An Onboard Survey of
GoCary Customers

2018

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An Onboard Survey of GoCary Customers
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Executive Summary
Introduction

In early October 2018, 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.

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 53%, an unusually high rating. Another 23% rated service as 6 on the same scale, meaning that the total rating service as excellent or very good is 76%.
- Operational aspects of service with 70% or more of customers giving the two top scores of 6 and 7 deserve note:
  - Ease of transferring within the system, (76%)
  - Weekday service frequency (75%)
  - Weekday service hours (70%)
- When asked to rank areas for improvement:
  - "Buses running on time" is by far the most frequently cited aspect of service to improve. It was cited by 69% of customers as first, second, or third most important to improve among the nineteen specific aspects of service examined.
  - Second most important in this sense is “Sunday service hours” (27%)
  - Third, Sunday service frequency (25%).
  - Fourth most important to improve was coverage, stated in the survey as “service to all destinations” (23%)
- Another way to consider service improvement priorities is to examine the correlation of each aspect of service with the overall service rating. That technique identified six priorities that would have a significant impact on the overall GoCary service rating:
  - Ease of transfer between systems
  - Buses running on time
  - Service to all destinations desired (coverage).
  - Saturday service hours
  - Weekday service hours
  - Usefulness of telephone operators
- Trip purpose is primarily oriented to employment (70%) and shopping (15%), but many customers also use GoCary for school (6%), or other purposes
- Demographics
  - GoCary provides a key support for employment and education. Of all GoCary customers, 51% are employed full time and another 17% part time. Another 16% are students, for a total of 84% of customers being employed or students.
  - 32% of GoCary customers identify themselves as African-American, 25% Hispanic, while 19% identify themselves as Caucasian/White, 10% Asian, 3% Native American, and 5% “Other.
Like most bus systems in the United States, the ridership of GoCary is young, with 47% younger than thirty-five.

Like the customer base of most transit systems in the United States, women outnumber men as customers (58%) to (41%) for men. (1% preferred not to answer.)

Similar to the ridership of many bus systems, many GoCary customer households report that they have extremely low household incomes. In this survey, 33% report income of less than $10,000 and only 10% report household incomes of $50,000 or more.

Customers are quite transit dependent, with 82% reporting that they have either no vehicle or no licensed driver (or neither) in the household.

**Travel characteristics**

- 42% of GoCary customers say they are using GoCary more often than in the previous year and 22% say they began riding only in 2018. Only 8% say they are riding less often now.
- When using other systems in the Triangle Region, GoCary customers are more likely to use GoRaleigh (34%) or GoTriangle (27%) than the other systems.

**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, 38% (21% 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, 46% (or 26% of all GoCary customers) have used them as part of a GoCary trip.

**Fare media**

- The largest percentage of GoCary customers (43%) boarded with a day-pass purchased either on the bus (31%) or ahead of time (12%).
- Thirty-four percent (34%) paid their fare in cash.
- Thus, combining the cash fare and the day-pass purchase on the bus, a total of 65% make a fare transaction on the bus.
- 35% make a prior pass purchase 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 39% 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, substantial numbers of customers over the age of sixty-five use a cell phone (90%), but only 15% of that group use a transit app. In contrast, greater numbers of 16-24 year olds use a cell phone (99%), but three and one half times as many of this age group (53%), 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 6 through 9, 2018. Similar surveys were conducted during the preceding three weeks with customers of GoCary, GoTriangle, and GoCary.

The questionnaire used in the survey was initially developed by Hugh Clark of CJI Research refined by 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 on a bus, not just a sample of those customers, were asked to participate, 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, and 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.

The questionnaire was self-administered. Survey personnel handed surveys and a pen to customers and asked them to complete the survey.
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 137 trips were sampled and recorded in this manner.

**PARTICIPATION RATES**

**Completion Rates on GoCary Onboard Survey, 2018**

<table>
<thead>
<tr>
<th>A total of</th>
<th>506 persons were riding during the surveyed trips and had a chance to participate</th>
</tr>
</thead>
<tbody>
<tr>
<td>and (22)</td>
<td>appeared to be younger than 16 and were not asked to participate 4%</td>
</tr>
<tr>
<td>and (15)</td>
<td>customers spoke a language other than English or Spanish 3%</td>
</tr>
<tr>
<td>and 79</td>
<td>refused outright 16%</td>
</tr>
<tr>
<td>and 153</td>
<td>said they had already completed the survey (possibly on another system) 30%</td>
</tr>
<tr>
<td>and 273</td>
<td>accepted the survey form with the apparent intention of finishing it 54%</td>
</tr>
<tr>
<td>Thus 468</td>
<td>adults were on the vehicles and were asked to participate 92%</td>
</tr>
<tr>
<td>Thus 273</td>
<td>customers represent, the total &quot;effective distribution,&quot; i.e., the raw sample</td>
</tr>
<tr>
<td>Of these...</td>
<td>240 Completed the survey on the GoCary bus 88%</td>
</tr>
<tr>
<td>and 9</td>
<td>completed the survey and returned it by mail or to an operator on another bus 3%</td>
</tr>
<tr>
<td>and (24)</td>
<td>Failed to return the survey they had accepted 9%</td>
</tr>
<tr>
<td>Finally: 249</td>
<td>Completed the survey 91%</td>
</tr>
</tbody>
</table>

Thus, 273 customers represent, the total "effective distribution," i.e., the raw sample.

Of all persons on board the sample trips, this represents: 49%

Of all English or Spanish speaking adults riding on a surveyed vehicle, this represents: 53%

Of all the customers on sampled trips who accepted a questionnaire, this represents: 91%

Of the 249 GoCary respondents:

- 189, or 76% completed all questions in the survey.
- Another 36, or 15% completed all but the final question, household income. (Income questions always have a high refusal rate.)
- Therefore, 225 completed all questions or all but the frequently skipped income question. This means that 91% of the sample answered 97% to 100% of the thirty-seven 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, 50 customers, or 20% of the effective final unweighted sample identified themselves as Hispanic, but
interestingly, three additional customers for a total of 53 respondents completed the survey in Spanish. This is unexpected because only 46 indicated that Spanish was the language they most often spoke at home.

**ANALYSIS**

Analysis consists primarily of crosstabulations and frequency distributions. Tables were prepared in SPSS, version 26 and charts in Excel 2016. The GoCary survey 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.
Frequency of Using GoCary

Riders were asked on how many days in a typical week they use GoCary. For purposes of further analysis, the customers are grouped into three sets, or "segments," depending upon how frequently they use GoCary. We refer to them as:

- One-to-three-day: Those who use GoCary one, two, or three days a week (28%)
- Four-to-five-day: Those who use GoCary four or five days a week (37%)
- Six-to-seven-day: Those who use GoCary six or seven days a week (35%)

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 is generally useful to those involved with planning or marketing.

Other breakdowns may also be of interest, and by request such breakdowns can be provided quickly because the survey data 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 further analysis in this report, the customers are shown in most charts broken into the three segments shown in Figure 2.
Using GoCary More Often, Less Often, or the same amount as Last Year

Respondents were asked if they were using GoCary more often, less often, or about the same as in the previous year, or whether they had begun using its services only during the current year.

Overwhelmingly, respondents said that they are riding either with same frequency (28%) or more often (42%) than a year ago, and 22% said they are new riders. Only 8% said they are riding less often. The six-to-seven-day riders are the most likely to be new riders (24%), while the most frequent riders are more likely (46%) than the other segments to say they are riding more often.
Trip Purpose: Use of GoCary for Various Purposes, by Segment

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 70% of customers citing that as their most frequent trip purpose.
- Shopping trips make up another 15% of trips. Thus, GoCary is carrying a large proportion of its customers (85%) 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 6% of the customers indicate that they use GoCary to travel to or from school.
- Medical and recreational trips account for 7%

Nearly all of the six-to-seven-day riders (89%) and almost three-fourths of the four-to-five-day riders (70%) made 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 (47%). This suggests that this customer base might either be working part-time or using different modes on different days.
Employment and Trip Purpose

That employment would be closely related to trip purpose would appear self-evident. However, there are some variations. As expected, 87% of those employed full time use GoCary to go to or from work, while 84% of part-time workers are headed for work, and another 8% of those part-time workers are headed for school. These are as anticipated.

Less expected is that 48% of those who say they are unemployed say they are going to or coming from work\(^1\). A possibility is that they are in temporary jobs while looking for work and therefore consider themselves to be unemployed according to those conditions, although they are “employed” under the definition of employment used by the Bureau of Labor Statistics. Similarly, 10% of retirees say they are making a work trip, probably working part time but still considering themselves to be primarily retired. A little over one-fourth of homemakers (29%) say they are going to work. These individuals could be working part time but consider homemaker to be their main occupation. Students, as expected, are going either to work (56%) or to school (25%).

\(^1\) With a sample of 249, sub-samples such as 3%, and sub-samples of those have an extremely small number of respondents, and the results should be understood as approximations that would have to be tested with a larger sample before we could assume accuracy.
Mode to the Bus Stop

Most GoCary customers (74%), most often simply walk to the nearest bus stop. There is no major difference among the three rider segments in this respect.

The second most frequent mode (13%) used to get to a GoCary bus is a trip of a bus of a different local system. The total of those getting to their stop by any bus (GoCary or one of the other bus systems in the region) is not very different among the segments. Of the most frequent riders, a total of 18% get to the stop by either GoCary (3%) or one of the other bus systems in the area (15%), while for the least frequent riders the analogous percentage is 12%.
In terms of the mode used to get to the bus stop, GoCary’s customers differ somewhat from national norms. Nationally, 81% of bus system riders walk to their stops, while 75% of GoCary riders do so. While 9% of bus riders nationally use public transit to access the stop they used for the trip on which they were surveyed, the same is true for 15% of GoCary riders. This higher percentage is likely the result of GoCary’s location at the periphery of three much larger transit systems in the region.
Respondents were asked which of the transit systems in the region they use in a typical week. Since they can use multiple systems, the sums of the percentages exceed 100% in Figure 8.

As expected, most riders (63%) said they use GoCary in a typical week. Conversely, this suggests that about 37% do not use GoCary every week. For all segments in 2018 who also use another local system, GoCary customers use GoRaleigh more than any other local system (34% overall). In addition, 27% also use GoTriangle.
GoCary Fares at the Time of the Survey

The table in Figure 9, copied from the GoCary website, displays the several types of pass media and special fares available at the time of the survey in 2018.

Type of Fare Used

The largest percentage of GoCary customers (43%) boarded with a day-pass purchased either on the bus (31%) or prior to boarding (12%). Thirty-four percent (34%) paid their fare in cash. Thus, combining the cash fare and the day-pass purchase on the bus, a total of 65% make a fare transaction on the bus.

The other customers used free or pre-paid passes of some other type. This includes 6% using the GoPass and 3% a university ID. Finally, 14% used a seven- or thirty-one-day pass.

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Source of fare information: https://gocary.org/fares-passes-gocary
In many systems a decade or more ago, when the day-pass was not yet widely offered, the primary discounted pass option was often 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 greatly.

The day pass rarely offers as deep a discount as a longer term pass, but it imposes little risk, no substantial cash flow problem, and does save money for the heavy transit 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, 38% of those with household income of less than $20,000 use cash, while of those with incomes of $50,000 or more, only 19% use cash. The same percentage (40%) of those in the income level below $20,000 and those with income of $50,000 or more use a day pass.

The major difference between the lower and higher income customers, involves the one remaining type of inverse relationship between income and fare type used. It involves the free fares provided by the GoPass and university ID. Those with incomes of $50,000 or more are twice as likely (23%) as those with incomes less than $20,000 (10%) and more likely than those with incomes between $20,000 and $49,999 (8%) to use a GoPass or a university ID to use GoCary services at no cost to themselves.
Three Aspects of Mode Choice

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 42% in the chart above) hold a valid license and 37% have a vehicle available, while, conversely, 63% do not.

Nationally, the meta analysis conducted by CII Research for APTA of more than 200 onboard surveys\(^3\) indicated that among bus customers, 61% lacked a vehicle for the trip they were making when surveyed. At 63%, this places GoCary at the national norm in this respect.

\(^3\) APTA, 2016. *Who Rides Public Transportation,* an APTA publication prepared by CII Research. Available at the APTA website.
Figure 14 Availability of a Vehicle

<table>
<thead>
<tr>
<th></th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
<th>60%</th>
<th>70%</th>
<th>80%</th>
<th>90%</th>
<th>100%</th>
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<td>1 - 3 days</td>
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<td></td>
<td></td>
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<tr>
<td>Three or more</td>
<td>3%</td>
<td>0%</td>
<td>3%</td>
<td>2%</td>
<td>1%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
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<tr>
<td>Two</td>
<td>3%</td>
<td>6%</td>
<td>0%</td>
<td>3%</td>
<td>2%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>One</td>
<td>27%</td>
<td>44%</td>
<td>29%</td>
<td>34%</td>
<td>37%</td>
<td>38%</td>
<td>39%</td>
<td>40%</td>
<td>41%</td>
<td>42%</td>
<td>43%</td>
</tr>
<tr>
<td>None</td>
<td>66%</td>
<td>51%</td>
<td>68%</td>
<td>61%</td>
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<td>59%</td>
<td>58%</td>
<td>57%</td>
<td>56%</td>
<td>55%</td>
<td>54%</td>
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</table>

**Availability of a Vehicle**

Figure 13 demonstrated that 37% of the GoCary customers have a vehicle available, although not all have a license to drive. This finding leads us to the question of whether the availability of a vehicle is related to the frequency with which customers use GoCary. According to Figure 15, there are some variations between user segments.

Specifically, the graph reveals evidence that customers who use GoCary four or five days a week are more likely than others to have a vehicle available. This is somewhat surprising because we shall see later in Error! Reference source not found. that the incomes of the four to five day rider segment are no greater than the incomes of other segments. We can speculate, however, that the four to five day work week is indicative of more regular employment and income that tend to make borrowing, and thus vehicle ownership, more feasible.
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. Conversely, this means that 56% have used one of the car-sharing services, including 11% who have used them only once, 14% twice, and 31% who have used them three or more times.

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 16 provides basic answers.

Of the 56% of GoCary customers who have used Uber or Lyft, 38% say they replaced a GoCary trip with a ridesharing trip. This amounts to 21% of all GoCary customers (i.e. 38% of 56% = 21%).

Of the 56% of customers who have used Uber or Lyft, nearly one half, 46%, say they combined a ridesharing trip with a GoCary trip. This amounts to 26% of the ridership (i.e., 46% of 56% = 26%) of the ridership who have used a ridesharing service, say that they have used it as part of a bus trip.

We do not know for what purpose some Uber/Lyft riders have combined a rideshare trip with a GoCary trip. However, in Figure 6 (Mode to the GoCary Bus Stop) only 3% said they used Uber/Lyft to get to the bus stop for their current trip. Other customers must have used ridesharing for other purposes. This issue will be worth exploring in some manner in the coming years if only on an informal basis. One question that would be helpful to understand is whether use of ridesharing is filling gaps in coverage, span, or in weekend service.

*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.
Replacing or Supplementing a Trip, by Segment

As we saw in previous charts, 56% of GoCary customers say they have used Uber or Lyft in the past thirty days. Of these riders, 38% (i.e. 21% of all riders) say they replaced a GoCary trip with a trip on a rideshare service, while 46% (i.e., 26% of all riders) have combined a rideshare trip with a GoCary trip.

The practice of using rideshare to replace a GoCary trip varies significantly among the rider segments, with the six-or-seven-day (62%) and the one-to-three-day (61%) riders being more likely than the four-to-five-day riders (51%) to do so. In addition, the four to five day riders are also less likely (30%) than either the one to three day riders (47%) or the six to seven day riders to combine a GoCary trip with a ridesharing trip.

Although there are some differences among the rider segments, the differences should not obscure the main finding, that a significant proportion of riders are supplementing and even replacing some GoCary trips with ridesharing trips. It is also important to remember that the percentages cited here are percentages of riders, not of the trips they make. Riders were not asked to estimate the number or proportion of their trips replaced in this manner. This may be a useful question to include in a future survey.
Demographics
Employment of Customers

Respondents were asked about their employment. In 2018, a total of 51% of GoCary customers reported being employed full time, while another 16% said they were employed part time, and 17% said they are students. Although it is not displayed in the chart, students who are also employed full or part time comprise 8% of all riders.

Full time employment is considerably more frequent among the six-to-seven-day riders (70%) than among the four-to-five-day riders (43%), and the one-to-three-day riders (36%).
Unemployment Rates in NC, Wake, Durham, and Orange Counties

The substantial decrease in unemployment in the Triangle Region since the Great Recession is shown clearly in the Bureau of Labor Statistics (BLS) data shown in Figure 19. At the time of the survey, the official BLS unemployment rate in North Carolina was 3.7% statewide and 3% in Wake County.

In the survey, 3% indicated that they consider themselves unemployed, the same rate as shown in the BLS charts above. We also saw in Figure 5 that 48% of these “unemployed” riders said that their trip purpose was getting to or from work. Thus, they are employed in terms used by the Department of Labor, although their employment may be only an interim tactic while seeking a new job. This would amount to about 1.4% of the GoCary ridership, leaving 1.6% unemployed and not working in the interim.

The low level of full unemployment (i.e. unemployed and not working in the interim) Coupled with the fact that 84% of GoCary riders are either employed or students (or in some cases both) the important role of GoCary as a factor in labor mobility is clear.

Income of Rider Households

As is true of riders in many passenger transit surveys of other systems, most GoCary riders have very low household incomes. In 2018, 33% report household incomes of less than $10,000. Another 18% report their incomes as ranging from $10,000 to just under $20,000, while 49% report incomes of $20,000 or more. The income distribution varies somewhat among the three levels of riding frequency. Among the four-to-five-day riders 43% report incomes below $10,000, which is a considerably larger percentage of low income users than for the other segments. Conversely, the percent reporting incomes of $20,000 or more is somewhat smaller among this segment (42%, compared to 46% for the one-to-three-day riders, and 60% for the six-to-seven-day riders).

Comparing the incomes of the GoCary customers to the national data from the...
APTAs report on rider demographics, we can see that the incomes of the GoCary customers are similar at the low end to the comparable national levels in cities/towns of less than 200,000 population, somewhat higher in the $15,000 to $24,999 range, and similar otherwise.

**Employment and Income**

In 2018, household incomes below $10,000 seem unlikely. However, in a minimum wage job ($7.25 in NC), even if a person worked full time for 2,000 hours a year, the income would be only $14,500. Frequently such low wage jobs do not provide a full 2,000 hours of work with the result that incomes can fall below that level. It is important to remember that responses to the income question in surveys are approximations. For example, the real income of a household with earning income under $10,000 is likely to be supplemented by such programs as SNAP and Medicaid. And the real incomes of those who are employed and have fully paid health insurance, and those who are sixty-five or older and on Medicare, or students on scholarships (etc.) have income supplements that are unlikely to be accounted for in a quick survey response about household income. Thus, the actual income levels may be understated. The point remains, however, that the income levels of GoCary users are low.

As one would expect, income is related to the employment circumstances of customers. Of those who are unemployed and seeking work, 84% report incomes of less than $10,000. Homemakers are next with 69% in that category, while students and part time workers are tied for third with 41% in each category. For obvious reasons, full time workers report the highest levels of income. Retired persons are next because this segment reported significantly higher percentages of mid-level income earnings ranging from $35,000 to $49,999.
$49,999 and above, whereas the volunteer income range only goes up to $34,999. This may be thanks to Social Security or pensions, and for some retired customers a job in retirement.

![Figure 23 Rider Segment by Gender](image)

Gender of the Customers

GoCary customers are predominantly female (58%) with a male ridership of 41%, while 1% preferred not to state a gender identity.

Although the gender balance does not differ significantly among the rider segments, the six-to-seven-day rider segment seems to have a slightly higher percentage of male riders (43%) than the other segments.

Nationally, according to the CJI APTA report cited earlier, among bus customers, 56% are women. Thus GoCary is essentially right at the national norm. However, recent surveys by CJI and others have found a majority of males among the riders in several rider surveys. A recent joint study by CJI with EMC Research Inc in Columbus, Ohio, for example, found a 56% male ridership. Whether or not this represents a significant change in the transit market will not be known until additional studies are conducted.
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 2018, 32% of the GoCary respondents identified themselves as African American/Black, 25% as Hispanic, and 19% as Caucasian/White. These three groups total 76% of the ridership.

Those identifying as Asian account for 10% of the ridership, and Native American as 3%. The “Other” category 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 at all helpful.

The distribution of ethnicity differs somewhat among the rider segments, with seven-day customers considerably more likely (36%) to identify as African American compared to four-or five-day customers (31%) or one-to-three-day customers (29%)
Language Spoken Most Often at Home

Approximately three-fourths (76%) of GoCary customers most often speak English at home while 22% speak Spanish at home. The rider frequency segments vary in this respect with the four-to-five day customer segment (30%) speaking Spanish more often than those in other segments.
Like most bus transit systems in the United States, GoCary has a young ridership. Of all GoCary riders, over half (51%) 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.

The age distributions differ somewhat among the three rider segments. The most notable variation is in the total percentage of the ridership under or over the age of thirty-five. Among the six-to-seven-day customers the percentage younger than thirty-five is 47%. Among the one-to-three-day customers, the percentage is 43%. The four-to-five-day customers fall significantly above with 62% in that age group. This youthful age characteristic reflects the greater proportion of workers in the four-to-five-day and six-to-seven-day categories that we saw earlier in Figure 18, which suggests that the workforce that uses the GoCary system to get and from work is young.
Figure 27 Age Profile of Transit Customers Nationally (APTA, op cit)

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

<table>
<thead>
<tr>
<th>Age Range</th>
<th>GoCary riders</th>
<th>Bus riders nationally</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>20 - 24</td>
<td>17%</td>
<td>12%</td>
</tr>
<tr>
<td>25 - 34</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>35 - 44</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>45 - 54</td>
<td>18%</td>
<td>17%</td>
</tr>
<tr>
<td>55 - 64</td>
<td>7%</td>
<td>15%</td>
</tr>
<tr>
<td>65 or older</td>
<td>9%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Age Profile of Transit Customers Nationally

Figure 27 demonstrates that nationally, the age distribution among GoCary customers is somewhat similar to that of bus system customers in general, although 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.
- Nationally, another 21% are between twenty-five and thirty-four, as is also the case for GoCary.
- Another 17% are between thirty-five and forty-four, the same as GoCary’s 17%.
- At the national level, 17% are between forty-five and fifty-four while 18% of GoCary customers are between the same age range.
- The balance, 23% nationally and 16% for GoCary, are fifty-five or older.
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 age ranges from twenty to twenty-four, fifty to fifty-nine, and above sixty-five. The population in the twenty to twenty-four year old age set accounts for 5%, while in the ridership it accounts for 17%. And at the age of seventy and older, the percentage of the population is 9% while among riders it is 5%. The percentages diverge somewhat, alternating one slightly higher than the other between the ages of twenty-five and forty-nine, but the differences are small. Although, the GoCary ridership consistently remains lower than the Town of Cary population once they 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 fifty when the percentage of the general population in each age group maintains a gradually declining trend while the percentage among riders falls sharply to 4%.
An Age Profile of GoCary Customers

A quick glance at the chart above tells an important story about the age of GoCary ridership: It is somewhat disproportionately young. More than one-fourth (29%) of GoCary riders are twenty-five or younger. Almost sixty percent (57%) are forty or younger.

In several studies of transit customers in other cities, CJI has found that the age profile of any given system’s bus ridership tends to follow an age progression similar to that shown above in Figure 29. Generally, about one-fourth to one-third of ridership falls into a youthful cohort that is often in school or college preparing for work-life and ranging in age from sixteen to approximately twenty-five. After the age of twenty-five the percentage of transit customers in each age group fluctuates and eventually drops off and enters a declining slope, which, for most transit systems we have studied, represents a life cycle period when many transit customers are entering a career phase of life, earning more and often buying a vehicle. After the age of 55, the percent of ridership tends to fall off and stabilize as people begin to retire.
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 Center⁵. The age sets used by PEW and those used 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. Also, while Baby Boomers are said to be no older than seventy-three, there are too few riders in the survey above that age to create a separate group for the older generation (“The Silent Generation”) and they are grouped with the Boomers for purposes of the chart. However, the PEW definitions provide an adequate guide.

In Figure 30, we see a pattern similar to that presented in Figure 29. 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 (54%).

⁵ See http://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/
Customer Satisfaction
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 61). We begin this section of the report with the overall rating of service.

Fifty-two percent (52%) rate service overall as 7, or excellent. Another 23% score it 6, giving a total of 75% with high satisfaction scores.

The occasional, one-to-three-day riders, offer the highest score on overall service quality, with a total of 84% scoring service overall as 6 or 7 on the seven-point scale, while slightly fewer (79%) of the four-to-five-day riders, and 63% of the six-to-seven-day riders assign that score. The six-to-seven-day riders, who typically have the most routine commutes, offer a lower “excellent” percentage than the other segments, with 46%.
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 32 displays in blue bars the percent able to provide any rating whether positive, neutral or negative. In the red portion of the bars the chart displays 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

---

<table>
<thead>
<tr>
<th>Operating Services Used by All</th>
<th>Buses on time</th>
<th>Weekday service frequency</th>
<th>Weekday service hours</th>
<th>Ease of transfer within system</th>
<th>Total average trip time</th>
<th>Service to all destinations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>91%</td>
<td>88%</td>
<td>83%</td>
<td>82%</td>
<td>82%</td>
<td>82%</td>
</tr>
<tr>
<td>Operating Services Used by Many</td>
<td>Ease of transfer between systems</td>
<td>80%</td>
<td>20%</td>
<td>79%</td>
<td>21%</td>
<td>78%</td>
</tr>
<tr>
<td></td>
<td>Saturday service frequency</td>
<td>79%</td>
<td>21%</td>
<td>78%</td>
<td>22%</td>
<td>77%</td>
</tr>
<tr>
<td></td>
<td>Sunday service hours</td>
<td>77%</td>
<td>23%</td>
<td>76%</td>
<td>24%</td>
<td>76%</td>
</tr>
<tr>
<td></td>
<td>Sunday service frequency</td>
<td>76%</td>
<td>24%</td>
<td>76%</td>
<td>24%</td>
<td>76%</td>
</tr>
<tr>
<td>Travel Environment</td>
<td>Sense of safety on bus</td>
<td>87%</td>
<td>13%</td>
<td>87%</td>
<td>13%</td>
<td>86%</td>
</tr>
<tr>
<td></td>
<td>Bus interior cleanliness</td>
<td>87%</td>
<td>13%</td>
<td>87%</td>
<td>13%</td>
<td>86%</td>
</tr>
<tr>
<td></td>
<td>Bus operator courtesy/helpfulness</td>
<td>86%</td>
<td>14%</td>
<td>86%</td>
<td>14%</td>
<td>83%</td>
</tr>
<tr>
<td></td>
<td>Fare medium options</td>
<td>86%</td>
<td>14%</td>
<td>86%</td>
<td>14%</td>
<td>83%</td>
</tr>
<tr>
<td></td>
<td>Bus shelter/transit center cleanliness</td>
<td>83%</td>
<td>17%</td>
<td>83%</td>
<td>17%</td>
<td>81%</td>
</tr>
<tr>
<td></td>
<td>Usefulness of printed information</td>
<td>81%</td>
<td>19%</td>
<td>81%</td>
<td>19%</td>
<td>76%</td>
</tr>
<tr>
<td></td>
<td>Quality of WiFi</td>
<td>76%</td>
<td>24%</td>
<td>76%</td>
<td>24%</td>
<td>76%</td>
</tr>
<tr>
<td></td>
<td>Usefulness of telephone operators</td>
<td>66%</td>
<td>34%</td>
<td>66%</td>
<td>34%</td>
<td>66%</td>
</tr>
</tbody>
</table>

**Figure 32 Services Included in the Survey, Grouped by Type and Showing Percentage Unable to Provide a Rating**

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

GoCary Onboard Customer Survey, 2018
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 this changing proportion of respondents offering ratings, Figure 32 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. 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 32, 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 32. 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 33 Scores of "Excellent" in 2018 on Individual Components of GoCary Service

Percent of all customers rating service "Excellent"

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Score of &quot;Excellent&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall service</td>
<td>53%</td>
</tr>
<tr>
<td>Ease of transfer within system</td>
<td>55%</td>
</tr>
<tr>
<td>Weekday service frequency</td>
<td>53%</td>
</tr>
<tr>
<td>Weekday service hours</td>
<td>46%</td>
</tr>
<tr>
<td>Service to all destinations</td>
<td>44%</td>
</tr>
<tr>
<td>Buses on time</td>
<td>42%</td>
</tr>
<tr>
<td>Total average trip time</td>
<td>42%</td>
</tr>
<tr>
<td>Ease of transfer between systems</td>
<td>49%</td>
</tr>
<tr>
<td>Saturday service frequency</td>
<td>48%</td>
</tr>
<tr>
<td>Saturday service hours</td>
<td>45%</td>
</tr>
<tr>
<td>Sunday service frequency</td>
<td>42%</td>
</tr>
<tr>
<td>Sunday service hours</td>
<td>38%</td>
</tr>
<tr>
<td>Sense of safety on bus</td>
<td>63%</td>
</tr>
<tr>
<td>Bus interior cleanliness</td>
<td>62%</td>
</tr>
<tr>
<td>Fare medium options</td>
<td>61%</td>
</tr>
<tr>
<td>Usefulness of printed information</td>
<td>60%</td>
</tr>
<tr>
<td>Bus shelter/transit center cleanliness</td>
<td>56%</td>
</tr>
<tr>
<td>Bus operator courtesy/helpfulness</td>
<td>55%</td>
</tr>
<tr>
<td>Usefulness of telephone operators</td>
<td>54%</td>
</tr>
<tr>
<td>Quality of WiFi</td>
<td>48%</td>
</tr>
</tbody>
</table>

GoCary Service Overall  Travel Environment  Operating Services Used by Many  Operating Services Used by All

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

Figure 33 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 32, Figure 33 is organized by the type of service being rated. At the top of the chart are the operational services fundamental to all customers. Each of these 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 55%, 53%, and 49% excellent, respectively. Coverage (“Service to all destinations you want to get to”) finds fewer, but nearly one half of customers rating it as excellent (46%). On time performance and total time required for a trip lag right behind coverage at 44% and 42%, respectively.

Operational aspects of service that are used by fewer customers than other services, tend to have somewhat fewer ratings of excellent than the more universally used service elements. This is particularly true for weekend service. Transferring between systems (49% 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.” Saturday service frequency also received excellent ratings by nearly half (48%). Saturday service hours falls slightly below that level at 45%. 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, 38% and 42% 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, each received excellent scores by more than 40% of the respondents. The sense of safety dimension, with 63%, is at the top of this list with bus interior cleanliness, fare medium options, and usefulness of printed information as runner ups with ratings of 62%, 61%, and 60% respectively. The relatively low rating of courtesy and helpfulness of the bus operators is a bit surprising since it is typical for personnel to have very good ratings, but given that this dimension was given a rating of 55%, the relatively lower performance does not necessarily indicate that any particular action needs to be taken. This is because occasional complaints notwithstanding, customers generally like the interaction with the transit personnel with whom they come in contact and give them high scores. The remaining items of consideration are bus shelter and transit center cleanliness (56%), the usefulness of telephone operators (54%), and the quality of WiFi on the buses, which barely meets the 50% mark (48%).

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6 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 34 Distribution of Grouped Service Rating Scores

#### Distribution of Ratings

| Operating Services Used by all | Overall service | Ease of transfer within system | Weekday service frequency | Weekday service hours | Service to all destinations | Buses on time | Total trip time | Ease of transfer between systems | Saturday service frequency | Saturday service hours | Sunday service frequency | Sunday service hours | Sense of safety on bus | Bus operator courtesy/helpfulness | Bus shelter/transit center cleanliness | Fare medium options | Usefulness of printed information | Usefulness of telephone operators | Quality of WiFi | Bus interior cleanliness |
|-------------------------------|----------------|--------------------------------|--------------------------|----------------------|--------------------------|----------------|----------------|---------------------------------|--------------------------|----------------------|-------------------------|-------------------------|---------------------|--------------------------|---------------------------------|--------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------|-------------------------|
|                               |                |                                |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Overall service               | 2%             | 24%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Ease of transfer within system| 2%             | 23%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Weekday service frequency     | 3%             | 22%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Weekday service hours         | 4%             | 27%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Service to all destinations   | 8%             | 30%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Buses on time                | 3%             | 35%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Total trip time              | 5%             | 34%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Ease of transfer between systems| 4%             | 28%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Saturday service frequency   | 5%             | 28%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Saturday service hours       | 5%             | 28%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Sunday service frequency     | 8%             | 34%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Sunday service hours         | 8%             | 36%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Sense of safety on bus       | 1%             | 14%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Bus operator courtesy/helpfulness| 2%             | 18%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Bus shelter/transit center cleanliness| 0%         | 21%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Fare medium options          | 3%             | 19%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Usefulness of printed information| 2%             | 22%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Usefulness of telephone operators| 5%             | 25%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Quality of WiFi              | 6%             | 31%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |
| Bus interior cleanliness      | 3%             | 35%                            |                          |                      |                          |                |                |                                |                          |                      |                          |                          |                     |                          |                                |                          |                            |                            |                            |                        |                          |

#### Service Rating Distributions

The previous chart, Figure 33, showed 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 distributions, the scores of 1 to 7 have been combined into three sets as shown in Figure 34 above. 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%).
As measured by the mean score, the rating scores of three segments tend to be mostly in agreement. This tendency for the rider frequency segments to agree in their ratings is indicated by two characteristics of this chart. First, within each of the three service types, the rank-order of their scores is similar. Second, the maximum difference among the segments is small, only .7, (for cleanliness of shelters and transit center) on the seven-point scale. These two observations suggest that regardless of how often one uses GoCary services, the experience will tend to be perceived in generally similar ways.
Determining Customer Priorities for Service Improvement

In the charts from Figure 31 through Figure 35 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 36 and Figure 37:

- The first method (Figure 36) 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 37) 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.
One way to prioritize: Ask Customers “What Are the Three Most Important Services to Improve?”

Nearly seventy percent (69%) of GoCary customers indicate that having the buses run on-time is one of their top three improvement priorities.

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, 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.

To the extent that more people begin to use real-time transit apps for bus arrival information, as 39% now do (see Figure 38), that information will decrease the anxiety of waiting and will help reduce the perception of a lack of on time performance. In addition, greater frequency will have a similar effect because even in the absence of real time information, frequent service creates certainty that the next bus will be coming soon.

The next closest priority, “Sunday service hours” is rated in the top three by 27%. The third and fourth in the rank order of customer service improvement priorities, are “Sunday service frequency” (25%) and “Service to all destinations” (23%)
A second way to prioritize: Determine Which Service Elements Would Move the Needle of the Overall GoCary Service Rating if They Were to Be Improved

Using survey data to prioritize elements of service that customers feel need improvements is a challenge. Figure 36 presented one way to do it. Figure 37 on page 56 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 37, page 56) is actually less complex than it may seem, but it does require some explanation.

- The concept of the matrix in Figure 37 is as follows: Respondents rated nineteen separate aspects of GoCary service as shown in Figure 36 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 of 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 means using a simple graph with the 1-7 rating on one axis and the correlation on the other axis. However, there are two challenges to doing this.

  o First, the numbers are of different types. The rating scale uses whole numbers specified in the questionnaire from 1 – 7. The correlation coefficients are decimal numbers ranging from -1 to +1. A perfectly negative relationship is -1 and a perfectly positive relationship is +1. As a practical matter, the correlation is always a decimal since perfect positive or negative relationships just do not exist. Rather than trying to represent whole numbers on one axis and decimals on the other, it helps to have common measurement units.

  o The second and more important challenge for the analysis is that the ratings tend to skew positive and to vary more between scores of 4 through 7 than between 1 and 3 (see Figure 31). There are very few poor ratings. This only makes sense, since 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.

One way to solve both of these challenges is to standardize the scores. This simply means to convert them statistically to comparable scores based on how each rating and each correlation differs from the average of such ratings and correlations. This procedure enables us to construct a matrix that shows the services which, if improved, would have the most powerful effect on the rating of GoCary service overall.
The 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:

<table>
<thead>
<tr>
<th>Correlation of each service rating with the rating of overall service</th>
<th>Relatively low ratings but relatively important to the overall rating, dragging it down</th>
<th>Relatively high ratings and relatively important to the overall rating Service already good and core to the overall system score. Important to maintain it or risk losing the overall rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>High correlation</td>
<td>Improvement here moves the needle most, but these tend to be structural and the most difficult to change</td>
<td>Relatively high ratings and relatively unimportant to the overall rating Service good. Further improvement unlikely to move the overall quality needle, but deterioration may reduce the rating.</td>
</tr>
<tr>
<td>Low correlation</td>
<td>Relatively low ratings but relatively unimportant to the overall rating Improvement desirable, but unlikely to move the overall quality needle much</td>
<td>Service ratings</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service ratings</th>
<th>Low rating</th>
<th>High rating</th>
</tr>
</thead>
</table>

Figure 37 on the following page displays how the nineteen elements of service are positioned within this priority matrix.
Figure 37 Relationship between Overall Performance Rating and Ratings of Individual Service Elements

**Keys to improving overall rating:** Strong correlation, relatively low ratings. System is perceived to perform relatively poorly on these and these ratings are strongly related to the overall rating score. Improving these would substantially improve the overall rating.

**Maintain your strong position.** Strong correlation, relatively high ratings. System is perceived to perform relatively well on these elements, and scores are related to the overall rating.

<table>
<thead>
<tr>
<th>Legend</th>
<th>Operating services used by almost all riders</th>
<th>Operating services used by fewer than 95% of riders</th>
<th>Travel Environment</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>More important to overall satisfaction</th>
<th>Fare medium options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ease of transfer between systems</td>
<td>Usefulness of printed information</td>
</tr>
<tr>
<td>Service to all destinations</td>
<td>Bus shelter/transit center cleanliness</td>
</tr>
<tr>
<td>Saturday service hours</td>
<td>Sense of safety on bus</td>
</tr>
<tr>
<td>Weekday service hours</td>
<td>Bus interior cleanliness</td>
</tr>
<tr>
<td>Buses on time</td>
<td>Bus operator courtesy/helpfulness</td>
</tr>
<tr>
<td>Usefulness of telephone operators</td>
<td>Weekday service frequency</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lower satisfaction rating</th>
<th>Higher satisfaction rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday service hours</td>
<td>Total average trip time</td>
</tr>
<tr>
<td>Sunday service frequency</td>
<td>Saturday service frequency</td>
</tr>
<tr>
<td>Quality of WiFi</td>
<td>Bus operator courtesy/helpfulness</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Work on these if possible, but improvement will have low impact on overall rating.** Weak correlation, relatively poor rating scores. These elements are below average in their ratings but improving them would make little difference in overall rating.

**Maintain ratings.** Weak correlation, relatively positive ratings. Riders rate these elements relatively well, but these relatively positive ratings make little difference in overall rating.

**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 correlation with, 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 rating of all rating scores. The farther to the left, the poorer the rating compared to the average of all ratings, and the farther to the right, the better the rating compared to the average of all ratings. The two lines cross at the mid-points of the scores.

In considering Figure 37, keep in mind that the position of a service element in the matrix is based on its rating relative to the average for all scores. For example, a service element appearing at the right means that it is rated better than the average of all service elements. If, for example, the average score for all nineteen service elements were, say, 3.0, and the score for a specific element were 4, it would have a relatively positive score in spite of the fact that in absolute terms on a scale from 1 – 7, a 4 would be a neutral score, not a highly positive score. It would be, in short, better than average².

---

² The statistic is called the Z-score in statistics jargon and is based on the number of standard deviations from the mean for both the correlation and the satisfaction score. The scores from -2.5 to +2.5 shown on the axes are counts of the number of standard deviations from the mean.
**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 as the left of the line. The closer to the far right, the better the rating; the closer to the far left, the worse 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 ratings, a proxy for 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.

**Color Coding Shows the Location of the Service Types in the Matrix**

Notice the color coding of the service elements:

- Four 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 which is that 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 low impact on the movement of the overall satisfaction needle.

- 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, and two, Saturday service hours and ease of transferring among area systems, are above the line.

**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 system 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 (69%) 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 there are also 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 the transit systems that are 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 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 75% ratings of 6 or 7 (see Figure 34). This is important in that this is obviously a key element for a transit system in which over two-thirds (70%) of the riders are going to or coming from work, and another 6% are going to or coming from school. Presumably most of these customers are working or attending school during the week, making weekday service a key to customer satisfaction. That 75% 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 20%, tied for #5 against bus operator courtesy/helpfulness and weekday service hours in the listing of 19 service elements named as important to improve. This a key aspect of service, yet customers are not telling us that they want improvement and instead are indicating that they are satisfied with the status quo. The converse of this, however, is that if weekday service frequencies were reduced, it would be likely to lead to rapid disappointment and could indeed have a significant, and negative, impact on the overall rating. Steady as she goes is the message here. The same is true of Bus operator courtesy/helpfulness. Customers are satisfied. The task in both cases is to maintain the ratings.

LOWER LEFT QUADRANT: IT WOULD BE NICE TO IMPROVE THESE ELEMENTS, BUT DOING SO WOULD NOT AFFECT THE RATING OF GOCARY 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. Since the quality of WiFi service only appears just below average (i.e., just to the left of the vertical axis) and very low on that axis, it can be assumed that it has very little influence on the overall GoCary rating.
Mobile Communication
Use of Cell and Smart Phones

Among GoCary customers, cell phone ownership is high, but not quite universal, with 93% of customers indicating they use a cell phone. Thirty-nine percent (39%) 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 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 39. That figure demonstrates that the use of such apps is decently related to age with a general downward trend in utilization as age increases. This means that unless 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. One surprising observation is that the majority of those GoCary users who do not use cell phones are of ages thirty-five to forty-four, however it is unclear why this might be the case.
Appendix A: Questionnaire
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)

<table>
<thead>
<tr>
<th>Service</th>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Buses running on-time</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Frequency of service on weekdays (Mon-Fri)</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Frequency of service on Saturday</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Frequency of service on Sunday</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Hours the buses operate weekdays (Mon-Fri)</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Hours the buses operate Saturday</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Hours the buses operate Sunday</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Total time required to make your usual trip</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Availability of service to all destinations you want to get to</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Ease of transferring within GoCary system</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Ease of transferring between GoCary and other area bus transit systems</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Cleanliness of the bus interiors</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Cleanliness of the bus shelters and transit center</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Your sense of personal safety from other passengers on the buses</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Courtesy and helpfulness of bus operators</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Usefulness of information from 485-RIDE telephones operators</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Usefulness of printed information such as schedules or brochures</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Available ways for you to pay your bus fare</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Quality of wireless internet (WIFI) service</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. The quality of GoCary services overall</td>
<td>7 6 5 4 3 2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

21. Of the services in questions 1 – 19 above, please list the three most important to improve?

   __________ Most important
   __________ 2nd most
   __________ 3rd most

22. On how many days in a typical week do you use GoCary? (Circle only one)

   1 2 3 4 5 6 7

23. What is the ONE main purpose for which you most often use the GoCary buses? Is it to go to or from... (Check only one)

   1 2 3 4 5 6 7

24. Compared to one year ago, do you currently ride GoCary... (Check only one)

   1 2 3 4

25. For your fare on the first GoCary bus you boarded during this trip, did you... (Check only one)

   1 2 3 4 5

26. How did you get to the stop where you get on this GoCary bus? (Check only one)

   1 2 3 4 5 6 7

27. In a typical week, which, bus systems do you usually use? (Check all that apply)

   1 2 3 4 5 6 7

28. If you use a cell phone, do you use a mobile app for local transit on it? (Check only one)

   1 2 3 4

29. In the past 30 days, how often have you used Uber or Lyft or a similar ridesharing company? (Check only one)

   0 times 1 time 2 times 3 times 4 times or more

30. How old are you? __________ Years old

31. Please mark all of the following that apply to you. Are you: (Check all that apply)

   1 2 3 4 5 6 7

32. Do you have a valid driver’s license? (Check only one) 1 Yes 2 No 3 Not applicable

33. How many cars or other vehicles are available for your use? (Circle only one)

   1 2 3 or more

34. Do you identify as... (Please check all that apply to you)

   1 2 3

35. Do you consider yourself to be... (Please check all that apply to you)

   1 2 3 4 5

36. What language do you most often speak at home? (Check only one)

   1 2 3

37. What is your total annual household income? (Check only one)

   1 2 3 4 5 6

Comments: ________________________________
Por favor, diganos sobre cómo utiliza GoCary

En los últimos 30 días, Cómo calificaría a GoCary en los siguientes servicios...
(Cerciórate de que contestes a cada pregunta o marques la casilla que indica que no se aplica a usted)

1. Autobuses transitando a tiempo 7 6 5 4 3 2 1 Δ
2. Frecuencia de servicio entre semana (Lun-Vie) 7 6 5 4 3 2 1 Δ
3. Frecuencia de servicio el sábado 7 6 5 4 3 2 1 Δ
4. Frecuencia de servicio el domingo 7 6 5 4 3 2 1 Δ
5. Horas que autobuses operan entre semana (Lun-Vie) 7 6 5 4 3 2 1 Δ
6. Horas que autobuses operan el sábado 7 6 5 4 3 2 1 Δ
7. Horas que autobuses operan el domingo 7 6 5 4 3 2 1 Δ
8. Tiempo total requerido para hacer su viaje regular 7 6 5 4 3 2 1 Δ
9. Disponibilidad del servicio a todos los destinos que desea llegar 7 6 5 4 3 2 1 Δ
10. Facilidad de transferir dentro del sistema GoCary 7 6 5 4 3 2 1 Δ
11. Facilidad de transferir entre GoCary y otros sistemas de tránsito de autobuses del área 7 6 5 4 3 2 1 Δ
12. Limpieza del interior del autobús 7 6 5 4 3 2 1 Δ
13. Limpieza de los albergues de autobús y de centros de tránsito 7 6 5 4 3 2 1 Δ
14. Su seguridad personal o a otros pasajeros en los autobuses 7 6 5 4 3 2 1 Δ
15. Cortesía y amabilidad de operadores de autobús 7 6 5 4 3 2 1 Δ
16. Utilidad de la información de los operadores de 485-RIDE 7 6 5 4 3 2 1 Δ
17. Utilidad de la información impresa tal como horarios o folletos 7 6 5 4 3 2 1 Δ
18. Formas disponibles para que pague su tarifa de autobús 7 6 5 4 3 2 1 Δ
19. Calidad del servicio de internet inalámbrico (WIFI) 7 6 5 4 3 2 1 Δ
20. Calidad de los servicios de GoCary en general 7 6 5 4 3 2 1 Δ

21. De los servicios en las preguntas 1 a 19 anteriores, ¿por favor enumera los tres más importantes para mejorar? _____ Lo más importante _____ 2º más _____ 3º más

22. ¿Cuántas veces usas GoCary en una semana típica? (Cerciórate de que) 1 2 3 4 5 6 7

23. ¿Cuál es el ÚNICO propósito principal para el que usas los autobuses de GoCary más seguido? Es ir hacia or desde... (Marque sólo una) 1 2 3 4 5 6 7

24. Comparado con hace un año, ¿cuánto has usado GoCary... (Marque sólo una) 1 2 3 4 5 6 7

25. Para su tarifa en el primer autobús GoCary que abordó en este viaje, usted... (Marque sólo una) 1 2 3 4 5 6 7

26. ¿Cómo llegaste a la parada donde subiste a este autobús de GoCary? (Marque sólo una) 1 2 3 4 5 6 7

27. En una semana típica, ¿qué sistema de autobús sueles usar? (Marque todo lo que corresponda) 1 2 3 4 5 6 7

28. Si usa un teléfono celular, ¿usa una aplicación móvil de tránsito local en él? (Marque sólo una) 1 2 3 4 5 6 7

29. En los últimos 30 días, ¿con qué frecuencia usó Uber o Lyft a una compañía de viaje compartido similar? (Marque sólo una) 1 2 3 4 5 6 7

30. ¿Cuántos años tienes? ___________ Años

31. Marque todo lo siguiente que se aplique a usted. Eres: (Marque todo lo que corresponda) 1 2 3 4 5 6 7

32. ¿Tiene una licencia de conducir válida? (Marque sólo una) 1 2 3 4 5 6 7

33. ¿Cuántos automóviles u otros vehículos hay disponibles para su uso? (Cerciórate de que) 0 1 2 3 4 5 6

34. ¿Te identificas como... 1 2 3 4 5 6 7

35. ¿En consideras ser... (Por favor marque todo lo que corresponde a usted) 1 2 3 4 5 6 7

36. ¿Cuál idioma habla más a menudo en casa? (Marque sólo una) 1 2 3 4 5 6 7

37. ¿Cuál es su ingreso familiar anual en total? (Marque sólo una) 1 2 3 4 5 6 7

Comentarios: ____________________________
Appendix B: Rider Comments
<table>
<thead>
<tr>
<th>Route</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Don’t close stop #11056. I use it to go to work every day.</td>
</tr>
<tr>
<td>1</td>
<td>I believe the female drivers on the #1 &amp; #2 are very unprofessional (with the exception of #3). I have been riding GoCary for over 8 years &amp; ridership has gone down because of the lack of professionalism &amp; courtesy from these drivers.</td>
</tr>
<tr>
<td>1</td>
<td>I need Maynard bus, bad!!!</td>
</tr>
<tr>
<td>1</td>
<td>I once asked a bus driver the route times and she told me to check the paper. I told her I couldn't figure it out and she refused to tell me.</td>
</tr>
<tr>
<td>1</td>
<td>I require the bus to get to work. Please do not close routes #1 and #2 of GoCary. I will lose my job if it closes.</td>
</tr>
<tr>
<td>1</td>
<td>Please don’t take away the bus stops. I need them to get to work I have no car. Thank you.</td>
</tr>
<tr>
<td>1</td>
<td>Very cozy and comfortable.</td>
</tr>
<tr>
<td>2</td>
<td>A very safe way of travel due to the experienced drivers. Thumbs up!!!</td>
</tr>
<tr>
<td>2</td>
<td>Estoy muy agradecida por sus servicios</td>
</tr>
<tr>
<td>2</td>
<td>Good drivers. Keep forward. Excellence service everyday</td>
</tr>
<tr>
<td>2</td>
<td>I noticed the sign at stop #1113 that says it may be closing. Please don’t close it, this is my only means to get to work.</td>
</tr>
<tr>
<td>2</td>
<td>I only use the bus to go to and from work. I use Lyft if the weather is bad. I’d love to see the Cary town ctr stop relocated to the other side of the mall.</td>
</tr>
<tr>
<td>2</td>
<td>Keep the #2 route. It’s convenient. The drivers are the best.</td>
</tr>
<tr>
<td>2</td>
<td>Longer hours on weekends.</td>
</tr>
<tr>
<td>2</td>
<td>Transit time is really my only issue.</td>
</tr>
<tr>
<td>2</td>
<td>Very upset that the buses will not be going through crossroads. It’s very hard to get to shopping and now taking it away. Bad.</td>
</tr>
<tr>
<td>2</td>
<td>Why did you stop giving service to senior citizens (especially on a fixed income)?</td>
</tr>
<tr>
<td>3</td>
<td>A little bit of improvement. Thanks for the good job.</td>
</tr>
<tr>
<td>3</td>
<td>Sunday AM going to K-mart, Kildare Farm should start from train station at 8:00 AM like all the buses and run every 30 minutes. Because weekend hours are very important; also holidays. We need buses running. --Health Care Employees</td>
</tr>
<tr>
<td>Rating</td>
<td>Comment</td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>4</td>
<td>Please extend service to the Cary Park Area Green Level, Church road, and Carpenter Fire Station road. It gets old and expensive to ride Lyft to the bus stop.</td>
</tr>
<tr>
<td>4</td>
<td>Satisfactory.</td>
</tr>
<tr>
<td>5</td>
<td>I would like the #5 on Sundays to run as early as the weekday #19. All buses don’t have Wi-Fi.</td>
</tr>
<tr>
<td>5</td>
<td>Excellent service.</td>
</tr>
<tr>
<td>5</td>
<td>GoCary does need additional routes and extended services.</td>
</tr>
<tr>
<td>5</td>
<td>GoCary!</td>
</tr>
<tr>
<td>5</td>
<td>Good service. Improve frequency. Cover more areas. Where pedestrians walk is bad.</td>
</tr>
<tr>
<td>5</td>
<td>I appreciate this service. Thanks guys! I’m able to get to and from work. Thank you!</td>
</tr>
<tr>
<td>5</td>
<td>Ok.</td>
</tr>
<tr>
<td>5</td>
<td>Some bus drivers are always later for taking too long at time points.</td>
</tr>
<tr>
<td>6</td>
<td>Bus frequency after 6pm (#4 bus) as well as GoRaleigh buses are problematic.</td>
</tr>
<tr>
<td>6</td>
<td>Bus service is very good. GoCary door-to-door is very helpful.</td>
</tr>
<tr>
<td>6</td>
<td>Buses run more often. Have buses all over Cary.</td>
</tr>
<tr>
<td>6</td>
<td>Excellent service. Very good people. Very nice courteous drivers.</td>
</tr>
<tr>
<td>6</td>
<td>I like GoCary.</td>
</tr>
<tr>
<td>6</td>
<td>I need a route for the parkway.</td>
</tr>
<tr>
<td>6</td>
<td>I’ve only been riding the bus a short time. I’m trying to relocate here and the drivers have been so helpful to me. Good job to Cary drivers.</td>
</tr>
<tr>
<td>6</td>
<td>I really like the bus system. Just hope that we have more frequent buses on Sunday and I hope for a bus to go straight to Durham on Sunday.</td>
</tr>
<tr>
<td>6</td>
<td>I rely solely on public transportation to get me to both of my jobs &amp; grocery shopping. Please do not close the Maynard bus stops, Pond, or Kildaire Farm road #2 &amp; #A buses.</td>
</tr>
<tr>
<td>6</td>
<td>I ride the #6, #1, #2. Please keep those routes.</td>
</tr>
<tr>
<td>6</td>
<td>I wish I wasn’t disabled.</td>
</tr>
<tr>
<td>6</td>
<td>In USA I have witnessed Cary bus service as one of the best!</td>
</tr>
<tr>
<td>6</td>
<td>Just use for work but will use more, being that I only work one job now. Great service. The only time I didn’t ride, I woke up late.</td>
</tr>
<tr>
<td>6</td>
<td>More hours needed for bus operation.</td>
</tr>
<tr>
<td>Page</td>
<td>Comment</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
</tr>
<tr>
<td>6</td>
<td>Public transportation is vital to the community. I wish more people would ride to support it. I need to be dropped off to ride. Stop is a 30 minute walk from my house.</td>
</tr>
<tr>
<td>6</td>
<td>Thank you.</td>
</tr>
<tr>
<td>6</td>
<td>The transportation service needs a lot of work. The buses themselves barely work. Some of the drivers have poor attitudes. They need to make sure the lifts are working at all times.</td>
</tr>
<tr>
<td>6</td>
<td>The Wi-Fi is spotty, at best. The hours of operation should be longer, so I do not need to find a ride home, when working 2nd shift!</td>
</tr>
<tr>
<td>6</td>
<td>Todo esta bien</td>
</tr>
<tr>
<td>6</td>
<td>Very satisfied with the bus service.</td>
</tr>
<tr>
<td>6</td>
<td>Would like to see more buses on the route.</td>
</tr>
</tbody>
</table>