



King County

Bothell
Woodinville
Alternative
Services
Proviso
Report

April 29

2016

A report written in response to King County Ordinance 17941, Section 113,
as amended by Ordinance 18110, Section 49 B, Proviso P8

Alternative Services,
Market Development,
Metro, DOT



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Acknowledgements

The process leading up to this report has been a multi-stakeholder partnership. Metro would like to acknowledge the following groups and individuals for their contributions.

Councilmember Rod Dembowski and his staff, especially Elizabeth Evans Webb, initiated this work and brought the relevant parties to the table.

The University of Washington Bothell partnered with Metro on the needs assessment process through the university's Community Based Learning program. In particular, Metro thanks Kelly Snyder, Assistant Vice Chancellor Government Relations; Kara Adams, Interim Director of Community Based Learning and Research; Dr. Kari Lerum; Dr. Santiago Lopez; Dr. Shauna Carlisle; and the students of BIS 312A and B and BIS 442.

Cascadia College supported the public engagement process. The cities of Bothell and Woodinville contributed staff time, meeting space, and outreach support.

The members of the Stakeholder Working Group contributed their time and ideas and provided key insight and recommendations to Metro. They helped shape the Alternative Services concept plan recommended in this report.

Executive summary

This report is a response to King County Ordinance 18110, which included direction to Metro to develop, “a plan for implementation of an alternative services program providing service between the campus of the University of Washington-Bothell and Cascadia Community College and the cities of Woodinville and Bothell, which shall be designed to address travel needs of college students and employees; individuals living or working in the cities of Woodinville and Bothell; and other transit consumers.”

Alternative Services is a Metro demonstration program that develops and tests alternatives to fixed-route bus service and implements those services in communities to address unmet transportation needs, fill mobility gaps, and complement the existing transit network.

During the first quarter of 2016, a team of Metro staff members worked in partnership with the cities of Bothell and Woodinville and the University of Washington Bothell (UW Bothell) and Cascadia College (formerly known as Cascadia Community College) to ask the public about transportation needs and gaps in those communities. This process included two community surveys, regular meetings of a Stakeholder Working Group, and three Community-Based Learning partnerships with UW Bothell students. The students’ work can be found in the Appendix. The findings of the needs assessment is summarized below.

Identified transportation needs

- Reliability
- Access to transit
- On-demand service
- Flexible routing
- Transportation service information

Identified transportation gaps

- Lunchtime trips from the campus and from business parks
- Students and staff travelling to campus from far away communities
- Existing service is unreliable and often delayed by traffic
- Low awareness of existing service and tools
- Access to Woodinville Tourism District
- General commute needs
- Access to transit is difficult, long, and unsafe
- Parking garage congestion at UW Bothell/Cascadia College campus

After identifying and prioritizing transportation needs and gaps in Bothell and Woodinville, the Metro team worked with the stakeholders in an iterative process to develop solution concepts to address those needs and gaps.

Although the project focus was on alternative services, the public engagement process also identified a strong desire for additional fixed-route service in these two communities.

Customers pointed to overcrowding, reliability issues, and a growing population as particular challenges. Fortunately, the March 2016 service change package included service improvements on routes that serve Bothell and Woodinville. These improvements include increased frequency and span of service on Route 372 between the UW Bothell/Cascadia College campus and the SR-522 corridor and the expansion of the 931 DART area to parts of Woodinville that have limited fixed-route service, bringing service to Green Heights Senior Apartments and some mixed-use developments. These improvements will help address many of the needs expressed during the outreach, especially the top-priority needs for reliable service and access to the regional transit network.

Suggested Alternative Service Concepts for Implementation

To address the transit gaps not affected by the March service change, Metro suggests the following alternative services concepts for implementation:

1. **A community van program** that could provide pre-arranged recurring or one-time group trips in Metro vans, especially for students and workers seeking to access downtown Bothell and Woodinville for shopping and services.
2. **A real-time rideshare program** that would promote informal carpooling that's coordinated using a mobile application, especially for students and workers who have dynamic schedules but want to save money on transportation.
3. **A commuter van program (TripPool and home-end Vanshare)** that would address commuter first-mile/last-mile needs, especially to address access to transit and park-and-ride overcrowding.
4. **A promotional partnership in the Woodinville Tourist District** that could promote the use of transportation network companies or taxis to reach tourist destinations which lie outside the transit network.
5. **An education campaign** that would raise awareness of transit tools and services.

This multi-faceted approach will address the many diverse needs and disparate transportation gaps in these communities. Note, however, that partnership is the foundation on which all successful alternative services programs are built. Officials with the City of Bothell and UW Bothell have already expressed enthusiasm about the community van program and were open to exploring partner contributions that may include housing and managing a community transportation coordinator and providing vehicle parking. Partner contributions for real-time ridesharing and a commuter van program can include contributing to promotional efforts, assisting with communication and outreach, and helping to securing parking space.

The alternative services concepts identified for implementation in Bothell and Woodinville are estimated to have lower costs than the alternative services currently operated in King County all of which are community shuttles. Vehicle and fuel costs are lower because the vehicles used for community and commuter van programs are smaller than those used for the community

shuttles that have been implemented to-date. Estimated operating costs are lower because community shuttles use paid contracted operators while the alternative services concepts identified for Bothell and Woodinville all leverage volunteers in the community to provide shared rides.

Because the suggested alternative services concepts identified for implementation in Bothell and Woodinville are new, it is difficult predict potential ridership. Metro has calculated potential ridership estimates for two ridership scenarios, “conservative” and “optimistic.” These ridership scenarios make use of the results of the Alternative Services Preferences Survey developed as part of the Community-Based Learning partnership with UW Bothell students.

In the coming months Metro will work closely with UW Bothell, Cascadia College and the cities of Bothell and Woodinville to refine the solution concepts, provide information and material as needed to support organizational decision-making, and draft the legal and operational frameworks necessary for successful implementation. This is an opportunity for us to learn together and Metro is pleased to be working with these stakeholders in the development of new ways to improve local mobility for residents, employees, students and others in the area.

Background

Alternative Services Program overview

King County Metro's Alternative Services Program was created to develop and test new transportation services for areas of King County that, as noted in Metro's Strategic Plan, may lack the kind of land use, infrastructure, and density that support the cost-effective use of traditional fixed-route bus service. In these areas, alternative transportation services may be a better match for community needs—and more cost effective.

With the adoption of the King County Metro Five Year Implementation Plan for Alternatives to Traditional Transit Service Delivery in 2012 and a \$12 million 2015/2016 appropriation in Ordinance 17941, Metro has been providing more of these innovative transportation options by developing two-year demonstration programs tailored to the needs of local communities. These projects build on Metro's Five-Year Implementation Plan for Alternatives to Traditional Transit Service Delivery, and are designed both to mitigate significant impacts of the September 2014 service cuts and to complement Metro's existing fixed-route bus network. A report on the first eighteen months of the program is due to King County Council in the fall of 2016.

Legislative context: Ordinance 18110

On Sept. 14, 2015, the King County Budget and Fiscal Management Committee passed Ordinance 18110, which amended the 2015/2016 Biennial Budget ordinance (Ordinance 17941). The ordinance requires Metro to develop a plan for providing alternative services between the campus of the University of Washington Bothell and Cascadia College (UW Bothell/Cascadia College campus), and the cities of Woodinville and Bothell. This ordinance gave rise to the Bothell Woodinville Alternative Services project. The project's needs assessment process and public engagement took place during the first quarter of 2016.

The following excerpt from Ordinance 18110 outlines the requirements of this report.

Ordinance 18110, Page 55, P8-B, File#2015-0232 (Excerpt)

B. Of this amount, \$1,000,000 may not be expended or encumbered until the executive transmits a report and a motion that accepts the report, and the motion is passed by the council. The motion shall reference the subject matter, the proviso's ordinance, ordinance section and proviso number in both the title and the body of the motion.

The report shall address, but not be limited to:

- 1. A plan for implementation of an alternative services program providing service between the campus of the University of Washington-Bothell and Cascadia Community College and the cities of Woodinville and Bothell, which shall be designed to address travel needs of college students and employees; individuals living or working in the cities of Woodinville and Bothell; and other transit consumers;***

2. **The community outreach plan** used to identify stakeholders. The plan shall include members of the public; students, staff, and administrators of the University of Washington-Bothell and Cascadia Community College; local governments; private businesses; and other transit agencies providing service in the area, who shall be consulted on the design, financing, and implementation of the alternative services program;
3. **The costs of implementation** of a preferred alternative services program and any financial partnerships developed to pay for these costs;
4. **Potential ridership** including individuals affected by other bus service changes, geographic coverage, access and linkage to the regional transit network and the services being or planned to be delivered; and
5. **A comparison of this alternative services program's estimated cost and ridership** with the cost and ridership of other alternative services programs operated by the county in the past five years.

The executive must file the report and motion required by this proviso by April 30, 2016, in the form of a paper original and an electronic copy with the clerk of the council, who shall retain the original and provide an electronic copy to all councilmembers, the council of staff, the policy staff director and the lead staff for the transportation, economy and environment committee, or its successor.

Partnership with UW Bothell

The needs assessment and community engagement for this project were carried out in partnership with the University of Washington Bothell (UW Bothell). Under the university's Community-Based Learning Partnership program, Metro staff members worked with undergraduate students to learn about transportation mobility needs and gaps in Bothell and Woodinville. As shown in Table 1, the partnership gave students an opportunity to put their education into action while learning about transportation planning.

Three courses participated in this partnership: two sections of BIS 312, Approaches to Social Research, and one section of BIS 442, Advanced Geographic Information Systems. Additional students contributed to the survey data analysis for extra credit. The BIS 312 students contributed to the development of the second survey and made key recommendations for how to evaluate the community's preferences for different alternative services. The BIS 442 students used their GIS skills to conduct a gap analysis of the communities to identify areas in need of alternative service projects based on different factors. The original student work is included in the Appendix.

In addition to their contribution to the needs assessment and community engagement, the students provided important local insight into student travel patterns and needs. Metro staff members met for approximately one hour with each section and spent time listening to the students' perspectives and experiences with transit, parking, traffic, and other transportation

issues. At the end of the process, the students prepared presentations with recommendations for Metro and members of the public.

Table 1: Excerpt from UW Bothell Community Based Learning Program Agreement

UW Bothell Alternative Services Project: Community-Based Learning Course Deliverables	
Course Objective: <u>Identify and prioritize travel needs</u> of UW Bothell and Cascadia Community College students and employees, individuals living or working in the cities of Woodinville and Bothell, and other transit consumers.	Jan 4-March 18 2016
Advanced GIS (BIS 422)	
Spatial Analysis of Transportation Needs: Using spatial tools represent transportation needs/gaps in Bothell and Woodinville (2-5 pages). Maps may include: <ul style="list-style-type: none"> • Origin-Destination maps of UW B commuters • Concentrations of low-income and minority populations in Bothell and Woodinville • Concentrations of youth, students, or people without access to a car • Walkshed maps of existing transit routes (daytime vs night service) • Active transportation routes and facilities that access UW Bothell • Mode Split by Destination • Ridership on current routes • Existing rideshare participation rates 	March 4
Approaches to Social Research (BIS 312)	
Alternative Services Preferences Survey: Write and conduct a survey of Bothell and Woodinville residents to understand their preferences of the different alternative service options. Survey might look at the following topics: <ul style="list-style-type: none"> • Preferences for the Alternative Services options (vanpool, Vanshare, shuttle, TripPool, etc.) • Likelihood to ride different options • Frequency respondents would ride different options • Origin-Destination respondents would like for different options • Willingness to volunteer as a rideshare driver 	Feb 4
Quantitative Methods Extra Credit Students:	
Survey Analysis of One Survey: Analyze and report on the results of the first survey (Needs Assessment Survey) Include charts and graphs and some interpretation of the data.	Survey 1: Jan 22
All Courses	
Final Presentation: 15-20 min presentation to the Stakeholder Working Group, including the community context, analysis of current service, survey methodology, survey results and analysis, and recommendations.	March 11

March 2016 service changes to routes serving Bothell and Woodinville

The goal of the Alternative Services program is to complement the fixed-route bus network by filling transportation gaps in areas where fixed-route may not be the most cost-effective solution. In order to understand the transportation gaps, a comprehensive service assessment was conducted including an analysis of the March 2016 service changes that would affect Bothell and Woodinville. These changes, as implemented on March 26, 2016, are outlined below and in Figure 1.

Route 238 – Totem Lake to UW Bothell/Cascadia College campus

Route 238 has been extended from the campus to Woodinville on weekdays only, to replace coverage lost by ending Route 372 at the campus. Route 372 is a very busy route, but attracts very little ridership east of the campus, so the area has been overserved with articulated buses. Route 238 will provide a more appropriate vehicle for the market. This change will also improve reliability on Route 372 by shortening it.

Route 372 – UW Seattle to UW Bothell/Cascadia College campus

As part of the Link Light Rail service restructure the frequency of Route 372 has been increased, and shortened to end at the UW Bothell/Cascadia College campus. The service span on weekdays has been expanded until about 1 a.m.

Routes 372, 312, 522 – 522 corridor

Improved frequency on Route 372 will mean the combined frequency of routes 372, 312, and 522 between the UW Bothell/Cascadia College campus and the SR-522 corridor is now 15 minutes or better for most of the day on weekdays.

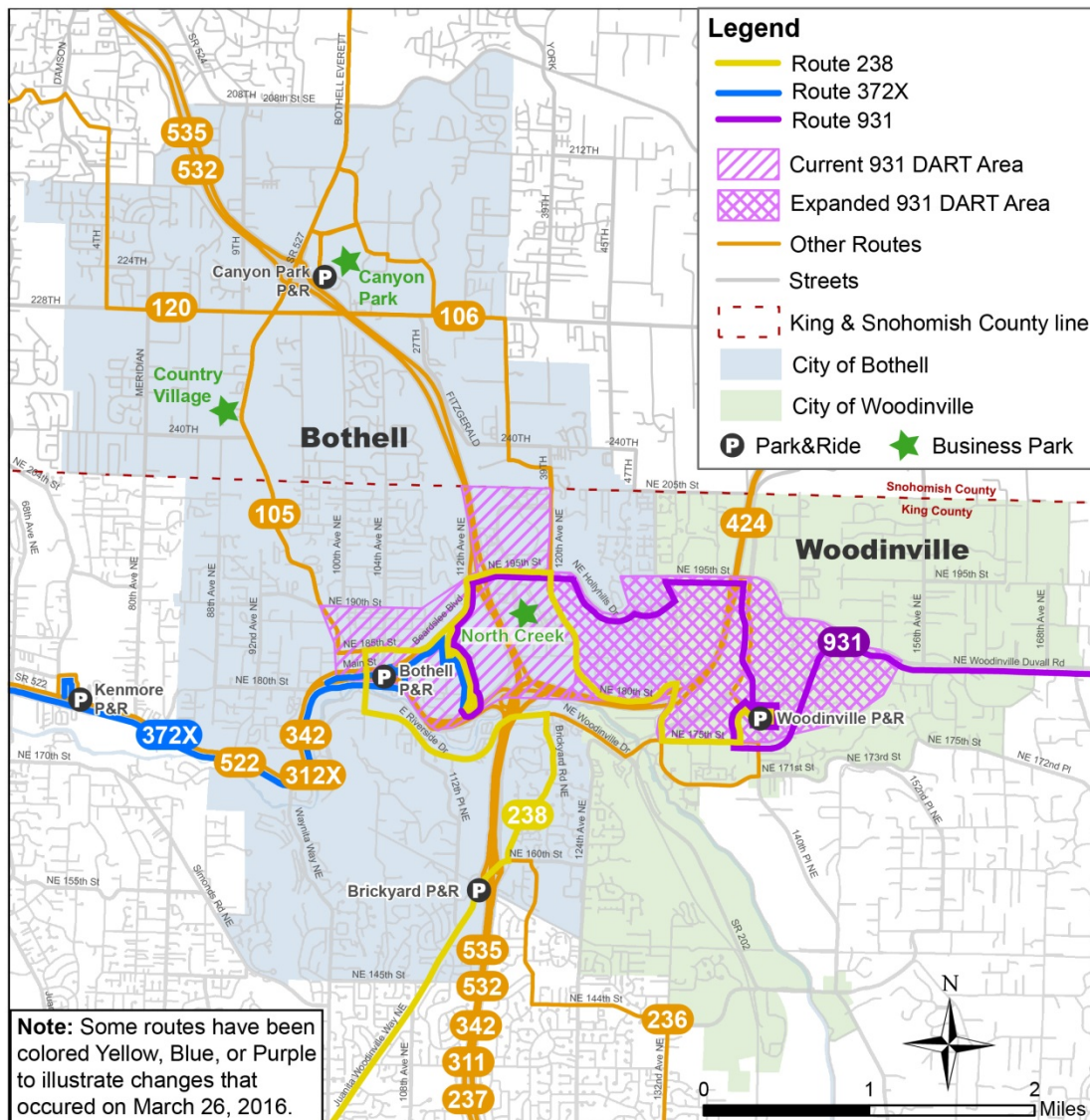
Route 522

A new set of express stops has been added on Lake City Way NE at 20th Avenue NE (southbound) and NE 85th Street (northbound). These are now the last inbound stop and first outbound stop on Lake City Way NE, prior to entering/after exiting I-5. This change will improve connections between North Seattle and Bothell and Woodinville.

DART Route 931 – Redmond to UW Bothell/Cascadia College campus

This route's DART (flexible-service) area has been expanded into Woodinville to provide greater accessibility to transit for local residents. This expansion will provide coverage in parts of Woodinville that have limited fixed-route service, and bring service to Green Heights Senior Apartments and some mixed-use developments.

Figure 1: March 2016 service changes in Bothell and Woodinville



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Route 238

- The frequency and hours of service on Route 238 remains the same. The route has been extended to Woodinville on weekdays to replace service currently provided by Route 372X

Route 372X

- Between the U-District and UW Bothell/Cascadia College campus, buses now come more often and the period of service is now longer every day. No longer provides service east of UW Bothell.

DART Route 931

- The frequency and hours of service on DART Route 931 remains the same. The DART area - or flexible service area - has been expanded into parts of Woodinville.

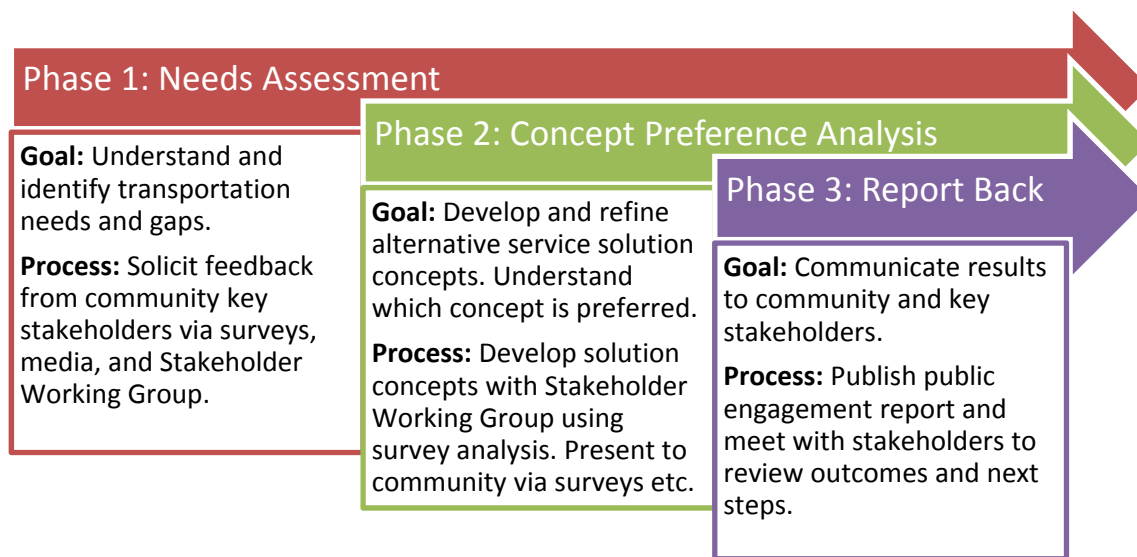
Planning process

Public engagement

Overview

When doing community outreach for the Alternative Services Program, Metro uses a three-phase process to engage residents, local jurisdictions, and organizations to facilitate community-based decision-making (Figure 2). Phase 1 focuses on identifying needs and gaps in the transportation ecosystem. Phase 2 involves developing solution concepts and presenting them to the community for comment. Phase 3 is about reporting back to the community at large as well as to key stakeholders on the outcomes of the process and next steps.

Figure 2: Three phases of public engagement



The specific public engagement activities and their timeline for Bothell Woodinville are shown in Figure 3.

Engagement goals

The following goals guide the Alternative Services public outreach process:

- Provide those affected with the ability to shape the outcome.
- Engage the community in a way that fosters trust.
- Empower people to play active roles in shaping service changes.
- Support community-based solutions.
- Be responsible and accountable to the public.

- Provide customers and the public with access to understandable, accurate, and transparent information.
- Identify and build relationships with local partners who will have a stake in the outcome of this process. Provide them with in-kind, operating, or other support to make the outcome as successful as possible.

Key stakeholders

Metro recruited representatives from local groups to be part of the Stakeholder Working Group. These groups were also targeted by all outreach efforts, especially as the online survey was promoted. These groups included the following:

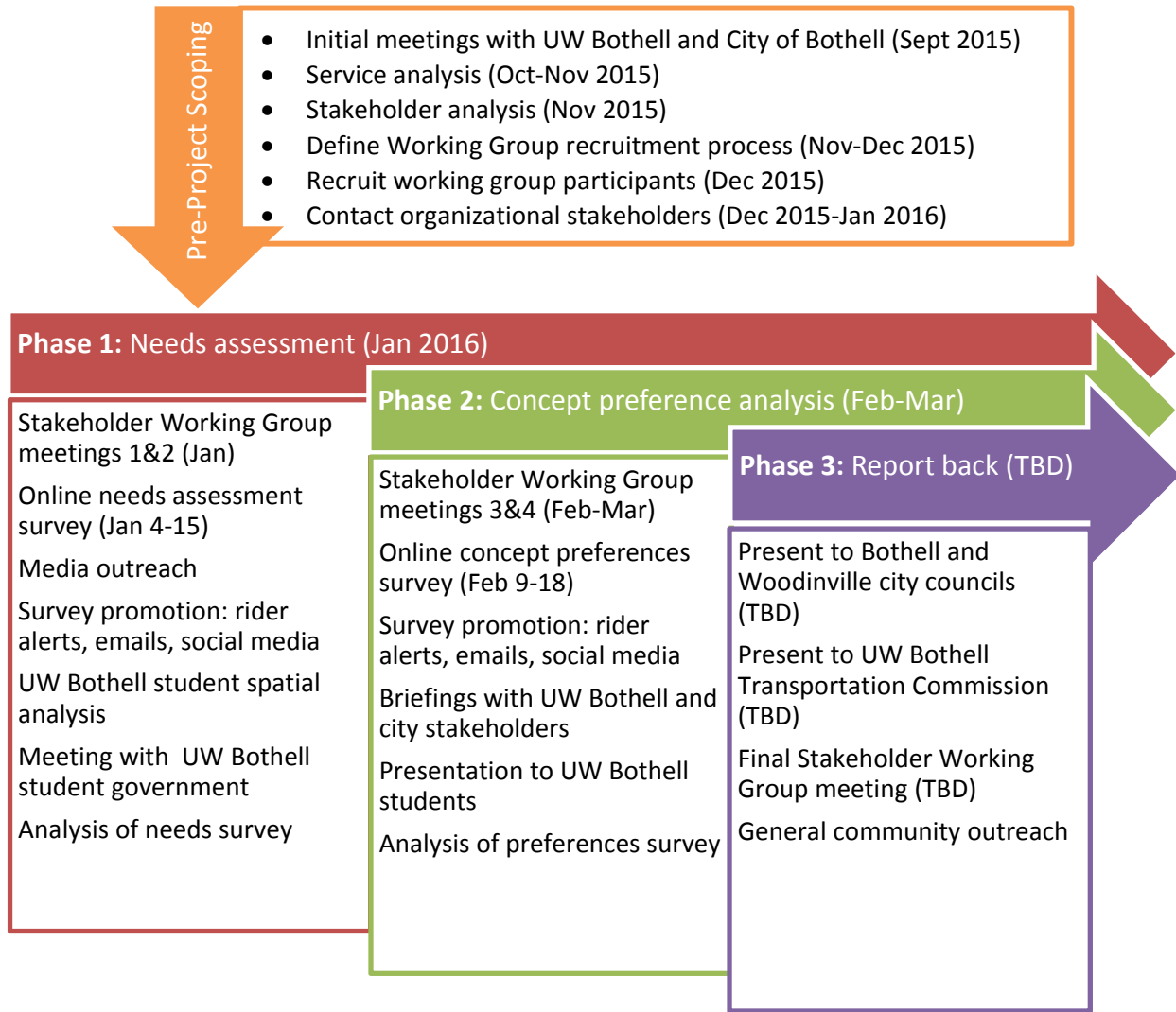
- Students, staff, and faculty at UW Bothell and Cascadia College
- Current riders in Bothell and Woodinville
- Potential riders of affected routes and alternative services
- Transit-dependent populations
- Organizations and agencies that serve transit-dependent populations
- Local businesses and chambers of commerce
- Current users of existing alternative services
- Rideshare users

Outreach activities

Metro used a wide array of outreach channels to communicate about the process to as many stakeholders as possible. These channels included:

- Metro’s online and social media “Have a Say” outlets – website content, Facebook, Metro Matters blog, twitter
- News releases, media briefings, partner social media
- Notifications – rider alert and rack cards
- Online surveys
- Display boards
- Stakeholder Working Group facilitation, meeting agendas, materials
- Accommodations for community members with limited English proficiency
- Public engagement report

Figure 3: Bothell Woodinville public engagement (Sept 2015-March 2016)



Phase 1: Needs Assessment

The goal of the Phase 1 outreach was to identify gaps in transit service. Metro started with a facilitated discussion in early Stakeholder Working Group meetings to learn about what is working and what isn't working with the current transit system, and to provide an overview of Metro's service history and a detailed service assessment of the project area.

Metro staff members then used the information they had gathered to create an online survey for Bothell and Woodinville residents and people who travel in the area. Translation services were available if needed. After the Phase 1 survey closed, Metro staff compiled the results and shared them with the Stakeholder Working Group to gain insights and facilitate discussion about how the Alternative Services Program may be able to fill the gaps.

Phase 2: Concept Preference Analysis

Phase 2 explored specific alternative services concepts that Metro designed to meet the needs identified in Phase 1. Using alternative services materials and education pieces, the group was able to look at the array of services available and decide collectively which ones will work best for their communities before taking these ideas to the general public in Phase 2. The concepts selected by the Stakeholder Working Group were real-time ridesharing, community shuttle, community van, TripPool, and Vanshare. The group also agreed that an education campaign would be an important part of any alternative services solution, to increase awareness of existing services and tools.

The Phase 2 survey asked respondents first if the transit needs they identified in Phase 1 had been accurately understood by Metro. It then presented each alternative services concept individually and requested specific feedback. The goals were to learn whether each concept met the identified need and to learn more about how people would use each concept if it were launched as a pilot.

Since this project had a compressed timeline, Metro compiled the Phase 2 survey results and then turned them into recommended concepts before returning to the Stakeholder Working Group for consideration. The working group advised Metro whether the recommended concepts should be included in the implementation plan.

Phase 3: Report Back

Phase 3 will involve summarizing and reporting information in the Public Engagement Report to key stakeholder groups including the Stakeholder Working Group, decision-makers from the cities of Bothell and Woodinville and, UW Bothell and Cascadia College. It also includes general community outreach reporting activities such as uploading the Public Engagement Report to the King County Metro website.

Integrating equity and social justice into the process

Ensuring that everyone has an equal opportunity to participate in the planning process is a central policy and a core value at King County. One of the goals of the King County Strategic Plan “Working Together for One King County,” is to “promote robust public engagement that informs, involves and empowers people and communities.” Integrating equity and social justice into Metro’s public engagement processes is essential to delivering transportation services that contribute to a more fair and just society. Metro took the following steps to integrate equity and social justice into this alternative services planning process.

Survey Participation

Metro staff members used a wide range of outreach methods to notify students, workers, and residents in Bothell and Woodinville about the opportunity to participate in the survey. Outreach tools included transit alerts, rack cards, sponsored Facebook posts, and Twitter posts. The cities of Bothell and Woodinville distributed information about the surveys to their constituents. Rack cards were distributed at the Bothell City Hall, UW Bothell, and the Bothell Library. Metro staff members sent emails to community contacts (North Shore Senior Center, Associated Students of University of Washington Bothell, UW Bothell Commuter Services, Greater Bothell Chamber of Commerce, Northshore YMCA) and asked recipients to share the survey link. King County Councilmember Dembowski’s office distributed the survey link to constituents. Metro staff members also distributed the link to employee transportation coordinators in Woodinville. Metro issued a news release on January 6 advising the community of the process, however, the story was not picked up by any media outlets.

Survey participation was strong in both phases. More than 850 individuals took the first (needs assessment) survey, and more than 500 responded to the second (concept preferences) survey.

Stakeholder Working Group

Stakeholder Working Group members were recruited from key local stakeholder groups such as the business community, community social service agencies, the UW Bothell, and Cascadia College.

Metro staff members worked to make the group’s meetings accessible to all members by working around member schedules, and broadened access by holding meetings in different locations around Bothell and Woodinville.

Outreach to specific groups

Seniors

Many seniors rely on public transportation to remain connected to their communities, families, and essential services. The Northshore Senior Center’s Transportation Manager served on the Stakeholder Working Group and advocated for the special needs of elderly community members. Metro asked Northshore Senior Center to distribute the survey to seniors in the community.

Students

Because student transportation to and from the UW Bothell/Cascadia College campus was specifically called out in Ordinance 18110, Metro made a concerted effort to encourage student representation. Metro recruited student representatives from Cascadia College and UW Bothell to sit on the Stakeholder Working Group, and invited all students to attend and participate in Stakeholder Working Group meetings. Metro staff members made presentations about the project to four UW Bothell classes (a total of about 250 students) and used the opportunity to ask students about their transportation needs. Metro staff also met with the Associated Students of the University of Washington Bothell, which provided insights and recommendations and helped distribute information about the surveys. Among those who responded to the first needs assessment survey, 9.8 percent were post-secondary students.

People of color

People of color were represented on the Stakeholder Working Group. Among respondents to the first survey, 17.5 percent identified themselves as people of color.

People with disabilities

Among respondents to the first survey, 13 percent reported they had a disability (mobility, vision, hearing, or cognitive).

Limited English proficiency

Language translation services were made available to individuals who wanted to participate in the survey in their native language. Bus rack cards advertising the surveys included a short passage in Spanish advising Spanish-speakers on how to take the survey in Spanish.

Most (97.2 percent) of the people who took the first survey were English speakers.

Low income

Respondents to the surveys reported a wide range of household incomes, but more than 50 percent reported that their incomes were over \$75,000 a year.

Gender balance

Both men and women participated in the Stakeholder Working Group meetings but generally men outnumbered women at meetings.

Findings

The public engagement process described above identified the following transportation needs and gaps in the Bothell and Woodinville areas:

Transportation needs (ranked by community-identified priority)

1. **Reliable service** you can depend on
2. **Access to transit** and park-and-rides
3. **On-demand service** that's ready when you are
4. **Flexible service** that can adapt to your changing schedule
5. **Information and awareness** about existing service and transit tools

Transportation gaps

- Lunchtime trips from the UW Bothell/Cascadia College campus and from business parks
- Students and staff members need to travel to campus from far-away communities
- Existing service is unreliable and often delayed by traffic
- Low awareness of existing service and tools
- Access to the Woodinville Tourism District
- General commute needs
- Access to transit is difficult, long, and unsafe
- Parking garage congestion at UW Bothell campus

Needs assessment survey results

The Phase 1 survey asked respondents to describe their transportation needs in terms of a variety of dimensions, including origin, destination, travel time, trip type, barriers, enabling factors, concerns, and awareness of existing programs and services.

Survey respondents identified their top three destinations in Bothell and Woodinville as downtown Bothell, Woodinville Towne Center, and Canyon Park/Thrasher's Corner. Half of respondents said they were transit riders, and of those, 42 percent said they accessed transit by driving alone. This indicates that there is a potential market for "first-mile/last mile" rideshare solutions such as Vanshare or TripPool.

Survey respondents identified the following significant barriers to riding transit in Bothell and Woodinville: having to plan around a bus schedule (44 percent), not enough evening service (37 percent), no service near home (29 percent), hard to find parking space at park-and-ride (27 percent), no service near destination (25 percent), and irregular work hours or class schedule (19 percent).

The needs assessment survey revealed low awareness of many of Metro's longstanding services and programs. Forty-nine percent of respondents said they were not familiar with RideshareOnline.com, Metro's ride-matching and rideshare portal. Fifty-two percent said they were unfamiliar with the ORCA LIFT (Low-Income Fare) program, which could be a great benefit

to residents with low incomes and students who are not participating in the U-PASS (student universal bus pass) program. Thirty-six percent said they were unfamiliar with Vanshare, and 23 percent said they were unfamiliar with VanPool. These programs can benefit commuters by giving them access to HOV/Express Toll lanes, door-to-door trips, and in the case of Vanshare, reserved park-and-ride parking. Most surprisingly, 21 percent of participants reported that they were unfamiliar with the concept of carpooling in private vehicles, so a general ridesharing promotion in the community might be of great benefit.

Eighty-nine percent of respondents said they were unsure or unwilling to participate in a ridesharing program (such as carpooling, VanPool, Vanshare, or TripPool). When asked what their top barriers were, they said their schedules are too varied (58 percent), they didn't want to rely on other people (46 percent), organizing a carpool is too complicated (22 percent), there is nobody near them that they could share a ride with (22 percent), and they are uncomfortable sharing a ride with people they don't know (22 percent). Metro's Alternative Services Program has developed new programs that overcome these barriers and so have the potential to significantly increase the number of people willing to share rides in Bothell and Woodinville.

Survey results showed that more people are satisfied than dissatisfied with the connections from Woodinville and Bothell to the UW Bothell/Cascadia College campus. Slightly more people reported being dissatisfied than satisfied with the connection between Bothell and Woodinville Towne Center.

The survey asked participants to identify the top interventions that would induce them to visit different destinations more often. Twenty percent chose "an alternative service that arrives when you need it." Sixteen percent said "more knowledge and confidence with the transit system" would help them access downtown Bothell without driving alone. Asked what would help them access the UW Bothell/Cascadia College campus more often without driving alone, 12 percent chose "an alternative service that arrives when you need it;" 11 percent chose "more park-and-ride spaces," and seven percent chose "a way to find carpool partners when I need them." Asked about accessing Woodinville Towne Center more often without driving alone, 23 percent chose "an alternative service that arrives when you need it;" 17 percent chose "an alternative service that is available during the day," and 12 percent chose "more knowledge and confidence with the transit system."

As shown in Table 2, the top desired qualities in a new alternative service were identified as "picks me up near my house," "reliable service," "high frequency," "costs the same or less than current bus service," and "gets me to destinations I can't get to now on the bus."

Table 2: Customer concept preference survey results - prioritization of needs

Question: If Metro developed a new transportation service, what qualities would it need to have to be useful to you?	
Picks me up near my house	56.68%
Reliable Service	53.39%
High frequency	52.44%
Costs the same or less than current bus service	42.99%
Gets me to destinations I can't get to now on the bus	41.57%

Alternative services concepts for implementation in Bothell and Woodinville

To address the varied transportation gaps and community-identified needs in Bothell and Woodinville, Metro suggested a suite of alternative services to the Stakeholder Working Group. Those mobility services include:

- Community van
- Real-time rideshare
- Commuter van program (home-end Vanshare & TripPool)

Metro is also suggesting the following partnership projects to support the delivery of the above-mentioned services and meet identified transportation needs:

- Promotional partnership with the City of Bothell and the Woodinville Tourist District
- Community education campaign

These alternative services are explained in detail in the following pages and summarized in Figures 4 and 5.

Figure 4: Alternative service product concepts for Bothell and Woodinville

Bothell/Woodinville Alternative Service Concepts

The March 2016 Service Change will bring fixed-route service improvements to routes 372X and DART 931. To complement these improvements Metro, in partnership with the Bothell-Woodinville Stakeholder Working Group, has developed the following concepts, which if implemented, will enhance mobility and support the use of existing transit service.

Product concepts





	<p>Community Van Community Vans are Metro owned and maintained vehicles provided in partnership to a local city for community members to take pre-scheduled group trips to popular local destinations using volunteer drivers.</p> <p>Benefits:</p> <ul style="list-style-type: none"> • Great for group trips to scheduled events (e.g. trips to concerts or to a farmers market) • Recurring, scheduled trips could be arranged for "lunch runs" from the business parks or student trips to downtown Bothell <p>Need it fills:</p> <ul style="list-style-type: none"> • Flexible • Reliable Service
	<p>Real-Time Rideshare Real-Time Rideshare leverages a mobile application to enable private carpool ride-matching to take place in real-time. Rider pays a fare and driver is reimbursed for expenses through the application.</p> <p>Benefits:</p> <ul style="list-style-type: none"> • Drivers and passengers vetted through the app • Allows users to save time and money on their commute • Users don't need to be tied to a fixed schedule • Drivers get reimbursed for their expenses <p>Need it fills:</p> <ul style="list-style-type: none"> • On-Demand • Flexible
	<p>Vanshare Vanshare provides people a way to share the ride from their home to a transit hub using Metro vans and a volunteer driver. Riders arrange their trips in advance and share the ride to/from transit with the same group of people on a fixed schedule.</p> <p>Benefits:</p> <ul style="list-style-type: none"> • Guaranteed parking • Drivers vetted by Metro • Reliable service, operates on a fixed schedule • Insurance, gas, and maintenance paid by Metro <p>Need it fills:</p> <ul style="list-style-type: none"> • Access to transit • Reliable service
	<p>TripPool TripPool leverages a mobile application to match riders between their homes, school or work and/or a local transit center in real-time. Uses Metro van, volunteer drivers, Metro fares and includes reserved parking at a park and ride.</p> <p>Benefits:</p> <ul style="list-style-type: none"> • Guaranteed parking • Drivers vetted by Metro • Request a ride when you want to leave • Insurance, gas, and maintenance paid by Metro <p>Need it fills:</p> <ul style="list-style-type: none"> • Access to transit • On-Demand • Flexible

Figure 5: Alternative Services concept delivery package

Service delivery package

 <p>Community Van Partnership Metro and a community partner will jointly deliver the Community Van service</p> <ul style="list-style-type: none"> • Determine partner jurisdiction/organization • Partner designates a local transportation coordinator which will be partially funded by Metro • Develop a Community Hub to post transportation info • Volunteer driver recruitment and trip promotion 	 <p>Parking Partnership Metro will reserve parking at Park and Rides and potentially partner parking lots for TripPool and Vanshare Participants.</p> <ul style="list-style-type: none"> • Determine parking need • Determine optimal location for parking spots • Negotiate use agreement for the parking spaces including use, enforcement, and signage 	 <p>Woodinville Tourism District Partnership</p> <p>Foster partnerships with ride-hailing companies better serve the Woodinville Tourism District</p>
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Education campaign with incentives
Direct mail to Bothell/Woodinville residents and UWB/CC students and staff including the following:

 <p>Neighborhood Travel Map</p> <p>Map that details all the transportation options available to the public</p> <ul style="list-style-type: none"> • Bus routes/stops • Sidewalks/bike facilities • Major community destinations • New alternative transportation services • 10-minute walkshed 	 <p>Information about new service</p> <ul style="list-style-type: none"> • Details on fixed-route service improvements in the March service change • Introduction to the Alternative Services products 	 <p>Information about tools and services</p> <p>Real-time bus arrival</p> <ul style="list-style-type: none"> • OneBusAway • BusFinder <p>Trip Planning</p> <ul style="list-style-type: none"> • Metro Trip Planner • Google Transit <p>Ridesharing resources</p> <ul style="list-style-type: none"> • Rideshareonline.com • Community Van trips • iCarpool • Commuter Van Programs 	 <p>Incentives to join VanShare, Community Van, TripPool, and Real-Time Ride Share</p> <ul style="list-style-type: none"> • Rewards and reserved P&R parking for new VanShare participants • Rewards and reserved P&R parking for new TripPool participants • Rewards for new Real-Time Rideshare users • Rewards for Community Van users
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Community van

This new transportation pilot program is provided in partnership with participating cities. It provides prearranged recurring, or one-time group trips that meet locally identified transportation needs. Metro owns the vans and provides fuel, maintenance, and vehicle insurance.

Trips are scheduled in advance and vans are driven by volunteers who are screened and approved by Metro. Trips are coordinated by a part-time community transportation coordinator (CTC), who is hired by the local jurisdiction and partly funded by Metro. This coordinator promotes van trips and raises community awareness through a website, letting riders know how to join group trips and volunteer to drive.

Riders are picked up at prearranged stops along the way to the destination. Riders pay standard Metro fares, and the trips are free for volunteer drivers. Partnering jurisdictions define and prioritize community van trips, provide advice on community needs, promote services through existing communication channels, and provide parking spaces for vans. They also provide administrative oversight and a work station for the community transportation coordinator.

Metro recommends a community van to provide service between the UW Bothell/Cascadia College campus and the cities of Woodinville and Bothell. This would help address the travel needs of college students and employees and people who live or work in the cities of Woodinville and Bothell as well as other transit consumers. The program would address many of the transportation gaps identified for this area, including midday lunch trips, weekend trips for students who live on campus, and trips to the Woodinville tourism district.

Benefits

In addition to vehicles, fuel, maintenance, insurance, volunteer driver screening, and funding for a part-time community transportation coordinator, Metro provides the coordinator with training and staff oversight to promote and implement transportation products and services.

Metro also provides a community transportation hub, an online and/or physical “one-stop-shop” for community members to find local transportation options. A physical hub could also serve as a place for community members to meet with the community transportation coordinator about the community van and other local travel options. It might include kiosks with information on Metro and other local transportation services, maps, parking for community vans, and possibly other transportation resources such as a TripPool stop and shared or rental bikes.

Benefits for the community

- Trips are planned and scheduled to meet community needs

“Carpooling applies to more than workers. Volunteers carpool, retired people carpool to games, concerts, shows, plays etc. The world of work has no exclusivity on carpooling!!”

— Survey respondent

- Fills transportation gaps and gives riders more travel options
- Reduces local traffic congestion and improves air quality by sharing the ride
- A Community Transportation Hub creates a one-stop-shop for transportation resources

Benefits for riders

- Travel to destinations that may not be easily reachable via other transit options
- Evening and weekend trips
- Reliable recurring trips
- Pay one standard Metro fare for a round trip
- Access to HOV lanes and carpool parking
- Access to vehicles for larger groups

Why it's a good fit

Metro has suggested the concept of a community van as an alternative service for Bothell and Woodinville because it will fill identified transportation gaps, including:

- Shared lunchtime trips from the campus and business parks
- Access to the Woodinville tourism district and other common destinations
- Midday trips for students and faculty members who don't want to lose their parking spaces
- Evening and weekend trips for students who live on campus

Most survey respondents agreed that a community van would meet several of the identified transportation needs (flexibility, reliability, and access to regular transit). Twenty-seven percent of respondents said they were likely or very likely to try a community van. Of those, 56 percent said they would use it at least once a week.

The top three qualities respondents liked about a community van were, "Knowing that I can request a trip to anywhere I want to go," "Knowing that I can save on the cost of transportation," and "Knowing that the transportation coordinator will coordinate the trip details and find a volunteer driver." One respondent wrote, "I could use this for trips/educational for students I work with. I don't have a budget for school buses to take teens that I work with on field trips. This could be used for important humanitarian trips of value."

Partnership

Officials with the City of Bothell and UW Bothell were enthusiastic about the possibility of partnering with Metro on a community van program. Both organizations felt it could bring value to their constituents and have the flexibility to adapt to evolving needs, and both were open to the partnership requirements (hiring a community transportation coordinator and providing vehicle parking).

In addition to housing the community transportation coordinator and vehicles, the local partner must also provide strong promotional support for the program. This will help ensure the

success of the program by aiding in the recruitment of volunteer drivers and the dissemination of trip information to potential riders.

Real-time rideshare

This option provides informal carpooling that's coordinated using a mobile application (app) called iCarpool. Using the app, individuals driving in their personal cars can offer rides to other people going the same way. The app platform allows users to find each other, rate other users, and even reimburse the driver for a portion of the travel costs. The iCarpool app integrates easily with RideshareOnline.com, King County Metro's ridesharing platform, allowing users to track their trips and qualify for rewards and incentives from Metro.

Benefits

Real-time ridesharing takes advantage of thousands of empty seats on our roads today. It's a modern approach to a proven means of reducing traffic congestion. Ridesharing makes better use of existing transportation infrastructure, making it a cost-effective alternative service.

Real-time ridesharing would benefit residents, students, and employees in Bothell and Woodinville in the following ways:

- It creates more affordable and available transportation choices for people who want to travel car-free.
- It allows people who need to drive with an easy way to share their rides with other community members. Users can rate each other after the ride.
- It allows people to share trip costs with the driver fairly and securely.
- It allows people to share the ride without commitment or fixed schedules, making it a perfect choice for students who may have a different class schedule every day.

“Overall, I think King County Metro is doing a great job in a resource limited environment. Hats off to you and thanks for the opportunity to voice.”

— Survey respondent

Why it's a good fit

Real-time ridesharing would provide on-demand service and flexibility, meeting two of Bothell and Woodinville's identified transportation needs. It can be used for all types of trips and can fill many of the Stakeholder Working Group's identified transportation gaps, including lunchtime trips, trips to the Woodinville tourism district, trips to and from the UW Bothell/Cascadia College campus, and commute trips.

Partnership

Local jurisdictions and employers can partner with Metro to support Real-time ridesharing by participating in coordinated marketing, promotion, and communication efforts.

Commuter van programs (TripPool and home-end Vanshare)

Metro is recommending a commuter van program (TripPool and home-end Vanshare) to

address commuter first-mile/last-mile needs and increase access to the regional fixed-route transit network—both community-identified needs. This solution would specifically seek to provide shared-ride access to the transit network from suburban communities that are more than a quarter-mile away from a bus stop. By providing rideshare vans and a guaranteed park-and-ride parking space, these programs help reduce parking overflow and improve access to transit.

TripPool and home-end Vanshare are similar rideshare programs with two important differences: Vanshare is based on a fixed schedule, and requires five participants who share the monthly cost of the van, while TripPool works for customers with dynamic or irregular

schedules and passengers pay for trips taken. Both are Metro rideshare programs that provide commuters with vans for shared group trips between their neighborhoods or a common community stop and a park-and-ride or transit center. Metro partners with other transit agencies and jurisdictions to reserve guaranteed parking spaces for TripPool and Vanshare vehicles.

Vanshare has been available for many years but has traditionally been seen as a last-mile solution. Vanshare groups are provided with a parking space as well as the vehicle and its fuel, maintenance, and insurance.

One or two Vanshare participants volunteer to be drivers. In the morning, they pick up their neighbors on the way to the park-and-ride. Group members then disperse to their different transit routes. In the evening, they meet up again at the park-and-ride to share the ride back to their neighborhood.

This option is perfect for commuters who use transit and have a regular schedule but live too far from a bus stop to walk. Participants are not required to commit to a five-day schedule; it's not uncommon for users to use Vanshare part of the week and another transportation mode the rest of the time, however all participants share the monthly cost of the van. In addition, Metro provides an emergency ride home benefit to participants that would cover the cost of taking a taxi home in case they have an unplanned emergency.

TripPool is a new Metro service that uses a smartphone app to allow participants to coordinate rides in real-time. TripPool drivers are provided with a commuter van, fuel, maintenance, insurance, guaranteed park-and-ride spots, driver orientation, and an emergency ride home benefit.

The volunteer drivers log in to the app to accept trips from pre-registered riders during the morning or evening commute. Riders use the app to indicate to the driver that they would like a pick-up. The drivers pick up their riders at designated stops along the way to the park-and-ride. The app lets users coordinate and communicate. Riders pay a fare for each trip through the

“Thanks for asking users what we need. I am a loyal and daily bus rider, and I hope to benefit from improvements made on the basis of this survey.”

— Survey respondent

app. The cost of the ride is reimbursed to ORCA card-holders who register their card with RideshareOnline.com. If a rider misses the ride or must leave work early due to an emergency, he or she can use the emergency ride home benefit.

Benefits to the community

- Increases effective capacity of park-and-rides and delays the need for new parking infrastructure
- Reduces local traffic congestion by helping people share the ride
- Provides an additional transportation choice for people who live more than a quarter-mile from a transit stop
- Improves air quality by reducing the number of private vehicles on the road
- Reduces spillover into areas around the park-and-ride

“This [TripPool] would be an interesting option from Canyon Park – Park N Ride to the various offices in the Canyon Park office complex.”

— Survey respondent

Benefits to riders

- Vehicle, fuel, maintenance, insurance are included
- Metro supports volunteer driver recruitment and ride coordination
- Options for people with regular and variable work schedules
- Emergency Ride Home program provides a back-up plan during unforeseen emergency
- Guaranteed parking space for the TripPool or Vanshare commuter van

Why it’s a good fit

TripPool and Vanshare could fill the following identified transportation gaps:

- General commute needs
- Improved access to transit (currently defined as difficult, lengthy, and unsafe)

More than 65 percent of survey respondents agreed that TripPool would provide flexibility and better access to transit. Twenty-seven percent said they were very likely or somewhat likely to try TripPool. Of those, 75 percent said they would use it at least once a week. Those who said they were likely to try TripPool said the guaranteed parking space, flexible schedule, and ORCA integration appealed most to them.

Survey respondents who preferred a reliable transportation option with a regular schedule said Vanshare was a better option for them. More than 55 percent agreed that Vanshare would provide reliable service and access to the regional transit network. More than 21 percent of respondents said they were somewhat likely or very likely to try the program. Of these, 50 percent said they would use it three or more days a week. Those who were interested in Vanshare said they were attracted to the guaranteed parking and ability to use HOV/express toll lanes. One of the benefits of Vanshare is that it can be a first- or last-mile solution, meaning it can get people from home to transit or from transit to work.

Partnership

Vanshare and TripPool programs rely on enthusiastic promotional efforts from local partners, and on collaboration with parking entities. Raising awareness of these options and persuading commuters to try a new transportation choice takes consistent, ongoing messaging from trusted local organizations, including jurisdictions, educational institutions, and employers. Employers can help by including a Vanshare subsidy as part of their employee transportation benefit package. Local organizations can support Vanshare and TripPool programs by participating in outreach and marketing efforts.

Woodinville Tourist District Partnership

During the public engagement process community members identified an important transit gap in the Woodinville Tourist District. Many survey respondents and stakeholder group members said the area has no fixed-route service and that they would go to the Woodinville tourism district more often and without driving alone if an alternative service were developed to serve that area. However, these trips are different from the rest of the transportation needs identified through the outreach process. Tourists want to access the area from hotels in Bothell for one-off trips on weekends and evenings. Employees want to reach the area during their work hours, but these work hours may be irregular and fall outside the peak.

This is an opportunity to partner with the local ride-hailing (aka ride-sourcing or transportation network company) industry. These companies, including Uber, Lyft, and taxis, are well-suited to fill this transportation gap. They have a strong technical platform for matching riders with private contracted drivers, and, in the case of the transportation network companies, they have a dynamic pricing structure that motivates drivers to meet the demand as it goes up and down.

There's an opportunity to explore a promotional partnership to create a benefit to customers who take TNCs or taxis to the Woodinville Tourist District rather than driving alone. This partnership has yet to be negotiated but if all parties can come to agreement there is the potential to expand ride-hailing as a private-sector Alternative Service for this trip need.

These are wonderful ideas to try out asap in Bothell area. I am a daily commuter to Seattle Downtown, struggling to get a parking spot. This alternate services will help our community in a greater way and most importantly will help in reduce pollution / traffic and save lot of time and money for public. Eagerly waiting to see these vehicles on the residential road of Bothell.

— Survey respondent

“...there could be an education program about vanpool aiming toward college students. Most students have never heard of this program and could potentially be serviced by this... we love the creativity of the proposed solutions in reaching these unserved areas.”

— UW Bothell Student

Education Campaign with Incentives

The survey and stakeholder working group process revealed that many people in Bothell and Woodinville were unaware or unsure of many of the transportation options and tools already available to them. One stakeholder group member noted that some people might not even be aware of the time it takes to walk a mile which might lead to the perception of transit gaps where none exist. Many new tools have been developed very recently that help people overcome barriers to using transit. There is an opportunity to reduce the perception of a transit gap by increasing awareness of transit choices and tools in the Bothell-Woodinville communities.

Metro is recommending a community-wide education campaign to raise awareness of transportation options, tools, service change, and rideshare opportunities. In addition, special limited-time incentives for Bothell and Woodinville residents could be offered for those who switch to a TripPool, Vanshare, Community Van, or Real-Time Rideshare as well as other sustainable transportation modes. This education campaign would include social media, a “We’ll Get You There” webpage, the creation of a neighborhood travel map, a community wide direct mail campaign, and possibly event outreach at the UW Bothell campus.

A Note about Community Shuttles

The public engagement process revealed a strong appetite for reliable fixed-route bus service. Some of this interest was expressed in the response to the community shuttle option in the Phase 2 survey. In the second survey, 49% of respondents noted that community shuttle was, out of the five service concepts presented, the service they were most likely to try. Fortunately Metro is able at this time to make improvements to bus service that will provide customer value above and beyond what could be provided by a shuttle. In addition, there are a number of reasons why Metro is not considering a shuttle at this time:

1. Metro, Sound Transit, and Community Transit have fixed route bus service within the city of Bothell and Woodinville. As previously described, in March 2016, Metro will be improving the frequency and coverage of some routes within Woodinville and Bothell. Community Transit will also be adjusting some of its service to improve connections in North Bothell. These improvements will likely answer some of the concerns for better bus service.

2. Customers have a strong preference for direct routes over a circuitous path. The circulator route which was suggested by some of the stakeholders would connect key Bothell destinations in a large loop requiring customers to take a long, circuitous path to reach their desired destination. Most all of the connections that would be made by this circulator route are currently made by Metro, Sound Transit, and Community Transit fixed-route service. Customers tend to prefer to travel in a direct line to reach their destination because travel time is shorter. Customers often say that a direct route feels like a better use of their time. Commuters especially tend to avoid circulator routes.

In the second community survey customers expressed concerns with the need to plan around an infrequent schedule and take a circuitous route to their destination. Many survey respondents expressed that they want buses for long-distance travel (to downtown Seattle or Bellevue) but prefer to use a car or walk for local trips.

3. Customers tend to be unwilling to wait for infrequent service. There is a tradeoff between frequency and coverage. Community Shuttles tend to maximize coverage, which means there are fewer resources to put towards frequency. In general, the more circuitous and expansive the route, the less frequent it can be run, within a fixed budget. Metro's existing community shuttles run at 30 minute headways during short weekday spans. 75% of survey respondents were not willing to wait for more than 20 minutes for a shuttle ride.

4. The market for this type of service is small in this community and would lead to an inefficient use of resources. Customers in Bothell and Woodinville expressed a desire for commute service to work and campus with higher than 20 minute frequency. Moreover there is currently underlying service along most of Bothell's recommended circulator route. This means that the demand for community shuttle service would be low. Community shuttles have high capital and operating costs due to the need for specialized vehicles and paid drivers. Because ridership is projected to be quite low, a community shuttle would likely lead to high costs per rider.

The main appeal of Community Shuttle in Bothell and Woodinville appears to be that it has all the elements of regular fixed-route service: a paid driver, ORCA fare system, and a regular timetable. Survey respondents wrote that they appreciated that "it is a Metro vehicle with a trained Metro driver," and has, "safety- driven by trained and screened Metro employees." Fortunately this year Metro is able to do better than a community shuttle – in March 2016 Metro will be improving frequency and accessibility of bus service in both Bothell and Woodinville.

Implementation Work Plan

A Plan for the Implementation of the Alternative Services Program

The Alternative Services concepts suggested for implementation for Bothell and Woodinville include a suite of new services as well as an education campaign to promote participation. Key elements of the implementation work plan are summarized in Table 3. Because of there are many components to this program, a phased approach to implementation is recommended.

Phase One: Partnership Development

Partnerships are at the core of a successful Alternative Services program. The first phase of the project will involve solidifying partnership agreements with jurisdictions, UW Bothell, Cascadia College, and private organizations. Partnership development will include negotiating shared goals and objectives, definitions of success, monitoring and evaluation schedules, implementation responsibilities, information sharing procedures, and conflict resolution processes. Metro and partners will draft and sign Memoranda of Understanding (MOUs) that describe the agreed upon roles, responsibilities, and timelines. This phase may take up to three months depending on organizational timelines.

Phase Two: Vehicle Acquisition and Logistics

The logistical side of the implementation process will involve tasks such as vehicle and equipment procurement, parking identification, and sign production. A Transportation Coordinator for the Community Van will be hired and trained.

Development of some of the educational campaign components will also take place during this phase. These tasks will include creating the RideshareOnline.com network, incentive program, and Emergency Ride Home program. The Metro web developer will be tasked with developing the “We’ll Get You There” website with input from the local partners. A contractor will be hired to begin work on the neighborhood travel map.

Phase Three: Education, Recruitment, Promotion, and Marketing

This phase involves developing and executing the education campaign and recruiting volunteer drivers for the Community Van, Vanshare, TripPool, and Real-Time Rideshare programs. A campaign plan will be developed to guide this process.

Some of the key tasks involved in this phase will include designing the direct mail package, and printing and distributing all marketing materials and maps. A social media and email marketing campaign will also accompany this process and will involve copy writing, distribution, and leveraging partner online communication channels. Recruiting program participants will require

dedicated staff time and a wide variety of marketing tactics. This process will take the most time and hands-on effort and may require 6 months to a year before all four programs have enough vetted participants to fully launch.

Table 3: Summary of implementation work plan

Bothell Woodinville Implementation Work Plan			
	Project Tasks		
Project	Phase One: Partnership Development	Phase Two: Vehicle Acquisition and Logistics	Phase Three: Education, Recruitment, Promotion, and Marketing
Community Van	<ul style="list-style-type: none"> Negotiate partnership with local jurisdiction(s) 	<ul style="list-style-type: none"> Procure vehicles Hire Transportation Coordinator (TC) Identify parking space Identify TC workplace Develop online Community Hub webpage Recruit and orient drivers 	<ul style="list-style-type: none"> Brand vehicles Develop promotional materials (brochure, poster, website)
Real-Time Rideshare	<ul style="list-style-type: none"> Negotiate partnership with local jurisdiction(s) and iCarpool app developer. 	<ul style="list-style-type: none"> Develop Incentive Structure Hire employer-side outreach contractor RideshareOnline.com set-up Set up Emergency Ride Home Program Recruit drivers 	<ul style="list-style-type: none"> Develop digital assets Write promotional copy Write and coordinate email marketing
TripPool and home-end Vanshare Incentives	<ul style="list-style-type: none"> Negotiate partnership with local jurisdiction(s). 	<ul style="list-style-type: none"> Develop Incentive Structure Procure vehicles Identify and designate reserved P&R spaces Form Vanshare groups Recruit and orient drivers 	<ul style="list-style-type: none"> Design mailer Develop social media ad campaign. Design webpage Design and procure all required signage
Education Campaign	<ul style="list-style-type: none"> Negotiate communications partnership with local jurisdiction(s), UWB Bothell, and Cascadia College. 	<ul style="list-style-type: none"> Draft copy Hire map design contractor Compile mailing list Draft “We’ll Get You There” webpage copy Coordinate web developer 	
Promotional Partnership with Woodinville Tourism District	<ul style="list-style-type: none"> Negotiate partnership with City of Woodinville, winery/brewery business organization, and ride-hailing industry. 	<ul style="list-style-type: none"> Coordinate promotion components including development of codes or coupons, rules, partnership agreement terms, brand guidance, and marketing plan. 	<ul style="list-style-type: none"> Work with partners to design marketing materials.

Ongoing Program Tasks

Once the education and incentive campaign has launched, Metro staff will need to perform ongoing program tasks that include: corresponding with potential participants, vetting and onboarding rideshare drivers, updating online channels with new content, supporting the Transportation Coordinator, paying for services, and distributing incentives and Emergency Ride Home benefits. Partners will also be involved on an ongoing basis especially with regards to promoting the Alternative Services programs using their website, email lists, social media, and other communication channels.

Monitoring and Evaluation

To ensure that this program is successful, a robust monitoring and evaluation program will be in place to observe ridership and participation trends and to address potential issues that may arise. Metro staff will report back to partners on ridership trends twice a year and will work with partners to modify and adapt as needed as well as to inform promotion strategies.

Implementation Team

A Metro implementation team will be made up of staff from the Metro Alternative Services program, Metro Rideshare and Paratransit Operations, and Metro Marketing departments. The Implementation Team will work closely with the partner jurisdiction(s) and the UW Bothell and Cascadia College. The Implementation Team will also report regularly to the Stakeholder Working Group.

Stakeholder Working Group

A new Stakeholder Working Group will be formed to guide and support the implementation of the Alternative Services program. The Group will be made up of members of the former Stakeholder Working Group who participated in the needs assessment public engagement process as well as communications and planning staff from Bothell and Woodinville, the business community, staff and students from UW Bothell and Cascadia College, and local community social service agencies.

Timeline

Staff resources are the biggest variable that will determine the timeline for implementation. At the current staff levels and on-going project loads, Metro estimates that the Bothell Woodinville project will take approximately one year from implementation start date to be fully implemented. This is consistent with other large-scale multi-jurisdictional Alternative Services programs underway in the County. However, program elements will be rolled out over that period with several components implemented sooner.

Community Outreach Plan

This plan describes how Metro will include members of the public, students, staff, and administrators of the UW Bothell and Cascadia College, local governments, private businesses, and other transit agencies providing service to the area in the design, financing, and implementation of the suggested alternative services concepts. This process builds on the work of the winter 2016 public engagement process described earlier and leveraging the relationships Metro has built with local stakeholders.

Goals

The following goals will guide the community outreach component of the implementation work plan.

1. Raise awareness of the Alternative Services project and implementation with Bothell and Woodinville communities, transit riders, and project participants.
2. Promote the use of the new Alternative Services products – Community Van, Real-Time Rideshare, Commuter Van Program (TripPool and home-end Vanshare), and the Woodinville Tourist District Partnership.
3. Educate residents about transportation options in their communities and encourage learning about the public transit system in general and how to use buses and new Alternative Services to get the best value out of services available in each community.
4. As necessary, engage residents in community-based decision-making about the services and how to make their implementation and operation as successful as possible.

Stakeholders and audiences

Metro strives to communicate to all impacted stakeholders. The following groups have been identified as target audiences for communications related to this project.

- Peak-time commuters in Bothell and Woodinville
- Non-commuters and midday travelers in Bothell and Woodinville
- Park-and-ride users in Bothell and Woodinville
- Bothell and Woodinville elected officials and city staff
- Stakeholder Working Group members
- People who participated in previous surveys commenters
- Transit riders of all-day routes 236, 238, 372, 522, 535, CT105 and peak-only routes 237, 311, 312X, 342, DART931, 532, CT106, CT424
- Employees of CTR-affected work sites
- Community Transit and Sound Transit
- UW Bothell and Cascadia College students, staff and faculty
- Residents, employers, and underrepresented populations in Bothell and Woodinville

Outreach activities

The following indicates which messages and mediums will be used to communicate with different stakeholder groups.

Consultation on design, financing and implementation

- Members of the public
- Students, staff and administrators from UW Bothell and Cascadia College
- Cities of Bothell and Woodinville
- Private businesses in Bothell and Woodinville
- Community Transit and Sound Transit

Email notifications

- Stakeholders
- Transit Alert subscribers
- Outreach participants

Stakeholder briefings

- Local elected officials – Bothell and Woodinville
- UW Bothell and Cascadia College

Working Group

- Email members updates as the ordinance moves through County Council
- Reconvene the group if Alternative Services are implemented to provide an update and consider partnerships.

Partner marketing, promotion

- Identify and work with appropriate staff at the cities of Bothell and Woodinville, UW Bothell, Cascadia College, and interested employers to promote the Alternative Services implemented, including with online, social media, print, and face-to-face opportunities.

Earned media, social media

- Provide stories to The Woodinville Weekly & Northlake News, Bothell/Kenmore Reporter, Bothell Bridge (City of Bothell), The Navigator (Northshore Senior Center), plus area blogs and regional media
- Use King County social media to promote the new services

Advertising

- Consider purchasing print and online media ad space
- Consider purchasing Facebook advertising

Face-to-face events

- Staff ride area routes and talk with riders about the new services and encourage them to visit the website, call staff, download apps, and take informational materials.
- Do outreach events with ORCA to-go or tabling at community events.
- Hold “coffee and donuts” in the morning to inform riders of the new services at park-and-ride lots and popular bus stops.
- Attend local events to recruit potential TripPool, Vanshare, and Community Van drivers and riders.

Communications products and materials

- Website updates
- Brochures
- Posters
- Mail/mail inserts/bookmarks
- Rack card
- Blog, social media posts
- Resource sheet for people with special needs
- Resource sheet for city staff to communicate with residents

Community Outreach Timeline

The community outreach plan will be implemented in phases.

Community Outreach Phase 1: Notification to stakeholders about implementation (month one)

- Email update to Working Group members, route subscribers, and project participants
- Update to website
- Stakeholder briefings
- Consultation on design, financing and implementation

Community Outreach Phase 2: Launch Alternative Services product(s) once each is established (months two through six)

- Meet with Stakeholder Working Group – solicit their support in launching and promoting alternative services
- Update website – including program details for each new service
- Email update to working group members
- Produce collateral to describe various alternative services

- Host casual events at community gathering places and park-and-rides to promote new services
- Use advertising and promotional activities as budget allows to raise awareness and market new services
- Use traditional media relations and social media to tell the Alternative Services story

Community Outreach Phase 3: Ongoing monitoring and promotion (after each product is launched until end of pilot period)

- Check in with Working Group and solicit feedback and areas of improvement about how Alternative Services are working
- Stakeholder briefings as needed
- Monitor customer service issues and trends for areas of improvement

Estimated Costs of Implementation

The Bothell Woodinville Alternative Services project would include the suite of projects and services described earlier in this report. These services have been estimated to require a total project budget of approximately \$626,000. Costs (and potential ridership) are estimated on a two-year basis because all Alternative Services projects are two-year demonstration projects. The different components of the project budget are summarized in Table 4 and include:

- **Capital:** Assets purchased by Metro for this project specifically including vehicles, phones, and vehicle branding.
- **Two-Year Fuel Costs:** An estimate of fuel costs based on current commuter van rates.
- **Two-Year Non-Fuel Operating:** These expenses exclude fuel and Metro overhead but include the salary of the Community Transportation Coordinator, vehicle insurance and maintenance, emergency ride home benefits for all riders, etc.
- **One-Time Start-Up Expenses:** Includes costs like driver vetting and incentive offers.

Table 4: Estimated project costs

Project	Capital	Two-Year Fuel	Two-Year (non-fuel) Operating	One-Time or Start Up Expenses	Estimated Project Cost
Community van	\$88,000	\$20,000	\$137,000	\$1,000	\$246,000
TripPool/Vanshare	\$148,000	\$27,000	\$138,000	\$3,000	\$316,000
Real-time rideshare	\$0	\$0	\$20,000	\$4,000	\$24,000
Woodinville Tourist District Promotional Partnership	n/a	n/a	\$10,000	n/a	\$10,000
Education campaign	n/a	n/a	n/a	\$30,000	\$30,000
Total estimated project cost					\$626,000

The details of the community partnership required to implement these services have not yet been negotiated. Partnerships may involve financial contributions from jurisdictions or private entities but they may also be promotional or in-kind. No agreements have been made as of yet but local jurisdictions and organizations have already expressed interest in contributing to the success of these services.

Potential ridership

This section addresses potential ridership by first identifying the market potential for each of the individual products that comprise the alternative services program concepts identified for implementation and then using survey results to develop both conservative and optimistic measures of potential ridership.

Given the experimental nature of these projects and the multiple variables that influence ridership levels Metro has calculated potential ridership estimates for two scenarios: “conservative” and “optimistic”. Table 4 describes how these estimates are calculated. The conservative estimate assumes the rider will ride less frequently while the optimistic estimate assumes higher usage.

General Assumptions

The following describes the general assumptions made for estimating potential ridership:

- For the purposes of estimating market potential, it was assumed that 20% of people who said they would be “very likely” to use the service would actually do so and 10% of people who said they would be “somewhat likely” to use the service would actually do so. This assumption is based on data from Communities In Motion campaigns.
- Participants who stated they would use a service “less than once/week” were assumed to take the service once every 21 days in the conservative estimate and once every 14 days in the optimistic estimate.
- Participants who stated they would use a service “more than 3 days a week” were assumed to use the service 5 days a week in the optimistic estimate and 3 days a week in the conservative estimate.
- The implementation of any product includes marketing and incentives similar to a Communities In Motion campaign; the ridership estimates are assumed to be for a time post-launch when it can be reasonably inferred that education and outreach efforts have had time to inform and incentivize the public to use these services. Metro assumes that, at launch, these services will not immediately perform at the ridership levels indicated as the population will still be learning about and gaining familiarity with the new services in their community.
- 15% of the non-transit rider population would consider switching to transit (as determined by Metro’s Rider/non-Rider survey).
- Ridership estimates assume that services are being used for a “round-trip” of two one-way trips per stated use.

Specific Assumptions

In addition to the assumptions stated above which are valid for every product, there are a number of product-specific assumptions listed below:

Community Van

- The total market for Community Van is the entire population of the community as determined by US Census data.
- The market potential and ridership estimates assume that additional van supply is available to meet any level of demand.
- The model assumes that approximately one of every ten users of the system is a volunteer driver. This basis for this assumption is derived from the second concept preference survey.
- The model assumes rider access to a computer to check for available Community Van trips.

TripPool

- The total market for TripPool is residents of the community who commute to work as determined by US Census data.
- The market potential and ridership estimates assume that additional TripPool van supply is available to meet actual demand.
- The model assumes that approximately one of every ten users of the system is a volunteer driver. This basis for this assumption is derived from the second user preference survey.

Real-Time Rideshare

- The total market for Real-Time Rideshare is residents of the community who commute to work via car and 10% of the population of the community which commutes by bus as determined by US Census data. This market was assumed because real-time rideshare is most appealing to current car commuters and previous research on VanPools has shown that approximately 10% of the transit-using population would potentially switch to a ride-sharing program if one were convenient to them.

Vanshare

- The total market for Vanshare is people who work in community and commute to work by transit as determined by US Census data.

Table 5: Market and ridership potential

	Community Van	Real-Time RideShare	TripPool	Vanshare
Number of people in the total market	35,576	12,982	14,063	14,063
Proportion with a smart phone and a credit/debit card	N/A	75%	75%	N/A
Proportion who leave for work at approximately the same time (Two most popular 30-minute segments)	N/A	26%	26%	26%
Proportion who live within 10-miles of an over-capacity Park and Ride	N/A	N/A	80%	N/A
Proportion who are likely Transit Users*	15%	N/A	15%	15%
Target Market	5,336	2,532	488	814
Market Potential Estimation				
Stated "Very likely" to try the service	27%	7%	12%	7%
Stated "Somewhat likely" to try the service	32%	20%	26%	16%
Market Potential (Number of likely users)**	453	85	24	23
Potential Ridership - Conservative ("3 or more days/week" = 3 days; "Less than once/week" = 1 use every 21 days)				
"Would use 3 or more days/week"	19%	20%	33%	50%
"Would use 1/week"	37%	38%	43%	29%
"Less than once/week"	38%	36%	19%	18%
Boardings/week	68	13	10	12
Boardings/Year	3,550	692	532	638
Two-Year Total Ridership Estimate (conservative)	7,100	1,384	1,064	1,276
Potential Ridership - Optimistic ("3 or more days/week" = 5 days; "Less than once/week" = 1 use every 14 days)				
"Would use 3 or more days/week"	19%	20%	33%	50%
"Would use 1/week"	37%	38%	43%	29%
"Less than once/week"	38%	36%	19%	18%
Boardings/week	120	23	18	21
Boardings/Year	6,261	1,222	935	1,092
Two-Year Total Ridership Estimate (optimistic)	12,522	2,444	1,870	2,184
* This adjustment factor is only applied to the portion of the potential market that does not use transit.				
** These market potential calculations assume a 20% capture rate among those "very likely" to try the service and a 10% capture rate among those "somewhat likely" to try the service.				

Limitations

- The survey data used to determine potential ridership is not representative of the Bothell/Woodinville population as a whole. In the second concept preference survey, 73.3% of survey respondents identified as transit riders, while the more formal Rider/Non-Rider survey Conducted by King County in 2013 inferred that only 29% of the population is a transit rider. This can result in higher projected ridership than actual ridership as it is assumed that existing transit users would be more likely to try transit than non-transit users.
- Potential ridership figures were based on a small subset of responses to the survey questions as a whole. With such a small sample size (n<50 in most cases), a high degree of variance in the proportion of participants likely to use a service a given number of times/week is possible.

A Comparison of the Alternative Services Program’s Estimated Cost and Ridership

Four Alternative Services projects have been fully implemented to date: Community Shuttle Routes 628, 630, and 631 were all implemented in response to September 2014 route deletions and the Snoqualmie Valley Shuttle Route 629 was implemented in 2013 as part of a “right-sizing” planning effort. Many of the riders on routes 628, 629, 630, and 631 were existing Metro customers who had previously ridden deleted or reduced routes. The ridership on the existing Alternative Services shuttles has been estimated assuming current trends continue (Table 6).

Table 6: Previously Implemented Alternative Services - Two-Year Ridership Estimates

Alternative Service Project	Total Boardings (two-year estimates)	Details
Snoqualmie Community Shuttle Route 628	29,000	Began operating February 2015. Partially replaced deleted routes 209 and 215.
Snoqualmie Valley (SVT) Community Shuttle Route 629	36,470	Began operating 2013. Partially replaced deleted routes 224 and 311.
Mercer Island Community Shuttle Route 630	59,240	Began operating June 2015. Partially replaced deleted route 202.
Burien Community Shuttle Route 631	34,370	Began operating June 2015. Partially replaced deleted route 139.

It is difficult to fairly compare the costs and ridership of the previously implemented projects and the project concepts identified for implementation in Bothell and Woodinville. The service

offering is very different and so are the community characteristics such as demographic make-up, geography, existing fixed-route bus service etc. Moreover, Bothell and Woodinville have not recently lost Metro routes; in fact these communities have received improved service in the March 2016 service change. Finally, an advantage of the Alternative Service concepts for implementation in Bothell and Woodinville relative to previously implemented alternative services projects is “scalability.” Adding new service is relatively easy as ridership grows. Similarly, when ridership drops, service can be relatively quickly decreased.

For comparison purposes, conservative and optimistic two-year ridership estimates of the Alternative Services for Bothell and Woodinville have been calculated using the market potential methodology described above. These estimates are provided in Table 7 below. As noted in the assumptions for the market and ridership potential in Table 5, these estimates are based on the frequency with which the rider is expected to take the service. The upper “optimistic” end of the range assumes potential riders would take the service more often while the “conservative” end of the range assumes they would ride less frequently. The range of total ridership over the two-year period is estimated to be between approximately 11,000 and 19,000 rides. Metro anticipates that the actual ridership will likely fall somewhere in the middle of this range and will vary from month to month. Ridership will likely start low and grow as awareness of the program spreads.

Table 7: Bothell Woodinville Alternative Services two-year ridership potential

Alternative Service Project	Potential Ridership - Conservative (Two-year estimates)	Potential Ridership - Optimistic (Two-year estimates)
Bothell Woodinville Community Van	7,100	12,522
Bothell Woodinville Real-Time Rideshare	1,384	2,444
Bothell Woodinville Commuter Van Program (TripPool/Vanshare)	2,340	4,054
Total	10,824	19,020

Table 8 compares the costs of previously implemented Alternative Services projects and the estimated costs of the service concepts suggested for implementation in Bothell and Woodinville. The costs included here are capital, fuel, and operating. Start-up costs, the Education Campaign, the Woodinville Tourist District Promotional Partnership, and Metro overhead are not included in order to make a more equivalent comparison with the community shuttles.

Table 8: Cost comparison of previously implemented Alternative Service projects

Project	One-Time	Two-Year Estimates		
	Capital	Two-Year Fuel	Two-Year Non-Fuel Operating*	Two-Year Project Costs**
Alternative Services Programs Operated in King County in the Past Five Years				
Snoqualmie Community Shuttle Route 628	\$329,000	\$109,000	\$568,000	\$1,006,000
Snoqualmie Valley Community Shuttle Route 629 (SVT)	\$248,000	\$78,000	\$650,000	\$976,000
Mercer Island Community Shuttle Route 630	\$482,000	\$53,000	\$535,000	\$1,070,000
Burien Community Shuttle Route 631	\$122,000	\$20,520	\$417,000	\$559,520
Suggested Alternative Services Program for Bothell and Woodinville***				
Bothell Woodinville Community Van	\$88,000	\$20,000	\$137,000	\$245,000
Bothell Woodinville Real-Time Rideshare	\$0	\$0	\$20,000	\$20,000
Bothell Woodinville Commuter Van Program (TripPool/Vanshare)	\$148,000	\$27,000	\$138,000	\$313,000

*Service Hours, maintenance, insurance, emergency ride home

**Excluding Metro overhead, marketing, one-time start-up costs, and promotional costs

***The costs associated with the education campaign and Woodinville Tourism District partnership are not included here as they are not ongoing transportation services, but are rather part of the service delivery package.

In general, the suggested alternative services concepts for implementation in Bothell and Woodinville have lower overall estimated costs than alternative services programs operated in the past five years in King County. Estimated capital expenses are lower because vehicle costs are lower for commuter vans than for shuttles. Estimated fuel expenses are also lower because the smaller vehicles get better gas mileage. The estimated operating costs are lower in the case of Bothell and Woodinville than for the shuttles because the shuttles use paid contracted

operators to drive the vehicles while TripPool, Community Van, Vanshare, and Real-Time Rideshare leverage volunteers in the community to provide shared rides.

Conclusion

This report Metro describes a planning process for the development and implementation of an Alternative Services project in Bothell and Woodinville. The planning process included a service analysis, a needs assessment, a concept development and preferences analysis, and ridership potential and cost estimates analysis. Through the course of this planning process Metro identified transportation needs and gaps that can be addressed in a cost-effective way through an Alternative Services program that includes a Community Van program, a Real-Time Rideshare program, a commuter van program (TripPool and home-end Vanshare), a promotional partnership with the Woodinville Tourist District, and a community-wide education campaign. The alternative services concepts suggested for implementation in Bothell and Woodinville have been tailored to meet the unique needs and gaps identified by the community. The potential ridership and cost estimates above indicate that this program will provide good value to the community and complement the existing fixed-route bus service.

In the coming months Metro will continue to work closely with the jurisdictions and the post-secondary institutions to refine the project design and provide information and material as needed to support organizational decision-making. This might involve soliciting feedback from local transportation committees and city councils. With input from the local stakeholders Metro will narrow the focus of the concepts and draft the legal, operational, and framework necessary before implementation can begin.

The success of this Alternative Services project in Bothell and Woodinville will rest on the strength of the partnership the County develops with the local jurisdictions. Commitment to shared success is already evident in the community's response to the online surveys, in the UW Bothell's community-based learning partnership, in the volunteer time donated by Stakeholder Working Group members, and in the flexibility and enthusiasm of the Cities of Woodinville and Bothell. This spirit of teamwork and partnership will contribute to the successful implementation of the Alternative Services program in Bothell and Woodinville and help expand transportation choice for residents, workers, and students.

**Appendix: University of Washington
Bothell Student Reports**
Bothell Woodinville Alternative
Services Proviso Report

Addressing Transportation Gaps for King County Metro in Bothell and Woodinville, WA

Kellen Maloney

Patrick Naffah

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3/11/2016

Introduction

We were presented with the task of identifying areas with public transportation gaps within the King County Metro transit network in Bothell-Woodinville, and were given a heat map of the hotspots in the Bothell/Woodinville where students from UWB were more likely to travel to and from campus using transit. The focus of our research was to identify which areas are in need of improvements in transit services (e.g. additional bus stops, areas lacking transportation services, accessibility) and which areas in Bothell-Woodinville could benefit the most from the implementation of alternative Metro services such as rideshare, DART, or Dial-A-Ride. Some of the possible alternative services which could be implemented in areas with low accessibility could include: 1) community shuttle, where a route with flexible service areas is provided through a community partnership. Metro would provide the vehicle and it would be operated by a paid driver and service a fixed and flexible area; 2) A community hub which would give people access to transportation resources such as vans, bikes or bus route information. The advantages of this program include community partners who provide the information regarding transportation and scheduling, and Metro provides vehicles to use in low accessible areas; 3) A flexible rideshare program based on a mobile app similar to *Uber* which would use a private vehicle or one provided by King County Metro, this option has the advantage of responding to the specific needs of the commuter along with a set number of pickup points for the driver and incentives.

Methods and Data

The most efficient way to illustrate the transportation network and all of its aspects was to create a map. This map was composed of many different attributes, which all contributed in highlighting which areas had good coverage, and which ones needed some work. All the geographic information systems (GIS) data were obtained from King County's GIS Center (King County 2016). For the assessment, we followed a cost-distance approach. Cost-distance analysis is used to determine the costs of traveling across a network (road, stream, and infrastructure) to avoid oversimplifying distance measurements along complex spatial structures (Smith, 2016). The first step in cost-distance analysis is to determine the costs of travelling across different types of surfaces. This cost map focused on which elements of the geographic landscape provided ideal transportation and which areas could not be accessed based on walking distance. The criteria we used to determine areas in need were based on the information that the ideal distance people are willing to walk to a bus stops is a $\frac{1}{4}$ mile. We created the map in raster format (resolution 20 ft representing the average road/street) and performed all GIS analysis in ArcGIS v. 10.3 (ESRI, 2014).

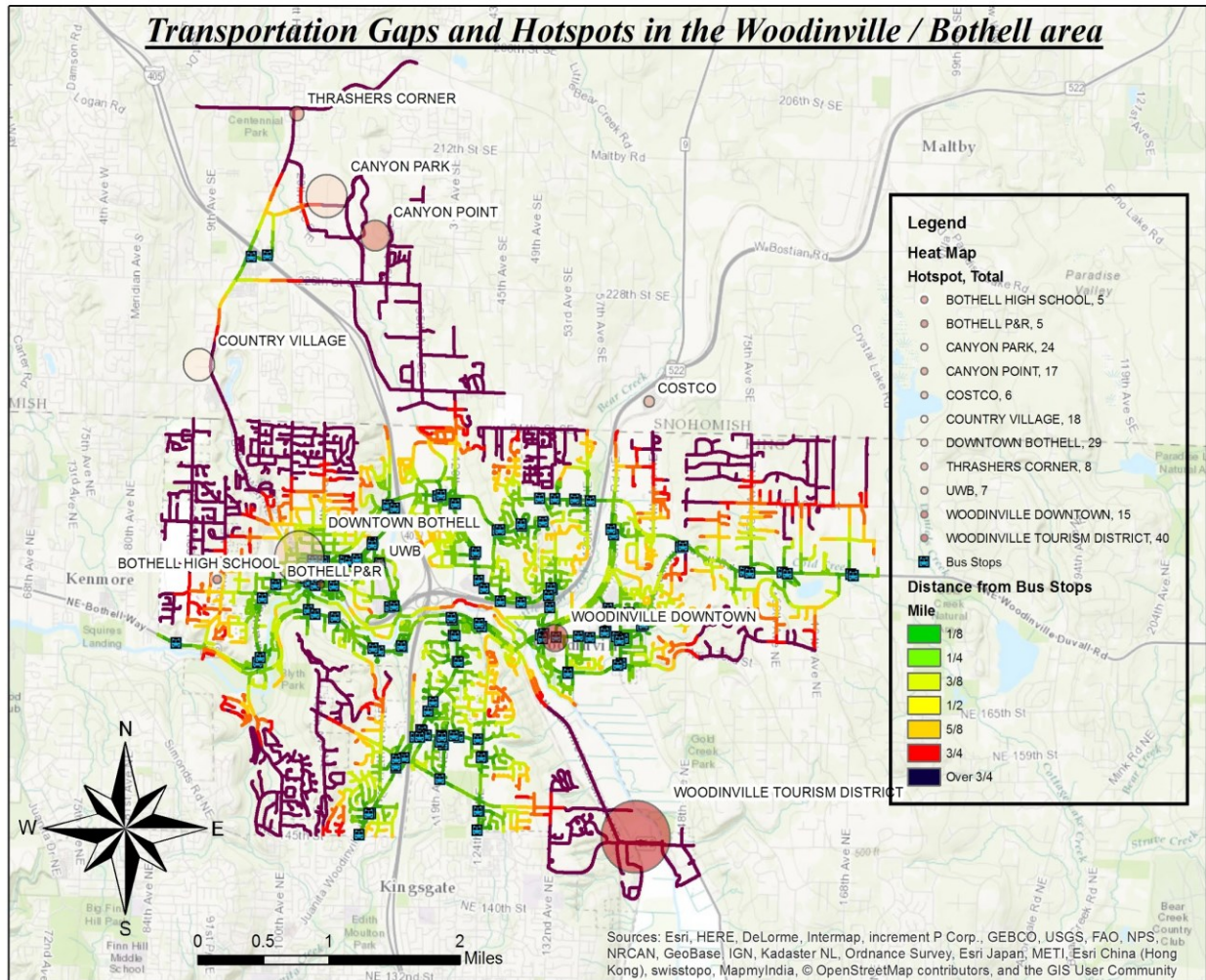
The 'cost' of traveling across different areas was calculated given based on the idea of walkability. Ideal access areas (pedestrian walkways, streets, bus routes, etc.) received a value of 20 distance units, and the ones deemed inaccessible (highways, private property, buildings, etc.) were given a value of 5000. This raster was then converted into a map that displayed the cost of travel between each single bus stop in the study area and all other locations. This type of map is known as a cost-distance map. We calculated the cost distance cumulative value between bus stop locations (our sources) and all locations in the study area using the cost raster to determine the cost of travel. Basically, the distances closest to the bus stops were considered a low cost of travel. However, the farther the distance was from these bus stops then the greater the cost of travel was calculated at. This resulted in a map that showed the cost

of traveling along ideal networks, and how great the cost of travel was along them. The cost distance map was classified into increments of 1/8th of a mile, all the way up to 3/4th of a mile (based on the assumption that it would not be ideal to ask a person to walk a greater distance than that). Lastly, a heat map was added to show popular destinations within this region. This information came from a survey facilitated and compiled by UWB students. These datasets of transportation were clipped with the data of city boundaries (Bothell and Woodinville). This resulted in the initial view of transportation within these city limits.

Results

Downtown Woodinville and Bothell have relatively good walking accessibility to the King County Metro network. This area is represented in the darkest shade of green and encompasses an area 1/8th of a mile or less from the most trafficked road networks. The two yellow shades of road transportation represent areas with the least preferred distances for walking, but would still have some accessibility. This color represents street network that is located 3/8 to 5/8 of a mile from the nearest bus stops. Red and purple colored street networks indicate no walking accessibility. Our results show these areas tend to be located on the outskirts of the downtown areas, and far from the major road network of Highway 522 and I-405. The suburbs located northwest and southwest of downtown Bothell are two examples of these dense street networks that reduce walking accessibility. The heat map that overlays the colored transportation network represents areas of interest. Data for the heat map was collected from an online survey. It suggests that the most trafficked areas include the Woodinville Tourism district, the Bothell Park & Ride, and Canyon Park.

King County Department of Transportation Project



Map Created by: Kellen Maloney, Patrick Naffah, Taj Singh

Date: 3/9/2016

Figure 1. Highlights the areas in need of transit improvements in dark and light colors representing areas/streets with most accessibility to bus stops.

Conclusions and discussion:

In this study we found that areas and streets around large urban residential neighborhoods concentrated mainly west of Bothell and in the south Woodinville tourist district could be benefit from additional services such as bus stops or more frequent rides. Woodinville tourist district was a major hotspot with high traffic but low number of bus stops and residential neighborhood west of downtown Bothell had the lowest accessibility to nearby bus stops.

Other locations with low accessibility did not appear on the heat map. These were the two suburban areas in the northwest and southwest Bothell region. These areas may not have ranked for several reasons. One reason may be the lack of existing metro accessibility, like bus stops. This doesn't allow people the option to traffic these areas via metro. Another reason may relate to the way people in suburban neighborhoods travel. Most people in these areas drive cars and don't rely on public transportation; however that doesn't mean that they wouldn't use it if they had the option. These are areas that should be targeted with alternative methods of metro transit. The metro DART service may be a good match for suburban areas. This allows people to schedule the bus service when they need it. The DART vehicles are smaller and perhaps more mobile as well, they might be able to handle suburban roads better than a metro bus could. Adding bus stops in these locations may be suitable if the bus stop was placed in a central location within the suburb. However, a service that could pick people up at their front door would be even more efficient and preferred. Community Vans should also be considered as an option for these areas. Community vans are mobile and would operate well in a denser network of streets. People could meet at a centralized location, or, because of the vans efficiency, they could be picked up at their house. The community should have some responsibility then over the commuter vans scheduling and perhaps operation.

Our results should be taken with caution however. Because the city of Bothell lies in both Snohomish and King county, multiple mass transportation networks function in the same space. King County Metro even operates in areas of Snohomish County, like Canyon Park and Country Village, this makes the accessibility for public transit unrealistically low in these areas. Also, the heat map was created based on the results of a survey conducted through the internet. Because the survey sampled a limited population, its results may not be representative of the entire Bothell-Woodinville Metro region.

Next Steps

All in all, this analysis has provided a fair share of insight to the transportation network within this region. However, there are many other considerations to be made. Although a lot was learned, this analysis was still a preliminary exploration. There were several complications on our end with the research portion of the analysis. The sidewalk data was meant to be added to show easier access for walking. When this data layer was added to the map, only a small section of the map showed sidewalks. It was decided to disregard this data altogether. Another complication involved a road that existed, but was not in data form. This road network couldn't be displayed on the map. These are just a couple of common computer errors that can occur in any computer type of analysis. Aside from these, it would have been worthwhile to include demographics on population within the region. The displayed road networks provided a basic view of the suburbs and region, but were not an ideal representation on their own. Population datasets would supplement the regions well in showing what areas a transportation network would be most beneficial. One final change that would have tied this analysis together would be to combine all forms of transportation together. This map was created using King County transportation networks, as well as a narrow variety of data. When in reality, transportation within these cities is composed of many different providers: Sound transit, King County Metro, and others. A map that included these components would yield in a much more holistic representation. This project was a challenge, but more importantly it was a great learning experience. It provided great insight to tackling real world problems - compared to being assigned worksheet after worksheet. The problem was presented, but then the route and direction at which the solution was created was completely up to us. This created a lot of flexibility in lessons learned: whether it was from using the ArcMap software, creating the presentation style, or even coordinating as a team.

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As our population grows and roads are becoming more congested, King County Metro is continuing to work to provide affordable, convenient, safe, and reliable transportation for the residents of King County and beyond. Your participation in this survey will help King County Metro tailor new innovative transportation services to best fit the needs of individuals and families who live and work in Bothell and Woodinville.

Your participation in this survey is completely voluntary and your answers will be kept confidential. **(INCLUDE HERE AN INCENTIVE FOR FINISHING THE SURVEY? EG: FREE CREDIT TOWARD ONE OF THE ALTERNATIVE TRANSPORTATION SERVICES).** The survey will take approximately x minutes to complete.

Part 1: Questions about where you live, work, and travel in Bothell and Woodinville

Do you live in the Bothell/Woodinville area?

- 1 yes
- 2 no
- 3 not sure
- 4 prefer not to answer

Do you work in the Bothell/Woodinville area?

- 1 yes
- 2 no
- 3 not sure
- 4 prefer not to answer

Do you attend school (K-12; technical college; college or university) in the Bothell/Woodinville area?

- 1 yes
- 2 no
- 3 not sure
- 4 prefer not to answer

Do you regularly commute for either school or work purposes?

- 1 yes

- 2 no
- 3 not sure
- 4 prefer not to answer

Does anyone else in your household regularly commute for either school or work purposes?

- 1 yes
- 2 no
- 3 not sure
- 4 prefer not to answer

Which days of the week do you most regularly commute to your location? (check all that apply)

- 1 Monday
- 2 Tuesday
- 3 Wednesday
- 4 Thursday
- 5 Friday
- 6 Saturday
- 7 Sunday
- 8 I do not regularly commute

On average how many miles do you commute in a day?

- 0-9 miles
- 10-19miles
- 20-29miles
- 30 miles+
- I do not regularly commute

On an average day what hours of the day do you spend traveling or commuting?

(select all that apply)

4-6 AM

6-8 AM

8 -10 AM

11 AM -1 PM

1-3 PM

3-5 PM

5- 7 PM

7-9 PM

9- 11 PM

11 PM- 1 AM

1- 3 AM

In general, how flexible are your daily transportation needs?

1 Not flexible, I almost always have to arrive and leave at a specific time.

2 Somewhat flexible

3 Very flexible, I can arrive and leave during any time of the day.

Below is a map of the Bothell/Woodinville area. Please indicate the number of the area where you live and where you work.

In which grid do you live? _____
To which grids do you most often travel? _____



How much money per week does your household spend on transportation related expenses?

- \$0.00-\$10.00
- \$10.00-\$20.00
- \$20.00-\$30.00
- \$30.00-\$40.00
- \$40.00-\$50.00
- \$50.00+
- not sure
- prefer not to answer

Part II: questions related to your interest in several new alternative services currently being developed by King County Metro.

In contrast to the standard mass transportation model, our new services will use smaller vehicles (cars and vans) and provide more tailored and personalized transportation.

TRIP POOL, VAN POOL, & REAL-TIME RIDE SHARE (Provide brief descriptions of all services here. Include the incentives provided for the drivers and riders, such as a guaranteed parking place at Park and Ride).

Individuals may have many reasons for using trip pool, van pool, and real time ride share. For each of the statements below please indicate how important these reasons are for you.

I want to reduce my carbon footprint (environmental)

- 1 Very important
- 2 Somewhat important
- 3 Neutral
- 4 Not important

I want to reduce my travel costs

- 1 Very important
- 2 Somewhat important
- 3 Neutral
- 4 Not important

I want to reduce my commute stress

- 1 Very important
- 2 Somewhat important
- 3 Neutral
- 4 Not important

I enjoy meeting new people

- 1 Very important
- 2 Somewhat important
- 3 Neutral
- 4 Not important

The fee for trip pool is \$2.80 (\$1.50 flat rate+ 5 mile minimum) +\$.26 per additional mile for our trip pool services. How affordable is this fee for you?

- Extremely affordable
- Quite affordable
- Occasionally affordable
- Not affordable

Please indicate your level of comfort in sharing trip pool rides with the following:

Your work colleagues

- 1 Very comfortable
- 2 Comfortable
- 3 Uncomfortable
- 4 Very uncomfortable
- 5 not applicable

Parents and their young children

- 1 Very comfortable
- 2 Comfortable
- 3 Uncomfortable
- 4 Very uncomfortable

Individuals of a different gender as you

- 1 Very comfortable
- 2 Comfortable
- 3 Uncomfortable
- 4 Very uncomfortable

Service animals

- 1 Very comfortable
- 2 Comfortable
- 3 Uncomfortable
- 4 Very uncomfortable

To what degree would it be important to you to have any of the following safety features included in King County Metro’s alternative transportation services?

- 1 Cameras or video surveillance
- 2 Driver and passenger rating system
- 3 SOS button on mobile device

How comfortable are you with a volunteer driver picking you up at your home?

- 1 Very comfortable
- 2 Comfortable
- 3 Uncomfortable
- 4 Very uncomfortable

How comfortable are you with a volunteer driver picking you up at a designated location close to your home?

- 1 Very comfortable
- 2 Comfortable

3 Uncomfortable

4 Very uncomfortable

How long would you be willing to wait for a pick up in a designated area?

1-5 minutes

6-10 minutes

11-20 minutes

21-30 minutes

31-40 minutes

41-50 minutes

51-60 minutes

What concerns do you have about using trip pool? Check all that apply:

1 I have young children that need accommodations

2 I am concerned that it might be inconvenient for me

3 I am concerned about the cost

4 I am concerned about safety

5 Other (please explain)

To what degree do you agree with the following statements?

It is important for me to be able to request the age of my driver.

1 strongly agree

2 agree

3 neutral

4 disagree

5 strongly disagree

It is important for me to be able to request the gender of my driver.

- 1 strongly agree
- 2 agree
- 3 neutral
- 4 disagree
- 5 strongly disagree

King Country Metro is committed to providing safe transportation for all passengers. Toward this end, for our Real-Time Rideshare program we have enabled a safety service that would allow you to automatically send a text to your designated safety contacts with information such as where you were going, who you were with, and when you arrive.

How important is this service to you in terms of ensuring your own safety?

- 1 Very important
- 2 Somewhat important
- 3 Neutral
- 4 Not important

How important is this service to you in terms of ensuring the safety of your loved ones using this service?

- 1 Very important
- 2 Somewhat important
- 3 Neutral
- 4 Not important

What concerns do you have about using real time ride share? Check all that apply:

- 1 I have young children that need accommodations
- 2 I am concerned that it might be inconvenient for me
- 3 I am concerned about the cost
- 4 I am concerned about safety

5 Other (please explain)

**For what purposes might you be able to use the Real-Time Ride share service?
(check all that apply):**

- 1 Work related (ex: going to and from work)
- 2 School related (ex: going to and from school)
- 3 Medical related (ex: going to a doctor's appointment)
- 4 Personal (ex: shopping; going to a friend's house)
- 5 Entertainment (ex: going to the movies)
- 6 Recreational (ex: going to a gym or park)
- 7 Other(please specify)

From what you know thus far, what is the likelihood of you using Real-time Rideshare?

- 1 Very likely
- 2 Somewhat likely
- 3 Somewhat unlikely
- 4 Very unlikely
- 5 Not sure

From what you know thus far, what is the likelihood of you using Trip Pool or Van Pool?

- 1 Very likely
- 2 Somewhat likely
- 3 Somewhat unlikely
- 4 Very unlikely
- 5 Not sure

Part III: Concluding questions about factors that may impact your transportation needs or preferences

Do you have regular access to a smart phone?

- 1 yes
- 2 no
- 3 not sure
- 4 prefer not to answer

What is your approximate age?

- 1 13 or younger
- 2 14-17
- 3 18-23
- 4 24-30
- 5 31-40
- 6 41-50
- 7 51-60
- 8 61-70
- 9 71-80
- 10 81-90
- 11 91+

With what gender do you personally identify?

- 1 Female
- 2 Male
- 3 Transgender
- 4 Other (write in response here): _____

What language do you consider to be your “home” or first language?

- 1 English
- 2 Spanish
- 3 Russian
- 4 Hindi
- 5 Other ...

Are you a parent or guardian of a young child who needs to use a car seat?

- 1 yes
- 2 no
- 3 not sure
- 4 prefer not to answer

Are you deaf or very hard of hearing?

- 1 yes
- 2 no
- 3 not sure
- 4 prefer not to answer

Do you need language translation services?

- 1 yes
- 2 no
- 3 not sure
- 4 prefer not to answer

Do you need assistance getting in and out of a vehicle?

- 1 yes
- 2 no
- 3 not sure
- 4 prefer not to answer

Do you need any of the following disability services? (check all that apply)

- 1 Wheelchair accessibility
- 2 Service animal accommodations
- 3 Other
- 4 I do not need any disability services

What is your approximate gross household income for 2015?

- \$0- \$18,999
- \$19,000-\$29,999
- \$30,000 -\$39,999
- \$40,000- \$49,999
- \$50,000- \$59,999
- \$60,000-\$69,999
- \$70,000-\$79,000
- \$80,000-\$89,999
- \$90,000-\$99,999
- \$100,000-\$120,999
- \$130,000-\$150,999
- \$160,000-\$180,999
- \$190,000-\$219,999
- \$220,000+
- not sure
- prefer not to answer

Is there anything else that you would like to share with us here? If so, please write in the space below.

Thank you for taking our survey! As a gesture of thanks, as well as to provide an incentive to try out our new services, we are offering you X credit toward x, y, or z services.

Extra questions (Note from Kari Lerum: I don't think these will be useful for you for this survey; many are dealing with vetting the volunteer drivers. But the students wanted to share these with you as well)

On a scale of 1-5 how much do you trust King County Metro's process of assigning volunteer drivers (1 being least trusting 5 being most trusting)?

1_2_3_4_5_

What information would you need in order to make trip pool accessible to you?

Fill in the Blank _____

How comfortable do you feel with navigating the trip pool website?

1-10 scale

How comfortable are you with pets in the car?

Very Comfortable

Comfortable

Fairly Comfortable

Slightly Comfortable

Not Comfortable

Does the trip pool website provide enough resources to answer the questions you may have?

(Yes, No, Unsure)

How comfortable do you feel driving in any of the following conditions/situations? (Check all that apply)

Rain

Snow

High traffic areas

Driving strangers

Driving in the dark

Other: _____

On average, how many hours are you willing to drive in a day?

1-3

4-6

7-9

How comfortable are you with the current trip pool safety precautions in place?

Very comfortable

Comfortable

Uncomfortable

Very uncomfortable

How many miles would you be willing to drive at \$.26 a mile?

0

1-5

6-10

11-15

16-20

How important is it to have a return ride?

Very Important

Important

Fairly Important

Slightly Important

Not important

How comfortable are you with being responsible for your passengers safety?

1 Very comfortable

2 Comfortable

3 Uncomfortable

4 Very uncomfortable

Driver Eligibility

1. Are you 21 or over?

Yes

No

If, No go the next set of questions

2. Do you have a valid Washington State Driver's License?

Yes

No

If answered yes to both questions you are eligible to be a TripPool Driver.

3. As a TripPool driver, how long are you willing to drive before arriving at your Park and Ride/Transit Center?

0-15minutes

16-30minutes

31-45minutes

46-60minutes