



An Onboard Survey of GoCary Customers

2019

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Executive Summary

Background

In the third week of October 2019, CJI Research conducted an onboard survey of GoCary customers. The GoCary survey includes 249 responses and has a margin of error of +/-5.9% at the 95% level of confidence. A larger sample was intended, but proved impossible to obtain even with the additional surveyor hours allocated to the 2019 survey because the survey staff was encountering the response that, "I already did the survey" because they were in fact encountering the same individual riders repeatedly.

PERCEPTION OF MAJOR SERVICE IMPROVEMENTS

- The survey obtained customer ratings of overall GoCary service and nineteen specific elements of service. A seven-point scale was used on which a score of 1 means very poor and 7 means excellent. The percent rating GoCary service overall as 7, or "Excellent," is 42%. Another 28% rated service as 6 on the same scale, meaning that the total rating service as excellent or very good is 70%.
- Operational aspects of service with 60% or more of customers giving the two top scores of 6 and 7 deserve note:
 - Weekday service frequency (72%)
 - Ease of transferring within the system, (65%)
 - Weekday service hours (67%)
- When asked to rank areas for improvement 5 items received 20% or more of the priorities mentioned:
 - "Buses running on time" is by far the most frequently cited aspect of service to improve. It was cited by 41% of customers as first, second, or third most important to improve among the nineteen specific aspects of service examined.
 - Second most important to improve was coverage, "service to all destinations" (32%)
 - Third, weekday service frequency (22%)
 - Fourth, total average trip time (21%)
 - Fifth, Weekday service hours (20%)
- Another way to consider service improvement priorities is to examine the correlation of each aspect of service with the overall service rating under the assumption that the rating of "GoCary service overall" would be a composite dependent on the nineteen ratings of individual aspects of service. This technique identified six priorities that would have a significant impact on the overall GoCary service rating:
 - Service to all destination desired (coverage).
 - Buses running on time
 - Weekday service hours
 - Saturday service hours
 - Ease of transfer between system
 - Usefulness of telephone operators
- Trip purpose is primarily oriented to employment (68%) and shopping (14%), but many customers also use GoCary for school (14%), or other purposes
- Demographics
 - GoCary provides a key support for employment and education. Of all GoCary customers, 51% are employed full time and another 21% part time. Another 21% are students, for a total of 93% of customers being employed or students or some combination of the two.

- 39% of GoCary customers identify themselves as African-American, and 16% Hispanic, while 34% identify themselves as Caucasian/White, 7% Asian, 2% Native American, and 4% “Other.”
- Like most bus systems in the United States, the ridership of GoCary is young, with 46% younger than thirty-five.
- Unlike the customer base of most transit systems in the United States, women do not outnumber men as customers (50% female 50% male).
- Similar to the ridership of many bus systems, many GoCary customer households report that they have extremely low household incomes. In this survey, 22% report income of less than \$10,000 and only 21% report household incomes of \$50,000 or more.
- Customers are quite transit dependent, with 78% reporting that they have either no vehicle or no licensed driver (or both conditions) in the household.
- Travel characteristics
 - 39% of GoCary customers say they are using GoCary more often than in the previous year and 18% say they began riding only in 2018. Only 6% say they are riding less often now.
 - When using other systems in the Triangle Region, GoCary customers are likely to use GoRaleigh (45%) or GoTriangle (38%).
- Ridesharing
 - 56% have used Uber or Lyft at least once in the thirty days prior to the survey.
 - Of the 56% using Uber or Lyft in the previous thirty days, 40% (22% of all GoCary customers) used Uber or Lyft to replace a GoCary trip.
 - Of the 56% who have used Uber or Lyft in the previous thirty days, 33% (or 19% of all customers) have used them in conjunction with a GoCary trip.
- Fare media
 - The largest percentage of GoCary customers (39%) paid their fare in cash.
 - 22% boarded with a day-pass purchased either on the bus (12%) or ahead of time (10%).
 - Thus, combining the cash fare and the day-pass purchase on the bus, a total of 51% make a fare transaction on the bus
 - 30% make a prior pass purchase (7 or 31 day) or use a free pass such as GoPass or a university ID, thus avoiding the delay of conducting a transaction while boarding.
- Mobile Communication
 - A transit app is used by 42% of GoCary customers.
 - While the use of transit apps is still very much inversely related to age, the use of basic cellphones is not. For example, 94% of customers sixty-five or older use a cell phone, but only 29% of that group use a transit app. In contrast, somewhat greater numbers of 16-24 year olds use a cell phone (98%), but 60%, use a transit app.

Introduction and Methodology

Background

As part of a regional customer satisfaction measurement program, CJI Research, LLC conducted a survey of customers onboard GoCary buses from October 20 through 22, 2019, with additional collection on November 2. We had intended to continue surveying for more days to collect a larger sample, but the proportion of passengers telling surveyors that they had already completed the survey rose to almost 100% of those approached, rendering further surveying fruitless. We suspect – but we cannot prove -- that there may be an unusually high number of occasional riders using GoCary who would be missed in an onboard survey that did not continue for at least a month, or be conducted by mailed or online response. Similar surveys were conducted during adjacent weeks with customers of GoCary, GoTriangle, and GoCary.

The GoCary sample is unusual in another way as well. While all bus systems experience substantial turnover of their customers, two-thirds (66%) of GoCary riders said they had begun using it only in the past two years, and of those, 40%, in only the previous year. That means that in terms of continuity with the 2018 survey data, we are dealing with a largely new group of passengers and can expect less stability in the percentages than one might see in other passenger surveys.

The questionnaire used in the survey was initially developed by Hugh Clark of CJI Research and was refined a coordinating committee from GoTriangle and Campo led by Elizabeth Raskopf of GoTriangle, the agency coordinating the multi-system project. The committee included representatives of all four transit agencies and CAMPO.

Methods: How the Survey Was Conducted

SAMPLE

A random sample of runs was drawn from a list of all GoCary runs. This initial sample was examined to determine whether the randomization process had omitted any significant portion of the GoCary system's overall route structure. The sample was adjusted slightly to take any such omissions into account.

Survey data collection occurred onboard the buses. On the bus, survey staff approached all customers rather than a sample. The only exception was that customers who appeared younger than sixteen were not approached, both for reasons of propriety and because children are typically unable to provide meaningful answers to several of the questions.

Because all customers were asked to participate rather than only a sample of customers on the bus, there was little or no opportunity for a survey staff member to introduce bias in selection of persons to survey. In effect, a bus operating within a specified window of time became a sample cluster point in a sample of such clusters throughout the total system.

The GoCary survey includes 249 respondents and has a margin of error of +/-5.9% at the 95% level of confidence. When the distribution of responses is other than 50:50 on a specific question, the sample error for a given sample size decreases somewhat. If a sub-sample is used, sample error increases somewhat.

DATA COLLECTION

Temporary workers from the Greer Group Inc. of Raleigh, NC were trained to administer the surveys under the supervision of CJI Research staff. Surveyors wore smocks identifying them in large print as "Transit

Survey” workers. This uniform helps customers visually understand the purpose of why an interviewer would be approaching them, thus increasing cooperation rate.

In most cases, the survey personnel met the bus operators at pull-out, accompanied them at the beginning of their shifts and rode the buses throughout the driver's assignment, or they took a shuttle to Cary Station to catch their assignments. In some instances, in order to assure broader coverage of certain routes, surveyors rode partial runs and then transferred to another route or run.

The questionnaire was self-administered. Survey personnel handed surveys and a pen to customers, asked them to complete the survey and return it to them before leaving the bus.

At the end of each sampled trip on a given run, the survey personnel placed the completed surveys in an envelope marked with the route, the run, the time, and the day and reported to the survey supervisors who completed a log form detailing the assignment. A total of 529 trips were sampled and recorded in this manner.

PARTICIPATION RATES

Many more trips were covered in 2019 than 2018, in an attempt to achieve a larger sample. However, sample size remained the same because although the percentage refusal rate remained constant (16%), the number of refusals increased from 79 to 120 because many more contacts were made. Also, the number of persons saying they had already completed the survey rose from 153 to 275 for the same reason. The latter is an indication of diminishing returns due to finding the same riders again and again in a small overall ridership pool. We suspect that there is probably a high proportion of occasional riders who would not be captured in a survey of less than a month.

Completion Rates on GoCary Onboard Survey, 2019

A total of	772	persons were riding during the surveyed trips and had a chance to participate	
		(33) appeared to be younger than 16 and were not asked to participate	-4%
Thus	739	passengers were adults and were asked to participate	96%
Of these...	(25)	customers spoke a language other than English or Spanish	-3%
while another	(120)	refused outright	-16%
and another	(275)	said they had already completed the survey (possibly on another system)	-36%
Thus finally	280	accepted the survey form with the apparent intention of finishing it	36%
Thus,	280	customers represent, the total "effective distribution," i.e., the raw sample	
Of these...	240	Completed the survey on the GoCary bus	88%
and	7	completed the survey and returned it by mail or to an operator on another bus	3%
and	(33)	Failed to return the survey they had accepted	12%
Finally:	247	Completed the survey	88%
		Of all persons on board the sampled trips, this represents:	32%
		Of all English or Spanish speaking adults riding on a surveyed vehicle, this represents:	35%
		Of all the customers on sampled trips who accepted a questionnaire, this represents:	88%

The survey in 2019 was longer (44 items) than in 2018 (37 items). Of the 249 GoCary respondents in 2019:

- 151, or 61% completed all questions in the survey.
- Another 31, or 13% completed all but the final question, household income. (Income questions always have a high refusal rate.)
- Therefore, 182 completed all questions or all but the income question.
- This means that 74% of the sample answered 97% to 100% of the forty-four questions

In the analysis, those who did not respond to a question are eliminated from the computation of percentages and means unless there was a way to infer the response. For example, if a rider gave as a trip purpose *getting to or from school*, it was apparent that this was a student, and that employment could be coded as "student," even if the respondent had not responded to the employment question.

QUESTIONNAIRE

The questionnaire was self-administered. It is reproduced in Appendix A.

The questionnaires were serial numbered so that records could be kept for the route and day of the week on which the questionnaire was completed. This is a more accurate method than asking customers which route they are riding when completing the survey.

The survey is printed in English on one side and in Spanish on the other. In the survey of GoCary customers, 46 customers, or 5% of the effective final unweighted sample identified themselves as Hispanic, but only 24, or 3% of the completed questionnaires were completed in Spanish. Stated in another way, only about one-half (52%) of the customers identifying themselves as Hispanic completed the survey in Spanish.

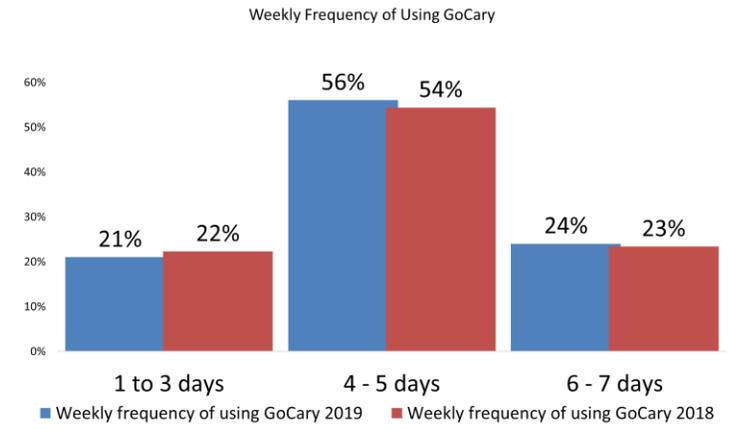
ANALYSIS

Analysis consists primarily of crosstabulations and frequency distributions. Tables were prepared in SPSS, version 26 and charts in Excel 2016. The GoCary survey data will be archived by CJI Research so that it will be available for further analysis as needed.

With a few exceptions, all percentages are rounded to the nearest whole number. In a few cases, when this could have caused important categories to round to zero, or when comparisons between charts would appear inconstant if tenths were not included, percentages are carried to tenths. Rounding causes some percentage columns to total 99% or 101%. These are not errors and should be ignored.

Rider Profile

Figure 1 Weekly frequency of using GoCary



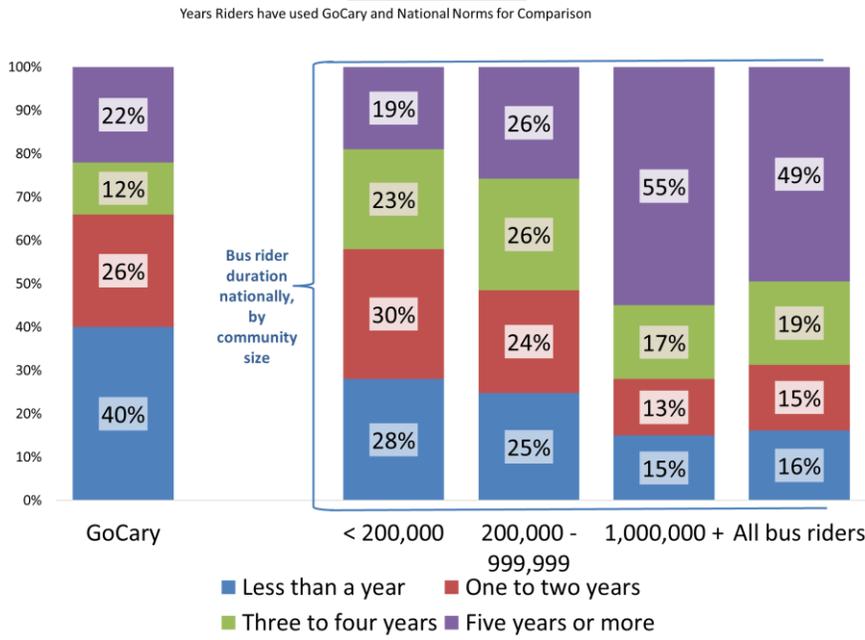
The percentages in each group did not vary significantly between 2018 and 2019.

Why segment the sample in this manner? The frequency of using public transit is the most basic differentiating characteristic within the ridership. Understanding the ridership in groups rather than as a monolith can be useful to those involved with planning or marketing. Other breakdowns may also be of interest, and by request such breakdowns can be provided both quickly and at no cost because the survey data file is maintained live to meet such requests. Such breakdowns might include level of dependency on transit, trip purpose, or demographics such as age or income. All are easily available on request.

For how many years have you used GoCary?

Duration of using a transit system, is a measure of the turnover in ridership. We know from ridership figures that GoCary ridership has fluctuated over the past six years, and between 2018 and 2019, decreased by several percent relative to a 2013 baseline. However, 40% of GoCary customers said they have begun to use GoCary only in the six months prior to the survey, and another 26% (for a total of 66% in only the past two years). This means that there is a very high degree of both gain and loss of ridership each year. We call this “churn” or “turnover.” In turn that suggests that a major factor in building ridership is a better retention rate.

Figure 2 Years riders have used GoCary vs riders throughout the United States



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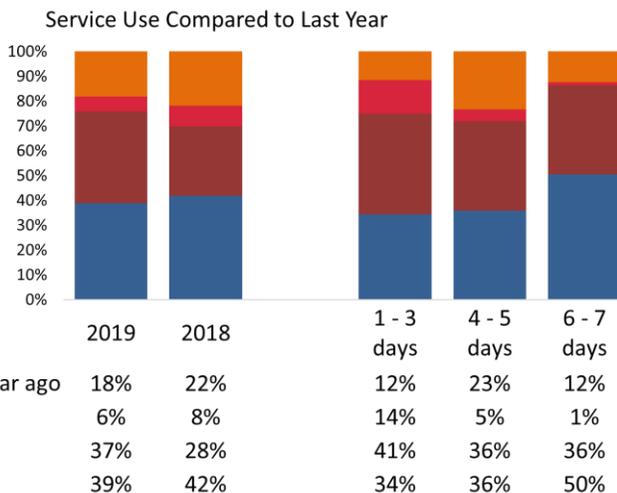
Compared to the duration of bus ridership nationally, GoCary is an outlier, primarily because of the

small size of the Cary community. While nationally, 49% of bus riders say they have used the bus for five years or more, only 22% of GoCary riders say the same thing.

Similarly, while nationally, only 16% of “All bus riders” say they have used the bus for less than a year, 40% of GoCary riders say that.

A large part of the reason for this is that nationally, a large proportion of bus riders live in large cities with old and established transit systems, higher density, and populations accustomed to using public transportation. For this reason, bus services in cities with one million or more inhabitants tend to have much lower rates of turnover than smaller cities. Thus, when we break the national data down by size of the

Figure 3 Compared to a Year Ago, Do You Ride More Often, Less Often or the Same?



communities served, GoCary characteristics are a better match to the characteristics of communities of fewer than two-hundred thousand residents.

Using GoCary More Often, Less Often, or the same amount as Last Year

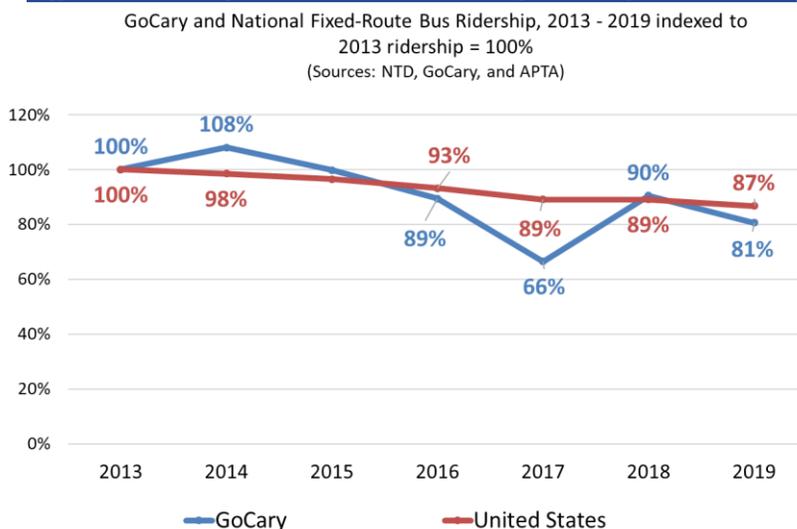
Riders were asked whether they were using GoCary more often, less often or the same amount as in the previous year. Thirty-nine percent (39%) said they are riding more often, 18% are new riders, 37% are riding as often as a year ago, and

only 6% are riding less often. Since we know that GoCary ridership actually declined slightly since 2018, we have to see this as further evidence that there has been a great deal of turnover. This is typical of most bus systems, with the exception of those in very large and old cities.

The four to five day riders are the most likely to be new riders (23%), while the most frequent, six to seven day riders are more likely (50%) than the other segments to say they are riding more often.

Ridership figures from APTA show that bus ridership nationally has been on an extended downward trend. Figure 4 compares bus ridership nationally to that of GoCary using ridership in 2013 as a benchmark¹. It displays the percentage of 2013 ridership for each year since then. There was a long decline in GoCary ridership from 2014 through 2017, with an increase in

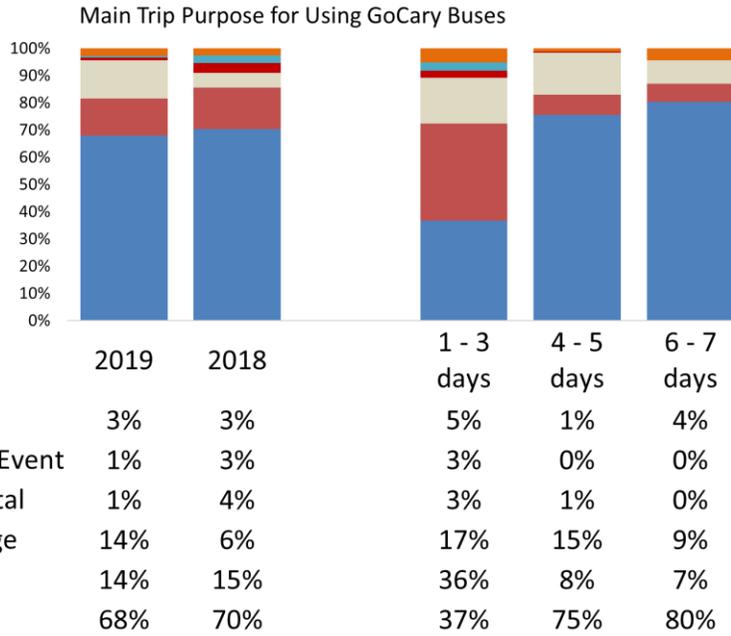
Figure 4 GoCary and national ridership trends, 2013 - 2019



¹ GoCary ridership figures from GoCary and NTD (Federal Transit Administration, National Transit Database See: <https://www.transit.dot.gov/ntd/transit-agency-profiles>)

2018 from 66% of 2013 ridership to 90%. This placed it at the same level as national ridership, using 2013 as the baseline. However, 2019 saw a decline from 87% to 81% of the 2013 level.

Figure 5 Trip Purpose



Trip Purpose

Customers were asked to name the single main purpose for which they use GoCary.

- Getting to or from work is the primary trip-purpose, with 68% of customers in 2019 and 70% in 2018 citing that as their most frequent trip purpose. (This is not a statistically significant change.)
- Shopping trips make up another 14% of trips. Thus, GoCary is carrying a large proportion of its customers (82%) either

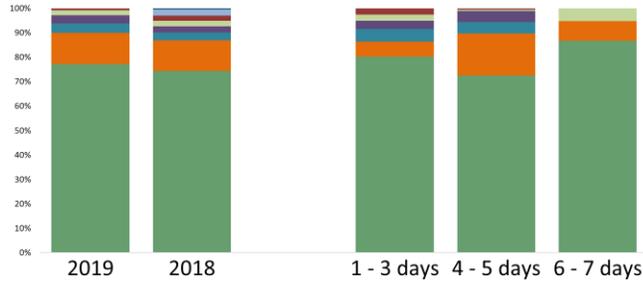
for work trips or for shopping trips, an indication of the potential economic impact that GoCary’s services are having on the local economy by supporting labor force and shopping activities.

- Another 14% of the customers indicate that they use GoCary to travel to or from school compared to 6% in 2018.
- Medical and recreational trips account for 2%

Eighty percent (80%) of the six-to-seven-day riders and three-fourths of the four-to-five-day riders (75%) make work-trips. The one-to-three-day a week riders are more likely than the other segments to have used GoCary for each of the non-work purposes. It is interesting, however, that even among these least frequent customers, work trips are common (37%). This suggests that this customer base might either be working part-time or using different modes on different days.

Figure 6 Mode to the GoCary Bus Stop

How Passengers Got to Bus Stop for Current Trip



	2019	2018	1 - 3 days	4 - 5 days	6 - 7 days
Drove	0%	0%	0%	0%	0%
Other GoCary bus	0%	3%	0%	0%	0%
Another mode	1%	2%	3%	1%	0%
Uber/Lyft	2%	2%	3%	1%	5%
Dropped off	3%	3%	3%	4%	0%
Biked	4%	3%	5%	5%	0%
Bus other than this system	13%	13%	6%	17%	8%
Walked	77%	75%	80%	73%	87%

Mode to the Bus Stop

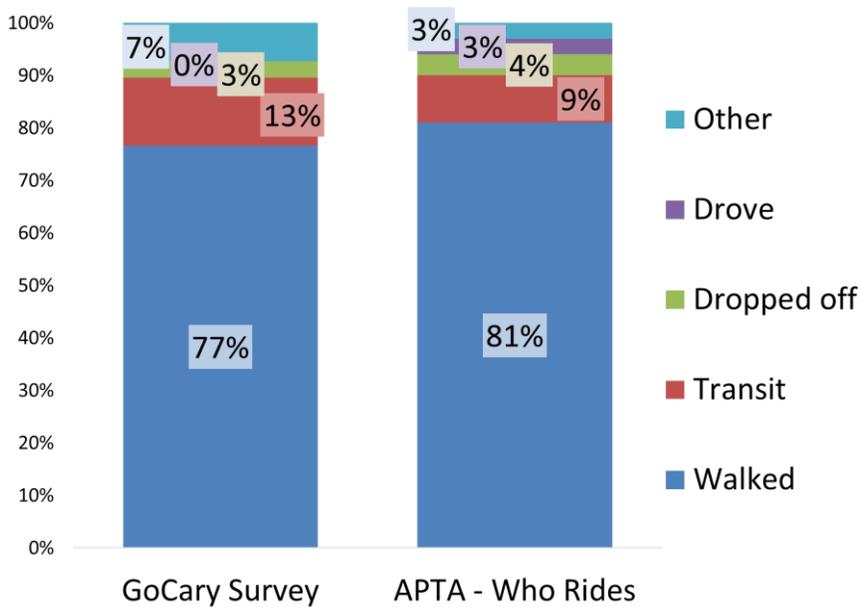
Most people (77%), usually walk to the nearest bus stop rather than driving or taking a bus operated by a different system. There are some differences among the three rider segments in this respect. The four to five day riders are substantially more likely (17%) than others to use a bus system other than GoCary to get to their first GoCary bus.

The six to seven day riders are more likely than the other

segments to walk to their stop, 87% compared to only 73% for the four to five day riders and 80% for the one to three day riders. The four to five day riders are more than twice as likely as the other segments to say they got to their GoCary bus on a different bus system.

Figure 7 Access Mode – GoCary and Nationally (GoCary Survey and APTA)

Mode to the bus stop, GoCary and National

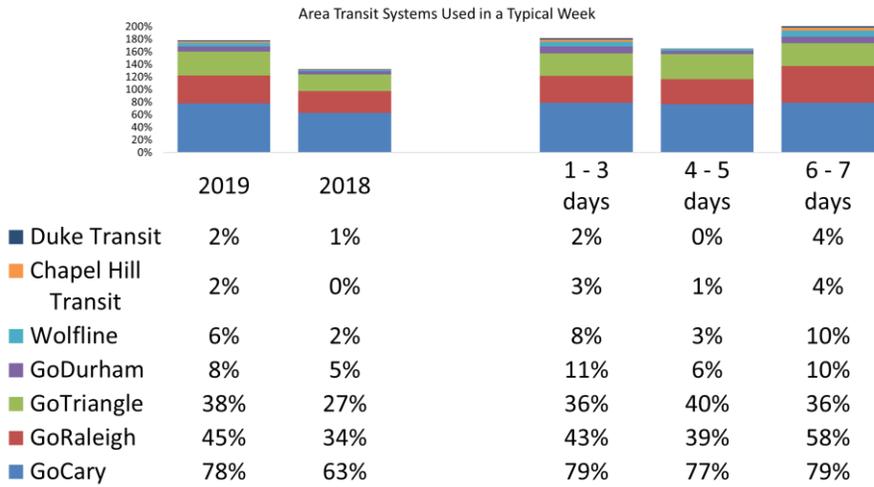


Access Mode – GoCary and Nationally (GoCary Survey and APTA)

GoCary customers are acting very close to national norms as they relate to the mode to the bus stop:

- Nationally, 81% of bus system riders walk to their stops, while 77% of GoCary riders do so.
- While 9% of bus riders nationally use public transit to access the bus stop they used for the trip on which they were surveyed, the same is true for 13% of GoCary riders.

Figure 8 Bus Systems Used in a Typical Week



week. Besides GoCary, many riders use GoRaleigh (45% overall). In addition, 38% also use GoTriangle.

Use of Area Bus Systems

Respondents were asked which of the several transit systems in the region they use in a typical week. Because they can use multiple systems, the sums of the percentages exceed 100% in Figure 8.

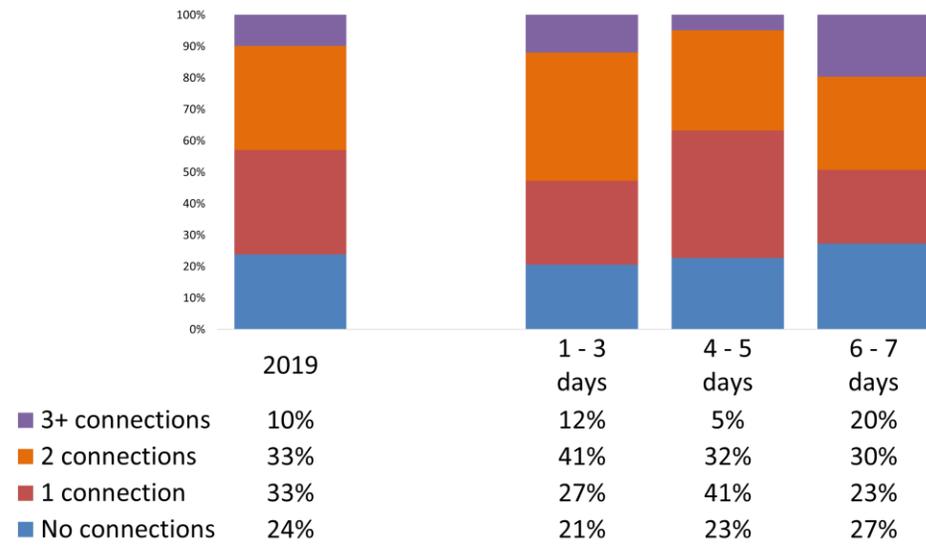
As expected, most riders (78%) said they use GoCary in a typical week. Conversely, this suggests that about 22% do not use GoCary in a typical

Transfer Connections

Customers were asked how often they “...connect with or transfer to another bus to complete your trip.” Figure 9 shows that almost one-fourth of GoCary riders (24%) make no connections or transfers, while one-third (33%) transfer once, one third (33%) transfer twice and 10% transfer three times or more. Thus, a total

Figure 9 Transfers/Connections

In making this one-way trip, how many times do you connect with, or transfer to, another bus to complete your trip?



of 76% transfer at some point during their GoCary trip. The mean number of connections made is 2.23.

Although the fact of transferring at all is fairly constant among the rider segments, the four to five day riders are significantly more likely than other riders to transfer only once rather than more often.

GoCary Fares at the Time of the Survey

The inset table on this page displays the several types of pass media and special fares available at the time of the survey in 2019².

	Full Fare	Discount Fare
Single Ride Fare	\$ 1.50	\$ 0.75
GoCary Day Pass	\$ 3.00	\$ 1.50
GoCary 7-Day Pass	\$ 14.50	\$ 7.25
GoCary 31-Day Pass	\$ 54.00	\$ 27.00
\$25.00 Value Card	\$ -	\$ 20.00
Regional Day Pass	\$ 4.50	\$ 2.00
Regional 7-Day Pass	\$ 16.50	\$ 7.50
Regional 31-Day Pass	\$ 76.50	\$ 34.00

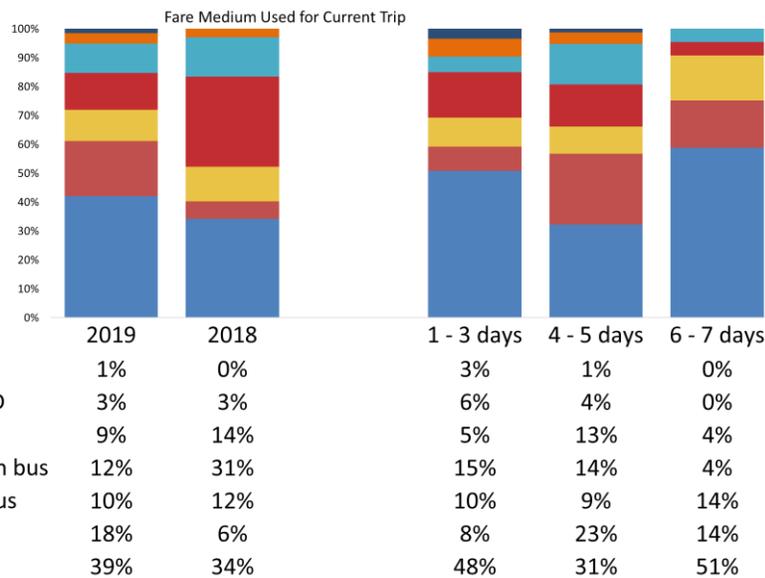
Type of Fare Used

The largest percentage of GoCary customers (39%) paid a single trip cash fare. Another 22% boarded with a day-pass purchased either on the bus (12%) or prior to boarding (10%). Combining the cash fare and the day-pass purchase on the bus, a total of 51% make a fare transaction on the bus.

The other customers used free or pre-paid passes of some other type. This includes 18% using the GoPass (up from 6% in 2018) 3% a university ID, and 9% used a seven-or thirty-one-day pass. The fare media used vary among the rider segments, with the least and most frequent riders being substantially more likely to use cash (48% and 51%, respectively), though for different reasons. For the infrequent riders, use of a

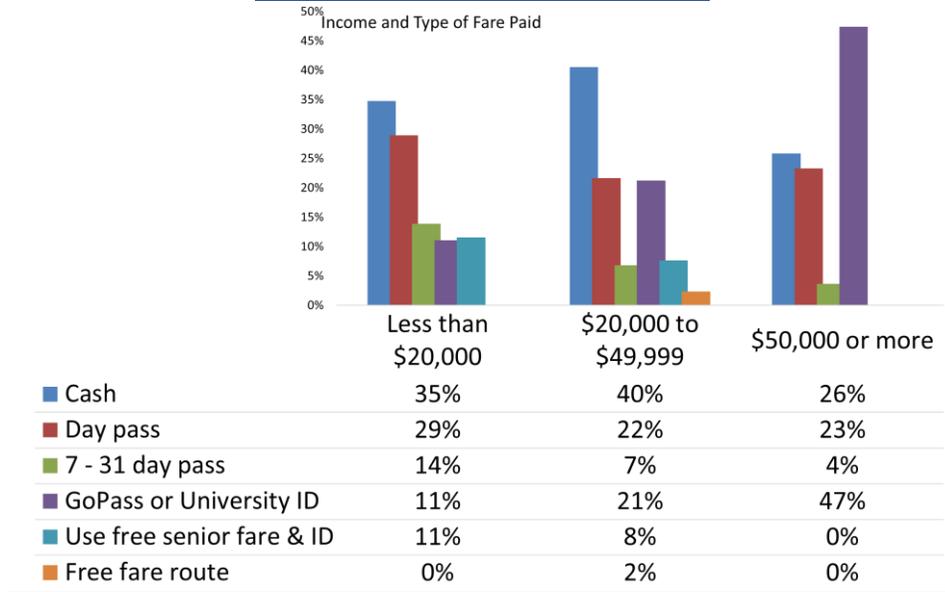
single-trip cash fare probably makes financial sense and a long term pass does not. The very frequent riders might benefit from using a seven of thirty-one day pass, but the cash flow challenge is often such that people cannot risk committing that much money in advance.

Figure 10 Fare Medium Used



² Source of fare information: <https://gocary.org/fares-passes-gocary>

Figure 11 Income and Type of Fare



Income and Fare Medium Used

In many systems a decade or more ago, when a variety of passes, especially the day-pass and GoPass were not yet widely offered, the primary purchased, and discounted, pass option was usually a monthly pass, and sometimes a seven-day pass. Lower income riders rarely could afford to utilize the fare discount offered by such passes because of the challenge

posed by their very limited cash flow and the risk of committing cash in advance for a month’s or even a week’s transportation. Thus, there was a strong tendency for lower income riders to pay full cash fares, and for discounted passes to be used primarily by those with higher incomes. With the advent of the day pass, however, that inverse relationship between the use of discounted multi-trip pass fare media and income, while still apparent, has weakened.

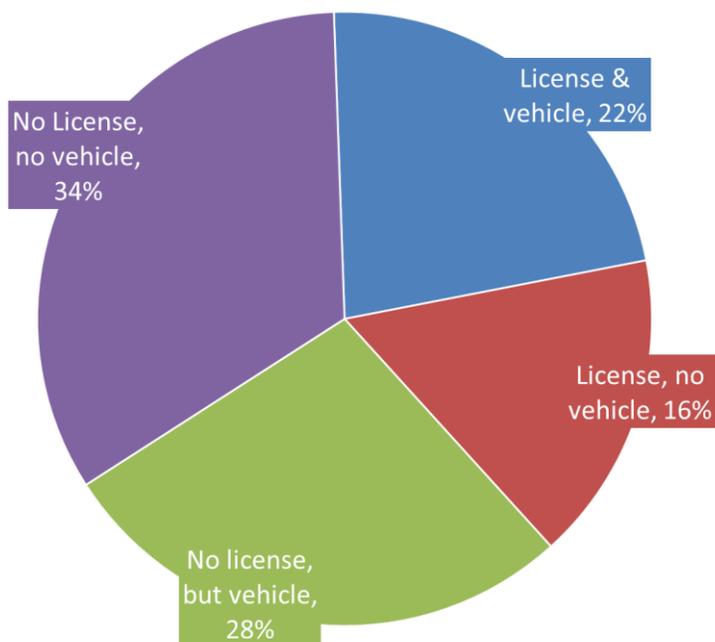
The day pass does not offer a discount as deep as a longer term pass, but it imposes little risk, no substantial cash flow problem, and does save money for the user. Also, if pre-purchased before boarding, or at the second and subsequent uses if purchased on the bus, it also saves boarding time for the system, thus providing both a social and an operational benefit.

On GoCary, use of cash fare is higher among riders with incomes of less than \$50,000 (35% if income is less than \$20,000 and 40% if between \$20,000 and \$50,000). Of those with incomes of \$50,000 or more, fewer, 26%, use cash. The day pass is used by substantial numbers of all income level, but by somewhat more of the lowest income segment.

The major difference between the lower and higher income riders (and the one remaining type of inverse relationship between income and fare type used) involves the free fares provided by the GoPass and a university ID. Those with incomes of \$50,000 or more are more than four times as likely (47%) as those with incomes less than \$20,000 (11%) and more than twice as likely as those with incomes between \$20,000 and \$49,999 (21%) to use a GoPass or a university ID to use GoCary services at no cost to themselves.

Figure 12 Aspects of Mode Choice: Having a License and Having a Vehicle

Having Valid Driver's License and Vehicle Available



Two Aspects of Mode Choice – Valid License + Vehicle

Having a choice of local transportation mode depends not only on the availability of a vehicle but also on having a valid driver’s license. Figure 12 indicates that a large minority of customers (totaling 38% in Figure 12) hold a valid license and 50% have a vehicle available.

Availability of a Vehicle

In 2019, 50% of GoCary customers have at least one vehicle available for their use. This is a major change from the survey sample in 2018, when only 39% said they had one or more vehicles available. To some extent this change probably

represents continued economic improvement between 2018 and 2019 in terms of both employment and wages. But it also likely is a function of the small sample size in both years. The latter suggests that the actual figure is probably in between the two.

The most frequent riders are the most likely to be transit dependent in the sense that 71% have no private vehicle available for their use compared to 44% for each of the other two segments.

Figure 13 Availability of a Vehicle

Vehicle Availability

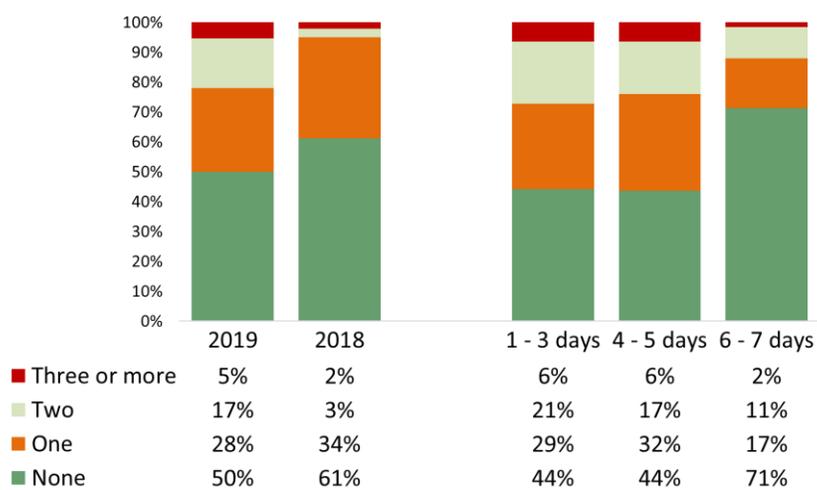
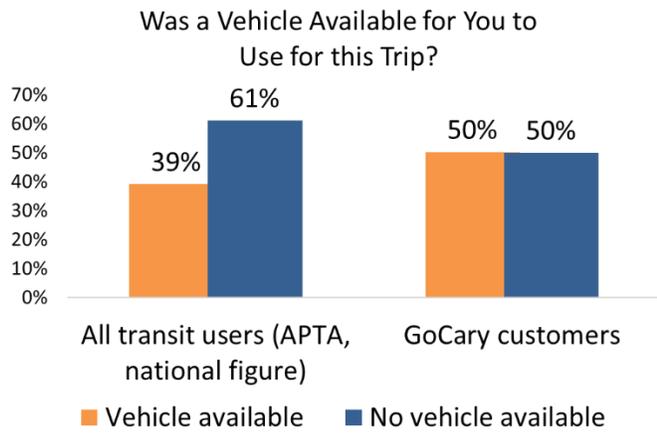


Figure 14 Vehicle Availability nationally (APTA) and GoCary



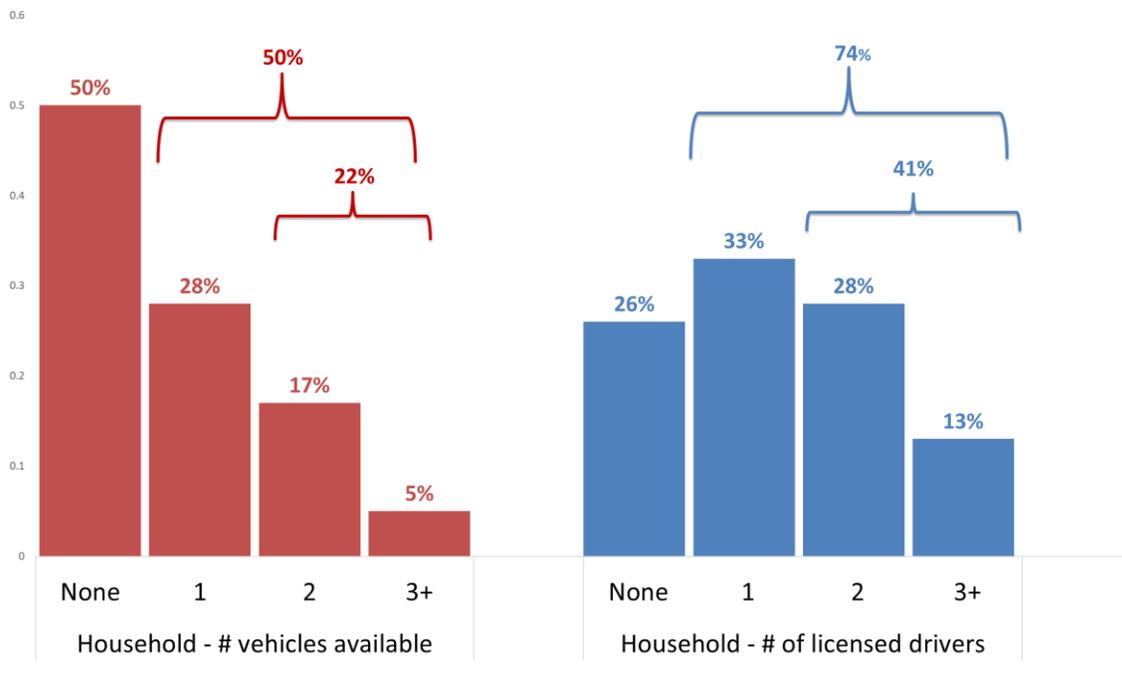
Nationally, a meta-analysis conducted in 2016 by CJI Research for APTA of more than 200 onboard transit passenger surveys indicated that among bus customers, 61% lacked a vehicle for the trip they were making when surveyed³. At 50%, this places GoCary well below the national norm in this respect.

Vehicles and Licensed Drivers

While only 50% of individual GoCary customers have a vehicle available for their use, most (74%) of the households in which they live have one or more licensed drivers.

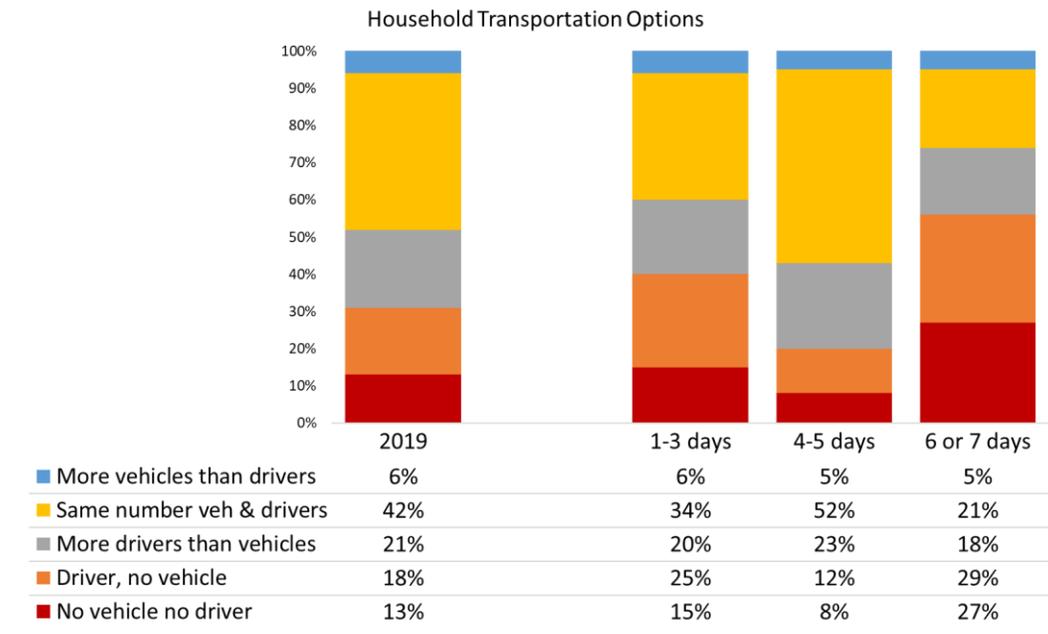
Figure 15 Transportation Options

Transportation Options in GoCary Customer Households



³ <https://www.apta.com/research-technical-resources/research-reports/who-rides-public-transportation/>

Figure 16 Household Transportation Options



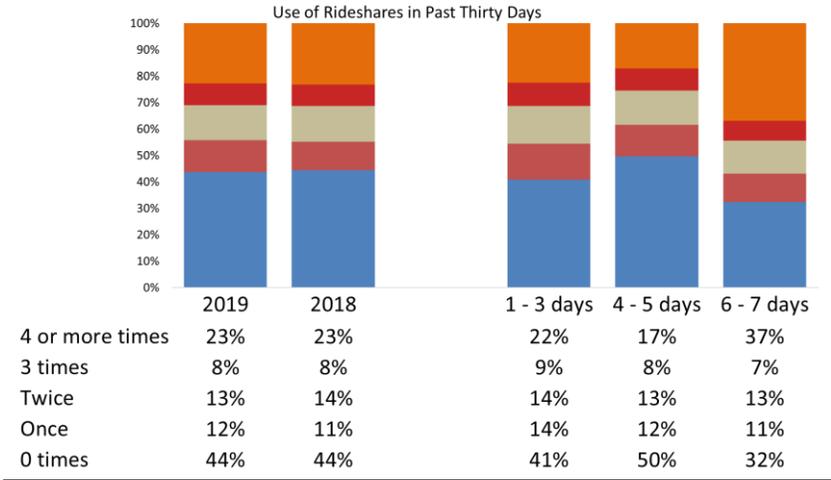
Another View of Household Transportation Options

Another way to think about personal transportation options customers have is shown in Figure 16. We have seen in Figure 15 that there are more customer households with licensed drivers than there are households with vehicles available. While the number of vehicles in the household is important, the ratio of vehicles to licensed drivers able to drive themselves or give rides to others in the household is also very important.

Among GoCary customers, a total of 48% have either the same number of vehicles as drivers (42%) or more vehicles than drivers (6%). Another 21% share a vehicle in that the household has more drivers than vehicles. The balance of customers either have no licensed driver in the household (18%) or neither a vehicle nor a driver (13%). The latter two groups, totaling 31% can be considered fully transit dependent.

The rider segments differ substantially in this respect. While 28% of the six to seven day riders have the same number of licensed drivers as vehicles or more vehicles than drivers, of the four to five day riders, 58%, and of one to three day riders, 40% meet that criterion.

Figure 17 Use of Uber or Lyft in Past Thirty Days



Use of Uber or Lyft in past thirty days

Mode choice is no longer simply about owning or leasing a personal vehicle. Since 2015, car sharing has become mainstream. Of all GoCary customers, 44% say they have not used car sharing services in the past thirty days. (This percentage has not changed since 2018.) Conversely, this means that 56% have used one of the car-sharing services, including 12% who have used them only once, 13% twice, and 31% who have used

them three or more times⁴. Statistically, these figures have not changed since 2018.

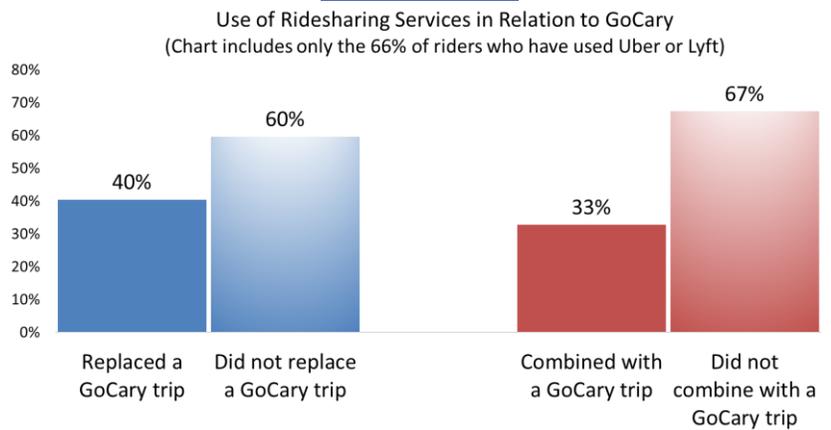
The four to five day riders are less likely than riders in the other segments to use ridesharing services. The reason is likely that they are also the segment more likely than others to have a favorable ratio of vehicles to drivers in the household.

Use of Uber and/or Lyft to Supplement or Replace a Trip on GoCary

Figure 15 indicated that 56% of GoCary customers had used Uber or Lyft in the past thirty days. How have those trips interacted with GoCary? Figure 18 provides basic answers.

Of the 56% of GoCary customers who have used Uber or Lyft, 40% say they replaced a GoCary trip with a ridesharing trip. This amounts to 22% of all GoCary customers (i.e. 40% of 56% = 22%). This is unchanged from 2018 when it stood at 21%.

Figure 18 Use of Uber and/or Lyft to Supplement or Replace a Trip on GoCary



Of the 56% of customers who have used Uber or Lyft, one-third, 33%, say they combined a ridesharing trip with a GoCary trip. This amounts to 19% of the ridership (i.e., 33% of 56% = 19% of the ridership).

We do not know for what purpose some Uber/Lyft users have combined a rideshare trip with a GoCary trip. However, in Figure 6, (page 18) only 2% said they used Uber/Lyft to get to the bus stop for their current trip. Other customers must have combined ridesharing

with GoCary for other purposes. This issue will be worth exploring in some manner in the coming years if only on an informal basis.

⁴ In future surveys it may be useful to determine if customers using shared rides are doing so with dependents because that may be no more costly than multiple cash bus fares.

Figure 19 Reason for replacing a GoCary Trip with ridesharing

Reason for having substituted a rideshare for a GoCary trip	Percent of those giving a reason
Bus not running at late hour	38%
Bus would have taken too long	22%
No money for the bus	9%
Says bus was late	9%
Convenience	6%
Weather	6%
Missed the bus	6%

Replacing a Trip

Those who said they had replaced a GoCary trip with a ridesharing trip were asked why they had done so. The dominant response was that the buses were not running at the late hours when transportation was needed (38% of the 40% replacing a trip, or 15% of all GoCary riders). The next most common response was that the “bus would have taken too long.” This could mean several things, among them that the rider simply chose to use Uber or Lyft for a faster trip,

or that a late start by the customer had made using the GoCary service unfeasible in that instance.

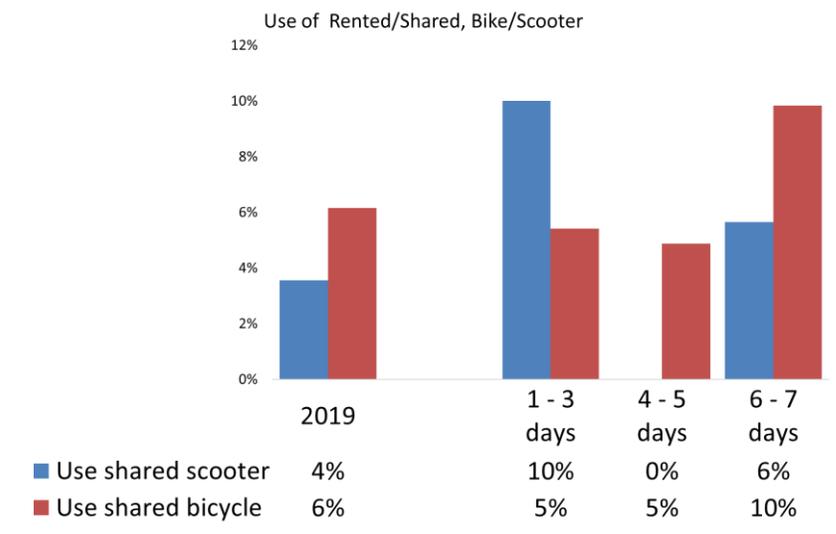
Rental Bikes and Scooters

Asked if they had used or planned to use a rental bike or scooter “...during any part of this trip,” 4% said a scooter and 6% a bicycle. Scooter use was particularly heavy (10%) among the least frequent GoCary riders and use of a shared bicycle was heaviest among the most frequent GoCary riders. (10%.

Some readers have noted that this percentage, though small, intuitively seems high. For example, no respondents said that they got to

their first GoCary bus using a rented bike or scooter (Figure 6). However, the reader should keep in mind that the wording of the question asked if the rider had used or planned to use a bicycle or a scooter during “...any part of this trip.” The respondent could have understood that to mean getting from their bus to their destination, or using a bike or scooter at some other point in the day (e.g., going to lunch) if they interpreted their “trip” to include the entire day at work or shopping (etc.).

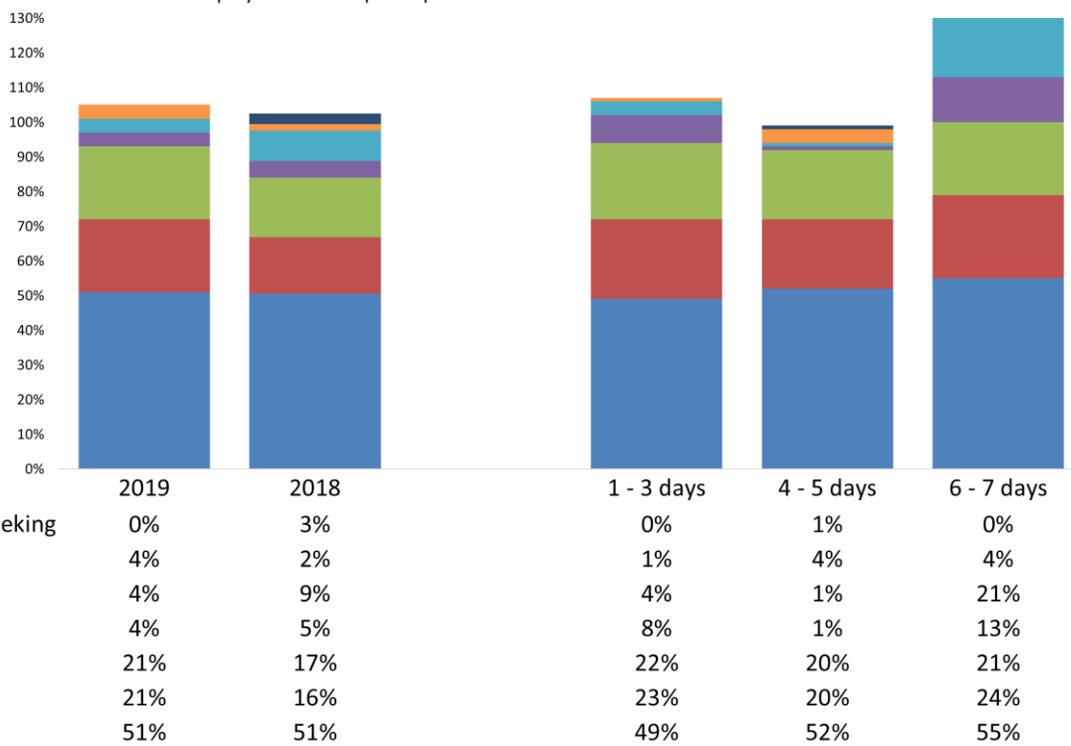
Figure 20 Use of a rental bike or scooter



Demographics

Figure 21 Employment of Customers

Employment - Multiple responses included



Employment of Customers

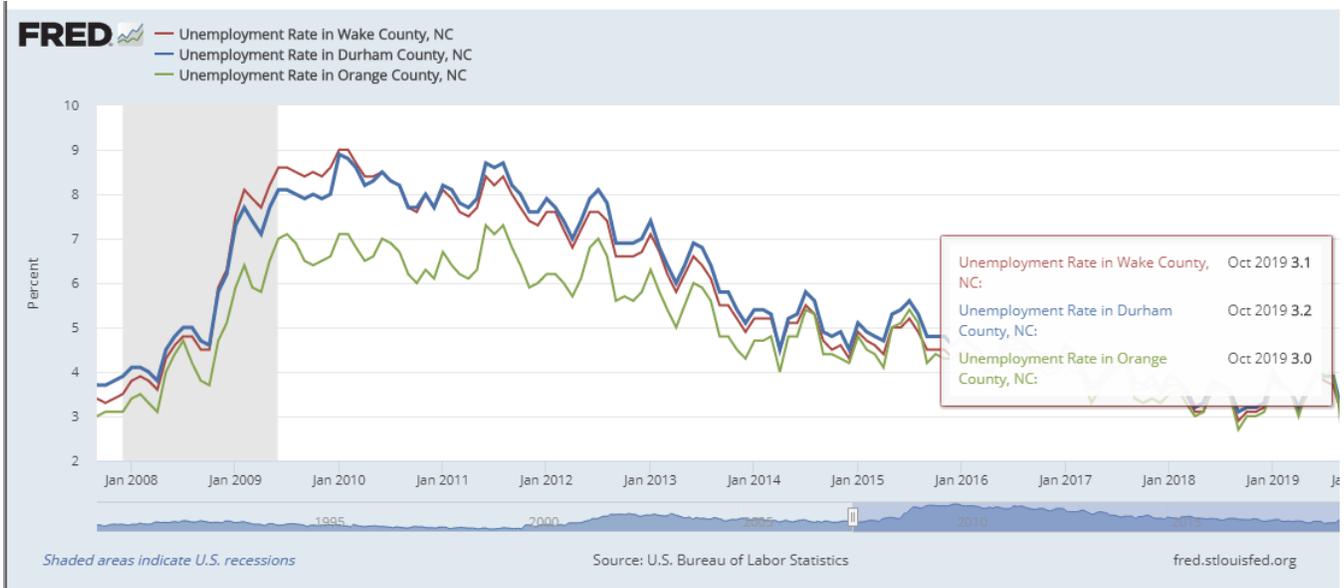
Respondents were asked about their employment. In 2019, as in 2018, a total of 51% of GoCary customers reported being employed full time. Another 21% said they were employed part time, and 21% said they are students. Although it is not displayed in the chart, students who are also employed full or part time comprise 5% of all riders. (In the chart they are included in the 21% students and in either the full or part time employment category, whichever they selected in the survey.) Multiple responses are permitted to this question since many people occupy more than one “employment” role. The most frequent riders are more likely than others to claim multiple roles. The dominant difference are the percentage of homemakers and retired persons who are several times more frequent in this segment than in the other two.

Unemployment Rates in NC, Wake, Durham, and Orange Counties

In the survey, no one indicated that they consider themselves unemployed. The unemployment statistic reported to the Federal Reserve by the Bureau of Labor Statistics for Wake County in October, 2019 when the survey was conducted was 3.1%.

The substantial decrease in unemployment in the Triangle Region since the Great Recession is shown clearly in Figure 22 on the following page.

Figure 22 Unemployment Rates in NC, Wake, Durham, and Orange Counties



Income of Rider Households

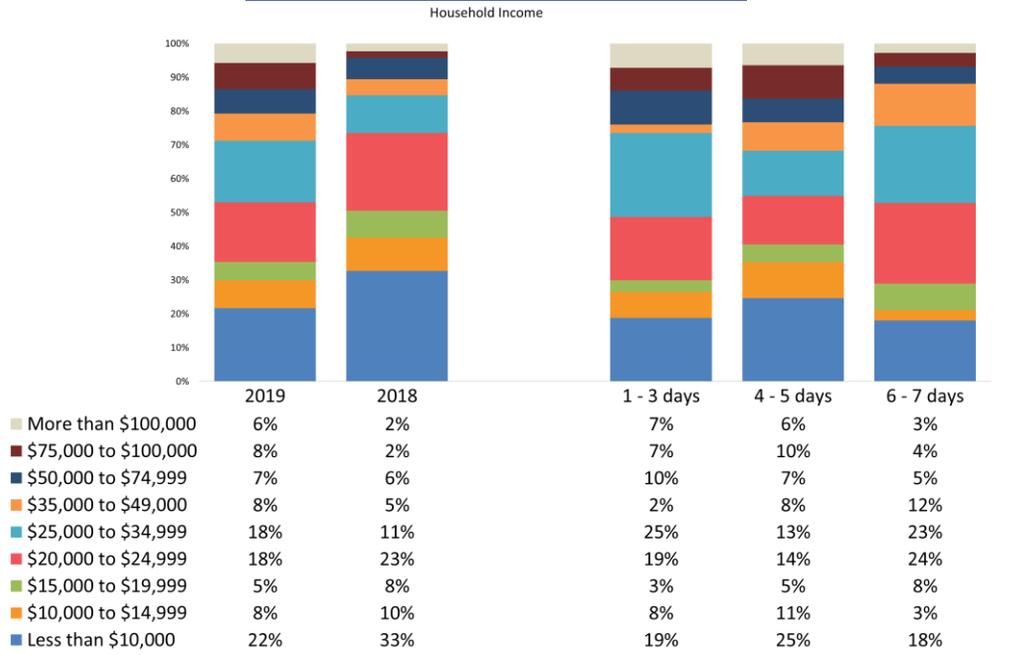
As is also true of riders in many passenger transit surveys elsewhere, most GoCary riders have very low household incomes.

In 2019, 22% reported household incomes of less than \$10,000. Another 13% report their incomes as ranging from \$10,000 to just under \$20,000, while the balance,

65% report incomes of \$20,000 or more. Although the sample is small, it appears that there may have been some increase in the percentage of GoCary customers who have incomes above \$25,000, from 26% in 2018 to 47% in 2019.

The income distribution varies somewhat among the three levels of riding frequency. Among the four-to-five-day riders 25% report incomes below \$10,000, which is a somewhat larger percentage of low income users than for the other segments. Conversely, the percent reporting incomes of \$25,000 or more is somewhat smaller among this segment (44%, compared to 51% for the one-to-three-day riders, and 47% for the six-to-seven-day riders).

Figure 23 Income of Rider Households



Incomes of GoCary customers in 2019 are somewhat higher compared to incomes of bus rider households nationally in communities or roughly similar size,. For example, while 48% of riders in communities with populations of fewer than 200,000 persons, have household income of less than \$15,000, that is true of only 30% of GoCary customers.

Figure 24 Income of GoCary Customers and Bus Riders in Small Communities
Nationally

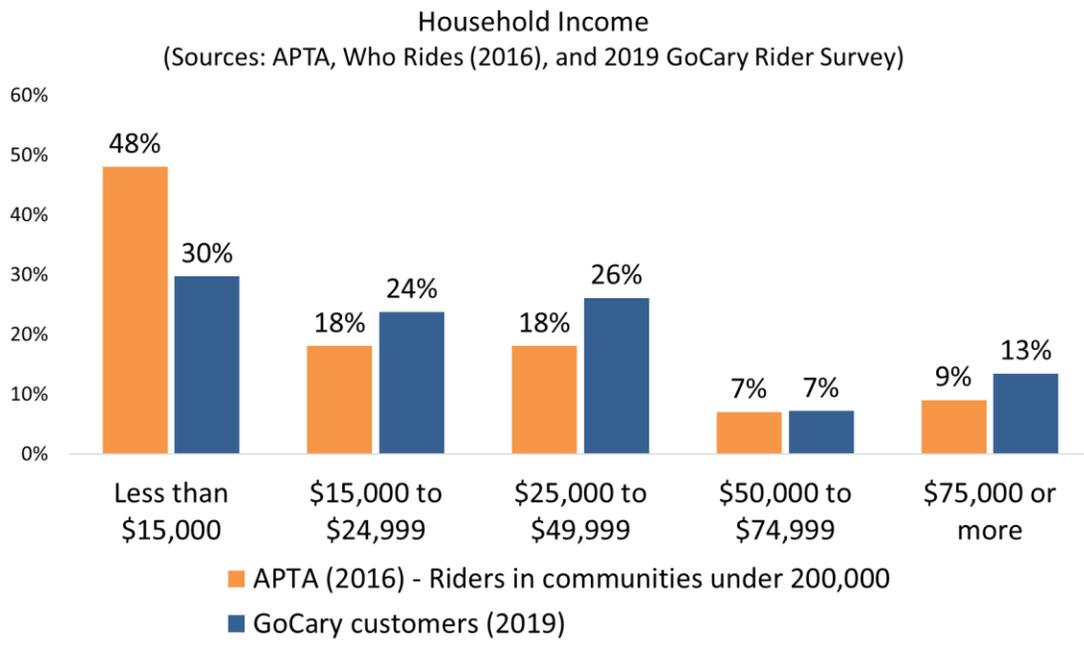
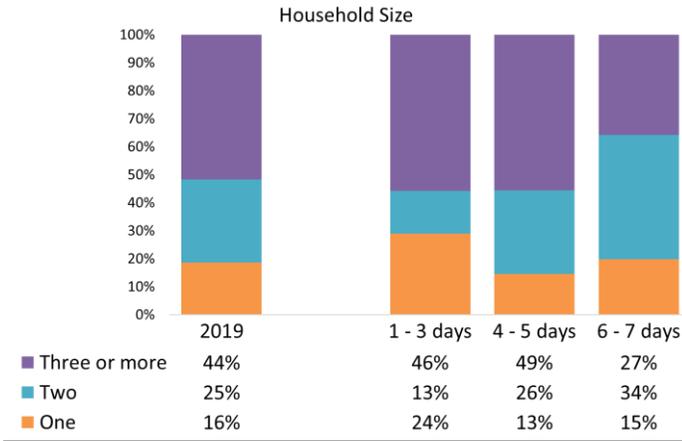


Figure 25 Household Size among GoCary Customers

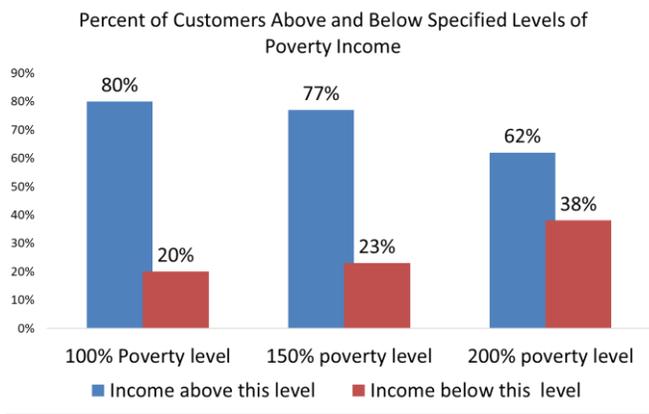


Household Size

Only 16% of GoCary customer households are single person-households. Most are either two (25%) or three or more (44%) person households.

This varies substantially among the three rider frequency segments. The most frequent riders tend to have households of only one or two persons (49%) and only 27% having three or more persons. On the other hand, the one to three day riders are bifurcated, with more single person households (24%) than the other segment, but also fewer two-person households than the other segments, and almost as many three or more person households as the four to five day riders.

Figure 26 Poverty Level Income



Poverty level income

Poverty level income is a product of the size of the household and the income level of the household⁵.

For the most part (80%) GoCary customer households have incomes greater than the poverty level. Also, 77% have incomes above 150% of that level, and 62% have incomes above 200% of

the poverty level. The importance of these levels is that eligibility for benefits of various federal and state programs depend on being below a certain percentage of the federally defined poverty level of income.

Conversely, of course, the positive figures noted above mean that 20% of GoCary customers live in households below the poverty line, 23% in households below 150% of the poverty line and 38% live below 200% of the poverty line.

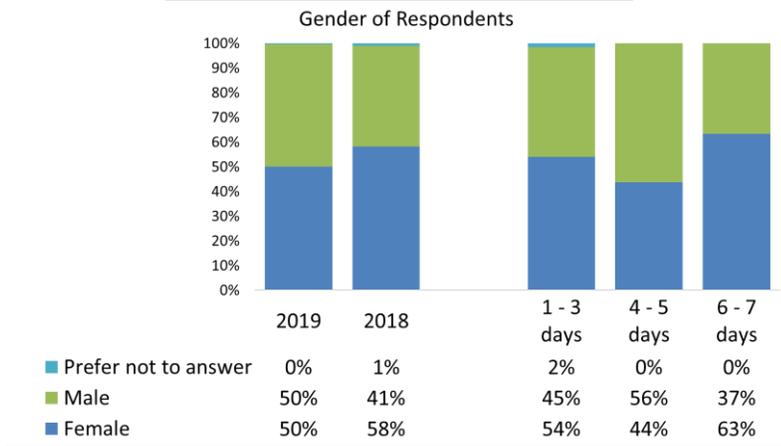
As the footnote explains, these figures are only an approximation of poverty level. However, they offer some perspective on the income challenges facing many riders, 20% of whom are estimated to be residing in households with poverty level income. A quick reading of the table of income and household size should indicate to most readers that even at multiples of poverty level income, households in these categories are living on quite limited resources.

2019 Poverty Guideline*	
Number of people in household	48 States & DC**
One	\$ 12,490
Two	\$ 16,910
Three	\$ 21,330
Four	\$ 25,750
Five	\$ 30,170
Six	\$ 34,590
Seven	\$ 39,010
Eight	\$ 43,430

* <https://aspe.hhs.gov/2019-poverty-guidelines>
 **Alaska and Hawaii are computed separately

⁵ The questionnaire collects income in grouped income levels. To obtain the poverty estimates it is necessary to approximate absolute income by taking the mid-point between the levels shown in the questionnaire so that, for example, income of \$10,000 to \$14,999 becomes \$12,500. In addition, the approximation is limited because the survey limits the number of people in the household to "3 or more." This means that in a few cases very large households with substantial incomes would be classified as in poverty. However, this would not affect many cases in the survey.

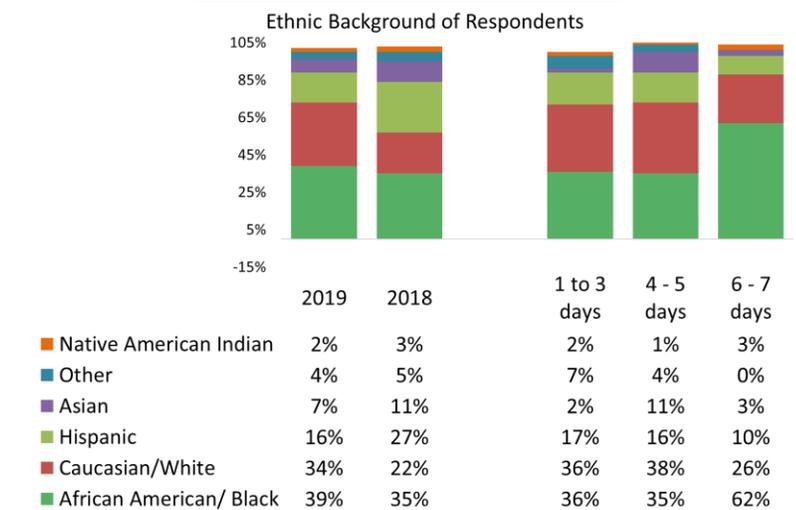
Figure 27 Rider Segment by Gender



customers, 56% are women. Thus, the 2018 GoCary result is closer to the national norm.

The gender balance differs significantly among the rider segments. The four to five day segment is distinctly more male than the other segments while the six-to-seven-day rider segment is predominantly female, a fact that probably also contributes to the result in Figure 21 showing a higher proportion of homemakers and retired persons in that segment than in others to culturally specified roles, and to the relative longevity of women.

Figure 28 Ethnicity of Customers



sample error of the 2019 result. Many fewer riders identified themselves as Hispanic in 2019 (16%) than in 2018 (27%). However, more riders identified as Caucasian/White in 2019 (34%) than in 2018 (27%). In small samples these are not truly major shifts, but they are outside the margin of sampling error. Those identifying as Asian account for 7% of the ridership, and Native American as 2%. The “Other” category (4%) allowed for a handwritten response. But the write-ins were predominantly expressions of nationality or cultural groups (Russian, Arabic, etc.) or notations such as “mixed,” or sardonic (e.g. Human) and in this context are not helpful.

Overall, the general ethnicity pattern in 2019 remains similar to 2018, with a “majority minority,” (totaling 64%, excluding “Other”) and with a substantial proportion of Caucasian/White as well. The distribution of ethnicity differs substantially among the rider segments, with six to seven-day customers considerably more likely (62%) to identify as African American compared to four-or five-day customers (35%) or one-to-three-day customers (36%)

Gender of the Customers

In 2019, the sample of GoCary customers split equally by gender, 50% male and 50% female. That represents a change from 2018 when the sample was 58% female. This is probably an unusually large difference due to timing or other minor differences in sampling and is unlikely to represent a real change. The actual proportion is likely to be between the two levels.

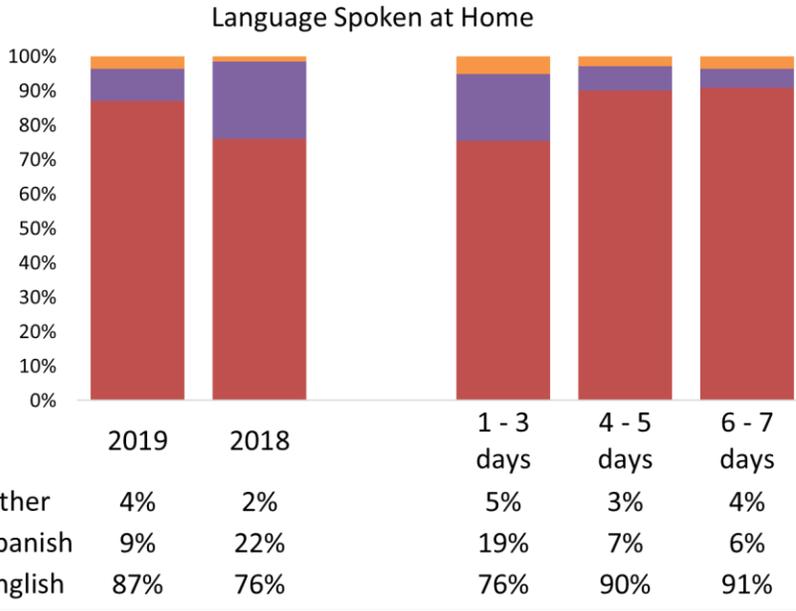
Nationally, according to the CJI APTA report cited earlier, among bus

Ethnicity of Customers

In measuring ethnicity, it is important to focus on self-identification by asking “Which do you consider yourself...?” and asking that respondents note all descriptions that apply to them. In this way surveys usually capture some overlap among the several groups.

In 2019, 39% of the respondents identified themselves as African American/Black, 16% as Hispanic, and 34% as Caucasian/White. In the 2018 sample, 35% identified as African American, statistically within margin of

Figure 29 Language Spoken Most Often at Home

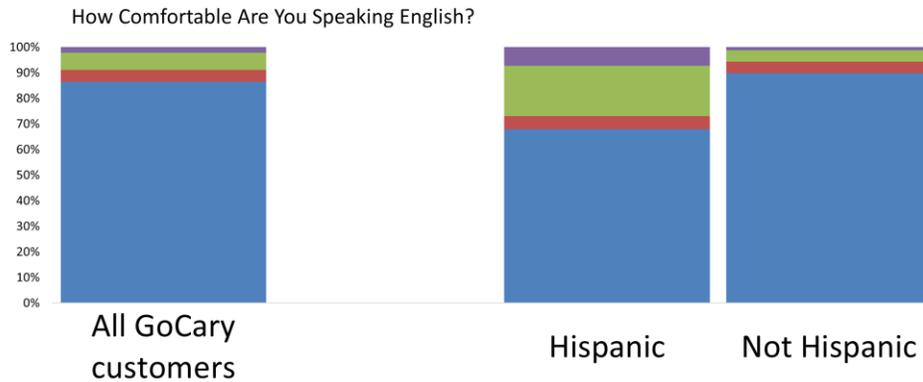


Language Spoken Most Often at Home

At home, 87% of GoCary customers most often speak English, while 9% speak Spanish. The rider frequency segments vary significantly in this respect, with more of the four-to-five day customer segment (19%) speaking Spanish than those in other segments. Given that Figure 28 showed that there was little difference between the one to three and four to five day riders in the percent Hispanic, this is a bit surprising.

Of all GoCary customers, 91% are either very comfortable or mostly comfortable speaking English. However, a total of 9% are clearly not very comfortable speaking English. As one would expect, it is primarily those who identify as Hispanic who express some level of discomfort speaking in English.

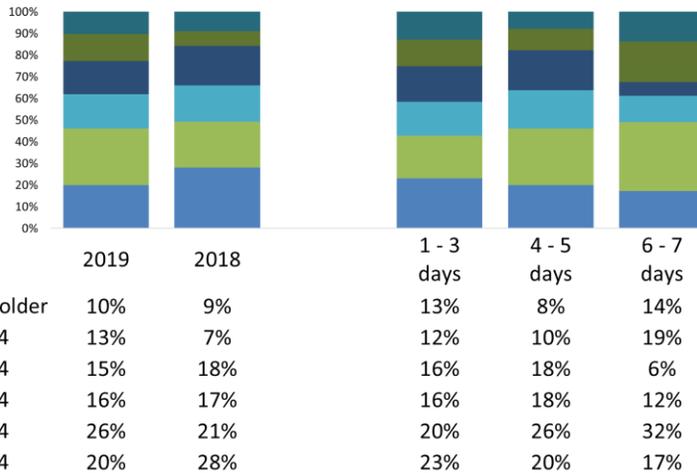
Figure 30 How Comfortable Are You Speaking English?



	Ethnic Identity		
Not comfortable	2%	7%	1%
Slightly comfortable	7%	20%	4%
Mostly comfortable	5%	5%	5%
Very comfortable	86%	68%	90%

Figure 31 Age of GoCary Customers

Age Groups of Passengers



Age of GoCary Customers

Like most bus transit systems in the United States, GoCary has a young ridership. Of all GoCary riders, almost half (46%) are under the age of 35. This percentage actually underestimates the youth somewhat because for reasons of data validity and ethical practice, we did not attempt to survey anyone who appeared to be younger than 16.

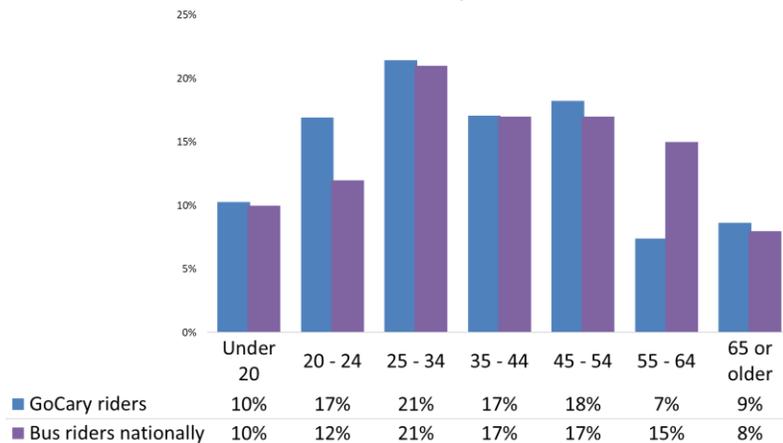
Between 2018 and 2019 there was a notable change in the proportion of riders in the two youngest categories.

The youngest (16-24) stood at 28% in 2018 but declined to 20% in 2019. The next oldest age category (25-34) increased from 21% in 2018 to 26% in 2019. Some of this change would be the result of the same riders continuing to use GoCary and aging by a year. However, that would not account for the five point shift (from 21% to 26% in the 25-34 age group). The inherent variability in small samples likely has something to do with the difference, especially since we saw in that 40% of the riders being sampled in 2019 had begun using GoCary only after the 2018 survey. Also, though the timing in October of each year was within days of the same time, but there could easily have been youth-attracting events at UNC or other university in the area at the time of the survey in 2018 that were not repeated in 2019. The bottom line is that the change is outside the sample error of 5.9%, and we can be confident that it does reflect a real change. However, it may not represent a long-lasting change.

The percent of each segment in the two youngest age groups (under 35) differ very little among the rider segments, although there are differences between the two youngest groups (16-24 and 25-34).

Figure 32 Age Profile of Transit Customers Nationally (APTA, *op cit*)

Comparison of Rider Age Profile of GoCary Riders and Public Bus Transit Riders Nationally



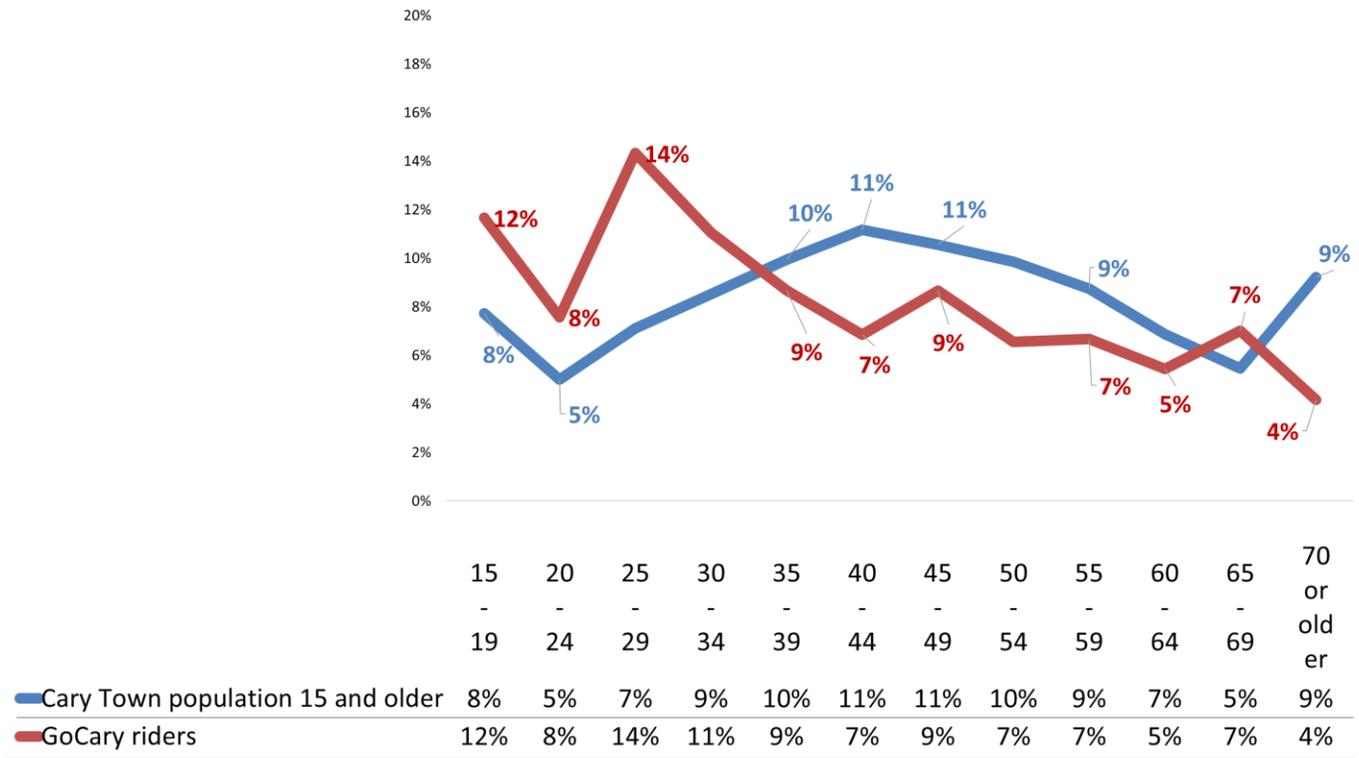
Age Profile of GoCary Customers and Transit Customers Nationally

Figure 32 demonstrates that nationally, the curve of the age distribution among GoCary customers is somewhat similar to that of bus system customers nationally. However, the GoCary customers tend to be younger than bus riders nationally.

Nationally, 22% of bus customers are under the age of twenty-five, a percentage slightly less than that of the 27% under twenty-five among GoCary customers. In the age groups from twenty-five to fifty-four, the size of the cohorts is essentially the same. The balance, 23% nationally and 16% for GoCary, are fifty-five or older.

Figure 33 Age of GoCary Customers and the Cary Town Population

Age Distribution of GoCary Riders and Cary Town Population 15 and Older
(Source of population data: American Community Survey, five year estimates, 2017)



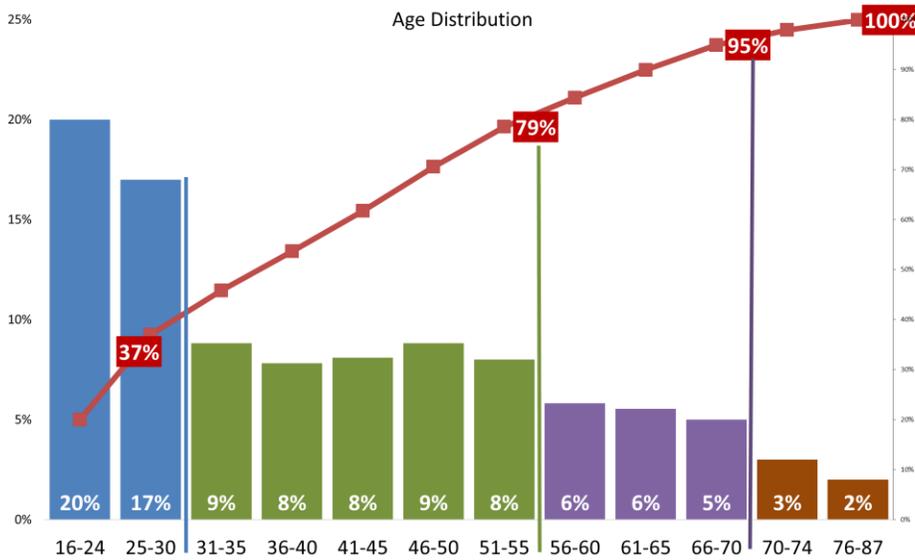
Age of GoCary Customers and the Town of Cary Population

Relative to the percentages in each age group among the Town of Cary population fifteen and older, GoCary ridership diverges most in the youngest age range from sixteen to twenty-nine and older than seventy. The Cary population in the sixteen to twenty-nine year old age set accounts for 20%, while in the ridership it accounts for 34%. And at the age of seventy and older, the percentage of the population is 9% while among GoCary riders it is 4%.

The percentages diverge somewhat, alternating one slightly higher than the other between the ages of twenty-nine and sixty-nine, but the differences are small. Although the percent in each age group of GoCary ridership consistently remains lower than that of the Cary Town population once the lines cross between the ages of thirty to thirty-nine.

After the age of forty, the two populations follow similar gradual downward trajectories until the age of sixty when they diverge, with the percentage of riders rising slightly to 7%, then falling to 4% among those 70 or older, while the share of the adult population rising to 9%.

Figure 34 Age Profile of GoCary Customers



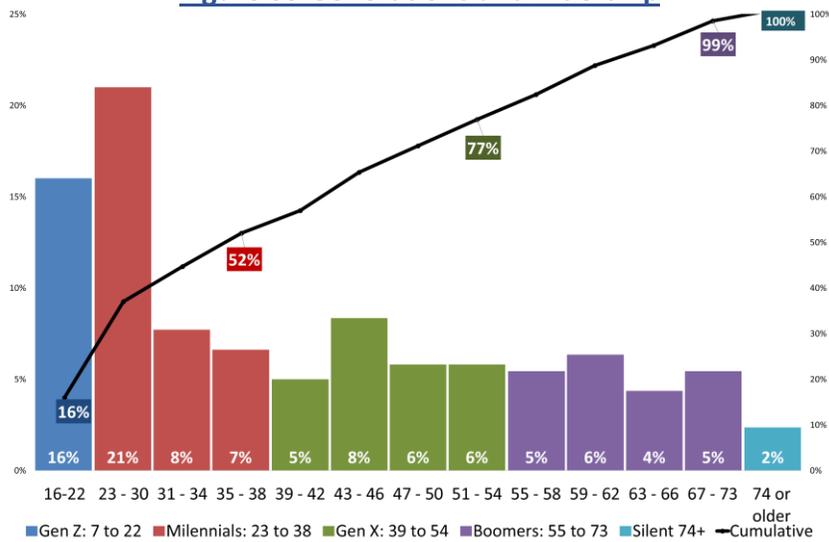
An Age Profile of GoCary Customers

A quick glance at Figure 34 tells two important stories about the age distribution of the ridership:

- First, It is disproportionately young. One fifth (20%) of GoCary riders are twenty-four or younger. Another 17% are between twenty-five and thirty.
- Second, the age profile divides neatly into four groups defined by the point at which there is a clear decrease in the

percentage of the ridership in each four year age group. The first age group is quite young, probably in school or just beginning a job or career. The second, from thirty-one to fifty-five, are the dominant working years. After fifty-five there is a bit of a decline in numbers, but then at seventy, the numbers fall off as retirement becomes the defining social characteristic.

Figure 35 Generations and Ridership



Generations and Ridership

For purposes of visualizing the age characteristics of the GoCary customer base, another way to think about the age distribution is to apply the age-ranges popularly used to describe generational groups. We have used definitions proposed by Pew Research Center⁶.

The age groupings used by PEW and those in the survey do not entirely correspond because while Pew defines Gen Z as between the ages of seven and twenty-two, the GoCary survey interviewed no one

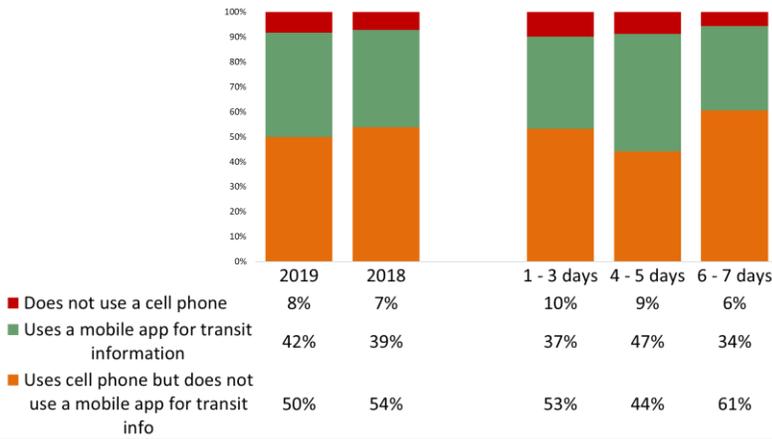
below the age of sixteen. However, the PEW definitions provide an adequate guide. In Figure 35, we see a pattern similar to that presented in Figure 34. Both charts make the point that a large proportion of the ridership is young. In the case of generations, the youthful Gen Z and Millennial generations account for more than half of the total ridership (52%).

⁶ See <http://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/>

Mobile Communication

Figure 36 Use of Cell and Smart Phones

Riders that Use a Local Transit Mobile Application



Use of Cell and Smart Phones

Among GoCary customers, cell phone ownership is high, but not quite universal, with 92% of customers indicating they use a cell phone. Forty-two percent (42%) of customers use a transit app on their phones.

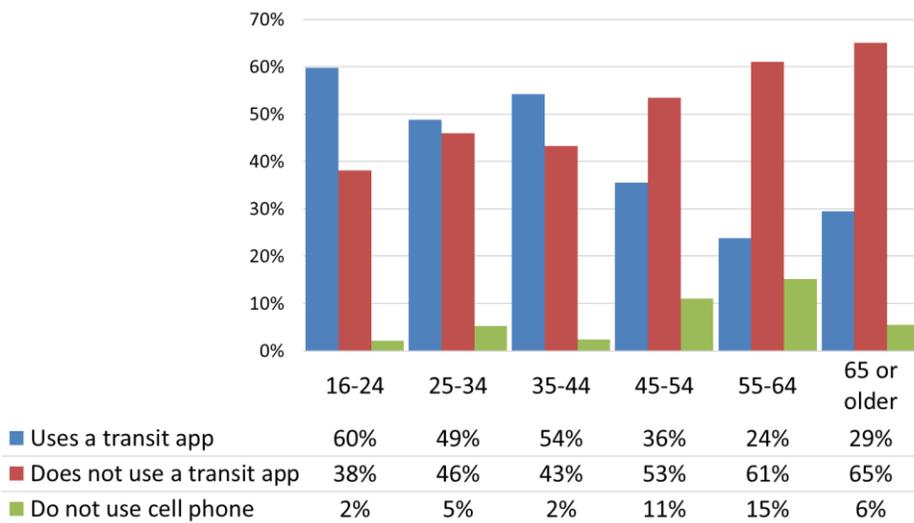
The number of customers using a transit app indicates that while a little over one third of GoCary customers are now using their smartphones as transit information sources, that practice is not yet universal. Other communication modes

– print and telephone -- continue to be necessary.

That mobile apps cannot (yet) be relied on to provide the only communications channel to the GoCary ridership is illustrated by the results shown in Figure 37. That figure demonstrates that the use of such apps is related to age with a general downward trend in utilization as age increases. This means that unless

Figure 37 Age and the Use of Mobile Transit App

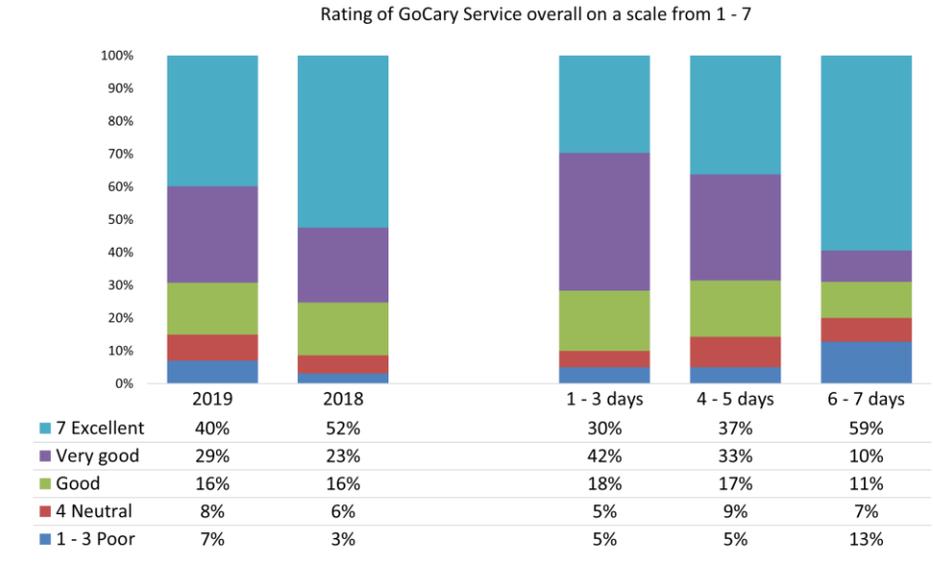
Age and the Use of a Transit App



something occurs to change this relationship between age and the use of mobile technology for transit, it will take at least several years for transit apps to become the primary source of information for a substantial majority of GoCary customers.

Customer Satisfaction

Figure 38 Overall Service Rating by Rider Segment



Overall System Rating Score by Rider Segment

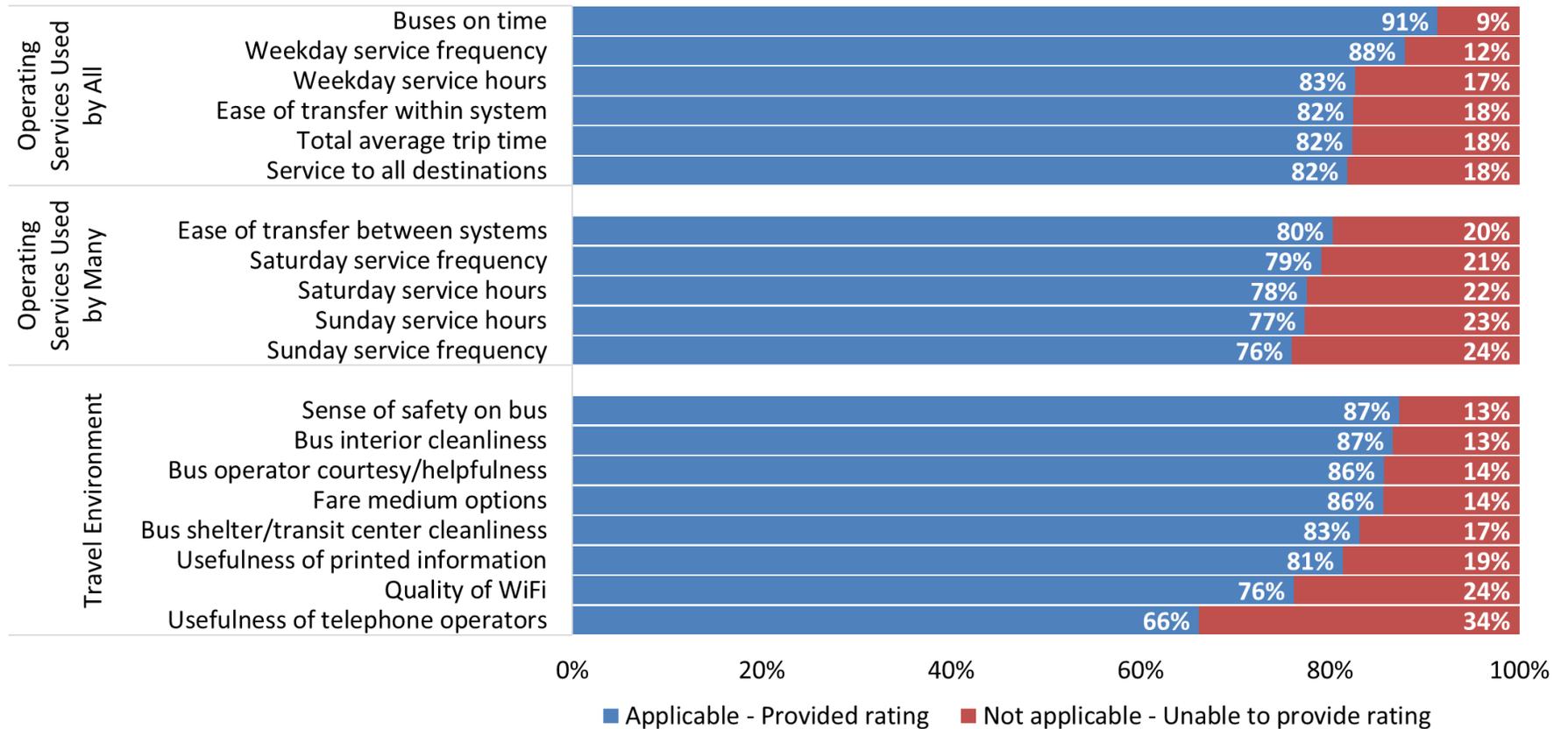
Customers were asked to rate nineteen aspects of GoCary service using a scale from 1 to 7 on which a score of 7 means “Excellent,” and 1 means “Very poor.” They were then asked to rate the service overall (See questionnaire page 54). We begin this section of the report with the overall rating of service.

Forty percent (40%) rate service overall as 7, or excellent. Another 29% score it 6, giving a total of 69% with high satisfaction scores. In 2018 this score was slightly higher, with 75% in the top two categories. However, this change is within the margin of sampling error. It may represent a real rating change, but there is a significant chance that it is a product of random chance in the result.

The rider frequency market segments are in approximate agreement on the overall quality of service with the top two ratings varying in only the narrow rang of 69% to 72%.

Figure 39 Services Included in the Survey, Showing Percentage Not Applicabl

Percent of riders providing a rating vs those saying that this aspect of service was "Not applicable" to them



Services Grouped by Type, Showing Percentage Stating that the Service was not Applicable to Them

Two interacting parameters help shape the distributions of the rating scores.

- (1) One parameter is simply the proportion of all customers who can provide a rating, thus presumably indicating that they use the service at least occasionally. We refer to this as utilization. Figure 39 displays in blue bars the percent able to provide any rating whether positive, neutral or negative. It displays in the red portion of the bars the percent who answered that the service was not applicable to them.
- (2) The second parameter is the type of service being rated. These types are explained below, but the essence is that some are operational, and some are simply static aspects of the travel experience.

UTILIZATION

Taking utilization first, some services such as weekend service, were given ratings by more and others by fewer customers. We consider the extent to which customers can provide ratings a proxy for *utilization* of the service. To illustrate the differing proportions of respondents offering ratings, Figure 39 displays the percent of all respondents who offered any rating, whether positive or negative, and the percent who said that the service did not apply to them or who skipped the question. Ratings for services with fewer users than others have a different denominator when percentages are computed for the ratings and they are thus reflective of only those who use them. The computation of the percentages in the charts which follow and show service ratings are based on only those who answered the rating question, not on the total sample.

TYPE OF SERVICE

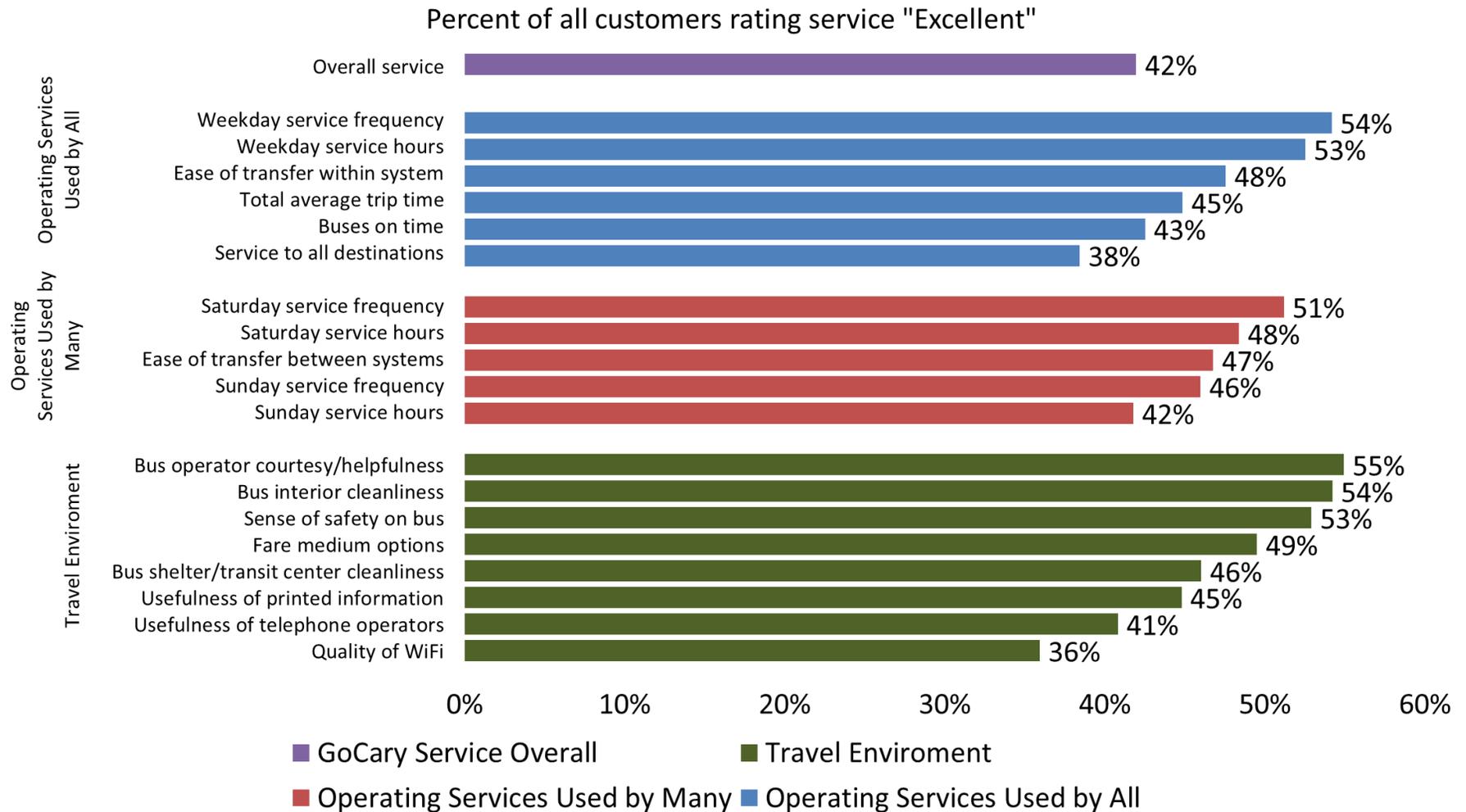
The second parameter involves the type of service. The typology is intended to put comparisons of ratings among the various services, on an apples-to-apples basis. One major factor differentiating the nineteen services included in the survey is whether the service element is *operational* in the sense that it involves some combination of system design and the ongoing process of keeping the vehicles moving and serving passengers on a daily basis or is the type of service that sets the general environment in which the customer experiences GoCary services. To take an example, clearly the “Quality of Wi-Fi” and “Fare medium options” are service elements that help set a general environment, while “service to all destinations” and “Buses running on time” are operational matters.

In Figure 39, we apply this reasoning to differentiate three types of service elements based on two criteria: (1) the type of service (operational or travel environment) and (2) the extent to which operational services service are utilized, using the “not applicable” response as a proxy for not utilizing the service.

One can obviously debate the categorizations. For example, is interior cleanliness of the buses an operational factor or a factor that affects the customer’s perception of the travel environment? It certainly involves operational activity by GoCary, but on the other hand, it does not impact such things as the time customers wait for a bus or their ability to get to various locations. Thus, it is categorized with other factors affecting the environment in which people travel, rather than with operations.

No specific conclusion is to be drawn from Figure 39. It is provided only to give the reader a perspective on the differences among the elements in terms of service type and the proportion of customers using the service, as scores are compared in the several figures that follow.

Figure 40 Scores of "Excellent" in 2018 on Individual Components of GoCary Service



Rating Scores: Scores of "Excellent" in 2018 on Individual Components of GoCary Service

Figure 40 above presents a first look at customer rating scores for individual elements of service. This chart includes only the top score of seven, or "Excellent," on the seven-point scale.

Like Figure 39, Figure 40 is organized by the type of service being rated. At the top of the chart are the operational services fundamental to all customers. All but one of these (service to all destinations) has more than 40% scoring it as excellent. Ease of transferring within the system, Weekday service frequency, and Weekday service hours have the highest percent excellent in the high utilization operational group, with 54%, 53%, and 48% excellent, respectively. Average trip time (45%) and buses running on time (43%) also are above 40% “Excellent.” Coverage (“Service to all destinations you want to get to”) finds fewer, but more than one-third of customers rating it as excellent (38%).

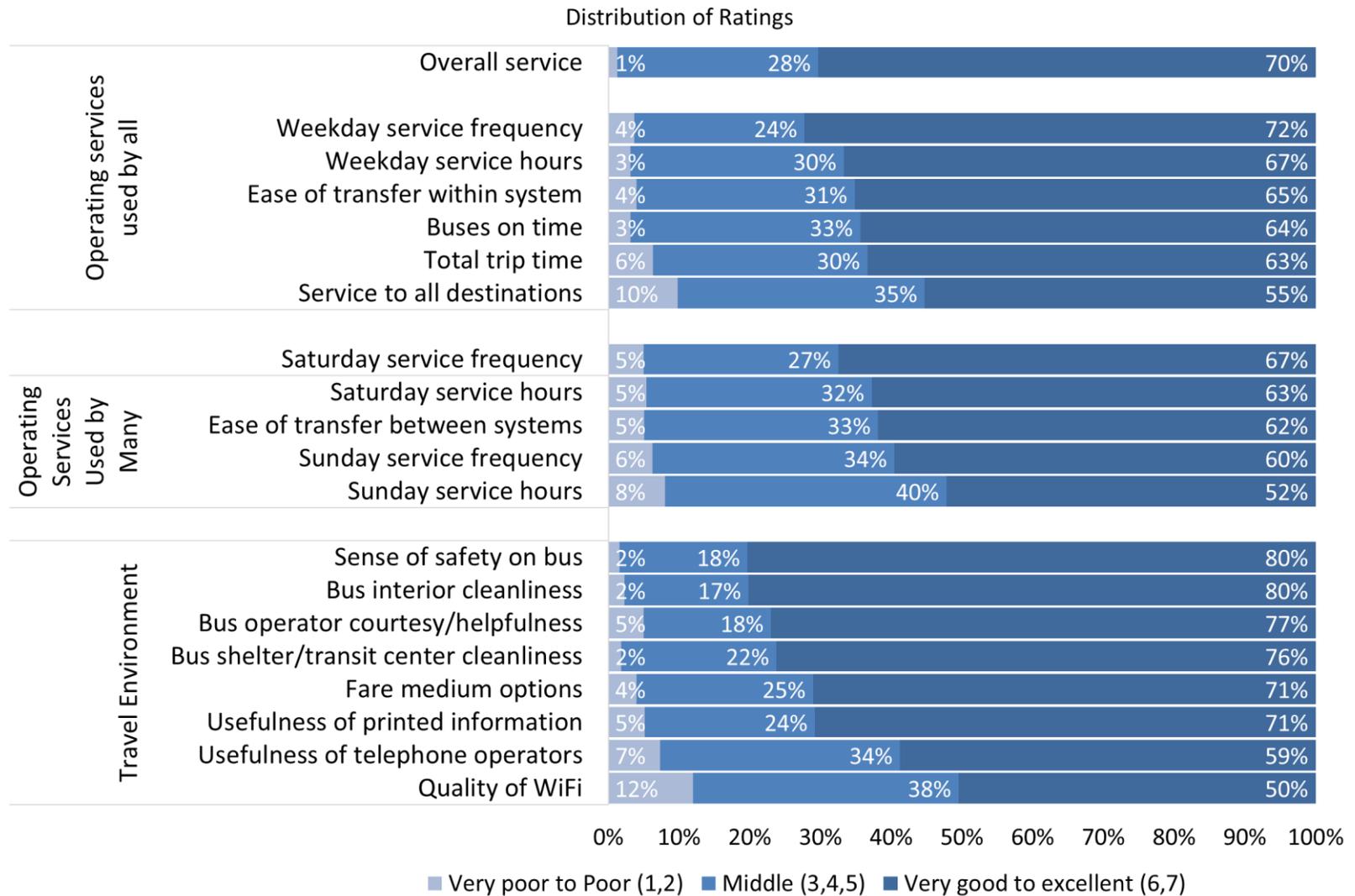
Operational aspects of service that are used by fewer customers than other services, have ratings of excellent similar to the more universally used service elements⁷. This is particularly true for weekend service. Frequency and hours of Saturday service both have fairly high percentages in the “Excellent” score category (51% and 48%, respectively). Transferring between systems (47% excellent) is the one element included in this set that does not involve weekend service. It is in this set because 20% said the question did not apply to them, implying that they do not make such inter-system transfers in a “typical week.” The two other service elements in this set both involve Sunday service, and both get scores of excellent by fewer than one half of the customers, 42% and 46% for both service span and frequency respectively.

The third set of services involve the environment in which GoCary customers travel. Of the eight services included in this set, all but the quality of WiFi received excellent scores by more than 40% of the respondents. The top three in this category are statistically identical, with 55%, 54% and 53% respectively rating as excellent bus operator courtesy and helpfulness, interior cleanliness of the buses, and the sense of personal safety when on the bus.

As generations change, and smartphone technologies continue the trend toward domination of the information sphere, the importance of telephone operators and printed material is gradually fading. This trend may be visible in the fact that 35% and 19%, respectively, said that they had no experience with these aspects of service. Likewise, they had the lowest scores in this set, with only 36% excellent for WiFi and 41% for the usefulness of telephone operators.

⁷ Note that the percentage is based on only those who were able to provide a rating, not the total sample so that the percent “excellent” is not falsely reduced by inclusion of those who answered “not applicable” in the denominator.

Figure 41 Distribution of Grouped Service Rating Scores



Service Rating Distributions

The previous chart, Figure 40, showed only the top percentages on the seven-point scale. However, so that we can see what the balance is between positive and negative ratings, it is important to also consider the distribution of scores within the full 1 – 7 range.

To simplify the chart showing the distribution of results on , the scores of 1 to 7 have been combined into three sets as shown in Figure 41. The top two positive scores (6 and 7) are combined as are the bottom two scores (1 and 2). The combined middle scores of 3, 4, and 5 can be considered neither extremely positive nor extremely negative. The scores of six or seven represent either excellent or nearly excellent scores. This is simply a way to summarize the results that also allows us to visualize the distribution of the scores.

RESULTS TEND TO BE POSITIVE

The basic story of this chart is that, as with most similar surveys for other transit systems, the ratings differ primarily in the degrees of positive ratings, not in stark differences between positive and negative ratings. The percentages in the lowest rating categories of 1 and 2 tend to be less than 10%. The percentages giving positive scores of six and seven on the scale in contrast, tend to be much greater. For example, of the six operational high utilization characteristics, each of them has a high six/seven rating greater than 60%.

The largest percentages in the lowest score category represent service to all destinations (8%), Sunday service frequency (8%), and Sunday service hours (8%).

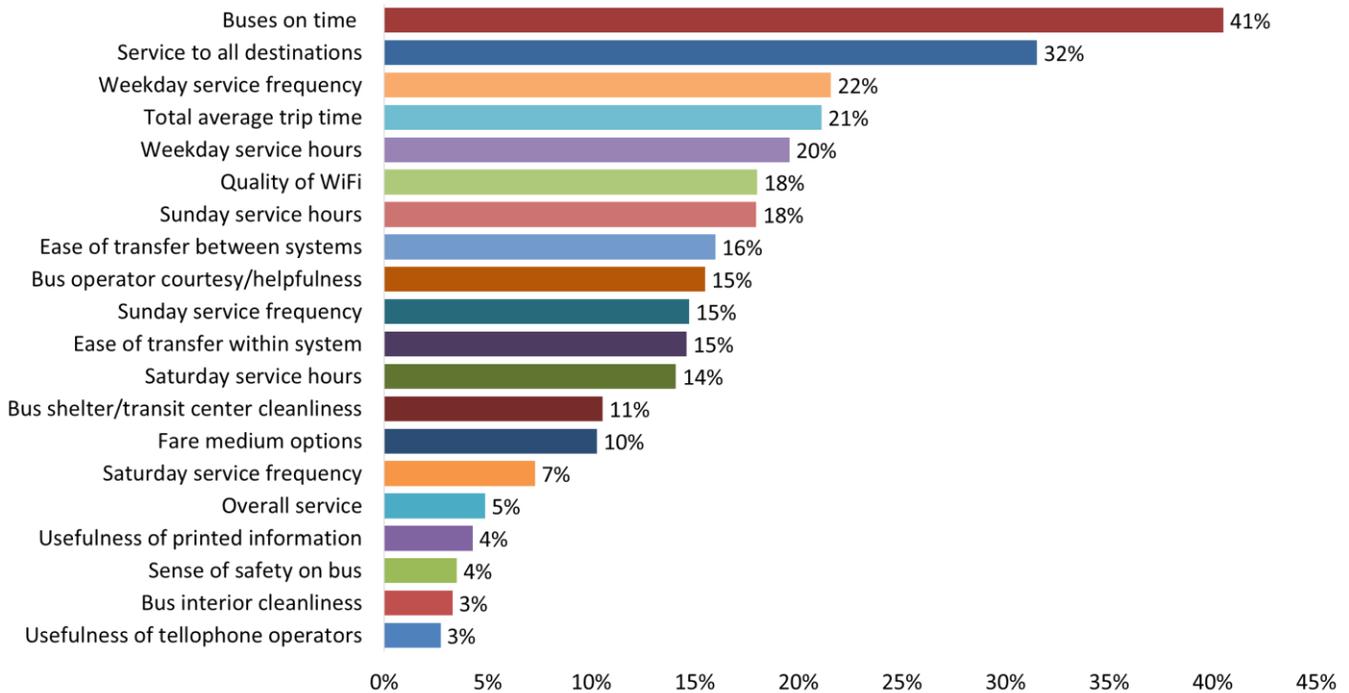
Determining Customer Priorities for Service Improvement

In the charts from Figure 38 through Figure 41 we have seen the opinions of GoCary customers about service overall and of nineteen separate elements that make up GoCary service. While these charts give us considerable information about how customers perceive GoCary service (quite positively), it is static information – it does not tell us how to prioritize service improvements. Two methods of prioritizing are presented in Figure 42 and Figure 43:

- The first method (Figure 42) is very straightforward. It is based on customer response to the simple request: “Of the services in questions 1 – 19 above, please list the three most important to improve.”
- The second method (Figure 43) involves a combination of two statistical analyses. First it compares each service rating to the average rating of all services: Is the rating above or below the average score for all nineteen elements of GoCary services? Second, it correlates the rating of each element of service with the rating of GoCary service overall so that we can infer its influence on that overall score.

Figure 42 Most Important Element to Improve

Mentioned as One of Three Most Important to Improve
(Sum of mentions as first, second, and third most important to improve)



One way to prioritize: Ask Customers “What Are the Three Most Important Services to Improve?”

Forty one percent of GoCary customers indicate that having the buses run on-time is one of their top three improvement priorities. This is a virtually universal desire of transit riders. While it is a common sentiment and is meaningful in terms of operations that satisfy the customer, that does not mean it should be taken entirely at face value. It is important to keep in mind that the customer belief that on-time performance must be improved is a customer *perception*, not a measurement-based observation. Customers themselves will often arrive at their stop early, only marginally on time, or a bit late for their bus and perceive that it is the bus that is off schedule. They may also not know the relationship of their stop to a time point. Thus, their perception and the reality can be quite different. We have seen instances in which objectively speaking, on time performance has not changed measurably, but the ratings have changed. The reasons can be various.

For example, greater frequency can result in better scores for on-time performance because increasing frequency of service creates certainty that the next bus will be coming soon. Increasing confidence that the next bus is due soon relieves the anxiety that may be translated into concern that bus “may not be on time.” In addition, to the extent that more people begin to use real-time transit apps for bus arrival information, as 42% now do (see Figure 36), that kind of information – if consistently accurate -- should decrease the anxiety of waiting and will help reduce the perception of a lack of on time performance.

Only one other aspect of service is mentioned as one of the top three improvement priorities by more than 30% of customers. It is the second most often mentioned improvement priority “Service to all destinations” (32%). For a system like GoCary with a limited route system operating within a regional set of systems, the only realistic way a customer can reach widespread destinations is to make transfers. Fortunately, the “ease

or transferring” within the GoCary system and between GoCary and other systems in the region both receive positive scores for customer satisfaction, 65% and 62%, respectively.

A Second Way to Determine Which Improvements Would Increase Satisfaction

Using survey data to prioritize elements of service that customers feel need improvements is a challenge. Figure 42 presented one way to do it. Figure 43 on page 50 presents a second way to accomplish it. This approach takes the pool of nineteen services and answers the question: Which of these are more important and which are less important in determining the customers’ rating of GoCary service overall? This question is answered in a matrix. The matrix itself (Figure 43, page 50) is actually less complex than it may seem, but it does require some explanation.

- The concept of the matrix in Figure 43 is as follows: Respondents rated nineteen separate aspects of GoCary service as shown in Figure 42 on the previous page. They also rated “The quality of GoCary services overall.” We can assume that customers’ ratings of the quality of services overall sum up their ratings of quality on the nineteen specific elements of service. Assuming this, we can answer the key question which is: Which elements of GoCary services would, if improved, move the needle of the rating of GoCary service overall?
- Two basic statistics are involved in this analysis, first the average or “mean” rating of service quality on the scale from 1 – 7 and, second, a correlation statistic that measures the strength of the relationship (i.e., the *correlation*) between each element of service and the overall service rating for GoCary. These statistics, when used together, answer two questions: How do customers rate each of the nineteen elements of service? And how closely related is each of those ratings to the overall rating?
- To visually display the results of this kind of analysis requires using a simple graph with the 1-7 rating on the horizontal axis and the correlation value on the vertical axis. That way the better the rating, the farther to the right the service element will appear in the chart. Also, the higher the element appears in the chart vertically, the more important it is to the overall score.
- Notice that although in the questionnaire, the rating scale runs from 1 – 7, all of the ratings fell between 5.2 and 6.4 and therefore only that range is shown. The ratings tend to skew positive and to vary more among the higher scores than between 1 and 3 (see Figure 38). There are very few poor ratings. This only makes sense, because after all, if many riders rated service negatively, it would be odd if they continued to use the service. But for analysis of how to “move the needle” on the overall GoCary service rating, the positive tilt of the ratings means that if we are to use the ratings to prioritize service improvements, we have to examine how the best scores differ from the good scores, not how the best scores differ from the worst scores. That is the reason we designate the scores as above or below average, not as poor or excellent.

A matrix will help answer the question: What service improvements would move the needle on the rating of GoCary service overall? To do this we look at the ratings and at the correlation of each of those ratings with the rating of GoCary service overall. The results can be charted in a matrix like this:

When we add the actual survey statistics to fill out the matrix, it will show service improvement action priorities as shown below:

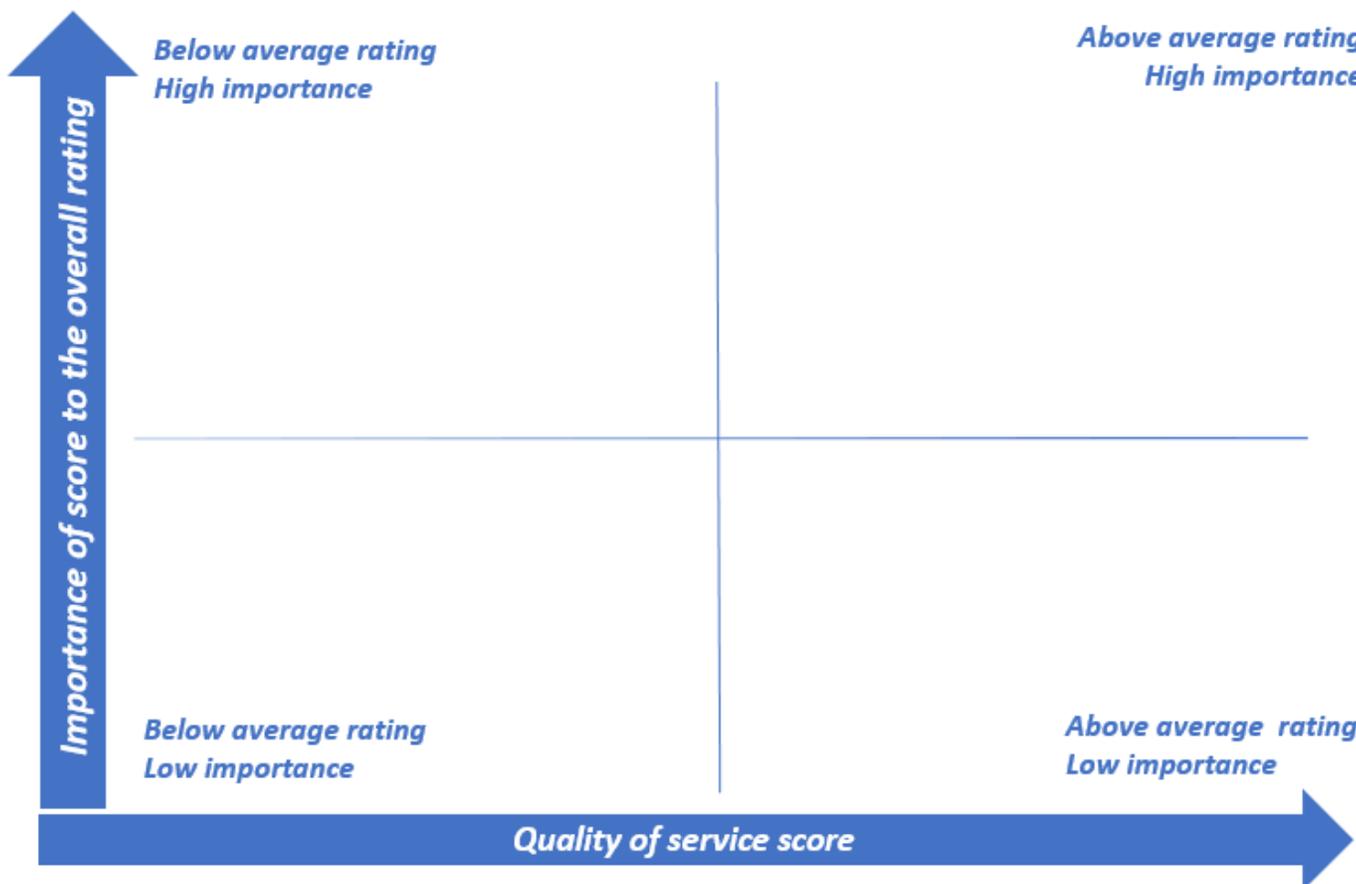


Figure 43 on the following page displays how the nineteen elements of service are positioned within this priority matrix.

Figure 43 Relationship between Overall Performance Rating and Ratings of Individual Service Elements



Relationship between Overall Performance and Individual Service Elements

In the chart, the location of a service vertically, up or down along the *vertical axis indicates the strength of its relationship to*, and presumably influence on, the overall rating for GoCary service. The higher on that axis, the more important we can assume that element is in influencing the score for service overall. The lower on the line, the weaker it is. The *horizontal axis indicates the rating score* for the individual element of service relative to the average rating of all the nineteen scores (the average score is 5.89). The farther to the left, the poorer the rating relative to the average score, and the farther to the right, the better the rating.

TOP, BOTTOM, LEFT, RIGHT

- Services appearing above the horizontal line are more important to the overall rating of GoCary service than those that appear below the line, those that appear below the line are less important.
- Services appearing at the right of the vertical line are rated better in quality than the services at the left of the line. The closer to the far right, the better the rating; the closer to the far left, the poorer the rating.

Elements in the upper right of the chart are currently helping to boost the overall GoCary service rating by being better rated than the average of all nineteen elements of GoCary service, while others (top left quadrant) are currently detracting from it. It is elements in the latter group that require particular attention given that the objective is to improve overall customer satisfaction. Elements in the lower left of the chart receive relatively

poor performance scores but have relatively little influence on the overall score. Similarly, elements in the lower right quadrant have relatively high rating scores, but they too have little statistical relationship to the overall score and can be assumed to have little influence on it as long as at least current levels of service quality are maintained.

COLOR CODING SHOWS THE TYPES OF SERVICE IN THE MATRIX

Notice the color coding of the service elements:

- Three of the six aspects of service we have labeled “Operating services used by almost all riders” are *above* the horizontal line that indicates average importance to the overall service rating. The exceptions are weekday service frequency and total average trip time, which both fall below the horizontal line indicating that in the survey statistics, they both had less influence on the rating of GoCary service overall than the operating services above the line. While both aspects of service are below the line, there is a distinction that should be noted between the two: Total average trip time is to the left of the vertical overall performance line, and weekday service frequency is to the right of the line. This means that the existing level of service frequency on weekdays is acceptable to most riders and an increase would not move the needle much on overall satisfaction. Alternatively, the placement of total average trip time both below and to the left of the horizontal and vertical lines suggests that customers are dissatisfied and would appreciate efforts to improve total average trip time. However, it should be kept in mind that such an improvement would have a limited impact on the movement of the overall satisfaction score.
- Of the five elements we have labeled “Operating services used by fewer than 95% of riders,” three are *below* the line of average importance to the overall score. However, two, Saturday service hours and ease of transferring among area systems, are above the line, indicating that although they are not universally used, improvement would have a significant impact on overall satisfaction.

THE UPPER LEFT QUADRANT: IMPROVING THESE WOULD MOVE THE OVERALL RATING NEEDLE THE MOST

Improving service and thus ratings of the six elements in the upper left quadrant would have the greatest positive impact on the rating of GoCary service overall. Service coverage (“Service to all destinations”), Buses running on time, the availability of better service hours (both weekday and Saturday), the usefulness of telephone operators, and the ease of transfer between systems all are fundamental aspects of service, and all appear in this quadrant. Buses running on time is a perennial desire of transit customers and is often found in this position in the matrix. In addition, it was clearly the top priority (41%) when respondents were asked to name the top three aspects to improve.

Of course, none of these six services in the upper left quadrant can be easily changed.

THE UPPER RIGHT QUADRANT: MAINTAIN THIS RELATIVELY STRONG POSITION

At the upper right are six elements of service that represent relative strengths among all GoCary services because they score relatively well, and they are important to the overall GoCary rating. Compared to all other aspects of GoCary service, these services are relatively strong and support the current overall positive rating. One of these, the ease of transfer between buses operated by GoCary (“Ease of transfer within system”) is an operational service used by almost all customers. The other five relate to the travel environment: Bus interior and shelter and transit center cleanliness, the sense of safety on the bus, the usefulness of the printed information provided by GoCary, and the availability of fare medium options.

THE LOWER RIGHT QUADRANT: THIS SERVICE IS GOOD, BUT IMPROVEMENT WOULD BE WELCOME

Finally, at the lower right are two service elements with high favorable ratings relative to other services, but that under current service configurations are relatively unimportant in influencing overall satisfaction. GoCary does well on these and needs to maintain that level of satisfaction, but efforts to improve all or any one of these would have minimal impact on the rating of GoCary service *overall*.

Weekday service frequency lies in this quadrant to the right side of the matrix indicating a positive rating, but it also lies below the line of average importance to the overall satisfaction score. We saw earlier that it earns 72% ratings of 6 or 7 (see Figure 41). This is important in that this is obviously a key element for a transit system in which 82% of the riders are going to or coming from work or college. Presumably most of these customers are working or attending school during the week, making weekday service a key to customer satisfaction. That 72% rate it as 6 or 7 is a positive sign in that sense.

In other words, riders are apparently satisfied with this service, with the result that it has little impact on variation in the overall rating assuming that current levels of service are maintained. Moreover, it is rated in the top three elements to improve by only 22%, statistically tied for #3 with total average trip time (21%) and weekday service hours (20%) in the listing of 19 service elements named as important to improve. Service Weekday service frequency is obviously a key aspect of service, yet customers arrayed in the matrix are telling us it is, relatively speaking, less important to their overall opinion of GoCary service than buses running on time, service to all destinations, and weekday hours of service.

LOWER LEFT QUADRANT: IT WOULD BE NICE TO IMPROVE THESE ELEMENTS, BUT DOING SO WOULD NOT AFFECT THE RATING OF GO CARY SERVICE OVERALL BY MUCH

Five elements of service appear in this quadrant. Total average trip time is the only operating service used by all, or almost all, riders that is located in this quadrant. The three service elements that represent almost all (95% at most) riders include Sunday service hours and frequency, and Saturday service frequency, and the final element, which is an aspect of the overall travel environment, is the quality of WiFi service.

Bottom Line

To improve customer satisfaction overall, GoCary should consider the following priorities identified in the matrix:

1. Coverage is a rider priority. However, it is difficult to increase coverage without diminishing performance in other areas, especially average trip time and frequency of service. And it is especially difficult in a small system with limited route structure. Insofar, however, that the desire for increased coverage may refer, not to other destinations in Cary, but to regional ones, a second high priority of riders may come into play, specifically doing what may be possible to facilitate transfers between systems.
2. If possible, extend Saturday hours of service for two reasons. First, it is a high priority for riders as measured in the matrix. Second, we have observed elsewhere that riders who have to work weekends, especially in the evening, are among the least satisfied riders, and are among the most likely to seek an alternative to bus service if it does not meet their weekend employment needs.
3. If possible, extend weekday hours. This too is an aspect of service that appears in the upper left quadrant of the matrix (although just at the margins of ratings and importance), indicating that it influences the overall level of satisfaction and that it is just below average in its rating. In addition, lack

of late evening service was the most frequently mentioned reason given for replacing a GoCary trip with a ridesharing trip. This would also apply to weekend hours, of course.

4. Satisfaction with weekday frequency of service and with the courtesy and helpfulness of bus operators is high. It's low level of importance in influencing the overall level of satisfaction appears to mean that riders are sufficiently satisfied in these respects that they have little influence on their overall attitudes toward GoCary service.
5. Four of what we have called the "Environmental" aspects of service are identified by the matrix approach (upper right quadrant) as being important to the overall satisfaction score and to be well rated. While these are not operational items (with the arguable exception of cleanliness of shelters and bus interiors) they are important to maintain to prevent loss of riders' sense of well-being while using GoCary.

Appendix A: Questionnaire

Please tell us about how you use GoCary



In the past 30 days, how would you rate GoCary on the following services... (Circle a rating for each question or check the box indicating that it does not apply to you)

	Excellent	Neutral	Very Poor	Don't know or don't use				
1. Buses running on-time	7	6	5	4	3	2	1	<input type="checkbox"/>
2. Frequency of service on weekdays (Mon-Fri)	7	6	5	4	3	2	1	<input type="checkbox"/>
3. Frequency of service on Saturday	7	6	5	4	3	2	1	<input type="checkbox"/>
4. Frequency of service on Sunday	7	6	5	4	3	2	1	<input type="checkbox"/>
5. Hours the buses operate weekdays (Mon-Fri)	7	6	5	4	3	2	1	<input type="checkbox"/>
6. Hours the buses operate Saturday	7	6	5	4	3	2	1	<input type="checkbox"/>
7. Hours the buses operate Sunday	7	6	5	4	3	2	1	<input type="checkbox"/>
8. Total time required to make your usual trip	7	6	5	4	3	2	1	<input type="checkbox"/>
9. Availability of service to all destinations you want to get to	7	6	5	4	3	2	1	<input type="checkbox"/>
10. Ease of transferring within GoCary system	7	6	5	4	3	2	1	<input type="checkbox"/>
11. Ease of transferring between GoCary and other area bus transit systems	7	6	5	4	3	2	1	<input type="checkbox"/>
12. Cleanliness of the bus interiors	7	6	5	4	3	2	1	<input type="checkbox"/>
13. Cleanliness of the bus shelters & transit center	7	6	5	4	3	2	1	<input type="checkbox"/>
14. Your sense of personal safety from other passengers on the buses	7	6	5	4	3	2	1	<input type="checkbox"/>
15. Courtesy and helpfulness of bus operators	7	6	5	4	3	2	1	<input type="checkbox"/>
16. Usefulness of information from 485-RIDE telephone operators	7	6	5	4	3	2	1	<input type="checkbox"/>
17. Usefulness of printed information such as schedules or brochures	7	6	5	4	3	2	1	<input type="checkbox"/>
18. Available ways for you to pay your bus fare	7	6	5	4	3	2	1	<input type="checkbox"/>
19. Quality of wireless internet (WiFi) service	7	6	5	4	3	2	1	<input type="checkbox"/>
20. The quality of GoCary services overall	7	6	5	4	3	2	1	<input type="checkbox"/>

21. Of the services in questions 1 - 19 above, please list the three most important to improve?
 1 Most important _____ 2 2nd most _____ 3 3rd most _____
22. In a **typical week** on how many days do you use GoCary? (Circle only one)
 0 (None - Not a regular GoCary rider) 1 2 3 4 5 6 7

23. What is the ONE main purpose for which you **most often** use the GoCary bus? Is it to go to or from... (Check only one)
 1 Work 2 School/college 3 Shopping
 4 Medical/dental 5 Recreation/event 6 Other
24. How long have you been riding GoCary?
 1 Less than six months 2 Less than 1 year 3 1-2 years
 4 3-4 years 5 5 or more years
25. Compared to one year ago, do you currently ride GoCary...
 1 More often 2 The same 3 Less often 4 Did not ride a year ago
26. Please check all Triangle Region bus systems you use in a **typical week**.
 1 GoRaleigh 2 GoDurham 3 GoTriangle 4 GoCary
 5 Chapel Hill Transit 6 Duke Transit 7 WolfLink
27. In making this one-way trip, how many times do you connect with, or transfer to, another bus to complete your trip? (Circle only one)
 0 - No connections/transfers 1 2 3 or more connections/transfers
28. For your fare on the **first GoCary bus** you boarded during this trip, did you... (Check only one)
 1 pay cash fare for that trip only 2 buy a day pass on the bus
 3 use a day pass bought ahead of time 4 use a 7 or 31 day pass
 5 use a university or other ID 6 use a GoPass
 7 use free senior fare & ID 8 First GoCary trip was on a free fare route
29. How did you get to the stop where you got on the first GoCary bus you boarded during this trip? (Check only one)
 1 Walked 2 Used own bike 3 Used rented bike/scooter
 4 Drove 5 Was dropped off by family/friend 6 Uber or Lyft
 7 Bus other than GoCary 8 Other _____
30. Do you use a cell-phone? 1 Yes 2 No
 a. If you use a cell phone, do you access the internet on it? 1 Yes 2 No
 b. Do you have a mobile app for local transit on your cellphone? 1 Yes 2 No
31. Do you have a valid driver's license? 1 Yes 2 No
32. How many licensed drivers live in your household (including you if you have a license)?
 0 None 1 2 3 4 5 6 7 8 or more
33. How many cars or other vehicles are available for your use?
 0 None 1 2 3 4 5 6 7 8 or more
34. How many people, including you and any children, live in your household?
 0 None 1 2 3 4 5 6 7 8 or more

El cuestionario en español se encuentra en la parte posterior

35. In the past 30 days, how often have you used Uber or Lyft in the Triangle region?
 1 0 not at all 2 1 time 3 2 times 4 3 times 5 4 or more times
36. If you used Uber or Lyft in the past thirty days...
 a... did you use both GoCary and Uber/Lyft during the same one-way trip?
 1 Yes 2 No
 b... did you use Uber/Lyft for a trip you otherwise would have made on GoCary?
 1 Yes 2 No
 If yes, you did that because? _____
37. During any part of this trip you are on now, did you or will you use:
 a. A Lime, Citrix Cycle, or similar shared bicycle 1 Yes 2 No
 b. A Bird, Lime, or similar rental scooter 1 Yes 2 No
38. Please mark all of the following that apply to you. Are you...
 1 Employed full time 2 Employed part time 3 Unemployed and seeking work
 4 Homemaker 5 Student 6 Retired 7 Volunteer position
39. How old are you? _____ Years old
40. Do you identify as... 1 Male 2 Female 3 Prefer not to answer
41. Do you consider yourself to be... (Please Check all that apply to you)
 1 African American/Black 2 Asian 3 Caucasian/White
 4 Hispanic 5 Native American Indian 6 Other: _____
42. How comfortable are you speaking English? (Check only one)
 1 Very comfortable 2 Mostly comfortable
 3 Slightly comfortable 4 Not comfortable
43. What language do you most often speak at home? (Check only one)
 1 English 2 Spanish 3 Other: _____
44. What is your total annual household income? (Check only one)
 1 Less than \$10,000 2 \$10,000 to \$14,999 3 \$15,000 to \$19,999
 4 \$20,000 to \$24,999 5 \$25,000 to \$34,999 6 \$35,000 to \$49,999
 7 \$50,000 to \$74,999 8 \$75,000 to \$100,000 9 More than \$100,000

Comments: _____

Thank you! Please return this form to the surveyor on your bus.

Por favor díganos cómo usa GoCary



En los últimos 30 días, ¿cómo calificaría GoCary en los siguientes servicios...
(Círcule una calificación por cada pregunta o marque la casilla que indica que no aplica a usted)

	Excelente	Neutral	Muy Malo	No lo sé o no lo uso				
1. Autobuses funcionan a tiempo	7	6	5	4	3	2	1	<input type="checkbox"/>
2. Frecuencia de servicio entre semana (lun-vier)	7	6	5	4	3	2	1	<input type="checkbox"/>
3. Frecuencia de servicio el sábado	7	6	5	4	3	2	1	<input type="checkbox"/>
4. Frecuencia de servicio el domingo	7	6	5	4	3	2	1	<input type="checkbox"/>
5. Horario de autobuses entre semana (lun-vier)	7	6	5	4	3	2	1	<input type="checkbox"/>
6. Horario de autobuses los sábados	7	6	5	4	3	2	1	<input type="checkbox"/>
7. Horario de autobuses los domingos	7	6	5	4	3	2	1	<input type="checkbox"/>
8. Tiempo total requerido para su viaje diario	7	6	5	4	3	2	1	<input type="checkbox"/>
9. Disponibilidad de servicio a todos los destinos a los que desea llegar	7	6	5	4	3	2	1	<input type="checkbox"/>
10. Facilidad de transir dentro de GoCary	7	6	5	4	3	2	1	<input type="checkbox"/>
11. Facilidad de transferir entre GoCary y otros sistemas de tránsito del área	7	6	5	4	3	2	1	<input type="checkbox"/>
12. Limpieza de los interiores del autobús	7	6	5	4	3	2	1	<input type="checkbox"/>
13. Limpieza de las paradas y centro de tránsito	7	6	5	4	3	2	1	<input type="checkbox"/>
14. Su sentido de seguridad personal de otros pasajeros en los autobuses	7	6	5	4	3	2	1	<input type="checkbox"/>
15. Cortesía y ayuda de operadores de autobús	7	6	5	4	3	2	1	<input type="checkbox"/>
16. Utilidad de la información de los operadores telefónicos 485-RIDE	7	6	5	4	3	2	1	<input type="checkbox"/>
17. Utilidad de la información impresa, como horarios o folletos	7	6	5	4	3	2	1	<input type="checkbox"/>
18. Formas para pagar la tarifa del autobús	7	6	5	4	3	2	1	<input type="checkbox"/>
19. Calidad del servicio de internet (WIFI)	7	6	5	4	3	2	1	<input type="checkbox"/>
20. Calidad de servicios GoCary en general	7	6	5	4	3	2	1	<input type="checkbox"/>

21. De los servicios en las preguntas 1 a 19 anteriores, enumere los tres más importantes ¿Para mejorar?

1 Más importante _____ 2 2do más _____ 3 3er más _____

22. En una **semana típica**, ¿cuántos días usa GoCary? (Círcule solo uno)

0 (Ninguno—No es un pasajero regular de GoCary) 1 2 3 4 5 6 7

23. ¿Cuál es el propósito principal numero UNO para el que usa con **mayor frecuencia** el autobús GoCary? ¿Es para ir o venir de... (Marque solo uno)

1 Trabajo 2 Escuela/colegio 3 Compras
4 Médica/dental 5 Recreación/evento 6 Otro

24. ¿Cuánto tiempo lleva viajando en GoCary?

1 Menos de seis meses 2 Menos de 1 año 3 1-2 años
4 3-4 años 5 5 o más años

25. En comparación con hace un año, ¿actualmente viajas en GoCary...

1 Mas seguido 2 Lo mismo 3 Menos seguido 4 No viajaba hace un año

26. Marque los sistemas de autobús de Triangle Region que use en una semana **típica**.

1 GoRaleigh 2 GoDurham 3 GoTriangle 4 GoCary
5 Chapel Hill Transit 6 Duke Transit 7 WolfLine

27. Al hacer este viaje de un sentido, ¿cuántas veces se conecta o transfiere a otro autobús para completar su viaje? (Círcule solo uno)

0 - Sin conexiones/transferencias 1 2 3 o más conexiones/transferencias

28. Para su tarifa en el **primer autobús GoCary** que abordó durante este viaje, ¿Usted... (Marque solo uno)

1 pago solo en efectivo por ese viaje 2 compro un pase de un día en el autobús
3 uso un pase de un día comprado con anticipación 4 uso un pase de 7 o 31 días
5 uso identificación universitaria u otra 6 uso un GoPass
7 use free senior fare & ID 8 1er viaje de GoCary fue ruta de tarifa gratis

29. ¿Cómo llegaste a la parada donde tomaste el primer autobús GoCary que subiste durante este viaje? (Marque solo uno)

1 Caminando 2 Uso bicicleta propia 3 Uso bicicleta/scooter alquilada
4 Manejo 5 Fue dejado por familia/amigo 6 Uber o Lyft
7 Autobús que no sea GoTriangle 8 Otro _____

30. ¿Usas un teléfono celular? 1 Sí 2 No

a. Si usa un teléfono celular, ¿tiene acceso a Internet en él? 1 Sí 2 No

b. ¿Tiene una aplicación móvil para tránsito local en su celular? 1 Sí 2 No

31. ¿Tiene una licencia de conducir válida? 1 Sí 2 No

32. ¿Cuántos conductores con licencia viven en su hogar (incluido usted si tiene una licencia)?

0 Ninguno 1 2 3 4 5 6 7 8 o más

33. ¿Cuántos automóviles u otros vehículos están disponibles para su uso?

0 Ninguno 1 2 3 4 5 6 7 8 o más

34. ¿Cuántas personas, incluidos usted y cualquier niño, viven en su hogar?

0 Ninguno 1 2 3 4 5 6 7 8 o más

35. En los últimos 30 días, ¿cuanto ha usado Uber o Lyft en la región de Triangle?

1 0 en absoluto 2 1 vez 3 2 veces 4 3 veces 5 4 o mas veces

36. Si usó Uber o Lyft en los últimos treinta días...

a... ¿Usó GoTriangle y Uber/Lyft durante el mismo viaje de un sentido?

1 Sí 2 No

b... ¿Usó Uber/Lyft para un viaje que de otra forma hubieras hecho en GoCary?

1 Sí 2 No

¿Si sí, lo hiciste porque? _____

37. Durante cualquier parte de este viaje en el que esté ahora, ¿usó o usará:

a. Una Lime, Citrix Cycle, o bicicleta compartida similar 1 Sí 2 No

b. Una Bird, Lime, o scooter de alquiler similar 1 Sí 2 No

38. Marque todo lo siguiente que aplique a usted. Eres tú...

1 Empleado de tiempo completo 2 Empleado de medio tiempo 3 Desempleados y buscando trabajo
4 Ama/o de casa 5 Estudiante 6 Jubilado/a 7 Puesto voluntario

39. ¿Cuántos años tienes? _____ Años

40. ¿Te identificas como... 1 Hombre 2 Mujer 3 Prefero no responder

41. ¿Te consideras... (Por favor marque todo lo que corresponda a usted)

1 Afroamericana/Negro 2 Asiatico 3 Caucásica/Blanco
4 Hispano 5 Indio Nativo Americano 6 Otro: _____

42. ¿Qué tan cómodo estás hablando inglés? (Marque solo uno)

1 Muy cómodo 2 Mayormente cómodo
3 Ligeramente cómodo 4 No Comodo

43. ¿Qué idioma hablas con más frecuencia en casa? (Marque solo uno)

1 Inglés 2 Español 3 Otro: _____

44. ¿Cuál es su ingreso familiar total anual? (Marque solo uno)

1 Menos de \$10,000 2 \$10,000 a \$14,999 3 \$15,000 a \$19,999
4 \$20,000 a \$24,999 5 \$25,000 a \$34,999 6 \$35,000 a \$49,999
7 \$50,000 a \$74,999 8 \$75,000 a \$100,000 9 Mas de \$100,000

Comentarios: _____

¡Gracias! Por favor devuelva esta encuesta al encuestador en su autobús.

Appendix B: Rider Comments

Route	COMMENTS
1	ACCOMODATION FOR FAMILIES WHEN ENTERING BUS WITH STROLLERS. ALLOW THE LIFT AT WHEN ENTERING BUS
1	BETTER TICKET SWIPE MACHINES OR MAYBE SUPPLY DRIVERS WITH EXTRA CARD INCASE MACHINE MALFUNCTIONS
1	I LOVE RIDING THE BUS THE 1 AND 2 BUS ALWAYS GET ME TO AND FROM WORK ON TIME. KEEP UP THE GOOD WORK
1	NO COMPLAINTS JUST WISH BUS HOURS FOR OPERATION WERE EXTENDED AN HOUR EARLIER AND ONE HOUR LATER
1	OK
1	THE BUSES SHOULD RUN MORE ITS EITHER I BEEN 1 HOUR EARLY OR 3 MINS EARLY TO WORK NO IN BETWEEN THATS WILD
2	ANNETTE IS THE BEST DRIVER EVER
2	DRIVERS ARE VERY GOOD. NICE EASY TO TALK TO.
2	HEY, NIGHTTIME SUPERVISOR, CHRIS YOUNG MAN, YEAH. HIS CUSTOMER SERVICE SKILLS ARE DISGRACEFUL. HE'S IN THE WRONG JOB.
2	I NEED THIS BUS SERVICE THE 1&2. IT IS THE ONLY BUS THAT GETS ME TO WORK. I WISH THERE WERE TWO BUSES PER ROUTE THAT WAY I COULD HAVE A LITTLE MORE FLEX ABILITY THANK YOU
2	NUMBER 1 BUS HAS ONE DRIVER THAT NEVER STOP SEES ME CROSSING TO GET TO THE BUS BUT KEEPS GOING. OTHER THAN THAT LOVE RIDING THE BUS
2	TODO BIEN UN POCO MAS AMALOLES LOS OPERADOR 65
2	WIFI IS NOT VERY GOOD
3	ALL #300 GO TRIANGLE MUST STOP & PICK UP AT ALL CTRAN STOPS. ALL BUS DRIVERS NEED CUSTOMER SERVICE ORIENTATION ASAP.
3	DONT GET RID OF CARY IS KIDS Y PART OF RTE3!!! PEOPLE NEED IT!
3	EXPENSIVE FARE
3	I LOVE RIDE GO CARY BUS THE DRIVERS ARE VERY HELPFULL.
3	PLEASE KEEP HEMPSTEAD CT. AS A FIXED ROUTE STOP.
3	SMOOTH DRIVERS & FRIENDLY
3	SUNDAY --[ILLEGIBLE]- ARE CATCH A TRAIN THEN I WAIT 30 MINS TO CATCH 5 TO GO FOR WORK
3	THE WOMAN WHO DRIVES THE 2 BUS ON SAUTRDAY MORNING IS GREAT
3	WHY WOULD THEY TAKE BUS FROM COMING IN SHOPPING CENTER? BUSES EXPENSIVE.
3	WONDERFUL DRIVERS I MEET IN MY TRIP ALL THE TIME
4	GET UP TO DATE, ACCURATE INFO ON TRANSLOC!!!
4	GREAT SERVICE HOPE TO SEE MORE RIDERS WONDERFUL BUS DRIVERS
4	I HAVE FEW EXPERIENCES IN -[ILLEGIBLE]- BUS DRIVERS ARE NOT VERY HELPFUL AND GAVE YOU WRONG --[ILLEGIBLE] - WHEN ASKED. PLEASE REQUEST YOU TO GET THIS IMPROVED.
4	I NEED NEW ROUTE FOR CARY PARKWAY TO TARGET SHOPPING CENTER.

4 PLEASE LET DOOR TO DOOR TAKE PASSENGERS TO OTHER THINGS THAN WORK,
DOCTOR AND SCHOOL, CHEAPER THAN TAXI. THANK YOU!

4 SOMETIMES I BARELY HAVE EVEN 5 SECONDS TO GET FROM GOTRIANGLE BUS TO
BUS 4 AT THE TRANSIT CENTER BEFORE IT LEAVES.

5 ANNA HALL IS GREAT

5 ANSWERS BASED ON AFTERNOON DRIVER

5 BASED ON AFTERNOON RIDE

5 BUS DRIVERS NEED TO PAY ATTENTION TO COVERED

5 COMFORTABLE SEATING

5 DRUNK PEOPLE AT NIGHT BE MINDFUL PLEASE.

5 I LIKE THE BUSES BEING @ MY HOME.

5 I LIVE IN BRIAR CREEK AND TRAVEL TO CARY EVERY DAY. I HAVE 4 TRANSFERS ON MY
ROUTE. ID LOVE A MORE DIRECT ROUTE.

5 I LOVE ALL DRIVERS

5 I WISH THERE ARE MORE FREQUENT BUSES ALL DAYS OF THE WEEK, SO THAT A 5-
MILE TRIP WON'T TAKE 1 1/2 HOURS, OR A 35-MILE WON'T TAKE 3 HOURS. SOME
DRIVERS ARE NOT KIND; I WISH THEY HAVE MORE COURTESY TRAINING THANK YOU
GO CARY!

5 LAST WEEK THURSDAY #3 BUS AT 6:50 AM DRIVE RIGHT BY ME AT HARRISON AVE AT
RESEARCH OR - DID NOT STOP. SAME DAY - NO 4:00 #3 BUS FROM DEPOT - HAD TO
WAIT OR 4:30 BUS

5 MORNING SHIFT BUS ROUT ALWAYS ON TIME, BUT WEHN I GET OFF WORK AT 5:30
PM THE # 5 BUS IS ALWAYS LATE SO I GET HOME CLOSE TO 900PM

5 SUNDAY SCHEDULE IS NOT GOOD DEBIT CARD READERS WOULD MAKE PAYMENT
SIMPLE

5 THANK YOU FOR THIS SERVICE RIDING TODAY WITH MY AUTISM-SPECTRUM 19 YR
OLD SON TO SEE IF THIS COULD WORK IN THE FUTURE FOR HIM TO GO TO APPTS
SOLO

5 THANK YOU VERY MUCH

5 THANK YOU VERY MUCH!

5 THE # 5 DRIVE BY ME & NEVER STOPPED - FRI & SAT

5 THE MORNING DRIVERS - GREAT EXCELLENT THE EVENING DRIVERS - VERY POOR,
NEVER ON TIME MISS CONNECTING BUSES.

5 THE STOP FOR TKILDAIRE. PACK DR ALONG ROUTE 5 NB HAS NO PHYSICAL STOP OR
SIGN. THIS IS VERY FRUSTRATING IN ORDER TO HEAD BACK HOME AFTER MEDICAL
APPOINTMENTS @ CORNER BUILDING I HAVE CALLED MULTIPLE TIMES & EMAILED
COMPLAINT.

5 TRYING TO FIGURE OUT THE EXPRESS 11104 ROUTE - NOT MARKED ON AT SIDE OF
BUS TOO HOT ON BUS!

5 WHEN BUSES ARE LATE AFTER 5PM OR 6PM #5 IT CAUSES THE RIDER TO HAVE TO
WAIT AT THE TRAIN STATION FOR AN HOUR FROM 6PM TO 7PM

5 WHY TAKE BUSES OUT SHOPPING CENTER

5 WITH TRAFFIC SO BAD ITS HARD TO MAKE IT TO TERMINAL IN TIMELY MANNER ESP.
BUS 5 IN THE AFTERNOON

- 6 ALGUNOS CONDUCTORES SON MUY AMABLES, ESPECIALMENTE REMAS (ILLEGIBLE NAME)
- 6 CARY NEEDS A LOCAL YMCA ON THE BUS ROUTE
- 6 GRACIAS PRO SU SERVICIO LO HE USADO POR MAS DE 12 ANOS EL TRANSPORTE PUBLICO. AHORA ES MEJOR. GRACIAS.
- 6 MY WIFE IS AN RN WHILE I AM A SUBSTITUTE TEACHER
- 6 PERFECTO
- 6 SEVERAL DRIVERS DISRESPECTFUL OF ME WITH MY SERVICE ANIMAL