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AN EVALUATION OF VIA RIDESHARE SERVICE IN WEST SACRAMENTO: ANALYSIS FROM SURVEYS AND EXPERT INTERVIEWS

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Executive Summary

The UC Berkeley Transportation Sustainability Research Center (TSRC) conducted an evaluation for the City of West Sacramento of the pilot Via Rideshare System, which began providing rides to customers in May of 2018 and is currently in operation. This analysis presents the findings from surveys and expert interviews. Surveys were deployed to both users and non-users of the pilot service in order to assess the behavioral impacts of the system on users and to evaluate non-user response to the system and why they had not yet opted to not use the service. The user survey, which collected 224 respondents, provided a number of key takeaways. First, the pilot served as a mode substitution with several personal vehicle modes, the most prominent of which was Uber/Lyft (45% mode substitution). Second, of the 39 respondents, 23% responded that they drove alone at least once fewer every week or greater in response to using Via. Third, of 35 respondents, 49% reported that the pilot service significantly improved their child's mobility and accessibility. Via was reported to improve quality of life by 57% of respondents. These results, amongst others discussed in the report, show that users reported that the service was impacting their behavior and quality of life.

The non-user survey, which collected 145 respondents, also provided several important takeaways. First, 44% of 125 respondents reported that they had planned to use the service but had not gotten around to it yet. Second, 55% of 105 respondents thought that the service would be cheaper. Third, 51% of 106 respondents answered that they thought that the pilot service could replace their use of other modes because it was better. Likewise, 31% of those 106 respondents believe the service could provide additional mobility in the sense that it allowed for trips that would not have been doable otherwise. These results show some of the underlying reasons concerning why non-users opted not to ride the service.

Several expert interviews were also conducted to learn more concerning the institutional impacts. These persons detailed the difficulties that were experienced in developing the pilot. Some of these include settling legal issues related to indemnification, marketing the service, and recruiting drivers. One of the key successes of the partnership as stated by an expert was the sharing of data. But the challenges that had to be overcome resulted in negotiations that required considerable time to complete. These issues highlight the need for the development of guidelines at the state legislative branch that clearly delineate the role of each party within a partnership similar to the one established in this project. Further findings are presented in more detail within the report.

Introduction

This report presents an evaluation of a microtransit system operated in the City of West Sacramento. West Sacramento established a microtransit operation within the city through a contract with Via to operate a pilot of a subsidized on-demand rideshare service. The purpose of the pilot was to expand the mobility options available to West Sacramento residents. The microtransit system was meant to serve as a dynamically routed and dynamically scheduled supplement to the traditional fixed route transit service that continued to operate within the city.

Microtransit is an emerging mode of transportation that is gaining traction within urban and suburban transportation systems. Microtransit systems can work in a variety of ways, depending on the needs and purpose of the system. The Society of Automotive Engineers defines microtransit “as a privately or publicly operated, technology-enabled transit service that typically uses multi-passenger/pooled shuttles or vans to provide on-demand or fixed-schedule services with either dynamic or fixed routing.” (SAE, 2018)

As the definition states, one of the key features of microtransit is flexible routing and flexible schedules that can dynamically adjust to demand. Microtransit vehicles can be part of a dedicated fleet or may be composed of a set of personal vehicles owned by drivers and then placed into service of the system while the driver is working with the microtransit operator. Microtransit systems are also designed to have occupancies greater than one passenger. In many cases, electing to ride solo is not an option. Riders must often accept that other travelers may be picked up along the way, and that their route may not be direct. Microtransit systems are often operated in partnership with a local transit or municipal agency. The agencies may partner with microtransit systems to provide mobility connections to the local fixed-route transit systems. They also may provide point-to-point connections within a zone of operation. This latter feature, the zone of operation, is not part of the formal definition of microtransit, and such systems could operate in the absence of zones. But the use of zones has emerged as a functional feature of several recent microtransit operations. Analogous to public transit system jurisdictions of operations, recent microtransit system vehicles have provided services within an operating zone and generally do not leave the zone while in service. Microtransit trips usually must start and end within the zone to qualify for service or any special pricing.

West Sacramento’s initiative to provide on-demand rideshare service was reflective of an emerging nationwide trend of cities to employ alternative transit services. These initiatives were motivated by a longstanding need to find better methods for providing transit mobility within auto-oriented environments. Communication technologies have enabled the development and deployment of these systems within an increasing variety of environments.

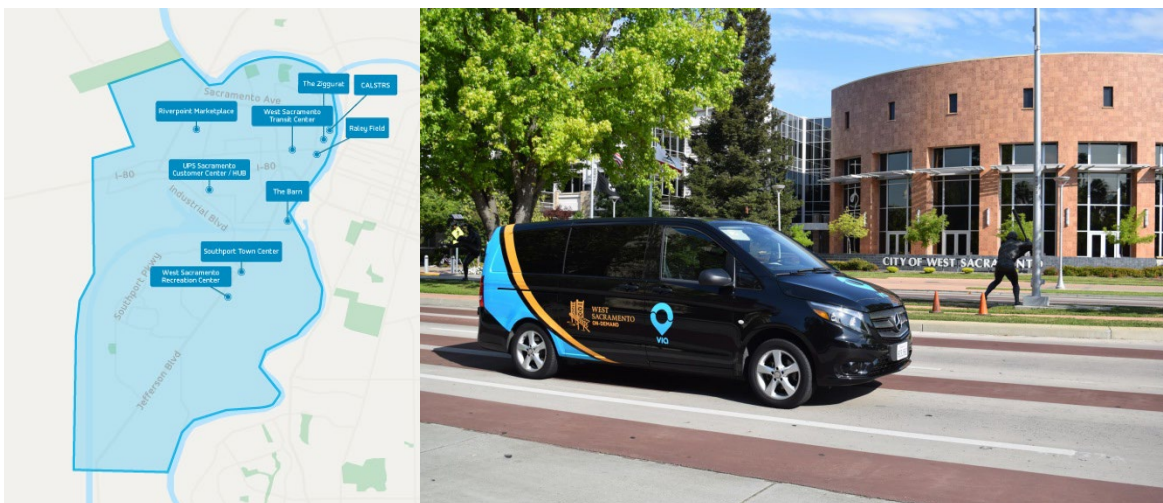
The City of West Sacramento has a population of about 50,000, with a population density of about 2,500 people per square mile. It is served by several transportation agencies, including the Yolo County Transportation District, which provides local and regional public transit options that include bus, paratransit, and co-op cab service ("Transportation | City of West Sacramento", n.d.). Additionally, the Sacramento Regional Transit District provides services for residents traveling into Sacramento. The city, located just west of Sacramento, is also close to the Amtrak stations of Sacramento and Davis. In terms of land use, West Sacramento is a relatively auto-

oriented environment. A recent travel survey of respondents in Sacramento, West Sacramento, and Davis conducted by Handy & Heckathorn (2017) showed that car travel is predominant in West Sacramento. The 2016 survey, conducted as part of a bikeshare system pilot, found that respondents living in West Sacramento averaged 5.8 days per week of driving or riding in a car over the previous seven days; compared to 0.4 days per week riding on a bus or train within the previous week. West Sacramento respondents averaged 1.9 vehicles per household and 105 miles driven per week, both of which were higher than respondents living in Sacramento and Davis.

The Via project in West Sacramento was born out of the competition that was held in 2015 by the U.S. Department of Transportation, called the Smart Cities Challenge (US DOT, 2017). This competition solicited proposals from cities on the use of emerging technologies in transportation to address challenges with respect to transportation networks as well as secondary issues that stem from those challenges. West Sacramento submitted to the Smart Cities Challenge and was ultimately not selected along with 77 other cities. But the competition provided a blueprint for developing the microtransit pilot that was eventually implemented.

As part of the city's mobility action plan, a partnership between Via and West Sacramento was established to help address challenges facing their transit system including, but not limited to, low ridership, increasing senior mobility needs, and excess commute times. This partnership led to the development of the one-year pilot program under evaluation in this report. The one-year pilot launched on May 14, 2018, and employed a fleet of ten Via-operated vans that could transport up to six passengers at a time. Passengers using the service were able to complete trips that originated and ended within West Sacramento's borders. Trips could be booked using the smartphone app developed for the pilot, or through a phone call. The fee charged was a flat one-way rate of \$3.50 per ride, and \$1.75 per ride for seniors and riders with disabilities. The vans in operation were assigned to routes that would group together passengers who were traveling in a similar direction at similar times. Wheelchair accessible vehicles were also available to be used if needed. Figure 1 shows the geographical boundaries of the pilot region (left) and picture of the operating vehicle (right).

Figure 1: Geographic Coverage Zone of Via Rideshare System and Operating Vehicle



Source: City of West Sacramento

Several cities have enacted partnerships with private microtransit service companies to provide services. Among those partnerships included Kansas City’s Bridj pilot in 2016 and involved the now defunct operator, Bridj, which provided van service for a flat fee within Kansas City (Bliss, 2017). There was also Pinellas Suncoast Transit Authority (PSTA)’s partnership with Uber in 2016. This consisted of PSTA providing subsidized Uber rides to bus stops for low-income and unemployed residents (Bliss, 2016). In Centennial, Colorado, a six-month pilot provided first and last mile (FMLM) service in the form of free Lyft rides (City of Centennial & Fehr and Peers, 2017). And currently, several cities are in the midst of operating partnerships as part of the Federal Transit Administrations’ Mobility on Demand Sandbox Program (Shaheen et al., 2017). For example, Via also operates microtransit systems with LA Metro and King County Metro as part of this federal project. Like the project in Colorado, the project is designed to provide FMLM connections to local rail and metro stations. Microtransit system experiments are expanding rather quickly, a select list of microtransit programs that are ongoing or in planning stages are listed in Table 1.

Table 1: Examples of Selected Microtransit Programs

Location	Description
Santa Barbara, CA*	<ul style="list-style-type: none"> • A flexible, on-demand, and app-based service that is planned to be launched in mid-2020. • The service will allow riders to be picked up directly at their location and dropped off directly at their location (curb-to-curb service). • Vehicles will include eight seats and are produced by Ford • Transfers from vans to fixed-route bus service will be free
St. Clair County, MO**	<ul style="list-style-type: none"> • Six-month pilot beginning in November 2019 • Flexible, on-demand, curb-to-transit, and app-based service that will provide rides in East St. Louis • Primarily focused in areas that are transit-inaccessible • Partnership between a local college and a subsidiary of Ford. This partnership will be examined by local transit agency to help explore potential microtransit options
Johnson County, KS***	<ul style="list-style-type: none"> • Flexible, app-based pilot service that costs \$1.50 per ride • Vans fit up to 12 passengers • Service began in January 2019 and is still in operation • App software developed by subsidiary of Ford
Knights Landing, CA ⁺	<ul style="list-style-type: none"> • Rural microtransit program intended for use primarily by students and others who have less accessibility • Vans fit up to 7 passengers • Vehicles accommodate two wheelchairs and bicycles • Began in August 2019 for riders 18 and younger
Montgomery County, MD ⁺⁺	<ul style="list-style-type: none"> • County-owned service that is app-based, flexible, and offers corner to corner service. • Primarily intended to provide service to Metro stations within county and also other destinations • Vans holds 11 passengers
Orange County, CA ⁺⁺⁺	<ul style="list-style-type: none"> • Curb-to-curb service that launched in 2018 • Vans hold 8 passengers • One fare provides unlimited rides for the day within the zone

Sources: Molina (2019)*, ("St. Clair County Transit introduces micro-transit", 2019)**, Horsley (2019)***, ("‘Microtransit’ bus unveiled in Knights Landing – Daily Democrat", 2019)⁺, Lazo (2019)⁺⁺, ("OCTA Launches OC Flex Microtransit Service", 2019)⁺⁺⁺

Because microtransit systems are themselves new, understanding of how microtransit options impact cities is an emerging area of study. It is recognized that microtransit has the potential to help improve FMLM connections to public transit, as well provide better mobility within lower density environments where fixed-route public transit has some strategic disadvantages and may be used to supplement traditional transit service. In the sections that follow, we present the methodology and data collection of this evaluation, as well as a summary of results.

Data and Methodology

This analysis consisted of data collected from two surveys and expert interviews. Invitations for the first survey were sent to persons who had signed up for the service and used it during the operational period, while invitations for the second survey were sent to people who had signed up to use Via's service, but did not actually use it. Some questions, such as demographic and household composition questions, were contained in both the user and non-user surveys. Other questions were specific to each survey and the circumstances of the user group. The two surveys were launched in April 2019.

The user survey took an average of 10 minutes to complete and the non-user survey took an average of 5 minutes. A total of 224 respondents completed the user survey while a total of 145 respondents completed the non-user survey. The impacts that were assessed from the responses included: 1) modal shift due to use of the Via Rideshare Service, 2) change in vehicle miles traveled, 3) change in auto ownership, 4) customer satisfaction, 5) quality of life, and 6) change in household transportation expenditures.

In addition, this study interviewed several experts who had direct knowledge of the pilot. The purpose of the interviews was to learn more about the implementation details and institutional dynamics of conducting the pilot program. Questions were asked to the experts concerning successes of the program, areas for improvement, and lessons learned.

Impact related survey questions were asked in ways that required respondents to provide attribution of the change in behavior to Via. Respondents had to indicate that a specific impact was related to the use and presence of Via. These responses were translated to a variety of impacts related to travel behavior. Questions asked respondents to provide information about their changes in driving and vehicle ownership in response to using Via. These changes considered several main components, among them including impacts from vehicle shedding, impacts from personal vehicle suppression, and impacts from the change in driving or riding in personal vehicles. In the sections that follow we present an analysis of sample distributions of survey questions and a synthesis of expert interview findings.

Survey Results

Sociodemographics

The user and nonuser surveys asked questions about the sociodemographic compositions of respondents to better understand who is and who is not using the Via Rideshare System in West Sacramento. We measure six key sociodemographic metrics and display distributions from the user survey, nonuser survey, and the ACS 2017 5-year estimates for the City of West Sacramento. The results are shown in Table 2, which includes the distributions of: 1) gender, 2) age, and 3) education, and Table 3, which includes the distributions of 4) race/ethnicity, 5) income, and 6) households with and without children.

Females were found to be more common among both user and nonuser surveys, with 69% of user survey respondents, and 63% of non-user respondents. This compares to a population with a relatively even gender balance of 51% female. This relatively strong dominance of females in the samples of both surveys would suggest that females may have a greater interest in using microtransit systems like the Via system. The age distributions among the three populations show that 40- to 49-year-olds were the most common age group among respondents to the user survey. Twenty-seven percent of users were between 40 and 49 years old while only 17% of both nonusers and the overall ACS population fell into this age category. Additionally, adults of 60 years and older were slightly more common among the two surveyed populations than in the general city population. There were also lower proportions of users and nonusers under the age of 30 as compared to the general ACS population. These findings suggest that Via users in West Sacramento were more likely to be middle-aged or older than the general population of the city. This finding is consistent with the fact that one of key motivations of the Via service was to provide improved mobility to senior populations that had more limited mobility via public transit or personal automobiles.

The education level of respondents was found to be high. The vast majority (86% or more) of the user and nonuser respondents had attended at least some college or had an associate's degree or higher, compared with 61% of the ACS population. In addition, there was a difference in the education level between the user and non-user population, 42% of users had obtained a bachelor's degree or higher while 70% of nonusers had attained a similar level of education. Within the general population, this share was 25%. In terms of race/ethnicity, white respondents were somewhat overrepresented within both the user and nonuser populations, making up 59% and 56% of users and nonusers, respectively, while they comprise just 48% of the general population. Hispanic/Latinos and Asians were relatively underrepresented among the respondent populations as compared to the general population. The income distributions of users and nonusers match up fairly closely with the distribution found in the general population. There are slightly higher proportions of respondent households making \$100,000 or more across both surveys, 33% of users and 35% of nonusers, relative to 27% of the general population. At the same time, 10% of user respondents earn under \$10,000, compared just 5% earning this amount or lower among the ACS population.

Lastly, we measured the proportion of households with children among the three populations. We found that Via user respondents were slightly more likely to have children in the household

when compared to the nonuser and ACS populations. Forty-five percent of user households had children compared to 38% of nonusers and 35% of the general population. Users are also slightly more likely to have children ages 6 years or older, as 37% have at least one child 6 years or older compared to 28% and 25% among the nonuser and ACS populations, respectively. Note that the ACS categories for households with children do not count 18-year-olds as children whereas our user and nonuser surveys do. Therefore, the children age categories are matched up as closely as possible for comparison purposes but do not exactly match. While the user survey population was found to have more households with children relative to the nonuser and general population, it is important to note that all populations had a majority of households with no children. These results, in combination with the balance of older users within population suggest that Via may have been especially useful to two unique populations, 1) households with senior citizens, and 2) households with school age children.

Table 2: Gender, Age, and Education of Survey Samples and Population

Gender	User, N = 217	Nonuser, N = 142	ACS 2017, N = 52,206
Male	31%	37%	49%
Female	69%	63%	51%
Age	User, N = 177	Nonuser, N = 113	ACS 2017, N = 38,529
18 to 19 years	5%	1%	3%
20 to 29 years	12%	12%	21%
30 to 39 years	16%	20%	21%
40 to 49 years	27%	17%	17%
50 to 59 years	14%	19%	16%
60 to 69 years	14%	20%	11%
70 to 79 years	8%	6%	7%
80 years and over	5%	4%	3%
Education	User, N = 211	Nonuser, N = 112	ACS 2017, N = 38,529
Currently in high school or less than high school	4%	0%	15%
High school degree or equivalency	10%	13%	24%
Some college or associate's degree	44%	17%	36%
Bachelor's degree	24%	40%	17%
Graduate or professional degree	18%	29%	8%

Table 3: Income and Household Size of Survey Samples and Population

Race/Ethnicity	User, N = 206	Nonuser, N = 131	ACS 2017, N = 52,206
White	59%	56%	48%
Black or African American	5%	4%	4%
American Indian and Alaska Native	1%	0%	0%
Asian	6%	9%	10%
Native Hawaiian and Pacific Islander	0%	1%	1%
Hispanic or Latino	18%	12%	30%
Two or more races	9%	18%	7%
Other	1%	0%	0%
Income	User, N = 217	Nonuser, N = 145	ACS 2017, N = 18,000
Less than \$10,000	10%	8%	5%
\$10,000 to \$14,999	7%	10%	8%
\$15,000 to \$24,999	9%	5%	11%
\$25,000 to \$34,999	9%	7%	7%
\$35,000 to \$49,999	11%	7%	11%
\$50,000 to \$74,999	13%	15%	18%
\$75,000 to \$99,999	9%	13%	12%
\$100,000 to \$149,999	16%	22%	15%
\$150,000 to \$199,999	11%	11%	7%
\$200,000 or more	6%	3%	5%
Households with Children	User, N = 224	Nonuser, N = 145	ACS 2017*, N = 18,000
No Children under 19 in Household	55%	62%	65%
Under 6 years only	8%	10%	10%
Under 6 years and 6 to 18 years	13%	8%	8%
6 to 18 years only	23%	20%	16%

*ACS children age categories do not include 18-year-olds

Mode Shift

The user survey contained questions exploring the impact that Via Rideshare Service had on how residents of West Sacramento travel and to gauge whether the introduction of the service has impacted the way they travel. The first question asked which modes the respondent used in general over the past 2 years. From there, questions explored more specific directional impacts from Via. Table 3 shows a breakdown of survey respondents' general mode use during the preceding two years. As expected, the vast majority of user survey respondents indicated using the Via service, while high proportions also indicated that they had driven alone or rode with a family or friend. Note that a slightly higher percentage of respondents had indicated that they had used Uber or Lyft than Drive Alone.

Table 4: Mode Choice in West Sacramento by User Survey Respondents

<i>Which of the following modes of transportation have you used in West Sacramento over the past 2 years? (Check all that apply) (N= 223)</i>	
Via Rideshare Service	88.8%
Drive alone	67.7%
Drive/Ride with family/friend (non-commute)	72.2%
Carpool or Vanpool (for commuting)	11.7%
Walk (to a destination)	60.5%
Personal Bicycle	39.5%
Bikeshare (e.g., JUMP)	21.5%
Yolobus Service	27.4%
Yolobus Special Paratransit Service	3.1%
Uber/Lyft	68.6%
Taxi	4.9%
Motorcycle or Scooter	7.2%
Other	1.8%

The survey then asked respondents to report how frequently they used the modes that they have used in the past two years. Table 5 shows the distribution of responses to the frequency of use by mode. Note that respondents were only asked about frequency of use if they reported that they used the mode (as shown in Table 4). Hence, the sample sizes vary across the modes shown.

Table 5: Frequency Mode Use

Please indicate how frequently you currently use the following modes.

	Never in the past 2 years	Once a year	Once every 6 months	Once a month	Twice a month	1 to 3 times per week	4 to 6 times per week	7 to 13 times per week	2 to 4 times per day	More than 4 times per day
Via Rideshare Service, N = 198	0%	10%	18%	18%	16%	25%	6%	3%	4%	1%
Drive alone, N = 149	1%	1%	3%	4%	6%	15%	19%	14%	26%	10%
Drive/Ride with family/friend (non-commute), N = 160	1%	0%	2%	9%	8%	43%	17%	10%	9%	2%
Carpool or Vanpool (for commuting), N = 26	0%	4%	8%	12%	19%	27%	15%	8%	8%	0%
Walk (to a destination), N = 134	0%	1%	7%	9%	16%	32%	19%	4%	8%	2%
Personal Bicycle, N = 85	0%	0%	19%	15%	21%	26%	9%	2%	5%	2%
Bikeshare (e.g., JUMP), N = 47	0%	2%	6%	19%	34%	28%	4%	6%	0%	0%
Yolobus Service, N = 59	0%	7%	14%	14%	14%	24%	14%	5%	10%	0%
Yolobus Paratransit Service, N = 6	17%	0%	17%	0%	17%	17%	33%	0%	0%	0%
Uber/Lyft, N = 152	0%	3%	16%	24%	28%	23%	5%	1%	0%	0%
Taxi, N = 11	0%	27%	55%	0%	0%	18%	0%	0%	0%	0%
Motorcycle or Scooter, N = 16	0%	13%	13%	19%	25%	25%	6%	0%	0%	0%

As indicated in Table 5, about 87% of 198 respondents who indicated that they used Via Rideshare Service in the frequency question answered said that they used the service 1 to 3 times per week or less. A smaller sample, (n = 149) reported driving alone as one of their modes, but among this subsample, 69% traveled this way 4 to 6 times per week or more. Of the 59 respondents who indicated using Yolobus Service, 73% reported using it 1 to 3 times per week or less. Overall, the frequency of use distribution shows that users of Via made considerable use of personal vehicles. It also shows that their distribution of frequency of use for Via more closely aligned with that of public transit.

Two questions were asked to more directly assess how the pilot service facilitated mode shift. One of the questions, the results of which are shown in Table 6, simply asked respondents to indicate whether their use of Via impacted use of other modes. Note the percentages listed are the percentages of those reporting use of the mode (not of the sample overall). At 68%, Uber/Lyft ranked first with the highest proportion of (and total) of respondents indicating change in mode use due to use of the pilot service. The next largest impact was on the mode of driving/riding with family/friends, with 72 respondents (46%) reporting a change in the mode due to Via. Next, in order of number of respondents reporting a change was walking, followed closely by driving alone. Via was also found to impact the use of regular public transit as 38

(68%) of respondents indicating that they used Yolobus Service said their use of the mode changed due to using Via. Additionally, about a third of respondents that indicated using personal bicycle (28 respondents) or bikeshare (16 respondents) indicated that Via has changed their use of those respective modes.

Table 6: Impact of Via on Mode Shift

<i>Has your use of the Via Rideshare Service caused an increase or a decrease in your use of these modes?</i>		
	Yes, my use of this mode has changed due to my use of the Via Rideshare Service	No, my use of this mode has NOT changed due to my use of the Via Rideshare Service
Drive alone, N = 145	37%	63%
Drive/Ride with family/friend (non-commute), N = 156	46%	54%
Carpool or Vanpool (for commuting), N = 26	19%	81%
Walk (to a destination), N = 131	46%	54%
Personal Bicycle, N = 86	33%	67%
Bikeshare (e.g., JUMP), N = 48	33%	67%
Yolobus Service, N = 60	63%	37%
Yolobus Paratransit Service, N = 6	67%	33%
Uber/Lyft, N = 151	68%	32%
Taxi, N = 11	45%	55%
Motorcycle or Scooter, N = 16	19%	81%

Overall, the responses seem to strongly show that the Via Rideshare Service is changing how they travel. Another question asked to assess the magnitude of the impact, and the results are presented in Table 7. The responses to the question indicate that most of the shift is causing respondents to use the mode less as a result of Via suggesting that it has served as more of a substitute rather than a compliment to most modes. Notably, out of 101 respondents indicating a change in use of Uber and Lyft, 81% said that use of Via had caused their use of Uber and Lyft to decrease. Similarly, about 73% of respondents reporting a change in driving alone indicated that they did so less often or much less often due to Via. Note that respondents had the option of reporting that their use of the mode was “about the same” even if they reported a change due to Via in the previous question.

Table 7: Direction of Change in Impact

"Overall, how much more or less often have you used these modes of transportation because of your use of the Via Rideshare Service?"

	Much more often	More often	About the same	Less often	Much less often
Drive alone, N = 54	0%	4%	24%	56%	17%
Drive/Ride with family/friend (non-commute), N = 72	0%	7%	32%	44%	17%
Carpool or Vanpool (for commuting), N = 5	0%	0%	40%	60%	0%
Walk (to a destination), N = 59	0%	12%	32%	39%	17%
Personal Bicycle, N = 28	0%	11%	29%	39%	21%
Bikeshare (e.g., JUMP), N = 15	7%	7%	13%	53%	20%
Yolobus Service, N = 37	0%	14%	16%	41%	30%
Yolobus Paratransit Service, N = 3	0%	0%	0%	33%	67%
Uber/Lyft, N = 101	0%	4%	15%	50%	31%
Taxi, N = 5	0%	0%	0%	40%	60%
Motorcycle or Scooter, N = 3	0%	0%	0%	33%	67%

For those reporting a direction of change, an additional question was asked to measure the number of trips added or reduced using other modes due to the use of Via. The results are shown in Table 8 and Table 9. Of the 39 respondents to the question who indicated that they drive alone less, 33% did so at least once fewer every week or more. Likewise, 45% of the 41 respondents riding less with a family or friend did so at least once fewer every week or more. For the active modes, the proportion of respondents who made at least one fewer trip weekly walking (n = 33), using a personal bicycle (n = 16), or riding bikeshare (n = 11) was 39%, 26%, and 27%, respectively.

Table 8: Reduction in Travel with Mode due to Via

"For those modes you reported using less often overall... About how many fewer trips do you make on these modes due to your use of the Via Rideshare Service?"

	I do not know, I am not sure	A negligible difference	Less than once fewer every month	About once fewer every month	About once fewer every week	2 to 4 times fewer every week	Greater than 4 times fewer every week	I now never use this mode
Drive alone, N = 39	21%	8%	13%	26%	18%	5%	5%	5%
Drive/Ride with family/friend (non-commute), N = 43	14%	7%	9%	26%	21%	12%	12%	0%
Carpool or Vanpool (for commuting), N = 3	33%	0%	67%	0%	0%	0%	0%	0%
Walk (to a destination), N = 33	15%	9%	12%	15%	21%	12%	6%	9%
Personal Bicycle, N = 16	6%	19%	25%	19%	13%	13%	0%	6%
Bikeshare (e.g., JUMP), N = 11	18%	18%	0%	36%	9%	18%	0%	0%
Yolobus Service, N = 25	4%	12%	12%	12%	20%	16%	8%	16%
Yolobus Paratransit Service, N = 1	0%	0%	0%	0%	0%	0%	100%	0%
Uber/Lyft, N = 80	9%	13%	19%	24%	10%	19%	4%	4%
Taxi, N = 4	0%	25%	0%	0%	0%	0%	50%	25%
Motorcycle or Scooter, N = 3	0%	33%	0%	33%	0%	0%	0%	33%

Table 9: Increase in Travel with Mode due to Via

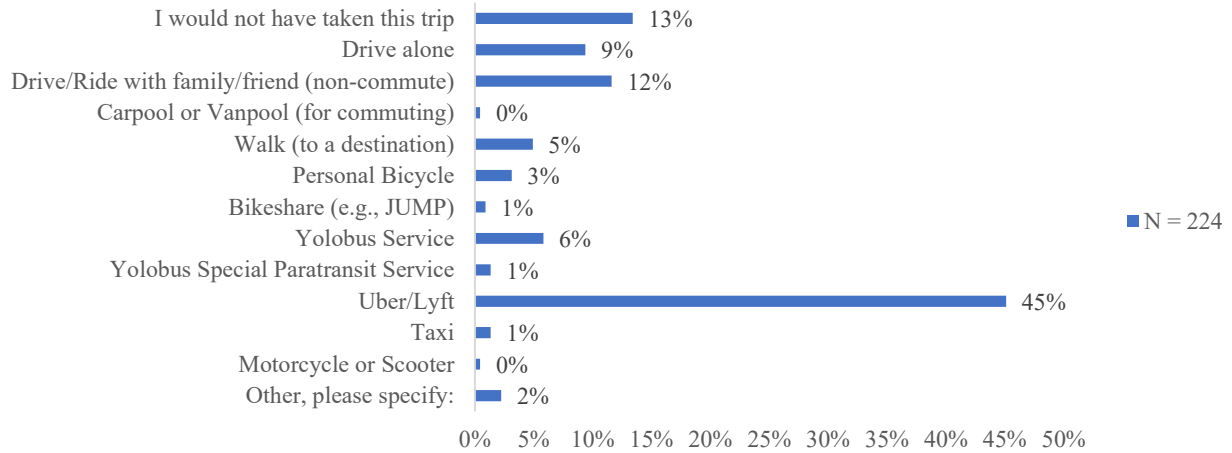
"For those modes you reported using more often overall...About how many fewer trips do you make on these modes due to your use of the Via Rideshare Service?"

	I do not know, I am not sure	A negligible difference	Less than once more every month	About once more every month	About once more every week	2 to 4 times more every week	Greater than 4 times more every week
Drive alone, N = 2	0%	0%	0%	0%	0%	100%	0%
Drive/Ride with family/friend (non-commute), N = 5	40%	0%	0%	20%	20%	20%	0%
Walk (to a destination), N = 7	0%	0%	0%	43%	29%	29%	0%
Personal Bicycle, N = 3	0%	0%	0%	0%	67%	0%	33%
Bikeshare (e.g., JUMP), N = 2	0%	0%	50%	50%	0%	0%	0%
Yolobus Service, N = 5	0%	20%	0%	20%	20%	20%	20%
Uber/Lyft, N = 4	0%	50%	0%	25%	0%	25%	0%
Other, N = 1	0%	0%	0%	0%	100%	0%	0%

The user survey also asked several questions concerning the last trip that the respondent made using the pilot service. One of the questions asked the respondents to select the mode they would have used if Via was not available. As shown in Figure 2, 45% of 224 respondents said they would have opted to take Uber or Lyft instead, while 21% said they would have either drove alone or with a friend or family member.

Figure 2: Recent Trip Mode Substitution

If the Via Rideshare Service had not been available, then how would you have made this trip otherwise?



Impacts on Vehicle Usage and Ownership

The survey explored whether the Via Rideshare Service impacted how much residents drive or their vehicle ownership. The survey asked users of the pilot service to provide the number of vehicles that are currently in their possession, and this breakdown is shown in Table 10.

Table 10: Breakdown of Vehicle Ownership Amongst Via Users

<i>How many vehicles do you currently own or lease? N = 220</i>	
0	24%
1	29%
2	29%
3	11%
4	6%
5 or more	1%

Another question was asked to gauge the impact of the change in driving. As seen in Table 11, slightly under half of the respondents did not perceive any change in driving due to the use of Via. 42% of respondents indicated that they drove ‘somewhat less’ or ‘much less.’

Table 11: Self-Perceived Ordinal Estimate of Change in Driving Owned Vehicles

<i>As a result of the Via Rideshare Service, I drive my personal vehicle(s)...</i>	
<i>N = 169</i>	
Much more	2%
Somewhat more	1%
About the same (no real change in driving)	47%
Somewhat less	31%
Much less	11%
Driving of personal vehicles has changed, but not because of Via	8%

The survey also inquired into whether users got rid of vehicles, acquired vehicles, or postponed purchasing a vehicle since May of 2018. Table 12 shows the results to the question asking respondents whether they shed a vehicle since May 2018, which is the month that the pilot service began operating. Eighty percent of respondents to this question indicated that they did not shed a vehicle, which is not surprising, since a vehicle is a significant capital asset that is not easily parted within a relatively auto-oriented environment like West Sacramento.

Table 12: Vehicle Shedding

<i>Have you gotten rid of any vehicles since May 2018? N = 220</i>	
No, I/we not gotten rid of any vehicles	80%
Yes, I/we gotten rid of one (1) vehicle	16%
Yes, I/we gotten rid of two (2) vehicles	4%
Yes, I/we gotten rid of three (3) vehicles	0%
Yes, I/we gotten rid of four (4) or more vehicles	0%

The survey also asked respondents that reported shedding one or more vehicles whether they would have gotten rid of the vehicles if the pilot service was not available. As shown in Table 13, 48% of the 44 respondents indicated that they definitely would have still made that decision, while 27% indicated ‘probably’ rather than ‘definitely’. A quarter (n = 11) of those respondents indicated that they would either probably or definitely still have the vehicle if the pilot service was not available. This suggests that most vehicles would have been shed even without the pilot. But, the pilot service did directly impact the shedding decisions of some households, leading to a reduction in vehicle ownership. Note that these are sample distributions and not weighted to account for the expected increased frequency of use that is expected among sample respondents.

Table 13: Vehicle Shedding Due to Via

<i>If the Via Rideshare Service were not available, would you still have gotten rid of the vehicle(s)? N = 44</i>	
Yes, definitely	48%
Yes, probably	27%
No, I/we would probably still have the vehicle(s)	18%
No, I/we would definitely still have the vehicle(s)	7%

Respondents who indicated that they had shed a vehicle were also asked a subsequent question that gauged which services factored into that decision. The results to the follow-up question are shown in Table 14. Of 44 respondents, 62% indicated that the Via Rideshare Service had a moderately important or stronger impact on their decision to shed a vehicle. Also noteworthy was that 49% of 41 respondents indicated that Uber/Lyft had a moderately important or stronger impact on their decision. Note that the sample size was lower for other modes, because only respondents that used that mode were shown it as an option.

Table 14: Contribution of mobility services in decision to get rid of a vehicle

<i>How important have the following mobility services been in your decision to get rid of a vehicle?</i>					
	Extremely important	Very important	Moderately important	Slightly important	Not at all important
Via Rideshare Service, N = 44	25%	23%	14%	11%	27%
Uber/Lyft, N = 41	12%	10%	27%	22%	29%
Bikeshare (e.g., JUMP), N = 35	14%	11%	11%	11%	51%
Carshare (e.g., Zipcar), N = 36	0%	3%	8%	17%	72%
Public Transit (e.g., Yolobus), N = 37	11%	5%	19%	16%	49%
Taxis, N = 34	0%	0%	3%	9%	88%
Other, please specify:, N = 20	15%	15%	5%	0%	65%

Another important consideration is personal vehicle suppression, which is the impact of the pilot service in suppressing the need to acquire a personal vehicle. That is, personal vehicle suppression is vehicle acquisition that would have occurred if the service was not available. Respondents were asked if they would have acquired any vehicles if the rideshare service were not available, and the responses to this question are shown in Table 15. Over 75% of the 221 respondents indicated that they would not have acquired a vehicle while 21% indicated they would have acquired one vehicle. This further suggests that the service made some impact on vehicle holding decisions of users. Personal vehicle suppression is a powerful impact of shared mobility systems, because it is easy to do and results in considerable reductions in VMT. It is easy to do, because it involves inaction (as opposed to the effort required to discharge a vehicle),

and it is powerful because a vehicle not acquired is a vehicle not driving. Most personal vehicles are driven thousands of miles every year.

Table 15: Vehicle Suppression

<i>If the Via Rideshare Service were not available, do you think you would have to acquire any vehicles? N = 221</i>	
No, I/we would not have to acquire any vehicles	78%
Yes, I/we would have to acquire one (1) vehicle	21%
Yes, I/we would have to acquire two (2) vehicles	1%
Yes, three or more vehicles	0%

Table 16 shows results of a similar question asking respondents whether the available mobility services were important for reducing their need to acquire a vehicle. Of 48 respondents, 90% indicated that the Via Rideshare Service was moderately important, very important, or extremely important for reducing their need to acquire a new vehicle. Among respondents to this survey, Via had the largest impact relative to other available mobility services.

Table 16: Contribution of mobility services in decision to not acquire a vehicle

<i>How important have the following mobility services been in reducing your need to acquire a vehicle?</i>					
	Extremely important	Very important	Moderately important	Slightly important	Not at all important
Via Rideshare Service, N = 48	40%	31%	19%	8%	2%
Uber/Lyft, N = 47	19%	17%	34%	11%	19%
Bikeshare (e.g., JUMP), N = 39	10%	13%	23%	15%	38%
Carshare (e.g., Zipcar), N = 37	3%	5%	11%	8%	73%
Public Transit, N = 39	13%	21%	21%	5%	41%
Taxis, N = 36	0%	3%	3%	8%	86%
Other, please specify:, N = 18	0%	0%	6%	0%	94%

The survey asked respondents how likely they are to acquire a vehicle in the next few years due to the pilot service. As seen in Table 17, 20% of the suppressing 44 respondents indicated that they are more likely to acquire a vehicle due to the pilot service, while 44% of those 44 respondents are either less or much less likely to acquire a vehicle in response to the service. The magnitude of the share answering more likely is surprising at the surface. One plausible explanation is the Via Rideshare Service is, for these respondents, temporarily postponing the need to purchasing a vehicle, rather than permanently eliminating it.

Table 17: Vehicle Acquisition Due to Via

As a result of the Via Rideshare Service, how likely are you to acquire a vehicle in the next few years? N = 44

Much more likely	0%
More likely	20%
No change as a result of Via	36%
Less likely	30%
Much less likely	14%

Reasons for use and Impacts on Quality of Life

Questions were included in the survey to evaluate reasons for use, and the impacts on quality of life from the Via Rideshare Service. This included questions to discern respondent likes and dislikes of the service, as well as the trip purposes riders were using Via to fulfill. The non-user survey also contained a number of questions on this subject, which evaluated the reasons why non-users did not use the service.

Reasons for taking Via Service and Perceptions of Use

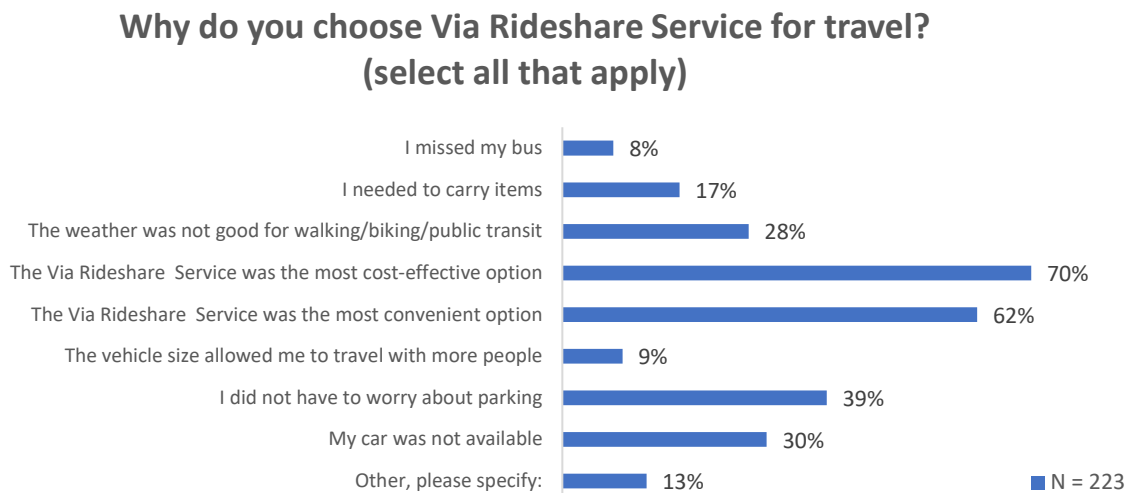
Table 18 shows the distribution of trip purposes with Via and the relative frequency with which Via was used to achieve that purpose. The results suggest that the service was used for social and recreation activities by a large proportion of the respondents, but lesser proportions of the sample used the service for commuting to work or school. However, Via was noted to provide travel to a number of minors, who were not surveyed directly. Additional questions were included and asked of parents of kids who traveled with Via, those questions are discussed later in this report.

Table 18: Trip Purpose with Via

<i>How often do you use the Via Rideshare Service for the following trip services?</i>					
	Never in the last year	Rarely	Infrequently	Somewhat often	Very often
Social/recreational activities, N = 217	20%	15%	21%	27%	17%
Commute to/from work, N = 209	56%	12%	7%	11%	13%
Commute to/from school, N = 205	72%	7%	6%	7%	8%
Go to/from bus stops, N = 208	80%	10%	4%	4%	2%
Work-related meetings, N = 208	74%	9%	5%	6%	6%
Run errands, N = 211	39%	14%	12%	19%	16%
Healthcare appointments, N = 210	69%	10%	7%	5%	9%
Other, please specify:, N = 74	68%	9%	4%	5%	14%

Respondents were also asked ‘why do you choose Via Rideshare Service for travel?’ This question allowed for multiple options to be selected and the responses are displayed in Figure 3. Notable shares of the respondents to this question indicated that their choice of the pilot service was due to its cost-effectiveness and convenience.

Figure 3: Reasons for choosing Via Rideshare Service for Travel



Quality of Life

Table 19 shows the responses to questions asking how Via had affected their perceptions of quality of their life. The results showed that Via improved perceived quality of life for many

respondents in several ways. Quality of life was assessed along dimensions of independence, access to food and medical care, civic engagement, social activities, transportation cost, local patronage of business, feelings of safety, and overall quality of life. Very small percentages of respondents indicated that the service was having a detrimental impact on the aspects of life considered, and relatively larger portions perceived that these aspects had been improved by the service. A fair share of respondents, ranging from a large minority to a majority in some cases reported that Via did not significantly change their quality of life. Overall, the results from Table 19 show that when Via is impacting quality of life, it is generally improving it.

Table 19: Quality of Impacts of Via

<i>"To what degree has the Via Rideshare Service impacted the following aspects of life?"</i>							
	Greatly decreased	Moderately decreased	Slightly decreased	Not changed	Slightly increased	Moderately increased	Greatly increased
Sense of independence, N = 220	3%	0%	3%	40%	20%	15%	18%
Access to healthy foods or medical care, N = 213	2%	0%	1%	69%	9%	8%	11%
Civic or community engagement, N = 208	3%	1%	2%	54%	21%	8%	11%
Participation in social activities, N = 209	4%	0%	1%	48%	22%	14%	11%
Monthly transportation expenses, N = 212	6%	8%	22%	45%	10%	2%	7%
Visits to local shops or businesses, N = 208	2%	1%	2%	51%	17%	13%	13%
How safe you feel getting around town, N = 211	1%	2%	1%	43%	16%	15%	21%
Overall quality of life, N = 211	2%	0%	3%	38%	20%	18%	19%

Children

Another component that can impact quality of life is mobility options for children. Respondents were asked additional questions if they reported having children in the house. One of the questions asked respondents to provide the frequency of their children's use of the pilot service, and the results are shown in Figure 4.

Figure 4: Frequency of Use of Via by Children

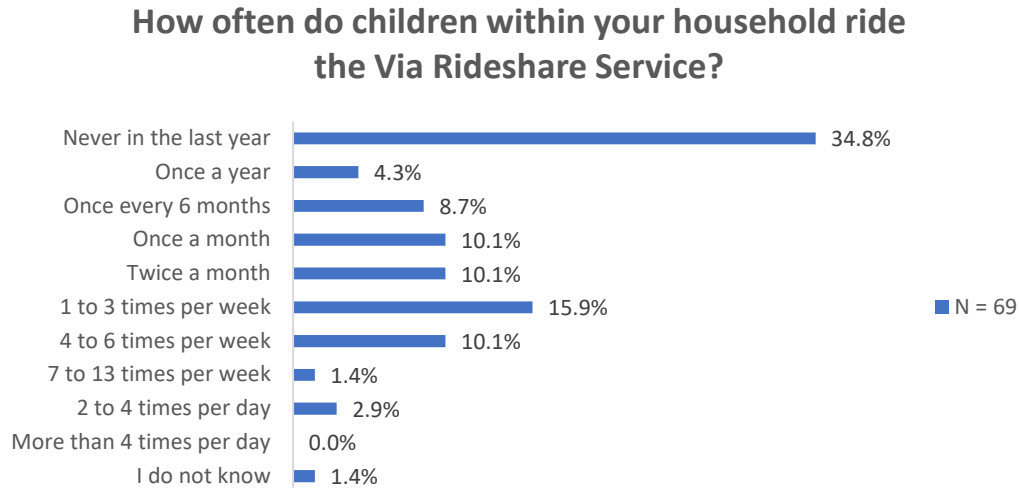
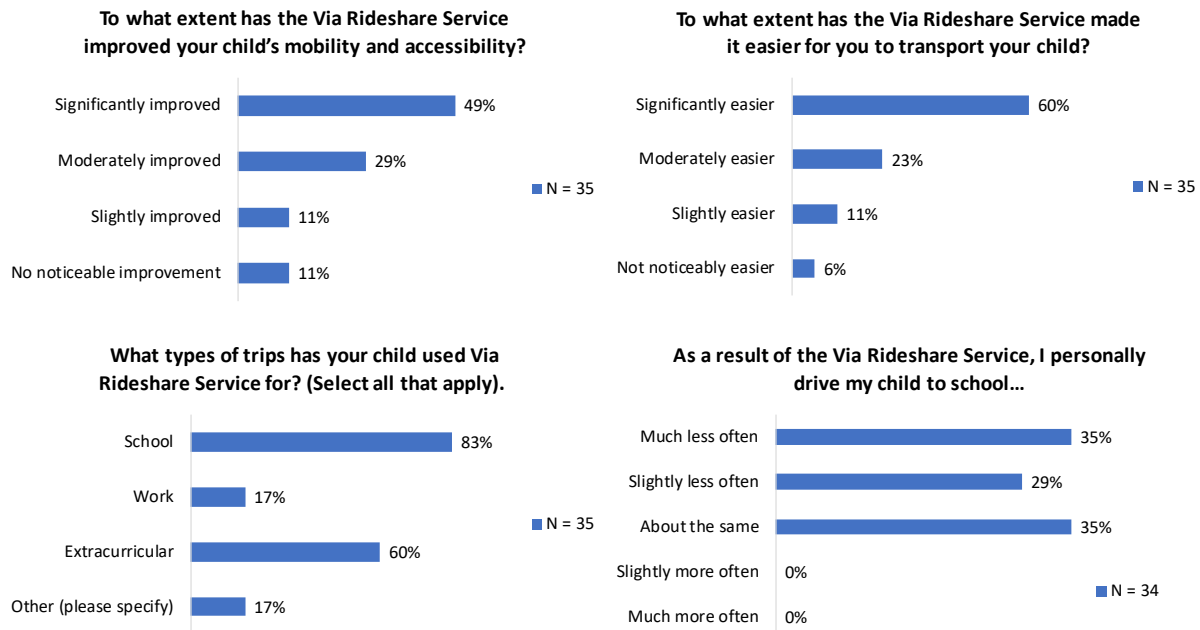


Figure 5: Other Questions Concerning Children Riding Via



The results of four other questions concerning behavior of kids using Via is shown in Figure 5. Anyone who reported their children using Via at least once a month were asked these four follow up questions regarding whether Via had improved their child's mobility and accessibility. Of those respondents, 48% indicated that the service had significantly improved their child's mobility and accessibility. All but two of the 35 respondents reported that Via had made it easier to transport their children, with over half stating that it made it significantly easier. Among 34 respondents, 22 (64%) of respondents with children indicated that the pilot service had caused them to drive their child to school less. None of those respondents indicated that the service caused them to drive their child to school more. This suggests that the pilot service was helping to alleviate some of the sense of burden in users of having to drive their children to school by serving as an alternative mobility option.

Non-users

The survey was sent to persons who had not used the service but signed up for it. The survey was focused on learning more about why these individuals expressed interest in Via, but ultimately chose not to use it. One of the questions was designed to seek out perceptions held by non-users of the service, the distribution of responses are shown in Figure 6. Over half of the respondents indicated that they thought the service would be cheaper. A quarter of respondents said that they thought it would benefit the environment. A fifth of respondents felt that it would be more direct and not require them to wait as long. A second question asked respondents why they had not used the service as shown in Figure 7. As the most prominent reason, 44% of respondents indicated that they were planning to use the service but simply had not used it yet. A considerable portion of respondents selected "Other", with the option to write in response. Four respondents provided additional detail, which are summarized as follows:

- 1) "Driving is more convenient"
- 2) "I'm handicapped and have trouble with steps and need my scooter when [you] go places"
- 3) "I typically only use an Uber/Lyft or rideshare when traveling outside the city limits and I don't want to deal with finding/paying for parking. Via doesn't travel outside city limits."
- 4) "No need at this time"

The third response highlights the coverage bounds of the pilot service being limited to West Sacramento, which prevented people from using the service to travel to downtown Sacramento. This was an issue that was noted by one of the expert interviewees (discussed later) as being infeasible to address in the development of the pilot service.

Figure 6: Non-user priors on the Via Rideshare Service

**Which of the following reasons best fit the statement below?
Please select all that apply. I thought the Via Rideshare Service would...**

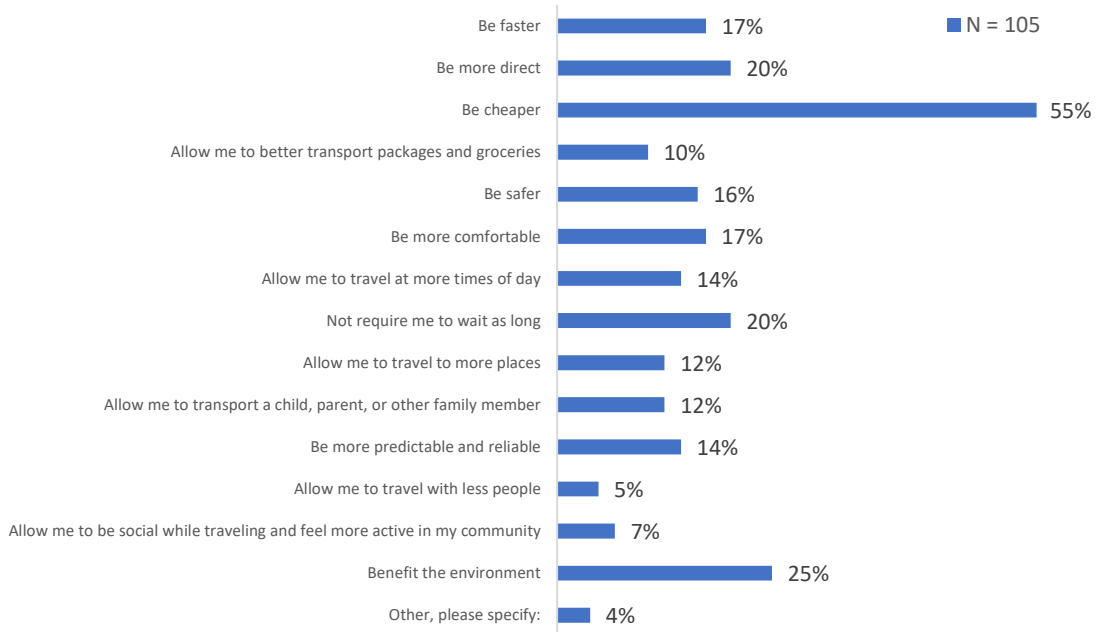
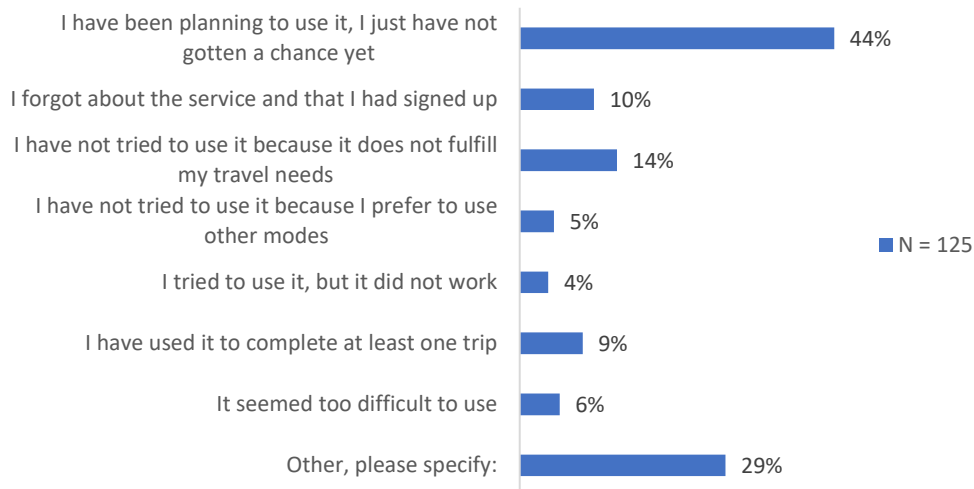


Figure 7: Why non-users have not engaged with Via

Why have you not used the Via Rideshare Service? Please select all that apply.

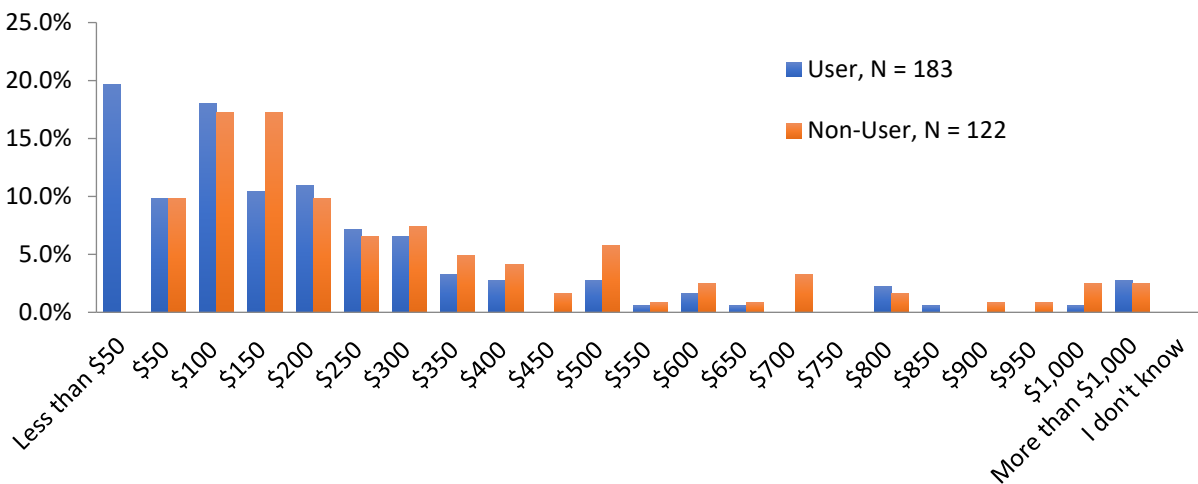


Costs

Both the user and non-user surveys contained a question that asked respondents how much they currently spend on transportation expenses. This included expenses related to public transportation, personal vehicle expenses, biking expenses, and any expenses due to use of Uber, Lyft, or taxi. The response distribution is shown in Figure 8, and it highlights that for the respondents to the questions, over half of both users and non-users reporting spending no more than \$200 per month.

Figure 8: Distribution of Monthly Transportation Cost

What are your current estimated monthly transportation expenses?



Expert Interview Synthesis

As part of the evaluation of Via, the research team engaged in a series of interviews with individuals close to the project in the form of implementation and interaction. Before the service became operational, a significant amount of preparation had to be completed by the City. The expert interviews conducted were designed to provide perspectives on the successes, challenges, and opportunities for improvement with the pilot project.

Improved Mobility for Senior, Disabled, and Disadvantaged Populations

A key goal of the pilot was to better serve the city's senior populations and also to provide improved accessibility for other disadvantaged populations. Some challenges arose in making the appropriate accommodations for groups such as those who have mobility challenges. For example, the pilot service generally required most users to walk a short distance to their pickup

spot or from their drop-off location. Wheelchair users were able to be picked up directly at the location they were present at from the onset of the pilot. However, wheelchair users were not the only users who required this, and early in the pilot, there was no way for other users to indicate that they required this specialized meeting point accommodation outside of a customer service call. An app modification that occurred as a result of this issue introduced the ability of users to report that more direct travel accommodations were needed due to non-wheelchair challenges with mobility.

Pricing

One of the goals of the project was providing affordable mobility. But defining affordability and setting prices were a challenge to the stakeholders. Via charged a flat fare of \$3.50 for each ride. Later, the stakeholders would realize that a flat fare would not be affordable for people who use the service multiple times a week or day. As a result, they decided to offer a new price option that allowed users to pay for a weekly pass. The price per ride and the weekly pass price were halved for seniors and those with qualified mobility needs.

Indemnification

Determining legal liability in the event of an accident also proved to be a considerable challenge. Indemnification was a process that the City was quite unfamiliar with because they had limited experience, which led to a significant amount of scenario analysis, planning, and discussion with Via. Both Via and the City had contrasting visions of liability. Ultimately, mutual indemnification was agreed upon after work was completed by the City's attorney's office. The entire indemnification specification process was lengthy and complex.

Determining Regulation Requirements

Some navigation was required for determining the specific reporting requirements and regulations to which the Pilot would need to adhere. This arose in part from the novelty of such a partnership, which was not directly addressed by the guidelines outlined by California's Transportation Development Act (TDA) or the state's Public Utilities Commission (CPUC). The related guidelines did not directly address how such a partnership should be modulated. The challenges faced highlighted a need for better clarity at the state and federal level on how reporting should be managed for a microtransit system.

Recruiting Drivers

The stakeholders also had to determine how van drivers would be recruited and how they would relate to Via. The City lacked the resources and capital to employ drivers in the same way that transit districts do, while Via utilizes drivers as independent contractors. There was some debate among people in the community about this employment status, with some feeling that the drivers should be hired as employees. Ultimately, the project proceeded with the independent contractor

model. A related concern raised was that the pilot service would recruit persons who lived outside of the Sacramento area, which would raise the vehicles miles traveled (VMT) generated by the service. The pilot service was able to obtain over a 50% local driver rate.

Meeting Demand for the Service

The service proved to be popular with residents, and the stakeholders interviewed received overwhelmingly positive feedback. As the service grew in popularity, there was an increasing concern as to whether it would be able to accommodate the levels of demand that were being generated. Initially, the service began with six vans in operation but this increased to eight later in the pilot. Though demand has been served fairly well, there has been desire expressed to increase supply further in order to improve the quality of service. All of the stakeholders interviewed made mention of receiving positive feedback from people in community who have used the service. The pilot service was extended beyond its one-year allotment in part due to the positive feedback received.

Determining the Coverage Bounds

The pilot service was limited to use within West Sacramento's city limits, but there was desire from the community for the service to travel into Sacramento. There was the additional complication that the two cities are situated in two different counties and two separate transit districts. This raised a number of jurisdictional challenges that would have likely required some lengthy negotiations on the terms of service within Sacramento. Expansion to Sacramento and other jurisdictions may occur in the future, but the issues facing such expansion are more complicated than simply driving there cost-effectively. The system is providing a transit service in another transit jurisdiction, and boundary crossing raises a number of institutional and regulatory barriers that need to be overcome.

Marketing and Education

To market the service to the public, several methods were used. Community outreach was performed, a billboard was used, and the news about the service was spread to high volume areas within the city. Additionally, a referral program that incentivized people to share the news about the service was also adopted. Outreach that helped persons without a smartphone use the service was also performed. One of the challenges that had to be overcome was reaching members of the elderly and other population groups that were more isolated. Recruiting efforts for the project were well received, but there was noted room for improvement in reaching some from more isolated groups. Special efforts by the project team to help members of the elderly community get access to the application was highly commended and was also attributed to helping this demographic engage the system, despite it being traditionally a more challenging group to adopt new technologies.

Additional Lessons Learned

The Need for Guidelines that Promote Successful Partnership Planning: The novelty of the partnership necessitated considerable time be allotted for establishing the details of the pilot. The level of effort needed to address these challenges was hard to anticipate in the pre-planning process. Among the issues to be addressed included streamlining the indemnification process, delineating insurance coverage held by involved parties, and setting the pricing and fare structure. Additionally, providing principles for developing an attractive business model that enticed drivers to participate is important. At key junctions, exchanges between the City and Via had to include litigation teams to assist in the process. The definition of what role the City would play in the development, maintenance, and evaluation of the pilot, versus the transit district and other entities, was unclear initially. As with many ventures, unexpected challenges were naturally a part of this process of innovation. Most notably, guidelines could help cities traverse the complex questions concerning indemnification and how to best relate to local transit operators and other entities when establishing a service like the Via Rideshare Service. As time progresses and more of these partnerships are established, it is expected that the ability to develop useful guidelines will strengthen.

Public-Partnerships Can Promote Positive Outcomes: The strong positive feedback on the service from users shows that partnerships can earn customer acceptance. It could easily be inferred that the tactful marketing and outreach campaign performed by the stakeholders helped promote adoption of the service. Making the effort to listen to feedback from the community is essential in establishing a successful partnership. Nevertheless, the City hopes that this process can become even more seamless in the future as new mobility companies become more familiar with the intricacies of dealing with local governments.

Citations

- 'Microtransit' bus unveiled in Knights Landing – Daily Democrat. (2019). Retrieved 6 November 2019, from <https://www.dailydemocrat.com/2019/10/16/microtransit-bus-unveiled-in-knights-landing/>
- Bliss, L. (2016). A Florida Transit Agency Takes On the Digital Divide in a Partnership With Uber. Retrieved 22 July 2019, from <https://www.citylab.com/transportation/2016/06/pinellas-county-uber-dial-a-ride/487568/>
- Bliss, L. (2017). The Microtransit Revolution Will Be Running a Little Late. Retrieved 22 July 2019, from <https://www.citylab.com/transportation/2017/05/bridj-is-dead-but-microtransit-isnt/525156/>
- City of Centennial & Fehr & Peers. (2017). *go Centennial - Final Report*. Fehr & Peers. Retrieved from https://www.centennialco.gov/uploads/files/Government/Iteam/Go%20Centennial%20Final%20Report_for%20web.pdf
- Handy, S., & Heckathorn, D. (2017). *Sacramento Area Travel Survey: Before Bike Share*. Davis, California: National Center for Sustainable Transportation. Retrieved from https://ncst.ucdavis.edu/wp-content/uploads/2016/10/NCST_Handy_Sac-Travel-Survey-Report_Final-Report_AUGUST-2017.pdf
- Horsley, L. (2019). What is microtransit? To get around JoCo for little money, it could be a solution. Retrieved 6 November 2019, from <https://www.kansascity.com/news/politics-government/article225201750.html>
- Lazo, L. (2019). On-demand, \$2-a-ride service launches in parts of Montgomery County. Retrieved 6 November 2019, from <https://www.washingtonpost.com/transportation/2019/06/25/on-demand-a-ride-service-launches-parts-montgomery-county/>

Milne, S. (2017). West Sacramento Launches On-Demand Ride Hailing Program With Mercedes Vans. Retrieved 6 June 2019, from <http://www.capradio.org/articles/2018/05/14/west-sacramento-launches-on-demand-ride-hailing-program-with-mercedes-vans/>

Molina, J. (2019). Santa Barbara MTD to Roll Out Pilot Program for Van Shuttles. Retrieved 6 November 2019, from https://www.noozhawk.com/article/santa_barbara_mtd_to_launch_van_shuttle_service_20191101

OCTA Launches OC Flex Microtransit Service. (2019). Retrieved 6 November 2019, from <https://www.prnewswire.com/news-releases/octa-launches-oc-flex-microtransit-service-300744077.html>

Shaheen, S., Cohen, A., Yelchuru, B., & Sarkhili, S. (2017). *Mobility on Demand: Operational Concept Report*. Washington, D.C.: U.S. Department of Transportation. Retrieved from <http://innovativemobility.org/wp-content/uploads/Mobility-on-Demand-Operational-Concept-Report-2017.pdf>

Society of Automotive Engineers International (2018) “Taxonomy and Definitions for Terms Related to Shared Mobility and Enabling Technologies” *Surface Transportation Recommended Practice*. J3163.

St. Clair County Transit introduces micro-transit. (2019). Retrieved 6 November 2019, from <https://www.theintelligencer.com/news/article/St-Clair-County-Transit-introduces-micro-transit-14536809.php>

Transportation | City of West Sacramento. Retrieved 19 July 2019, from <https://www.cityofwestsacramento.org/government/departments/parks-recreation/adults/active-aging/transportation>

US DOT (2017). Smart City Challenge. Retrieved 13 September 2019, from <https://www.transportation.gov/smartcity>