

A Survey of Users of TheRide A Service of The Ann Arbor Area Transportation Authority October 2017

A study conducted by:





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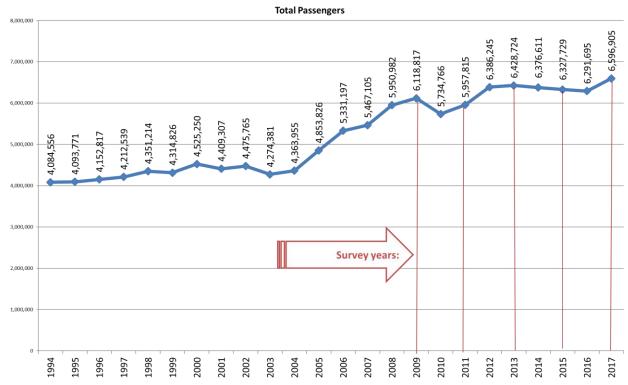
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Introduction

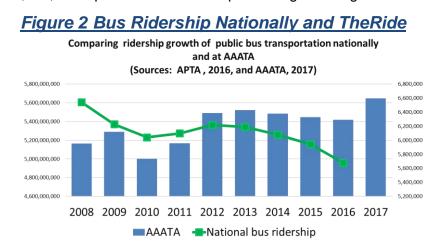


Figure 1 Ridership 1994 - 2017



Ridership in Context

TheRide has experienced a period of ridership growth since 2004, reaching a new peak in 2017. It remained relatively flat from 1994 through 2003, changing only from 4,084,556 trips in 1994 to 4,274,381 trips in 2003. Ridership then began a long increase to a new high in 2009 when it



reached a total of 6,118,817 trips. With the Great Recession, it fell back to below six million trips by 2010. However, as the economy slowly recovered much of its strength post 2010, ridership began a rapid increase again, reaching 6,428,724 in 2013. Subsequently there were minor decreases such that the ridership for 2016 was 6,291,695.

By 2017, there growth had resumed, with ridership rising by

4.8% between 2016 and 2017 to a new twenty-three year high of 6,596,905 riders. This is especially interesting because nationally bus ridership has been declining, not increasing as shown in Figure 2.



Survey Data Collection

A survey was conducted onboard AAATA buses from October 14 through October 22, 2017, a period very similar to the timing of previous surveys. Temporary workers were used for this purpose under the supervision of CJI Research staff. Surveyors wore smocks identifying them in large print as "Transit Survey" workers. This uniform helps riders visually understand the purpose of the interviewer's approach.

Survey personnel accompanied drivers at the beginning of the shifts and rode the buses for an entire run. They approached all riders who appeared to be sixteen years old or older, rather than a sample of riders. Thus, the bus was, in effect, a sample cluster point within which all were surveyed. Survey personnel handed surveys to riders and asked them to complete the survey. They also provided pens branded with TheRide logo to the potential respondents.

At the end of the run, the survey personnel placed the completed surveys in an envelope marked with the route and the run and reported to the survey supervisors who completed a log form detailing the run.

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 riders which route they are riding when completing the survey.

Sample

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

The resulting total sample size is 3,096 useable responses. When all respondents are included, this sample has a sample error level of $\pm 1.6\%$. When a sub-sample is used, sample error increases somewhat, though with such a large overall sample, this would affect the findings only in very rare circumstances in which only very small sub-segments of the ridership were being examined separately. This does not occur in the report presented here.



Participation Rates

A total of 5,697 AAATA riders were approached and asked to participate in the survey. Of these, 925 (16%) said they had already completed a survey. Another 940 (16%) were unwilling to participate, and 273, or 5%, presented a language barrier (i.e., other than English or Spanish). Thus, the total "effective distribution," defined as a rider accepting the survey materials and agreeing to complete a survey form, was 3,621 persons. Of these, 525 (14% of those accepting the survey) accepted the questionnaire but failed to return it, seventy-eight (2%) took the questionnaire and either gave it to another driver or mailed it back in a post-paid envelope, and 3,096 returned a useable survey form to the surveyor on the bus. Thus, the effective participation rate among everyone who was approached was 54%, and was 86% among those who initially agreed to participate.

Figure 3 Response Rates

		Completion Rates		
A total of 5,697 adults were riding the surveyed trips and thus had a chance to participate				
Of this total of all	adult riders	925 said they had already completed the survey	16%	
		940 refused outright	16%	
	273 encountered a language barrier			
ar	and 3,621 accepted the survey with apparent intention to complete it		64%	
Thus,	3,621	represents the "effective distribution." Of this effective distribution,		
		525 accepted but did not complete the survey	14%	
3,018 Completed it on the AATA vehicle			83%	
78 Completed the survey and returned it to an AATA operator on and		2%		
		3,096 returned useable survey questionnaires		
Of all adults riding a surveyed vehicle, this represents:			54%	
Of effective distribution, this represents:			86%	

Analysis

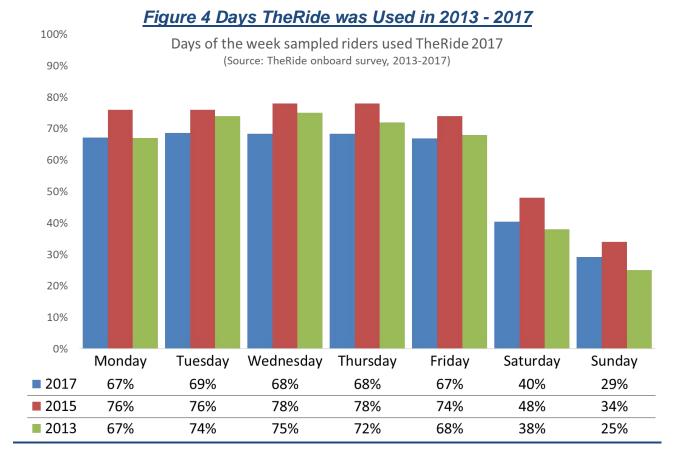
Analysis consists primarily of cross tabulations and frequency distributions. Tables were prepared in SPSS (version 24) and charts in Excel for Office 365.

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, percentages are carried to tenths. Rounding causes some percentage columns to total 99% or 101%. Such totals do not represent errors and the deviation from 100% should be ignored.



Rider profile





Days TheRide was Used in 2013 - 2017

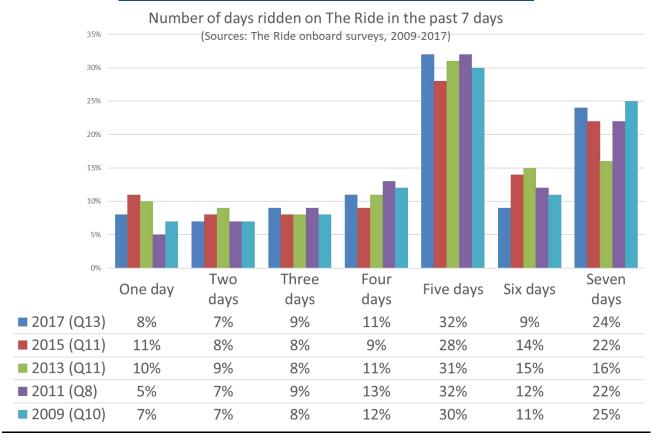
In 2017, during the five weekdays prior to the survey, TheRide was used by slightly fewer than 70% of the riders. The percentage using TheRide each week day was lower than it was in 2013 or 2015, with the exception of the survey in 2017 when Monday use stood at 67% as it had in 2013. The differences are greater between 2015 and 2017 than they are between 2013 and 2017.

Why this kind of variation between years and among days of the week would occur is unknown. There may have been weather or community events in that caused an increase in use during weekdays, or there may have been some idiosyncratic reason. We cannot determine this from the data.

Weekends attract fewer riders, with 40% saying they used TheRide on Saturday and 29% on Sunday. In 2015, in the early period of post-levy service increase, it was unsurprising that the percent saying they used TheRide on Saturday and Sunday increased. While the percentages using TheRide on Saturday and Sunday increased relative to 2013, the puzzle is why those percentages would have decreased from 2015 to 2017.



Figure 5 Frequency of Using TheRide, by Segment



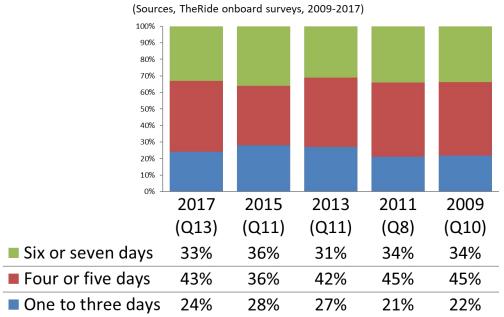
Frequency of using TheRide, by Segment

Most riders (a total of 65%) use AAATA from five to seven-days a week. Twenty-four percent (24%) say they use it every day, while another 9% use it six days a week. This represents a similar result to that of 2015 when 22% said every day and 14% said they rode six days a week. We consider the differences more likely to be random variation in the scheduling of surveying than a real change in riding patterns.



Figure 6 Frequency of Using TheRide, by Year of Survey





Frequency of Using TheRide, by Year of Survey

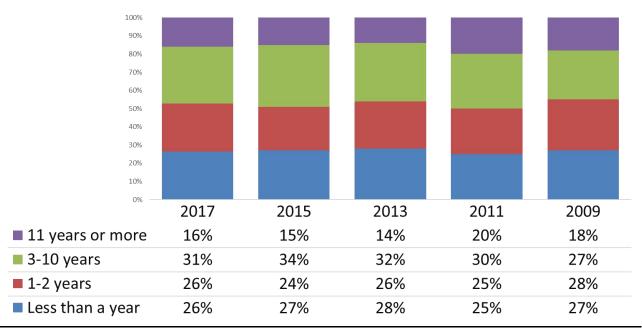
For purposes of further analysis, the riders are grouped into three sets, depending upon how frequently the riders use TheRide. Throughout the balance of the report, we will treat them as a segmenting variable and group them as:

- Those who use TheRide one to three days a week (24%)
- Those who use TheRide four or five days a week (43%)
- Those who use TheRide six or seven days a week (33%)



Figure 7 How Long Using TheRide (by year)?

Q22 Duration of Using TheRide (Sources: TheRide Onboard Surveys, 2009-2017)



How Long Using TheRide, 2009 - 2017

In 2017, 26% said they had begun using TheRide only in the year of the survey. This result is statistically identical to the percentage in the previous (2015) survey when it stood at 27%. The range of differences in this respect is only 3%, ranging from 25% in 2011 to 28% in 2013¹. The consistency of this percentage is interesting and demonstrates that the transit market is constantly turning over at a roughly consistent rate, a fact that makes rider retention a primary imperative for planning and marketing.

These rates are fairly typical of transit-rider turnover for all bus transit systems. Slightly more than one-fourth (26%) had begun using TheRide in the previous one to two years (2015-2016) while the balance, 47%, began prior to that time.

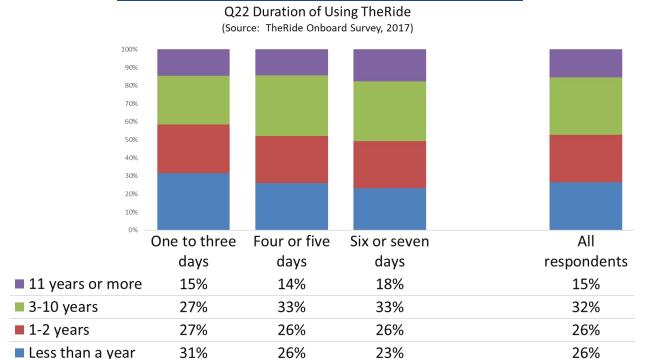
The primary difference among the five biennial surveys is that the percentage of long term riders using TheRide for eleven years or more diminished from highs of 18% in 2009 and 20% in 2011 to 14% in 2013 and it remains at this lower level in 2017, with 16% in this long-term rider category.

¹ For future reference if these surveys are repeated, they were all conducted in mid to late October during periods when the universities would be in session, but there would be no home football games that would create a short- term distortion in traffic and in the types of passengers riding TheRide.



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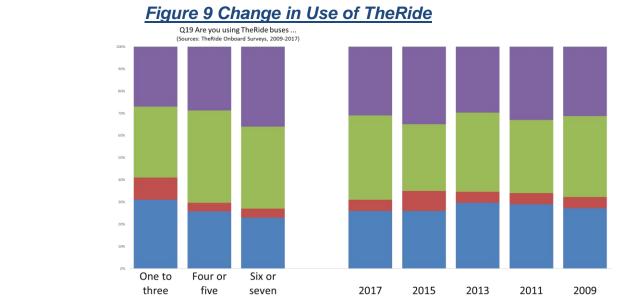
Figure 8 How Long Using TheRide (by segment)?



How Long Using TheRide, by Segment

By far, the largest influx of recent riders is among the occasional riders, among whom 31% began riding only in 2017, compared with 23% of those using TheRide six or seven-days a week. Clearly, part of the marketing effort should involve retention of these one to three-day riders and making it easier for them to use TheRide more frequently.





31%

38%

5%

26%

35%

30%

9%

26%

30%

36%

5%

30%

33%

33%

5%

29%

31%

36%

5%

27%

Change in Use of TheRide

■ More often than a year ago

About same as year ago

Less often than a year ago

■ Was not using TheRide until

2017

days

27%

32%

10%

31%

days

29%

42%

4%

26%

days

36%

37%

4%

23%

All riders were asked whether they were using TheRide more often, less often, or about the same as they did a year ago. Twenty-six percent (26%) said they had not been using TheRide until 2017, so could not realistically answer. Thirty-one percent (31%) said they were using TheRide more often than a year ago, a slightly lower percentage than said this in 2015 (35%).

In spite of the slight dip from 2015 to 2017, the percentage who said they were using TheRide more than a year ago has been quite consistent over time. We anticipated a bit of a spike in those saying "more often" in 2015 given that service had been expanded as a result of the successful levy in 2014. In fact, the percentage saying they were riding more often did increase by five points, from 30% to 35%.

However, given the rapid turnover of ridership, the base of individual people using TheRide changes substantially between surveys. This rate of turnover means that any short-term bump such as this in year-over-year ridership as a result of service changes would quickly dissipate.



Figure 10 Change in Frequency of Using TheRide among the Riders Using TheRide Prior to 2017

Q19 Are you using TheRide buses ... (Sources: TheRide Onboard Surveys, 2009-2017) (Chart includes only those who began using TheRide before the year of the survey) 10% One to Four or Six or Q19 Are you using five 2017 2015 2013 2011 2009 three seven TheRide buses .. days days days 47% More often than a year ago 39% 38% 47% 41% 42% 46% 43% ■ About the same as a year ago 57% 47% 48% 52% 41% 51% 46% 50%

Change in Use of TheRide among the Riders Using TheRide Prior to 2017

5%

14%

Among those riders who had a history of riding prior to 2017 when the survey was conducted, 41% said they rode more often in 2017 than in 2015. The percentage of riding less often decreased from 12% to 7%, reversing the movement seen between 2013 and 2015, while the percent using TheRide with the same frequency increased to 52% from 41% in 2015, a reversion to the percentages seen in 2013.

5%

7%

12%

7%

7%

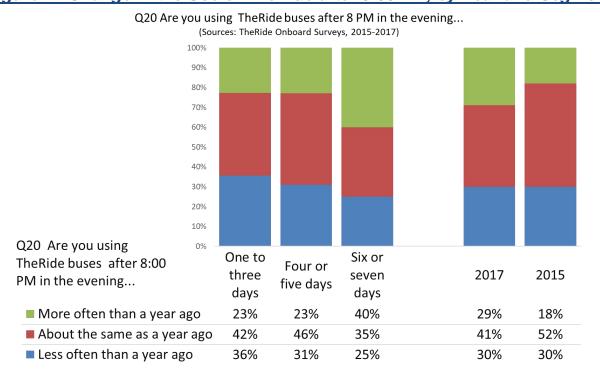
7%

Substantial percentages of all three rider segments say they use TheRide more often now than they did a year ago. The most frequent users are more likely (47%) than four or five-day riders (38%) or occasional one to three-day riders (39%) to say they ride more often currently than a year ago.



Less often than a year ago

Figure 11 Change in the Use of TheRide after 8:00 PM, by Year and Segment



Change in the Use of TheRide after 8:00 PM, by Year and Segment

There has been a substantial increase in the percentage of riders saying they use TheRide more after 8:00 PM now than in 2015. When the 2015 survey was conducted, some, but not all, of the service increases made possible by the passage of the millage increase in May 2014 had been made. By the time of the October 2017 survey, service had been fully expanded and, just as important, riders had had time to become accustomed to the expanded services and take advantage of them.

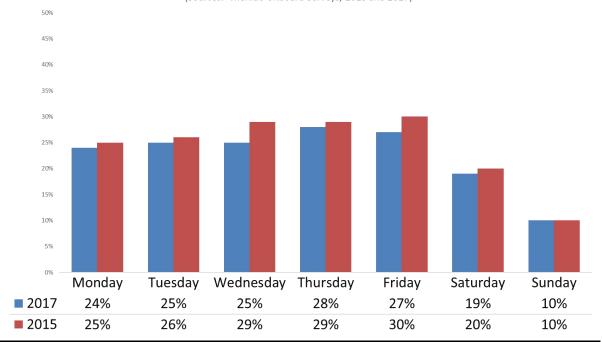
In 2015, 18% said they were using TheRide after 8:00 PM more than in the previous year. However, in 2017, that percentage increased to 29%, while the percent saying they were using it less often remained the same (30%) as in 2015.

The most frequent riders are more likely (40%) than other riders (23% of each of the other segments) to say that they are using TheRide more often after 8:00 PM in 2017 than during the previous year.



Figure 12 Days of the Week TheRide Is Used after 8:00 PM





Days of the Week TheRide Is Used after 8:00 PM

In spite of the fact that more riders in 2017 than in 2015 say they are riding after 8:00 PM more often than a year ago, the percentage saying they used TheRide after 8:00 PM on any given day is no greater than in 2015 and on Wednesday and Friday, appears to be (statistically) significantly lower.

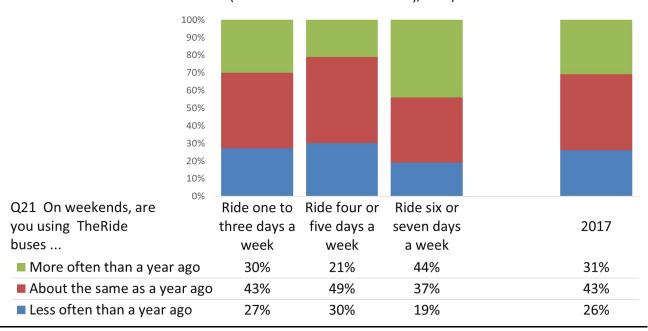
We cannot be certain of the reason for this, but it is likely a matter of chance occurrence (or lack) of events in the area during the week leading to the survey week. However, it is also possible that ride-sharing is causing minor diminution of riding.

We cannot examine this with the current data. However, this bears watching. The 2019 survey will determine whether there is a trend or if this is merely a matter of a short-term deviation.



Figure 13 Change in Weekend Use of TheRide

Q21 On weekends, are you using TheRide buses (Source: TheRide Onboard Survey, 2017)



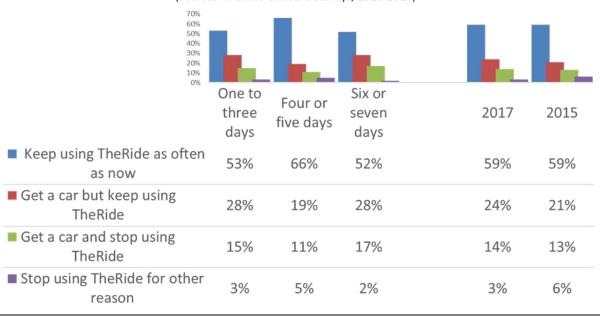
Change in Weekend Use of TheRide

In 2017, 31% of the riders said that they were using TheRide more often on weekends than in the previous year. (This question was not asked in 2015.) As with the use of the buses after 8:00 PM, it is the six or seven-day riders who are most likely (44%) among the three rider segments to be using the bus more often on the weekends.



Figure 14 Preference for Use of TheRide Next Year

Q23 A year from now would you prefer to... (Sources: TheRide Onboard Surveys, 2015-2017)



Preference for Use of TheRide Next Year

Riders were asked whether next year they preferred to continue using TheRide, or whether, for various reasons, they would prefer to reduce or even discontinue their use of the service. Actual use is determined by many things besides positive marketing messages and levels of service. These include factors external to the transit system such as employment levels, gasoline prices, the composition of the ridership (e.g., the percentage of students), and other factors. But here we are asking about *preference*, not intent.

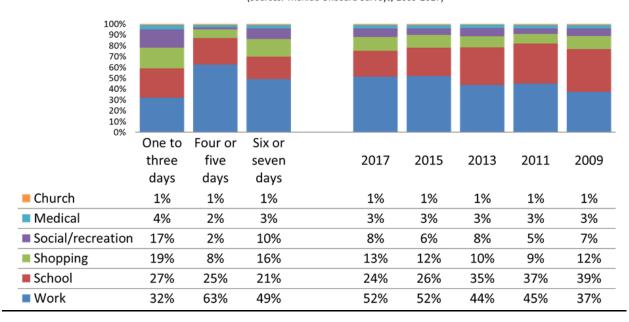
In 2015, 59% indicated that they would prefer to keep using TheRide, while 21% indicated that they preferred to obtain a car, but also planned to continue using TheRide. The balance, totaling 19%, indicated that for several different reasons they preferred to cease using TheRide. In 2017, the results were almost identical. The only difference is in a slight (3%) shift from those who said they preferred to stop using TheRide for "other reasons," to those who prefer to get a car, but also continue to use TheRide.

The primary message in this chart is that 59% indicated that they would *prefer* to continue using TheRide and 24% that they would prefer to combine using TheRide while also getting a car, a strong endorsement by both groups of their favorable opinion of TheRide's service. However, a secondary message is that a total of 17% said they would prefer to stop using TheRide altogether next year. We have already seen in Figure 7 that 26% of riders said they had begun using TheRide only in 2017. Both of these findings are indications of the constant turnover in the ridership and how challenging it is to retain riders.



Figure 15 Trip Purpose

Q1 & Q6 combined to infer primary trip purpose (Sources: TheRide Onboard Surveys, 2009-2017)



Trip Purpose

Work as the primary trip purpose changed considerably between 2009 and 2017, rising from 37% in the 2009 survey to a plateau in the mid-40% range (45% in 2011 and 44% in 2013), then rising to a new plateau of 52% in 2015 where it remains in 2017. It seems possible that one reason for the increase in work trips in this period was the improving economy and availability of jobs. However, a major factor is clearly the decline in the percentage of trips being taken to get to school. School trips as a percentage of all trips declined from 39% in 2009 to 24% in 2015.

Getting to or from school or college (24%) does remain a major trip purpose, however. We shall see in a later chart (Figure 29 on page 39) that 46% of AAATA riders are students, a decline since 2009 when 52% said they were students.

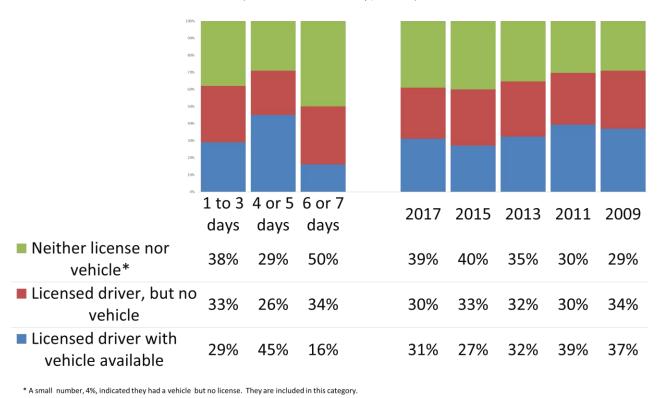
The increase in the percentage making work trips was also associated with the increased percentage of employed riders. We shall also see later (in Figure 29) that between 2009 and 2017, the percentage of riders employed outside the home increased from 36% to 44% while the percent of employed students declined from 18% to 10% as the percentage of students in general declined.

Notice that four to five-day riders are more likely than other segments to make trips for work (63%, up slightly from 58% in 2015). The six or seven-day riders continue to make school trips, 21%, a minor increase within this segment from 18% in 2013.



Figure 16 Mode choice, Over Time and among Segments

Q16,Q17 Combined: Have license? Have vehicle? (Sources: TheRide Onboard Surveys, 2009-2017)



Modal choice, Over Time and among Segments

The proportion of TheRide's ridership with full mode choice declined from nearly 40% in the earliest surveys in this series (37% in 2009, 39% in 2011) to a point closer to 30% in the three most recent surveys (32% in 2013, 27% in 2015, and 31% in 2017). Full mode choice means that they had both a valid license and a vehicle available for their trip on the day they were surveyed on the bus.

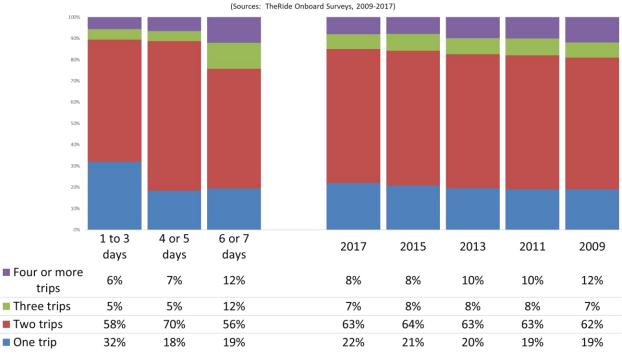
Another 30% are licensed drivers but had no vehicle available for the trip. The balance, 39%, had no license and for the most part, even if they had a license, they had no vehicle available.

Mode choice varies considerably among the three rider segments. Four to five-day riders are more likely than the other rider segments to be licensed to drive and have a vehicle available (45%), and thus have the greatest level of choice. Of course, they are also more likely to be traveling for work, and thus are clearly income-earners with the options income brings. Among the most intensive, six or seven-day riders, only 16% fall in this full mode choice category, although that percent is higher than the 11% for this same segment in 2015. This suggests that riders who are the heaviest users of TheRide may be gaining somewhat in terms of transit options.



Figure 17 Trips Per Day

Q7. How many separate one-way trips will you make today?



Trips Per Day

Riders were asked how many separate one-way trips they would make on the day they were surveyed. Just over two-thirds, 63%, indicated they would make two trips, 15%, three or more trips, and the balance, 22%, only one trip. These results are almost identical to the prior years' results and the small differences can be ignored.

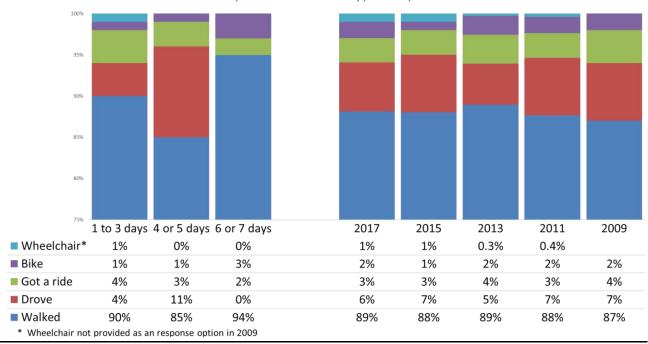
Among the six or seven-day riders, a total of 24% make three or more trips a day, a significant decline from 2015 (not shown here) when 29% of this segment were making that many trips. Only 12% of four or five-day and 11% of one to three-day riders make so many trips.

Clearly, the frequency of transit use, as measured in the charts in this report, based on the number of days per week transit is used, is magnified by the tendency of the more frequent AAATA users to use it for more trips on the days they ride.



Figure 18 Mode to the Bus Stop

Q4 How did you get to your stop? (Sources: TheRide Onboard Surveys, 2009-2017)



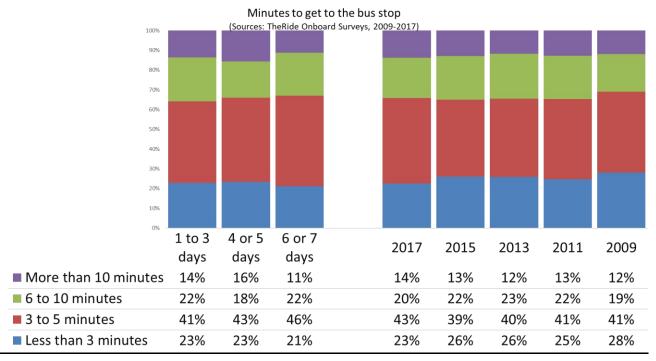
Mode to Bus Stop

As is typical in almost all transit systems, most people (89% in the case of AAATA) walk to the bus stop. This has not changed substantially since 2009, varying only among 87% in 2009 to 89% in 2013, and 88% in 2015.

This tendency varies somewhat among the rider segments, with 11% of four or five-day riders indicating that they had driven to the bus stop compared to none of the seven-day riders and only 4% of the one to three-day riders.







Time to the Bus Stop

Riders were asked how long it takes to get to their bus stop by the mode they use. In general, they say it takes five minutes or less. For example, of all riders, 23% said it takes them less than three minutes to get to the bus stop, and 43% said it takes three to five minutes to get to the bus stop. These percentages have changed very little since 2009. However, the percent saying it takes them less than three minutes has inched down from 28% to 23%, while those saying it takes longer have

Figure 20 Minutes to the Bus Stop Minutes to the bus stop (Source: TheRide Onboard Survey, 2017) 100% Percent of riders taking this many minutes to get to 96% 92% from 86% Cumulative percent of all riders this far Mean = 7.2 minutes 68% their bus stop Median= 5 minutes ■Minutes to the stop Cumulative % 3-4 min 5-6 min 7-10 min 11-15 min 16-20 min 21 or more

correspondingly inched up.

As in previous surveys, these tendencies continue to vary only slightly among the rider segments.

For all riders, the median time to get to the bus stop is five minutes. This means that one-half of riders spend five minutes or less getting to the bus stop and half spend more time than that.

Another indication that riders are now spending slightly more time to get to TheRide bus stops is that in 2015, the median was 4.5 minutes.



Figure 21 Time to the Bus Stop, by Mode to the Stop

How many minutes did it take you to get to the bus stop?				
By: How did you get to your stop?				
			% of Respon-	
	Mean	Median	dents	
Drove	20.1	15	6.3%	
Got a ride	11.7	6	2.9%	
Wheelchair/scooter	7.9	5	0.4%	
Bike	6.5	5	1.8%	
Walked	6.2	5	88.6%	
All riders	7.3	5	100%	

Time to the Bus Stop, by Mode to the Stop

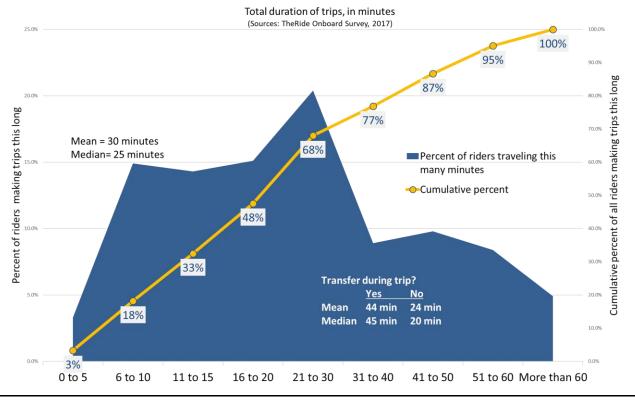
Not surprisingly, those who walk to their stop (88.6% of the riders) take the least time to get to their bus stop, an average (mean) of 6.2 minutes. Bicycling, used by 1.8% of the riders, is almost as fast (6.5 minutes), but the distance is undoubtedly greater. Using a wheelchair or scooter takes almost two minutes longer than walking (7.9 minutes). Only .4% of riders use a wheelchair or scooter.

Although there is some variation among these three self-propelled modes to the bus stop, the median of five minutes is identical, meaning that half take fewer than five minutes and half take more.

Those who get a ride (2.9% of the riders), take an average of 11.7 minutes, with six minutes as the median. Finally, the 6.3% of riders who drive to their bus stop take 20.1 minutes to get there, and fifteen minutes is their median. This suggests that approximately 3% have a drive longer than twenty minutes just to get to their stops. The maps of origins and destinations in the appendix are suggestive of the length of trips some riders are making. (See Figure 61 Overview Map of Origins and Destinations on page 83.)



Figure 22 Minutes the Total Trips Take



Minutes the Total Trips Take

One-third (33%) of riders have trips, including getting to the stop and time on the bus, of fifteen minutes or less. Approximately two-thirds (68%) have trips of thirty minutes or less. The remaining riders take longer trips. Ninety-five percent of the trips are no longer than sixty minutes, while 5% are longer than that.



Figure 23 Routes Rider Use Regularly

Which routes do you use regularly on TheRide?

	One to	Four or	Six or		
	three days	five days	seven days	All riders	
Route 4	34%	36%	53%	41%	
Route 6	26%	19%	34%	26%	
Route 5	24%	20%	29%	24%	
Route 23	19%	18%	18%	18%	
Route 3	13%	13%	16%	14%	
Route 24	14%	12%	16%	14%	
Route 22	10%	6%	10%	8%	
Route 32	7%	9%	6%	8%	
Route 28	7%	6%	8%	7%	
Route 62	6%	10%	4%	7%	
Route 66	6%	6%	9%	7%	
Route 65	7%	5%	8%	6%	
Route 27	5%	4%	6%	5%	
Route 30	6%	5%	5%	5%	
Route 42	3%	4%	9%	5%	
Route 25	5%	4%	4%	4%	
Route 44	3%	3%	5%	4%	
Route 45	3%	3%	6%	4%	
Route 29	3%	3%	2%	3%	
Route 31	3%	3%	4%	3%	
Route 43	1%	3%	5%	3%	
Route 46	3%	2%	4%	3%	
Route 60	2%	4%	1%	3%	
Route 41	3%	3%	1%	2%	
Route 47	1%	1%	5%	2%	
Route 21	1%	1%	1%	1%	
Route 26	2%	1%	1%	1%	
Route 33	1%	1%	1%	1%	
Route 63	1%	1%	1%	1%	
Route 64*	0%	2%	1%	1%	
Route 61*	0%	0%	0%	0%	
Route 67*	0%	0%	0%	0%	
Route 68*	0%	0%	0%	0%	
* "0%" signifies a percentage less than 0.5					

Routes Riders Use Regularly

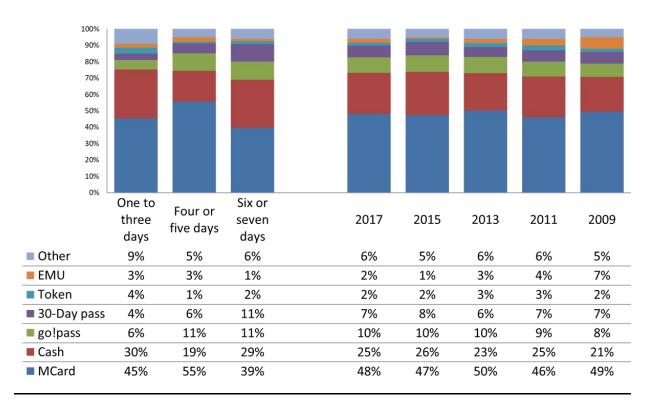
This table shows what percent of riders use each route regularly. For example, 41% of TheRide riders use Rt 4 regularly, 26% use Rt 6 regularly, etc. Many riders use more than one route. For this reason, the columns sum to more than 100%.

The table also shows the percent of each rider segment that uses each route.



Figure 24 Fare Payment

Q10 How fare was paid (Sources: TheRide Onboard Surveys, 2009-2017)



Fare Payment

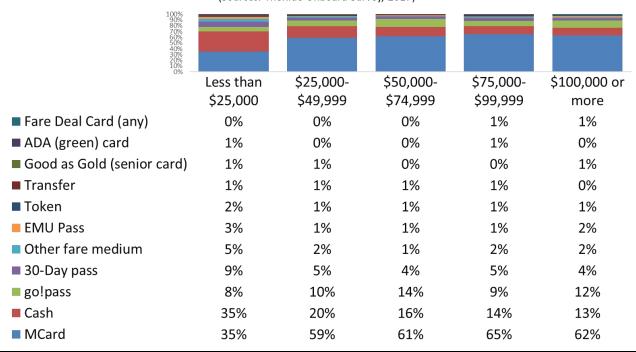
Among all riders in 2017, almost half (48%) paid their fare for their trip with an MCard, 25% paid cash, and the other 27% used another type of pass. This includes the 30-Day pass, 7%; the EMU pass, 2%; and "other"). The use of the go!pass has been very consistent at 10% since 2013. Another 25% paid their fare with cash. This percentage has remained stable, varying in the narrow range of only 23% to 26% since 2011.

As one would expect, the use of cash is greatest among the occasional transit users, among whom 30% paid the fare in cash. However, of that rider segment, 45% use an MCard and the balance used another type of pass or an "other" form of fare. Among the four or five-day riders, 55% use an MCard, an indication that many or most of the commuters in this segment work, or are students, at the University of Michigan.



Figure 25 Fare Payment and Rider Income

Income and fare structure (Sources: TheRide Onboard Survey, 2017)



Fare Payment and Rider Income

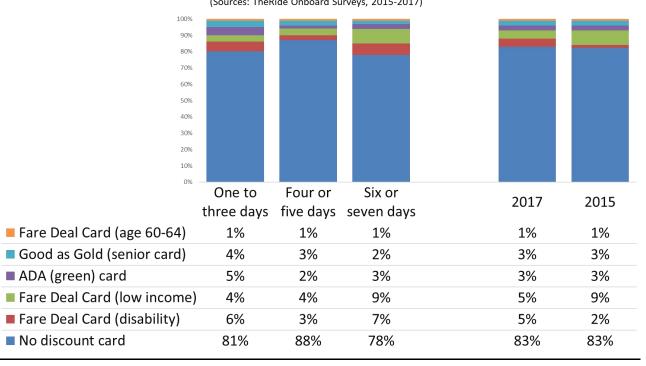
Use of the MCard, which accounts for 47% of the fares paid, is positively related to income. The greater the income, the greater the odds that a rider will pay the fare with an MCard. From the lowest level of income to the level of \$75,000 to \$99,999, the percent using an MCard increases. Then the percentage of riders using the MCard flattens out or may decline slightly. In contrast, the use of cash is inversely related to income. The lower the income, the greater the odds that a rider will use cash for the fare.

What was said in the 2013 and 2015 reports continues to hold true regarding the relationship of income to fare medium: "It is generally the case in public transit markets that people from lower income households are more likely than those from households with higher incomes to use cash rather than to hold discounted passes. That is the case in using TheRide. However, unlike riders on most transit systems, the reason is not so much that they are less likely to purchase a thirty-day pass for income-related reasons, but rather that they are much less likely to have a pass subsidized by the University."



Figure 26 Types of Discounted Fare Cards

Q11 Do you have one of the following discount cards?
(Sources: TheRide Onboard Surveys, 2015-2017)



Types of Discounted Fare Cards

While most riders (83%) do not hold one of the several types of fare cards that are discounted for senior, disabled, or low-income persons, a total of 17% of the riders do hold one of the cards. The largest categories are the "Fare Deal" cards for riders with low incomes or with a disability, each with 5%. As shown in the chart, the two "Fare Deal" cards are used by more of the six or seven-day riders than by the other segments.

Other category-related discounted fare cards vary in use from 1% to 3% of riders. They are related to age and disability and tend to be used by more by the occasional riders.

These percentages should not be interpreted as estimates of eligibility to use these kinds of passes because if a rider holds a go!pass, MCard, or other type of employer-provided pass, they would have no reason to go to the effort of applying for one of the discounted cards.

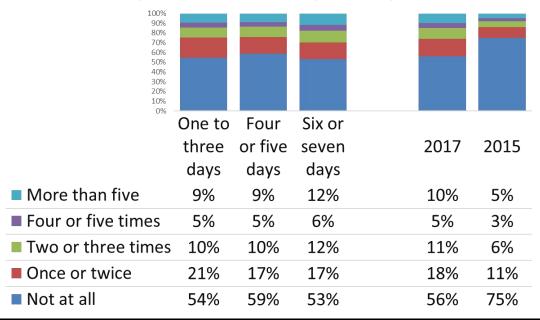


Transportation Alternatives, Including Car Sharing



Figure 27 Use of Uber or Lyft in the Past Thirty Days

Q24 Use of Uber or Lyft (Sources: TheRide Onboard Surveys, 2015-2017)



Use of Uber or Lyft in the Past Thirty Days

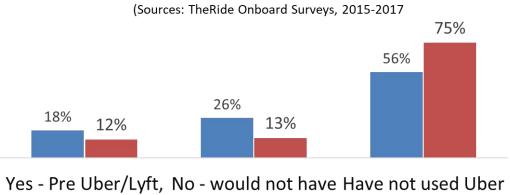
The market share of local travel held by Uber and Lyft has increased substantially since 2015, when 75% said they had not used Uber or Lyft in the past thirty days. In 2017, that percentage had declined to 56%, while the percentage using them for more than just one or two trips had gone from 14% to 26%, and the percentages using them for one or two trips had gone from 11% to 18%.

There is no clear pattern distinguishing the three segments from each other in terms of using these ride-sharing companies.



Figure 28 Displacing Transit Trips with Car Sharing?

Q25 Were Uber/Lyft trips you made trips you would in the past have made on TheRide?



Yes - Pre Uber/Lyft, No - would not have Have not used Uber would have used taken those trips on or Lyft

TheRide TheRide

■ 2017 ■ 2015

Displacing Transit Trips with Car Sharing?

Those who have used Uber and Lyft were asked whether the trips for which they had used ridesharing were trips for which, in the past, they would have used TheRide. Of all riders in 2017, 18% indicated they would have used TheRide, while 26% would not. Fifty-six percent (56%) had not used Uber or Lyft.

The 18% of all riders saying that the rideshare trip had replaced a trip on TheRide, stands in contrast to the 12% who said this in 2015.

It is beyond the scope of this report, but it will, at a later time, be worth further examination of the ride-sharing market data in this survey in terms of demographics, satisfaction levels, income, whether users are distinct in terms of origins and routes used, and other factors.

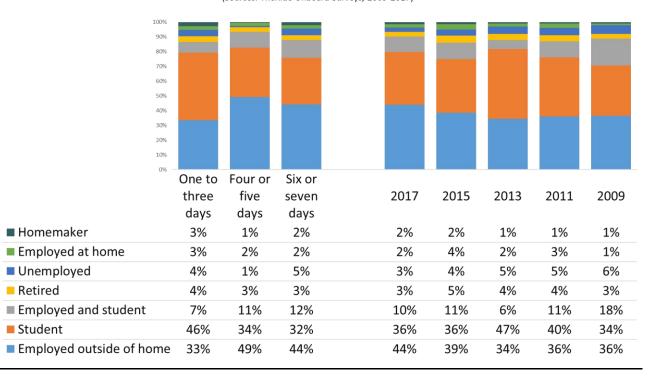


Demographic Profile



Figure 29 Employment

Q27 Employment (Sources: TheRide Onboard Surveys, 2009-2017)



Employment

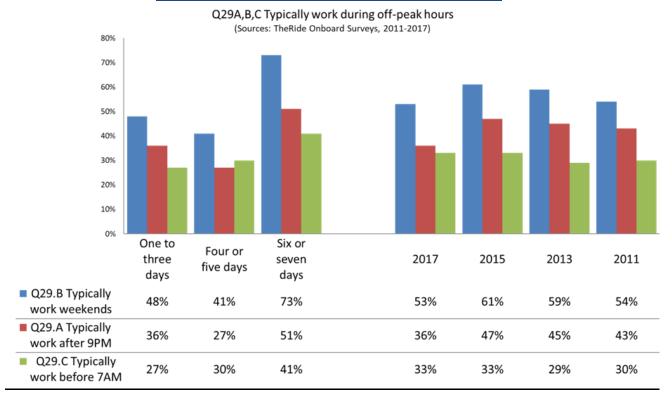
In surveys prior to 2015, an absolute majority of riders had been students, either students-only or students who are also employed. In 2013, for example, 47% of riders indicated they were students-only and another 6% indicated they are both students and employed, for a total of 53% of TheRide's users. In 2015, for the first time, the percentage of students in the ridership declined to less than a majority (total of 47%), and in 2017 stands at 46% (36% students-only and 10% students who are also employed). This is statistically the same as in 2015.

The next largest group other than students consists of persons who are employed for pay outside their homes (44%), up slightly from 39% in 2015. The increase in this percentage may constitute a trend. It grew from 34% in 2013 to 39% in 2015 and to 44% in 2017.

The one to three-day rider segment is more likely than the others to consist of students (total of 53%). Conversely, the four or five-day and seven-day riders are more likely (49% and 44%, respectively) than the more occasional, one to three-day riders (33%) to be employed outside the home. All three segments, however, have substantial numbers of both employed and student riders.



Figure 30 Employment at Non-Peak Times



Employment at Non-Peak Times

Riders who are employed outside the home were asked whether they work during off-peak times, specifically weekend days, and/or after 9:00 PM on any day of the week. Included among the employed riders are both those who are only employed and those who are both students and employed.

- Of employed riders, 53% indicated that they must work on the weekend, down from 61% in 2015 and 59% in 2013; this has returned to close to the 2011 level of 54%. The reasons for the fluctuations are not apparent.
- Thirty-six percent (36%) indicated they must work on one or more days a week after 9:00 PM.
 This is down from 47% in 2015 and 45% in 2013.
- Thirty-three percent (33%) say they must begin work before 7:00 AM on at least some work
 days. This percentage has been rather consistent, varying by only a low of 29% in 2013 to 33%
 in 2015 and 2017.

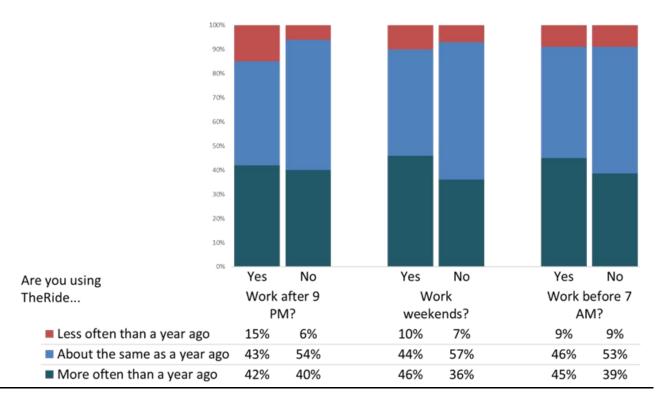
As one would anticipate, the obligation to work in these off-peak periods is greater among the intensive, seven-day-a-week riders. They are more likely to be lower in income than the other segments and are more likely to hold jobs that require weekend and evening work.

It should be noted that AAATA has very substantially increased service on weekends and has increased service during the evening seven-days a week.



Figure 31 Employment at Non-Peak Times & Using TheRide More/Less Often than a Year Ago

Change in overall use of TheRide, and employment during off-peak times (Source, TheRide Onboard Survey, 2017)



Employment at Non-Peak Times & Using TheRide More/Less Often than a Year Ago

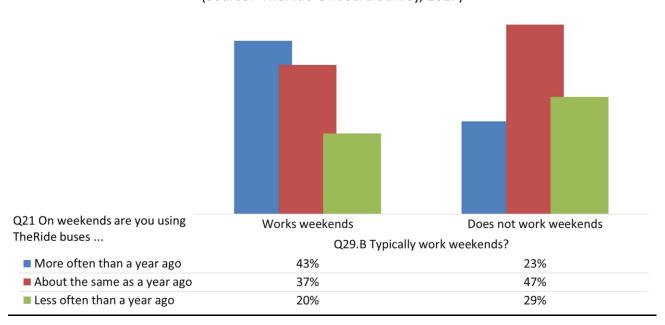
Given that off-peak service, although expanded in recent years, is nonetheless less available than peak weekday service, it seems likely that riders who work during off-peak shifts would be more likely to say they were using TheRide less often than in the previous year. This assumes, of course, that the job shift began within the previous year.

We find that those who work after 9:00 PM are indeed more likely (15%) to say they are using TheRide less often compared to those who do not work at those hours (6%). However, the relationship to weekend work is not strong at all, and there is no relationship between changing use of TheRide and having to work before 7:00 AM.



Figure 32 Working Weekends and Using TheRide More/Less Often on Weekends

Q21 On Weekends, are you using TheRide buses... (Source: TheRide Onboard Survey, 2017)



Working weekends and Using TheRide More/Less Often on Weekends

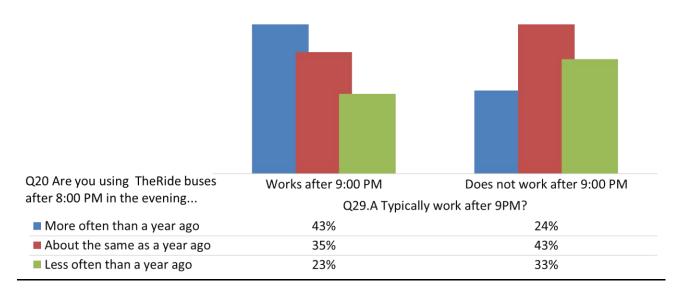
There is a clear tendency for those who work on the weekends to say they are using TheRide more often than in the previous year. Without more information on when the weekend work began, we cannot conclude definitively that the increased use is a result of the increases in both TheRide's coverage and hours of service, since the same riders may have increased their use of TheRide even in the absence of service expansion. (Actual ridership records would provide a better test of this than survey data.)

However, the results shown in Figure 32 appear consistent with the interpretation that increase in weekend service has resulted in increased utilization. While 43% of those who work on the weekend say they are using TheRide more often, only 23% of those not working weekends say the same thing. And while 29% of those not working weekends say they are using TheRide less often now, only 20% of weekend workers say they are using it less.



<u>Figure 33 Working after 9:00 PM and Using TheRide More/Less Often after 8:00 PM</u>

Q20 Are you using TheRide buses after 8:00 PM in the evening... (Source: TheRide Onboard Survey, 2017)



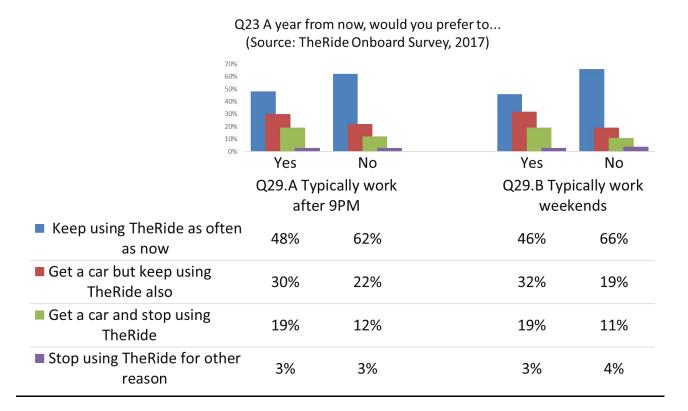
Working after 9:00 PM and Using TheRide More/Less Often after 8:00 PM

The logic of weekend work being associated with increased use of TheRide on the weekend applies by analogy to working after 9:00 PM and using TheRide more often or less often in the evening. In Figure 33 above, we see that indeed those who work after 9:00 PM are more likely (43%) than those who do not (24%) to say they are using TheRide more often in the evening. Moreover, the post-9:00 PM workers are much less likely (23%) than others (33%) to say they are using TheRide less often.

While we cannot definitively prove with an academic level of certainty that this is the case, it certainly appears that the expanded services of TheRide are leading to greater utilization among existing riders. This may well have to do with the fact that, while most bus systems are experiencing ridership declines, TheRide has enjoyed an increase.



Figure 34 Off-Peak Work and Preference for Use of TheRide Next Year



Off-Peak Work and Preference for Use of TheRide Next Year

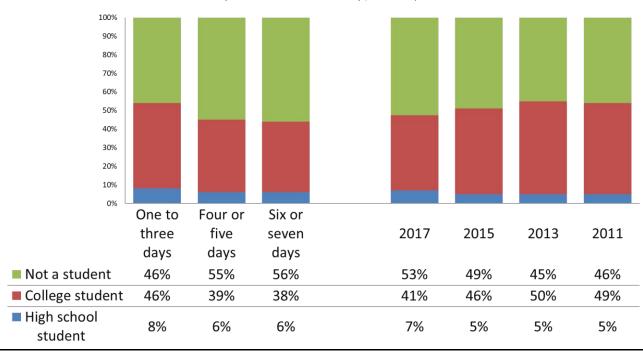
Even with the expanded coverage and hours of service, those riders who work after 9:00 PM or on the weekend are more likely than others to say they would prefer to have a car, and less likely to say they would prefer to keep using TheRide as often as they do now.

For example, of those working after 9:00 PM, 30% say they would prefer to get a car, but also continue using TheRide. Presumably the car offers greater flexibility, especially at those times when service, although expanded, is reduced. A similar response occurs among those who work weekends. Thirty-two percent (32%) of that group say they would like to "get a car but keep using TheRide also."



Figure 35 Student Status

Q28 Student status
(Sources: TheRide Onboard Surveys, 2011-2017)



Student Status

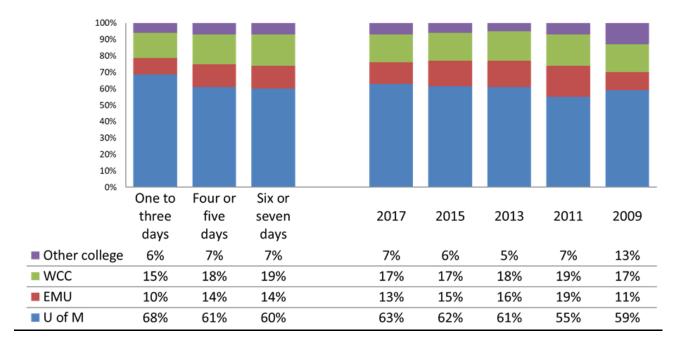
Many (41%) of TheRide's riders are college students and another 7% are high school students. These percentages have declined somewhat from 49% in 2011 to 50% in 2013, and 46% in 2015. There is a corresponding increase in the percentage of non-student ridership which grew from 45% in 2013 to 53% in 2017.

As there was in previous years, in 2017 there is an inverse relationship between being a college student and frequency of using TheRide. Of one to three-day riders, 46% are college students. However, fewer (38%) of the six or seven-day riders are college students.



Figure 36 School/College Attended

Q28A Which school do students attend? (Sources: TheRide Onboard Surveys, 2009-2017)



School/College Attended

Those riders who indicated that they are students were asked which school they attend. Of all student riders (a category which includes both employed students and students-only) 63% said they attend the University of Michigan, while 17% attend Washtenaw Community College, 13% Eastern Michigan University, and 7% other schools.

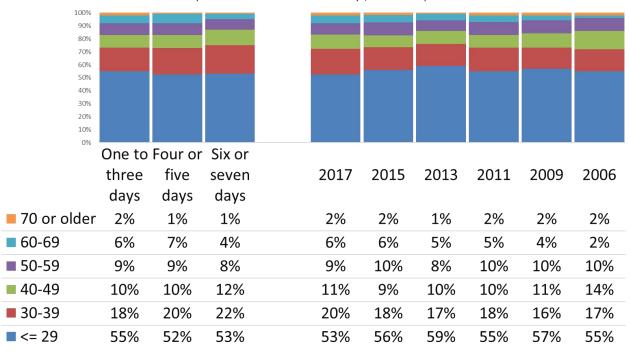
These proportions are statistically the same as in 2015.



Figure 37 Age of Riders

Q26 How old are you?

(Sources: TheRide Onboard Surveys, 2006-2017)

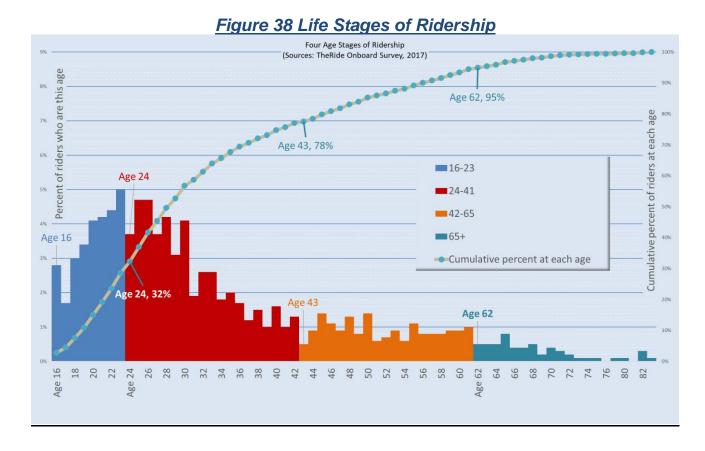


Age of Riders

In the United States, transit riders tend to be young, even in towns without major universities. This is especially true, however, in university towns such as Ann Arbor. Of all those using TheRide in 2017, 53% are under the age of thirty, slightly lower than the 56% in 2015 and 59% in 2013. Given that students make up a very substantial portion of the total ridership, this is not surprising. Although the percentage of riders younger than thirty has declined somewhat since 2013, overall, since 2006, the fundamental age distribution of the ridership has changed only marginally.

There are only minor and ignorable differences among the segments in terms of the age distributions.





Life Stages of Ridership

There are four general age-related life stages of ridership within most of the transit systems CJI has studied. The proportion of riders within each two-year age cohort rises with age until the early twenties (in this case twenty-three), and then declines rapidly from that peak to the early forties. The age dividing line between the categories is somewhat arbitrary, and arguably the line might be drawn at forty, forty-one, or forty-two. Here, we have used the age of forty-three. The age-distribution then becomes more or less flat, varying from tenths of a percent to one percent during career years of forty-three to sixty-two, when, as retirement nears for some and begins for others at about the age of sixty-five, it declines again and again remains flat.

While the chart in Figure 38 represents the age distribution of the total ridership as a static snapshot, it also suggests that this is a trajectory of individuals' probabilities of becoming a transit rider. As age increases from sixteen to twenty-three, his or her probability of using transit increases. Then from twenty-four to forty-three his or her probability of using transit decrease rapidly, then stabilizes within a narrow range until retirement nears.

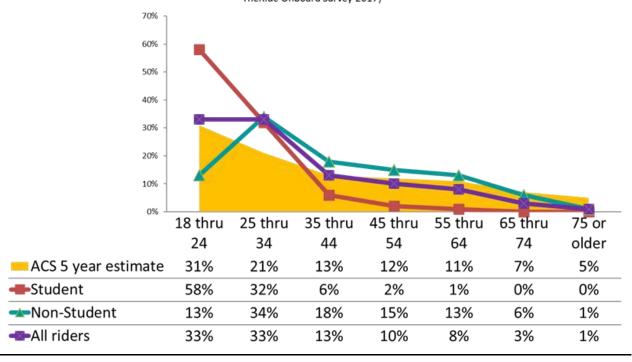
In terms of trying to increase ridership, the message is clear. The odds of increasing share among those who have settled into a lifestyle pattern in their forties or older are slim to none. The possibility of increasing share among the younger population whose peers already have some propensity to ride are greater. Retaining the population in their thirties for another six months or a year, similarly has potential.



Figure 39 Age of Riders and the Public

Age of the public and of riders

(Sources: American Community Survey, 2016 (5 year estimates) and TheRide Onboard Survey 2017)



Age of the General Public and Age of AAATA Riders

In most transit systems we observe a substantial gap between the ages of the population and the aggregate age of the ridership, with the ridership being far younger than the general public. In the case of TheRide, the differences do exist in the usual direction, but they are smaller than we usually observe. As a result, the age profile of all riders in 2017 (red line in Figure 39), matches reasonably closely the profile of Ann Arbor and Ypsilanti (yellow area).

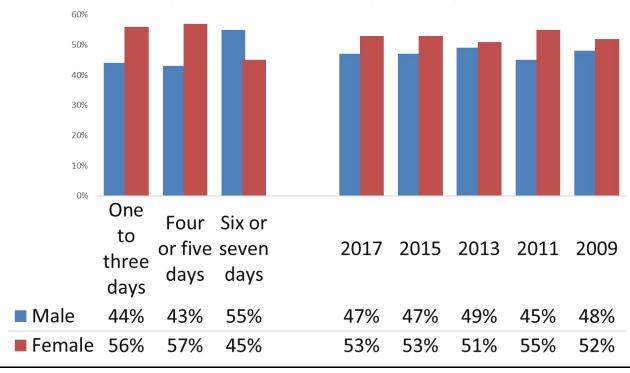
The differences that do appear are almost entirely related to the extreme differences between the ages of students and the ages of other riders.



Figure 40 Gender of Riders

Q30 Gender

(Sources: TheRide Onboard Surveys, 2009-2017)



Gender of Riders

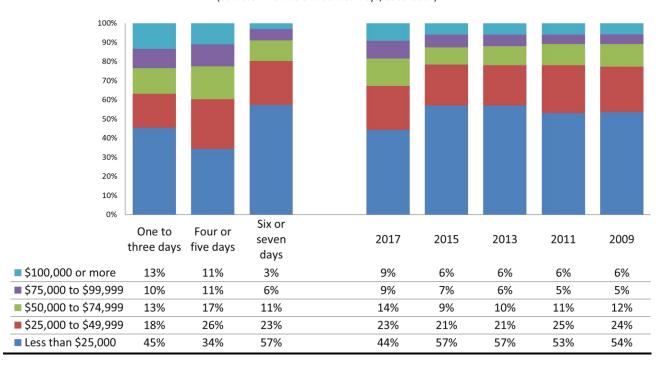
According to the five-year estimates (2016) of the American Community Survey, the total population of Ann Arbor, Ypsilanti City, and Ypsilanti Township is 51% female, 49% male. In 2017, the gender distribution of riders was very close to that distribution with a ratio of 53% women to 47% men, the same proportions observed in 2015. The high percentage of women in 2011 (55%) was exceptional and probably was caused by some unknown short-term factor affecting the ridership at that time.

Occasional, one to three-day riders (56%) and four or five -day riders (57%) are more often female than are the six or seven-day (45%) who are predominantly male.



Figure 41 Income of Rider Househollds

Q32 Income (Sources: TheRide Onboard Surveys, 2009-2017)



Income of Rider Households

In 2017, unlike previous years, fewer than half of all riders (44%) report household incomes of less than \$25,000 annually. This represents a very major change compared to prior surveys. What accounts for this is not known from the data. However, there are clues. For one thing, the percentage of persons employed outside the home increased from 39% to 44% since 2015, continuing the increases from 34% in 2013 to 39% in 2015 (see Figure 29). In addition, the ridership in 2017 is somewhat older (see Figure 37), and thus many riders would be further along on a career path.

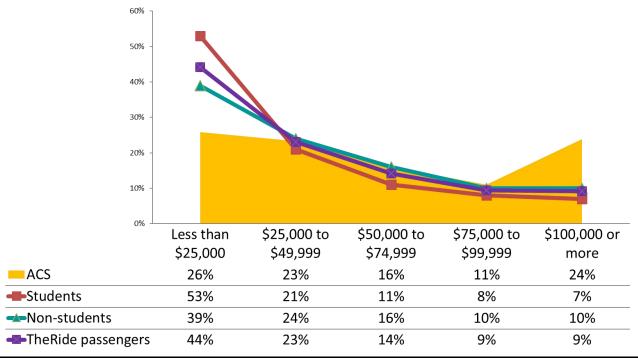
As is true of virtually all transit systems in the United States, the incomes of most frequent users of TheRide are more likely to be in the lowest category than are the incomes of the less frequent riders. For example, 57% of the households in the six or seven-day rider category report incomes of less than \$25,000 annually, but "only" 34% of the four or five-day report incomes this low. Yet both of these low-income percentages are substantially lower than in 2015 when they stood at 68% and 45%, respectively.



Figure 42 Income of Student and Non-Student Riders and the Public

Q32 Household income

(Source: American Community Survey, five year estimates, 2016 and TheRide Onboard Survey, 2017)



Income of Student and Non-Student Riders and the Public

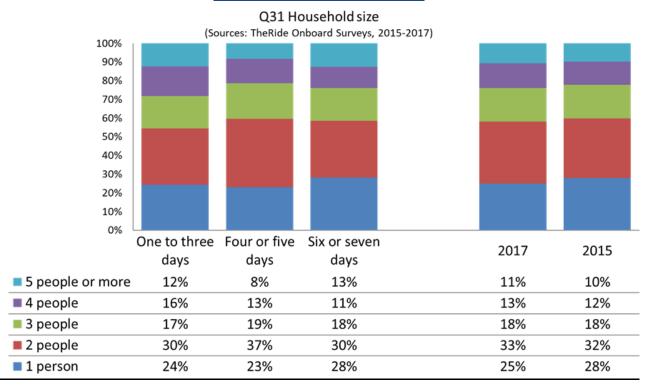
Because students are likely to have low incomes, but to be preparing for careers in which they are likely to have much higher future incomes, students and non-students are shown separately in Figure 42.

Students in general, if only because of their youth and current lack of the level of income they will one day enjoy, do have incomes lower than others. Indeed, while 39% of non-student riders have incomes in the lowest income level, 53% of students fall into that very low-income group.

Comparing riders to the population as a whole, it is apparent that differences between TheRide's riders and the general population occur at the income extremes. That is, while the percentages of the adult population and riders with incomes ranging from \$25,000 to \$99,000 are similar to those of the total adult population, the percentages at the low and high ends of the income spectrum differ considerably.



Figure 43 Household Size



Household Size

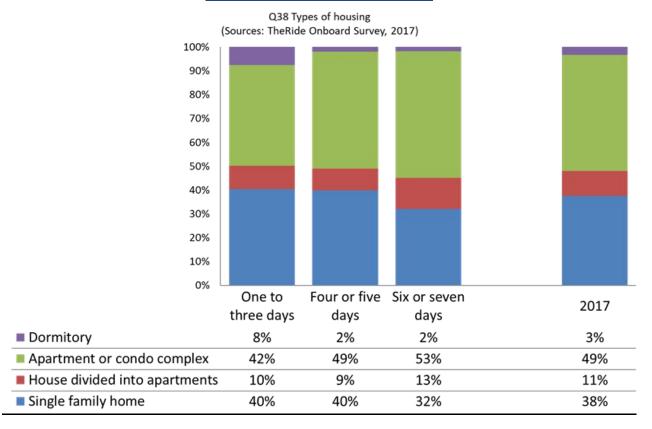
One-fourth (25%) of TheRide's users live alone. Another third (33%) live in two-person households. The balance (42%) live in larger households with three or more persons.

The six or seven-day riders are somewhat more likely (28%) than the four or five-day riders (23%) and one to three-day (24%) riders to live in single person households.

Household size is important to the computation of federal poverty level incomes which are based on per capita income within a household. A table of poverty level income among the ridership is provided in Appendix C: Poverty Level Incomes, page 81.



Figure 44 Types of Housing



Types of Housing

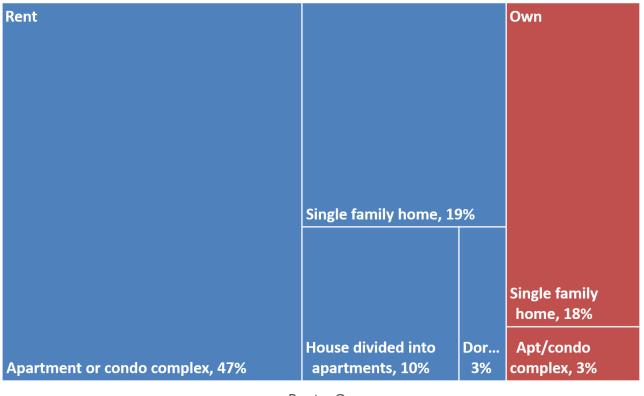
More riders live in condo or apartment complexes (49%) than in any other form of housing. More than one-third (38%) live in single family homes, while 11% live in apartments contained within houses. Only 3% live in dormitories.

The same rank order of housing types prevails among the three rider segments. However, the most frequent riders are more likely than the other segments to live in a complex of apartments or condos.



Figure 45 Types of Housing and Renting/Owning

Q37 & Q38 Renting/owning, and type of housing (Source: TheRide Onboard Survey, 2017)



Rent Own

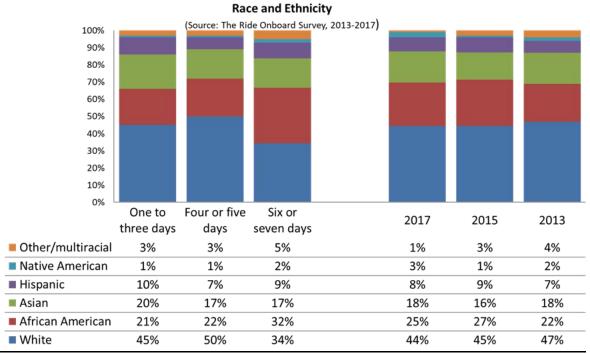
Types of Housing and Renting or Owning

Most riders (79%) rent housing while only 21% own. Almost half of all riders (47%) rent housing in apartment or condo complexes. Another 19% rent a single-family home, while 10% rent an apartment within a house broken into apartments. In spite of the large proportion of students in the ridership, only 3% live in dormitories.

Those who own a single-family home comprise 18% of the riders, while another 3% own a condo.



Figure 46 Race and Ethnicity



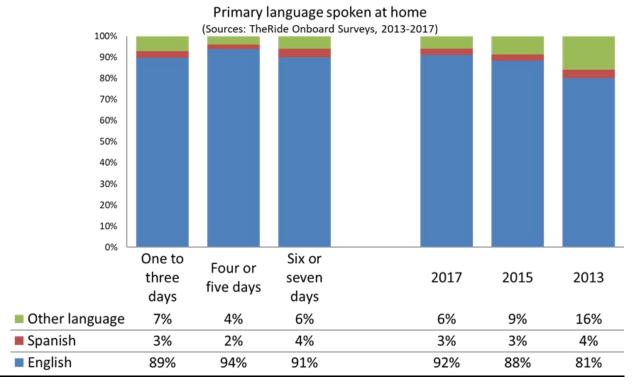
Race and Ethnicity

Ethnic identity has changed very little during the course of three surveys beginning in 2013. The three major groups are Caucasian/white (44%), African American (25%), and Asian (18%). While these figures have moved up or down from survey to survey, the overall distributions have remained quite consistent.

The distributions of the racial groups vary substantially among the rider segments. More of the six or seven-day (32%) self-identify as African American/Black than do the four or five-day (22%) or one to three-day (21%). Conversely, the four or five-day riders are more likely (50%) than the six or seven-day riders (34%) or one to three-day (45%) to self-identify as Caucasian/White.



Figure 47 Primary Language



Primary Language

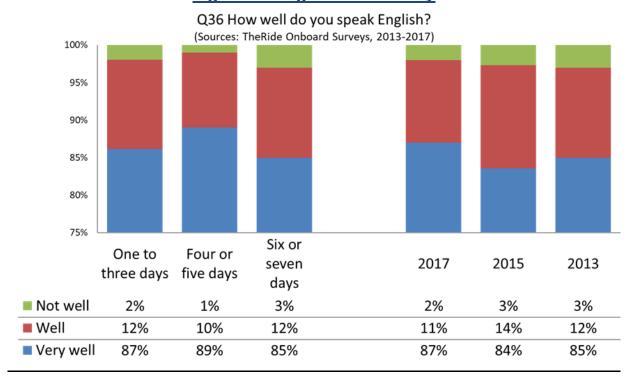
Respondents were asked what language they most often speak at home. Given the ethnic makeup of the ridership, it is not a surprise that 92% indicate that they speak English at home, and another 3% say they speak Spanish, while 6% said they speak another language.

It is interesting that languages other than English and Spanish declined as a share of the languages spoken by riders from 16% in 2013 to 9% in 2015 and 6% in 2017. Simultaneously, the percent speaking English at home increased from 81% in 2013 to 92% in 2017. Given the substantial degree of stability in the ethnic identification of the riders, the gradual change in language is unexpected and interesting, but lacks ready explanation. It may, however, have to do with the gradual percentage decline in student riders. In the 2017 survey, students (9%) are more likely than other riders (3%) to say they speak a language other than English or Spanish at home. If this relationship held true in previous surveys, it would explain the change in language in terms of the change in student ridership.

The rider frequency segments do not differ substantially in terms of the language spoken at home.



Figure 48 English Proficiency



English Proficiency

Asked how well they speak English, the overwhelming majority of riders, 87%, answered that they speak English very well. Another 11% indicated that they speak English well. Only 2% indicated that they do not speak English well. This tendency differs only slightly among the rider frequency segments.



Customer Satisfaction with Service



Figure 49 Satisfaction Questions

14. How satisfied or dissatisfied are you with TheRide service in each of the following areas?	Don't know	(i) Dissatisfied			(E) Neutral			(c) Satisfied
a. Drivers' courtesy with passengers		1	2	3	4	5	6	7
b. Overall quality of customer information		1	2	3	4	5	6	7
c. Cleanliness of bus interiors		1	2	3	4	5	6	7
d. Safety from accidents		1	2	3	4	5	6	7
e. Personal security		1	2	3	4	5	6	7
$\ensuremath{\text{f.}}$ The physical condition of the bus stop you use		1	2	3	4	5	6	7
g. Distance to bus stop you use most often		1	2	3	4	5	6	7
h Sufficient service to areas you want to go to		1	2	3	4	5	6	7
i. Dependability of making transfers		1	2	3	4	5	6	7
j. Directness of routes		1	2	3	4	5	6	7
k. Total duration of your trip		1	2	3	4	5	6	7
I. Predictability of bus arrivals		1	2	3	4	5	6	7
m. TheRide Service overal		1	2	3	4	5	6	7

Satisfaction Questions

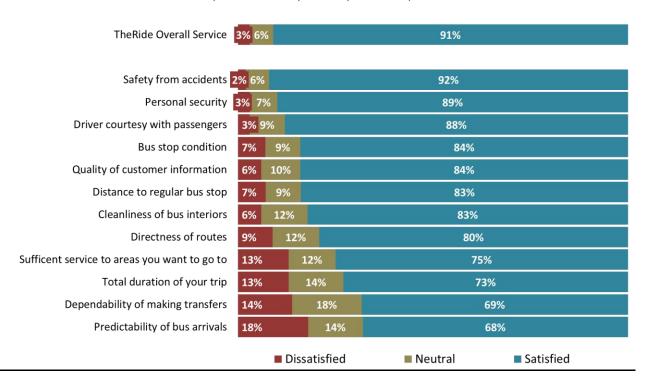
For the sake of better understanding the tables that follow, the original wording and format of the satisfaction questions is shown above.



Figure 50 Satisfaction with Service

Satisfaction with Service

(Source: The Ride Onboard Survey, 2017, Q14A-M) ("Not" sure and "No experience" responses excluded)



Satisfaction with Service

Riders were asked to rate TheRide on twelve specific aspects of service, as well as overall service, on a scale from one to seven. On the scale, a score of five, six, or seven indicate a positive level of satisfaction, a score of four indicates neutrality, and scores from one to three indicate dissatisfaction. A special checkbox indicates that the passenger lacked sufficient information to be able to make a judgment.

Figure 50 combines responses into the three sets described above. The percent who were not sure how to respond are excluded.

The first thing to notice is that all aspects of service are rated positively by more than two-thirds of responding riders. At the top is safety from accidents followed by a sense of personal security. In some systems the sense of personal security is ranked low, while for TheRide is it near the top of the rankings. The communities where it is rated poorly and thus low in the rankings, generally are more urban and are economically and demographically more diverse than Ann Arbor.

It is typical among bus systems CJI has studied that the service element items low in the rank order are operational. These include (from low rank to higher rank) on time performance, more accurately described here as "Predictability of bus arrivals,2" transfer dependability (which depends, in part, on predictability of arrivals), trip duration, and sufficient service where you want to go. These are structural and operations elements of service that are very challenging to alter in a manner that would produce consistently high scores. The fact that majorities of more than two-thirds of riders rate those aspects positively represents better satisfaction levels than in many systems we have studied.

² Thanks to Mr. Ken Anderson for this suggestion.



Figure 51 Detailed Satisfaction Ratings

Detail of service satisfaction scores								
	Don't know	Dissatisfied			Neutral			Satisfied
Score:	0	1	2	3	4	5	6	7
Q14.M TheRide Service overall	1%	0%	0%	2%	6%	18%	37%	37%
Q14.A Drivers' courtesy with passengers	1%	1%	1%	2%	9%	9%	20%	58%
Q14.B Overall quality of customer information	2%	1%	1%	3%	10%	15%	22%	47%
Q14.C Cleanliness of bus interiors	0%	1%	1%	4%	12%	16%	24%	43%
Q14.D Safety from accidents	1%	0%	0%	1%	6%	8%	22%	62%
Q14.E Personal security	1%	1%	1%	2%	7%	9%	23%	57%
Q14.F Physical conditioni of the bus stop you use	1%	2%	2%	4%	9%	13%	24%	46%
Q14.G Distance to bus stop you use most often	1%	2%	2%	3%	9%	11%	19%	54%
Q14.H Sufficient service to areas you want to go to	2%	3%	3%	7%	11%	14%	22%	39%
Q14.I Dependability of making transfers	21%	3%	4%	6%	18%	15%	18%	36%
Q14.J Directness of routes	2%	2%	2%	5%	11%	17%	23%	39%
Q14.K Total duration of your trip	0%	2%	4%	7%	14%	16%	22%	35%
Q14.L Predictability of bus arrivals	1%	5%	5%	9%	14%	17%	21%	29%

Detailed Satisfaction Ratings

The table above presents a detailed overview of the satisfaction scores. As in the previous chart, and with the exception of the rating for overall service, the ratings are displayed in descending order of the percent giving positive scores of five, six, or seven. But now the levels within the satisfaction scores are broken out. In this table, those who indicated they were unsure how to answer are shown, but not included in the computation of the percentages for each rating. In this way, in a single table we can see both the level of familiarity with the service and the opinions of those with enough familiarity to offer a score. The only aspect of service with a "don't know" percentage sufficiently large to strongly affect the satisfaction score is 21% for transfer dependability.

The real variation in scores occurs between a score of four and a score of seven. Scores of one, two, and three are given infrequently. This is typical of most satisfaction scores and is not surprising. After all, these are people who are using TheRide with some regularity and it would be surprising if they continued to do so while rating many of the services very negatively. The real differences are not between a negative view of service and a positive view, but rather in the levels in the continuum of mostly positive ratings. The only exceptions to this are frequency of service and on time performance, and even those scores are far more positive than negative.

Frequency of service and predictability of bus arrivals are relatively low rated but have to be seen in two contexts. First the relatively lower ratings of these two elements of service are almost universal among CJI's studies of all bus systems. Given the normal challenges of operating in traffic, in all weather, all manner of street configurations, and the realities of budgetary limits on frequency, the relatively lower rankings of these aspects of service within the list of all services is virtually inherent in the operation of buses in other than dedicated lanes, and is not surprising.



Figure 52 Satisfaction with Service Over Time

Customer satisfaction, 2006 through 2017								
Multi-year questions - All riders (excluding "don't know") Wording of several items has changed slightly over time. "na" indiicates an equivalent	Mean on scale of 1 - 7						Change	Rank order
question was not asked.	2017	2015	2013	2011	2009	2006	2015 to 2017	2017
Q14.D Safety from accidents	6.31	6.21	6.11	6.21	6.17	6.02	0.10	1
Q14.E Personal security	6.15	6.03	5.94	6.07	6.02	5.92	0.12	2
Q14.A Drivers' courtesy with passengers	6.13	5.97	5.80	5.93	5.84	5.73	0.16	3
Q14.G Distance to bus stop you use most often	5.93	5.65	5.65	5.78	na	5.56	0.28	4
Q14.B Overall quality of customer information	5.87	5.86	5.86	5.97	5.91	5.82	0.01	5
Q14.F Physical condition of the bus stop you use	5.84	5.63	5.51	5.65	na	na	0.21	6
Q14.C Cleanliness of bus interiors	5.77	5.64	5.69	5.82	5.77	5.74	0.13	7
Q14.J Directness of routes	5.65	5.64	5.54	5.66	5.64	na	0.01	8
Q14.H Sufficient service to areas you want to go to	5.48	5.54	5.36	5.58	5.53	na	-0.06	9
Q14.I Dependability of making transfers	5.34	5.29	5.30	5.42	5.35	5.51	0.05	10
Q14.L Predictability of bus arrivals	5.1	4.74	4.83	5.01	4.97	5.19	0.36	11
Q14.M TheRide Service overall	5.92	5.85	5.80	5.93	5.85	5.84	0.07	

Satisfaction with Service Over Time

There have been several changes in mean ratings (simple average ratings on the scale from one to seven) since 2013. With one exception (which is minor and can be ignored) change in the mean satisfaction scores between 2015 and 2017 has been in a positive direction. However, while the changes are interesting, some of them must be taken with a grain of salt because wordings of some questions have changed.

The largest of the apparent changes is in the predictability of bus arrivals which, if we assume equivalency of question wording, gained .36 points from 4.74 to 5.1. In previous surveys the wording was "On-time performance" or "Buses running on schedule." In citing change, we are assuming equivalency, which may or may not be entirely valid. However, there are reasons to believe this may in fact reflect improved perceptions. Service frequency was increased on several routes and, as important, more people are using smartphones and related transit apps showing location of the next bus. Thus, uncertainty is reduced and predictability improved. Moreover, in the past year, the projected arrival signs at the transit centers have been upgraded and earlier problems with the system resolved. Thus, it may be not so much a change in on-time performance, as in the reliability of arrival predictions.

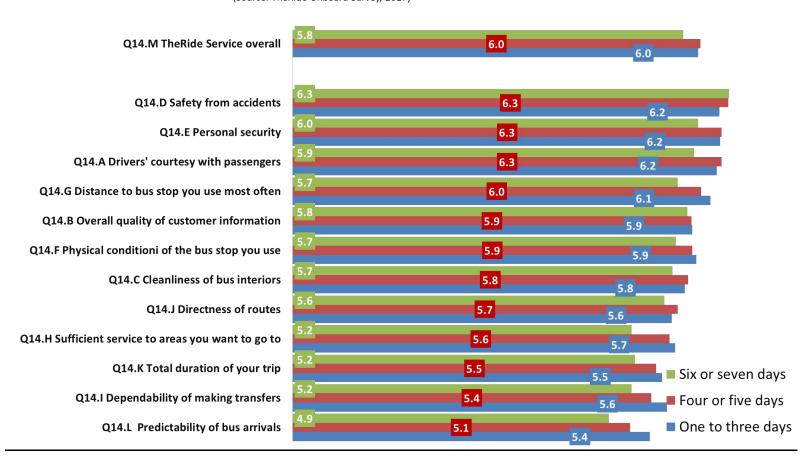
Two aspects of bus stops appear to have enjoyed improved mean ratings, although again, the wording of the questions may be a factor. The score of distance to the bus stop used most often is higher in 2017 when compared to results of previous years when the wording was "The location of the bus stops you use," a much broader concept that includes the social and traffic surroundings. Also, the mean for "physical condition of the bus stop you use" is higher in 2017 in comparison to previous years, but the wording was changed for this question as well. Previously it asked riders to rate the "Quality of bus stops you use."

We would also point out that the rank order of the mean scores is almost identical in movement, with the exception of distance to the bus stop, between ranks (only one place).



Figure 53 Mean Ratings by Rider Frequency Segments

Mean satisfaction ratings by frequency of using TheRide
(Source: TheRide Onboard Survey, 2017)



Mean Ratings by Rider Frequency Over Time

It is fairly typical for six or seven-day riders to offer service ratings that are somewhat lower compared to ratings given by less frequent riders. A primary reason is that the six or seven-day often lack the regular hours and simplicity of commuting routes that the four or five-day are more likely to experience. In addition, they are more transit dependent. Thus, they usually use the system differently from less frequent users. For example, they are more likely to transfer to obtain the coverage they need, making more trips per day, and using transit during hours of reduced service and on weekends. Finally, simply by making more trips per day on more days each week, they have more opportunities to observe whatever may go wrong in the course of a normal service day.



Identifying the <u>Relatively</u> Greater and Lesser Levels of Service Satisfaction



Introduction to a Quadrant Chart Method of Displaying Service Improvement Priorities

Prioritizing areas for service improvement is a major operational challenge for a transit system. Manipulating survey data from passengers to try to divine their priorities is similarly a tricky proposition. Figure 54 on page 68 presents one approach to that task.

The concept of the chart is this. The satisfaction questions include one rating of TheRide service "overall" and a series of many ratings of individual elements of service. The key objective of the chart is to combine the individual rating of each element of service and the relationship of each element with the overall rating. The intent is to answer the question: "How important is each element, like driver courtesy or frequency of service, etc. to the passengers' rating of TheRide service overall?" and thus, "What actions should the TheRide's administration take with respect to each element of service?"

We use correlation analysis for this purpose. A coefficient of correlation can vary from -1 to +1. The rating scores vary from one to seven. Because these are such different numbers in absolute terms, the only realistic way to compare them is to *standardize* them. This simply means to relativize them with respect to each other so that they can be compared. Thus, the resulting chart is not a chart of absolute scores on each service but a combination of how well a service was rated and how strongly that rating is associated with the overall rating of TheRide's service.

The resulting chart contains four quadrants:

High	each service rating of	Keys to improving satisfaction: Relatively poor performance on these services compared to others and this is related to overall level of satisfaction. Performance here hurts overall rating.	Maintain your strong position. Each item performs relatively well compared to other items and is related to overall satisfaction.						
Low	Correlation of ex rating with the r overall service	Work on this if possible, but not as top priority for increasing satisfaction among current riders. <i>Relatively</i> poor performance but that makes little difference in overall satisfaction score. Riders would be happier with improvement.	Maintain satisfaction. Performance of this service is well rated <i>relative</i> to other services, but that makes little difference in overall satisfaction.						
	Service performance rating								
	Low High								



In a chart presented earlier in this report we saw that all aspects of service have rather high marks. Even the lowest ratings are given positive scores by more than two-thirds of the riders. What is especially interesting about the quadrant matrix shown in Figure 54, then, is that it represents riders' perceptions of a system that they already regard quite positively. However, the riders find they want still more—more predictability, more places served, shorter duration, and more directness.

(Please note that unlike the other charts, in the matrix, the variable names had to be abbreviated.)

The matrix is quite similar to the matrix presented in the 2015 report (See Figure 48, page 64, "A Survey of Users of TheRide, 2015.") Some of the service elements measured were changed, but in general the results are very similar in terms of what riders want.

It would not be self-evident to riders that there are contradictions here between a desire, for example, for directness of routes and for greater territorial coverage. Nevertheless, these are the rider perceptions that are related to the overall satisfaction score.

At the upper right are particular strengths that have a relatively strong and positive impact on overall satisfaction, compared to other aspects of service. In this survey, there is only one variable, the quality of information. This was also true in 2015.

Also positive, but relatively less important to the overall attitude toward TheRide, are items at the ride side of the chart, but below the horizontal center line. In other words, these elements are perceived positively by riders, but have relatively little impact on the overall rating. They appear to have become simply assumed positive qualities of TheRide. It is important not to allow these to slip in quality because they are very personal aspects of local bus travel. The challenge here is maintenance, not improvement.

Uniquely among systems we have studied, the lower left quadrant is empty. At the lower left would be those service elements that on a relative basis are less well rated than others, but that are not especially important to the overall rating of TheRide. In 2015, three elements appeared in this quadrant, but they were positioned very close to the midpoint on the horizontal quality of service axis. In 2017, they have all moved up in quality and have moved to the right of the midpoint.

It should be noted that in some systems we see the items in the upper left quadrant that occupy the lower right quadrant for TheRide. For example, bus cleanliness, condition of the bus stops, and personal security are, in some systems, at the upper left. In part, that has to do with the size and nature of the urban area being served. However, it also appears that TheRide has done well to take care of those kinds of issues that are irritants to riders, thus leaving the very basic and most difficult elements in the need-to-improve quadrant.



Figure 54 How Service Ratings Relate to Overall Service Rating

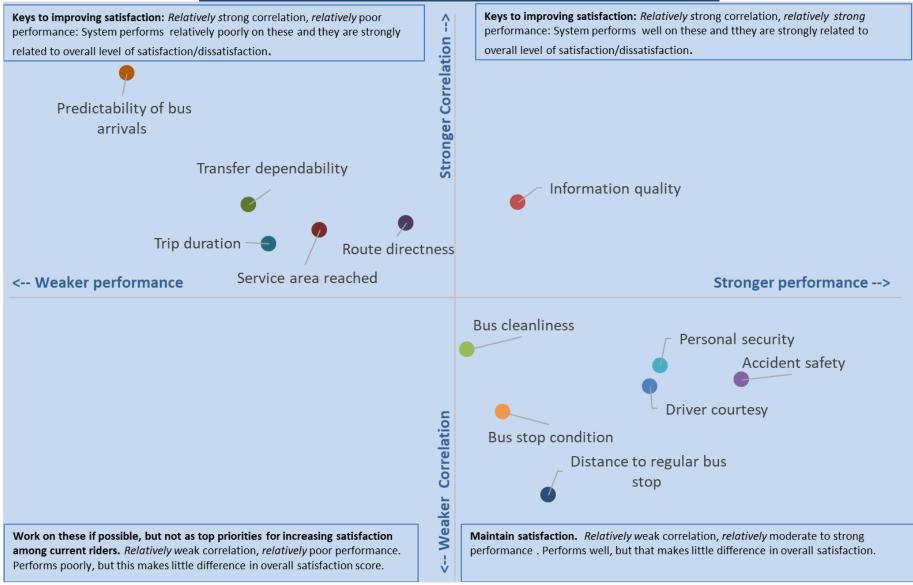
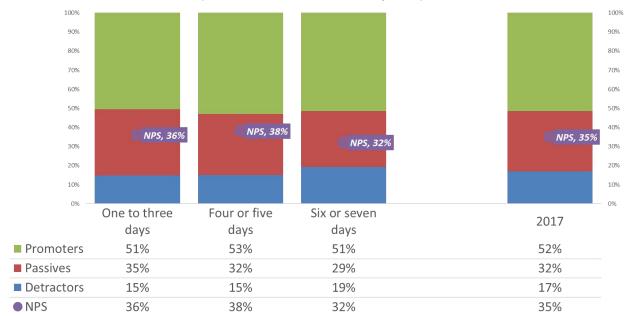




Figure 55 The Net Promoter Score

Q15 Net Promoter Score (Source: TheRide Onboard Survey, 2017)



^{*} Net Promoter® and NPS® are registered trademarks and Net Promoter Score and Net Promoter System are trademarks of Bain & Company, Satmetrix Systems and Fred Reichheld.

The Net Promoter Score

The Net Promoter Score, or NPS®, is a commercially marketed analysis tool that is widely used among corporations to compare performance on a common customer satisfaction standard. It is computed based on the response to the question: *How likely are you to recommend TheRide to a friend or colleague?* Responses are recorded on an eleven-point scale from zero to ten.

In the NPS concept:

- Promoters (score 9-10) are loyal enthusiasts who will continue to be customers and refer others, fueling growth.
- Passives (score 7-8) are satisfied but unenthusiastic customers who are vulnerable to competitive
 offerings.
- Detractors (score 0-6) are unhappy customers who can damage your brand and impede growth through negative word-of-mouth.

To calculate the Net Promoter Score (NPS®), take the percentage of customers who are Promoters and subtract the percentage who are Detractors³.

For all riders in 2017 NPS score is 35%. Two other systems studied by CJI recently asked that the NPS be used. Both are in the Research Triangle area of North Carolina. In 2015, the score for the Durham system ("GoDurham") was only 4.5%, but with service changes since then, there was dramatic improvement, with the score rising to 17%. For the regional system serving the greater Triangle area ("GoTriangle"), the GoTriangle NPS score was 43% in 2016.

³ Quoted from the Net Promoter Community website, Satmetrix, at http://www.netpromoter.com/know/

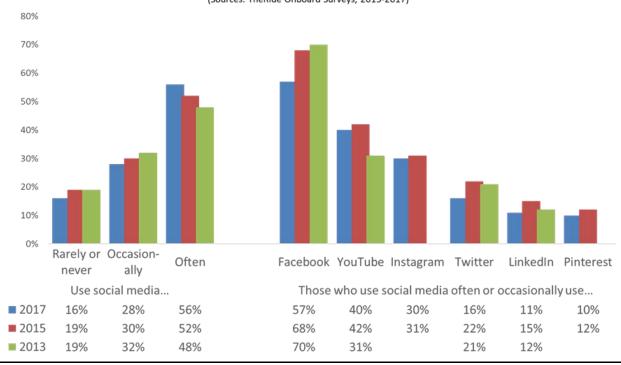


Use of Social Media and Other Information Sources



Figure 56 Use of Social Media

Q39, Q40 Use of social media (Sources: TheRide Onboard Surveys, 2013-2017)



Use of Social Media

Riders were asked how often they use social media. Fifty-six percent (56%) of riders say they use it often and another 28% say that they do so occasionally. This represents a modest increase from 2015 when 52% said they used social media often⁴.

Of all riders, 57% say they use Facebook, a significant decline since 2015 when the comparable figure was 68%. It has been widely reported that Facebook was losing teen market share to Instagram and Snapchat. Various publications cite eMarketer as estimating the loss at 3.4%⁵.

Although it declined, Facebook remains, by far, the most commonly used social medium. YouTube is next with 40%, about the same as the 42% using it in 2015. Instagram is a strong third, with 30% using it, about the same as the 31% in 2015.

⁵ See http://www.businessinsider.com/facebook-losing-teen-users-faster-to-instagram-and-snapchat-2017-8

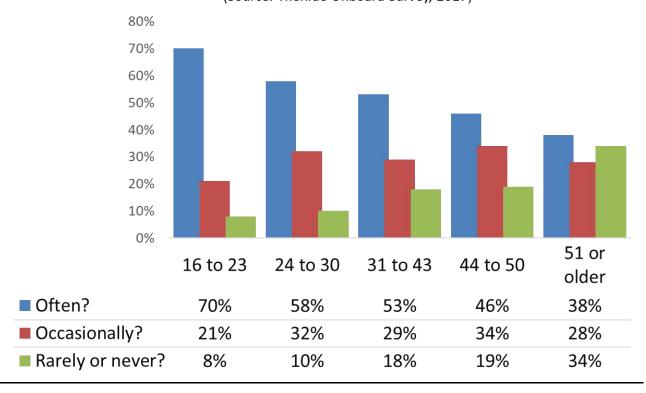


AAATA Onboard Survey, 2017

⁴ The percentages reported here for 2013 are somewhat different from the percentages in the 2013 report. The reason is that the questions were asked in a slightly different manner and they had to be made as comparable as possible in terms of the percentage base.

Figure 57 Age and the Use of Social Media

Q39 Do you use social media... (Source: TheRide Onboard Survey, 2017)



Age and the Use of Social Media

It is not a surprise that the frequency of using social media among TheRide's riders is closely related to age. While 70% of riders from sixteen to twenty-three say they use social media often, only 38% of those fifty-one or older say they do so. Conversely, the percent of those saying they use social media rarely or never increases with age. The relationships of the "often" and "rarely or never" categories are simple linear progressions.

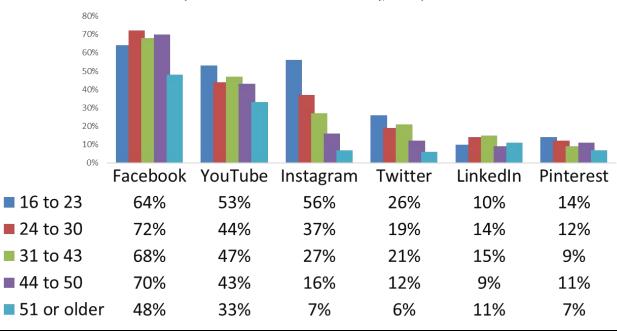
Occasional use, however, is less age-related, and varies within only a narrow range after the age of twenty-four.



Figure 58 Use of Specific Social Media, by Age Groups

Q40 .Which of the following do you use regularly...

(Only those who use social mediia) (Source: TheRide Onboard Survey, 2017)



Use of Specific Social Media, by Age Groups

The use of Instagram among the younger riders is apparent in the chart above. It shows that more than half of the sixteen to twenty-three year old riders use Instagram regularly, while only 37% of the next cohort, twenty-four to thirty, use it regularly.

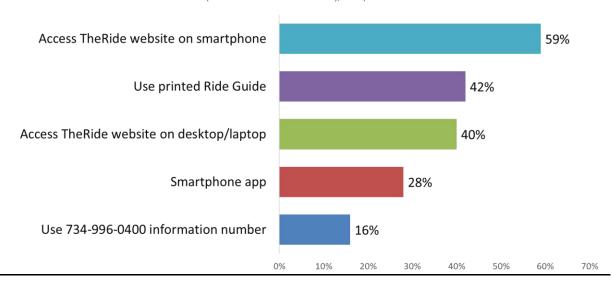
Although Instagram performs strongly in that younger age group, Facebook continues to dominate overall at every age level.



Figure 59 Obtaining Schedule Information

Q41 Do you often get route and schedule information from these sources?

(Source: TheRide onboard survey, 2017)



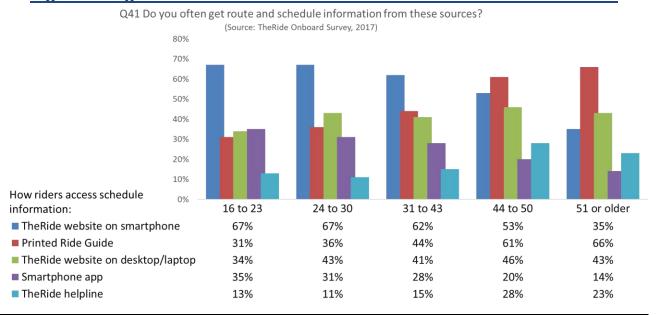
Obtaining Schedule Information

Asked whether they often get route and schedule information in several ways, more riders, 59%, said they often get information by accessing TheRide's website from a smartphone. Interestingly, only 28% said they often use a smartphone app for transit information.

More traditional means of information seeking are also widely used, specifically the printed Ride Guide and access to the website from a laptop or desktop.



Figure 60 Age and How Riders Access Route and Schedule Information



Age and How Riders Access Route and Schedule Information

Which mode is used to access information about TheRide depends, in part, on the age of the rider. The percentage of riders accessing the website from a smartphone declines from approximately two-thirds (67%) of riders sixteen to thirty years old to approximately one-third (35%) of those fiftyone or older. Conversely, the percentage using the Ride Guide is almost a mirror image of that age relationship, with only about one-third (31%) of those in the youngest age cohort using the Ride Guide, but two-thirds (66%) of those fifty-one or older using it. Older riders are also more likely than younger riders to say they use the other more traditional information source in this list, the telephone information number.

Other information-seeking modes are also age-related, although not as strongly as the use of mobile phones for the same purpose. The use of desktop and laptop computers for transit information-seeking is less common for the youngest riders (34%) than for others. But once riders reach the ripe age of twenty-four, the tendency to use laptop or desktop for this purpose flattens out in the mid forty percent range.

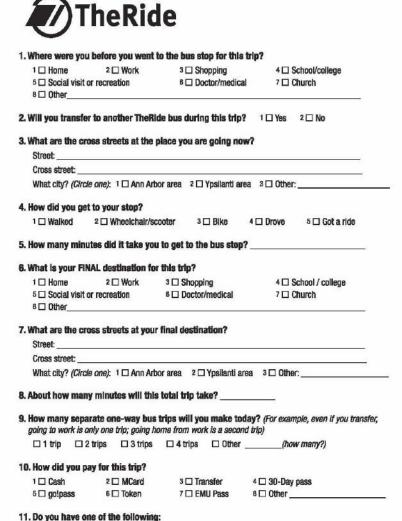
While the use of a smartphone app is less common among riders than using the smartphone to access TheRide website, approximately one-third of the youngest riders (35%) say they often use an app while only 14% of the oldest age group say they use an app.



Appendix A: Questionnaire



PASSENGER SURVEY - Please let TheRide know how to serve you better!



1 ☐ An ADA (green) card 2 ☐ Good as Gold (senior card) 3 ☐ Fare Deal Card (for disability)

4 □ Fare Deal card (for low income) 5 □ Fare Deal Card (age 60-64)

Routes:	3 41	4	5 43	6	21	22 46	23 47	24 60	25 61	26 62	27 63	28 64	29 65	30 66	31 67	32 68
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										3			⊕			0
a. Drivers' courtesy with passengers]	1	2	3	4	5	6	7
b. Overall quality of customer information									3	1	2	3	4	5	6	7
c. Clean	bus i	nteri	iors				3	1	2	3	4	5	6	7		
d. Safet	m ac	cider	its]	1	2	3	4	5	6	7	
e. Perso	nal s	ecui	rity						3	1	2	3	4	5	6	7
f. The physical condition of the bus stop you us]	1	2	3	4	5	6	7
g. Dista	nce 1	o bu	s sto	p yo	u use	most	often]	1	2	3	4	5	6	7
h Suffic	ient	servi	ice to	are	as you	ı wan	t to go	to D]	1	2	3	4	5	6	7
i. Depen	dabi	lity (of ma	king	trans	riers]	1	2	3	4	5	6	7
j. Direct	ness	of n	outes]	1	2	3	4	5	6	7
k. Total	dura	tion	of you	ur tr	ip]	1	2	3	4	5	6	7
I. Predic	tabi	ity o	f bus	arri	vals]	1	2	3	4	5	6	7
m. TheR	ide :	Servi	ce ov	eral	ı				1	1	2	3	4	5	6	7
15. How	like	ly an	e you	to r	ecom	mend	TheRi	de to	a frien	d or	collea	igue?				
Not a		likely 1	2		3		4	5		6	7		8	Extremely lik 9		ely 10
16. Do y	ou h	ave :	a vali	d dri	iver's	licens	:0?	1 🗆 Ye	8 2	□ Ne	o					
17. Was	a ca	r (or	truci	C OF	motor	cycle) avall	able t	you t	to ma	ike th	ls trip	? 1	□ Yes	2 [□No
18. On v	vhic	ı, if a	any, o	f the	past	sever	ı days	have	you us	ed T	heRid	le afte	r 8:00	PM? (/	VII that	арр
10			□ Mo		3 🗆 1		4 🗆 W		5 🗆 Th		6 🗆		7 🗆 Sa		□ Sur	

19 Which routes do you use regularly on TheDide? (shoose up to 4)



Please let TheRide know how to serve you better!

19. Are you using TheRide buses	31. How many people live in your household? 1 2 3 4 5 or more								
1 ☐ More often than a year ago 2 ☐ About the same as a year ago 3 ☐ Less often than a year ago									
	32. What is your total combined annual household income?								
20. Are you using TheRide buses after 8:00 PM in the evening	1 ☐ Less than \$10,000 2 ☐ \$10,000 to \$14,999 3 ☐ \$15,000 to \$19,999								
1 ☐ More often than a year ago 2 ☐ About the same as a year ago 3 ☐ Less often than a year ago	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								
21. On weekends, are you using TheRide buses									
1 ☐ More often than a year ago 2 ☐ About the same as a year ago 3 ☐ Less often than a year ago	33. Which do you consider yourself (Circle all that apply): 1 □ African-American/Black 2 □ Asian 3 □ Caucasian/white 4 □ Native—American Indian								
22. For how long have you been using TheRide?	5 □ Pacific Islander/Hawaiian 6 □ Other								
1 □ Less than a year 2 □ 1-2 years 3 □ 3-5 years 4 □ 6-10 years									
5 □ 11-15 years 6 □ more than 15 years	34. Are you (also) Hispanic/Latino(a)? 1 □ Yes 2 □ No								
23. A year from now, would you prefer to:	35. What language do you most often speak at home?								
1 ☐ Keep using TheRide as often as now 2 ☐ Get a car but keep using TheRide also	1 - English 2 - Spanish 3 - Other:								
3 ☐ Get a car and stop using TheRide 4 ☐ Stop using TheRide for other reason	36. How well do you speak English 1 Very well 2 Well 3 Not Well								
24. In the past 30 days, about how many times, if at all, have you used Uber or Lyft?									
1 □ Not at all 2 □ Once or twice 3 □ Two or three times	37. Do you rent or own the home where you live? 1 □ Rent 2 □ Own								
4 □ Four or five times 5 □ More than five									
TO TOUR OF THE SHIPS THE S	38. Is your residence:								
25. If you used Uber or Lyft recently, were those trips you would in the past have made on TheRide?	1 ☐ Single family home 2 ☐ House divided into apartments 3 ☐ Apartment or condo complex 4 ☐ Dormitory								
1 ☐ Yes - before Uber/Lyft, would probably have used TheRide for most of those trips									
2 □ No – they were not the kinds of trips I would have taken on TheRide	39. Do you use social media? 1 □ Often 2 □ Occasionally 3 □ Rarely or never								
	40. If you use social media, which of the following do you use regularly? (all that apply)								
26. How old are you? years old									
	1 ☐ Facebook 2 ☐ Twitter 3 ☐ Instagram 4 ☐ Pinterest 5 ☐ LinkedIn 6 ☐ YouTube								
27. Which one of the following best describes you? Are you (circle only one):	41. Do you often get route and schedule information from these sources?								
1 ☐ Employed for pay outside your home 2 ☐ Employed for pay in your home	TheRide website on a desktop/laptop 1 \(\triangle \text{Yes} \) 2 \(\triangle \text{No} \)								
3 ☐ Student 4 ☐ Homemaker 5 ☐ Unemployed 6 ☐ Retired	The Ride website on a smartphone 1 Yes 2 No								
	The printed Ride Guide 1 Yes 2 No								
28. Are you a 1 High school student 2 College student 3 Not a student	734-996-0400 information number 1 \(\superscript{Yes}\) 2 \(\superscript{No}\)								
a. If you are a college student, which college?									
1 □ U of M 2 □ EMU 3 □ WCC 4 □ Concordia 5 □ Cleary 6 □ Cooley 7 □ Other:	A smartphone app 1 Yes 2 No								
- 0-0 - 1 - 200- 12- 22- 22- 23- 10- 10- 10- 10- 10- 10- 10- 10- 10- 10	42. Have you any comments or suggestions for TheRide?								
29. If employed, in a typical week, do you usually?									
a. Work after 9:00 PM on any day?									
b. Work Saturday and/or Sunday 1 ☐ Yes 2 ☐ No									
c. Start work before 7:00 am on any day? 1 ☐ Yes 2 ☐ No									
30. Are you? 1 ☐ Male 2 ☐ Female	The Dide								
	TheRide								



¡Dígale a TheRide cómo podemos servirlo mejor!

9. ¿Utiliza los autobuses de TheRide?	31. ¿Cuántas personas viven en su hogar? 1 2 3 4 5 o más								
1 ☐ Con mayor frecuencia que hace un año 2 ☐ Casi con la misma frecuencia que hace un ai	ño .								
3 ☐ Con menos frecuencia que hace un año	32. ¿Cuál es el ingreso anual total combinado de su hogar?								
	1 ☐ Menos de \$10,000 2 ☐ \$10,000 a \$14,999 3 ☐ \$15,000 a \$19,999								
20. ¿Está utilizando autobuses TheRide después de <u>8:00 PM</u> de la noche?	4 □ \$20,000 a \$24,999 5 □ \$25,000 a \$34,999 6 □ \$35,000 a \$49,999								
1 ☐ Con mayor frecuencia que hace un año 2 ☐ Casi con la misma frecuencia que hace un año 3 ☐ Con menos frecuencia que hace un año									
Section Projection Control Con	 ¿De qué raza se considera usted? (Marque todas las que apliquen): 								
21. Los fines de semana, ¿está usando autobuses TheRide?	1 ☐ Afroamericana/Negra 2 ☐ Asiática 3 ☐ Caucásica/Blanca								
1 ☐ Con mayor frecuencia que hace un año 3 ☐ Con menos frecuencia que hace un año	ño 4 □ Indígena norteamericana 5 □ De las islas del Pacifico/nativo de Hawái 6 □ Otra								
22. ¿Durante cuánto tiempo ha estado usando TheRide?	34. ¿Es usted hispano(a) o latino(a)? 1 □ Sí 2 □ No								
a ☐ Menos de un año b ☐ 1-2 años c ☐ 3-5 años d ☐ 6-10 años	35. ¿Qué idioma habia usted con más frecuencia en su hogar?								
e □ 11-15 años f □ Más de 15 años	1 Inglés 2 Español 3 Otro								
23. Dentro de un año, ¿usted espera?	36. ¿Qué tan bien habla inglés? 1 ☐ Muy bien 2 ☐ Bien 3 ☐ No bien								
1 ☐ Seguir usando TheRide 2 ☐ Comprar un auto pero seguir usando TheRide									
3 ☐ Comprar un auto y dejar de usar TheRide 4 ☐ Dejar de usar TheRide por otros motivos	37. ¿Usted renta o es dueño de la casa donde vive? 1 ☐ Rento 2 ☐ Dueño								
24. En los últimos 30 días, ¿cuántas veces, si cualquier, utilizó Uber or Lyft?	38. Es su residencia:								
1 □ Nada 2 □ Una o dos veces 3 □ Dos o tres veces 4 □ Cuatro o cinco veces 5 □ Más de o	cinco 1 □ Vivienda unifamiliar 2 □ Casa dividida en apartamentos								
25. Si ha utilizado Uber o Lyft recientemente, habrías tomado esos viajes en el autobús en	3 ☐ Apartamento o complejo de condominios 4 ☐ Dormitorio								
el pasado?	39. ¿Usa los medios sociales? 1 ☐ A menudo 2 ☐ Ocasionalmente 3 ☐ Rara vez o nun								
1 ☐ Sí – antes de Uber/Lyft, probablemente habría utilizado TheRide para la mayoría de esos viajes	en nata 🌁 inche programmen de mandre danne in van Araben. 💮 en sterre danne mandre en part en men de mandre en men en anders en men en anders en men en anders en men en anders en ander								
2 □ No – no eran los tipos de viajes que habría utilizado en TheRide	40. Si usted usa los medios sociales, ¿cuáles de los siguientes usa regularmente? (Marque todas las que apliquen)								
26. ¿Qué edad tiene? años	1 Gacebook 2 Twitter 3 Instagram 4 Pinterest 5 LinkedIn 6 YouTube								
27. ¿Cuál de las siguientes opciones lo describe mejor? Usted es (Marque una opción):	41. ¿Usted consigue a menudo información de rutas y horarios de estas fuentes?								
1 ☐ Empleado que recibe pago fuera de su casa 2 ☐ Empleado que recibe pago en su casa	Sitio web TheRide en una computadora/laptop 1 G Si 2 G No								
3 ☐ Estudiante 4 ☐ Ama de casa 5 ☐ Desempleado 6 ☐ Jubilado	Sitio web TheRide en un teléfono inteligente 1 🗆 Sí 2 🗆 No								
	La Guía de Viaje impresa 1 □ Sí 2 □ No								
28. ¿Es usted?	Número de información 734-996-0400 1 🗆 Sí 2 🗆 No								
1 ☐ Estudiante de escuela secundaria 2 ☐ Estudiante universitario 3 ☐ No es estudiante a. Si es estudiante universitario, ¿de qué universidad?	Una aplicación de teléfono inteligente 1 □ Sí 2 □ No								
1 U of M 2 EMU 3 WCC 4 Concordia 5 Cleary 6 Cooley	42. ¿Tiene algún comentario o sugerencia para TheRide?								
7 — Otra	TEL CHOIN AIGHT COMOTICE TO CONGRESSIONA PER A MICHELOT								
9. Si está empleado, ¿generalmente?									
a. Trabaja después de las 9 p.m. 1 🗆 Sí 2 🗆 No									
b. Trabaja sábados y/o domingos 1 □ Sí 2 □ No									
c. Comienza a trabajar antes de las 7 a.m. cualquier día 1 🗆 Sí 2 🗅 No									
30. ¿Es usted? 1 ☐ Hombre 2 ☐ Mujer	The Rid								



Appendix B: Comments by Riders

Coded comments	Percent of		
Coded comments	mentions		
More service hours	25%		
Positive remark on AAATA	13%		
Bus timeliness	12%		
APP/wifi/website	10%		
Route changes	9%		
Driver attitude/capabilities	9%		
More stops/more buses	7%		
Bus safety & cleanliness/fellow passengers	5%		
Stop amenities	4%		
Remark on fares	2%		
MISC	2%		
Negative remark on service	2%		
Comment on the survey, not on service	1%		

Full text of comments under separate cover



Appendix C: Poverty Level Incomes

Income, household size and federally defined levels of poverty														
(Source: TheRide Onboard Survey, 2017)														
(% of Total Sa	mple)	Q20 What	is your tot	al annual h	ousehold	income?								
			\$10,000	\$15,000	\$25,000	\$35,000	\$45,000	\$55,000	\$75,000					
		Less than \$10,000	to \$14,999	to	to	to	to	to	to	\$100,000				
	\$24,999	\$34,999	\$44,999	\$54,999	\$74,999	\$99,999	or more							
(Assume mid-point of income ranges for				\$20,000	\$30,000	\$40,000	\$50,000	\$65,000	\$87,500	\$100,000				
incomes over														
Q19 How	1	5.6%	3.0%	1.7%	3.5%	4.5%	3.6%	2.5%	1.3%	0.4%				
many people	2	5.2%	2.3%	1.8%	3.6%	4.1%	4.4%	5.9%	3.1%	3.1%				
live in your	3	3.9%	1.3%	0.6%	2.1%	1.5%	1.8%	3.1%	2.5%	1.9%				
household?	4	2.2%	0.9%	0.4%	1.3%	0.9%	1.1%	1.9%	1.4%	2.2%				
nousenoiu:	5 or more	2.5%	0.9%	0.4%	0.9%	0.5%	0.6%	1.0%	1.0%	1.5%				
	Totals	19.4%	8.4%	4.9%	11.4%	11.5%	11.5%	14.4%	9.3%	9.1%				
	29.5% in poverty level income house							70.5% in non-poverty level households						

Additional Title VI tables showing demographics by route are under separate cover



Appendix D: Origin/Destination Maps



Figure 61 Overview Map of Origins and Destinations

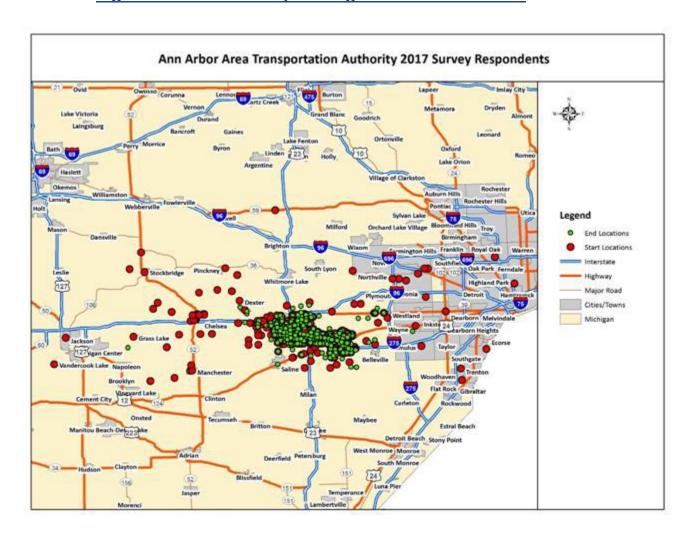




Figure 62 Four Views of Origins and Destinations

