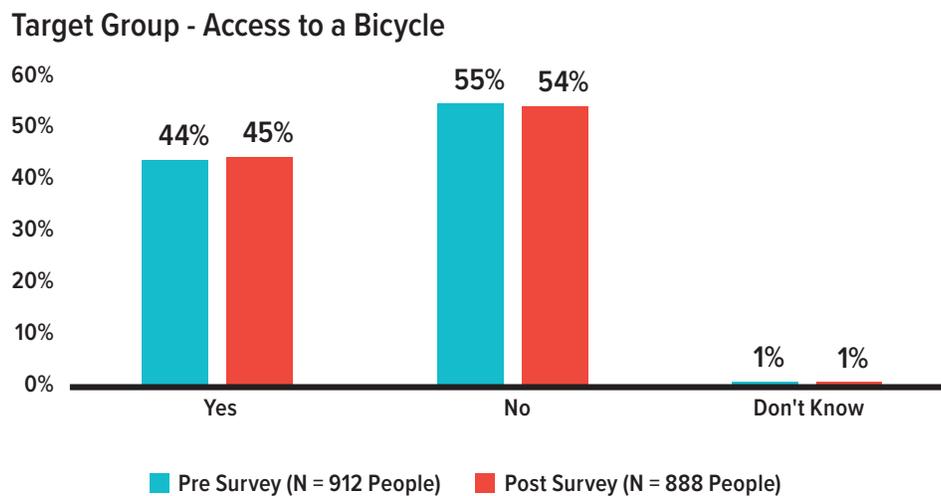


Figure 26: Access To A Bicycle



10 LESSONS LEARNED



DLSM: Milwaukie offered a unique opportunity to learn which program elements worked well and those that needed improvement. The following section highlights observations and feedback from program staff and partners.

STAFF TIME

- » City of Milwaukie staff allocated more time on the project than originally expected; however, the roles and responsibilities were a good fit for the City and meshed well with overarching goals of supporting the new transit investment and multimodal transportation.

COLLATERAL MATERIAL

Future efforts should consider the following minor suggestions regarding printed materials and travel tools:

- » Due to the high participation rate, additional safety lights and tote bags needed to be rush ordered.
- » Gain access to additional professional local photos to avoid using staged photos in the target area.



City of Milwaukie staff and Alta's Project Manager assisted with Go Kit deliveries.

CAMPAIGN ENGAGEMENT

Tabling at existing community events was beneficial for increasing awareness about the program; however, this activity increased the number of people from outside of the target area who ordered *Go Kits*.

FULFILLMENT AND DELIVERIES

The following tips may help increase fulfillment method efficiency during future iterations of Drive Less Save More programs:

- » Make sure additional staff is available to help with bicycle deliveries at the outset of the program.
- » Limit the number of households ordering materials from outside of the target area.
- » Deliver *Go Kits* during the evenings and on weekends when people are more likely to be home.
- » Taking the time to map delivery routes was tedious but improved the efficiency of deliveries throughout the large target area.

"We just moved here. We loved all the information. So helpful to find transportation alternatives in one place."

—PROGRAM PARTICIPANT

11 CONCLUSION



DLSM: Milwaukie was effective at engaging Milwaukie residents and promoting biking, walking, transit and sharing rides in the neighborhood and beyond. Results from the target group indicated a decrease in the drive-alone mode share of 5.1%, which equates to an annual savings of 1,316,513 vehicle miles reduced. Furthermore, MAX and walking trips increased by 3.7% and 3.5%, respectively. Bicycling and carpooling with adults increased by very small amounts, 0.2% and 0.1%, respectively. Bus use decreased by 2.8%, which was most likely due to the introduction of the Orange Line MAX and the subsequent bus service changes throughout the target area.⁸

DLSM: Milwaukie also helped participants become more active and shop local. Seventy-eight percent of participants said the program encouraged them to visit local shops, restaurants and parks. In addition, 96% of those who attended an event said those events were helpful for making more of their trips by walking, biking, carpooling, and transit. The TO Estimator health impact analysis indicated a 63% increase in physical activity among program participants. The annual value of these health improvements is \$191,800 based on avoided treatment and decreases in lost productivity. These results show the program was effective in reducing drive-alone trips, increasing physical activity, and demonstrating the benefits of using transportation options for everyday trips.



The artMOB led the Spring Art and Trivia Walk that showcased public art along the Orange Line MAX stops.

8 TriMet on and off bus counts for Milwaukie routes showed a small decrease in ridership from Fall 2015 to Spring 2016.

Drive Less Save More:
MILWAUKIE

*Exploring Milwaukie, Oak Grove,
and beyond*

