GO Durham GO Triangle GO Raleigh GO Cary

Triangle Region Onboard Customer Surveys
Combined Regional Report

October 2023

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1 Executive Summary

OVERVIEW

CJI Research conducted surveys of customers onboard buses in each of four systems serving the Triangle Region (**GoDurham**, **GoRaleigh**, **GoTriangle**, and **GoCary**). These surveys were conducted in 2018, 2019, and 2023, as part of a regional customer satisfaction measurement program. For this report, a composite sample included data from all four surveys, combined into a single data file with 4,098 responses. The

> ### Methodology
> **A random sample survey of this size has a margin of error of +/-1.5% at the 95% level of confidence.** Sub-samples for each of the systems taken separately have higher margins (i.e., slightly lower confidence levels) as noted in the four individual system reports. All margin of error statistics assumes a split of 50:50 in response. A random sample of 4,098 has a margin of error of +/-1.5% at the 95% level of confidence. This means that the results shown in this report are 95% likely to accurately represent the four-system ridership within a margin of 1.5%. For example, if the survey shows that 45% of riders are employed full time, the actual percentage is 95% likely to be within a range of 43.5% to 46.5%.

GoDurham survey was conducted in November 2022, and GoRaleigh, GoTriangle, and GoCary were conducted in April and May 2023. While this report focuses on survey data from 2022 and 2023, previous years' data is referenced to show changes over time.

Travel Characteristics

One-system vs. Multiple-System Users

Multi system travel has increased since 2018, with the number of users accessing multiple systems more than doubling between 2018 and 2023. (See Figure 1-1 and Figure 3-1).

Multi system usage is greatest among GoTriangle and GoCary riders. GoRaleigh and GoDurham riders were less likely to use other transit services (see Figure 3-2).

Figure 1-1   Increase in Multiple-System Users

	2018	2019	2023
Multiple Systems	19%	44%	40%
Single System	81%	56%	60%

■ Single System ■ Multiple Systems
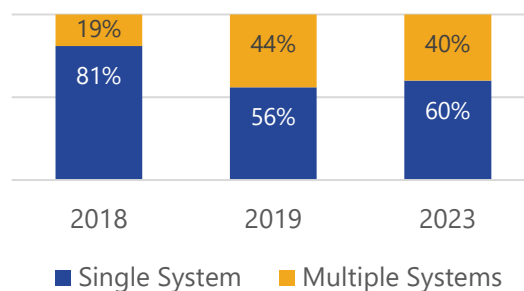
Trip Purpose

Across all systems, over two-thirds of riders indicated employment as their primary trip purpose, with school or college coming in second place, followed by shopping. The remaining trips were for medical/dental visits, recreation, and other purposes. Work trips as a proportion of all trips has declined slightly since 2018 and 2019 (Figure 3-6).

Vehicle Availability

Less than a third of 2023 respondents said they had a vehicle available to them, continuing a gradual decline in vehicle availability since 2018 (Figure 4-12). GoTriangle riders are most likely to

have a vehicle, followed by GoCary. Overall, riders on GoDurham and GoRaleigh are least likely to have access to a vehicle (Figure 4-13).

Ride Hailing

In the thirty days prior to the survey, Uber or Lyft replaced at least one transit trip for almost a third of transit riders. Between 2018 and 2023, usage of ride hailing increased slightly, with 68% saying they use a transit app on their phone (Figure 3-7).

Rider Demographics

Employment

Almost two-thirds of transit riders in the Triangle Region are employed, with half of those employed full-time, and the rest part-time (including students with jobs) (Figure 4-1). The number of riders not employed has more than doubled since 2018. This finding is correlated with a larger proportion of riders with low incomes: in 2023, over two-thirds of riders reported incomes of less than $25,000 (Figure 4-1).

Gender

Slightly more men used transit in 2023, mirroring a corresponding drop in female ridership. A small percentage of respondents identify as non-binary or prefer not to answer this question (Figure 4-3).

Ethnicity

Between 2019 and 2023, the proportion of riders identifying as African American/Black increased by 5%, while those identifying as Caucasian/White fell 8% (Figure 4-5).

Age

In 2023, younger riders (between 16 and 35) constitute the largest block of persons using Triangle services, though the percentage of riders older than 35 has risen since 2018 (Figure 4-8).

Customer Satisfaction

The survey was designed with input from all four transit systems, including their preferred customer satisfaction metrics. The survey included 17 metrics used across the four systems. The 17 metrics are organized into three categories Operational Elements Inherent in the Systems' Operations and Used by All Riders; Operational Elements Used by Many but not All Riders and Non-operational aspects of service that make up the rider environment.

Figure 1-2   Surveyed Service Elements

Aspects of service inherent in the system's operations and used by all riders	Operational aspects of service used by many but not all riders	Non-operational aspects of service that make up the rider environment
Total average trip time	Sunday service frequency	Bus interior cleanliness
Buses on time	Sunday service hours	Sense of safety on bus
Service to all destinations	Saturday service frequency	Quality of WiFi
Ease of intra-system transfer	Saturday service hours	Usefulness of 485.RIDE
Weekday service frequency	Ease of transfer between systems	Usefulness of printed information
Weekday service hours		Bus operator courtesy/ helpfulness

For detailed category survey results, see Figure 5-5.

In 2023, "7-Excellent" or "6-Very Good" ratings for overall system service quality dropped to 45%, a five-point decline compared to 2019. Lower rates were also reflected in riders' scores for individual service aspects (Figure 5-1). Ratings for the individual transit services were like these systemwide scores.

Changes in satisfaction scores in the onboard surveys since 2019 bear a striking similarity to national trends in consumer confidence and satisfaction, suggesting that such declines may be both part of larger cultural trends and a measure of perceptions specific to the four transit systems surveyed. (Figure 5-11   Consumer Confidence Index, 2007 to 2023 through Figure 5-13).

Changes in ridership demographics (e.g., income and racial/ethnic identification) may also underlie some survey questions' lower satisfaction scores, though most of these scores decreased across demographic differences independent of those changes. (through Figure 5-10).

Customer Satisfaction by Service Category

Survey results in the three service categories display customer satisfaction erosion in several areas:

Operational Elements Used by All Riders

Weekday service hours, *Weekday service frequency*, and *Intra-system transfers* were each rated Excellent or Very Good by slightly less than 50% of respondents in 2023, a drop of 6-7% in each category from previous years.

Excellent/Very Good ratings hovered around 40% in 2023 for *Service to all destinations desired, Buses operating on time, and Total duration of the trip.*

Excellent/Very Good ratings for *Transfers between systems in the Triangle region* dropped five points —to 43%—in 2023. Other metrics, including weekend service hours and frequency of service, also dropped to between 20% and 40%.

Operational Elements Used by Many/Some Riders

Several metrics in this category saw their Excellent/Very Good ratings fall around 10%, including *Bus operator courtesy and helpfulness, Usefulness of printed information, Usefulness of 485-RIDE, and Interior cleanliness of buses.*[1]

Excellent/Very good ratings for personal safety dropped dramatically, as evidenced by the scores for *Sense of personal safety from others on the bus*, which fell to 27% from a previous high of 53%. The decline in women's satisfaction outpace men's (Figure 5-14 and Figure 5-16). Safety is a high priority issue for many riders, underscoring the importance of the sharp decline in this metric[2].

Satisfaction with the quality of onboard WiFi remained constant across the survey periods.

Travel Environment

All positive ratings for the metrics in **Travel Environment** dropped, with "Quality of WiFi" showing the slowest decline, slipping six points. "Bus operator courtesy and helpfulness" and "Bus interior cleanliness" both saw their positives fall 11%, with "Usefulness of printed information" suffering a slightly higher drop, alongside "Usefulness of information from 485-RIDE." The largest decline by far was seen in "Sense of safety," for which positive ratings dropped 16%.

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[1] Sense of personal safety and bus interior cleanliness are closely related, with a correlation coefficient of .69. Such coefficients can vary from -1 to +1, with correlations at or near 0 indicating no relationship. The implication of the .69 correlation is that the two perceptions are strongly mutually reinforcing.

[2] A method for determining customers' priorities as defined by their satisfaction levels is presented in the Prioritizing section "(page 14).

2 Methodology

DATA COLLECTION

For each of the four system surveys, a random sample of transit trips was drawn from a list of all trips. These initial draft samples of runs and routes were examined to determine whether the randomization process had omitted a significant portion of the systems' overall route structures. The samples were adjusted slightly to take any such omissions into account.

Survey data collection occurred onboard the buses. Survey staff approached all customers, except riders who appeared younger than 16, for reasons of propriety and because children are typically unable to provide meaningful answers to several of the questions.

By asking all adult riders to participate in the survey, the team was able to eliminate selection bias for people to participate in the 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.

Background

The research design called for riders to be surveyed on each transit network annually (2018, 2019 and 2020). The COVID Pandemic caused the 2020 survey to be postponed. By late 2022 in-person surveying was feasible. The need for GoDurham to obtain Title VI data during the 2022 calendar year meant a need to complete the GoDurham survey in November 2022. The other three surveys (GoTriangle, GoRaleigh, and GoCary) would wait until April 2023.

A random sample survey of, has a margin of error of +/- 1.5% at the 95% level of confidence. Sub-samples for each of the systems taken separately have higher margins as noted in the four individual system reports. All margin of error statistics, as is customary, assume a split of 50:50 in response. A random sample of 4,098 has a margin of error of +/-1.5% at the 95% level of confidence. This means that the results shown in this report are 95% likely to accurately represent the four-system ridership within a margin of 1.5%. For example, if the survey shows that 45% of riders are employed full time, the actual percentage is 95% likely to be within a range of 43.5% to 46.5%.

Data Collection

Temporary workers were trained to administer the surveys under the supervision of CJI Research staff. Surveyors wore smocks identifying them in large print as members of the "Transit Survey Team." This uniform helps customers understand why a person they do not know would be approaching them on the bus. It also legitimizes them as official staff persons, increasing the cooperation rate.

In most cases, the survey personnel met the bus operators at pull-out and stayed on the bus for the entire driver assignment. To ensure broader coverage of certain routes, some surveyors rode partial runs and then transferred to another route or run or were dropped off by survey supervisors at a meeting point.

At the end of each sampled trip, the Survey Team member placed completed surveys in an envelope which doubled as a log-form marked with the route, the run, the time, and the day. The log-form was scanned, and key entered along with the

questionnaires in the envelope, thus providing a complete picture of each trip, and collectively, of each run.

In the analysis, those who did not respond to a question were eliminated from the computations unless there was a way to infer the response. For example, if a customer 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.

Survey Questionnaire

A common basic questionnaire for each survey was developed by CJI Research and adapted to the needs of each system. Copies of English versions of the questionnaires are included in the Appendix. They were printed in English on one side and Spanish on the other to facilitate use by speakers of either language or were self-administered by respondents. Survey personnel handed a questionnaire and a pen to customers, politely asking them to complete the survey, and to return it before leaving the bus.

Certain questions in the four questionnaires are identical, allowing them to be combined for the analysis used in this joint report. However, differing priorities of the four systems meant that some questions differed and cannot be included in the regional analysis.

The questionnaires were serial numbered. The serial number identified the log-form with which it is associated and thus the run and trip, the route, the date, and day of the week on which the survey was completed. This is a more accurate method than requiring the survey personnel to record such data and/or asking customers which route they are riding when completing the survey.

Survey Analysis

Analysis consisted primarily of crosstabulations and frequency distributions. Tables were prepared in SPSS, version 29, and charts in Excel for Office 365. The survey data set will be archived by CJI Research so that it will be available for further analysis, as needed.

The combined sample size was 4,098. A random sample survey of this size has a margin of error of +/-1.5% at the 95% level of confidence, assuming a split of 50:50 in response. The margin of error is smaller when response proportions are unequal.

Sample sizes varied among the four systems. The sample sizes were as follows:

GoDurham	1,471
GoRaleigh	1,332
GoTriangle	1,013
GoCary	282

Because the sample sizes were—intentionally—not proportional to the ridership of each agency, treating the combined sample as a unitary regional sample requires weighting by the total ridership of each system to get correct proportions among the four systems. Each system sample was also weighted by route within the system to correct any disproportions among routes within the individual system samples. Thus, the final dual weighting factor assures that the samples are

appropriately weighted within each system's sample, and between systems as well, thus producing a sound regional sample.

Results may vary slightly between the results for an individual system in this multi-system report and the individual system reports because the weighting factors used for the regional study differ slightly from the factors used in the individual system analyses.

Small differences exist—1%, to as much as 3%—in the system-wide figures presented in this report, when compared to the analogous tables in the individual system report. This is not an error in either study. Such differences are usually due to how rounding sometimes varies slightly, depending upon how a sample is analyzed. The analysis was designed to give big picture comparisons and such differences should be ignored.

With few exceptions, 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 inconsistent if tenths were not included, percentages may be carried to tenths. Rounding causes some percentage columns to total 99% or 101%. These are not errors and should be ignored.

3 Regional Transit Use

NETWORK TRAVEL

Transit riders in the Triangle increasingly use bus services as an integrated network rather than a series of independent, local bus services. Since regional travel involves linking together trips on multiple systems, one way to measure regional travel patterns from 2018-2023 is to count the number of local transit systems that riders use in a typical week, as illustrated in Figure 3-1. This data shows increasing use of multiple systems and a corresponding decrease in the number of people using only one system.

Figure 3-1   Systemic Travel Changes, 2018-2023
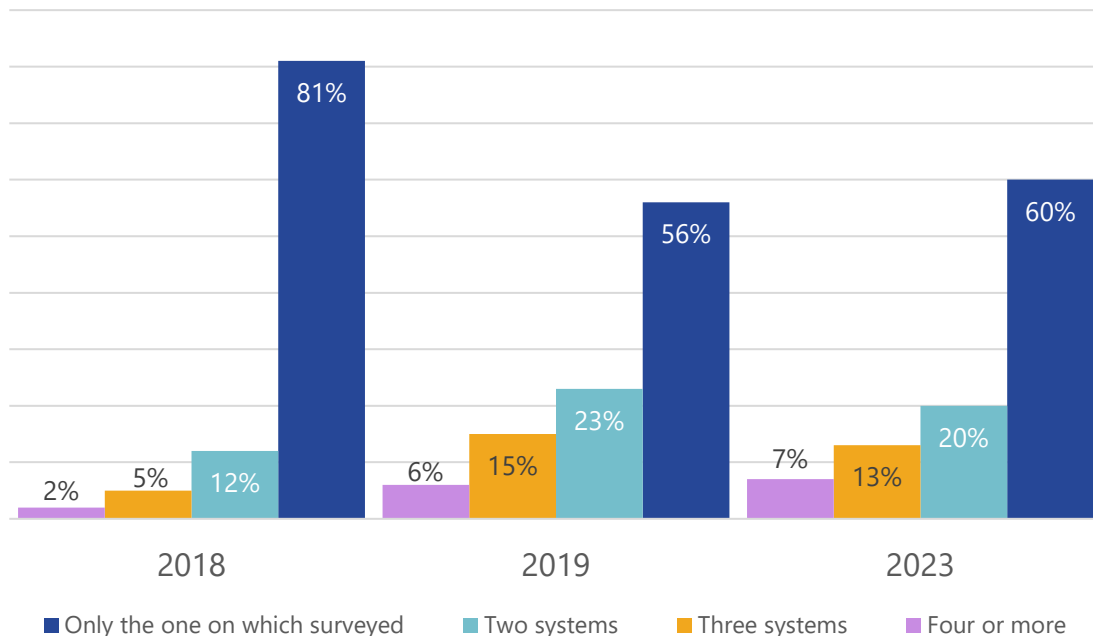
MULTI–SYSTEM TRANSIT RIDERS

The number of riders using multiple transit services increased between 2018 and 2023. with over two-thirds of **GoTriangle** users indicating they were multi-system riders. Slightly more than half of **GoCary** customers use multiple systems, while just one-third of **GoRaleigh** and **GoDurham** customers do so.

Figure 3-2   **Use of Multiple Transit Systems Overall and by Operator (2023)**

**Number of the Seven Local Transit Systems
Used Weekly on Regular Basis***

	GoDurham	GoRaleigh	GoTriangle	GoCary
7%	6%	7%	11%	9%
13%	11%	11%	26%	20%
20%	16%	20%	34%	27%
60%	67%	62%	29%	44%

All repondents   GoDurham   GoRaleigh   GoTriangle   GoCary

■ One (Only the one on which surveyed)
■ Two systems
■ Three systems
■ Four or more
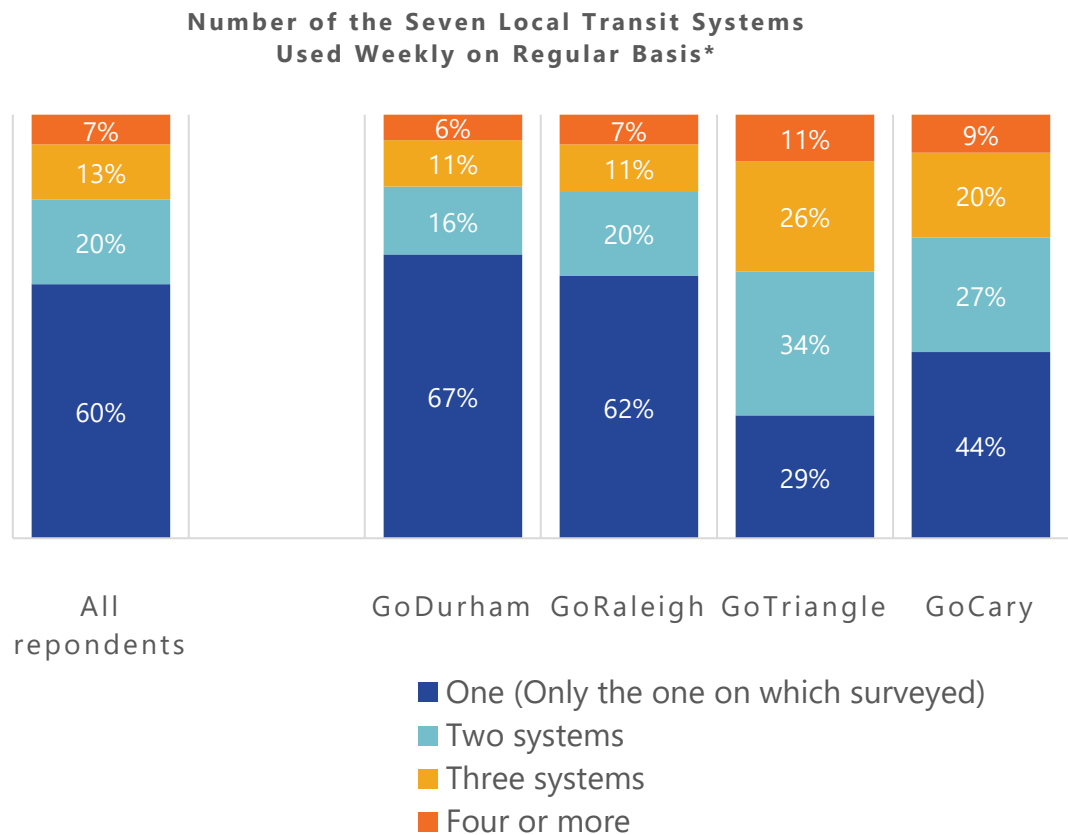
Seven systems include the four systems surveyed and shown above plus Chapel Hill Transit, Duke Transit, and Wolfline.

AREA BUS SYSTEM USAGE

More riders in the region are using multiple transit systems, including the large public transit operators but also Chapel Hill Transit and the university-based systems. Figure 3-3 illustrates how system usage has changed over time.[3] **GoRaleigh** and **GoTriangle** experienced the largest jump in multi-system riders, with **GoDurham** and **Wolfline** showing the slightest.

Figure 3-3   Bus Systems Used in a Typical Week

	2018	2019	2023
▪ Wolfline	3%	4%	5%
▪ Duke Transit	3%	4%	6%
▪ Chapel Hill	6%	7%	10%
▪ GoCary	4%	6%	11%
▪ GoDurham	47%	48%	51%
▪ GoTriangle	19%	25%	33%
▪ GoRaleigh	39%	43%	49%

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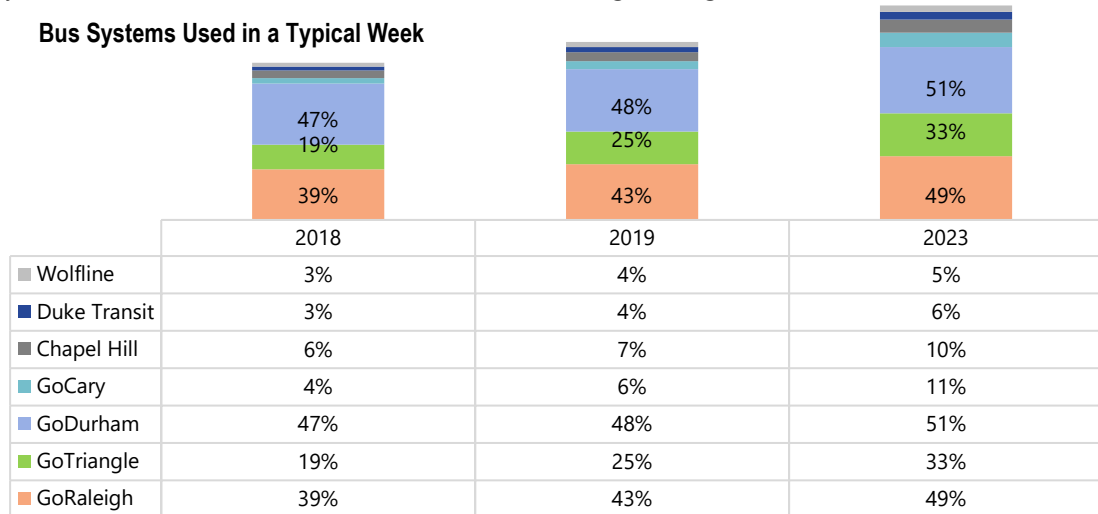
[3] Because many riders use multiple systems, the percentages shown in each column of Figure 3-3 are not mutually exclusive and sum to more than 100%. The extent to which riders use multiple systems is shown visually in the height of the columns.

TRENDS IN MULTIPLE-SYSTEM USE

Each system in the Triangle region has two market segments—local and regional riders—with a large percentage of riders using multiple systems on a regular basis.

All four systems saw an increase in multiple-system use during the survey periods; Figure 3-4 shows this growth on a system-by-system basis. Most changes were incremental and in a positive direction, with **GoTriangle** and **GoCary** riders more likely overall to use two or more systems than those riding **GoDurham** and **GoRaleigh**.

The most dramatic growth in the adoption of multi-system travel occurred among **GoRaleigh** riders whose use of **GoTriangle** increased from just 4% in 2018 to 28% in 2023.

Figure 3-4   Riders Use of Triangle Region Systems, 2018-2023
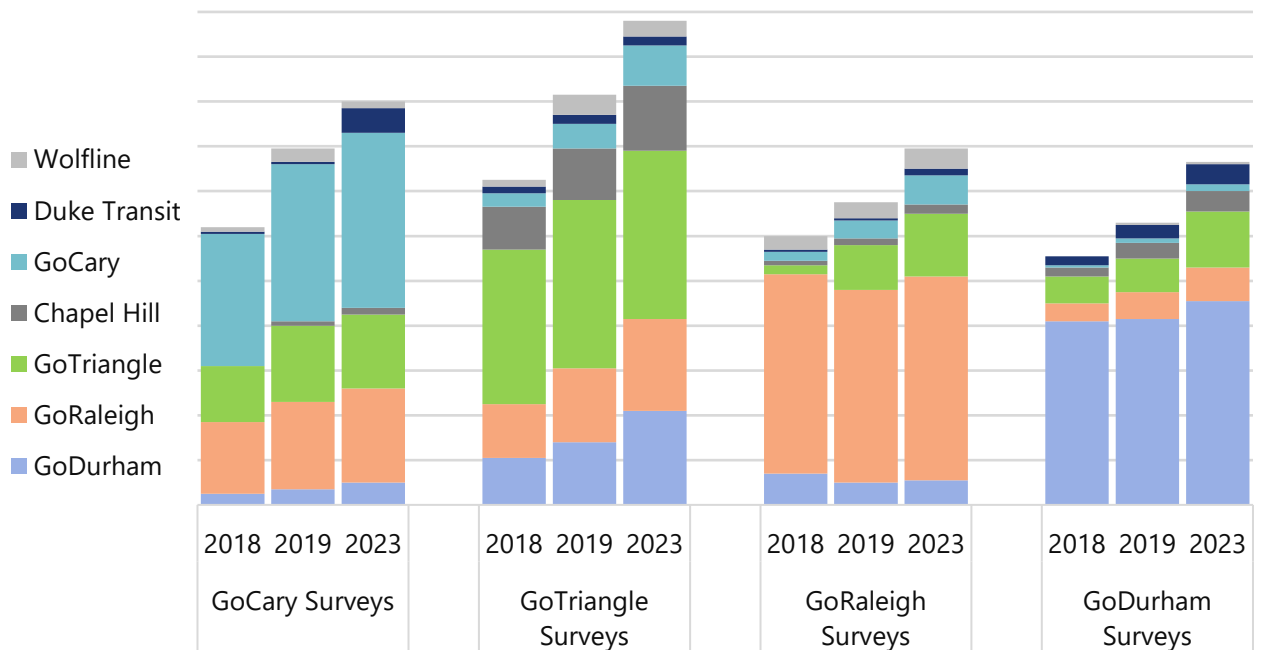
MARKET SHARE OF INTER-SYSTEM TRAVEL

When regional rider data was segregated from local riders, it provided a snapshot of how the transit systems share riders , and how market shares have changed over time (Figure 3-5).

Market share stability predominated across the overall system for the span of the three surveys, with just three outliers showing changes in the percentage of riders using their services. **GoRaleigh** riders who also use **GoTriangle** service, for example, more than tripled—rising from 13% (2018) to 41% (2019 and 2023). Similarly, **GoCary** riders using **Duke Transit** multiplied more than five-fold, from 2% in 2018 to 11% in 2023, while **GoCary** riders using **Chapel Hill Transit** jumped from 0% (2018) to 3% (2023).

Figure 3-5   Regional Market Share, by System
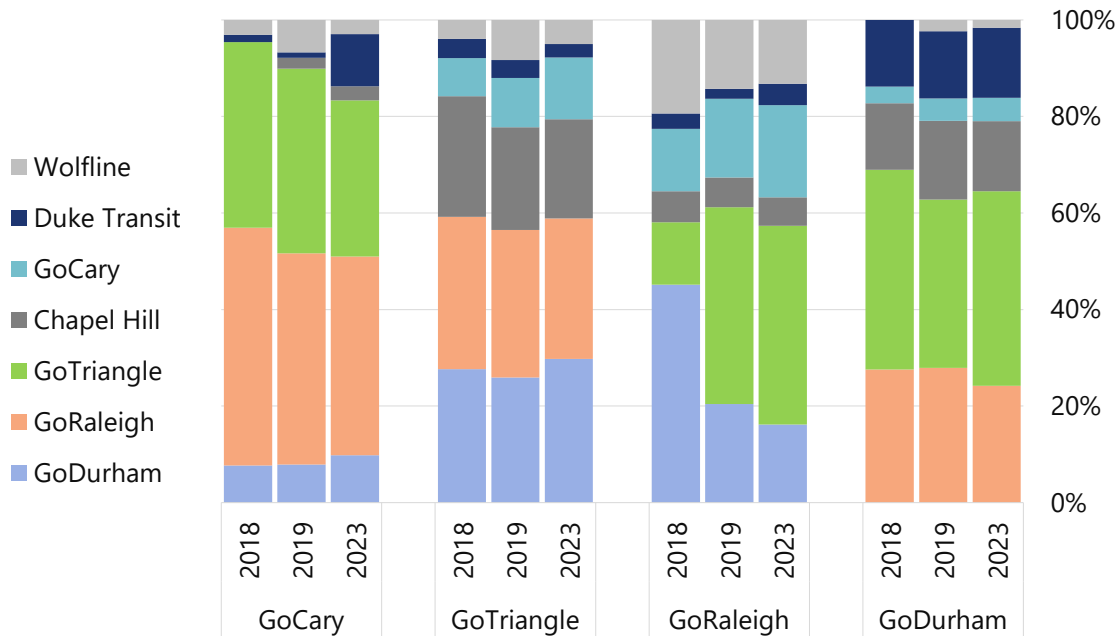
TRIP PURPOSE

Getting to or from work remains the primary trip-purpose for all four systems, in all three surveys. Work trips declined slightly throughout the survey periods. Given the concurrent workplace commuting disruptions caused by the COVID pandemic, monitoring future trip purpose changes will reveal if other factors are at play in this trending downturn.

Similar declines in ridership occurred with school/college trips, while shopping trips increased slightly, and medical/dental trips remained steady, with some variance by system.

Figure 3-6   Transit Rider Trip Purpose: 2023 by Operator and Overall, by Year
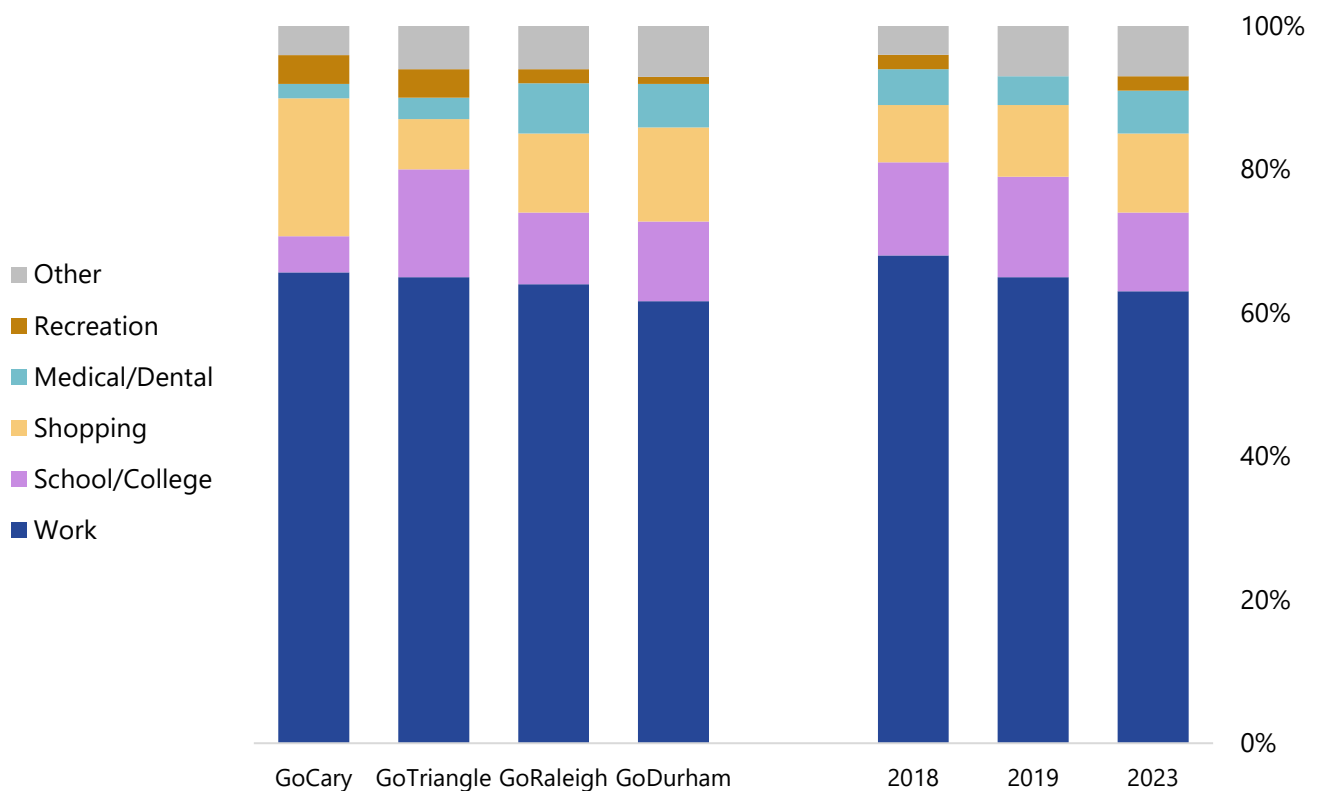
RIDER TECHNOLOGY

Transit Trip Replacement with Uber and/or Lyft

In the thirty days immediately preceding the surveys, the percentage of Triangle region riders replacing a transit trip with a ride on Uber/Lyft rose ten points, to 28% (2023). With the exception of **GoCary**, each survey period saw an increase in the number of transit trips being replaced by Uber/Lyft (Figure 3-7). *

Figure 3-7   **Uber and/or Lyft use to Supplement or Replace a Transit Trip** *(within 30 days of survey)* **2023 by Operator and Overall by Year**
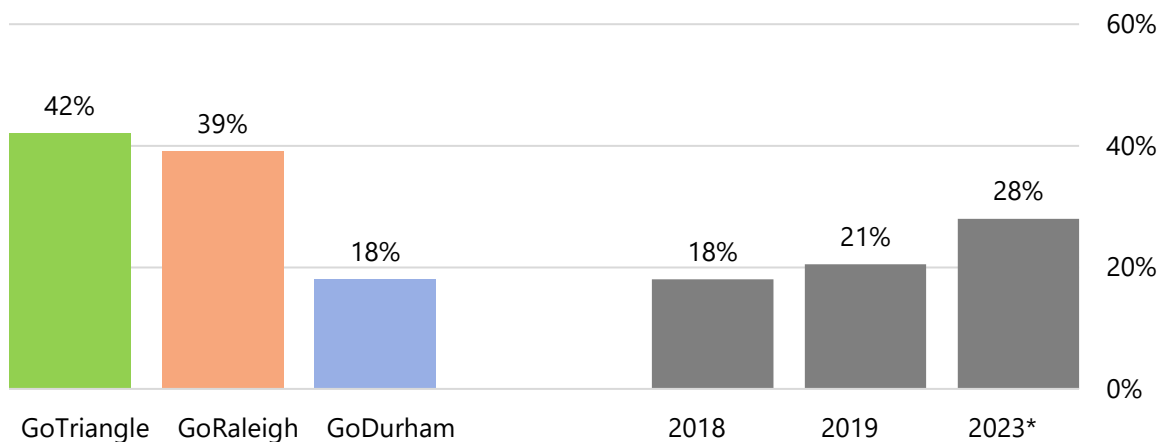
* This question was not asked in the GoCary survey in 2023. Since GoCary accounts for 3% of regional ridership, this 2023 percentage may misstate the 2023 regional total by as much as 3%.

Use of a Transit App

Transit customers increasingly take advantage of transit apps to plan trips and to check bus arrival times. In 2018, fewer than half of mobile phone users were using a transit app. By 2023, more than two-thirds of mobile phone owners were using transit apps on their phones, with well over three-quarters of **GoDurham** users utilizing them, compared with half of the users on the other three systems.

Figure 3-8   Use of Mobile Phones and Transit Apps by Operator (2023) and Overall, by Year
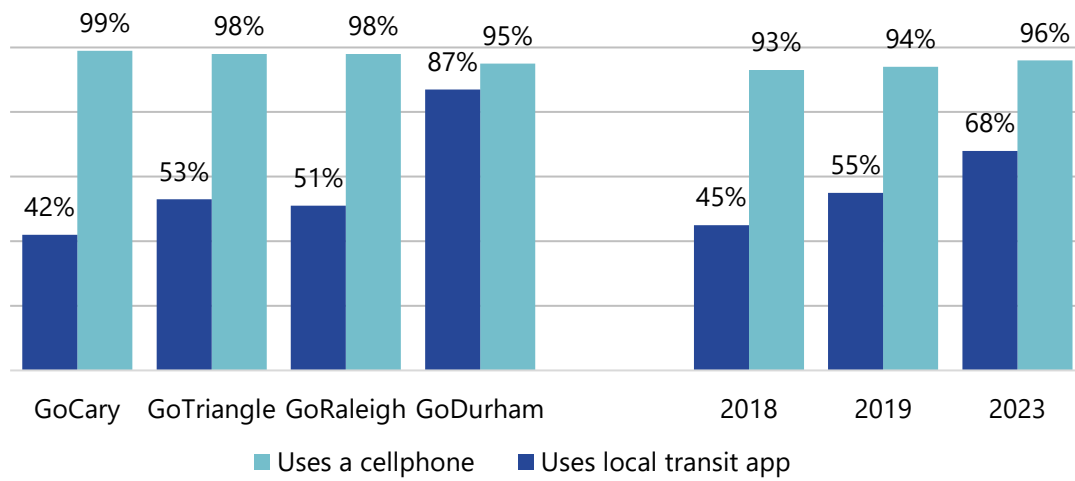
Rider Age and Transit App Use

Since the first of these surveys in 2018, age has been inversely associated with transit app use. The younger the riders, the more likely they are to use a transit app. The older the rider the less likely they are to use a transit app. However, even among the oldest age group, more people were using a transit app at each survey and the share of people aged 65 or older using a transit app stands at 50% in 2023

The exception to this age-to-app relationship is the very youngest riders surveyed (16-17); in 2019 and 2023, they were less likely to use an app than the next older age cohort.

Figure 3-9   Increase in Transit App Use Over Time, by Age by Year
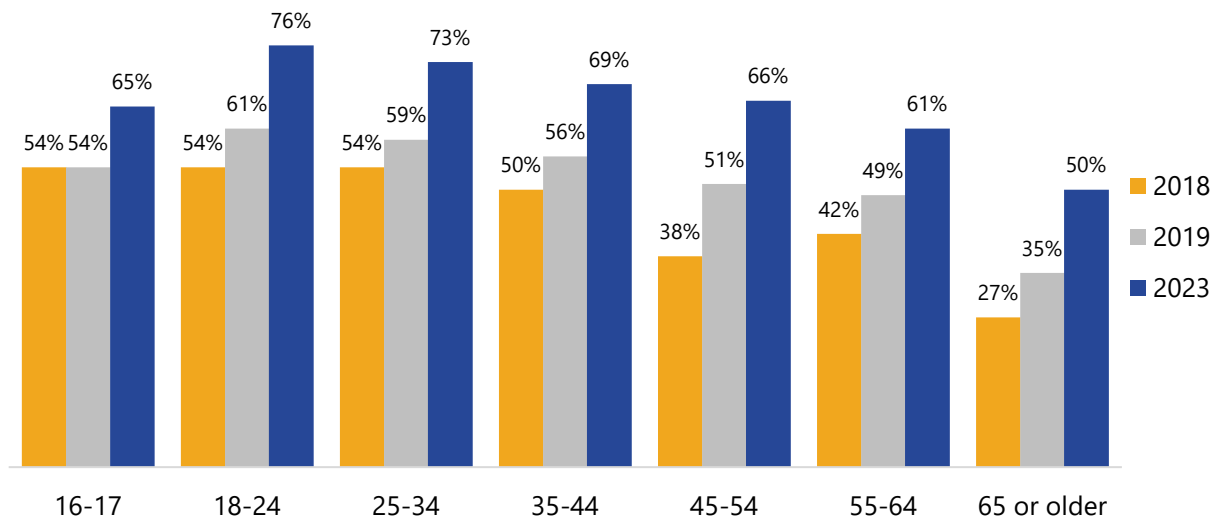
4 Demographics

Rider Employment

Employment characteristics in 2023 were very similar to those 2018/2019, with some statistically significant changes—the most notable being the number of unemployed, which more than doubled between, 2019 to 2023 (see pink regions in Figure 4-1). The number of riders employed full time remained statistically the same in 2018/19, before slipping slightly in 2023. Part-time and student employment numbers showed little change from 2018 to 2023.

Figure 4-1   Employment Status of Bus Riders – by Transit Provider (2023) and by Year (all providers)
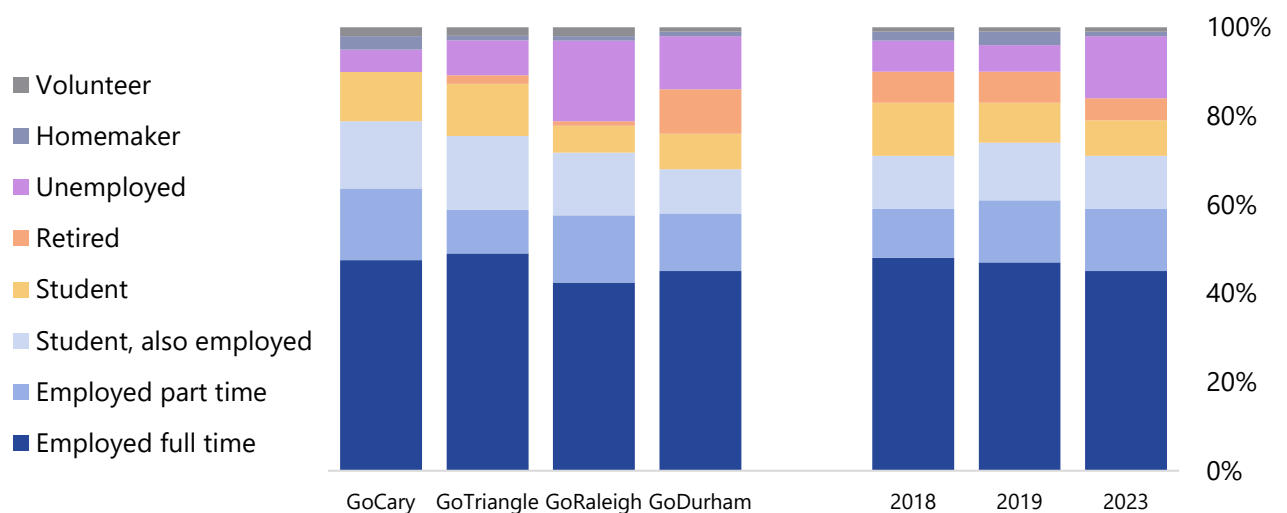
Rider Unemployment

The proportion of transit riders who describe themselves as unemployed increased from 6% to 7% in 2018/2019 to 14% in 2023. Transit riders are more likely to be unemployed than the population overall. Roughly 14% of transit riders in the Triangle region stated they were unemployed, while the actual unemployment rate in April 2023 as measured by the Bureau of Labor Statistics,[4] hovered around 3% in Wake, Durham, and Orange counties.[5]

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[4] BLS defines unemployment as those who are not employed but are "…willing and available to work and who have actively sought work within the past four weeks, rather than asking (as in the transit surveys) if respondents consider themselves unemployed.

[5] See: https://www.commerce.nc.gov/supplemental-release-april-2023-county-and-area-employment-numbers/open.

Household Income

The household income of transit riders did not change substantially between 2018, 2019 and 2023, with roughly one-third of all riders reporting an income of less than $10,000, about one third between $10,000 and $24,999 and another third making more than $25,000.

Transit riders using **GoTriangle** and **GoCary** services have higher incomes as compared with **GoRaleigh** and **GoDurham** riders. This finding is despite similar levels of employment across the systems (see figure 4-1).

Figure 4-2   Transit Rider Household Incomes by Transit Provider (2023) and Overall, by Year
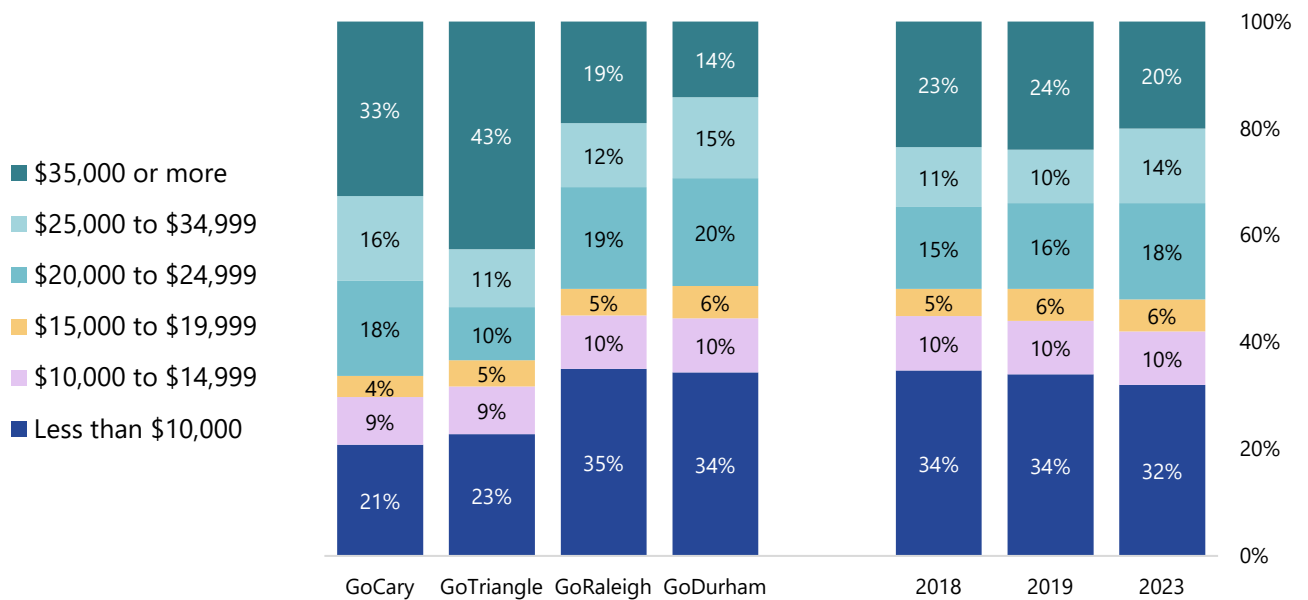
Gender

Transit customers in the region are 53% male and 44% female, with 3% identifying as non-binary or preferring not to state a gender identity. The percentage of female riders changed slightly (from 48% to 44%) between 2019 and 2023 (Figure 4-3).

Figure 4-3   Transit Riders by Gender – by Transit Agency (2023) and Overall, by Year

*Non-binary or prefer not to answer
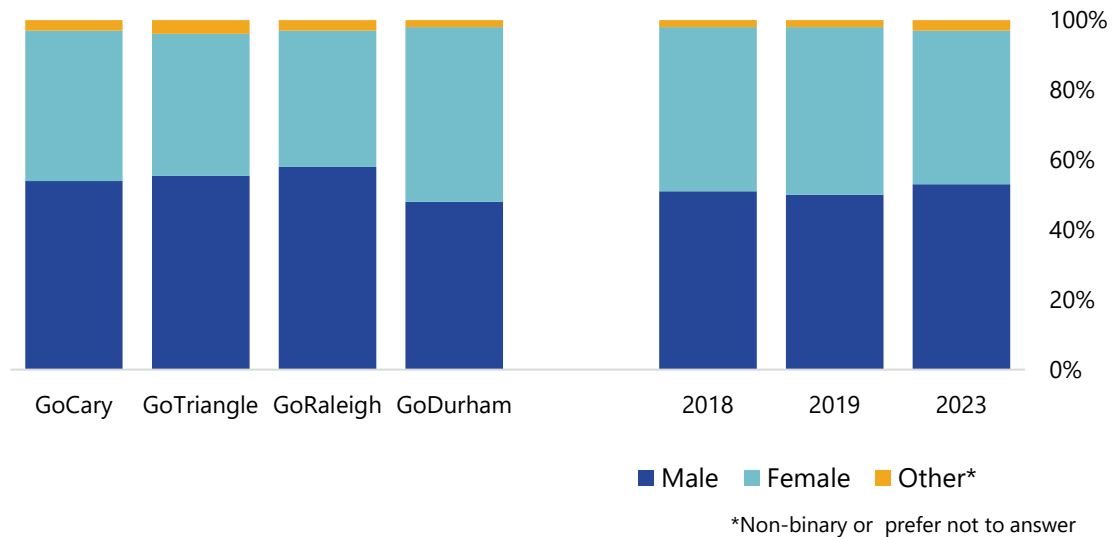
In 2023, more women use GoDurham services as compared with the other three systems, across all survey periods The survey shows that 50% of GoDurham riders are women as compared with 39% of GoRaleigh's riders, 41% on GoTriangle and 43% on GoCary. It is not shown here, but this same gender difference between GoDurham and the other systems was also evident in 2019.

Race and Ethnicity

There was very little change between 2018 and 2019 in the ethnic/racial makeup of the regional ridership. But in 2023, those identifying as African American/Black increased by 5%, while those identifying as Caucasian/White dropped as much as 8%. Riders identifying as Asian increased 3% between 2019 and 2023, while the percentage identifying with other ethnic groups changed very little.

The racial profiles differ substantially among the four systems surveyed, with Black riders comprising almost three-quarters of GoDurham riders and close to two-thirds of GoRaleigh riders. This compares with GoTriangle and GoCary systems, where less than half (GoTriangle) and one third (GoCary) identify as Black. GoDurham has the smallest Caucasian/White percentage (4%), while GoTriangle has the largest (30%), followed by GoRaleigh (20%) and GoCary (21%). Only 4% of GoRaleigh riders identify as Asian, with that group representing a narrow range between 13%-16% for GoDurham, GoTriangle, and GoCary. GoCary has the most Hispanic customers (20%), while the other three systems are statistically identical at around 7%.

Figure 4-4   **Ethnicity of Triangle Region Transit Customers by Agency (2023) and Overall, by Year**
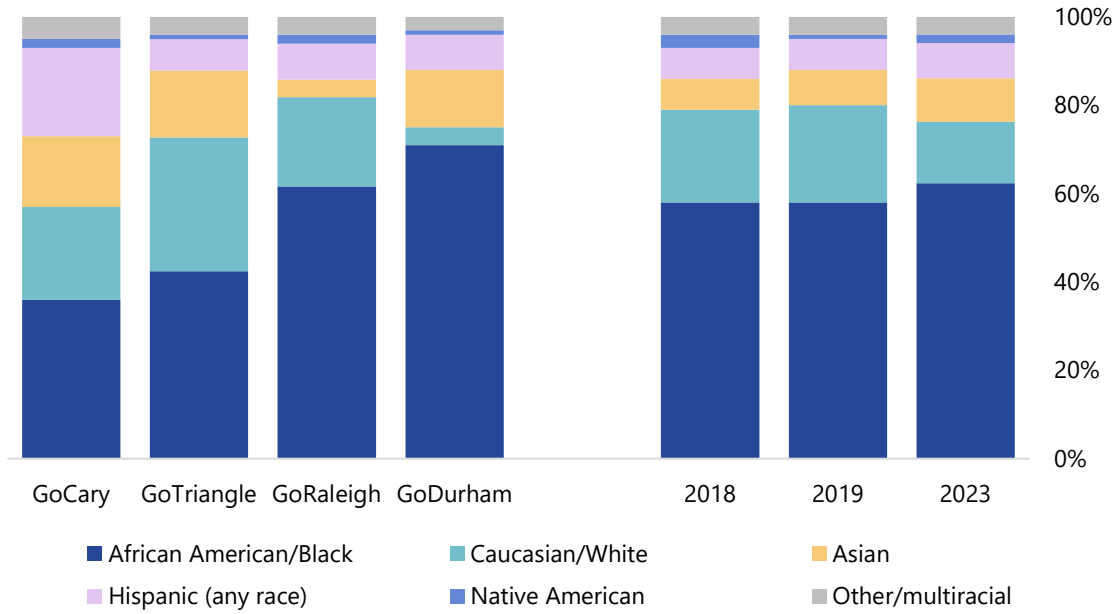
Language Most Often Spoken at Home

The overwhelming majority of Triangle Region customers speak English at home, while only 6% speak Spanish or another language (3%). **GoCary** has the largest proportion of Hispanic riders, and, as one would expect, they are more likely than customers of other systems to speak Spanish as their primary language.

Figure 4-5   Language Spoken Most Often at Home – by Transit Provider (2023) and Overall, by Year
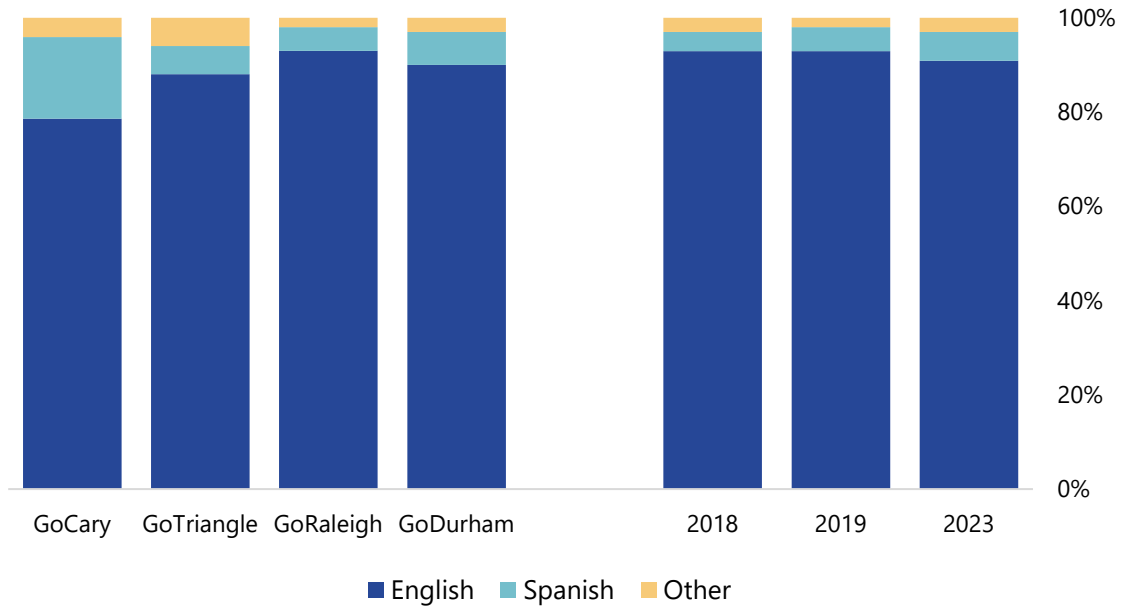
Age

The Triangle Region systems, like most bus systems in the United States continues to have a youthful ridership, but its 'average rider' is aging. Of all regional customers, almost half were under the age of 35 in 2023 (see blue segments in Figure 4-8), continuing a decline of youth ridership seen in 2018 and 2019.[6] This mirrors a corresponding increase in the percentage of riders in each of the older age cohorts.

GoTriangle and **GoCary** (have the greatest percentage of riders younger than 35 (almost half), followed by **GoDurham**, and **GoRaleigh**. These differences are reflected in riders' mean and median ages (Figure 4-7).

Figure 4-6   Age: Mean and Median

How old are you?		
	Mean	Median
GoTriangle	37.7	35
GoCary	38.5	35
GoDurham	40.2	38
GoRaleigh	41.2	40
Total	40.2	38

GoTriangle and **GoCary**—both of which have a *median rider age* of 35—have younger riders than either **GoDurham** or **GoRaleigh**, whose riders have median ages of 38 and 40, respectively.

Figure 4-7   Transit Riders by Age by Transit Agency (2023) and Overall, by Year

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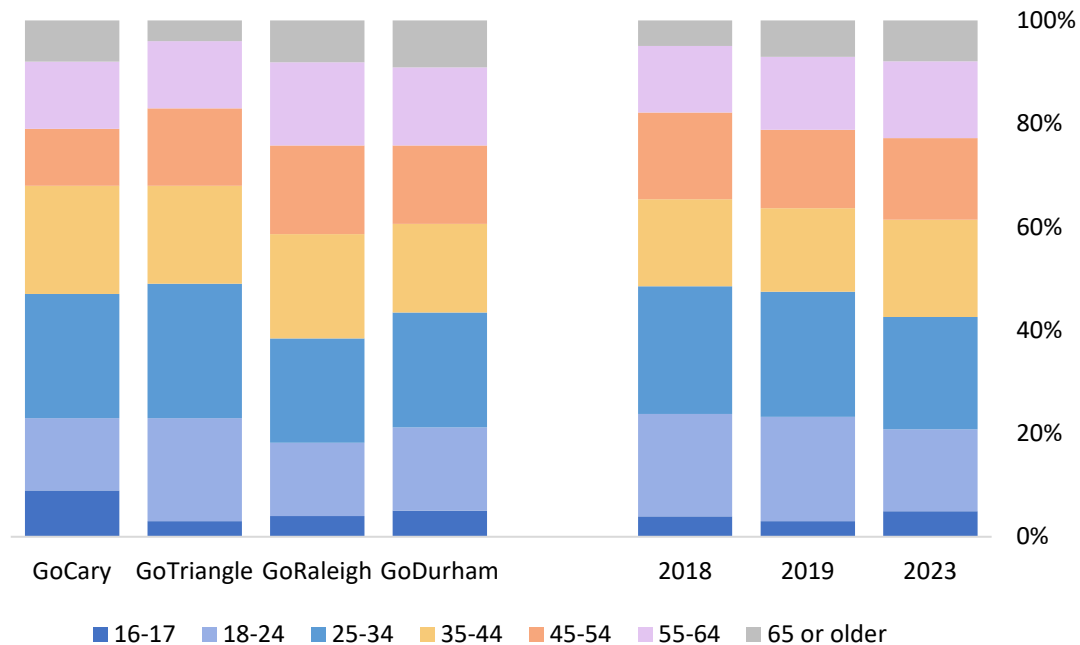
[6] This percentage of young riders probably underestimates the youth somewhat because for reasons of data validity and ethical practice, surveyors were instructed not to survey anyone appearing to be younger than 16.

Age Profile of Transit Customers and General Population

Riders under age 35 comprise a higher percentage of system riders relative to that age group's composition in the general population of Durham, Orange, and Wake counties. Conversely, senior ridership constitutes a much lower ridership (more than half as much, in those above 70) relative to its general population (Figure 4-9).[7]

The major differences between riders and the general population lie at the age extremes (shown in boxed areas in the chart).

Figure 4-8   Ages of Triangle Region Transit Customers (2023) and Three County Population (2021)

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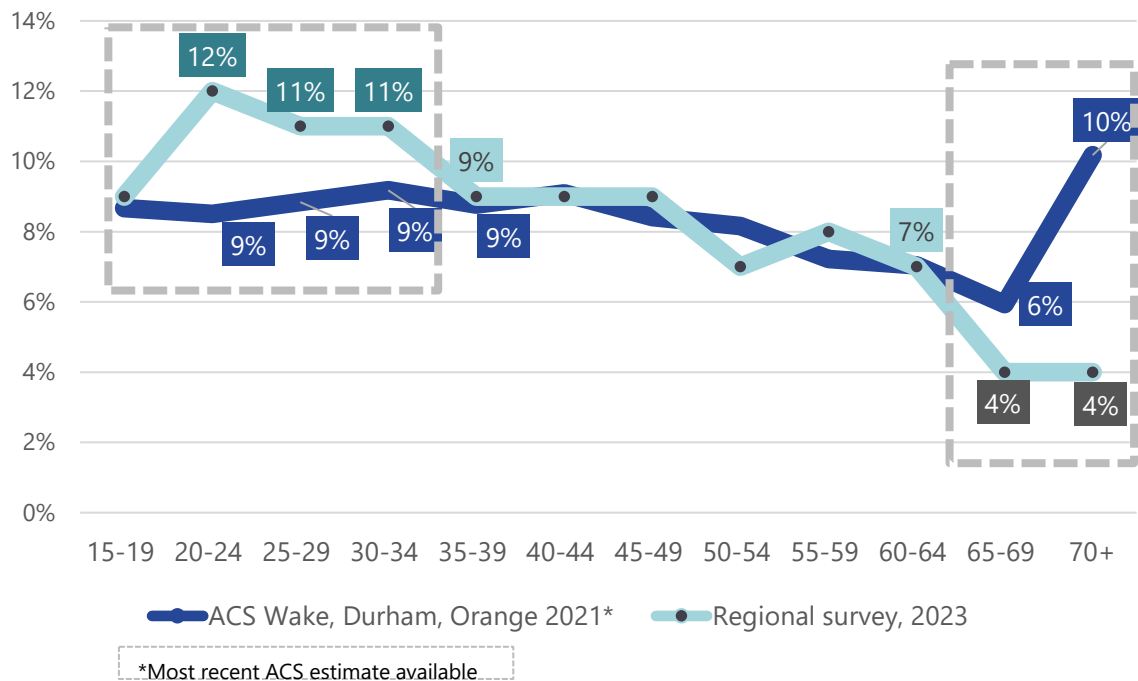
[7] ACS population estimates used here are for those older than 15 to make them comparable to the survey results.

Figure 4-10 adds age data for both 2018 and 2023 (the teal and blue lines), to show how the rider age profile changed across those five years, relative to the general population (the yellow line).

Figure 4-9   Ages of Triangle Region Population (2021) and Transit Riders (2018, 2019, 2023)
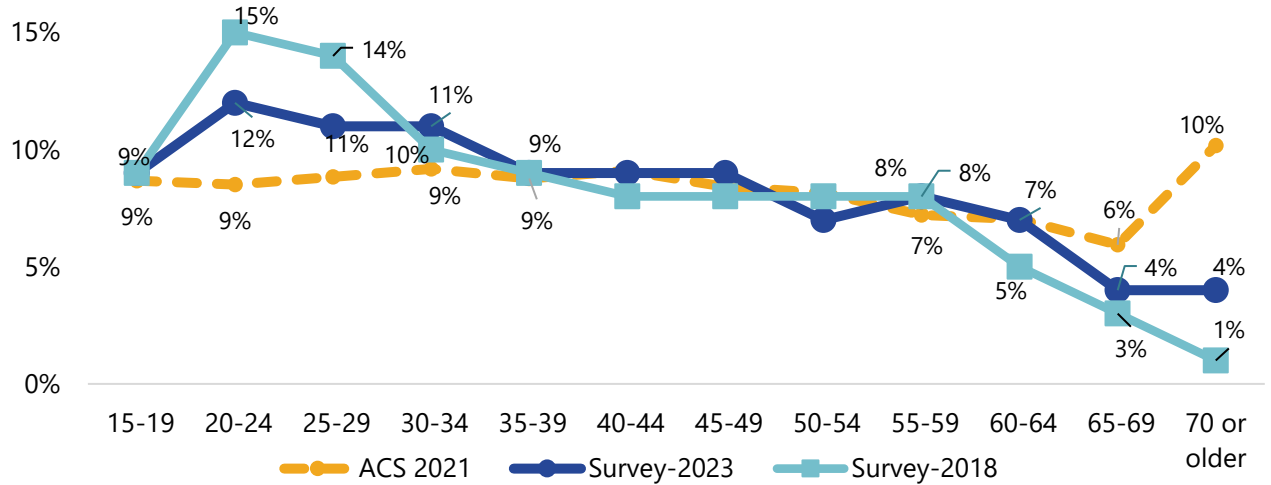
Source of population data: American Community Survey, One Year Estimate, 2021

Age Stages and Ridership

Another way to think about ridership age distribution is to visualize it in life stages, though the boundaries of such life-stages are non-scientific, being qualitative and open to interpretation (Figure 4-11). This figure illustrates how, in general, riders rely less on transit as they age.

Figure 4-10   Age Profile of Transit Customers in the Triangle Region
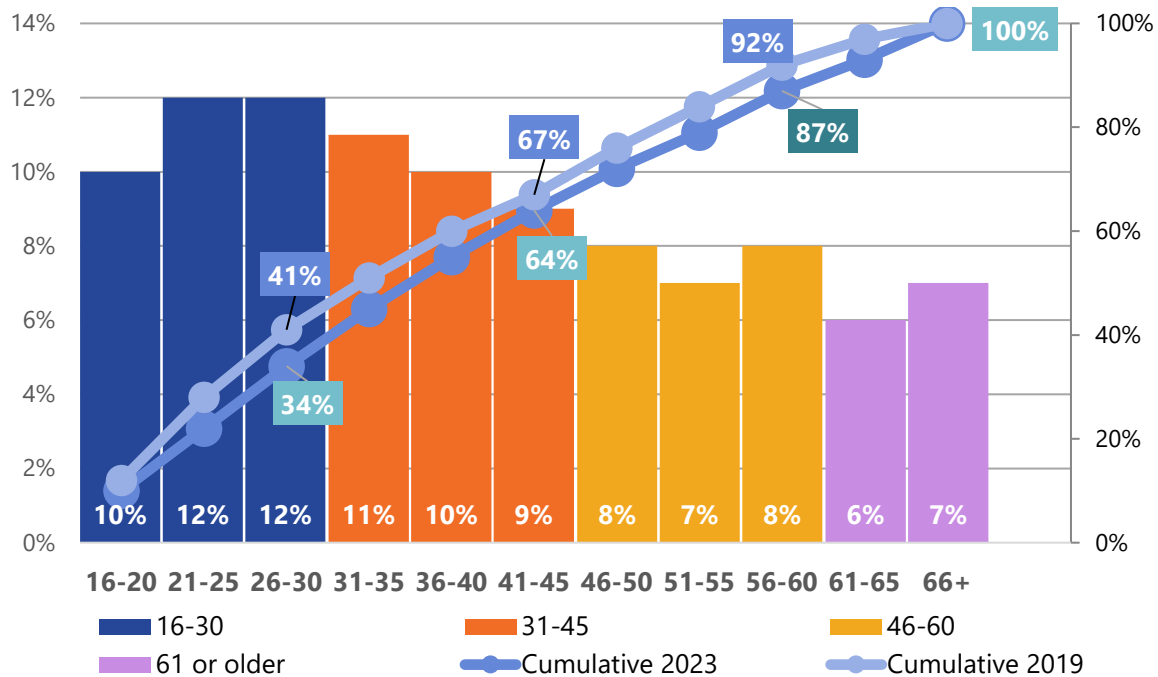
This chart's color groupings illustrate the proportions of people at various life stages typically using the bus. Impressionistic and not intended to be precise, the chart suggests an early stage of school and first job (16-30), followed by a period of settling into a life role (31-45), then a period focused on career (46-60), followed by retirement (61 or older).

The societal role of public transit portrayed in this chart suggests that the function of local transit is more one of providing people with the transportation resources they need to develop and maintain adult life-long earning, and less one of providing a social service assistance to needy older adults and others.

Vehicle Availability

Within each of the four systems, the availability of a vehicle increased between 2018 and 2019. By 2023 it had decreased below pre-pandemic levels, sometime dramatically (see **GoTriangle** in (Figure 4-13)) Such changes reflect shifts in income, employment, and other post-pandemic demographic characteristics.

GoTriangle and **GoCary** riders are substantially more likely than **GoDurham** and **GoRaleigh** riders to have a vehicle available. Overall, the percentage of riders with a vehicle available to them decreased markedly from 2018 to 2023 (Figure 4-12).

Figure 4-11   Vehicle Availability by Transit Agency (2023) and Overall, by Year
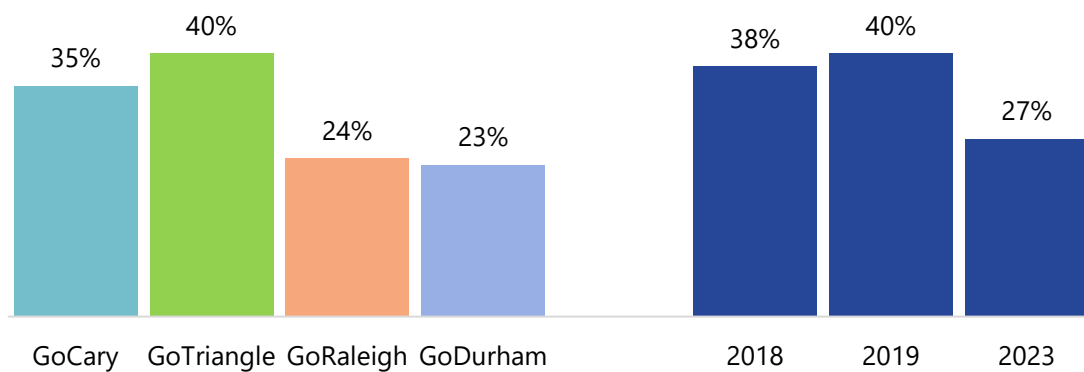
Figure 4-12   Vehicle Availability, by System (2018-2023)
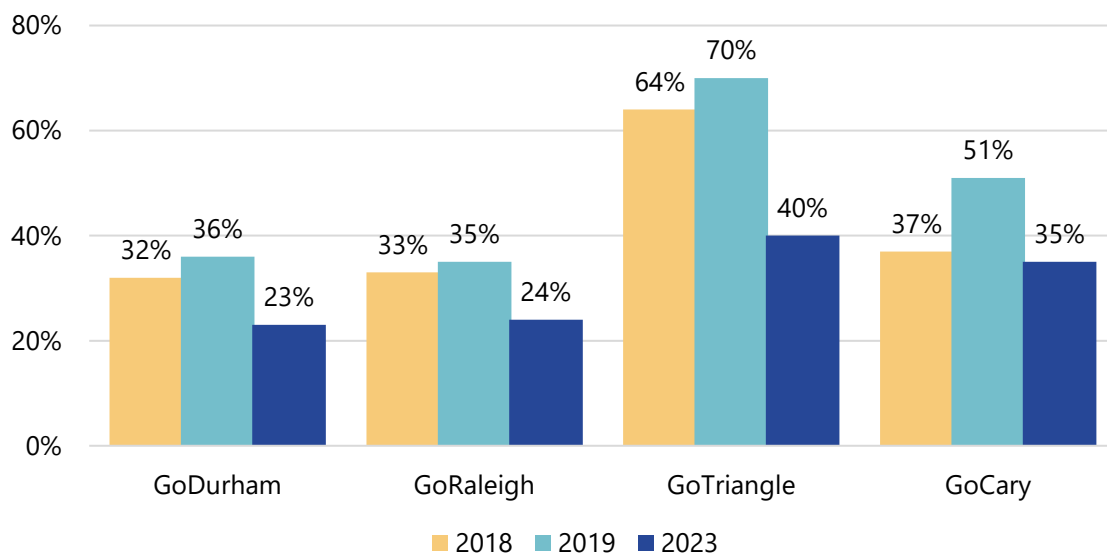
5 The Customer Experience

Overall System Rating Score

Customers were asked to rate various aspects of transit service using a scale from 1 ("Very Poor") to 7 (" Excellent"). In all four surveys, seventeen rating questions were asked, including seventeen related to specific aspects of service and one about service overall (See questionnaires starting on page 6-18).

"Good" to "Excellent" ratings are shown in blue in Figure 5-1, with Excellent and Very Good ratings constituting 45% of user scores for overall service in 2023, a marked decline from 2018 and 2019, when slightly more than half the riders rate system service Very Good or Excellent.[8]

Apart from **GoCary**, the systems have very similar scores of "Excellent." The ratings below show significant variations among the other three systems, with **GoTriangle** higher in the combined positive categories of five and six, and **GoDurham** and **GoRaleigh** scoring more in the neutral category.

Figure 5-1   Overall Service Ratings by Transit Provider (2023) and Overall, by Year

Legend: Very poor | 2 | 3 | Neutral | 5 | 6 | Excellent

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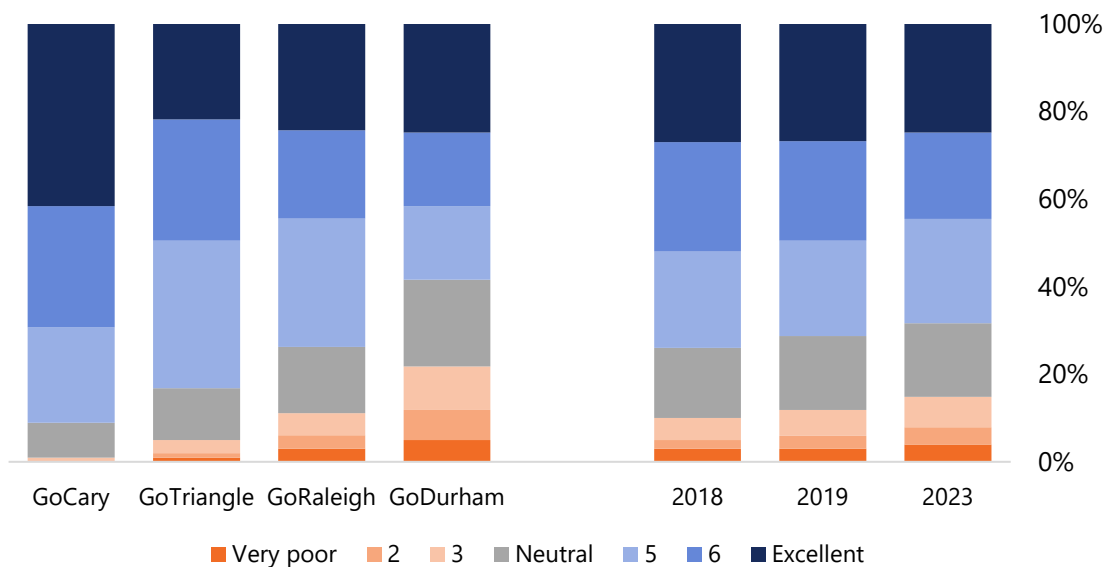
[8] As is typically the case in customer service rating scales, the overall score differs primarily in the degree of positive ratings, not in the balance between positive and negative ratings. In other words, most of the variation (i.e., statistical variance) is between scores of 4 and 7, not between 1 and 7. It is for the purpose of capturing this kind of change within the positive end of the scale that scales ranging from one to seven are more useful than scales of one to five.

"Excellent" Service Ratings

Figure 5-2 presents an overview of "Excellent" customer rating scores for individual elements of service, grouped according to the three categories discussed earlier. [9] These scores declined across almost all aspects of service, except for "**On-time performance**." Most operating service declines were small, but drops for the travel environment metrics were greater, especially "**Usefulness of printed information**," whose "Excellent" rating dropped over ten percent. Each metric was placed in one of three categories:

1. **Operating Elements Used by All Riders** – These service components, inherent in transit service and _used by all_ transit customers, include route structure (coverage), schedule adherence and other aspects of service.

2. **Operating Elements Used by Some/Many Riders** – These components, _used by many but not all_ customers, include weekend service and inter-system transfers.

3. **Travel environment** – This group has metrics that directly affect how a customer experiences transit services, and the general environment of the riding experience. Related metrics included "Quality of Wi-Fi," "Suspended fares," and "Courtesy and helpfulness of bus operators."

Figure 5-2   Change in Scores of "Excellent" on Components of Triangle Region Transit Service

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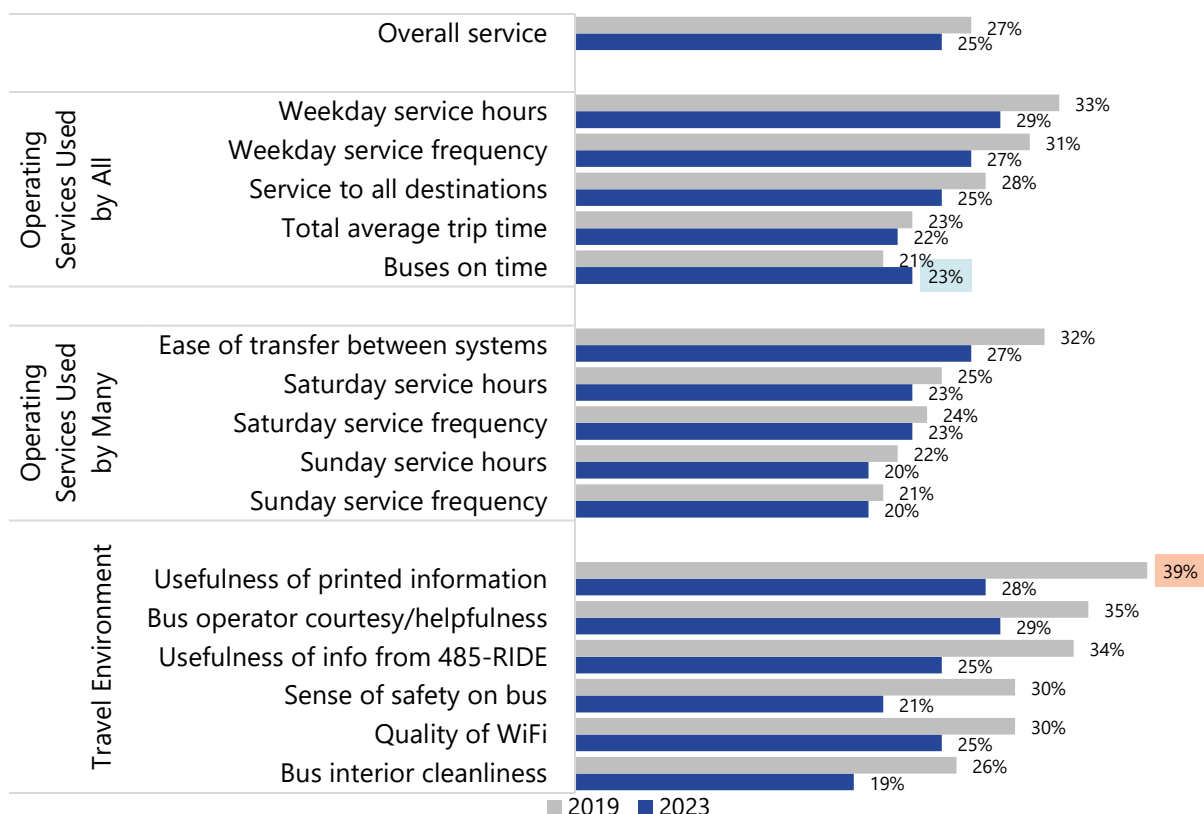
[9] This chart includes only the top score of seven, or "Excellent," on the seven-point scale. Note that the percentages are based on only those who were able to provide a rating, not the total sample so that the percent "excellent" is not falsely reduced by inclusion in the denominator of those who answered, "not applicable."

The decline of ratings for information services (485-RIDE and usefulness of printed information) may not have occurred because of a real change in the quality of the services (although there were open-ended complaints about the apps), but because the increased use of mobile electronic sources of information tends to make traditional sources less useful.

The survey data offer some evidence of this: those who use a transit app tended to rate 485-RIDE and the usefulness of printed materials lower than those who do not use an app (Figure 5-3).

Figure 5-3   Use of Transit App and Rating for Usefulness of Information from 485-RIDE
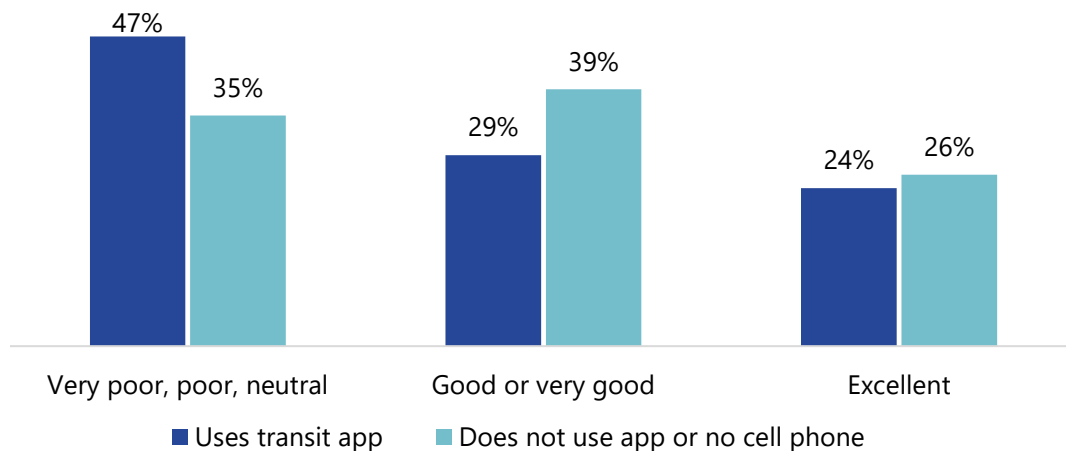
Of transit app users, almost half give 485-RIDE very poor to neutral ratings while only a third of those not using an app give a rating that low. Over a third of transit app users give the usefulness of printed materials ratings of very poor to neutral, with less than a third not using an app give ratings that low.

This does not explain the whole decline. Over a third of those without the app gave low scores for 485-RIDE, with slightly under a third doing the same for printed matter.

Figure 5-4   Use of Transit App and Rating for Usefulness of Printed Materials
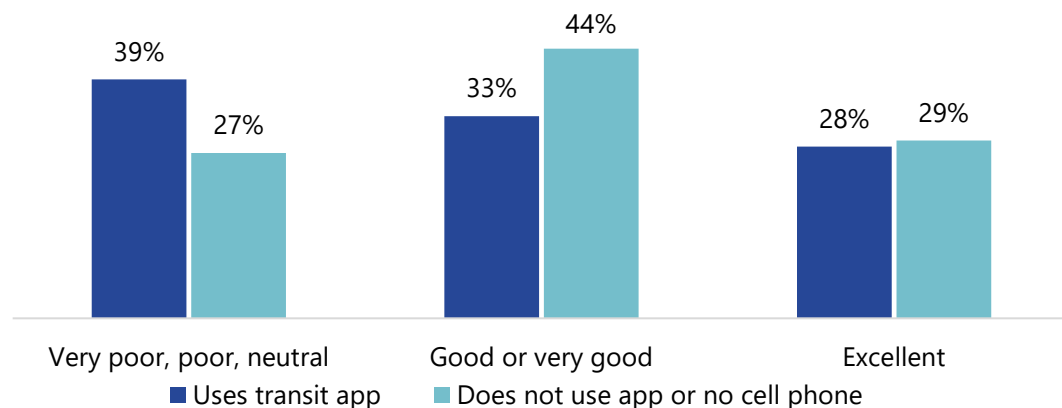
All Service Ratings

To gauge the balance between negative and positive ratings overall, the _range_ of scores from 1 to 7 is shown in Figure 5-5.[10] The results of this analysis tend to be positive. As with most such surveys, most riders give service elements high marks. Understanding differences between scores and changes over time, therefore, primarily involves considering differences between positive ranges. For example, the overall positive ratings for service are down slightly in 2023, dropping five points from 2019 (Figure 5-1).

Negative Ratings

With regards to service overall, the survey results show only 8% of riders gave service a poor rating. The tendency to give positive ratings to regularly used services is strong in every industry, transit included. Therefore, when 10% or more of customers are dissatisfied with a service, it should raise concerns about losing customers who have, or can seek, other options. While most metrics exceeded this negative-rating threshold, the overall service rating did not.

Positive Rating Changes, By Category

Six **Operational service elements used by all** saw their positive ratings decline by 4%-8%, compared to 2019; the three showing the greatest decline were "Weekday service hours," "Weekday service frequency," and "Ease of transferring within systems;" three had minor declines, or stayed the same: "Service to all destinations," "On-time performance," and "Total trip time."

Positive ratings for **Operational service elements used by most but not all riders** trended down for "Ease of transfer between systems," "Saturday hours of service," and "Saturday frequency." "Sunday service hours" had a steady positive score, and its negative score improved significantly, dropping 7% in 2023—still problematic, but much improved. "Sunday service frequency" scores were very similar, with the same rate of improvement in its negative score.

Positive ratings for the metrics in **Travel Environment** dropped, with "Quality of WiFi" faring the best, slipping six points. "Bus operator courtesy and helpfulness" and "Bus interior cleanliness" both saw their positives fall 11%, with "Usefulness of printed information" suffering a slightly higher drop, alongside "Usefulness of information from 485-RIDE." The largest decline by far was seen in "Sense of safety," whose positive ratings dropped 16%.

Why Would Rider Sentiment Shift So Negatively?

Most of the changes in these scores involve varying degrees of negative movement. The question must be asked why this might have occurred. The **service element** categories are diverse, ranging from "Operator courtesy and helpfulness," to operational issues like "Weekday service hours." Why would ratings in these disparate categories all change simultaneously—and in a negative direction? Have services in all four systems really declined across the board since 2019? Or did severely negative views among select demographic groups—those gaining a greater share of riders since 2019—pull down the ratings of the ridership as a whole? Alternatively, there may be

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[10] In the interest of simplification, the scores of 1 to 7 have been condensed into three levels. The top two positive scores (6 and 7) represent the sum of excellent and very good scores combined. Similarly, the bottom two scores (1 and 2) represent the poor and very poor scores. The combined middle scores of 3, 4, and 5 provide a mid-point.

something bigger going on in the culture at large, something which the riders' views of their local transit systems are only a small part. These questions are explored in the following section.

Figure 5-5   Distribution of Grouped Service Rating Scores

		Very poor/Poor	Middle	Very good/Excellent
Overall service	2019	6%	45%	50%
	2023	8%	48%	45%
Operating Services Used by All	Weekday service hours	7%	47%	47%
	Weekday service frequency	7%	49%	44%
	Ease of intra-system transfer	7%	48%	43%
	Service to all destinations	10%	51%	40%
	Buses on time	8%	53%	39%
	Total average trip time	10%	51%	38%
Operating Services Used by Many	Ease of transfer between systems	9%	50%	43%
	Saturday service hours	11%	51%	38%
	Saturday service frequency	11%	53%	37%
	Sunday service hours	14%	52%	34%
	Sunday service frequency	14%	54%	32%
Travel Environment	Bus operator courtesy/helpfulness	9%	44%	47%
	Usefulness of printed information	9%	45%	45%
	Usefulness of 485.RIDE	12%	49%	40%
	Quality of WiFi	13%	48%	39%
	Sense of safety on bus	11%	51%	37%
	Bus interior cleanliness	17%	49%	33%

■ Very poor/Poor   ■ Middle   ■ Very good/Excellent

RIDER DEMOGRAPHICS AND CUSTOMER RATINGS

It is unusual for transit riders to consistently and comprehensively assign lower ratings for transit services. This trend is unprecedented in CJI's experience of conducting hundreds of onboard surveys over many years. Commonly observed transit operation patterns suggest it is unlikely that the ratings for all aspects of service, previously stable, would suffer simultaneous decline in real quality. This suggests the change is one of perception, not operations. Demographic (and other changes in the personal characteristics of the ridership, as a whole) may be more closely related to the decline in satisfaction scores. The following section examines changes in the demographic characteristics of riders and considers how these changes may have contributed to changes in scoring of regional transit services.

DEMOGRAPHIC CHANGES SINCE 2019

Household income, race, and gender all changed since 2019 and are significantly related to declines in the service scores.[11]. Other factors that changed since the previous survey that are related to the rating scores are the availability of one or more vehicles to the rider, and use of Uber/Lyft to replace a transit trip.

Household Income

Between 2019 and 2023, riders with household incomes above $35,000 and those below $10,000 both *decreased*—while riders with household incomes between $20,000 and $34,999 *increased* (see page **Error! Bookmark not defined.**).

Might those income changes be related to the rating scores? Analysis indicates that, overall, the lowest and highest income riders were more likely than middle income riders to give high rating scores on service (). Conversely, those with incomes between the extremes were more likely to give poor scores.[12]

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[11] It would be impractical to examine the relationships between each of the seventeen aspects of service in Figure 24 and the several demographics and other factors that might influence them. To simplify, we will examine only the relationship of demographics to the score for "Service overall." The one exception to this is the special case of the rating of sense of personal safety form others on the bus.

[12] Since 2019, the high scoring income segment declined as a percentage of riders, while the low scoring income segment increased. Therefore, the changes observed in the income profile would tend to be associated with the lower rating scores in the surveys.

Figure 5-6   Household Income and Overall Service Rating
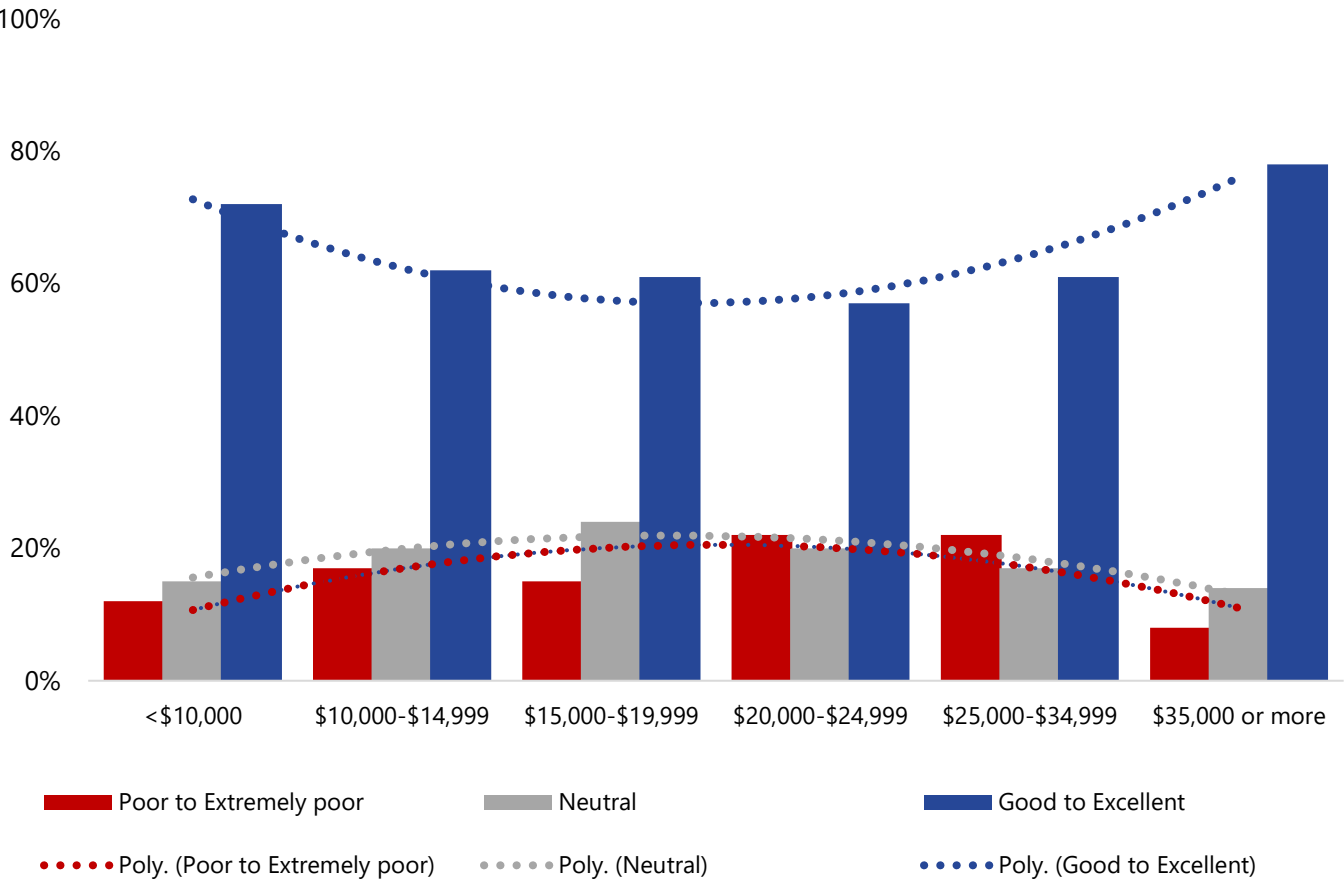
Ethnic/Racial Identity

There was a relatively small but significant change in the racial makeup of the ridership (See Fig 4.5) as the percentage of Black riders increased by 5% and white riders decreased by 8%. One question for the data is if different racial groups rate transit service quality differently, such that changes in the racial composition of riders helps explain lower service ratings.

While Black riders do rate service lower as compared with white riders (see Figure 5.7 shows), ratings are lower for both Black and white riders. This suggests that changes in the racial composition of riders do not explain lower ratings.

Figure 5-7   Changes in Riders Rating Services as Excellent or Very Good, by Race 2019 and 2023.
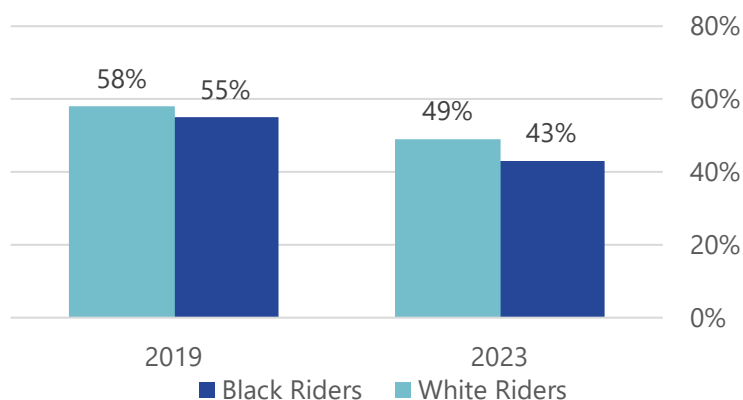
Figure 5-8   Ethnic/Racial Identity and Overall Rating of Service (2023)
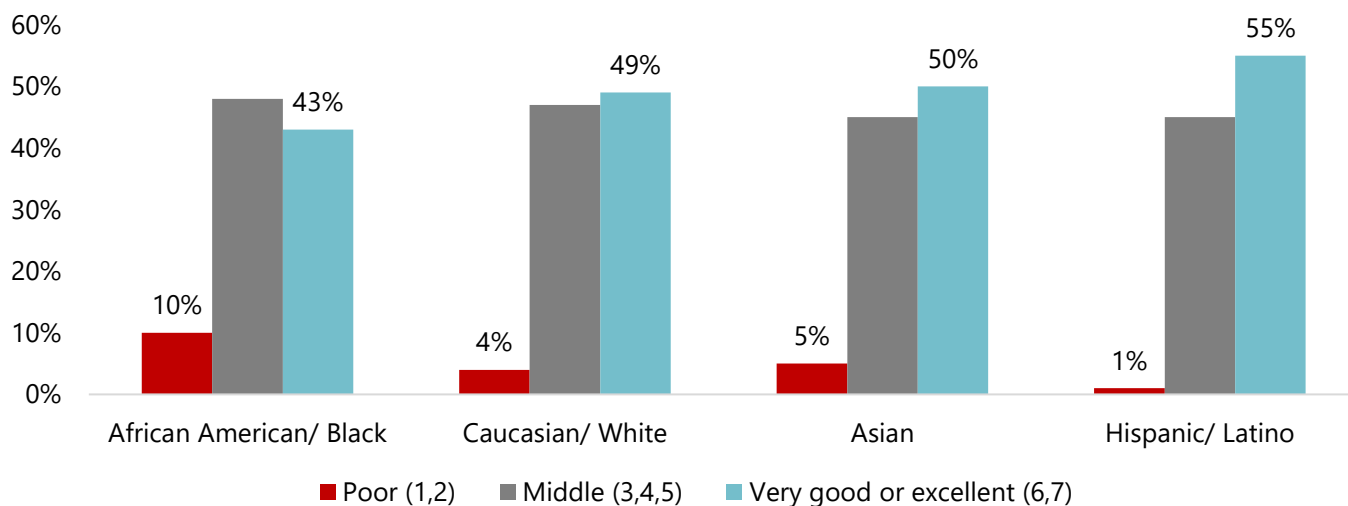
Vehicle Availability

Those with more than one vehicle were about 10% more likely to give more favorable scores than those with no vehicle (or only one) (Figure 5-9). Given the percentage of riders with one or more vehicles decreased by 13% (Figure 4-12), this may suggest that owning less than one vehicle results in a decline in the overall vehicle availability rating.

This is not to suggest that owning more vehicles somehow "causes" higher satisfaction scores—only that the two are related, probably as an indirect function of income. For obvious reasons, those with higher incomes are more likely to have more transportation options, including access to a vehicle. Therefore, it would be reasonable to hypothesize that having vehicle access enables riders to selectively use only the transit services they find most useful.

In that sense, having a vehicle could result indirectly in higher ratings—but not higher ridership.

Figure 5-9   Availability of Vehicles and Overall Service Score
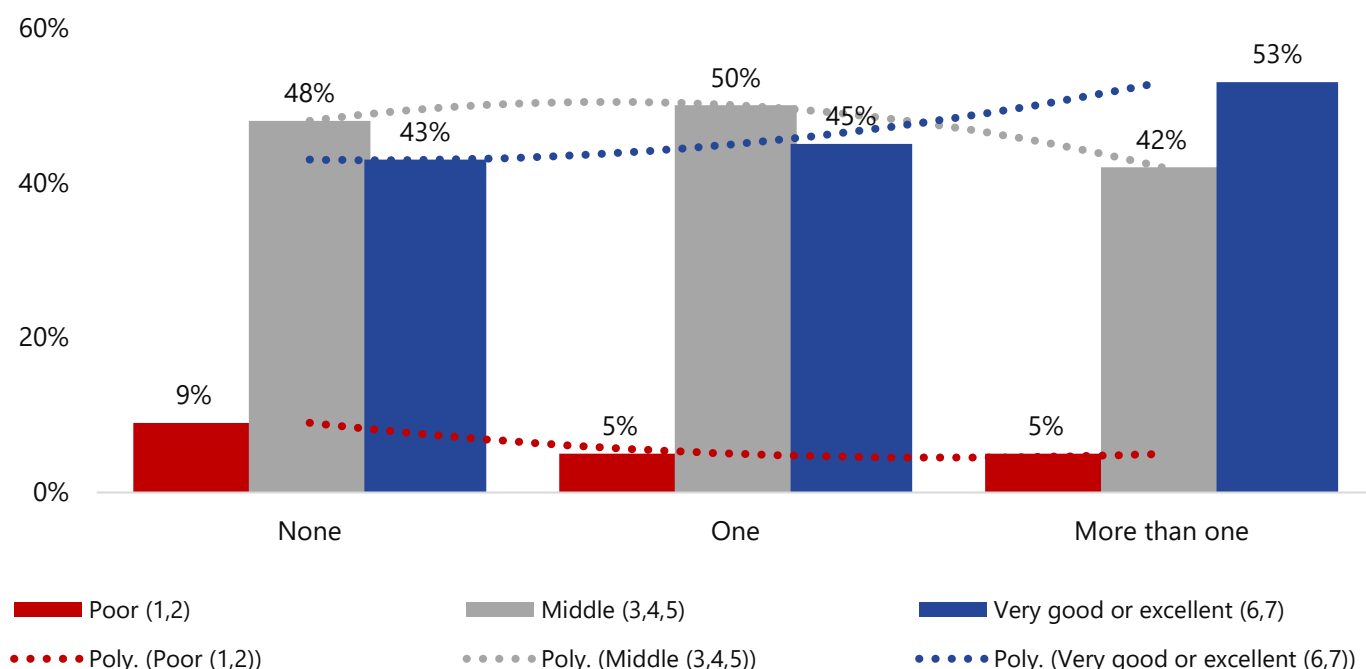
Use of Uber/Lyft

Those riders who have used Uber/Lyft to replace a local trip in the past thirty days are less likely than others to give a high score for service overall by almost ten percentage points (Figure 5-10).

Although using ride-hailing services certainly does not *cause* lower ratings, it may be that use of Uber/Lyft in lieu of transit is an indication of some perceived shortcoming of local transit. If so, the use of ride-hailing might be partially related to lower service ratings.

Rider Dissatisfaction and National Experience

In the statistical sense of the term, changes in rider demographics and their transportation options appear to help *"account for"* some of the change in the rating of service overall and to put the rating changes into perspective. However, these statistical explanations beg the question of why they would depress scores across the board among a wide variety of 17 types of service. Unless there had been a true across-the-board deterioration of every aspect of service (which appears improbable), what else might help explain the changes?

One clue may lie in the fact that the negative movement seen in the rider surveys parallels timing of changes in the "national mood" As measured by various national surveys. Perhaps some of the decline in satisfaction seen in the onboard surveys is part of tidal changes in attitudes of the American public toward institutions, including public service agencies.

This is not to dismiss the importance of the demographic differences documented by the onboard surveys, or the possibility that some aspects of service really did decline in quality. It is simply to suggest that the local trends may be part of national trends that are changing independently from the local satisfaction scores measure in the Triangle Region transit surveys.

Parallels between national and local trends in public confidence and satisfaction are easily documented. For example, the well-known Consumer Confidence Index published by The Conference Board, showed in May 2019 that consumer confidence hit a high point of optimism (Figure 5-11). But then, because of the pandemic, declined precipitously until the end of 2021. Although it then reversed as the pandemic receded and began gaining again, by the time in 2022-2023 when the current onboard survey data were collected consumer confidence was still far below the 2019 peak.

Figure 5-10   Use of Uber/Lyft to Replace a Transit Trip in the Triangle and Overall Service Score

Figure 5-11   Consumer Confidence Index, 2007 to 2023

Consumer Confidence Index®

Index, 1985 = 100

*Shaded areas represent periods of recession.
Sources: The Conference Board; NBER
© 2023 The Conference Board. All rights reserved.
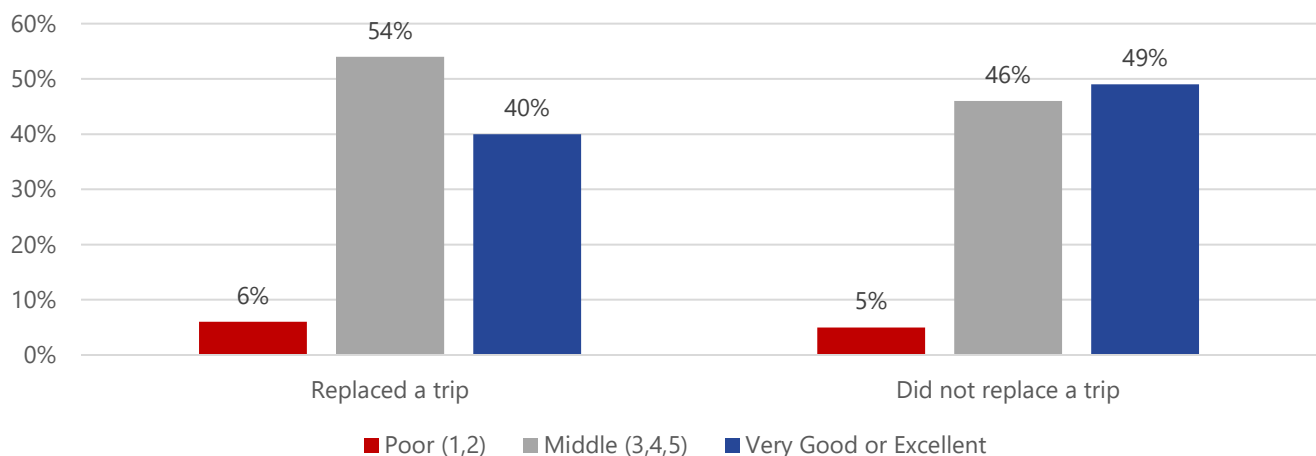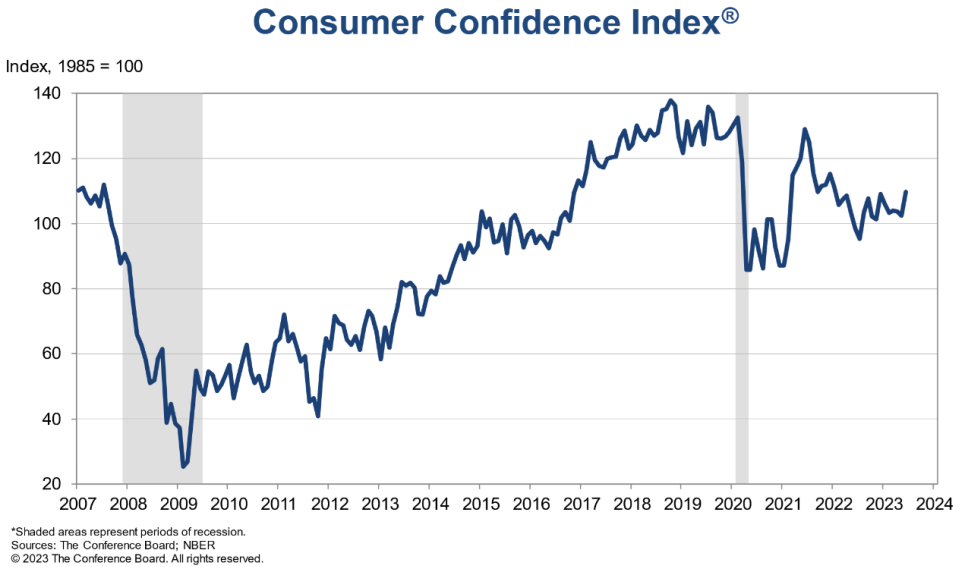
Source: The Conference Board

A similar national indicator is The American Customer Satisfaction Index (CSI). (Figure 5-12) CSI is a business organization that conducts surveys concerning customer satisfaction with virtually all sectors of the economy including the public sector. It publishes an index of overall consumer satisfaction. Like the Consumer Confidence Index, the Customer Satisfaction Index illustrates the pre-pandemic rise and the pandemic fall which continued through 2022, with only a minor recovery in 2023. Satisfaction with local transportation services cannot be assumed to be isolated from that national mood swing because they are, by definition, part of it.

Figure 5-12   The American Customer Satisfaction Index, 2000-2023 (Source, ACSI)

ANN ARBOR, Mich., (May 9, 2023) — Customer satisfaction in the United States improves for a third consecutive quarter, edging up 0.3% to 73.6 (on a 100-point scale) in the first quarter of 2023. The gain extends a positive streak in the American Customer Satisfaction Index (ACSI®) that reverses the trend of several years of declining customer satisfaction.

© 2023 American Customer Satisfaction Index. All Rights Reserved.

Very similar results were obtained in the regular Gallup organization surveys during the same period (Figure 5-13). These surveys provide further documentation of the national trends in the 2019-2023 period.

Figure 5-13   Gallup Findings on Confidence and Satisfaction
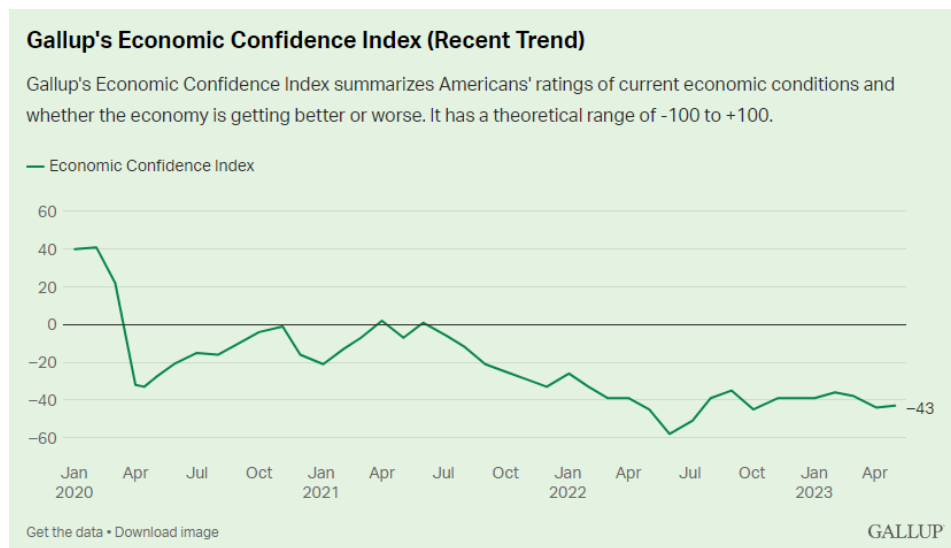
Americans' Satisfaction With the Way Things Are Going in the U.S. (Recent Trend)

In general, are you satisfied or dissatisfied with the way things are going in the United States at this time?

— % Satisfied

Get the data • Download image

GALLUP

Source: https://news.gallup.com/poll/506513/mood-remains-glum-satisfied-state-nation.aspx
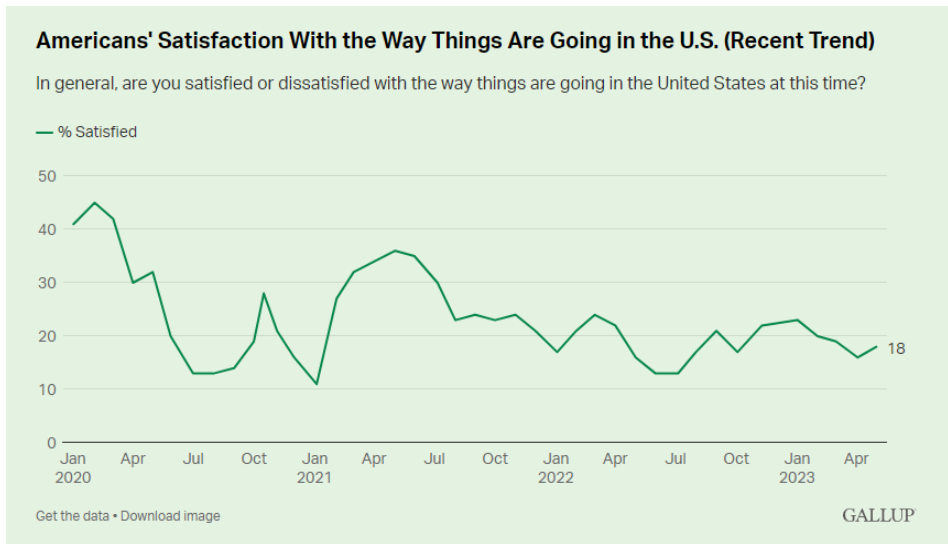
Arguing that the local changes in satisfaction are part of the larger national tidal change in mood simply describes the national stage on which the local scene is played out. In other words, even in the absence of any substantial objective change in transit service in the Triangle Region, we might have found a change in attitudes toward local services.

That does not mean that the negative leanings of the ratings between 2019 and 2023 should be dismissed. There may, for example, be things local systems can do to improve the perception of safety independent of national concerns about personal safety. Conversely, satisfaction with on-time performance increased slightly in its top score. It may be worth considering what operational changes may lie behind that perception.

THE SPECIAL CASE OF DECLINE IN THE SENSE OF PERSONAL SAFETY

In the onboard surveys, the rating for sense of personal safety from others on the bus tumbled from 30% excellent in 2019 to only 21% in 2023. In considering why the overall rating of perceived safety declined in the rider surveys, it is again helpful to consider the national environment in which the local change occurred.

Perception of crime as a problem has increased in recent years in the United States (Figure 5-14). In 2019, according to data from Gallup's regular national surveys, 47% of US adults said that they worried about crime "a great deal." In 2023, that percentage had risen to 54%. Triangle Region transit customers are unlikely to be exempt from such changes in cultural assumptions about safety from crime.

Figure 5-14   Gallup Survey Series, 2019 to 2023

Next I am going to read a list of problems facing the country. For each one, please tell me if you personally worry about this problem a great deal, a fair amount, only a little, or not at all. First, how much do you worry about crime and violence?*

	A great deal %	Fair amount %	Only a little %	Not at all %	No opinion %
2023 Mar 1-23	54	29	15	2	0
2022 Mar 1-18	53	27	14	6	0
2021 Mar 1-15	50	28	17	6	0
2020 Mar 2-13	42	33	20	4	0
2019 Mar 1-10	47	28	21	4	0

*https://news.gallup.com/poll/1675/most-important-problem.aspx

Figure 5-15   YouGov Survey on Perceived Safety While Using Public Transportation (Jan 2023)

How safe or dangerous would you say public transportation is in U.S. cities when it comes to crime?*

	All	Male	Female
Very safe	14%	20%	9%
Somewhat safe	34%	37%	31%
Somewhat dangerous	27%	22%	31%
Very dangerous	12%	10%	13%
Not sure	13%	11%	15%

* YouGov, January 24, 2023, 6,776 US Adults surveyed

A sense of safety is a *sine qua non* in marketing of services such as traveling by bus that require personal interactions with others. Therefore, from the standpoint of trying to maintain overall high customer satisfaction and regain ridership that had been lost to the pandemic, the decline of perceived personal safety from others on the buses is of great concern.

Gender and a Sense of Safety from Others on the Buses

General surveys suggest women, more often than men, express concern about their personal safety in public places,[13] something underscored in the difference between the 2019 and 2023 results in the Triangle Region onboard surveys.

In 2019, there was no statistical difference between men and women in their public safety ratings—however, by 2023 two things had changed: 1) both men and women had become significantly less positive about safety; and 2) concern with personal safety had become much more pronounced among female customers, showing more than a six-fold increase from 2019. The increase for men in this category showed a four-fold increase.

If the percentage of female riders had increased since 2019, the fact that they are so much more negative than men on the matter of personal safety might have fully accounted statistically for the decline in the sense of safety score among the total ridership. However, the percentage of women riders *declined* from 48% to 44% in that period. Therefore, although women are much more negative than men in this regard, the overall decreased safety score is based on perceptions of both men and women.

Figure 5-16   Gender and Sense of Safety from Others on the Buses

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[13] https://today.yougov.com/topics/politics/survey-results/daily/2023/01/24/c74d7/2
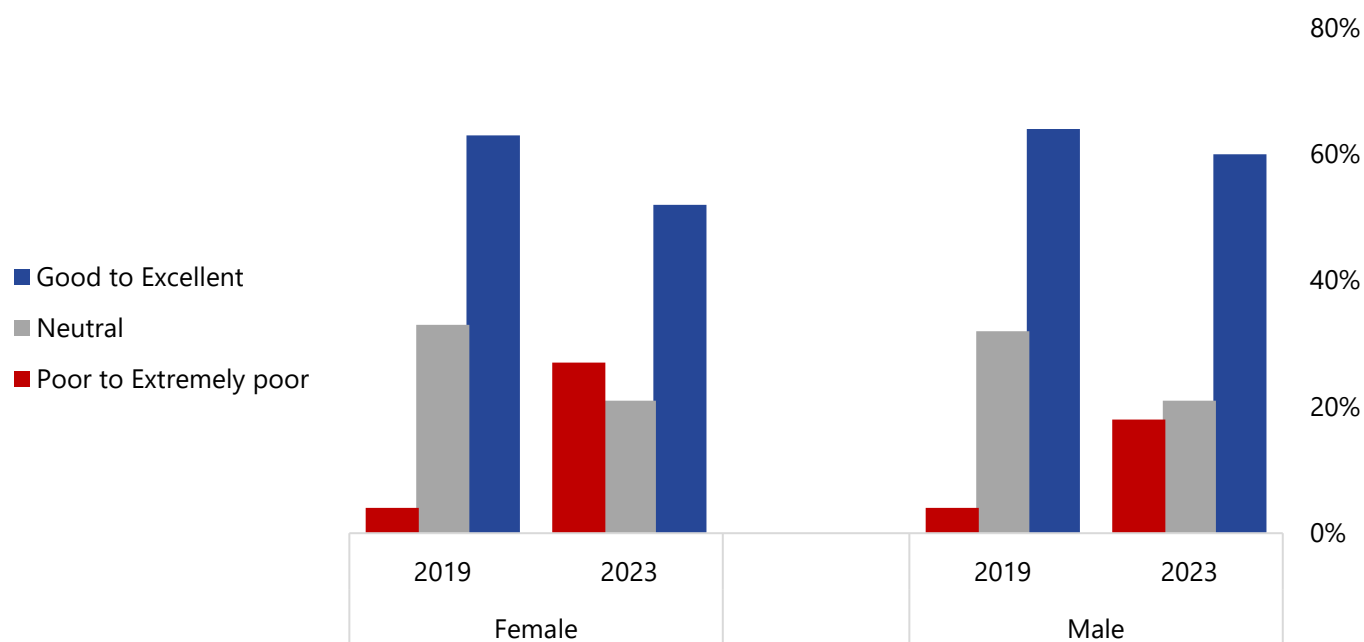
6 Prioritizing

Which of the individual aspects of service are more or less important in determining the customers' rating of Triangle Region transit service overall? The matrix in Figure 6-2 suggests some answers.

The scores are calculated by starting with customer overall scores. When customers rated "The quality of transit services overall," we assumed they were summing up their combined ratings of the seventeen specific elements of service.

Using this this assumption can help answer two key questions:

- "Which *elements of service*, <u>if improved</u>, would tend to move the rating needle favorably on *overall service*?"
- "Which elements important to the positive ratings would <u>drive down</u> the *overall service rating* if they slip in perceived quality?"

The middle column in Figure 6-1 shows the mean (average) rating for each surveyed service element, with the far-right column providing a correlation statistic measuring the relationship between each individual service rating and the overall service rating.

Figure 6-1   Mean Rating Scores and Correlations for Matrix

	Mean rating (scale 1-7)	Correlation with rating of "Service overall"
Weekday hours	5.15	0.721
Weekday frequency	5.12	0.731
Operator courtesy	5.12	0.733
Ease of intra-system transfer	5.08	0.758
Printed info	5.08	0.734
Ease of inter-system transfer	5.03	0.751
On time performance	4.91	0.737
Service to all destinations	4.89	0.696
485-RIDE	4.84	0.729
Trip duration	4.82	0.707
Saturday hours	4.8	0.697
WiFi quality	4.79	0.688
Saturday frequency	4.77	0.688
Personal safety	4.75	0.719
Sunday hours	4.56	0.662
Sunday frequency	4.54	0.636
Clean interiors	4.48	0.665

These statistics, combined in the matrix in Figure 6-2, consider two questions:

1. How do customers rate each of the elements of service? *(Horizontal axis)*
2. How closely is each of those ratings related to the rating of service overall? *(Vertical axis)*

Visualizing this kind of analysis required a scatterplot graph, with the 1-7 rating on the horizontal axis and the correlation on the vertical axis. The ratings tend to skew positive and vary only between scores of 4.48 and 5.15 (the mean scores in Figure 6-1). This positive tilt makes sense—it would be odd if customers who rated service very negatively continued to use the service.

To understand how to "move the needle" on the overall service rating, we must consider the fact that ratings differ only to the degree to which, they are positive. This means we must show how the **best** scores differ from the **merely good** scores—not how best scores differ from worst scores. For this reason, the horizontal axis showing the ratings starts at 4.4, rather than 1, and ends at 5.2, instead of 7. Correlations differ in the range of -1 to +1, but all of them in this study are strongly positive, and so vary only between .62 and .78.

Figure 6-2   Individual Service Elements in Relation to Overall Service
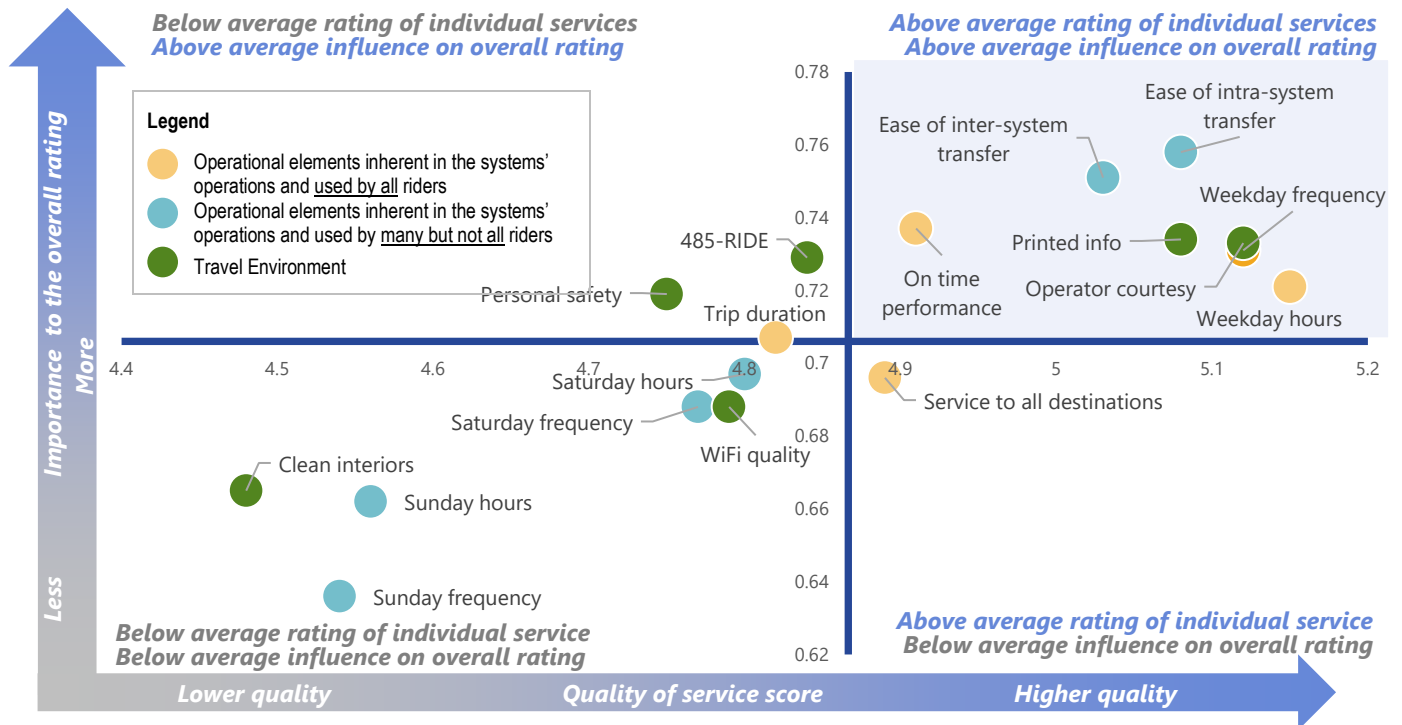
The positioning of each element of service provides a visual map of its importance **relative to all other elements**.

Elements in the upper right quadrant are those most likely to help 'move the needle' on the overall system rating, being better rated than the weighted average of all seventeen elements of service. Fortunately, many of the basic *operational elements affecting all riders* appear in this upper right zone.

Items in the upper left quadrant are service aspects with relatively low service quality scores, but high importance scores. This 2023 regional matrix is unique—in most rider surveys, operational elements like "On-time performance" and "Service frequency" appear in the upper left, but in this one, two elements of the travel environment emerge as key elements for improvement in the upper left: "Sense of personal safety" and "Information from 485-RIDE."[14]

In the lower left quadrant, service elements are relatively poorly rated, and fall below average in determining the score for overall service. Improving them would be welcome but very unlikely to change the rating for overall service. One reason for this is that several of these services are used by many but not all riders. In terms of what is important to the entire regional ridership, they are inherently less important than services that affect everyone.[15]

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[14] This is the first onboard survey in CJI's experience in which the sense of personal safety has appeared in this quadrant, emphasizing its importance to riders. The duration of a transit trip is a perennial challenge for bus routes operating in traffic and in many such surveys appears in this quadrant. The rating of 485-RIDE, discussed in an earlier section, is complicated by the fact that 26% of riders do not use the service in the era of transit apps and are excluded from this matrix. Those who remail in the computation use the service.

[15]"Cleanliness of bus interiors" is the lowest scoring item in Figure 6-2, lying far to the left of the vertical line marking the difference between "below-" and "above-average" scores. Both the perception of cleanliness and sense of personal safety have substantially declined since 2019, and the two are closely related, sharing a correlation statistic—.696. (Correlation statistics range from -1 to +1). A change in perceived interior cleanliness would very probably lead to an improvement in the sense of personal safety. Apparently, riders take maintenance of bus interiors as an indicator of how attentive the system is to the needs of passengers.

Appendix: Questionnaires

Note. The questionnaire for GoDurham is a "long form" questionnaire printed on legal size stock. The other three questionnaires were printed as letter size documents.

The questionnaires contain some identical elements, including demographics and customer satisfaction questions. Other questions are unique to the system on which they were used. Only identical elements are used in the Regional Report.

GO Durham | **Please tell us about how you use GoDurham** | El cuestionorio en español se encuentro en el otro lado

1. **Before the pandemic which began in March 2020, on how many days a week did you typically use GoDurham?**
   0 ❏ Not at all   1 ❏ Less than one day   2 ❏ One to three
   3 ❏ Four or five   4 ❏ Six or seven

2. **During the pandemic in 2020 and 2021, on how many days a week did you typically use GoDurham?**
   0 ❏ Not at all   1 ❏ Less than once a week   2 ❏ One to three
   3 ❏ Four or five   4 ❏ Six or seven

3. **What is the ONE main purpose for which you _most often_ use the GoDurham bus? Is it to go to or from... (Check only one)**
   1 ❏ Work   2 ❏ School/college   3 ❏ Shopping
   4 ❏ Medical/dental   5 ❏ Recreation/event   6 ❏ Other

4. **How long have you been riding GoDurham?**
   1 ❏ Less than six months   2 ❏ Less than 1 year   3 ❏ 1-2 years
   4 ❏ 3-4 years   5 ❏ 5 or more years

5. **Please check _all_ Triangle Region bus systems you use in a _typical_ week**
   1 ❏ GoRaleigh   2 ❏ GoTriangle   3 ❏ GoDurham   4 ❏ GoCary
   5 ❏ Chapel Hill Transit   6 ❏ Duke Transit   7 ❏ Wolfline

6. **Please mark _all_ of the following that apply to you. Are you...**
   1 ❏ Employed full time   2 ❏ Employed part time   3 ❏ Unemployed
   4 ❏ Homemaker   5 ❏ Student   6 ❏ Retired   7 ❏ Volunteer position

7. **If you are employed, are you currently working remotely or does your work require you to be onsite?**
   1 ❏ Remote only   2 ❏ Remote some days a week and onsite the other days
   3 ❏ Onsite on all working days

8. **(If employed) If your employer allowed it, could the type of work you do be done remotely or do you have to be onsite at your workplace to do it?**
   1 ❏ Can be done remotely   2 ❏ Cannot be done remotely

9. **How old are you?** _____ **Years old**

10. **Do you identify as...** 1 ❏ Male   2 ❏ Female
    3 ❏ Non-binary   4 ❏ Prefer not to answer

11. **Do you consider yourself to be... (_Please check all that apply to you_)**
    1 ❏ African American/Black   2 ❏ Asian   3 ❏ Caucasian/White
    4 ❏ Hispanic   5 ❏ Native American Indian
    6 ❏ Other:_____

12. **How comfortable are you speaking English? (Check only one)**
    1 ❏ Very comfortable   2 ❏ Mostly comfortable
    3 ❏ Slightly comfortable   4 ❏ Not comfortable

13. **What language do you most often speak at home? (Check only one)**
    1 ❏ English   2 ❏ Spanish   3 ❏ Other: _____

14. **What is your total annual household income? (Check only one)**
    1 ❏ Less than $10,000   2 ❏ $10,000 to $14,999   3 ❏ $15,000 to $19,999
    4 ❏ $20,000 to $24,999   5 ❏ $25,000 to $34,999   6 ❏ $35,000 to $49,999
    7 ❏ $50,000 to $74,999   8 ❏ $75,000 to $100,000   9 ❏ More than $100,000

15. **In making this trip to where you are going right now, do you have to change to another bus at any point to complete the trip, whether it is a GoDurham bus or a bus from another system?**   1 ❏ Yes   2 ❏ No

16. **How did you get to the stop where you got on the first GoDurham bus you boarded during this trip? (Check only one)**
    1 ❏ Walked   2 ❏ Used own bike   3 ❏ Used rented bike/scooter
    4 ❏ Drove   5 ❏ Was dropped off by family/friend   6 ❏ Uber or Lyft
    7 ❏ Bus other than GoDurham   8 ❏ Other _____

17. **Do you use a cellphone?**   1 ❏ Yes   2 ❏ No
    Do you use your cell phone...
    a. **...to send and receive text messages?**   1 ❏ Yes 2 ❏ No
    b. **...to access internet sites?**   1 ❏ Yes 2 ❏ No
    c. **...to check on local public transit service?**   1 ❏ Yes 2 ❏ No

18. **How many cars or other vehicles are usually available for your use?**
    0 ❏ None   1 ❏ One   2 ❏ Two   3 ❏ Three or more

19. **In the past 30 days, how often have you used Uber or Lyft in the Triangle region?**
    0 ❏ Not at all   1 ❏ 1 time   2 ❏ 2 times   3 ❏ 3 times   4 ❏ 4 or more times

20. **If you used Uber or Lyft in the past 30 days...**
    a. Did you use both GoDurham and Uber/Lyft as parts of the same trip?
       1 ❏ Yes   2 ❏ No
    b. Did you use Uber/Lyft instead of GoDurham for a trip you otherwise would have made on GoDurham?
       1 ❏ Yes   2 ❏ No
       ↳ You did that because? _____
       _____

In the past 30 days, how would you rate GoDurham on the following services?

(Circle a rating for each question or check the circle indicating that it does not apply to you)

	Excellent			Neutral			Very poor	Does not apply
21. Buses running on-time	7	6	5	4	3	2	1	◯
22. Frequency of service on weekdays _(Mon-Fri)_	7	6	5	4	3	2	1	◯
23. Frequency of service on Saturday	7	6	5	4	3	2	1	◯
24. Frequency of service on Sunday	7	6	5	4	3	2	1	◯
25. Hours the buses operate weekdays _(Mon-Fri)_	7	6	5	4	3	2	1	◯
26. Hours the buses operate Saturday	7	6	5	4	3	2	1	◯
27. Hours the buses operate Sunday	7	6	5	4	3	2	1	◯
28. Total time required to make your usual trip	7	6	5	4	3	2	1	◯
29. Availability of service to all destinations you want to get to	7	6	5	4	3	2	1	◯
30. Ease of transferring within GoDurham system	7	6	5 4		3	2	1	◯
31. Ease of transferring between GoDurham and other area bus transit systems	7	6	5	4	3	2	1	◯
32. Cleanliness of the bus interiors	7	6	5	4	3	2	1	◯
33. Cleanliness of the bus shelters and transit center	7	6	5	4	3	2	1	◯
34. Your sense of personal safety from other passengers on the buses	7	6	5	4	3	2	1	◯
35. Courtesy and helpfulness of bus operators	7	6	5	4	3	2	1	◯
36. Usefulness of information from 485-RIDE telephone operators	7	6	5	4	3	2	1	◯
37. Usefulness of printed information such as schedules or brochures	7	6	5	4	3	2	1	◯
38. Quality of wireless internet _(WIFI)_ service	7	6	5	4	3	2	1	◯
39. The quality of GoDurham services overall	7	6	5	4	3	2	1	▧

Comments:
_____
_____

PASSENGER SURVEY — Please tell us about how you use GoRaleigh
El cuestionorio en español se encuentro en el otro lado

GO Raleigh

1. In a *typical week* on how many days do you currently use GoRaleigh? *(Circle only one)*
0 (None – Not a regular GoRaleigh rider)   1   2   3   4   5   6   7

2. Before the pandemic which began in March 2020, on how many days a week did you typically use GoRaleigh?   0 (Did not use GoRaleigh then)   1   2   3   4   5   6   7

3. During the pandemic in 2020 and 2021, on how many days a week did you typically use GoRaleigh?   0 (Did not use GoRaleigh then)   1   2   3   4   5   6   7

4. What is the ONE main purpose for which you *most often* use the GoRaleigh bus? Is it to go to or from
1 ☐ Work   2 ☐ School/college   3 ☐ Shopping
4 ☐ Medical/dental   5 ☐ Recreation/event   6 ☐ Other_____

5. Please mark *all* of the following that apply to you. Are you...
1 ☐ Employed full time   2 ☐ Employed part time   3 ☐ Unemployed   4 ☐ Homemaker
5 ☐ Student   6 ☐ Retired   7 ☐ Volunteer position

6. If you are employed or a student, do you work/attend school...
1 ☐ Remote only   2 ☐ Remote some days; onsite other days   3 ☐ Onsite only

7. How old are you? _____ Years old

8. Do you identify as...   1 ☐ Male   2 ☐ Female   3 ☐ Non-binary   4 ☐ Prefer not to answer

9. Do you consider yourself to be... *(Please check all that apply to you)*
1 ☐ African American/Black   2 ☐ Asian   3 ☐ Caucasian/White
4 ☐ Hispanic   5 ☐ Native American Indian   6 ☐ Other: _____

10. What language do you *most often* speak at home? *(Check only one)*
1 ☐ English   2 ☐ Spanish   3 ☐ Other: _____

11. What is your total annual household income? *(Check only one)*
1 ☐ Less than $10,000   2 ☐ $10,000 to $14,999   3 ☐ $15,000 to $19,999
4 ☐ $20,000 to $24,999   5 ☐ $25,000 to $34,999   6 ☐ $35,000 to $49,999
7 ☐ $50,000 to $74,999   8 ☐ $75,000 to $100,000   9 ☐ More than $100,000

12. How many cars or other vehicles are available for your use?   0 None   1   2   3   4 or more

13. Please check *all* Triangle Region bus systems you use in a *typical* week
1 ☐ GoRaleigh   2 ☐ GoTriangle   3 ☐ GoDurham   4 ☐ GoCary
5 ☐ Chapel Hill Transit   6 ☐ Duke Transit   7 ☐ Wolfline

14. Have you used Uber or Lyft in the past thirty days?   1 ☐ Yes   2 ☐ No

15. Did you use Uber/Lyft instead of GoRaleigh for a trip you otherwise would have made on GoRaleigh?   1 ☐ Yes   2 ☐ No

16. Do you use a transit app on your cell phone?   1 ☐ Yes   2 ☐ No   3 ☐ No cell phone
If you use a transit app, which one? _____

In the past 30 days, how would you rate GoRaleigh on the following services?	Excellent	Very Good	Good	Neutral	Poor	Very Poor	Extremely poor	Does not apply
17. Buses running on-time	7	6	5	4	3	2	1	☐
18. Frequency of service on weekdays	7	6	5	4	3	2	1	☐
19. Frequency of service on Saturday	7	6	5	4	3	2	1	☐
20. Frequency of service on Sunday	7	6	5	4	3	2	1	☐
21. Hours the buses operate weekdays	7	6	5	4	3	2	1	☐
22. Hours the buses operate Saturday	7	6	5	4	3	2	1	☐
23. Hours the buses operate Sunday	7	6	5	4	3	2	1	☐
24. Total time it takes for your usual trip	7	6	5	4	3	2	1	☐
25. Service to all locations you want to go	7	6	5	4	3	2	1	☐
26. Ease of transfer among GoRaleigh routes	7	6	5	4	3	2	1	☐
27. Ease of transferring between GoRaleigh and other area bus transit systems	7	6	5	4	3	2	1	☐
28. Suspension of GoRaleigh fares	7	6	5	4	3	2	1	☐
29. Cleanliness of the bus interiors	7	6	5	4	3	2	1	☐
30. Availability of shelters at bus stops	7	6	5	4	3	2	1	☐
31. Your sense of personal safety from other passengers on the buses	7	6	5	4	3	2	1	☐
32. Courtesy & helpfulness of bus operators	7	6	5	4	3	2	1	☐
33. Usefulness of information from 485-RIDE telephone operators	7	6	5	4	3	2	1	☐
34. Usefulness of printed information such as schedule or brochures	7	6	5	4	3	2	1	☐
35. Quality of WIFI service	7	6	5	4	3	2	1	☐
36. The overall quality of GoRaleigh service	7	6	5	4	3	2	1	

37. Of the services in questions 17 to 35 above, please list the three most important to improve or if service is already very good or excellent, to maintain?
Most important _____   2nd most _____   3rd most _____

Comments: _____
_____
_____

PASSENGER SURVEY — Please tell us about how you use GoTriangle
El cuestionorio en español se encuentro en el otro lado

GO Triangle

1. Did you participate in a GoPass program *(by obtaining a transit pass through your school or employer)* **before GoTriangle suspended fares?**
1 ☐ Yes, I had an active GoPass in 2020   2 ☐ I have used a GoPass previously but not in 2020
3 ☐ I have never participated in a GoPass program

2. If employed, who is your current employer? *(Knowing where our riders work helps us plan to better serve your needs.)* _____

3. In a *typical week* on how many days do you currently use GoTriangle? *(Circle only one)*
0 (None)   1   2   3   4   5   6   7

4. Before the pandemic which began in March 2020, on how many days a week did you typically use GoTriangle?   0 (None)   1   2   3   4   5   6   7

5. During the pandemic in 2020 and 2021, on how many days a week did you typically use GoTriangle?   0 (None)   1   2   3   4   5   6   7

6. What is the ONE main purpose for which you *most often* use the GoTriangle bus? Is it to go to or from
1 ☐ Work   2 ☐ School/college   3 ☐ Shopping
4 ☐ Medical/dental   5 ☐ Recreation/event   6 ☐ Other _____

7. Please mark *all* of the following that apply to you. Are you...
1 ☐ Employed full time   2 ☐ Employed part time   3 ☐ Unemployed   4 ☐ Homemaker
5 ☐ Student   6 ☐ Retired   7 ☐ Volunteer position

8. If you are employed or a student, do you work/attend school...
1 ☐ Remote only   2 ☐ Remote some days; onsite other days   3 ☐ Onsite only

9. How old are you? _____ Years old

10. Do you identify as...   1 ☐ Male   2 ☐ Female   3 ☐ Non-binary   4 ☐ Prefer not to answer

11. Do you consider yourself to be... *(Please check all that apply to you)*
1 ☐ African American/Black   2 ☐ Asian   3 ☐ Caucasian/White
4 ☐ Hispanic   5 ☐ Native American Indian   6 ☐ Other: _____

12. What language do you most often speak at home? *(Check only one)*
1 ☐ English   2 ☐ Spanish   3 ☐ Other: _____

13. Please check *all* Triangle Region bus systems you use in a *typical* week
1 ☐ GoRaleigh   2 ☐ GoTriangle   3 ☐ GoDurham   4 ☐ GoCary   5 ☐ Chapel Hill Transit
6 ☐ Duke Transit   7 ☐ Wolfline   10 ☐ None of these

14. What is your total annual household income? *(Check only one)*
1 ☐ Less than $10,000   2 ☐ $10,000 to $14,999   3 ☐ $15,000 to $19,999
4 ☐ $20,000 to $24,999   5 ☐ $25,000 to $34,999   6 ☐ $35,000 to $49,999
7 ☐ $50,000 to $74,999   8 ☐ $75,000 to $100,000   9 ☐ More than $100,000

15. How many cars or other vehicles are available for your use?   0 None   1   2   3   4 or more

16. In the past thirty days, did you use Uber/Lyft instead of GoTriangle for a trip you otherwise would have made on GoTriangle   1 ☐ Yes   2 ☐ No

17. Do you use a transit app on your cell phone?   1 ☐ Yes   2 ☐ No   3 ☐ No cell phone
If you use a transit app, which one? _____

In the past 30 days, how would you rate GoTriangle on the following services?	Excellent	Very Good	Good	Neutral	Poor	Very Poor	Extremely poor	Does not apply
18. Buses running on-time	7	6	5	4	3	2	1	☐
19. Frequency of service on weekdays	7	6	5	4	3	2	1	☐
20. Frequency of service on Saturday	7	6	5	4	3	2	1	☐
21. Frequency of service on Sunday	7	6	5	4	3	2	1	☐
22. Hours the buses operate weekdays	7	6	5	4	3	2	1	☐
23. Hours the buses operate Saturday	7	6	5	4	3	2	1	☐
24. Hours the buses operate Sunday	7	6	5	4	3	2	1	☐
25. Total time it takes for your usual trip	7	6	5	4	3	2	1	☐
26. Service to all locations you want to go	7	6	5	4	3	2	1	☐
27. Ease of transfer among GoTriangle routes	7	6	5	4	3	2	1	☐
28. Ease of transferring between GoTriangle and other area bus transit systems	7	6	5	4	3	2	1	☐
29. Cleanliness of the bus interiors	7	6	5	4	3	2	1	☐
30. Availability of shelters at bus stops	7	6	5	4	3	2	1	☐
31. Your sense of personal safety from other passengers on the buses	7	6	5	4	3	2	1	☐
32. Courtesy & helpfulness of bus operators	7	6	5	4	3	2	1	☐
33. Usefulness of information from 485-RIDE telephone operators	7	6	5	4	3	2	1	☐
34. Usefulness of printed information such as schedule or brochures	7	6	5	4	3	2	1	☐
35. Quality of *WIFI* service	7	6	5	4	3	2	1	☐
36. The overall quality of GoTriangle service	7	6	5	4	3	2	1	

35. Of the services in questions 18 to 35 above, please list the three most important to improve?
Most important _____   2nd most _____   3rd most _____

Comments: _____
_____
_____

PASSENGER SURVEY — Please tell us about how you use GoCary — *El cuestionorio en español se encuentro en el otro lado*

GO Cary

1. In a *typical week* on how many days do you currently use GoCary? *(Circle only one)*
0 (None – Not a regular GoCary rider)   1   2   3   4   5   6   7

2. Before the pandemic which began in March 2020, on how many days a week did you typically use GoCary?   0 (Did not use GoCary then)   1   2   3   4   5   6   7

3. During the pandemic in 2020 and 2021, on how many days a week did you typically use GoCary?   0 (Did not use GoCary then)   1   2   3   4   5   6   7

4. What is the ONE main purpose for which you *most often* use the GoCary bus? Is it to go to or from
1 ☐ Work   2 ☐ School/college   3 ☐ Shopping
4 ☐ Medical/dental   5 ☐ Recreation/event   6 ☐ Other_____

5. Please check *all* Triangle Region bus systems you use in a *typical* week
1 ☐ GoRaleigh 2 ☐ GoTriangle   3 ☐ GoDurham   4 ☐ GoCary   5 ☐ Chapel Hill Transit
6 ☐ Duke Transit 7 ☐ Wolfline   8 ☐ GoApex   9 ☐ Morrisville Smart Shuttle
10 ☐ None of these

6. Please mark *all* of the following that apply to you. Are you...
1 ☐ Employed full time   2 ☐ Employed part time   3 ☐ Unemployed   4 ☐ Homemaker
5 ☐ Student   6 ☐ Retired   7 ☐ Volunteer position

7. If you are employed, are you currently working remotely or does your work require you to be onsite?   1 ☐ Remote only   2 ☐ Remote some days; onsite other days   3 ☐ Onsite only

8. Which GoCary routes do you use regularly? *(Circle the ones that apply)*
0   1   2   3   4   5   6   7   8   ACX

9. How old are you? _____ Years old

10. Do you identify as...   1 ☐ Male   2 ☐ Female   3 ☐ Non-binary   4 ☐ Prefer not to answer

11. Do you consider yourself to be... *(Please check all that apply to you)*
1 ☐ African American/Black   2 ☐ Asian   3 ☐ Caucasian/White
4 ☐ Hispanic   5 ☐ Native American Indian   6 ☐ Other: _____

12. What language do you most often speak at home? *(Check only one)*
1 ☐ English   2 ☐ Spanish   3 ☐ Other: _____

13. What is your total annual household income? *(Check only one)*
1 ☐ Less than $10,000   2 ☐ $10,000 to $14,999   3 ☐ $15,000 to $19,999
4 ☐ $20,000 to $24,999   5 ☐ $25,000 to $34,999   6 ☐ $35,000 to $49,999
7 ☐ $50,000 to $74,999   8 ☐ $75,000 to $100,000   9 ☐ More than $100,000

14. How many cars or other vehicles are available for your use?   0 None   1   2   3   4 or more

15. Do you use a transit app on your cell phone?   1 ☐ Yes   2 ☐ No   3 ☐ No cell phone
If you use a transit app, which one? _____

In the past 30 days, how would you rate GoCary on the following services?	Excellent	Very Good	Good	Neutral	Poor	Very Poor	Extremely poor	Does not apply
16. Buses running on-time	7	6	5	4	3	2	1	☐
17. Frequency of service on weekdays	7	6	5	4	3	2	1	☐
18. Frequency of service on Saturday	7	6	5	4	3	2	1	☐
19. Frequency of service on Sunday	7	6	5	4	3	2	1	☐
20. Hours the buses operate weekdays	7	6	5	4	3	2	1	☐
21. Hours the buses operate Saturday	7	6	5	4	3	2	1	☐
22. Hours the buses operate Sunday	7	6	5	4	3	2	1	☐
23. Total time it takes for your usual trip	7	6	5	4	3	2	1	☐
24. Service to all locations you want to go	7	6	5	4	3	2	1	☐
25. Ease of transfer among GoCary routes	7	6	5	4	3	2	1	☐
26. Ease of transferring between GoCary and other area bus transit systems	7	6	5	4	3	2	1	☐
27. Cleanliness of the bus interiors	7	6	5	4	3	2	1	☐
28. Cleanliness of the bus shelters and transit centers	7	6	5	4	3	2	1	☐
29. Your sense of personal safety from other passengers on the buses	7	6	5	4	3	2	1	☐
30. Courtesy & helpfulness of bus operators	7	6	5	4	3	2	1	☐
31. Usefulness of information from 485-RIDE telephone operators	7	6	5	4	3	2	1	☐
32. Usefulness of printed information such as schedule or brochures	7	6	5	4	3	2	1	☐
33. Quality of *WIFI* service	7	6	5	4	3	2	1	☐
34. The overall quality of GoCary service	7	6	5	4	3	2	1	

35. Of the services in questions 16 to 33 above, please list the three most important to improve or if service is already very good or excellent, to maintain?
Most important _____   2nd most _____   3rd most _____

Comments: _____
_____
_____