A SURVEY
OF RIDERS USING *THE RIDE*,
A SERVICE OF THE
ANN ARBOR TRANSPORTATION AUTHORITY
October, 2011

A study conducted by:

CJI Research CORPORATION

In cooperation with

TRANSIT marketing LLC

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Table of Contents

List of figures

Introduction

Survey Data Collection

A survey was conducted onboard AATA buses from October 4 through 10, 2011. Survey data collection occurred onboard the buses. Temporary workers were used for this purpose under the supervision of CJI Research Corporation staff. Surveyors wore both ID badges and smocks identifying them in large print as "Transit Survey" workers. This uniform helps riders visually understand the purpose of the interviewers approaching them.

Survey personnel accompanied drivers at the beginning of the shifts and rode the buses for an entire run. They approached all riders 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 pencils 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 AATA 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 AATA System's overall route structure. The sample was adjusted slightly to take any such omissions into account.

The resulting total sample size is 2,824 useable responses. When all respondents were included, this sample had a sample error level of $\pm$1. 6%. If a sub-sample were used, sample error would increase 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 5,476 AATA riders were approached and asked to participate in the survey. Of these, 862 (16%) said they had already completed a survey. Another 1,200 (22%) were unwilling to participate, and 238 presented a language barrier (4%). Thus, the total "effective distribution," defined as a rider accepting the survey materials and agreeing to complete a survey form, was 3,176 persons. Of these, 352 (11%) failed to return a questionnaire, and 2,824 returned a useable survey form, for an effective participation rate among everyone who was approached of 52%, and of 89% among those who initially agreed to participate.

Figure 1 Response rates

Response rates

A total of…	5,476	adults were riding the surveyed trips and thus had a chance to participate		
Of these…	862	said they had already completed the survey		16%
	1200	refused outright		22%
	238	encountered a language barrier		4%
…and…	3,176	were successful first time approaches		58%
Thus,	3,176	represents the "effective distribution."		
	123	Completed the survey and returned it to an AATA operator on another tri		4%
	2,701	Completed it on the AATA vehicle		85%
	352	accepted but did not complete the survey		11%
	2,824	returned useable survey questionnaires		
			Of all adults riding a surveyed vehicle, this represents:	52%
			Of effective distribution, this represents:	89%

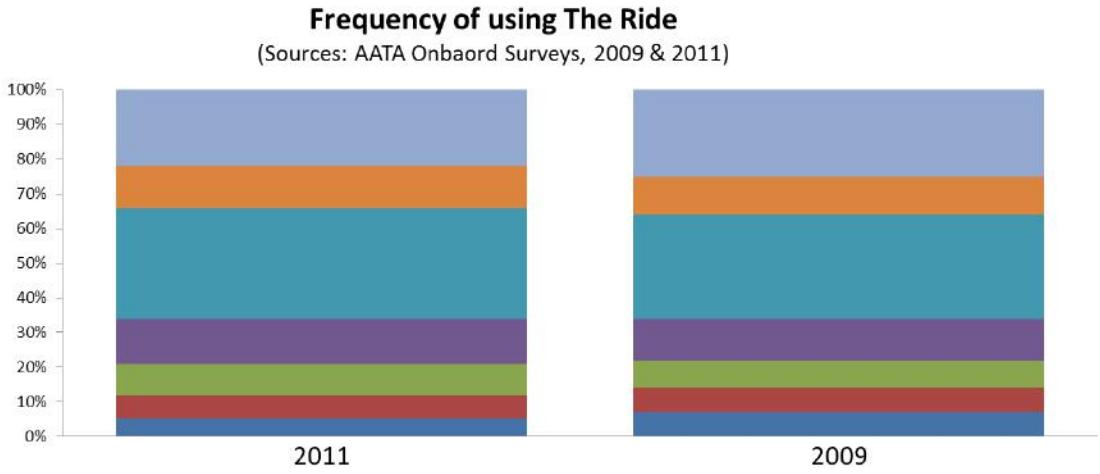
Analysis

Analysis consists primarily of cross tabulations and frequency distributions. Tables were prepared in SPSS (version 19) and charts in Excel 2010.

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

Figure 2 Frequency of using The Ride



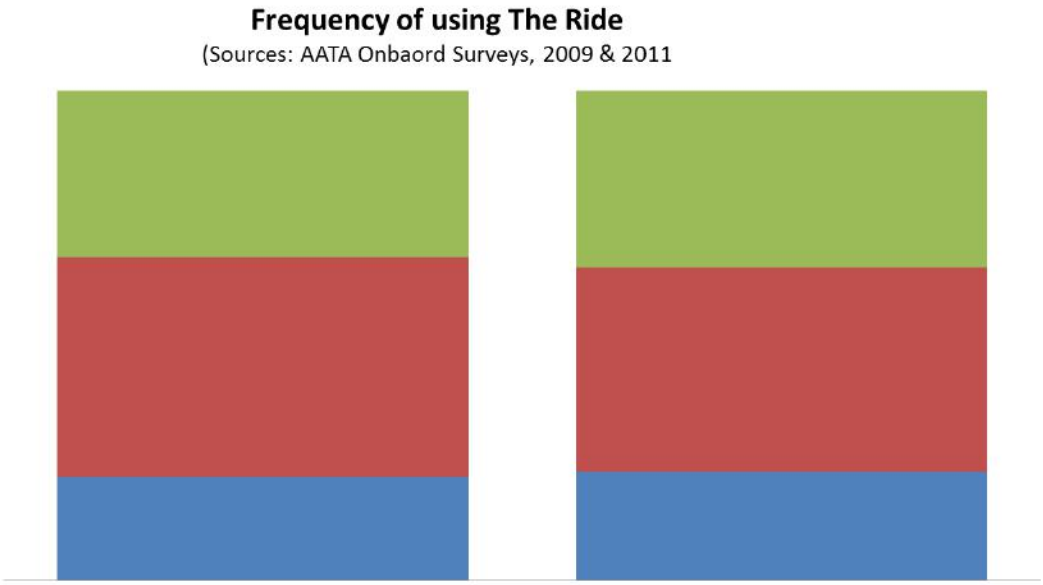
In the past 7 days, how many days have you ridden on an AATA bus?

	2011	2009
Seven days	22%	25%
Six days	12%	11%
Five days	32%	30%
Four days	13%	12%
Three days	9%	8%
Two days	7%	7%
One day	5%	7%

Frequency of using The Ride

Most riders (a total of 66%) use AATA five or more days a week. Almost one-fourth (22%) use it every day, while another 12% use it six days a week. These results did not change in any important way since 2009.

Figure 3 Compressed measure of frequency of using The Ride



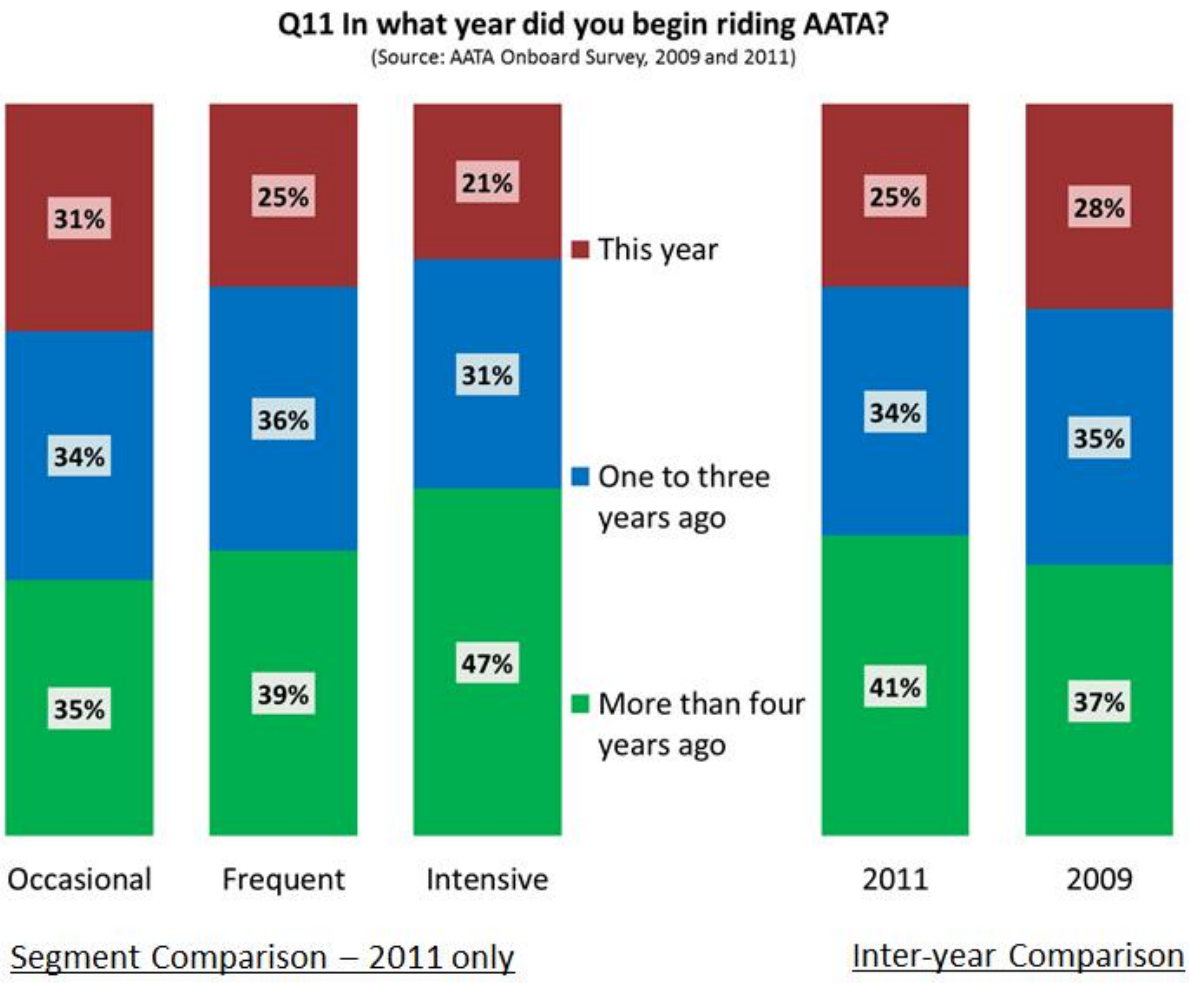
	2011	2009
Intensive	34%	36%
Frequent	45%	42%
Occasional	21%	22%

Rider segments

For purposes of further analysis, the riders are grouped into three sets, depending upon how frequently the riders use The Ride. We refer to them as:

- "Occasional riders," who use The Ride one to three days a week (21%)
- "Frequent riders," who use The Ride four or five days a week (45%)
- "Intensive riders," who use The Ride six or seven days a week (34%)

Figure 4 When riders began using The Ride



When riders began using The Ride

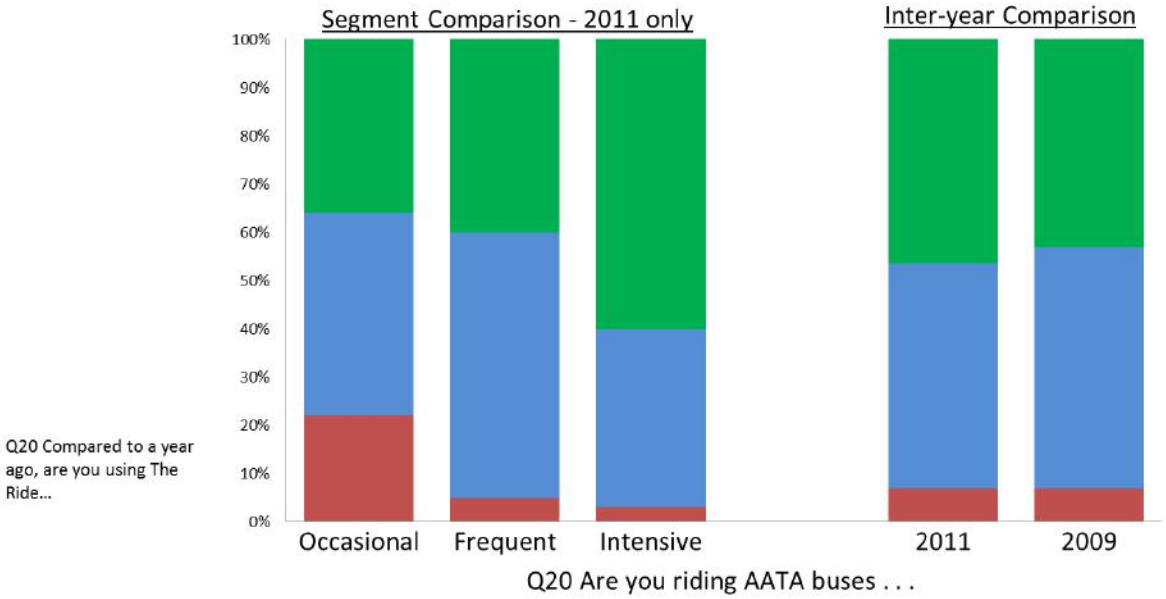
Twenty-five percent (25%) began using AATA only in the year (2011) of the survey. This result is 3% lower than the analogous result in 2009 (28%). The surveys were conducted in October, meaning that these people had begun using AATA only during the previous nine or ten months. These are fairly typical rates of clientele turnover for all bus transit systems. Approximately another third (34%) had begun using AATA between 2008 and 2010 and the balance, 41%, prior to that time. The longer term ridership constitutes 4% more of the sample than in 2009.

Riders in the latter group are the relatively long-term riders. The fact that they have increased as a proportion of total ridership is consistent with the fact that ridership declined somewhat after 2009. Longer term riders, who tend to be both older and more transit dependent are more likely to continue using transit than non-riders are to begin using it. It is speculative, but it would appear likely that the lack of growth in new employment opportunities in the 2009 – 2011 period may account for the lack of as many new riders in 2011 as there were in 2009.

Figure 5 Current use of The Ride and use one year ago

Current use of The Ride and use a year ago

(Data exclude those who began using The Ride in the years the survey was conducted)



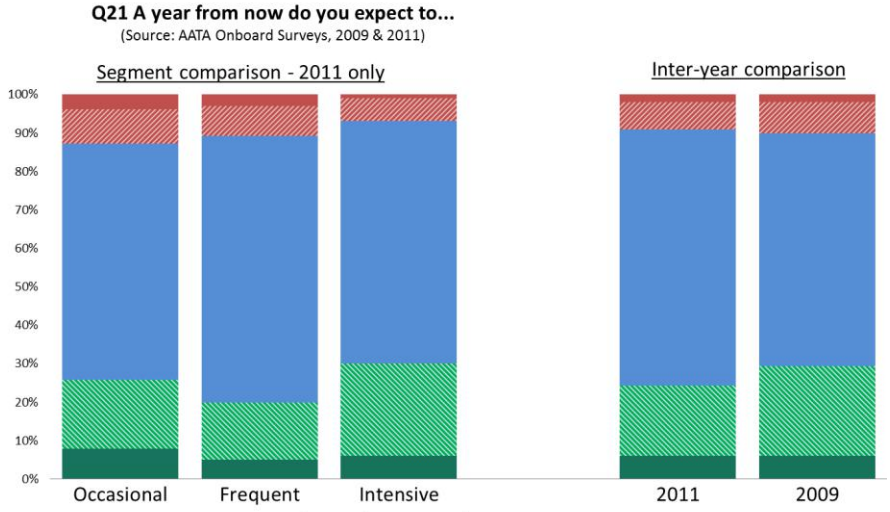
	Occasional	Frequent	Intensive	2011	2009
...more frequently	36%	40%	60%	46%	43%
...about the same	42%	55%	37%	46%	50%
...less frequently	22%	5%	3%	7%	7%

Current use of The Ride and use one year ago

Figure 5 above includes all AATA riders *except* those who began riding only in 2011. Since the chart involves change in the use of AATA from one year ago, obviously anyone who began using it in 2011 would, by definition, now be riding infinitely more often, and is thus irrelevant to the point.

Almost half (46%) of the relevant riders included here say they are riding about as often as they did a year ago. As was also the case in 2009, this is especially true of the frequent riders (55%) and less true of the occasional riders (42%) and intensive riders (37%). However, many riders (46%) say they are now riding more often than during the past year. This is up by 3% from the similar figure in 2009, probably an indication that ridership is again increasing. This increased tendency is especially true of the intensive riders (60%) and least true of the occasional riders (36%). In 2009, only 48% of intensive users had said they were using The Ride more than during the previous year.

Figure 6 Intention of using transit one year from now



	Occasional	Frequent	Intensive	2011	2009
stop using AATA for other reason	4%	3%	1%	2%	2%
move away from this area	9%	8%	6%	7%	8%
keep using AATA	62%	70%	63%	66%	60%
get a car but keep using AATA also	18%	15%	24%	18%	23%
get a car and stop using AATA	8%	5%	6%	6%	6%

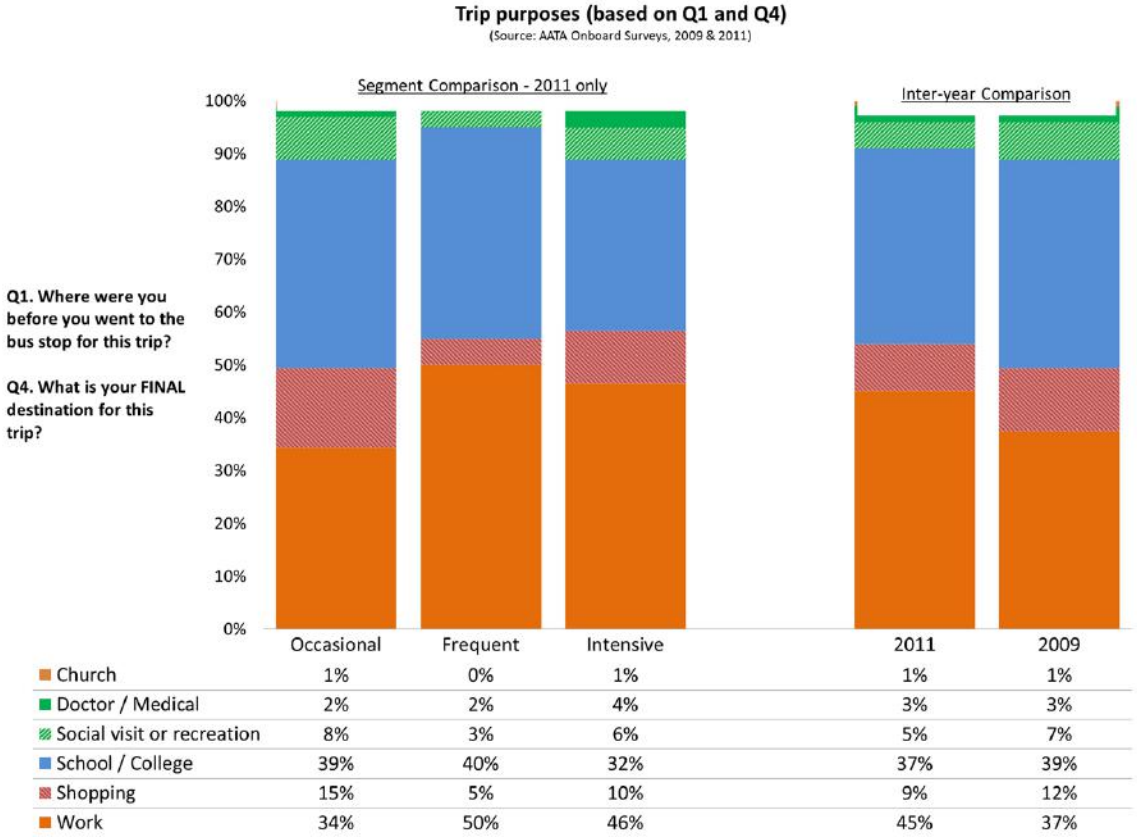
Intention of using transit one year from now

As it is with any business, customer retention is important in the marketing of public transit. AATA riders were asked whether in one-year they expected to continue to be using AATA buses, or whether for various reasons they would reduce their use or discontinue use of the bus service.

In 2009, 60% indicated that they would keep using AATA, while 23% indicated that they planned to obtain a car, but also planned to continue using AATA. The balance, 16%, indicated that for several different reasons they planned to cease using AATA. In 2011, the percent intending to continue using AATA had risen to 66% a change accounted for almost entirely by a decrease in the percent saying that they planned to get a car but also to continue using AATA. This would appear to be a sign of consumer caution.

The frequent riders, who tend to be commuters going to or from work or school (or both), comprise the segment most likely to say (70%) that they would keep using AATA. As in 2009, the intensive users are the ones most likely (24%) to say they intend to "get a car but keep using AATA." However that percentage is down from 29% in 2009.

Figure 7 Trip purposes



	Occasional	Frequent	Intensive	2011	2009
Church	1%	0%	1%	1%	1%
Doctor / Medical	2%	2%	4%	3%	3%
Social visit or recreation	8%	3%	6%	5%	7%
School / College	39%	40%	32%	37%	39%
Shopping	15%	5%	10%	9%	12%
Work	34%	50%	46%	45%	37%

Trip purposes

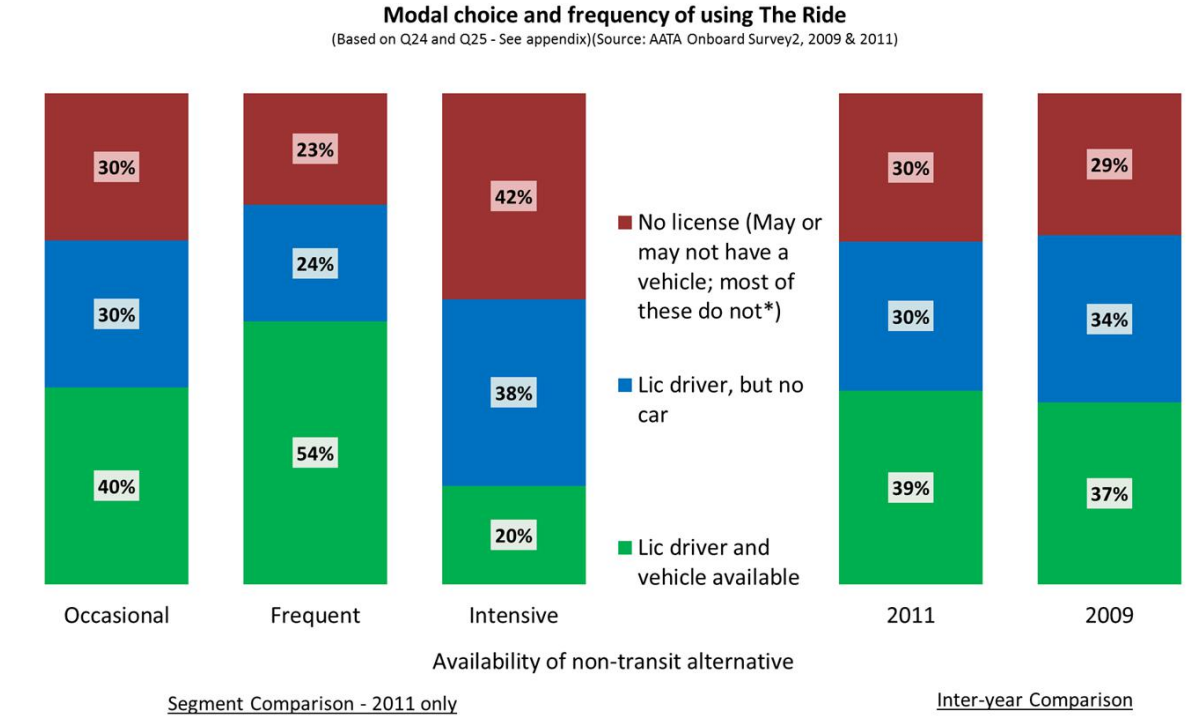
Trip purpose changed considerably between 2009 and 2011[1]. The primary change has been that the percent of riders making work trips rose by 8% from 37% to 45% with most of the commensurate decline coming in trips for shopping and a small portion of it in trips for social or recreational purposes and for getting to school or college.

We shall see in a later chart (Figure 22) that 40% of AATA riders are students, and another 11% are both students and employed for a total of 51%. Thus, it is not surprising that getting to or from school or college (37%) remains a major trip purpose. It has changed by only -2% in the 2009-2011 period, from 39% to 37%.

Notice that frequent riders tend to make trips for school (40%) and trips for work (50%), but few trips for other purposes. Intensive riders too divide primarily between trips for school (32%) and trips for work (46%), but among them were more trips for shopping (10%) than among the frequent riders (5%). For occasional riders, work trips were less frequent (34%), but school/college trips (39%) were comparable to the other segments, and trips for shopping (15%) or socializing (8%) were more frequent.

[1] The manner in which trip purposes are computed for this report was changed to improve the way it reflects trip purpose. Thus the trip purpose percentages reported in 2009 were recomputed for this report to be consistent with the newer method.

Figure 8 Modal choice



* This category includes only those without a valid license. Most often it includes riders with neither a license nor a vehicle, but also includes a smaller number of persons who have a vehicle but a suspended license.

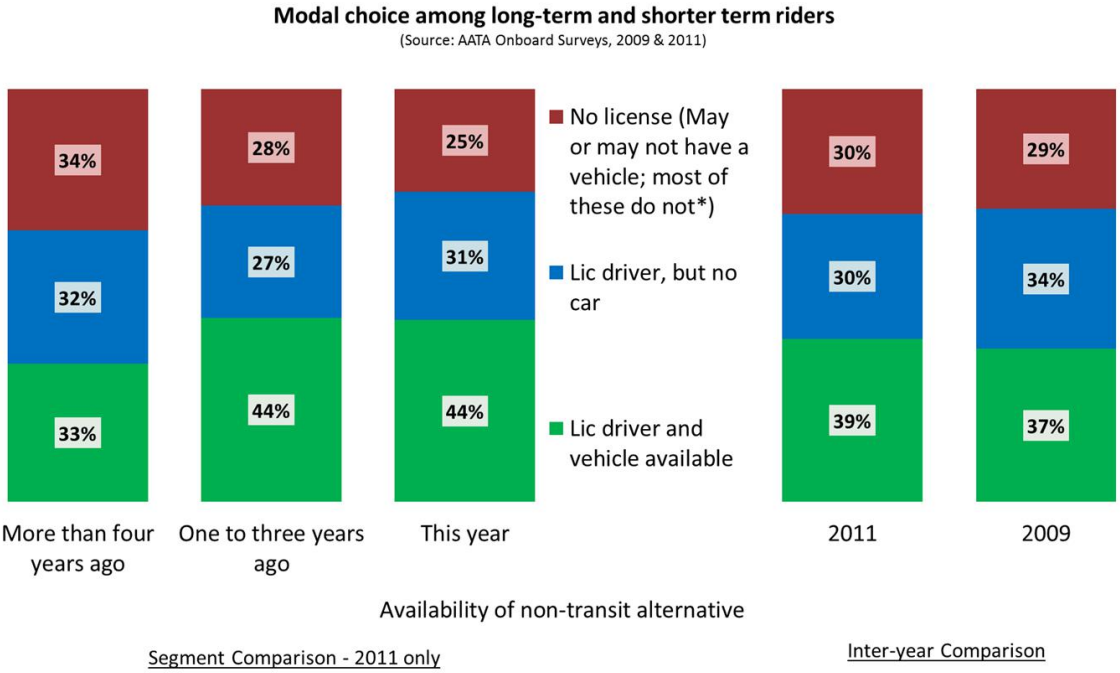
Modal choice

Among all riders, more than one third (39%) have modal choice in that they are licensed drivers and had a vehicle available for their trip on the day they were surveyed on the bus. Another approximate third (30%) are licensed drivers but had no vehicle available. The balance, 30%, had neither license nor vehicle available for the trip on which they were surveyed.

Modal choice varies considerably among the three rider segments. Frequent riders are more likely than the other rider segments to be licensed to drive and have a vehicle available (54%), 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 intensive riders, only 20% fall in this category, while 38% are licensed but had no vehicle available for the trip, and another 42% either have no license and/or lacked an available vehicle (an increase of 3% over 2009).

The reasons for the differences in modal choice are economic. While 64% of intensive riders have household incomes of $25,000 or less, slightly less than half of the other rider segments have such low incomes (see Figure 29).

Figure 9 Modal choice and duration of using The Ride



* This category includes only those without a valid license. Most often it includes riders with neither a license nor a vehicle, but also includes a smaller number of persons who have a vehicle but a suspended license.

Modal choice and duration of using The Ride

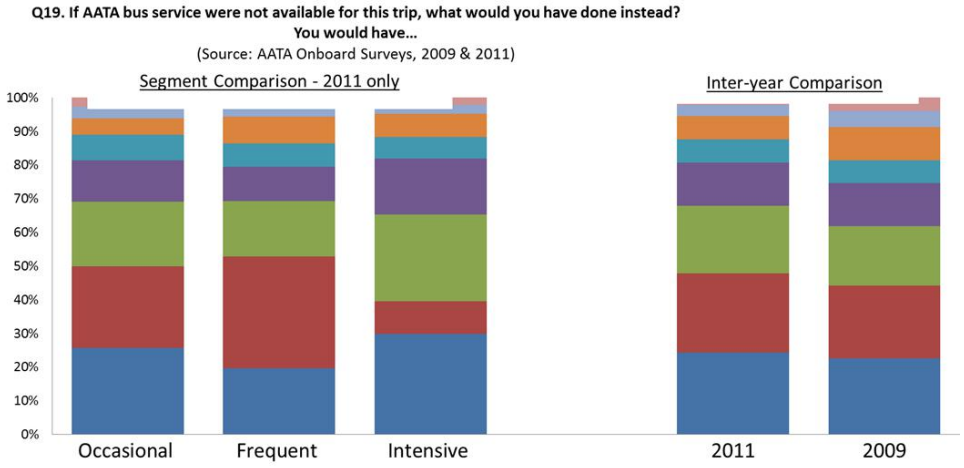
Those who began using AATA more than four years prior to the survey (i. e. , in 2007 or prior to that time) are more likely to be transit dependent (66%) than those who began later. Those who began using AATA between 2008 and 2011 are more likely to have modal choice (44%).

While there may be a few persons committed to the environmental impact of their transportation practices, experience and demographics show us that the primary reasons for the difference are economic. The long-term riders are long-term because they are transit dependent and lack the means to develop alternatives. Upward social mobility tends to shift the transportation behavior of people in the United States from transit to private vehicles (with certain exceptions in high density cities of which New York is the primary example).

In good economic times, upward social mobility is related to age for most of the population, especially for those young persons starting out in middle income families. As the young person ages, gains education and experience, job prospects and compensation tend to rise, and this makes non-transit alternatives available. Under contemporary, low density land-use patterns, this, in turn, makes turnover in the public transit market inevitable.

All of this also means that some people will tend to be "left behind" in the social and transportation upward mobility competition. Thus, it is those who have used AATA since 2007 or before who are most transit dependent (66%). To repeat a point, it may be that a few of these riders are determined environmentalists or have other reasons to be committed to using public transit, but in most cases the cause is sociological.

Figure 10 Alternative if AATA service had not been available



If AATA bus service were not available for this trip, what would you have done instead?

	Occasional	Frequent	Intensive	2011	2009
gone somewhere else	3%	2%	2%	2%	4%
taken a carpool or vanpool	4%	4%	3%	3%	5%
bicycled	5%	8%	7%	7%	10%
taken a U of M bus	8%	7%	7%	7%	7%
not taken this trip at all	12%	10%	17%	13%	13%
walked	19%	17%	26%	20%	18%
driven alone	24%	33%	10%	23%	22%
gotten a ride	26%	20%	30%	24%	23%

Alternative if AATA service had not been available

In the absence of AATA service, approximately one-fourth (24%) of AATA riders said that they would have gotten a ride, while another 23% said they would have driven alone. [2] Interestingly, 20% indicated they would have walked. This is consistent with the 2009 result (18%), a fact that suggests that a significant proportion of the trips being made via AATA are within walking distance. In both 2009 and 2011, 13% said they would not have made the trip at all.

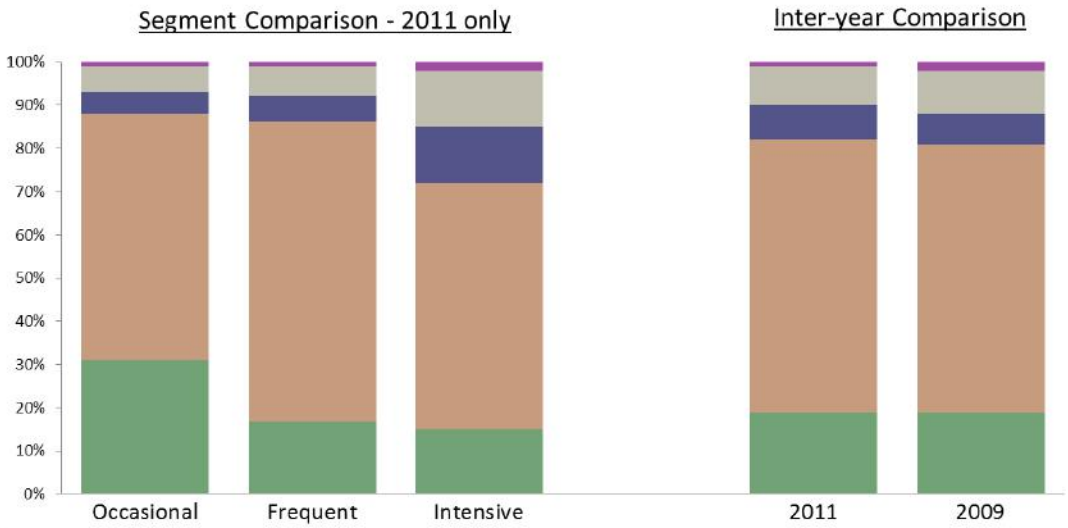
Being more likely to have modal choice, the frequent (33%) and the occasional riders (24%) are more likely than the intensive riders (10%) to say that they would have driven alone had AATA not been available.

[2] 2009 data recomputed to include those who answered that they would not have made the trip. Thus the reported percentages for 2009 will differ from the 2009 report.

Figure 11 Number of transit trips today

Q8 How many separate one-way trips will you make today?

(Source: AATA Onboard Surveys, 2009 & 2011)



	Occasional	Frequent	Intensive	2011	2009
More than 4	1%	1%	2%	1%	2%
4 trips	6%	7%	13%	9%	10%
3 trips	5%	6%	13%	8%	7%
2 trips	57%	70%	57%	63%	62%
1 trip	31%	17%	15%	19%	19%

Number of transit trips today

Riders were asked how many separate one-way trips they would make on the day they were surveyed. Almost two thirds, 63%, indicated they would make two trips, while 19% indicated they would make only one, and the balance, 18%, indicated they would be making three or more trips. These results are sufficiently similar to the 2009 results that the small differences can be ignored.

Figure 12 Trips per day

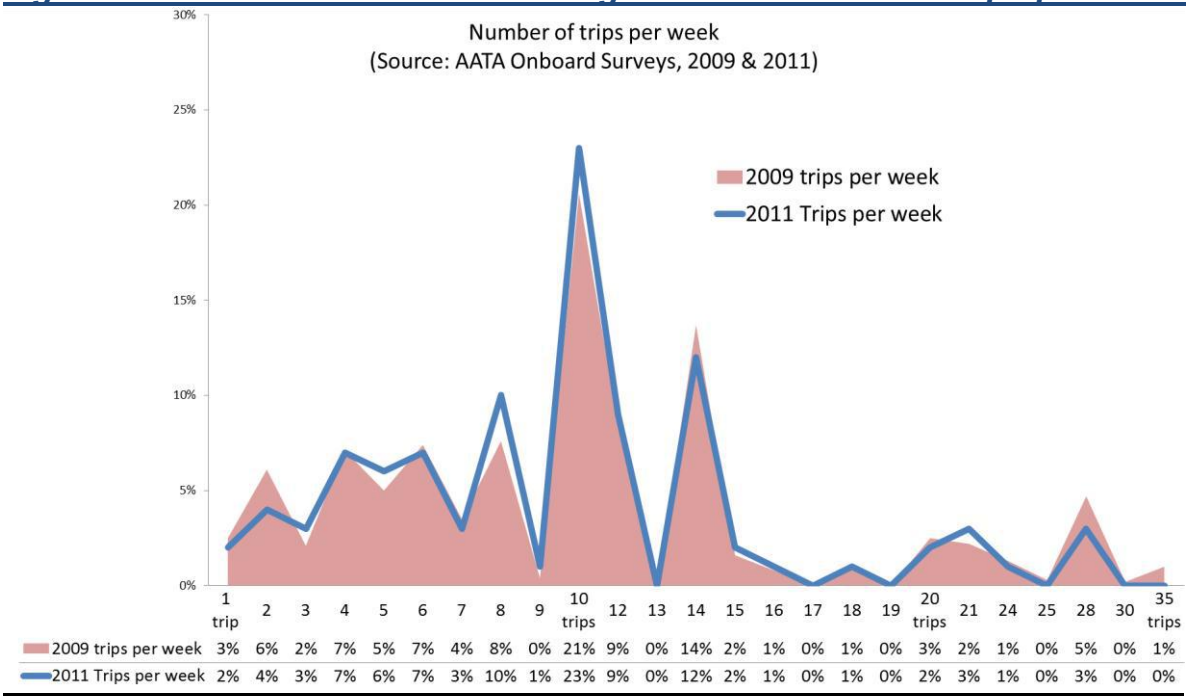
	2011	2009
	Mean	
Occasional rider	1.9	1.9
Frequent rider	2.1	2.1
Intensive rider	2.3	2.4
All riders	2.1	2.1

Among the intensive riders, a total of 28% make three or more trips a day, while only 14% of frequent riders and 12% of occasional riders make so many trips. In other words, the intensity of using transit 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 those who use AATA on more days to use it for more trips on those days.

The mean number of trips for all riders in both 2009 and 2011 was 2. 1[3]. The mean number of trips varies among the rider segments, with the occasional riders making slightly fewer than two trips (1. 9 trips) and intensive riders making substantially more than two trips (2. 3 trips).

[3] In 2009, for those making more than four trips our assumption (necessitated by the layout of the questionnaire) was that they made five trips. In 2011 the actual number of trips reported by the rider was used to compute the mean.

Figure 13 Percent of all riders making certain numbers of trips per week



	1 trip	2	3	4	5	6	7	8	9	10 trips	12	13	14	15	16	17	18	19	20 trips	21	24	25	28	30	35 trips
2009 trips per week	3%	6%	2%	7%	5%	7%	4%	8%	0%	21%	9%	0%	14%	2%	1%	0%	1%	0%	3%	2%	1%	0%	5%	0%	1%
2011 Trips per week	2%	4%	3%	7%	6%	7%	3%	10%	1%	23%	9%	0%	12%	2%	1%	0%	1%	0%	2%	3%	1%	0%	3%	0%	0%

Trips per week

By simply multiplying the number of days per week riders use AATA by the number of trips per day we can estimate the number of trips per week.

Of all riders in 2011, 21% make ten trips per week (see Figure 13). The next most common pattern is to make from twelve (9%) to fourteen (14%) trips per week. The inset table (Figure 14) shows this statistically. The average (mean) number of trips per week is 10. 5, while the median is 10 trips. The standard deviation is 6. 6 trips.

Because it is part of the computation of the trips per week, it is self-evident that the number of weekly trips will vary positively with the number of days on which AATA is used. However, it is instructive to see the differences among the segments. Notice, for example, that as in 2009, the intensive riders make approximately four times the mean numbers of trips (15. 6) that are made by occasional riders. Thus, to take just one example, retaining one intensive rider is the same, in terms of ridership, as attracting four new occasional riders.

Figure 14 Trips made each week by rider segments

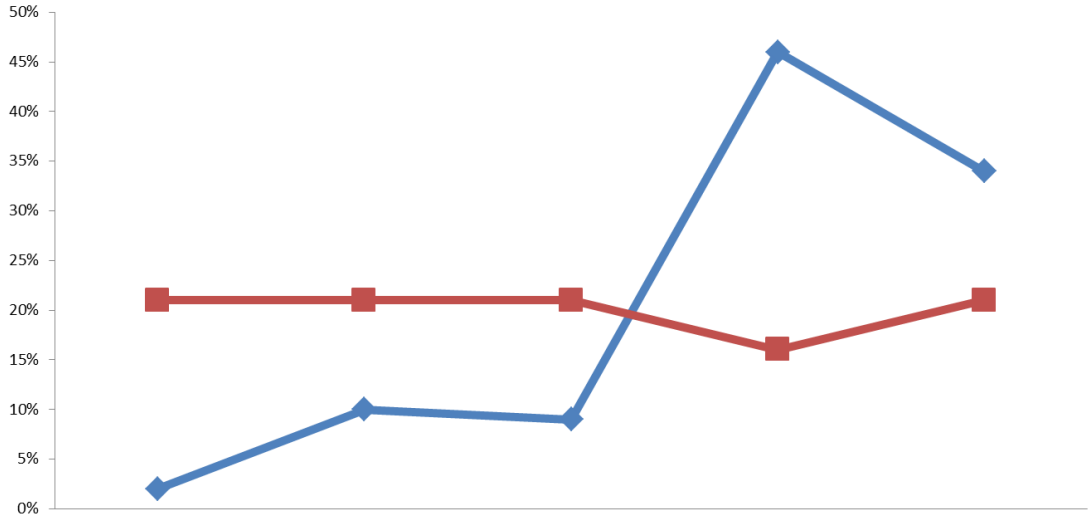
	Trips per week 2009		
	Mean	Std. Deviation	Median
Occasional rider	4.0	2.5	4
Frequent rider	9.7	3.9	10
Intensive rider	16.0	7.1	14
All riders	10.7	6.8	10

	Trips per week 2011		
	Mean	Std. Deviation	Median
Occasional rider	4.2	2.5	4
Frequent rider	9.6	3.8	10
Intensive rider	15.6	7.3	14
All riders	10.5	6.6	10

Figure 15 Trips to riders ratio

Riders and the estimated number of trips they make

(Source: AATA Onboard Survey, 2011)



	Lowest quintile*	2nd quintile	3rd quintile	4th quintile	Top quintile
% trips	2%	10%	9%	46%	34%
% of riders	21%	21%	21%	16%	21%

* The quintiles are approximate, as close to 20% as they could be divided in the data

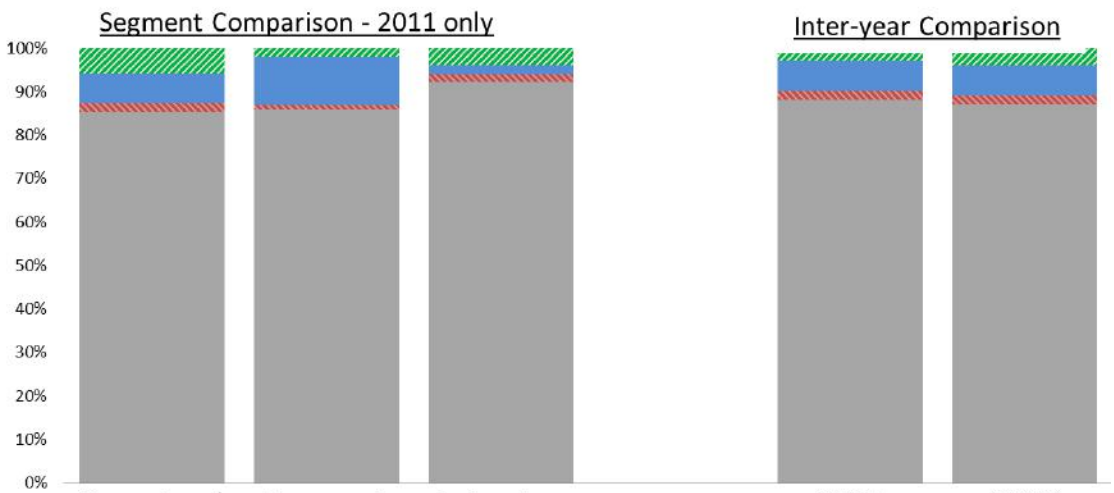
Trips to riders ratio

Figure 15 is based on an estimation procedure and represents a reasonable estimate of the percent of riders making the weekly trips The Ride provides. It illustrates the point that, as with many businesses, relatively few customers account for a great many of the sales. Notice that the bottom two (approximate) quintiles (42% of the riders) account for 12% of the trips. And the top two (37% of the riders) account for 80% of the trips.

Figure 16 Mode to bus stop

Q2 Mode to the bus stop

(Source: AATA Onboard Surveys, 2009 & 2011)

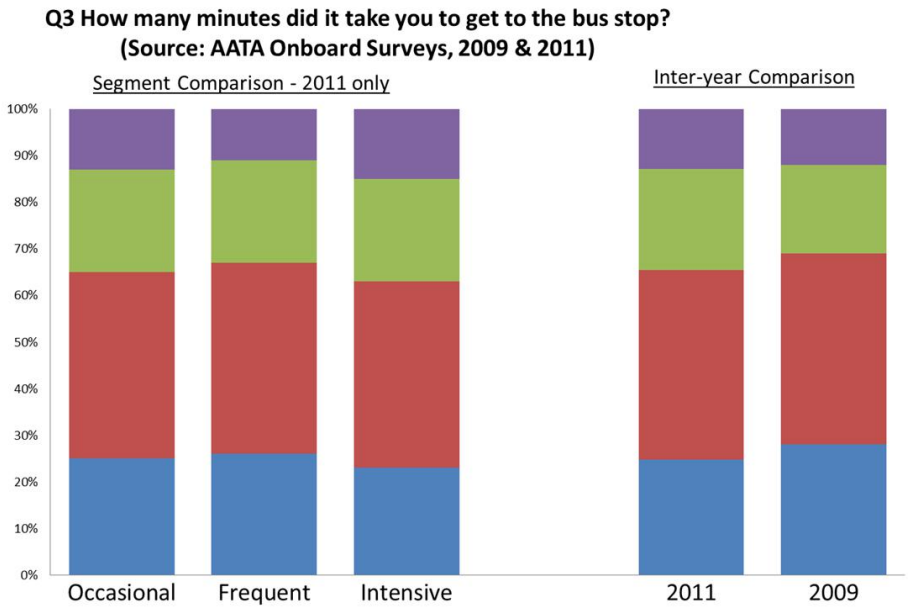


	Occasional	Frequent	Intensive	2011	2009
Got a ride	6%	2%	4%	3%	4%
Drove	7%	11%	2%	7%	7%
Bike	2%	1%	2%	2%	2%
Walked	86%	85%	92%	88%	87%

Mode to bus stop

As is typical in almost all transit systems, most people (88% in the case of AATA) walk to the bus stop. This tendency varies somewhat among the rider segments, with 11% of frequent riders indicating that they had driven to the bus stop, apparently utilizing a park and ride opportunity. Only 2% of intensive users drove to the stop.

Figure 17 Minutes to and from the bus stop



	Occasional	Frequent	Intensive	2011	2009
More than 10 minutes	13%	11%	15%	13%	12%
Just over 5 to 10	22%	22%	22%	22%	19%
3 to 5 minutes	40%	41%	40%	41%	41%
Less than 3 minutes	25%	26%	23%	25%	28%

Minutes to and from the bus stop

Riders were asked how long it takes them to get to the bus stop. In general, they say it takes five minutes or less in both directions. For example, of all riders, 25% said it takes them less than three minutes to get to the bus stop, and 41% said it takes them 3 to 5 minutes to get to the bus stop.

Figure 18 Time to and from stop

Q3 How many minutes did it take you to get to the bus stop?

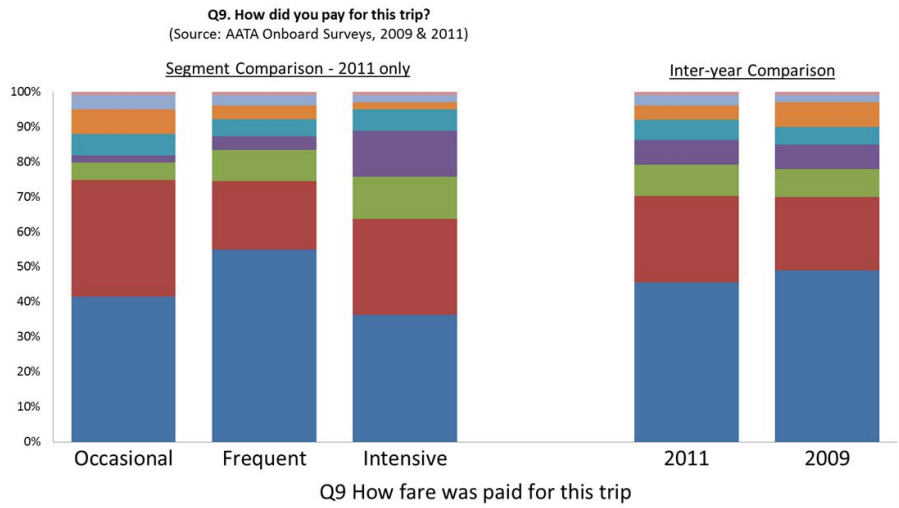
	2011	2009
Mean	6.8	6.6
Median	5	5
Std. Devia	7.7	7.8

These tendencies vary only slightly among the rider segments.

The inset table provides summary statistics in terms of the number of minutes it takes to get to the bus stop.

- For all AATA riders, the average time to the bus stop is 6. 8 minutes, essentially the same as in 2009 when the mean was 6. 6 minutes.
- The median time indicates that one-half of AATA riders spend five minutes or less getting to the bus stop or from the final bus stop to the destination, while half take more time than that. This is unchanged since 2009.
- The standard deviation of 7. 7 minutes to the bus stop indicates that roughly two-thirds (actually 68%) of AATA riders spend within 0 to 14. 5 minutes to get to the stop. This too is essentially unchanged since 2009.

Figure 19 How riders pay their fares



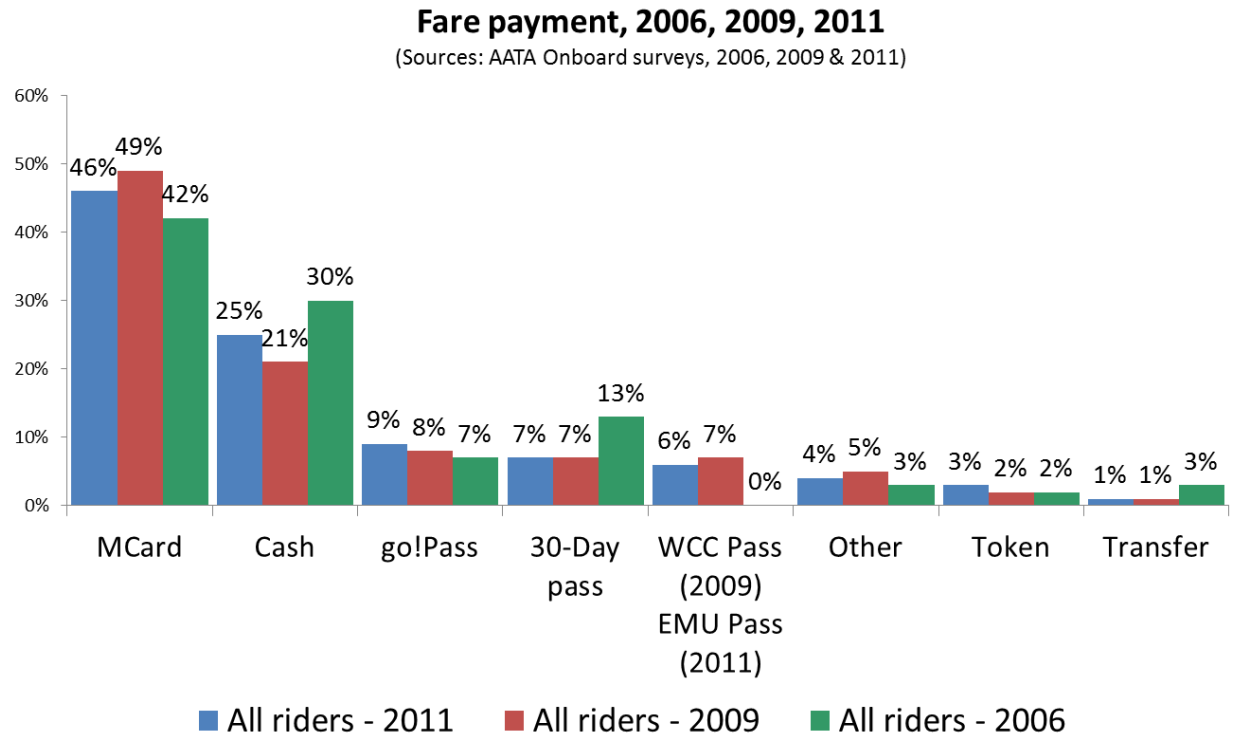
	Occasional	Frequent	Intensive	2011	2009
Transfer	1%	1%	1%	1%	1%
Token	4%	3%	2%	3%	2%
Pass WCC (2009) EMU (2011)	7%	4%	2%	4%	7%
Other	6%	5%	6%	6%	5%
30-Day pass	2%	4%	13%	7%	7%
go!Pass	5%	9%	12%	9%	8%
Cash	33%	20%	27%	25%	21%
MCard	41%	56%	36%	46%	49%

How riders pay their fares

Among all AATA riders, almost half (46%) pay their fare with an MCard, while another 23% use another type of pass (go!Pass, 30-Day pass, WCC pass, or a token), and a small number use a transfer (1%). Of all riders, 25% pay their fare with cash, an increase of 4% since 2009. That change is associated with a decrease in use of the MCard and of passes associated with WCC and EMU.

As one would expect, the use of cash is greatest among the occasional transit users, among whom 33% pay their fare in cash. However, of that rider segment, 41% use an MCard and another 18% use another type of pass.

Figure 20 Comparing fare payment in 2006, 2009, and 2011

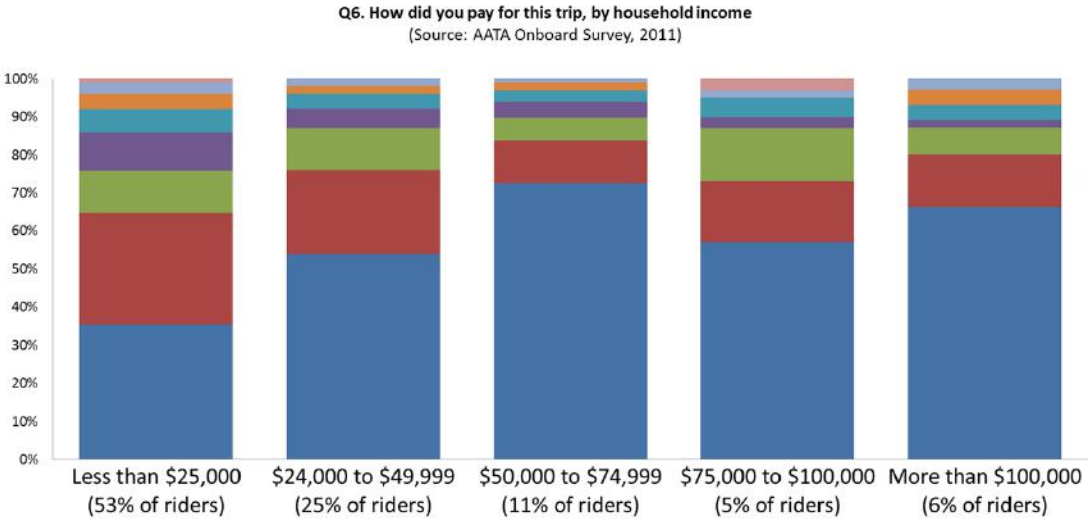


Comparing fare payment in 2006, 2009, and 2011

In 2011, compared to 2009 and 2006,

- 46% of riders used the MCard to pay their fares in 2011 compared to 49% in 2009 and 42% in 2006.
- 5% fewer were using cash than in 2006, but 4% more were doing so than in 2009.
- 6% fewer were using the 30 day pass than in 2006, but the percentage using the 30-Day pass was constant from 2009 to 2011 (7%)
- A WCC pass was being used by 6% in 2011, essentially the same as were using the EMU pass in 2009 (7%). There was no similar pass available in 2006.

Figure 21 Fare medium and income



	Less than $25,000 (53% of riders)	$24,000 to $49,999 (25% of riders)	$50,000 to $74,999 (11% of riders)	$75,000 to $100,000 (5% of riders)	More than $100,000 (6% of riders)
Transfer	1%	0%	0%	3%	0%
Token	3%	2%	1%	2%	3%
EMU Pass	4%	2%	2%	0%	4%
Other	6%	4%	3%	5%	4%
30-Day pass	10%	5%	4%	3%	2%
go!Pass	11%	11%	6%	14%	7%
Cash	29%	22%	11%	16%	14%
MCard	35%	54%	71%	57%	67%

Fare medium and income

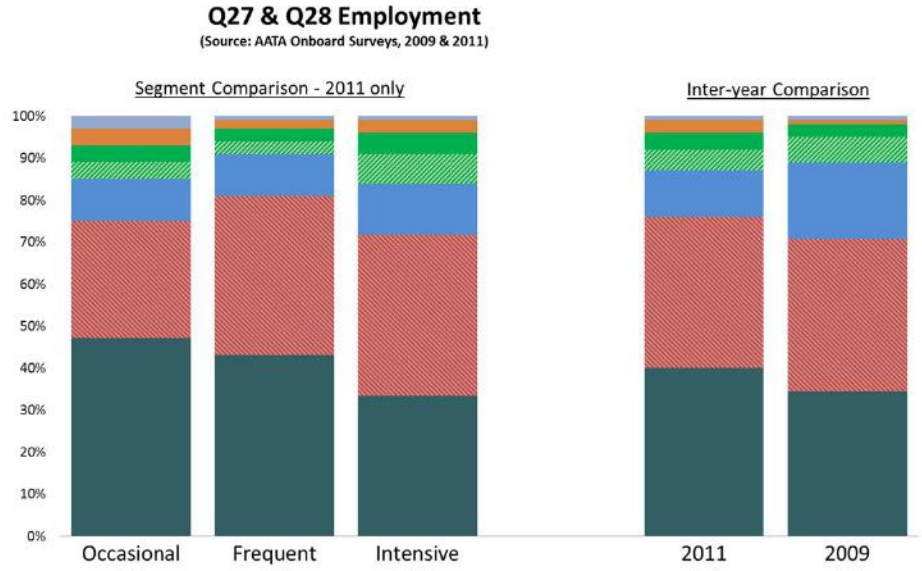
It is generally the case in public transit markets that people from lower income households are more likely than those from households with higher incomes to use cash rather than discounted passes. The reason is that using a discounted 30 day fare means having to have cash in advance to buy the pass. For a low income household, this means placing that cash at risk, because even short-term future travel needs are often uncertain.

The relationship of income level and use of cash fares holds true for AATA as well, though less so than in systems in some other cities. One reason for this is that the lowest income group among the riders are *more* likely than others to use the other forms of prepayment available to them (go!Pass, 30 day, token). They are simply less likely than those with higher incomes to have an MCard.

In the case of AATA, the presence of so many riders holding an MCard has a major impact on the total fare structure. Use of the MCard is clearly income-related: the higher the income, the more likely one is to use an MCard.

Demographic Profile

Figure 22 Employment of riders



	Occasional	Frequent	Intensive	2011	2009
Homemaker	3%	1%	1%	1%	1%
Employed for pay at home	4%	2%	3%	3%	1%
Retired	4%	3%	5%	4%	3%
Unemployed	4%	3%	7%	5%	6%
Sudent and employed	10%	10%	12%	11%	18%
Employed outside of home	28%	38%	38%	36%	36%
Student	47%	43%	33%	40%	34%

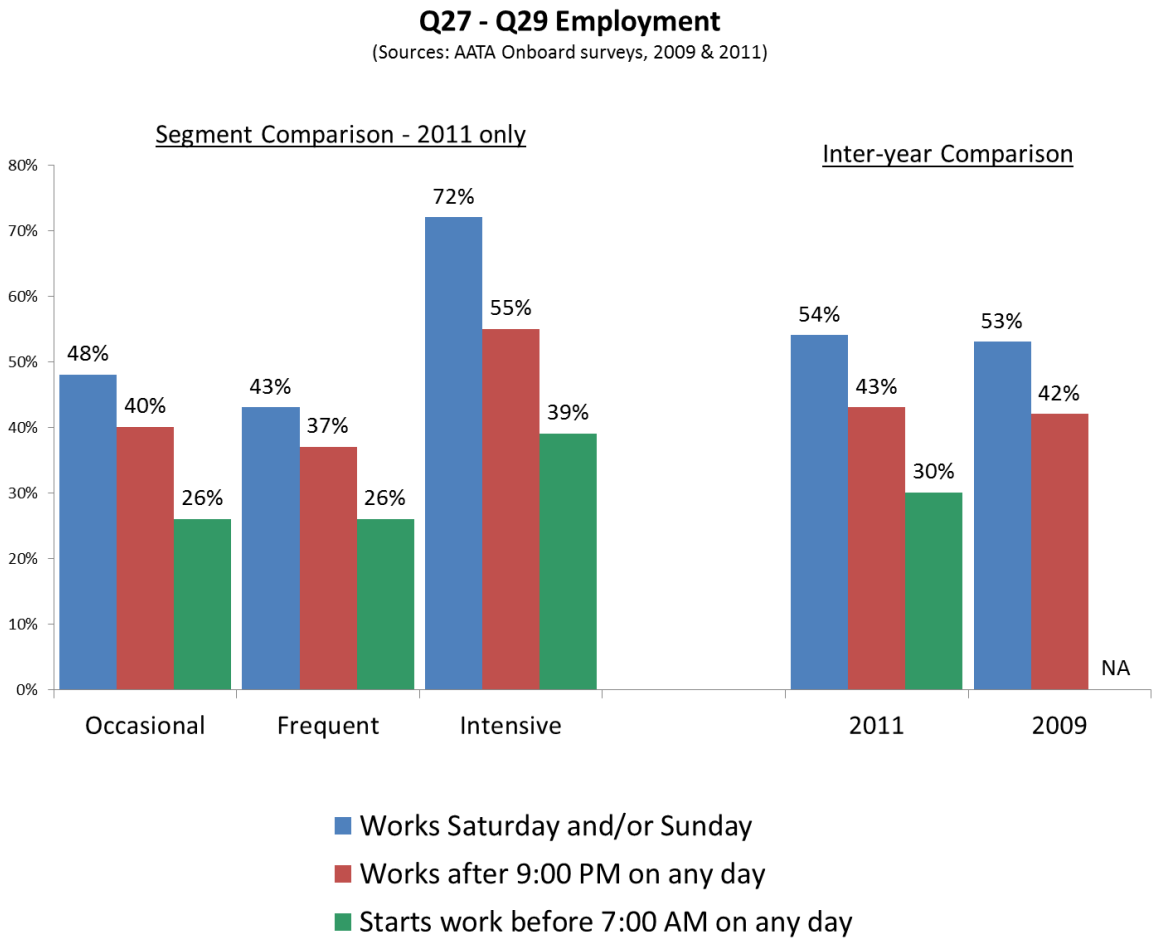
Employment of riders

A 51% majority of riders are students. While 40% of riders indicated they are students-only (up from 34% in 2009, another 11% indicated they are both students and employed (down from 18% in 2009), for a total of 51% indicating student status. The next largest group consists of persons who are employed for pay outside their home (36%, unchanged from 2009).

Of all riders, including both students who are also employed and persons who are only employed outside the home and are not students, 47% of AATA riders are employed, down from 54% in 2009 because of the decline in the percent of students who are employed, not because of any significant increase in the percent of riders describing themselves as unemployed.

More of the occasional riders than of the other rider segments are students-only. Thus, while 47% of occasional riders are students-only, 43% of frequent riders and 33% of the intensive riders are students-only. Conversely, the frequent and intensive riders are more likely (38% in both cases) to be employed outside the home than the occasional riders (28%).

Figure 23 Working on non-peak days and hours



Working on non-peak days and hours

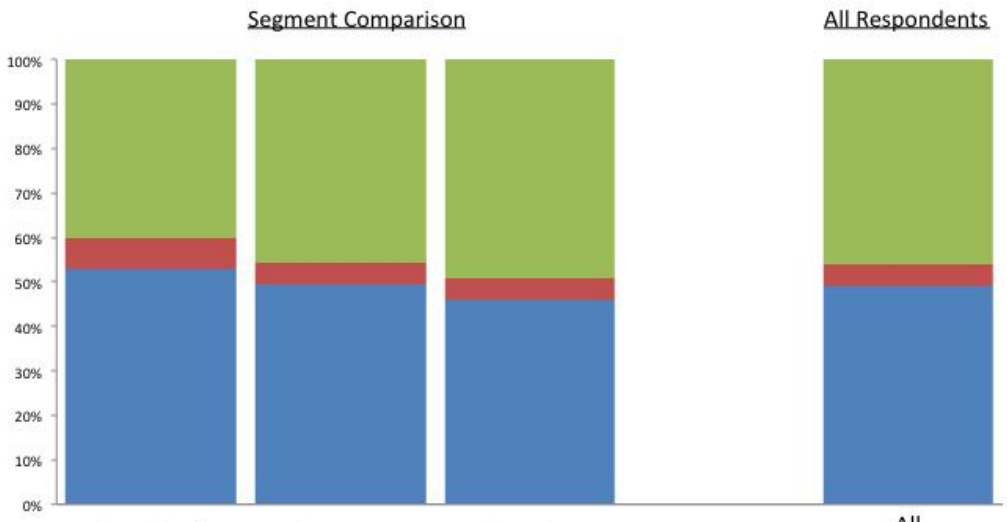
Those riders who are employed were asked whether they work during off-peak times, specifically weekend days, and/or after 9 PM on any day of the week. Included among the employed riders are both those who are only employed and those who are both students and employed. Of employed riders, 54% indicated that they must work on Saturday and/or Sunday, and 43% indicated they must work on one or more days a week after 9 PM. The 1% change in these percentages since 2009 can be ignored. In 2009, respondents were not asked if they had to begin work before 7:00 am, but in 2011 30% indicated they do have to work that early.

Having to work weekends is the most common phenomenon. Having to work evenings is the second most common, and working before 7:00 am is third. As one would anticipate, all three tendencies hold especially true for the intensive riders. They are lower in income than the other segments and would probably be more likely to have service jobs that require weekend and evening work.

This is an important issue for transit planning and marketing and is discussed further in the section titled "Importance of Service Improvements" that begins on page 68.

Figure 24 Student riders

(Sources, AATA Onboard Surveys, 2011)



Are you a student?	Occasional	Frequent	Intensive	All Respondents
Not a student	40%	46%	49%	46%
High school student	7%	5%	5%	5%
College student	53%	50%	46%	49%

Student riders

Approximately half (49%) of adult riders are college students and another 5% are high school students[4]. There is a slight inverse relationship between being a college student and frequency of using The Ride. While of occasional riders 53% are college students, fewer intensive users, 46%, are college students. Nevertheless, in all three riders group there are a great many college students, range from lowest (46%) to highest (53%) being only 7%.

[4] In 2009, the high school question was not asked. The percent of high school student riders in 2011 may be underestimated because interviewing rules required the survey staff to make a judgment (or ask) as to whether a potential rider-respondent was sixteen or older. The reasons for this are that younger persons are less reliable in terms of accuracy of information about the household. In addition for reasons of good public relations, it is probably not a good idea to have even a uniformed stranger approach a child younger than 16, however legitimate the approach.

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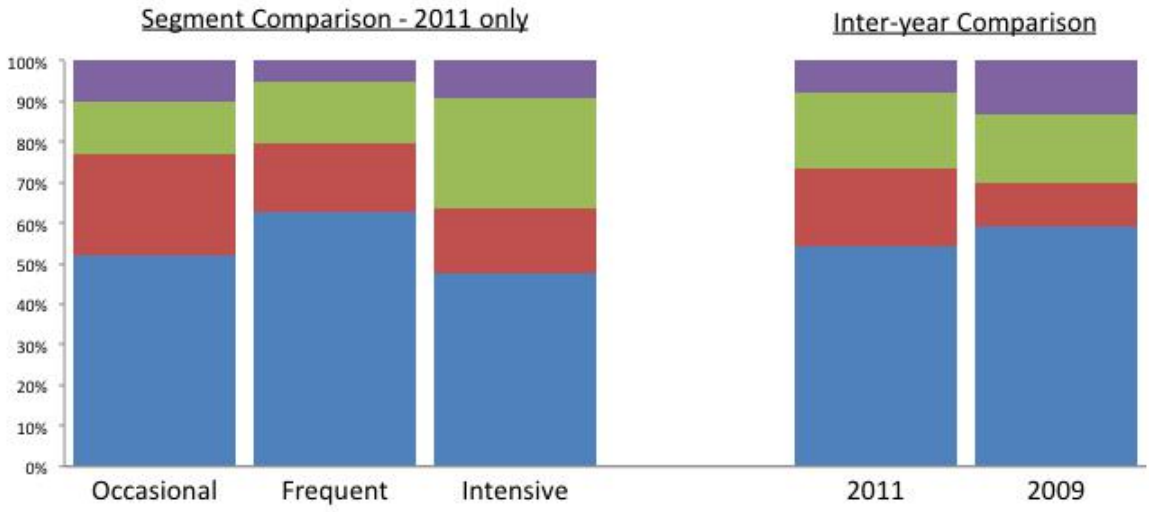
Figure 25 School/college attended

(Sources, AATA Onboard Surveys, 2009 & 2011)



	Occasional	Frequent	Intensive	2011	2009
Other	10%	5%	9%	8%	13%
WCC	13%	15%	27%	19%	17%
EMU	25%	17%	16%	19%	11%
U of M	52%	62%	47%	55%	59%

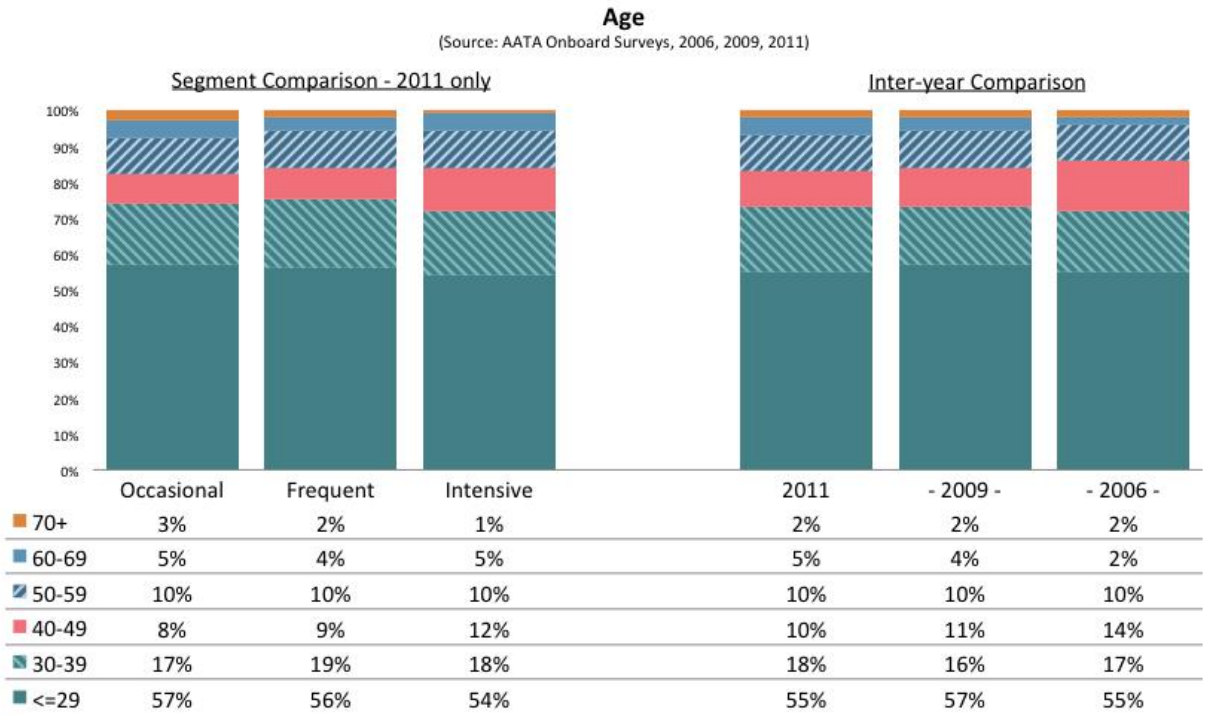
School/college attended

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) 55% said they attend the University of Michigan, while 19% attend Washtenaw Community College, 19% Eastern Michigan University, and 8% other schools. These proportions are generally similar in rank order to those in the 2009 survey, although there has been a major increase in the percent indicating that EMU was their college.

Just as in 2009, intensive riders differed considerably from the other rider segments in the schools attended. For example, 47% attend the University of Michigan, but 27% attend Washtenaw Community College, considerably more than the average of 19% for all riders.

Conversely, among the frequent riders, almost two-thirds (62%) attend the University of Michigan, 17% EMU, and 15% WCC. But among occasional riders 10% fewer (52%) attend University of Michigan, while 25% attend EMU – considerably more than the average for all riders of 19%.

Figure 26 Age



	Occasional	Frequent	Intensive	2011	- 2009 -	- 2006 -
70+	3%	2%	1%	2%	2%	2%
60-69	5%	4%	5%	5%	4%	2%
50-59	10%	10%	10%	10%	10%	10%
40-49	8%	9%	12%	10%	11%	14%
30-39	17%	19%	18%	18%	16%	17%
<=29	57%	56%	54%	55%	57%	55%

Age of riders

In the United States, transit riders tend to be young, even in towns without major universities. This continues to be true of AATA riders in 2011 as it was in 2009. Of all AATA riders, 55% are under the age of thirty. Given that students make up a very substantial portion of the total ridership, this is not surprising. Since 2006, the age of the ridership has not changed significantly.

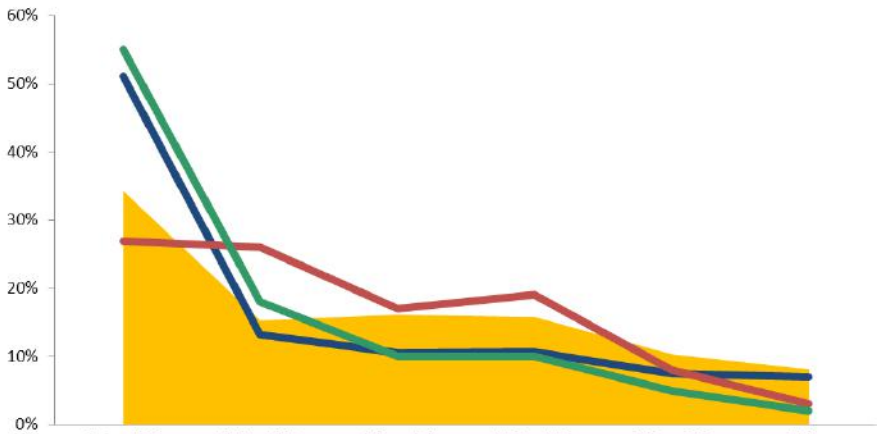
The rider segments do not differ greatly in terms of age. This is substantially different than in 2009. At that time, the occasional riders were significantly younger than the other segments. The data do not reveal why this may have changed. In 2009, 64% of occasional riders were twenty-nine or younger, while in 2011, that percentage had declined to 57%. On the other hand, the total under forty within that group changed somewhat less, to 74% in 2011 compared to 78% in 2009.

In 2011, the three rider segments are more alike in age than they are different.

Figure 27 Contrast - general public age (Census 2010) and AATA riders

Comparing age of the general public with age of riders

(Sources: Census, 2010 & AATA Onboard Survey, 2011)



	14 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70+
Washtenaw Co; 2010 Census	34%	15%	16%	16%	10%	8%
Ann Arbor & Ypsi Census 2010	51%	13%	11%	11%	8%	7%
AATA Non-student riders	27%	26%	17%	19%	8%	3%
All AATA riders (student and non-student), 2011 Onboard Survey	55%	18%	10%	10%	5%	2%

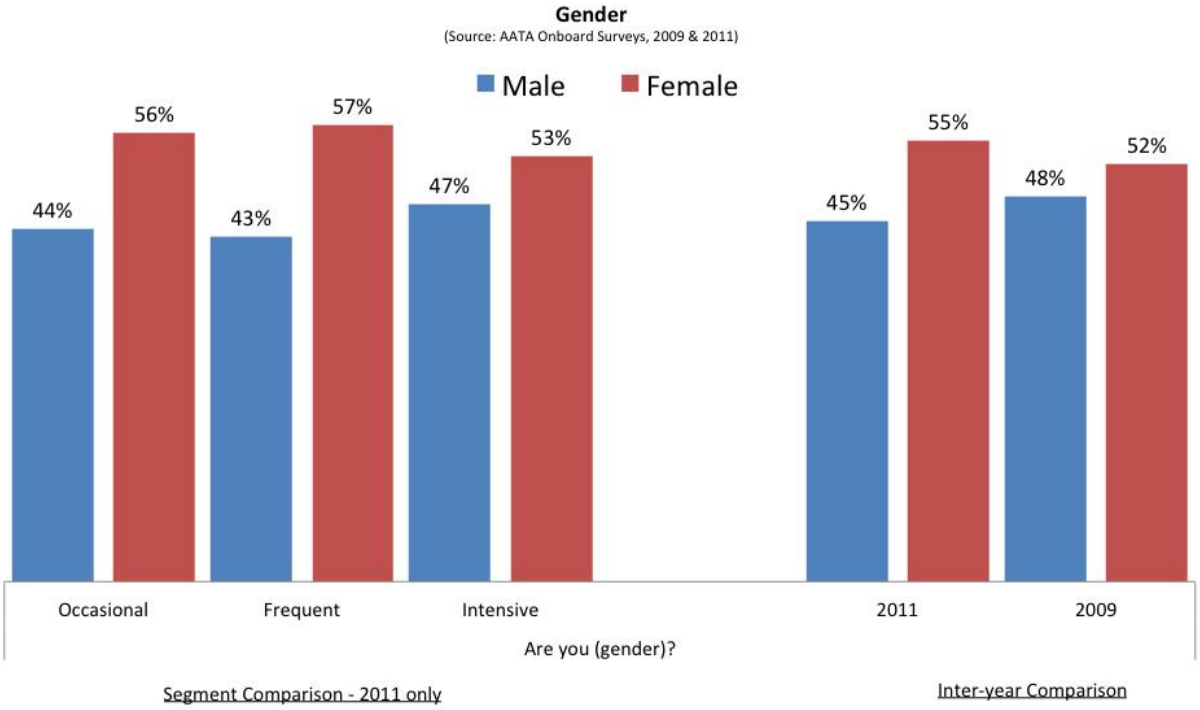
Age of the general public and age of AATA riders

The combined population of the Ann Arbor and Ypsilanti areas is unusually youthful compared to most American cities. In most transit systems we observe an immense gap between the ages of the population and the ridership, with the ridership being far younger than the general public. In this case, the differences do exist in the usual direction, but they are far smaller than we usually observe. As a result, the age profile of all riders, including both students and non-students matches fairly closely the profile of Ann Arbor and Ypsilanti.

The age distribution of the full AATA ridership (green line) is quite different from only the non-student portion of the AATA ridership (shown as the red line). Non-student riders are clearly older than the ridership as a whole, with fewer in the under-30 range and substantially more in the age range of 30 through 59. The total ridership is, however, similar to the profile of the general public of the current service area of Ann Arbor and Ypsilanti (dark blue line).

Given the desire to expand transit service county-wide, the age distribution of Washtenaw County is also included in the chart. The age profile of the current ridership is very dissimilar to the population of Washtenaw County as a whole (gold area of the chart). The county adult population is fairly young, with about one-third (34%) under the age of thirty, but it is substantially older than the population of the current service area and of the current ridership. Thus, in expanding the market, transit service will be seeking to serve not only a different, less dense, geography, but also a substantially older population than The Ride now serves.

Figure 28 Gender



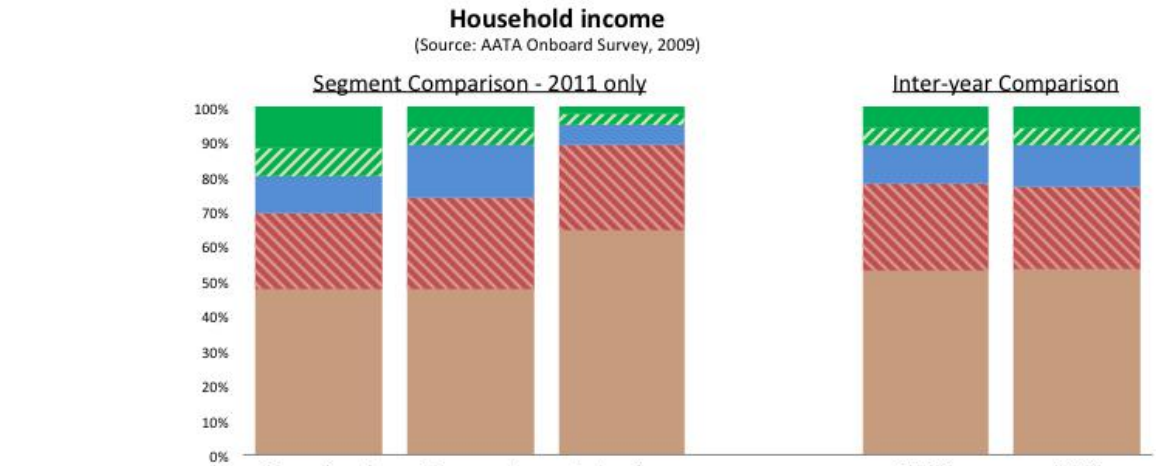
Gender of riders

Between the Census of 2000 and that of 2010, the total population of Ann Arbor and Ypsilanti changed from 52% female to 51% female. The gender distribution of riders in general and of each rider segment is significantly different from, the total population and change appears to have been in the opposite direction – i. e. , the percentage of women among riders increased. In 2009, ridership was, like the population, 52% female. This changed between 2009 and 2011. In 2011, 55% of riders are women.

A search in the data for something to explain this surprising shift from a difference of 4% to a difference of 10% in the prevalence of women among riders has, to date, been fruitless. If, for example there had been a surge in riders over the age of 60, a population that is much more female than male, that might have explained the change. But that did not occur, and other changes in variables, such as employment and student status, also did not explain it.

Occasional (56%) and frequent (57%) riders are more often female than are the intensive riders (53%).

Figure 29 Income



	Occasional	Frequent	Intensive	2011	2009
More than $100,000	12%	6%	2%	6%	6%
$75,000 to $100,000	8%	5%	3%	5%	5%
$50,000 to $74,999	11%	15%	6%	11%	12%
$24,000 to $49,999	22%	26%	24%	25%	24%
Less than $25,000	48%	47%	64%	53%	54%

Income of rider households

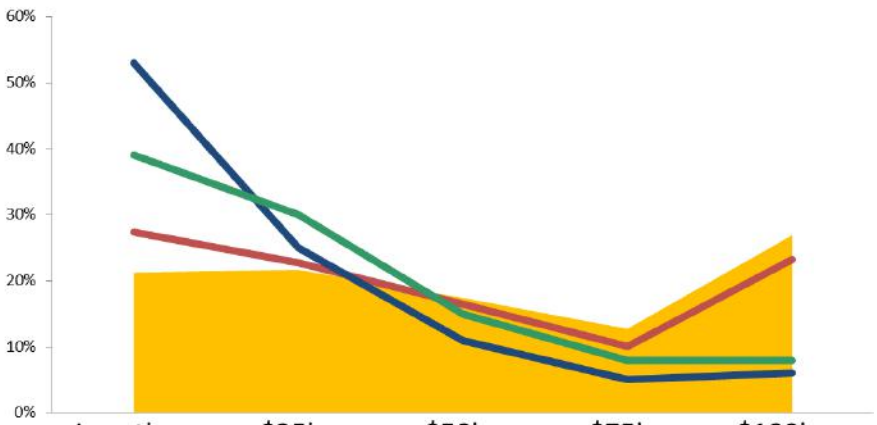
As in 2009 (54%), in 2011 more than half of all AATA riders (53%) report household incomes of less than $25,000 annually. As is true of virtually all transit systems in the United States, the incomes of most frequent riders ("Intensive") are more likely to be lower than those of the less frequent riders. For example, 64% of the households in the intensive rider category report income of less than $25,000 annually, but "only" 47% of the frequent riders report incomes this low. The reason, of course, is the relative transit dependency of the more intensive transit users.

Of the intensive riders, only 11% report household incomes of $50,000 or more. Of frequent riders, 26%, and of the occasional riders, 31% report incomes of $50,000 or more. This is a primary indicator of the style and extent of transit use to be motivated by income level as opposed to other motivators such as environmental concern.

Figure 30 Contrast - general public income (ACS results) and AATA riders

Comparing income of the general public with income of riders

(Sources: American Community Survey, 5 year summary, & AATA Onboard Survey, 2011)



	Less than $25,000	$25k - $49,999	$50k - $74,999	$75k - $99,999	$100k or more
Washtenaw Co - ACS	21%	22%	17%	13%	27%
Ann Arbor & Ypsilanti - ACS	27%	23%	17%	10%	23%
All AATA riders (Student and non-student)	53%	25%	11%	5%	6%
AATA non-student riders	39%	30%	15%	8%	8%

Comparing the incomes of households in Ann Arbor and Ypsilanti with those of AATA riders

Although the 2010 Census has been released, it is released in sections, with only certain demographics ready for release at any one time. The household income data was not yet available at the time of this report. As an alternate source for general public household income we have used the *American Community Survey*, which is a household random sample survey the Census Bureau conducts on an ongoing basis between the decennial census periods. Household income data have been drawn from that survey and compared in the chart above to the income distribution among AATA rider households from the AATA 2011 Onboard Survey.

The contrasting income levels of rider households and all households in both the cities of Ann Arbor and Ypsilanti and all of Washtenaw County are made clear in the chart above. Compared to all households in the two cities, AATA riders are almost two times more likely (53% to 27%) to fall into the lowest income category (<$25,000) and the contrast with the county is even more marked. This contrast is statistically unchanged from 2009. Compared to the populations of Ann Arbor and Ypsilanti, riders are also roughly one-fourth as likely (6% to 23%) to fall into the highest income category. This too is unchanged since 2009.

Washtenaw County as a whole has household income levels somewhat higher than those of Ann Arbor and Ypsilanti. Thus, as with the age characteristics reported earlier (Figure 27), if and when public transit service is expanded, the nature of the market for transportation will differ substantially from what it is for AATA today.

Customer satisfaction

Figure 31 How source-satisfaction questions were asked

12. How satisfied or dissatisfied are you with each way of obtaining information on AATA?

	Did not use	Dissatisfied ☹			Neutral 😐			Satisfied ☺	Past 30 days – any problem getting info this way?	
a. Schedule book (Ride Guide)	☐	1	2	3	4	5	6	7	Y	N
b. Schedules at bus stops	☐	1	2	3	4	5	6	7	Y	N
c. Customer service line (996-0400)	☐	1	2	3	4	5	6	7	Y	N
d. Website ("www.theride.org")	☐	1	2	3	4	5	6	7	Y	N
e. RideTrak (track bus on cell-phone)	☐	1	2	3	4	5	6	7	Y	N
f. Google Transit	☐	1	2	3	4	5	6	7	Y	N
g. MyRide (Route subscription)	☐	1	2	3	4	5	6	7	Y	N
h. Information specialists at the Blake Transit Center	☐	1	2	3	4	5	6	7	Y	N

Satisfaction items in the onboard questionnaire

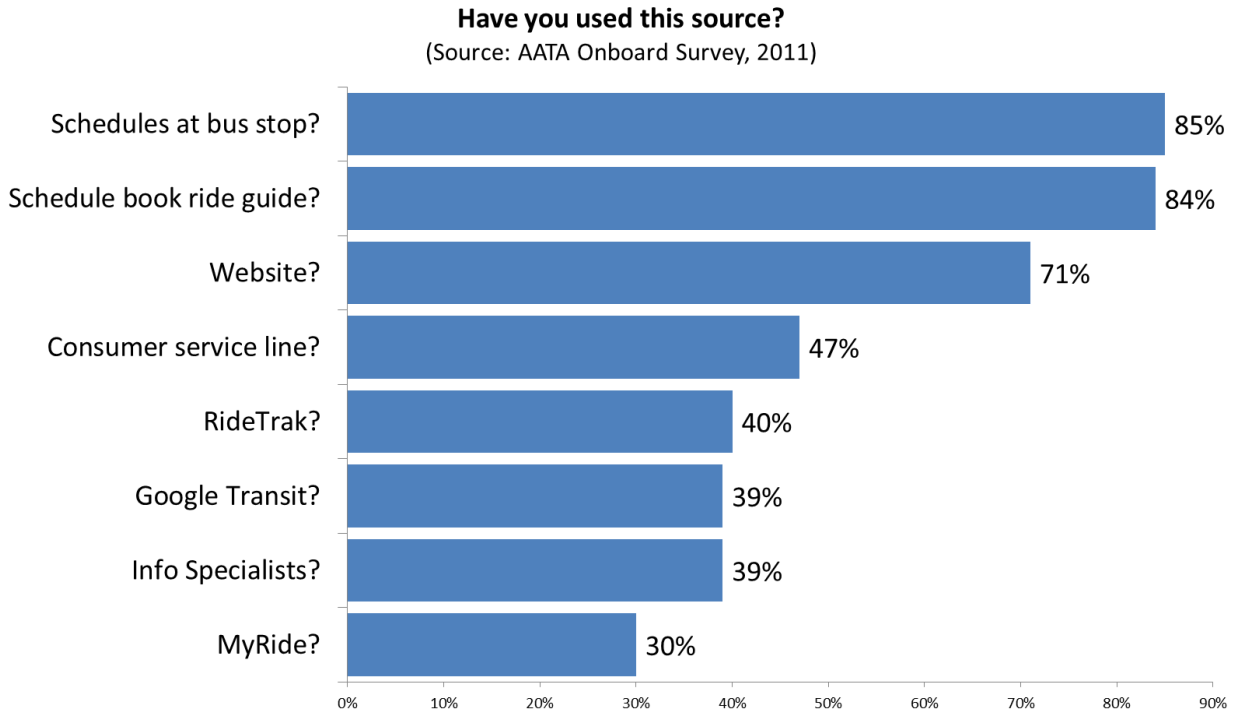
Before we describe the results of the customer satisfaction measurements in the survey, it is important to discuss the elements involved. This excerpt from the survey questionnaire in the figure above applies to two different sections of the survey: (1) satisfaction with sources of information about services provided by AATA, and (2) satisfaction with AATA services themselves.

The questionnaire measures satisfaction in two ways:

(1) Using a scale from 1 to 7. The results of these ratings are presented in full detail for the entire sample of riders. They are also broken down into the rider market segments, but only the top percent (i. e. those ratings on "7" on the 7-point scale) is presented for simplicity of comparison.
(2) Asking if the rider had experienced a problem in the past thirty days. The time limit is used to reduce the tendency for riders to nurse old grudges and respond while thinking of problems that had occurred a long while ago. The intent is also to provide a basis to measure progress in the future. The results are presented for all riders and for the rider market segments.

The two measurements are then combined into *Impact Scores.* These measure the *impact* of problems with information or service. Some problems experienced by riders may have a greater impact on their overall satisfaction than others. This method is described more fully in the text surrounding the impact score tables.

Figure 32 Use of information sources

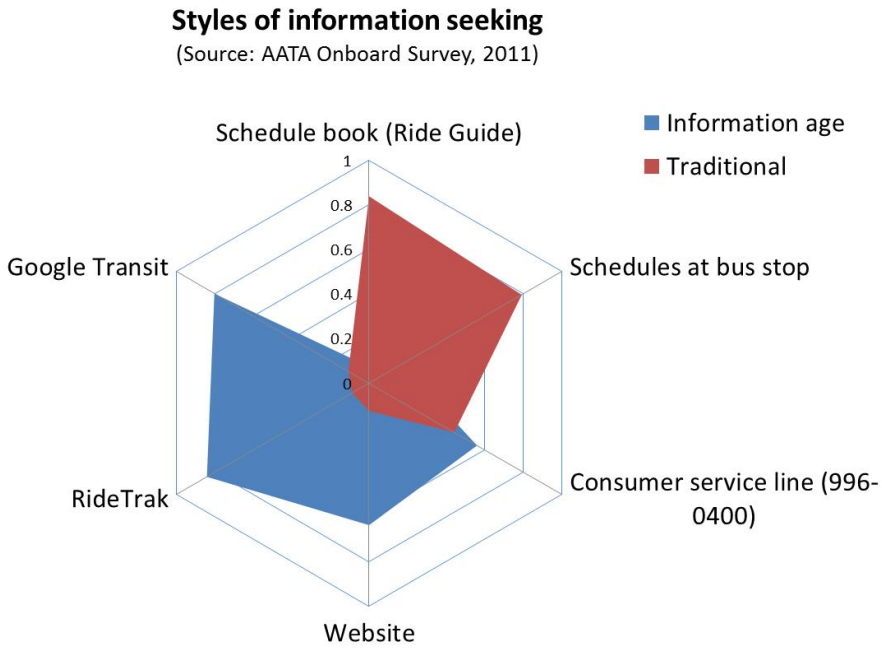


Use of information sources

The three most *utilized* sources are the same as they were in 2009: schedule book (used by 84%), schedules at the bus stops (used by 85%), and the AATA website (used by 71%). These are also the three with the highest percentages expressing satisfaction. Notice that all of these are anonymous and totally user driven sources that are a very general source of information the customer can use as desired. The other sources require interaction of some type and specification of a question or destination.

Slightly fewer than half of the riders (47%) have used the services of the customer service line, or the information specialists at the transit centers (39%), or RideTrak (40%). Those who have used any of these tend to respond positively or to be neutral on the service.

Figure 33 Tendencies in information-seeking



Tendencies in information-seeking

Factor analysis is a statistical method of reducing a series of responses to survey questions to a smaller number of cohesive groups of responses that express common themes using a scale that can vary from 0 to +1 as shown in the chrt. We are accustomed to the concept of common themes in patterns of political and religious beliefs which tend to have fairly cohesive thematic patterns. One implication of this is that by knowing one or two elements of the belief system, one can reasonably well predict the other elements. Another is that if a person follows one thematic strain, he probably rejects the other.

Figure 34 The relationship between two information-seeking tendencies

The total ridership includes overlapping information-seeking styles

	Low Traditional	Moderate Traditional	High Traditional	Total
Low Information Age	10%	9%	14%	33%
Moderate Information Age	13%	13%	7%	33%
High Information Age	10%	12%	12%	34%
Total	33%	34%	33%	100%

The way people seek information, including transit information, can be analyzed in that same manner. A thematic analysis (which in statistical jargon is *factor analysis*) of how people utilize AATA's information sources reveals what one might guess would be the typical patterns.

There is one group that we may call *traditional,* that seeks information in print form or by telephone – the traditional ways in which transit systems provided consumer information. The other group, which we can call an *Information Age* group, tends to rely on systems such as RideTrak and Google Transit, and to a lesser extent, the website. There is one area of overlap between the two styles of information seeking

in that the telephone information line is used to some extent by both groups, though to a lesser degree than their primary information tools.

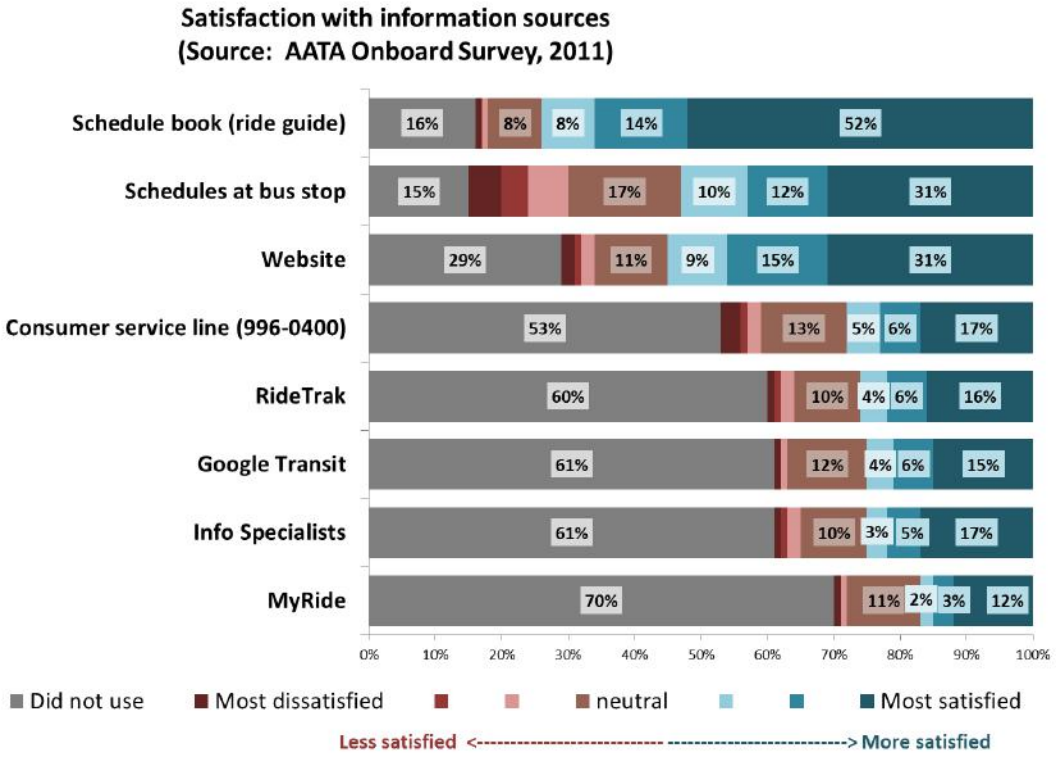
The inset table (Figure 34) demonstrates how the two tendencies relate to each other in the total ridership (the total table sums to 100%). The riders were broken into thirds or *terciles* according to their *factor scores* – i. e. , how closely they matched the pure type of information seeking style.

What we were interested in was the extent to which AATA might have to have two very distinct information programs, one for new-age types of people using smart phones, Google, and so forth, and another for traditionalists seeking information primarily in print. If it turned out that riders were severely skewed to one type or the other with little overlap, then two programs would be needed. If that were the case, the percentages in the upper right and lower left of the table would be large and the other cells small.

It turns out that only a few represent the extremes. For example, of all riders, 14% are in the cell-combination High Traditional and Low Information Age, and 10% are in the reverse combination of High Information Age and low Traditional. In fact, the balance, 76%, have some mixture of approaches to seeking transit information. More riders fall into the moderate categories on one or both style levels than fall into the high or low extremes.

There are distinct styles, in other words, but they tend to be moderate preferences rather than very mutually exclusive. While eventually electronic information-age technology may displace printing, for the moment it is important to maintain both forms of communication.

Figure 35 Satisfaction with information services



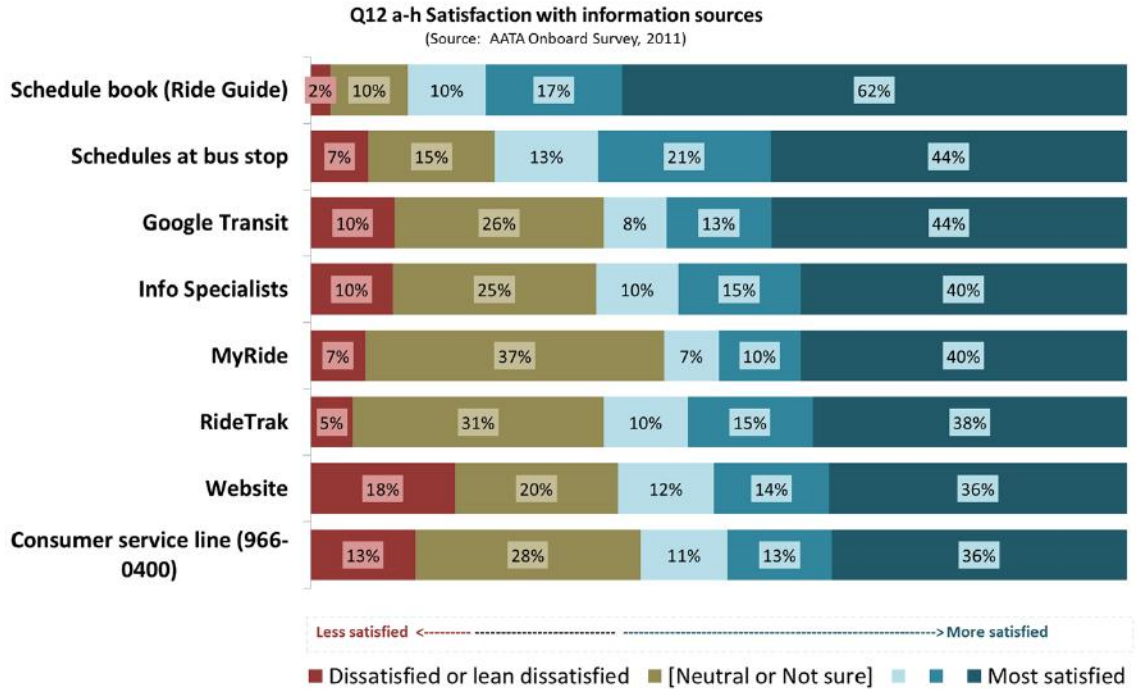
Satisfaction with information services

Each rider was asked to rate his or her level of satisfaction with sources of information AATA provides about its services. Ratings were based on a numeric scale ranging from 1 through 7. Optionally, in lieu of a rating, the rider could also indicate that he or she had not used the specific source of information.

This information is displayed in two ways in Figure 35 on this page and in Figure 36 on the following page.

Figure 35 puts the rating responses into perspective by revealing the percent who indicated they do not use the information source. The total percentage of positive or negative ratings is thus strongly affected by the extent to which people use the source. Notice that the two most used sources are very traditional print sources – the schedule book and schedules at the stops. In part because they are so widely used, they (along with the website) also have higher levels of satisfaction than the other sources.

Figure 36 Satisfaction with information services among those who have used them



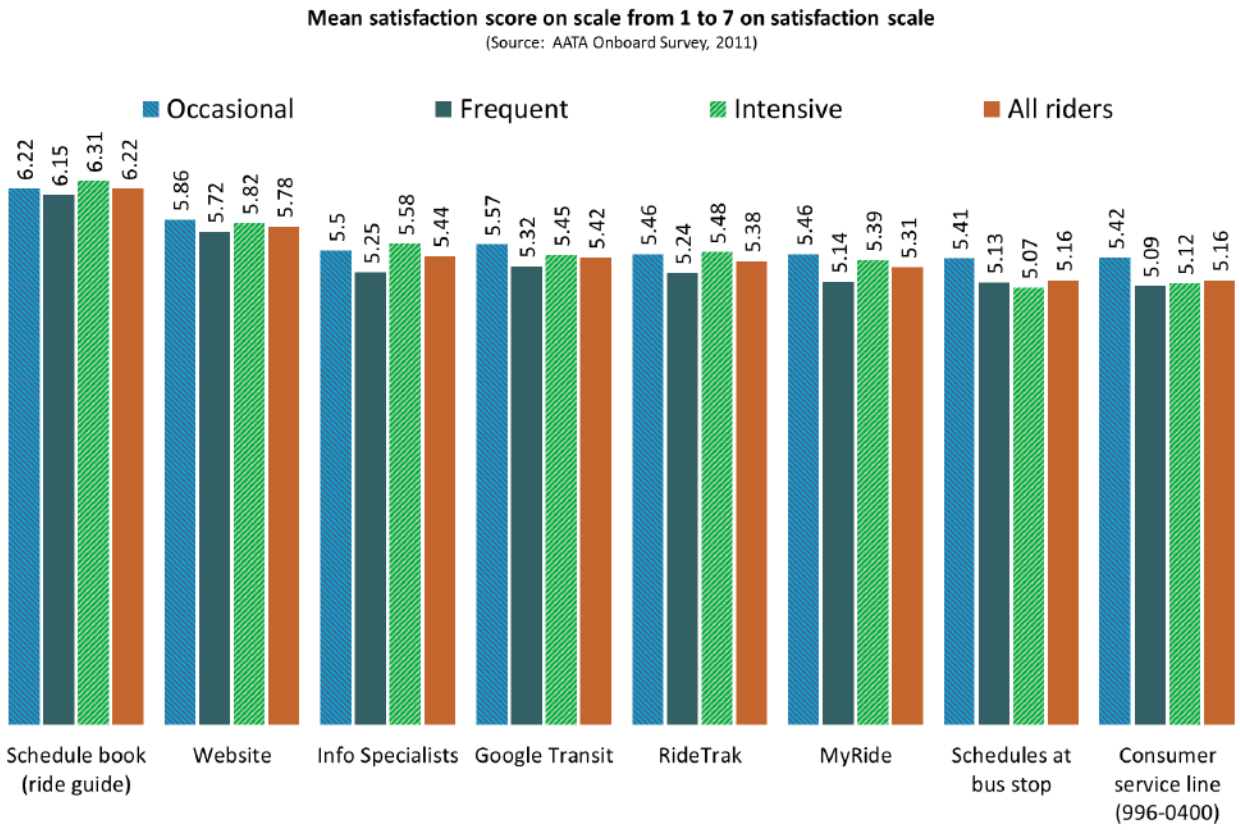
Satisfaction with information source among those who have used each source

By dropping from the percentages those who have not used each information source, we can better compare satisfaction among actual users. In addition, to simplify the chart, all negative scores (1,2,3) on the seven point scale have been combined in a single category labeled "Dissatisfied or lean dissatisfied," while the neutral (score of 4) and positive (5,6,7) scores remain uncombined. Figure 36 above provides those adjusted percentages.

The Ride Guide is well regarded, receiving the top score of seven from 62% of riders, and mostly satisfied scores from another 27%. Schedules at the stops and the Google Transit are also well-rated, with both receiving scores of seven on the seven point scale from 44% of respondents. The difference between the two comes primarily from the relatively high percent who are neutral rather than leaning positive about Google Transit.

The other scores varied within a range of only 4% (from 36% to 40%) in the category "most satisfied." However, they varied substantially between neutral and negative scores. For example, only 5% expressed a negative view of RideTrak, but 31% were neutral about it. On the other hand, 18% were negative about the website, while 20% were neutral.

Figure 37 Rider segments and satisfaction with information sources (Mean score)

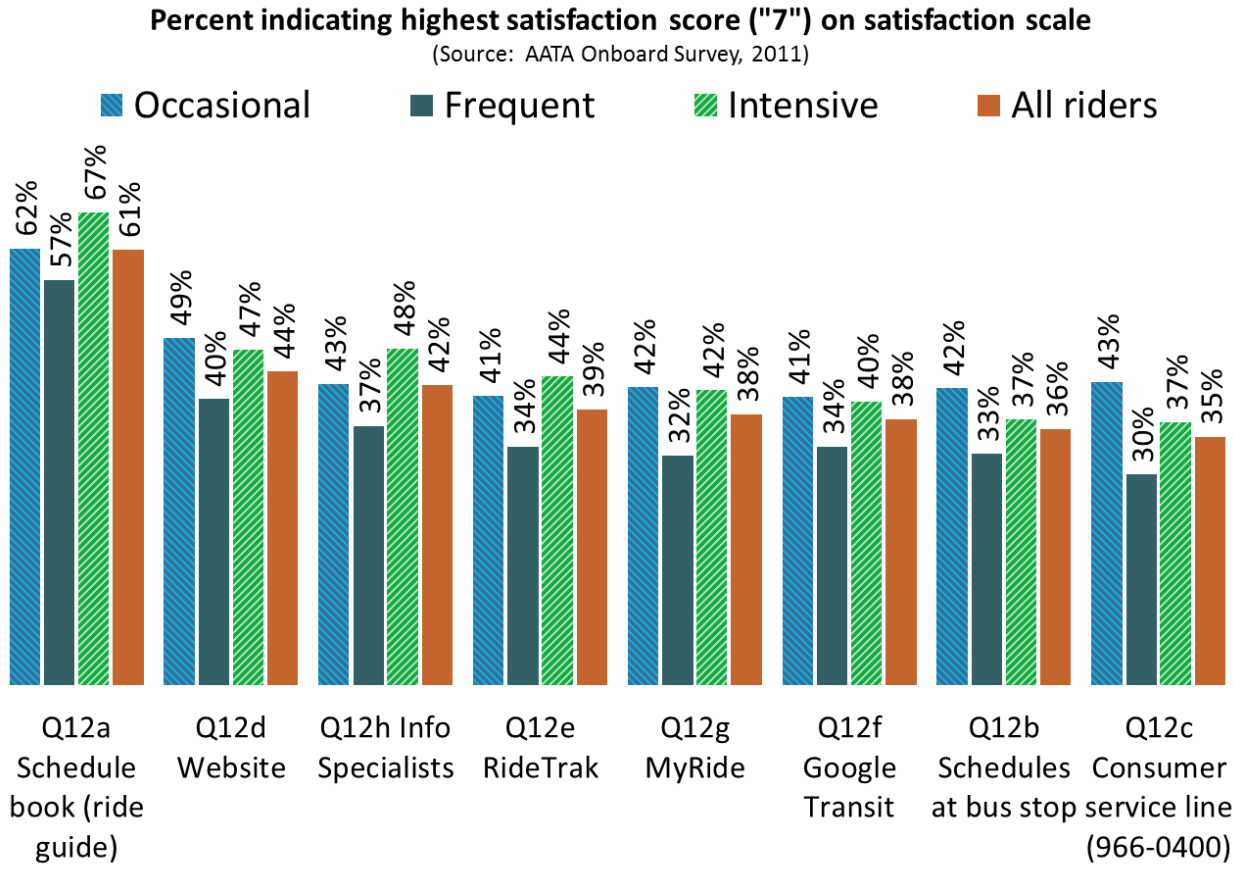


Rider segments and satisfaction with information

When we compare the three rider segments in terms of their levels of satisfaction (measured by mean score) with the eight sources of information (users only), we find that:

- The scores are all high (above 5).
- The scores among the rider segments are very similar.
- The scores are similar in terms of the rank order of the scores.

Figure 38 Rider segments and satisfaction with information sources (Top score in percent)



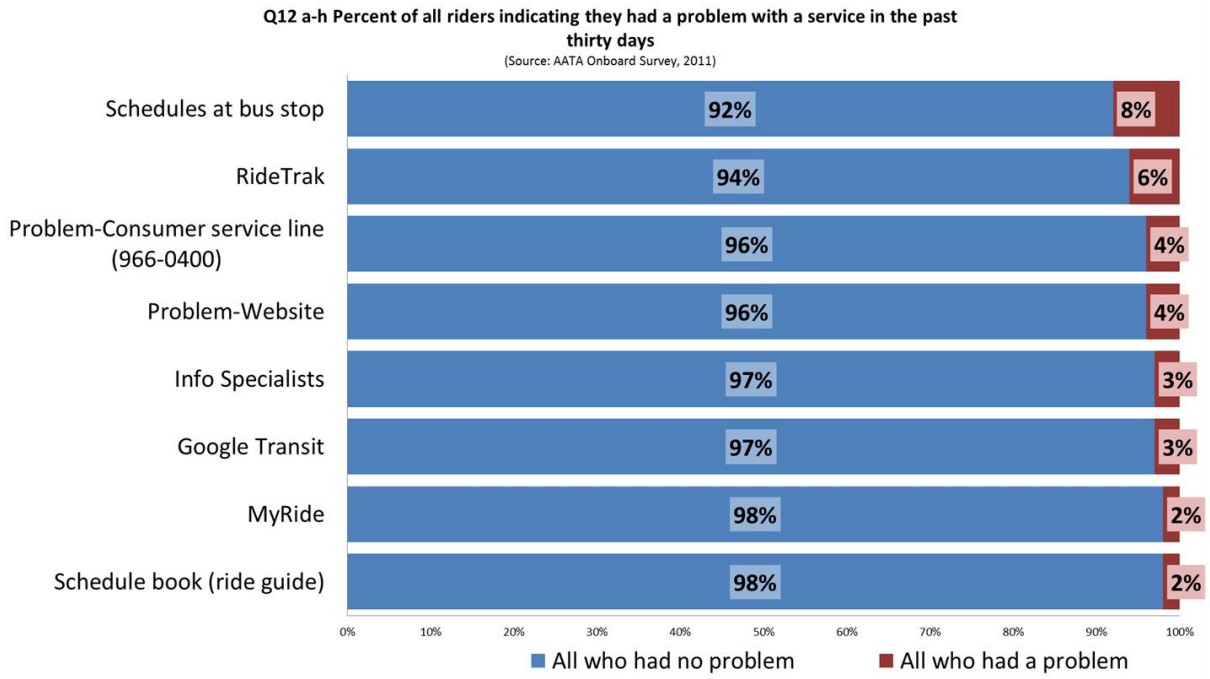
Rider segments and satisfaction with information sources (Top score in percent)

Figure 38 presents the same data as the previous chart but using a different statistic; in this case we use only the percentage scoring the item a "7" on the scale of one to seven.

Using the top percentage we can begin to see differences among the rider segments. The differences among the three segments, as we know from the previous chart of mean scores, are not profound. But they are noticeable. The primary difference is that the frequent rider is the rider less likely than the other two segments to score a source of information at the top level. And they do so by a margin ranging from five percent to thirteen percent. This difference is typical of rider segments in other transit systems.

This is caused by the fact that the frequent riders are more likely to be commuters and, because employment is at stake, more demanding of transit services. Intensive riders, being more transit dependent tend to be more forgiving, and being intensive users, more skilled in navigating the system, making it work for them. Occasional riders, with less urgent travel needs, are generally somewhat less demanding.

Figure 39 Reports of problems with information services



Reports of problems with information services

Respondents were asked not only to rate the various information services, but also to note whether they had had any problem with them in the past thirty days.

- More than 90% indicated for each source that they had encountered no problem.

- More riders (8%) reported encountering a problem of some sort with schedules posted (or not posted) at bus stops than cited any other problem. This was the major problem area in 2009 also. However, the 8% level represents a major reduction from 2009 when it was 14%[5].

- While 6% said they had encountered a problem with RideTrak, the fact that it as well as *My Ride,* are now available may have alleviated some of the problems with other information areas. We cannot demonstrate this using the data at hand, but all of the reports of problems with information declined substantially since 2009 and it is one hypothesis.

- Between 2% and 4% indicated they had encountered problems with various aspects of information services. And most had declined substantially from 2009 levels. In 2009 those levels were: Customer service line, 9%; Website, 8%; RideTrak (which had just been introduced), 7%; Customer information specialists, 6%; and Schedule book, 3%.

[5] In fact all of the problem reports were reduced in major proportion—roughly by half. This is so unusual that all programming used to determine the nature of these variables in a self-administered questionnaire data set (in which the response patterns are often irregular) was checked many times and the 2009 data rerun according to 2011 specifications. The conclusion was that the differences are real and not an artifact of slightly different programming approaches. Whether they are due to real *performance* changes or to changes in the *nature and attitudes* of ridership cannot be determined from these data. It is also possible that the RideTrak, which was introduced only shortly before the 2009 survey, has had a significant overall positive and broad effect.

Figure 40 Reports of information problems, by rider segment

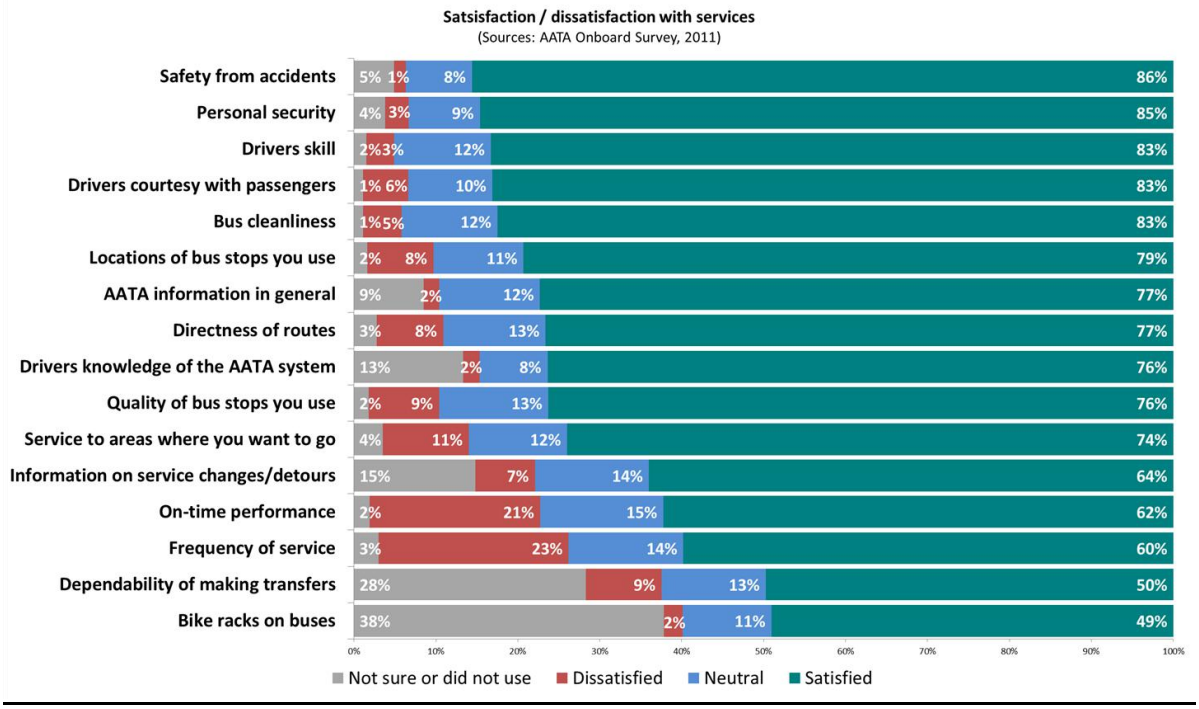
Reports of problems, by rider segment

Intensive users of transit were somewhat more likely than others to report having had problems with either the customer service line or with customer information specialists at the transit centers. This is not surprising since they travel more often by bus, making more trips per day on more days per week than others, with the resulting opportunity for things to go wrong more often. Moreover, many of them presumably use AATA for many purposes and varied destinations, thus necessitating the use of various information sources and a variety of routes that may not be routine for them and thus spark a need for information.

However, the differences in the perspective of the total ridership are small, only 1% or 2%.

Satisfaction with Service

Figure 41 Service satisfaction - overview



Service satisfaction – overview

Riders were asked to rate their satisfaction with services in the same way they rated satisfaction with information sources. Figure 41 above combines all satisfied responses (scores 5,6,7) and dissatisfied responses (scores 1,2,3). Neutral scores (4 on the scale from 1 – 7) are also shown. The percent who were not sure how to respond, presumably because they lacked experience, are also shown because the percentages vary widely. This needs to be understood to keep results in perspective.

First, all of the scores are very positive, including the rating of service overall, which has a positive rating by 89% of riders.

Two items had "don't know/don't use" percentages above 20%. They include the rating of bicycle racks on buses (38%) and the dependability of making transfers (28%). In 2009, the bicycle rack question was not included, but at that time, the dependability of making transfers had the highest "don't know" response (27%). It is because of their high "don't know" responses that transferring and bicycle racks are at the bottom of the list as rank ordered by the percent positive response in Figure 41.

The rank order of the service satisfaction findings is fairly typical of customer service ratings in other all-bus transit systems CJI has studied.

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Figure 42 Satisfaction or dissatisfaction with service among those able to offer a rating

Customer satisfaction, 2006 through 2011

Multi-year questions - All riders (excluding "don't know")	Mean on scale of 1 - 7			Change 09 to 11	Change 06 to 09	Rank order		
	2011	2009	2006			2011	2009	2006
Safety from accidents	6.21	6.17	6.02	0.04	0.15	1	1	1
Drivers' knowledge of the AATA system	6.17	6.07	6.00	0.10	0.07	2	2	2
Personal security	6.07	6.02	5.92	0.05	0.10	3	3	3
Drivers' skill	5.98	5.96	5.83	0.02	0.13	4	5	4
AATA information in general	5.97	5.91	5.82	0.06	0.09	5	6	5
Drivers' courtesy with passengers	5.93	5.84	5.73	0.09	0.11	6	7	6
Bus cleanliness	5.82	5.77	5.74	0.05	0.03	7	8	7
Directness of routes	5.66	5.64	na	0.02	na	8	9	na
Information on service changes / detours	5.65	5.48	5.54	0.17	-0.06	9	10	8
Service to areas where you want to go	5.58	5.53	na	0.05	na	10	5	na
Dependability of making transfers	5.42	5.35	5.51	0.07	-0.16	11	11	9
On-time performance	5.01	4.97	5.19	0.04	-0.22	12	12	10
Frequency of service	4.96	4.98	5.05	-0.02	-0.07	13	13	11
2011 only or 2006 and 2011						If ranked would be		
Bike racks on buses	5.90					7		
Locations of bus stops you use	5.78	na	5.56			8		
Quality of bus stops you use	5.65					9.5 (tie)		
AATA service overall	5.93	5.85	5.84	0.08	0.01			

Satisfaction or dissatisfaction with service among those able to offer a rating

In Figure 42 only those able to provide a rating are considered."Don't know" responses are excluded. With this recomputation of the percentages, we find that the general order of satisfaction levels remains very similar to what was shown in the previous chart. However, there are some differences.

First, when only those able to answer the question through experience are included, all satisfaction ratings stand at 56% positive or higher, even for the items at the bottom of the list. Also:

- For example, drivers' knowledge of the system, which had a 76% level of satisfaction, jumps to 88%.
- Bike racks on buses, which stood at 49%, moves up to 79%.
- Dependability of transferring moves from 50% satisfaction among all riders to 69% approval among those with transfer experience that enables them to rate the process.

There is a notable level of dissatisfaction above 20% negative in terms of on-time performance and frequency of service. This is very typical of all-bus, non-BRT systems.

Figure 43 Service satisfaction in detail

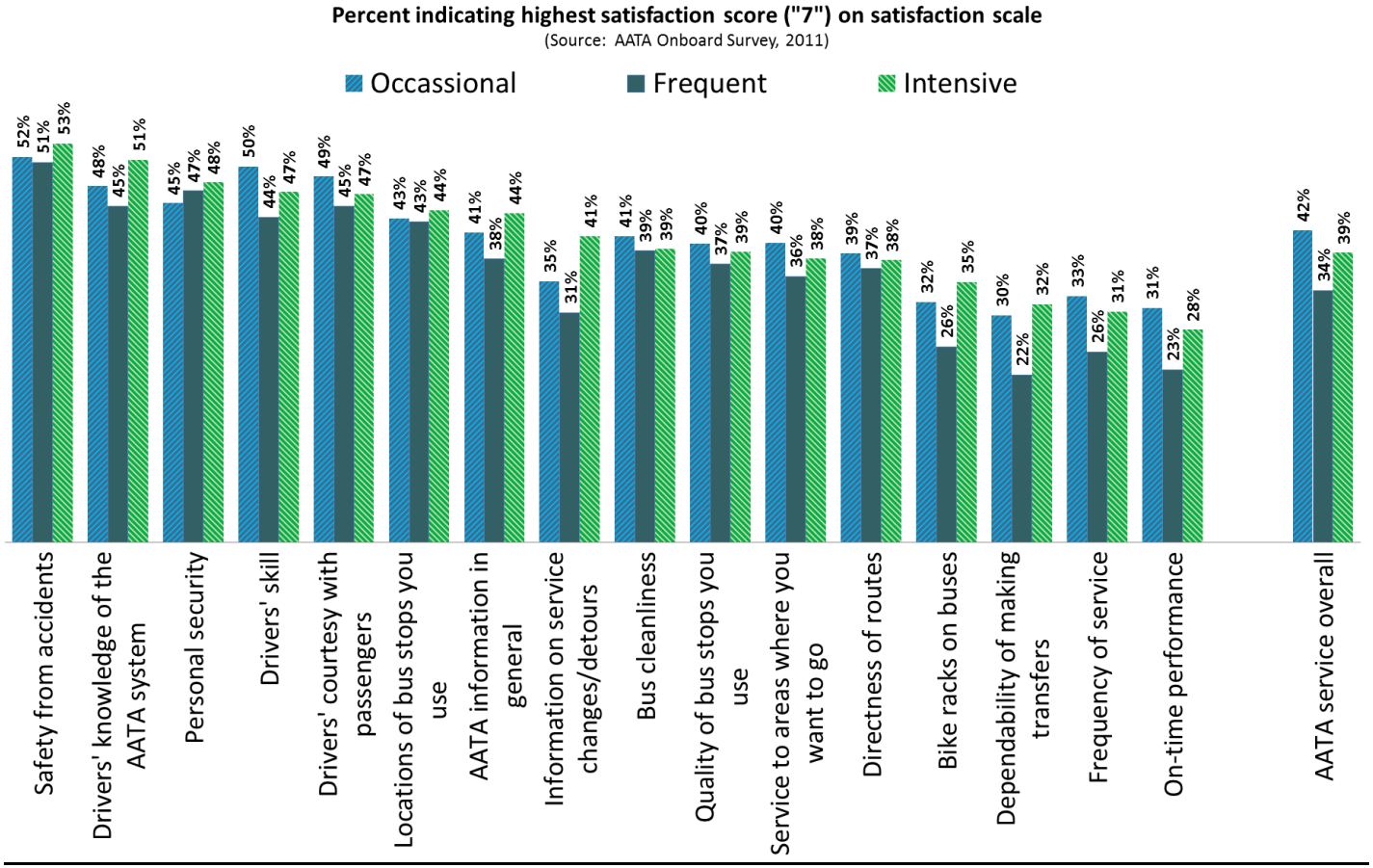
Detail of satisfaction ratings								
	Satis-fied			Neutral			Dissatis-fied	Not sure or did not use
	7	6	5	4	3	2	1	
Safety from accidents	54%	25%	10%	9%	1%	0%	0%	5%
Drivers knowledge of the AATA system	55%	23%	10%	10%	1%	0%	0%	13%
Personal security	49%	27%	12%	9%	1%	1%	1%	4%
Drivers courtesy with passengers	47%	25%	12%	10%	3%	1%	2%	1%
Drivers skill	47%	25%	12%	12%	2%	1%	1%	2%
Locations of bus stops you use	45%	23%	13%	11%	4%	2%	2%	2%
AATA information in general	45%	26%	14%	13%	1%	0%	1%	9%
Bus cleanliness	40%	27%	17%	12%	2%	1%	2%	1%
Quality of bus stops you use	39%	24%	15%	14%	5%	2%	2%	2%
Directness of routes	39%	24%	17%	13%	4%	2%	2%	3%
Service to areas where you want to go	39%	23%	15%	12%	6%	2%	3%	4%
Information on service changes/detours	41%	22%	12%	16%	5%	2%	2%	15%
Bike racks on buses	49%	20%	10%	17%	2%	1%	1%	38%
Frequency of service	30%	17%	15%	14%	12%	5%	6%	3%
Dependability of making transfers	38%	19%	12%	18%	7%	3%	3%	28%
On-time performance	27%	20%	17%	15%	11%	6%	5%	2%

Service satisfaction in detail

Figure 43 presents a more detailed overview of the satisfaction scores. The ratings are displayed in descending order of the percent giving positive scores of 5, 6, or 7, but now the *levels* of satisfaction and dissatisfaction are broken out. In this chart those who indicated they were unsure how to answer are shown, but not included in the computation of the scores. 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.

In all cases, the positive scores greatly outnumber the negatives. The tendency is for the riders who are able to provide a rating to score services either 6 or 7 on the satisfaction scale for most aspects of service. As is true of most all-bus systems, however, frequency of service and on-time performance are at the low end of satisfaction. Dependability of transferring is closely related to all three of these, and is also in the bottom four.

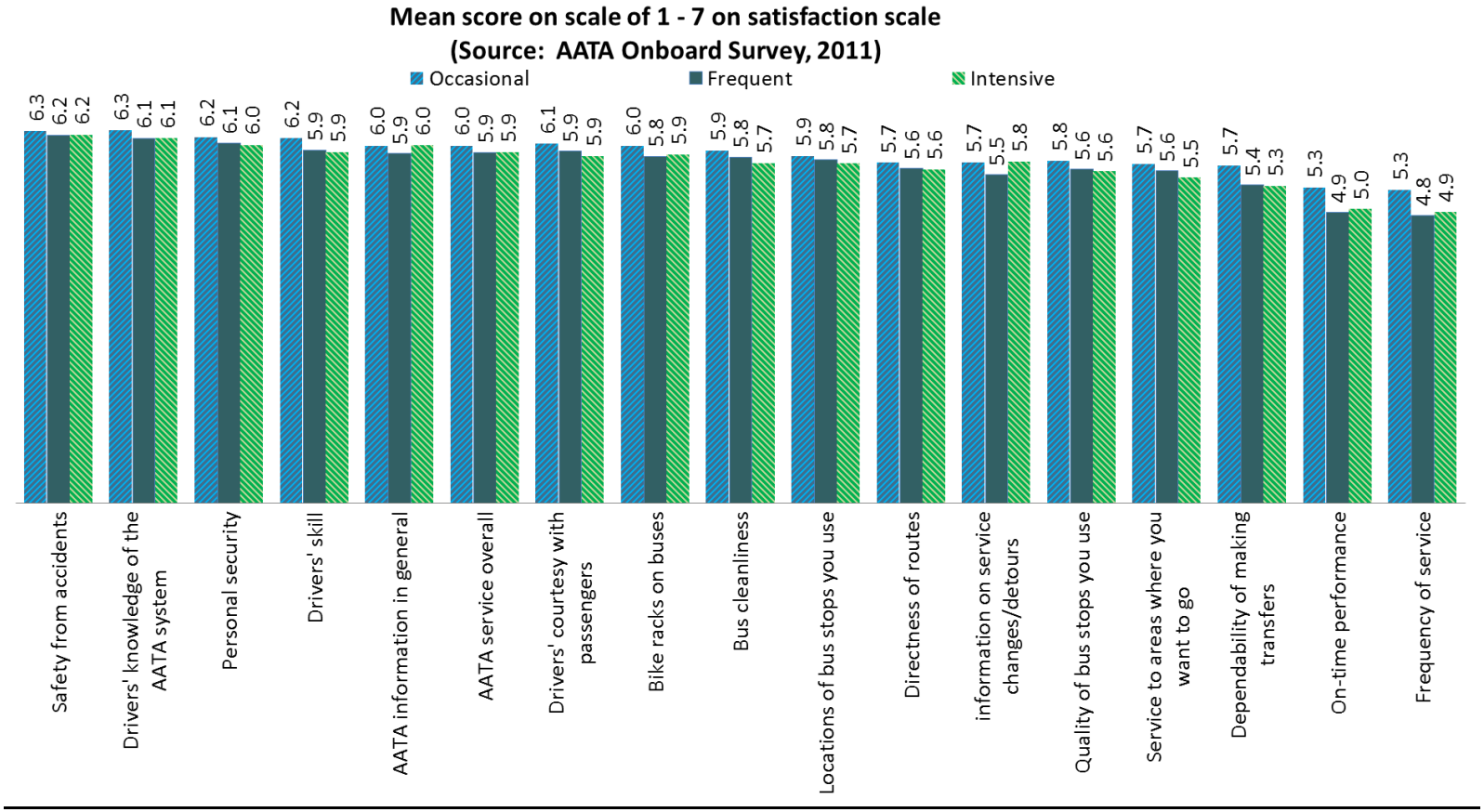
Figure 44 Top satisfaction scores of the rider segments



Top satisfaction scores of the rider segments

As with the satisfaction scores for information sources, we find that the intensive riders tend to score the most important aspects of AATA service slightly better than the frequent riders. Frequent riders tend to be commuters following time-sensitive schedules; they are more likely to have a choice of modes; they are more likely to be critical. This tendency includes on-time performance, frequency of service, dependability of transfers, and several other service characteristics. This tendency prevails in spite of the fact (as we will show later in this report) that they also tend to perceive more service problems.

Figure 45 Mean satisfaction scores of the rider segments



Mean satisfaction scores of the rider segments

Figure 45 displays the same data, but using mean scores rather than top percentages. Notice that the results are very similar in terms of the rank order of the ratings. For instance, the top four on the percentage chart are the same as the top four on the means table, with a minor difference in order. The same is true of the bottom four items. The difference is that in the top percentage table we can see some differences among the rider segments which tend to "wash out" in the table of means. The means table, however, gives us the central tendency on all variables in a single number.

Figure 46 Comparing satisfaction scores, 2006, 2009, and 2011

Customer satisfaction, 2006 through 2011

Multi-year questions - All riders (excluding "don't know")	Mean on scale of 1 - 7			Change	Change
	2011	2009	2006	09 to 11	06 to 09
Safety from accidents	6.21	6.17	6.02	0.04	0.15
Drivers' knowledge of the AATA system	6.17	6.07	6.00	0.10	0.07
Personal security	6.07	6.02	5.92	0.05	0.10
Drivers' skill	5.98	5.96	5.83	0.02	0.13
AATA information in general	5.97	5.91	5.82	0.06	0.09
Drivers' courtesy with passengers	5.93	5.84	5.73	0.09	0.11
Bus cleanliness	5.82	5.77	5.74	0.05	0.03
Directness of routes	5.66	5.64	na	0.02	na
Information on service changes / detours	5.65	5.48	5.54	0.17	-0.06
Service to areas where you want to go	5.58	5.53	na	0.05	na
Dependability of making transfers	5.42	5.35	5.51	0.07	-0.16
On-time performance	5.01	4.97	5.19	0.04	-0.22
Frequency of service	4.96	4.98	5.05	-0.02	-0.07
2011 only or 2006 and 2011					
Bike racks on buses	5.90				
Locations of bus stops you use	5.78	na	5.56		
Quality of bus stops you use	5.65				
AATA service overall	5.93	5.85	5.84	0.08	0.01

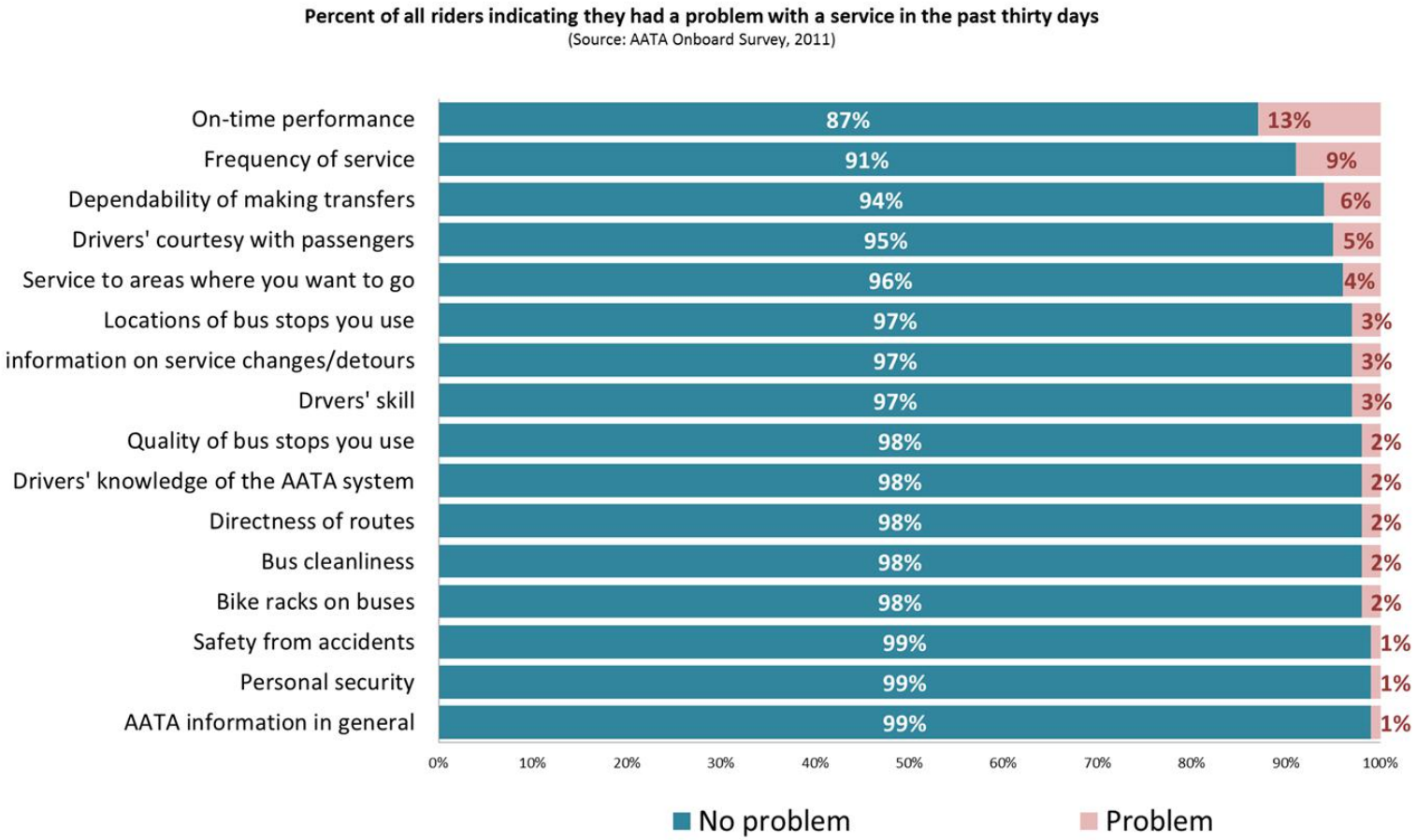
Comparing satisfaction scores, 2006 and 2009 (mean scores)

Most, but not all, of the satisfaction items asked in 2006 were asked again in 2009 and many of those were asked again in 2011. The table above shows the scores in each year and the change that occurred between years.

Notice that the changes are minimal, but it is striking that twelve of thirteen changed in a positive direction between 2009 and 2011. The largest single change between 2009 and 2011 was for information on service changes and detours (+. 17), not a large change but meaningful.

Among the aspects of service that changed least were frequency (-. 02), on-time performance (+. 04), and directness of routes (+. 02). The elements that changed more (though still only slightly) were less matters of system structure than they were matters of operational execution – safety, courtesy, skill, information, and so forth.

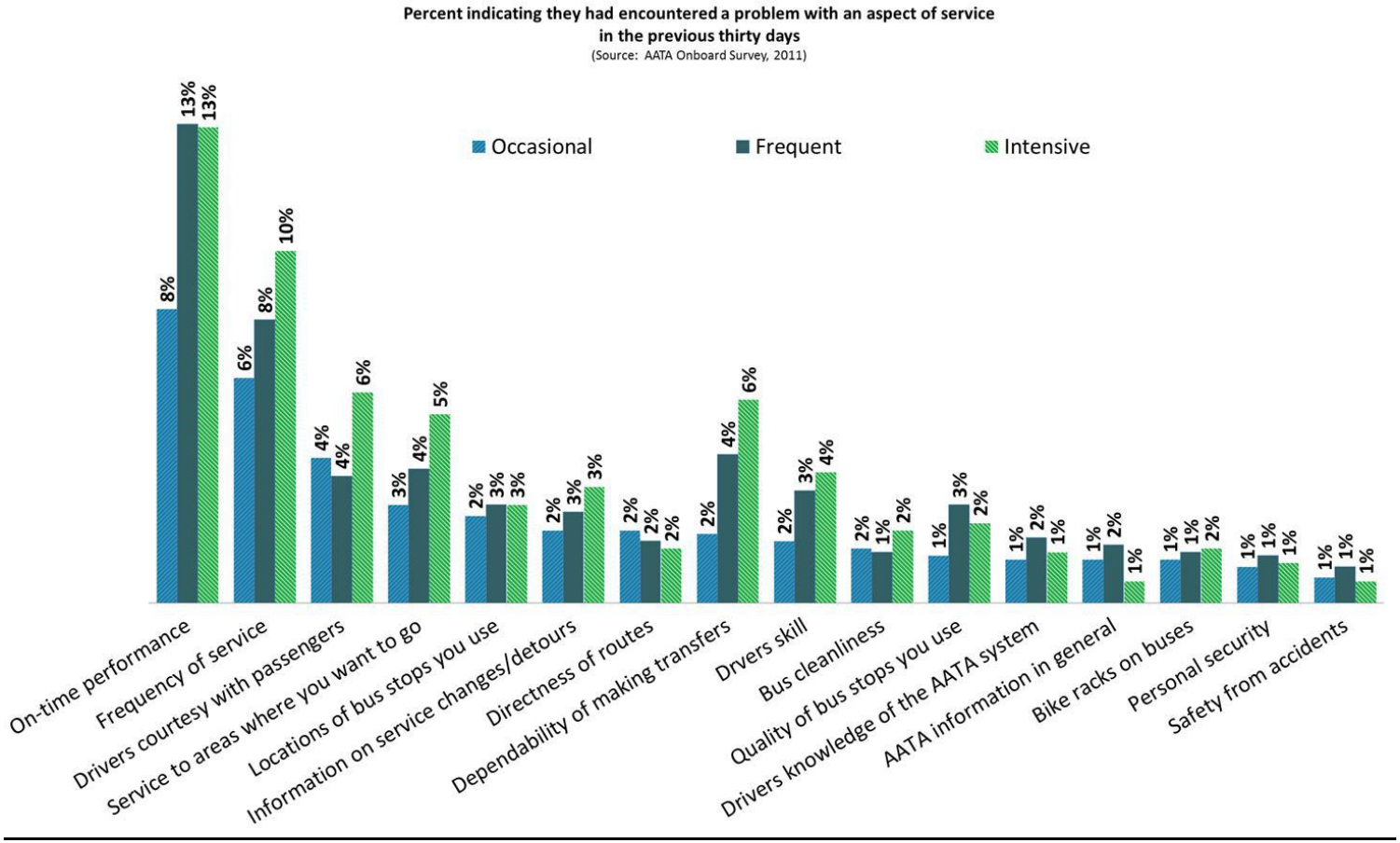
Figure 47 Problem reports with service in past thirty days



Problem reports with service in past thirty days

For all but one of the fifteen aspects of service measured, more than 90% of riders reported having had no problems in the past thirty days. As is often the case with bus systems without separate busways, on-time performance was cited by more people than any other aspects of service as having caused them a problem. The top three perceived service problems are closely related – on-time performance, frequency, and dependability of transfers.

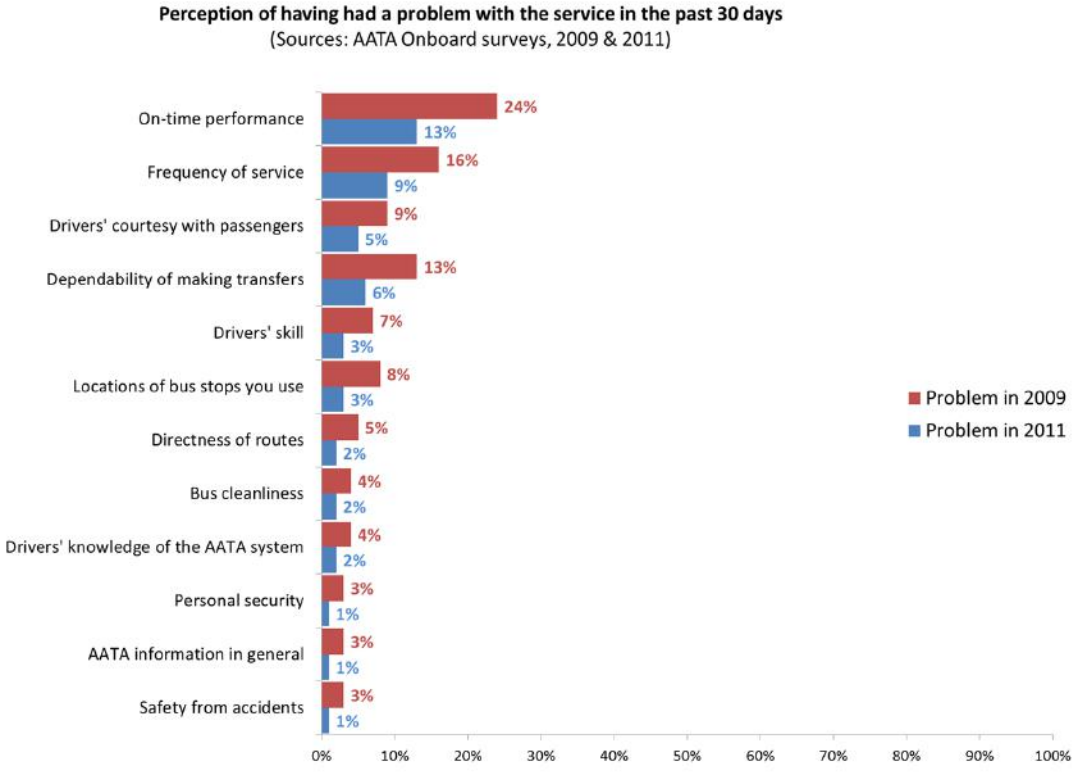
Figure 48 Service problem reports, by rider segment



Service problem reports, by rider segment

As it is with many bus systems, on-time performance receives more problem mentions than any other aspect of service from all three rider segments but especially from frequent and intensive riders. In spite of the fact that they tend to give somewhat higher satisfaction scores than the frequent riders on several of the most important aspects of transit service, including frequency, transfer dependability, driver courtesy, service to all areas, and others, the intensive riders are more likely to report having encountered problems simply because of their more frequent use. The differences are small, however, in the context of the entire ridership.

Figure 49 Perceived service problems, 2009 and 2011



Perceived service problems, 2009 and 2011

Riders' perceptions of having experienced problems with service changed considerably from 2009 to 2011, in spite of the fact that ratings themselves tended to change relatively little. For example, the rating of on-time performance changed only by a mean of +. 04 on the seven point scale, but the report of problems in the past thirty days went from 24% to 13%.

If only one or two of the problem perceptions had changed, we would consider that nothing unusual. But the fact that all of them changed, and in a positive direction, raised basic questions: Was service really so much better that perceived problems were reduced by roughly half[6]? Or could the change be explained by other factors such as a change in interpretation of

[6] Digression: A word on interpreting self-administered questionnaire responses and non-responses. In a self-administered questionnaire, respondents often assume that if they leave a blank, the interpreter of the data will understand the meaning of the blank in context. For example, if a rider rates on-time performance 6 on the scale of 1-7, and then leaves blank the question of whether she had experienced a problem, she probably meant that there was not a problem. When many people do this (and many do) there is a strong impact on the percentages unless we know how to interpret blanks. That is a simple example and would be easily dealt with, except that there are other complications. On short trips, respondents may not complete the questionnaire. Among thousands of responses, we must distinguish between a blank response to the question of whether a problem was experienced caused by an incomplete questionnaire versus a non-response we can infer was merely a skipped question. There are many other permutations of this kind of problem, all of which can be dealt with by programming. But the programming involves many possible combinations of responses and non-responses and is complex. For this reason, when change is seen between successive surveys, the possibility of differing interpretations of the data is the first thing to consider when faced with a very unexpected situation such as these changes. Exhaustive tests showed that procedures were uniform from 2009 to 2011 and that this did not explain the apparent change.

the raw survey responses or by a link between demographic factors and the perception of problems?

A footnote in an earlier section (see footnote 5, page 47) mentioned this matter with regard to reports of problems with information sources and explains steps taken to assure that interpretation of the data were correct.

We hypothesized that the changes in satisfaction with elements of service might have to do with the changing nature of the ridership. For example, the ratio of female to male in the ridership changed from 52%/48% to 55%/45%. Women in some cases tend to be more favorable than men to service providers on service satisfaction measurements. If that were true here, then perhaps the shifting demography would explain the changes. However, in this case there were no appreciable gender differences. Neither did the increased number of riders from EMU nor other demographic changes explain the differences.

Only one variable proved to be closely related to the perception of problems. But the direction of cause and effect is uncertain. The variable is the question, "A year from now, do you expect to keep using AATA, get a car but keep using AATA also, get a car and stop using AATA, move away, or stop using AATA for another reason." Those who thought they would either stop using AATA or get a car but keep using AATA (the latter response is a way-station on the path of ceasing to ride) were considerably more likely to have perceived service problems than those who planned to continue using AATA. For example, while 12% of those intending to continue using AATA said they had had a problem with on-time performance, 18% of those intending to reduce or cease using AATA had observed such a problem. The ratio for problems with service frequency was 8% to 13%, driver courtesy with passengers 3% to 9%, and so forth.

Because the percent intending to keep using AATA had increased by 6%, this would have the effect of decreasing the frequency of perceived service problems. In fact, the average percent perceiving a problem across all service elements among those perceiving no problem was 3% while the similar percentage for others was 6%, or 2 **:** 1, almost the same ratio as the difference between the 2009 and 2011 surveys (average 3**.** 4 and 7**.** 3 respectively). Or approximately 2 **:** 1.

Does this mean that because of reduced perception of service problems, more people are willing to continue using AATA? Or does it mean that people who intend to continue using a service are inherently less likely to find fault with the service and that due to the continuing impact of the recession or other reasons, there are now more of those comparatively content people? We suspect that the relationship works in both directions.

It should be understood that this relationship between perceived problems and the increase in those who intend to stay with AATA "explains" only part of the change. The change in some aspects of service such as on-time performance (which went from 24% to 13%) was greater than could be explained by the additional 6% who intend to continue using AATA as they did previously. This reinforces the interpretation that riders have perceived real service improvements

Impact of information and service problems

Figure 50 Impact scores for information services

Impact scores for customer satisfaction - Information					
	A Mean rating score by those reporting a problem	B Mean of those reporting no problem	C Gap score (B-A)	D Percent observing a problem in the past 30 days	E Impact score (C*D)
Schedules at bus stop	3.15	5.35	2.2	8%	.18
RideTrak	3.82	5.48	1.7	6%	.10
Consumer service line (966-0400)	3.13	5.28	2.2	4%	.09
Website	4.26	5.85	1.6	4%	.06
Google Transit	4.20	5.46	1.3	3%	.04
Info Specialists	4.34	5.50	1.2	3%	.03
Schedule book (ride guide)	4.54	6.25	1.7	2%	.03
MyRide	4.25	5.33	1.1	2%	.02

Impact scores for information services

The concept of impact scores is based on the idea that subjective ratings of service should be a combination of ratings and the frequency of observed service problems[7]. The impact score is actually a modified form of *gap analysis.* It uses the gap between the scores of those who say they have experienced a problem and those who have not observed a problem to examine the *impact* of the observed problem on the rating score.

The table above displays the computation of these impact scores for the onboard survey of 2011. The key is to combine the ratings with the report of recent problems, then to compare the scores of those who have noticed a problem with the scores of those who have not. Computing the impact score involves taking the mean service rating score of those reporting a problem and those reporting no problem, and computing the gap between them. The gap is then multiplied times the percent who report they had experienced a problem in the past month. This results in an "impact score."

The key is this: When there is a large difference in the satisfaction scores of those encountering a problem and those not encountering a problem, this means that not only did the riders observe a problem, but it had a substantial negative impact on them. And if many riders experienced the problem, that magnifies its impact throughout the ridership. Both the rating itself and the percentage of the ridership perceiving a problem affect the score.

To achieve a perfect or (more realistically) a near perfect score (a score at or near zero, which would mean that the factor had no negative impact at all) the transit system would have to have almost no reported problems and 100% top ratings.

[7] The concept is described in detail in *TCRP Report 47: A Handbook for Measuring Customer Satisfaction and Service Quality*.

Conversely, scoring at or near the worst possible score would require that all or almost all of those with a problem score the service "1" (the worst score on the scale of 1 - 7) and all or almost all of those with no problem score the service "7," and that all or almost all would report having had a problem. An unlikely situation at best.

Realistically, negative impact scores are normally very small decimal numbers less than one. Very negative scores are rare because most riders are relatively positive, and few report having encountered problems worth mentioning. ***For this reason, the real-world usefulness of the impact score is to identify outliers which do occur, though rarely, when a key aspect of service quality of high importance to rider has diminished.*** Given that for the most part, problems with information sources do not carry the potential for irritation that operational factors carry, we do not expect impact scores for information sources to reveal much.

The table of impact scores is arranged in descending order of the impact score. A high numeric score is less desirable. Notice the following things in the table:

- The range of scores from worst to best is only . 02 to . 18. None of these scores represents anything that requires urgent attention.

- The best score (near zero) is for My Ride, the email update service. It receives a satisfaction score of 4. 25 from those reporting a problem with it and a score of 5. 33 from those not reporting a problem, a difference of only 1. 1 points on the satisfaction scale from 1 to 7[8]. A problem was experienced by only a small number of riders (2%) and thus the impact is quite minimal, meaning that AATA does not need to deal with any major customer-driven problem with respect to My Ride.

- On the other hand, as in 2009, the score for information at the bus stops, while not even approaching 1, is the highest in this list. It has a gap of 2. 2 (down from 3. 1 in 2009) meaning that when there is a perceived deficiency it is annoying. A problem was encountered by 8% of riders. The resulting impact score is very small, . 18, which means that this is not an urgent matter. However, it remains at the top of the information list and thus remains a problem. We suspect that as the utilization of smart-phones grows, this concern will diminish with the expanding use of RideTrak.

[8] Conceptually, when using a rating scale ranging from 1 to 7, the impact score computed from the scale could range from zero (perfect satisfaction with no negative impact) to six (perfect disaster – 100% ratings of 1 and 100% of riders reporting a problem (i. e. , 7 minus 1), but realistically it rarely rises above 1 because problem reports tend to be few in number and satisfaction tends to be fairly high.

Figure 51 Impact scores for satisfaction with service

Impact scores for customer satisfaction - Services

	A Mean rating score by those reporting a problem	B Mean of those reporting no problem	C Gap score (B-A)	D Percent observing a problem in the past 30 days	E Impact score (C*D)
On-time performance	3.28	5.26	2.0	13%	.26
Frequency of service	3.02	5.14	2.1	9%	.19
Dependability of making transfers	3.25	5.56	2.3	6%	.14
Drivers' courtesy	3.75	6.02	2.3	5%	.11
Service to areas where you want to go	3.59	5.67	2.1	4%	.08
Locations of bus stops you use	3.36	5.85	2.5	3%	.07
Information on service changes/detours	3.63	5.72	2.1	3%	.06
Driver's skill	4.11	6.03	1.9	3%	.06
Quality of bus stops you use	3.22	5.71	2.5	2%	.05
Bus cleanliness	3.39	5.86	2.5	2%	.05
Bike racks on buses	4.03	5.93	1.9	2%	.04
Directness of routes	3.85	5.69	1.8	2%	.04
Drivers' knowledge of the AATA system	4.99	6.20	1.2	2%	.02
Personal security	3.83	6.09	2.3	1%	.02
Safety from accidents	4.09	6.23	2.1	1%	.02
AATA information in general	4.39	5.99	1.6	1%	.02

Impact scores for satisfaction with service

In Figure 43 we displayed the percentage of riders giving a rating between 1 and 7 on the 7 point satisfaction scale for each aspect of service. The five services with the lowest satisfaction ratings, defined as in terms of having the *lowest* top satisfaction scores (i. e. , the percentage rating them seven on the scale from one through seven) were, in order:

1. On-time performance (28%)
2. Dependability of making transfers (29%)
3. Frequency of service (31%)
4. Bike racks on buses (32%)
5. Information on service changes / detours (37%)

When impact scores are applied, we find substantial differences in terms of the aspects of service with the fourth and fifth rankings as having the most negative impact:

1. On-time performance
2. Frequency of service
3. Dependability of making transfers
4. Driver courtesy
5. Service to areas where you want to go

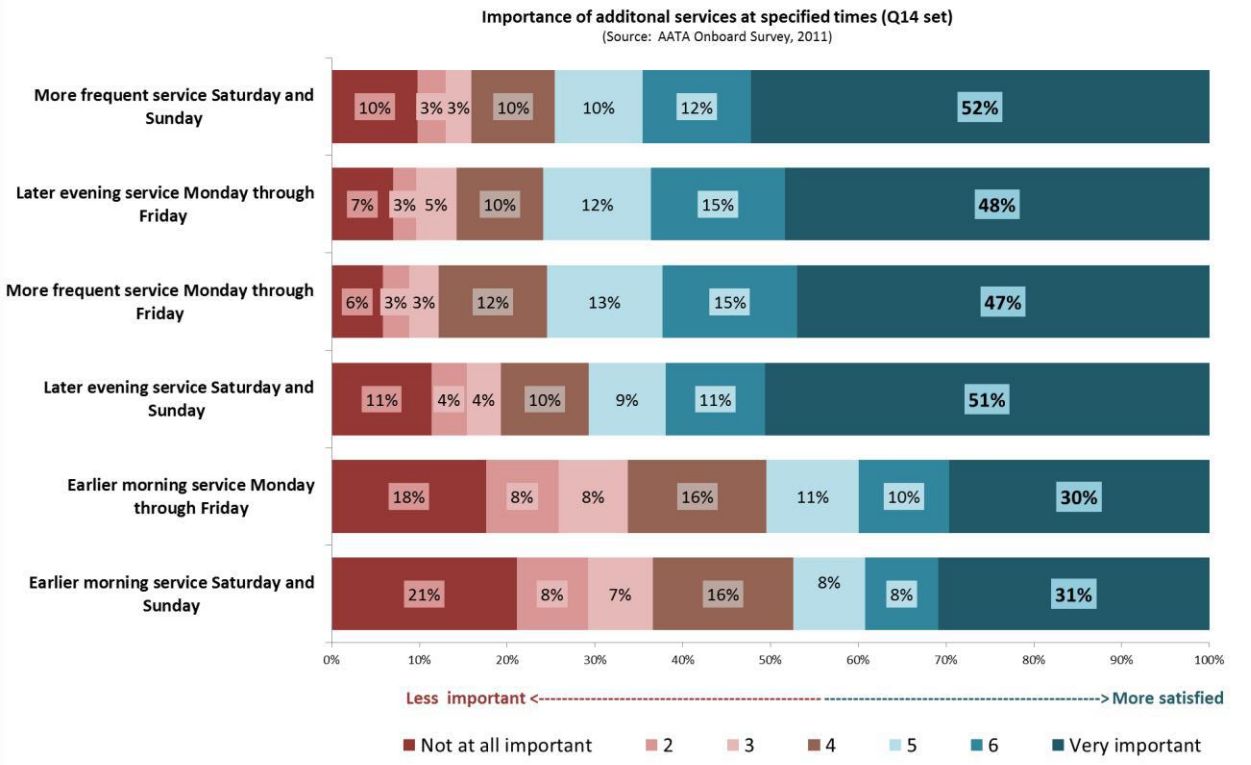
Apparently, on-time performance problems are irritating to a somewhat greater number riders than lack of frequent service. However, the top three dissatisfiers remain the same, though the order changes slightly.

The fourth and fifth position changed, however. Driver courtesy, which had an overall total of 88% positive ratings in the satisfaction scores of Figure 43, with 49% rating it as "7," is fourth on the list of the top five negative impact scores indicating negative impact of rider attitudes. Although only 5% report having had a problem in the past thirty days in this regard, the impact on satisfaction is major when it does occur, and this propels it to one of the significant elements of service that can have a negative impact.

Also, while bicycle racks were among the bottom five in terms of the best service ratings in Figure 43, that item is displaced by "service to areas where you want to go" when the imapct scores are considered.

Importance of Service Improvements: Extended Days and Hours of Service

Figure 52 Perceived importance of additional service at specified times of day and days of the week

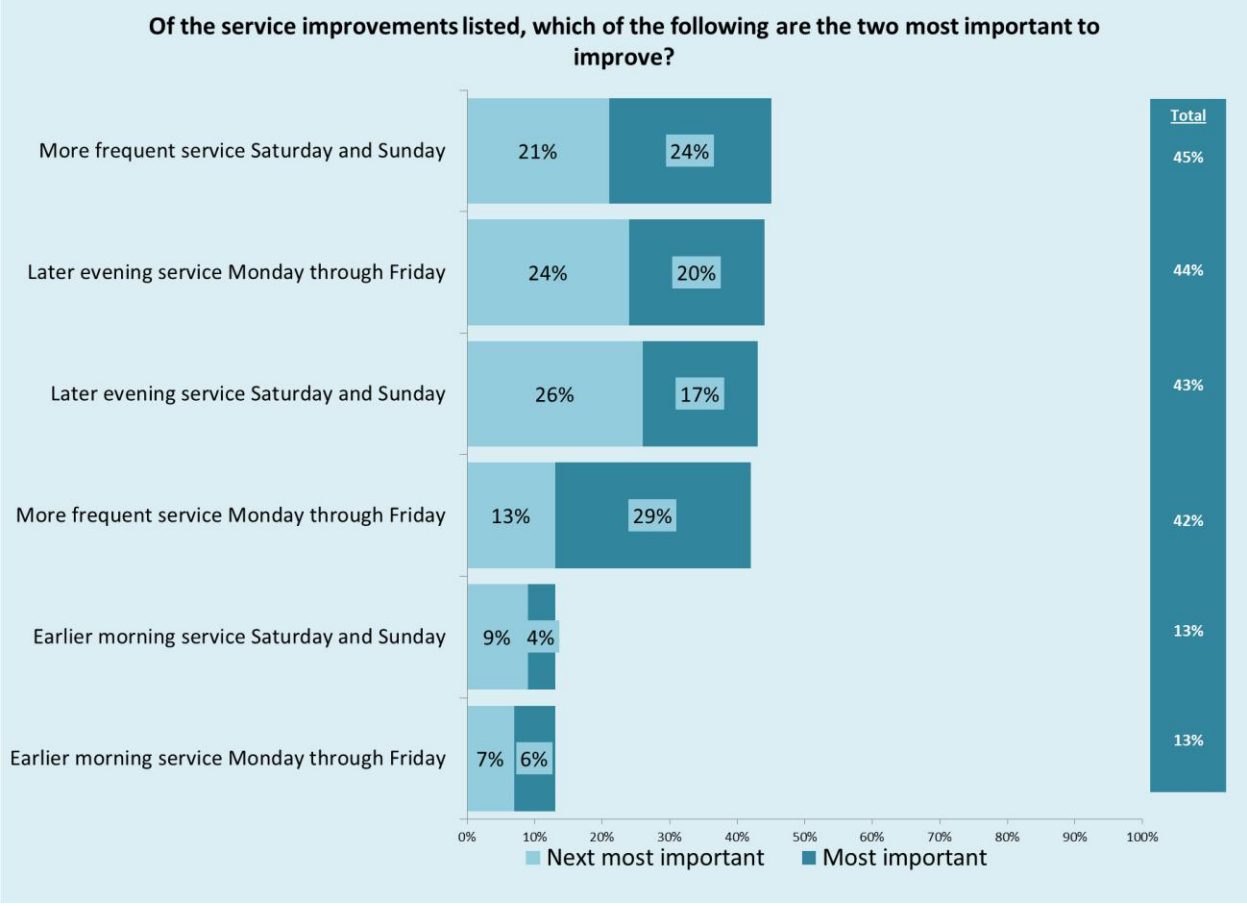


Perceived importance of additional service at specified times of day and days of the week

Besides being asked to rate services as they are, respondents were also asked to rate the importance of selected (and presumably feasible) service improvements. Two different aspects of service improvements were examined in the questionnaire. One asked about extension of service to additional times of day and days of the week. A second one, reported in the next section of the report, asked about structural changes such as more direct routes, shorter trip times, and other structural changes.

In the first set, similar percentages of riders identified four service increases as being very important and two as less important. The two less important elements involve service earlier in the day and the four more important include increased weekday and weekend service frequency, and service later in the evenings on both weekdays and weekends. Clearly, earlier morning service is an aspect of transit service of great interest to a much smaller number of riders than additional weekend or later evening service.

Figure 53 Two most important times and days for increased service



Two most important times and days for increased service

Respondents were asked to identify the two most important service improvements. Results are shown above.

There are two ways to think about the priorities identified in this table. The first way is to consider the total percentage identifying each improvement as being one of the top two. The other is to consider only the service identified as the most important. The former identifies the same four items identified by the simple rating scores shown in Figure 52, all with totals in the top two that are separated by only 3% from the highest scoring item (45% for more frequent service on weekends) and the lowest scoring item (43% more frequent weekday service). Given the closeness, it is difficult to say which is most important.

The second way to think about the priorities is to look at only the one identified as the most important and that clearly is greater frequency on weekdays (29% select it as most important). This is not surprising, given that most riders ride only on the weekdays.

Figure 54 Rider retention and service improvement priorities

Of the service improvements listed, which of the following is most important to improve?

	Keep using AATA	Get a car but keep using AATA also	Get a car and stop using ATA	Stop using AATA for other reason	Move away from this area
Percent of riders in this category	*66%*	*18%*	*6%*	*2%*	*7%*
More frequent service Monday through Friday	33%	15%	18%	43%	30%
More frequent service Saturday & Sunday	21%	28%	29%	22%	26%
Later evening service Monday through Friday	21%	20%	19%	14%	21%
Later evening service Saturday & Sunday	15%	24%	24%	10%	20%
Earlier morning service Monday through Friday	6%	7%	3%	7%	2%
Earlier morning service Saturday & Sunday	4%	6%	7%	4%	2%

In determining priorities for service improvements, the wishes of a simple majority or even plurality could rule if the objective were to satisfy the largest number of customers. On the other hand, if rider retention were the priority, another set of priorities might prevail. We might want to satisfy the needs of those most likely to cease using the service, even if they do not represent a majority or even a plurality.

Riders were asked whether they expected to be using AATA service in a year from the time of the survey. Two thirds (66%) said they expected to be using The Ride as often then as at the time of the survey. (This percentage increased from 2009 to 2011 from 60% to 66%.) However, the priorities of the 24% of riders who intend to "get a car" and either (presumably) reduce the use of AATA or discontinue it, have considerably different priorities. To them, more frequent and later evening weekend service is more important.

Thus, the objective of service changes makes a substantial difference in deciding the priority of various possible improvements.

Figure 55 How need for off-peak transportation for work affects desire to limit use of AATA

Occupational need for transportation during off-peak hours and expectation that riders may limit their use of AATA when they have the opportunity to do so

	Do you work Saturday and/or Sunday?		Do you work after 9:00 p.m. on any day?	
	Yes	No	Yes	No
Q18 A year from now, so you expect to . . .				
Keep using AATA	55%	72%	54%	69%
Get a car but also keep using AATA	31%	15%	32%	18%
Get a car and stop using AATA	6%	4%	6%	5%
Move away from this area	6%	6%	7%	6%
Stop using AATA for other reason	1%	3%	1%	3%

The need for off-peak service in relation to the intention to get a car

As we have seen, riders were asked whether "a year from now" they expected to continue using AATA, get a car but also keep using AATA, or other alternatives. Those who say they must work on Saturday and/or Sunday and those who must work after nine o'clock on any day are less likely to say they will keep using AATA and more likely to say they expect to get a car. Although they also expect to continue using AATA, they would clearly use it less.

This is a clear example of how off-peak service is related to rider retention.

Figure 56 Relationship of off-peak work hours to perceived priority of additional off-peak services

How the priorities of increased service at certain times vary with employees' work schedules

	Usually work Saturday and/or Sunday		Usually work after 9:00 PM on any day?		Usually start work before 7:00 AM on any day?	
	Yes	No	Yes	No	Yes	No
Of the service improvements listed above in a through f which of the following are the two most important to improve - Most important						
More frequent service Monday through Friday	18%	43%	19%	39%	22%	34%
More frequent service Saturday and Sunday	26%	18%	21%	22%	17%	23%
Later evening service Monday through Friday	19%	21%	25%	17%	20%	21%
Later evening service Saturday and Sunday	24%	10%	24%	12%	20%	15%
Earlier morning service Monday through Friday	6%	5%	5%	5%	14%	3%
Earlier morning service Saturday and Sunday	7%	3%	6%	5%	7%	4%
	100%	100%	100%	100%	100%	100%
Of the service improvements listed above in a through f which of the following are the two most important to improve - 2nd most important						
More frequent service Monday through Friday	9%	16%	10%	14%	8%	14%
More frequent service Saturday and Sunday	21%	21%	23%	20%	18%	22%
Later evening service Monday through Friday	22%	27%	23%	25%	22%	25%
Later evening service Saturday and Sunday	29%	21%	29%	24%	25%	25%
Earlier morning service Monday through Friday	6%	10%	4%	10%	11%	7%
Earlier morning service Saturday and Sunday	13%	5%	11%	7%	16%	7%
	100%	100%	100%	100%	100%	100%

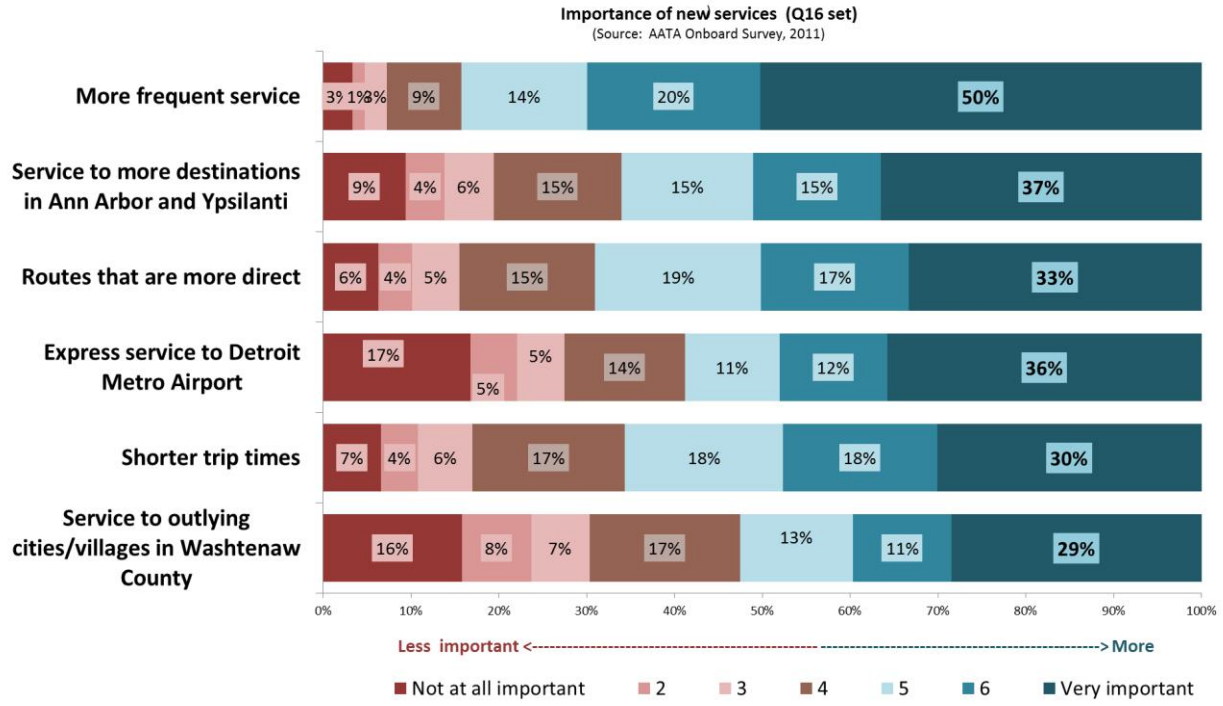
Off-peak work hours and perceived importance of additional off-peak services

It is clear from the table above that having to work weekends and/or evenings is closely related to the priority that riders assign to extension of weekend and evening hours. For example, of those who must work Saturday and/or Sunday a total of 50% rate having more frequent (26%) or later evening service (24%) on weekends as most important to improve compared to only 28% of those who do not work at those times.

Of those who say they must work after 9 PM on any day of the week (which could include either weekday or weekend), 49% consider later service on weekdays (25%) or weekends (24%) the most important priority, but only 29% of those who do not work after 9 PM consider it the most important priority.

Importance of Service Improvements: Additional Frequency, New Destinations, and Other Structural Changes

Figure 57 Importance of additional services



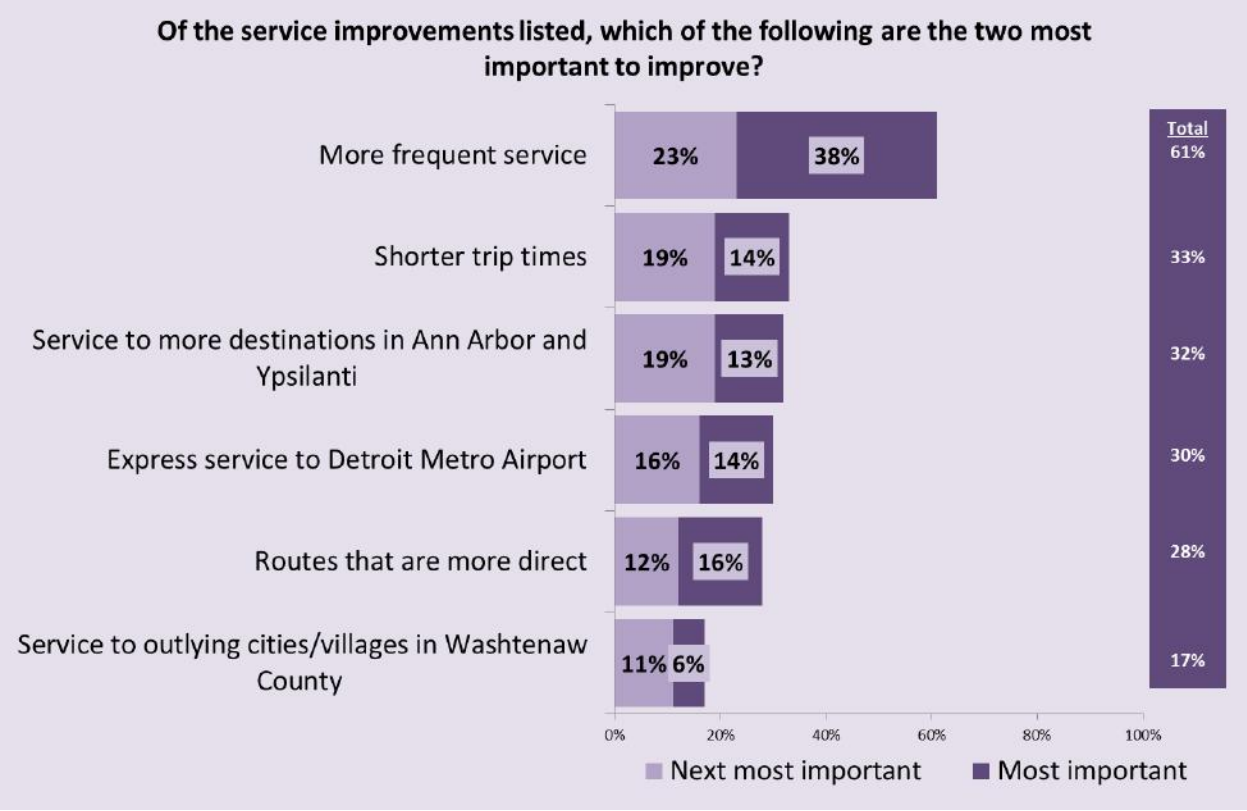
Importance of additional services

The top service improvement priority of AATA riders as measured only by the importance rating scale is *more frequent service*, with 50% giving it the top importance scale rating of seven, considerably more than the 37% who gave a top score to *service to more destinations in Ann Arbor and Ypsilanti.* Considering the top two scale scores of six and seven on the seven point scale, service frequency is in a class by itself with 70%. Interestingly all other elements have very similar percentages in the top two scores, making it difficult to choose a second priority on this basis.

Two points do stand out, however. First, given a list including both shorter trip times and greater frequency, riders clearly choose greater frequency. People hate to wait for a bus. RideTrak, for some, can decrease the uncomfortable uncertainty about the wait, but cannot decrease the wait time for a following bus after a missed transfer bus, for example.

Second, among the priorities for transportation in the county is expansion of service throughout the county. While this emerged as a priority in the Transit Master Plan (TMP) process, it is clearly not the most important priority of the current ridership with 29% giving it the top score. Nor is this surprising. After all, those who want or need to travel outside the existing AATA route structure currently must find other ways to do so and would not be found in a survey of current riders. And those who use AATA have destinations, by definition, within the urban Ann Arbor and Ypsilanti areas. It is perhaps more interesting that almost 30% of current riders do assign a top score to this expansion in spite of the fact that they are currently using the system within a much more restricted space. For this reason the low score among current riders should not be seen as a reason to discourage service expansion geographically.

Figure 58 Two most important service expansions

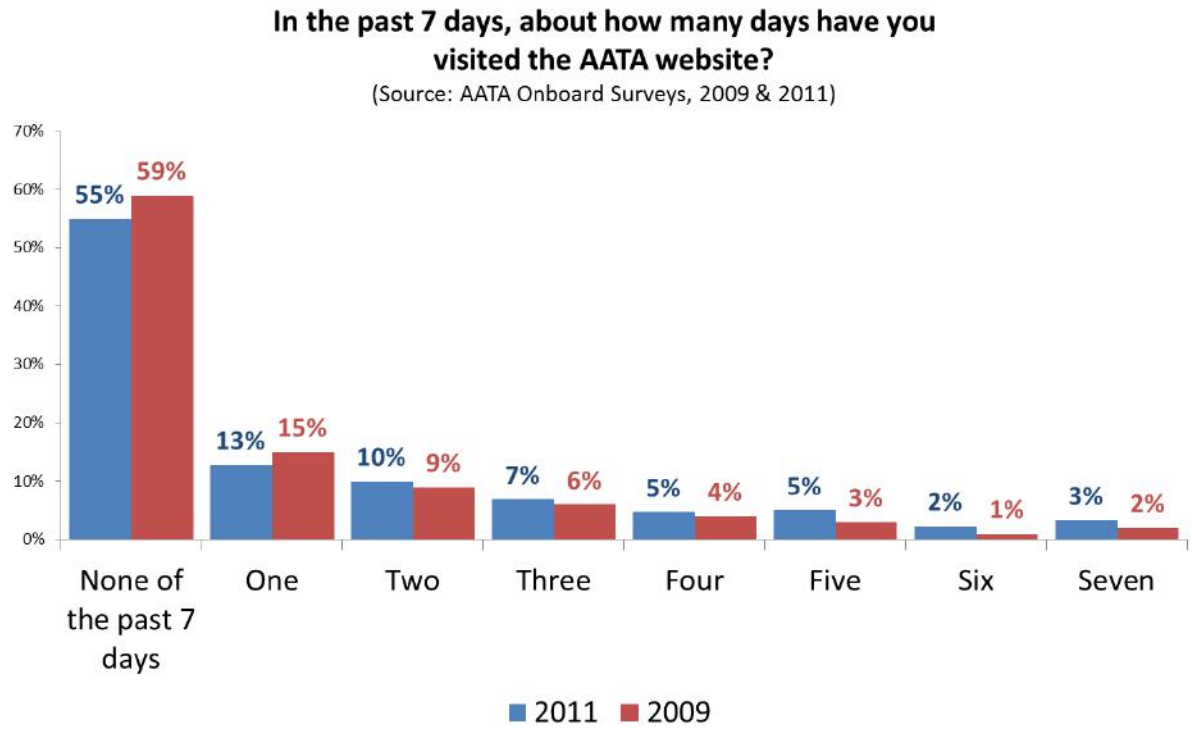


Two most important service expansions

Respondents were asked to identify the two most important service expansions. As was the case with the rating scale, the choice of the top two priorities places focus on greater service frequency above all, with 38% assigning it the position of *most important,* and another 23% second most important to improve. This compares to only 14% and 19% respectively, assigning first or second priority to shorter trip times.

Use of AATA electronic information services

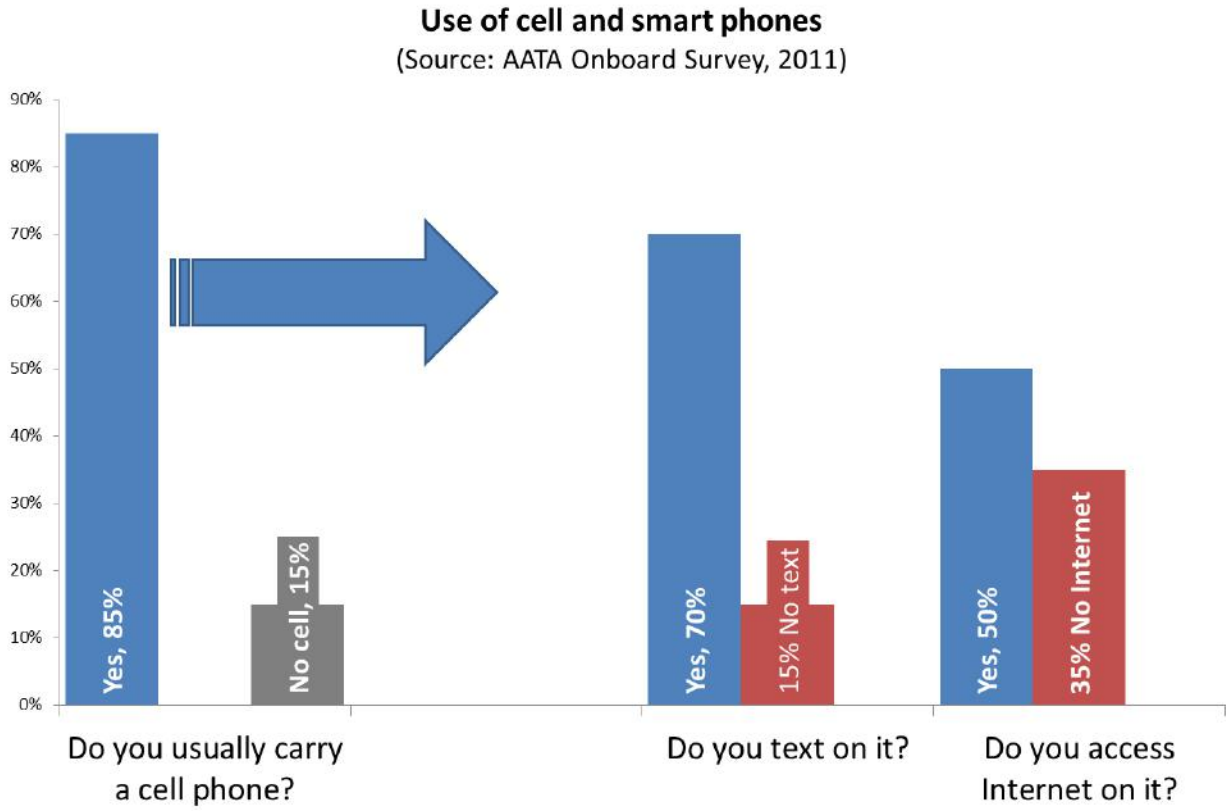
Figure 59 Use of the AATA website



Use of the AATA website

Since 2009, the use of the AATA website by riders has increased somewhat. In 2009, 59% said they had not used it at all in the past seven days, a percentage that had fallen to 55% by 2011. Also the percent saying they had used it multiple times increased from a total of 25% accessing the site two or more times in seven days to 32%, for example.

Figure 60 Use of cell and smart phones



Use of cell and smart phones

Riders were asked whether they usually carry a cell phone. Eighty-five percent (85%) indicated that they carry such a device. Within that 85%, 70% said that they send text messages on their phones, and 50% said they access the Internet on it. Clearly the ridership does not universally share mobile connectivity, but it is also well on the way to having that communications capacity.

Figure 61 Relationship of age to use of cell and smart phones

Age, use and style-of-use of mobile communications

		Youngest through 29	30-39	40-49	50-59	60-69	70+
Do you usually carry a cell phone?	Yes	92%	91%	80%	81%	68%	46%
	Do not usually carry a cell phone	8%	9%	20%	19%	32%	54%
If so do you use text messaging on it?	Yes	83%	73%	59%	57%	33%	22%
	No	9%	18%	21%	24%	35%	24%
	Do not usually carry a cell phone	8%	9%	20%	19%	32%	54%
If so, do you access the Internet on it?	Yes	63%	53%	42%	32%	21%	11%
	No	29%	38%	39%	48%	47%	35%
	Do not usually carry a cell phone	8%	9%	20%	19%	32%	54%

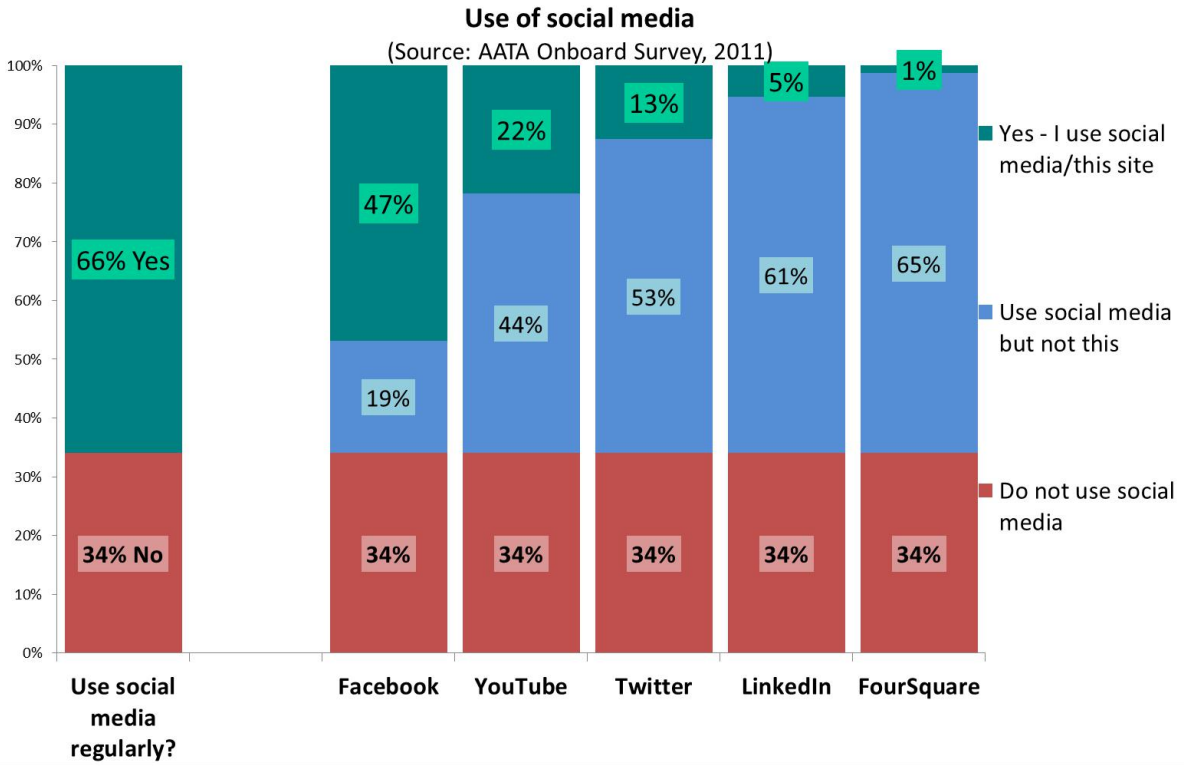
Relationship of age to use of cell and smart phones

It is almost a truism that utilization of the technological fruits of the Internet era is heaviest among the younger population. To a certain extent that age-related tendency is present among the AATA riders. For example, while 92% of the riders 29 or younger say they usually carry a cell phone, only 46% of riders who are 70 years old or older say they do so.

The use of mobile communications technology for purposes other than voice communication is also directly related to age among AATA riders. For example, take the age group 30 to 39 contrasted with the age group 60 to 69. Of the younger group, 73% use their phone for texting, while only 33% of the older group do so. Of the younger group, 53% access the Internet on it while only 21% of the older group do so.

The relationship between age and use of these technologies will tend to dissipate as they penetrate the market even more than they have to date, and as younger persons age while continuing to use (or expanding their use of) mobile communications technology.

Figure 62 Do you use social media regularly?



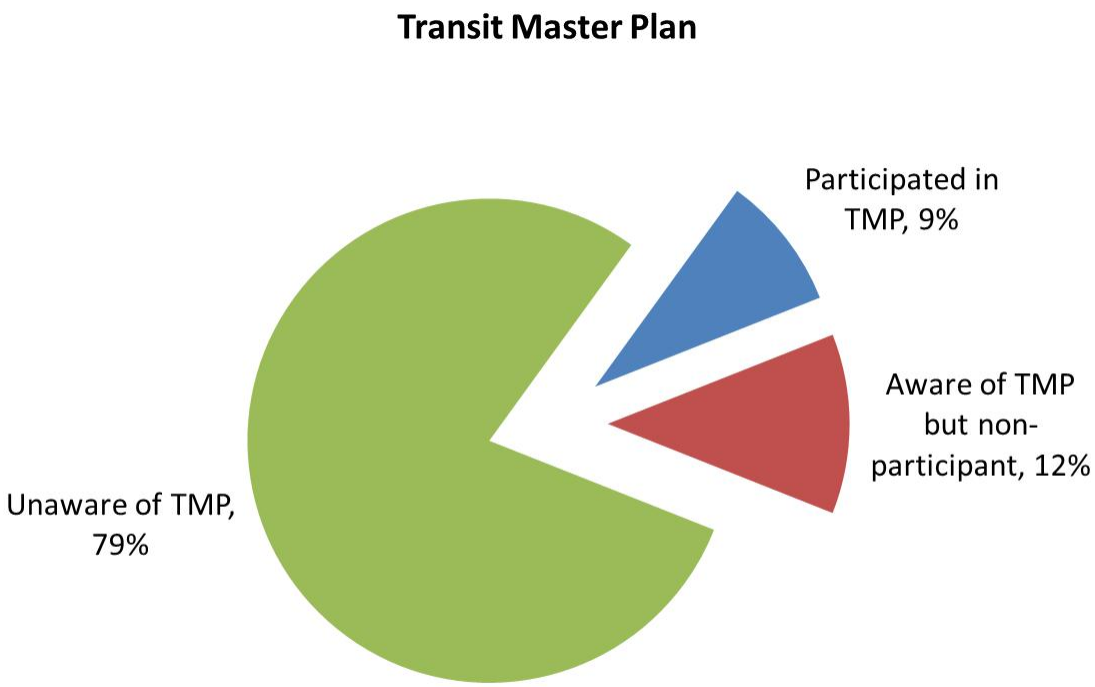
Do you use social media regularly?

In the 2011 survey, riders were asked if they use social media on a regular basis. Two-thirds (66%) do so. Of all riders, 47% say they use Facebook. It is by far the most commonly used social medium. YouTube is next with 22% use. Twitter, widely publicized as a revolutionary tool, is used by only 13% of riders, not inconsiderable, but less than one-third of the total using Facebook.

LinkedIn is a specialized medium, and not surprisingly is used by relatively few riders (5%). Similarly FourSquare has yet to establish itself and has only 1% of the market among riders.

Transit Master Plan

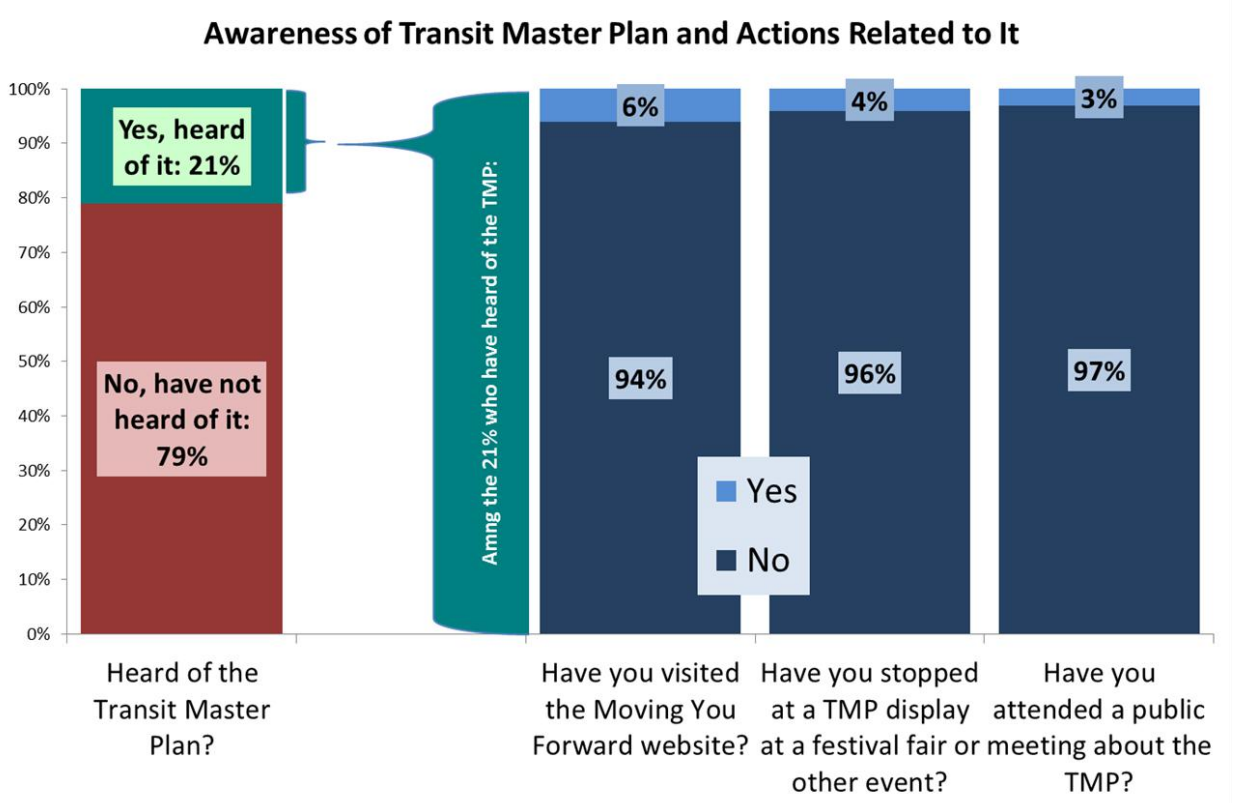
Figure 63 Awareness of Transit Master Plan (TMP)



Awareness of Transit Master Plan (TMP)

Since the survey of 2009, AATA has devoted a great deal of effort to developing a thirty year Transit Master Plan, or TMP, for Washtenaw County. Of all AATA riders, 21% indicated awareness of the TMP. Within that 21%, 9% indicated they had participated in the planning process in some manner, however minimal it may have been. The other 12% indicated they were aware of the TMP but had not participated in any TMP-related event, seen an exhibit, or participated in any other way.

Figure 64 Awareness of and participation in TMP

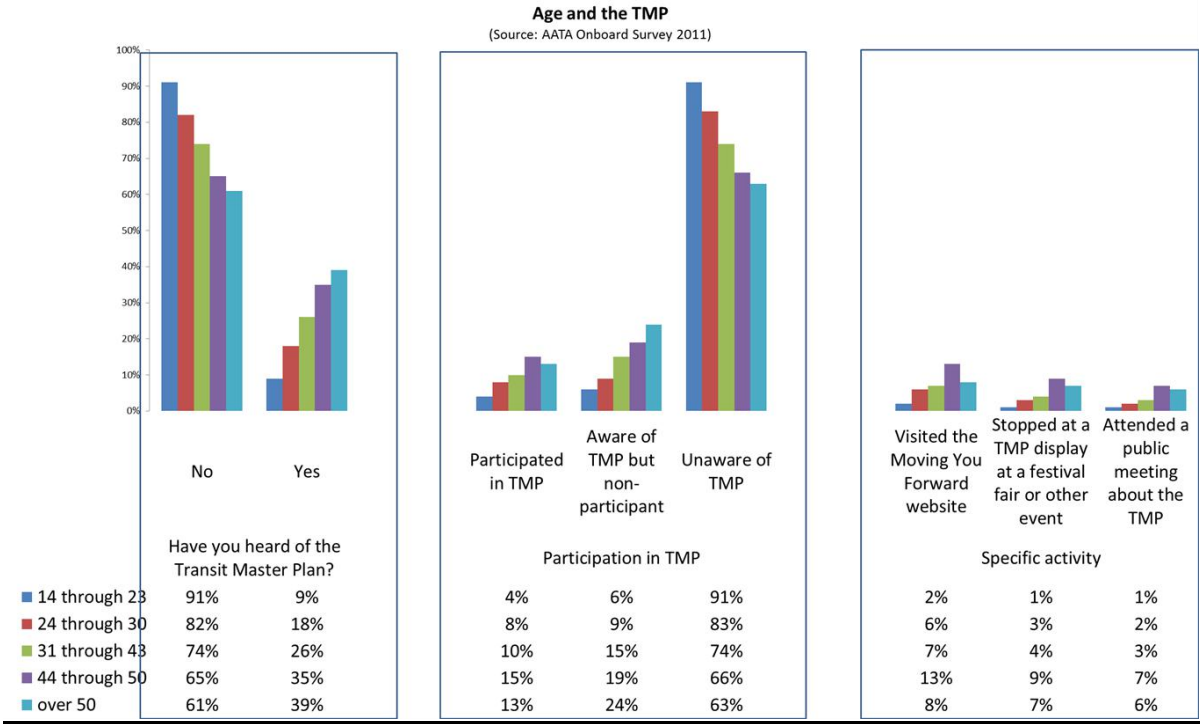


Awareness of and participation in TMP

Considering only the 21% who say they have heard of the TMP, we find that the most common form of participation was visiting the website called *Moving You Forward.* The site was visited by 6% of the 21% (i. e. , 1. 3% of riders). Some of the riders aware of the TMP (4%) had seen a TMP display, and some (3%) had attended a public meeting. Many of these had done more than one of these things so that the total participating in one or more of these activities is 9% (as shown in Figure 63).

It is notoriously difficult to gain high levels of public involvement in such activities. Nine percent (9%) should be considered an achievement, not a disappointment.

Figure 65 Age and the TMP



Age and the TMP

Awareness of the TMP among riders is related to age. This is typical of public affairs in general. At their stage of life, younger people are not yet rooted in the community and are not yet oriented to a role of social and political responsibility. Only 9% of riders 23 or younger had heard of the TMP, but of those over 50, 39% had heard of it. Also, among the youngest, only 4% had participated; among those 24 through 30, 8% had participated. But among those 44 through 50, 15% had participated and among those over 50, a similar number, 13%, had participated.

Appendix A: Questionnaire

TheRide

AATA Passenger Survey

Please let AATA know how to serve you better!

1. **Where were you before you went to the bus stop for this trip?**
   (1) Home (2) Work (3) Shopping (4) School / college
   (5) Social visit or recreation (6) Doctor / medical (7) Church
   (8) Other_____

2. **How did you get to your stop?**
   (1) Walked (2) Wheelchair/scooter (3) Bike (4) Drove (5) Got a ride

3. **How many minutes did it take you to get to the bus stop?** _____

4. **What is your FINAL destination for this trip?**
   (1) Home (2) Work (3) Shopping (4) School / college
   (5) Social visit or recreation (6) Doctor / medical (7) Church
   (8) Other_____

5. **How many separate one-way bus trips will you make today?** (For example, even if you transfer, going to work is only one trip; going from work to home is a second trip)
   1 trip 2 trips 3 trips 4 trips Other _____(how many?)

6. **How did you pay for this trip?**
   (1) Cash (2) Token (3) Transfer (4) 30-Day pass
   (5) go!Pass (6) MCard (7) EMU Pass (8) Other _____

7. **Which AATA routes do you use regularly? (up to 4)**
   Routes:
   1U 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
   16 17 18 20 22 33 34 36 609 A2:Canton A2:Chelsea

8. **Including today, in the past seven days, how many days have you ridden on an AATA bus?**
   1 2 3 4 5 6 7

9. **In the past 7 days, about how many days have you visited the AATA website?**
   0 1 2 3 4 5 6 7

10. **If AATA bus service were not available for this trip, what would you have done instead? You would have...**
    (1) ...driven alone (2) ...gotten a ride (3) ...taken a U of M bus
    (4) ...taken a carpool or vanpool (5) ...walked (6) ...bicycled
    (7) ...not taken this trip at all (8) ...gone somewhere else

11. **In what year did you begin riding AATA? (Circle one response only)**
    Before 2000 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011

    ☐ I am riding AATA today for my first time ever

12. **How satisfied or dissatisfied are you with each way of obtaining information on AATA?**

	Did not use	Dissatisfied ☹			Neutral 😐			Satisfied ☺	Past 30 days – any problem getting info this way?	
a. Schedule book (Ride Guide)	☐	1	2	3	4	5	6	7	Y	N
b. Schedules at bus stops	☐	1	2	3	4	5	6	7	Y	N
c. Customer service line (996-0400)	☐	1	2	3	4	5	6	7	Y	N
d. Website ("www.theride.org")	☐	1	2	3	4	5	6	7	Y	N
e. RideTrak (track bus on cell-phone)	☐	1	2	3	4	5	6	7	Y	N
f. Google Transit	☐	1	2	3	4	5	6	7	Y	N
g. MyRide (Route subscription)	☐	1	2	3	4	5	6	7	Y	N
h. Information specialists at the Blake Transit Center	☐	1	2	3	4	5	6	7	Y	N

13. **How satisfied or dissatisfied are you with AATA service in each of the following areas?**

	Don't know/	Dissatisfied ☹			Neutral 😐			Satisfied ☺	Past 30 days - any problem in this area?	
a. Drivers' skill	☐	1	2	3	4	5	6	7	Y	N
b. Drivers' courtesy with passengers	☐	1	2	3	4	5	6	7	Y	N
c. Drivers' knowledge of the AATA system	☐	1	2	3	4	5	6	7	Y	N
d. AATA information in general	☐	1	2	3	4	5	6	7	Y	N
e. Information on service changes/detours	☐	1	2	3	4	5	6	7	Y	N
f. Frequency of service	☐	1	2	3	4	5	6	7	Y	N
g. On-time performance	☐	1	2	3	4	5	6	7	Y	N
h. Dependability of making transfers	☐	1	2	3	4	5	6	7	Y	N
i. Locations of bus stops you use	☐	1	2	3	4	5	6	7	Y	N
j. Quality of bus stops you use	☐	1	2	3	4	5	6	7	Y	N
k Directness of routes	☐	1	2	3	4	5	6	7	Y	N
l. Service to areas where you want to go	☐	1	2	3	4	5	6	7	Y	N
m. Bus cleanliness	☐	1	2	3	4	5	6	7	Y	N
n. Safety from accidents	☐	1	2	3	4	5	6	7	Y	N
o. Personal security	☐	1	2	3	4	5	6	7	Y	N
p. Bike racks on buses	☐	1	2	3	4	5	6	7	Y	N
q. AATA Service overall	☐	1	2	3	4	5	6	7		

Please turn the survey over and complete the questions on the back

14. How important is each of the following improvements?

		Very Important						Not at all important
a	More frequent service Monday through Friday	7	6	5	4	3	2	1
b	More frequent service Saturday & Sunday	7	6	5	4	3	2	1
c	Later evening service Monday through Friday	7	6	5	4	3	2	1
d	Later evening service Saturday & Sunday	7	6	5	4	3	2	1
e	Earlier morning service Monday through Friday	7	6	5	4	3	2	1
f	Earlier morning service Saturday & Sunday	7	6	5	4	3	2	1

15. Of the service improvements listed above in a through f, which would be the two *most important* to improve? (Please write in one letter from a – f in each space):

_____ Most important _____ 2nd most important

16. How important is each of the following improvements?

		Very Important						Not at all important
a	Routes that are more direct	7	6	5	4	3	2	1
b	Shorter trip times	7	6	5	4	3	2	1
c	More frequent service	7	6	5	4	3	2	1
d	Service to more destinations in Ann Arbor and Ypsilanti	7	6	5	4	3	2	1
e	Service to outlying cities/villages in Washtenaw County	7	6	5	4	3	2	1
f	Express service to Detroit Metro Airport	7	6	5	4	3	2	1

17. Of the service improvements listed above in a through f, which would be the two *most important* to improve? (Please write in one letter from a – f in each space):

_____ **Most important** _____ **2nd most important**

18. Have you heard of the Transit Master Plan (TMP) for Washtenaw County? (1) Yes (2) No

19. Have you participated in any of these TMP input opportunities?

a. Visited the Moving You Forward website (1) Yes (2) No
b. Stopped at a TMP display at a festival, fair, or other event (1) Yes (2) No
c. Attended a public meeting about the TMP (1) Yes (2) No

20. Are you riding AATA buses ...

(1) More often than a year ago (2) About the same as a year ago (3) Less often than a year ago

21. A year from now, do you expect to:

(1) Keep using AATA (2) Get a car but keep using AATA also (3) Get a car and stop using AATA
(4) Move away from this area (5) Stop using AATA for other reason

22. Do you usually carry a cell-phone (1) Yes (2) No

a. If so, do you use text messaging on it? (1) Yes (2) No
b. If so, do you access the Internet on it? (1) Yes (2) No

23. Do you use social media regularly? (1) Yes (2) No

a. If "Yes," which of the following do you use regularly?

Facebook Twitter Foursquare LinkedIn You Tube

24. Was a car (or truck or motorcycle) available to you to make this trip? (1) Yes (2) No

25. Are you a licensed driver? (1) Yes (2) No

26. In what year were you born? 19_____

27. Which one of the following best describes you? Are you (circle only one):

(1) Employed for pay outside your home (2) Employed for pay in your home
(3) Student (4) Homemaker (5) Unemployed (6) Retired

28. Are you a ...(1) High school student (2) College student (3) Not a student

a. If you are a college student, which college?

(1) U of M (2) EMU (3) WCC (4) Concordia (5) Cleary (6) Cooley
(6) Other: _____

29. If employed, do you usually?

a. Work Saturday and/or Sunday (1) Yes (2) No
b. Work after 9:00 PM on any day? (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

31. What is your total combined annual household income?

(1) Less than $25,000 (2) $25,000 to $49,999 (3) $50,000 - $74,999
(4) $75,000 to 100,000 (5) More than $100,000

32. Any comments or suggestions for AATA? _____

_____

_____

PLEASE RETURN SURVEY TO SURVEYOR ONBOARD THIS BUS, OR TO ANY AATA BUS DRIVER. Thanks!

Appendix B – Comments by Riders - Under Separate Cover

Comments were offered by 850 respondents. Their raw comments are presented in an Excel file provided with the electronic version of this report. The file is called: "Appendix B Passenger Comments."

Appendix C: Combinations of Routes Usually Used

These results are approximately 60 pages in length and are provided in an Excel file that can be sorted in various ways. In addition, the 728 unique combinations of routes used are presented on the following pages in a lengthy table. Additional analysis of these results is available on request.

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