ENVIRONICS RESEARCH

TTC Service Standards Feedback Study

July 2020

Research Objectives

In light of the COVID-19 State of Emergency, the TTC would like to measure customer perceptions of current service designs and quality standards. The specific objectives of this study were to:

1. Identify areas where changes or improvements would be positively received by customers, and weigh the impact of desired improvements in conjunction with our previous understanding of drivers of customer satisfaction.

2. Update the framework for measuring trade-offs of service changes for customers.

Research Methodology

Online Survey of TTC Customers

Customers

Toronto residents aged 15+ who are TTC customers prior to emergency COVID-19 measures.

Total interviews: n=2,032

Toronto sample: n=1,507

GTA sample: n=525

Method

Members of market research panels were contacted by email with an opt-in link to the online survey. This short survey was available in mobile and desktop versions.

Timing

June 30th to July 5th 2020

Note: TTC customers are defined as those who take the TTC monthly or more under typical circumstances.

Service Standards Feedback – Executive Summary

Findings:

- Crowding has become significantly more important for TTC customers during the COVID-19 pandemic. While crowding has always been a key driver of customer satisfaction, compared to the last time the Service Standards study was conducted in 2016, customers today are more likely to perceive **crowding** on vehicles during peak periods as **the most important** service improvement the TTC should address.

- The importance of crowding is further highlighted by the relationship between crowding and wait time expectations among frequent customers. Two thirds of frequent customers would accept up to 10 minutes of additional wait time to ride a vehicle at 50% capacity.

- While there are some differences in the relative importance among key subgroups (frequency of use, mode usage, house income level, etc.), the results of the trade-off analyses (MaxDiff and conjoint) are very consistent overall.

Implications:

- Communications about service improvements should focus almost exclusively on crowding mitigation strategies for the foreseeable future. Customers want to know what level of crowding they should expect and how mitigation strategies will impact overall travel times. As Toronto moves towards Phase 3 of the recovery plan, some customers will expect that vehicles will be crowded and thus seek alternative transportation methods.

- Consider the impact of mitigation strategies and resource re-allocation on low income groups. Those with household incomes under $40K per year appear more tolerant of longer wait times, but this likely has more to do with the absence of viable alternatives.

Service Standards Feedback – Executive Summary

Findings:

- Customers believe the TTC should shift resources away from off-peak/less busy routes to accommodate economic challenges.

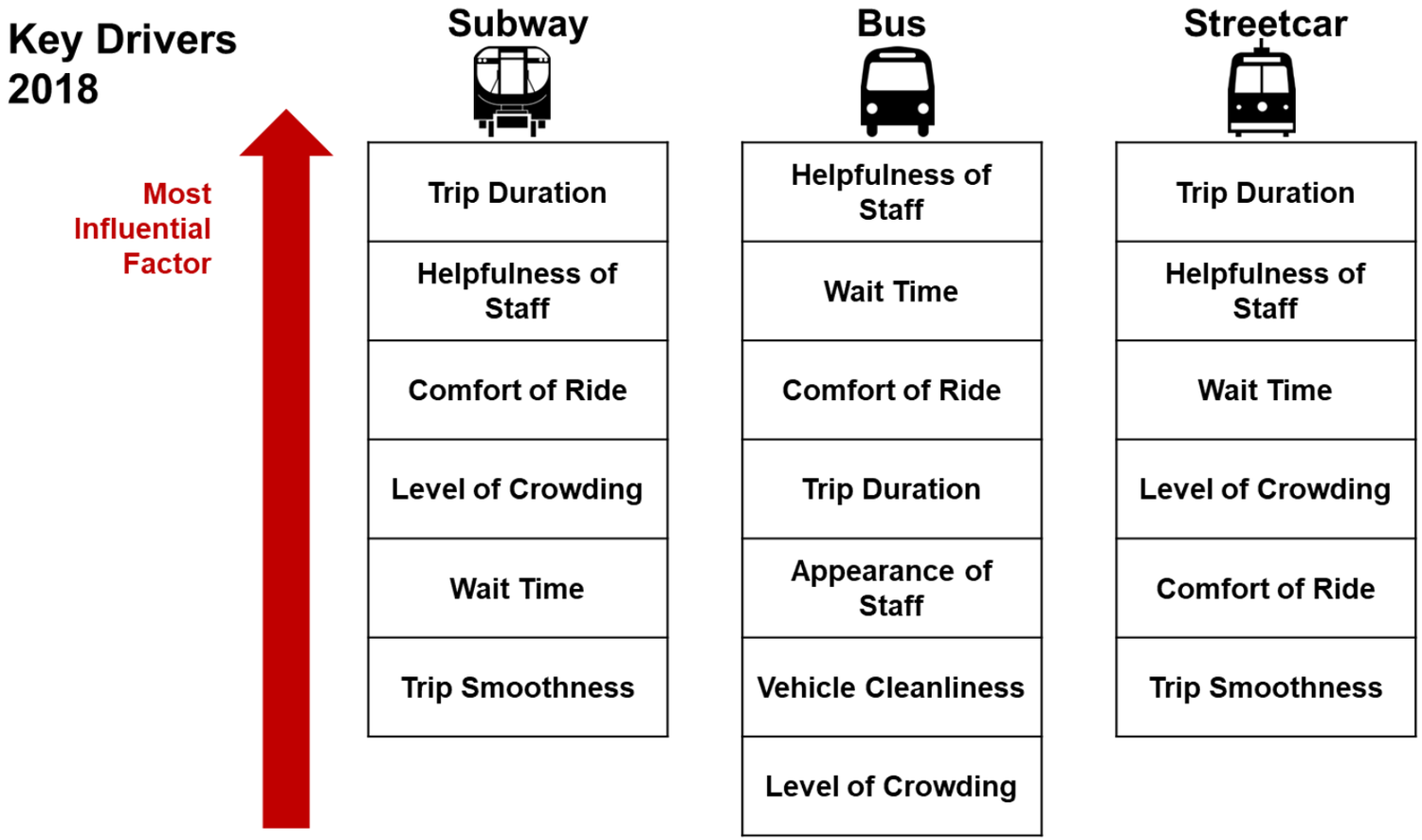
- Customers prefer transit scenarios that will the prioritize major routes, a reduced number of transfers, and more express service.

Implications:

- Customers understand that the economic realities of the pandemic will necessitate a shift in resources towards high priority areas of service; however, it is probable that public health concerns will be resolved before the TTC's funding issues. Thus, the TTC should expect that tolerance for service reductions will be short-lived. As customers return to pre-pandemic behaviours, we should expect to see greater importance attached to dimensions of service related to convenience (e.g. arrival time reliability, reduced number of transfers, etc.).

Drivers of Customer Satisfaction

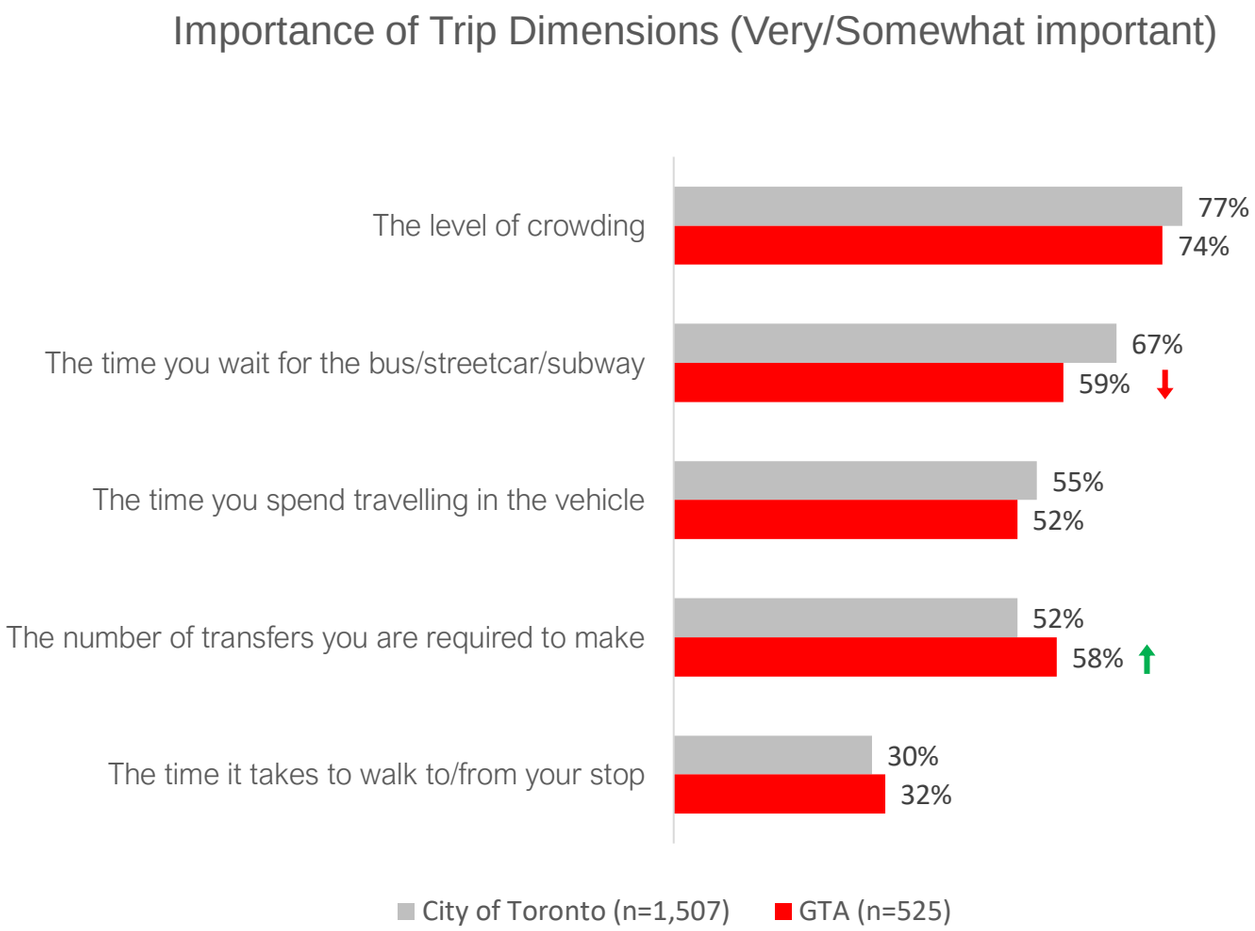
Historically, the drivers of customer satisfaction have remained very stable. Trip duration, crowding, and wait time have a significant impact on customer perceptions of the TTC.



Drivers of customer satisfaction are identified in the TTC quarterly customer satisfaction survey.

Importance of Trip Dimensions

TTC Customers place greater importance on crowding and wait time than other aspects of a trip.



- The importance of trip dimensions do not vary significantly by modes used by TTC customers (regardless of trip purpose).
- Frequent TTC customers place greater importance on many of these dimensions than do occasional customers.

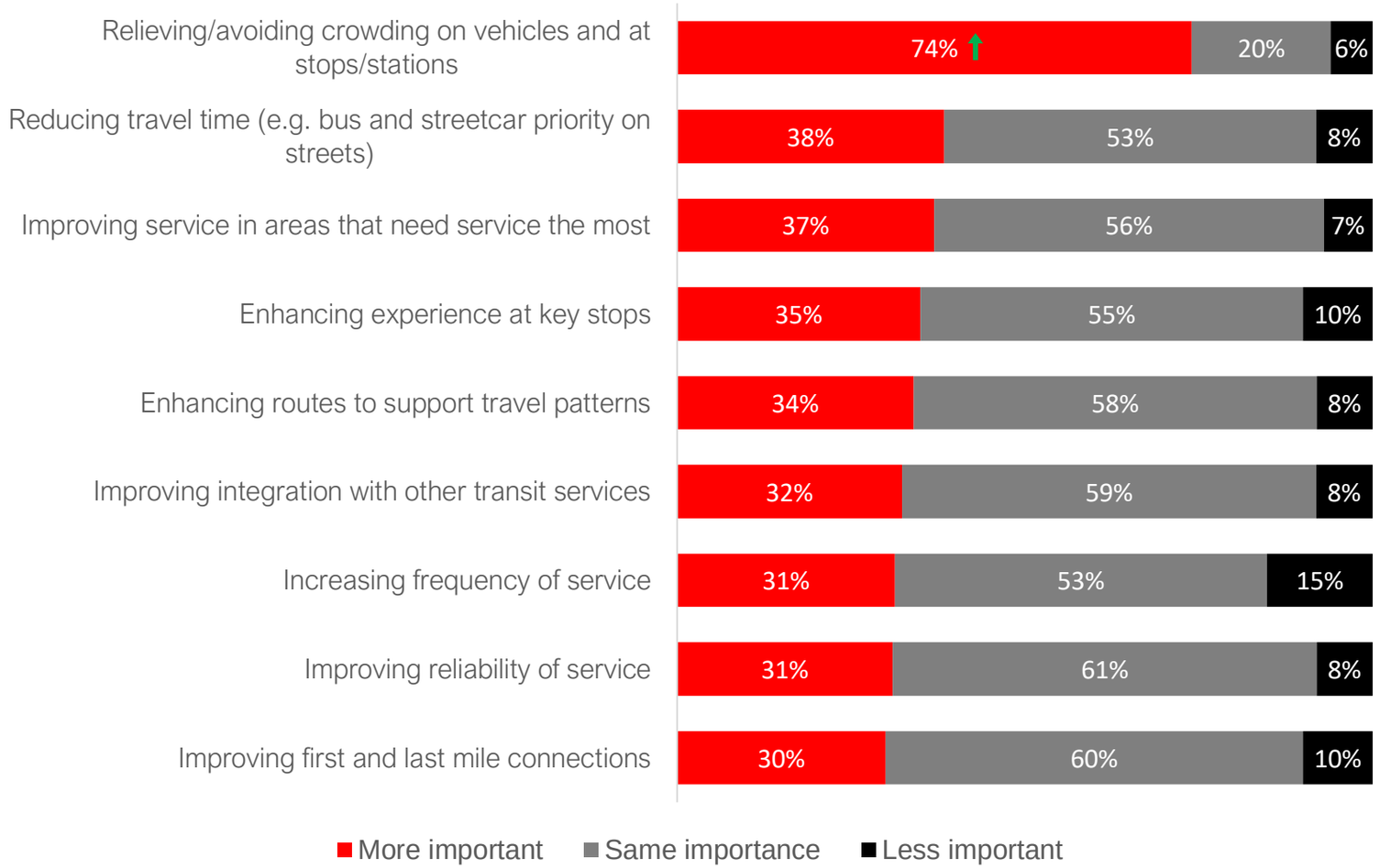
↑↓ *Significantly higher/lower than other groups at 95% confidence*

Q6. When planning your next trip on the TTC, please rank the following aspects of your trip in order of importance with 1 being the least important and 5 being the most important. (Base: n=2,032)*

Priorities for Transit

Crowding has become significantly more important for TTC customers during the COVID-19 pandemic.

Changes in transit priorities since COVID-19



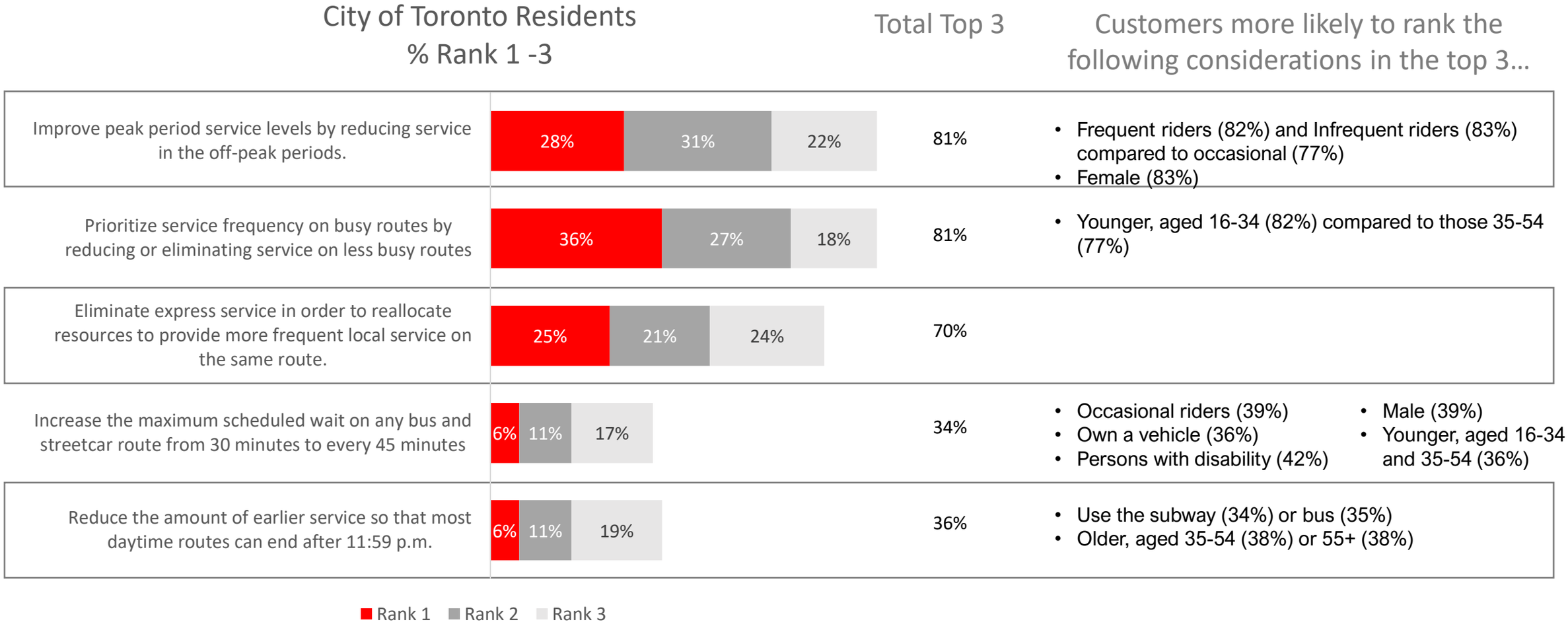
Changes in transit priorities when customers consider taking the TTC before and during the COVID-19 pandemic do not vary meaningfully across various customer subgroups (frequency of use, mode usage, house income level, etc.).

Significantly higher/lower than other groups at 95% confidence

Q0. We would like to understand if and how COVID-19 has impacted what you prioritize when you consider taking the TTC. Looking at the common customer considerations below, identify if and how your priorities have changed when thinking about taking transit since the COVID-19 pandemic began. (Base: n=2,032)

Recommended Actions

Customers believe the TTC should shift resources away from off-peak/less busy routes to accommodate economic challenges.

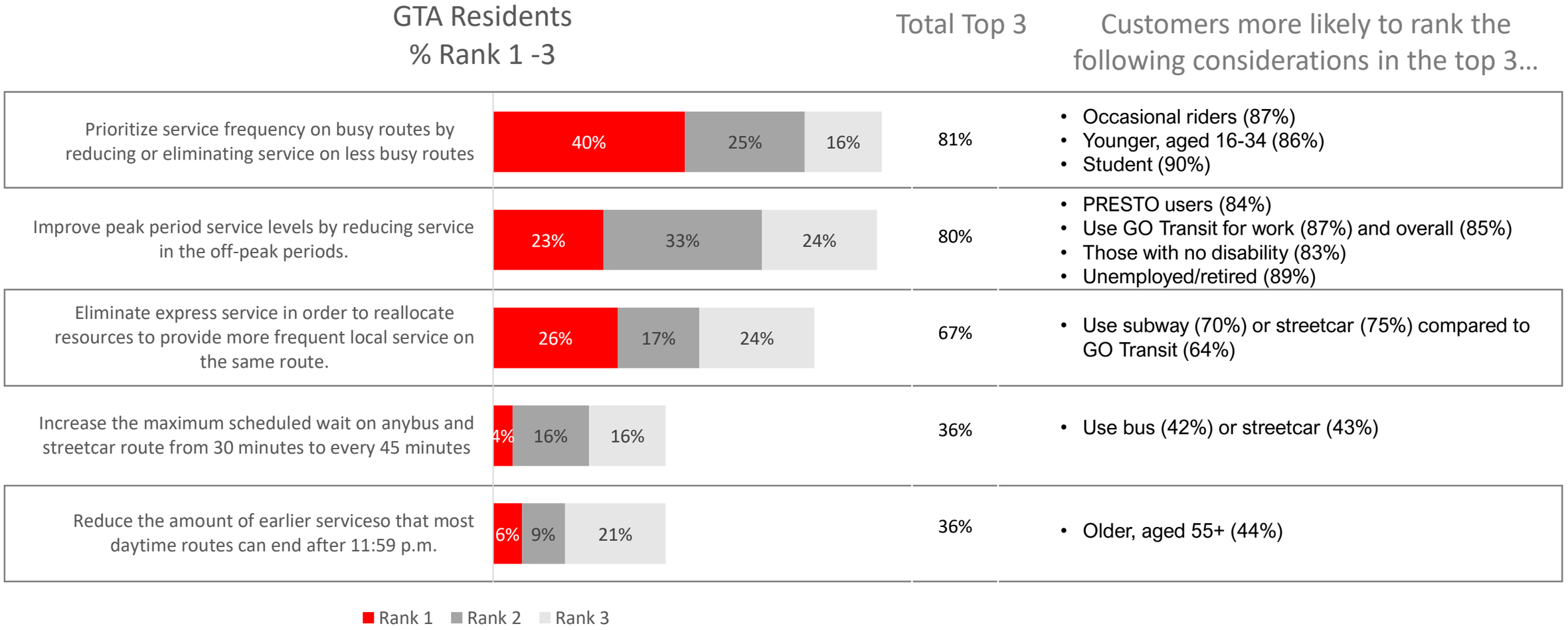


Significantly higher/lower than other groups at 95% confidence

Q7. Given the current economic challenges, how do you think the TTC should prioritize the following service changes.
(Base: n=1,507 City of Toronto Residents)

Recommended Actions (continued)

GTA residents place a greater importance on service frequency.



Significantly higher/lower than other groups at 95% confidence

Q7. Given the current economic challenges, how do you think the TTC should prioritize the following service changes.
(Base: n=525 GTA residents)

Customer Preferences

Methodology Considerations

A Maximum Difference (MaxDiff) analysis was conducted to weigh the perceived value of improvements to overall quality of service. Instead of having respondents rate attributes on a scale, MaxDiff forces respondents to choose the attributes they believe to be the most and least important.

Benefits of this approach include:

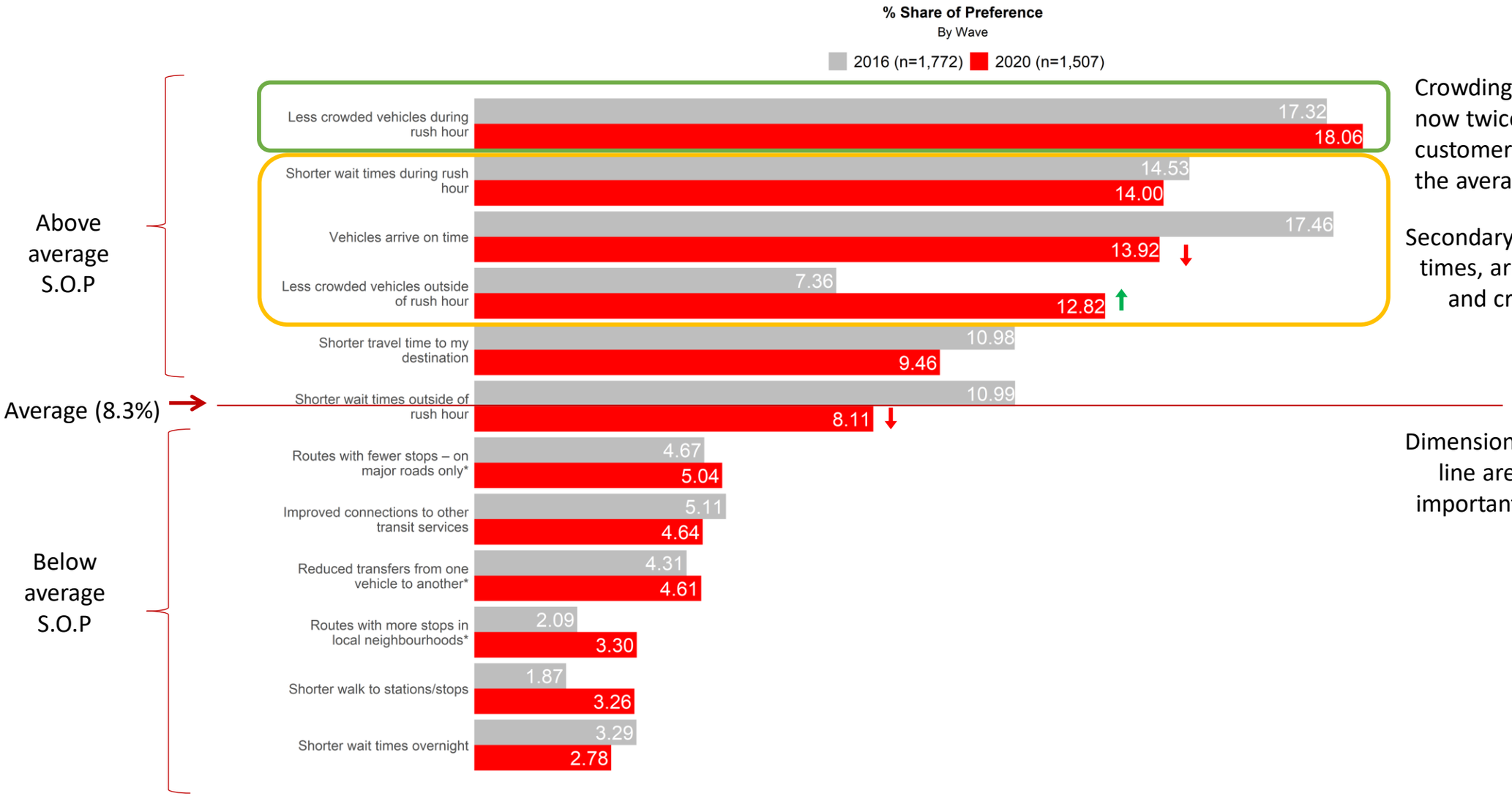
Avoids scale bias – Respondents may rate all items 8 – 10, making it difficult to identify the items of greater importance; rating scales lack discrimination among items. MaxDiff forces discrimination between items for greater understanding of what is most important.

Produces ratio level insights – Provides a better measure of relative position than ranking data (e.g., with ranking data, is the difference between 1st and 2nd the same as the difference between 2nd and 3rd ?).

Avoids ambiguity of scaled responses – People understand and use scales differently (e.g., from a respondent's perspective, what is the difference between an "8" and a "9" on a rating scale of importance?).

Importance of Service Improvements – 2020 vs. 2016

Crowding has become a clear priority for customers during the COVID-19 pandemic.



Crowding (during rush hour) is now twice as important to customers than are items below the average line.

Secondary priorities include wait times, arrival time (reliability), and crowding (off-peak).

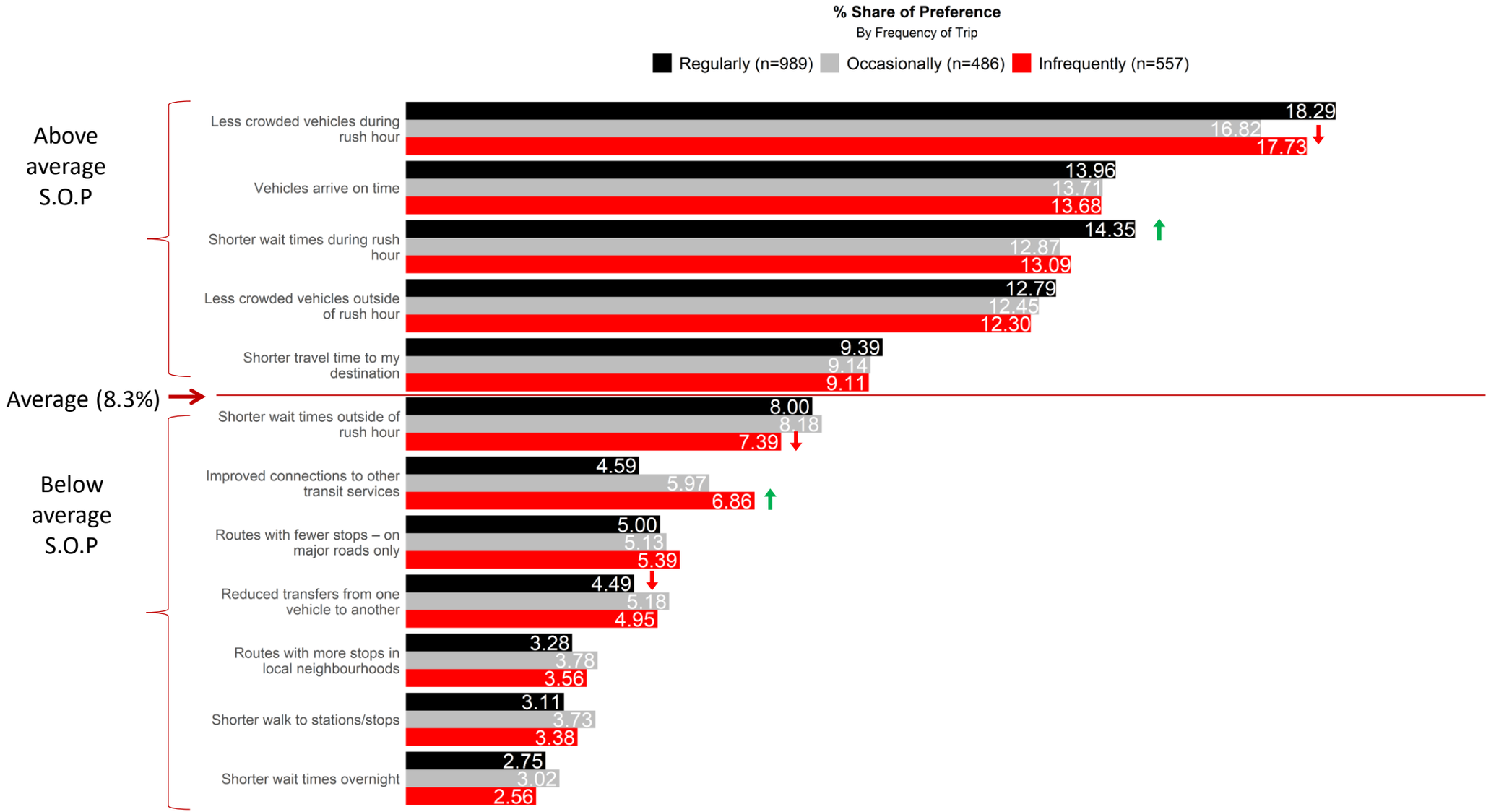
Dimensions below the average line are significantly less important to TTC customers.

Q. MD Looking at the list below, in your opinion, what is the most and least important improvements the TTC should make?
**slight wording change in 2020*

↑↓ *Significantly higher/lower than other groups at 95% confidence*

Importance of Improvements – Frequency of Use

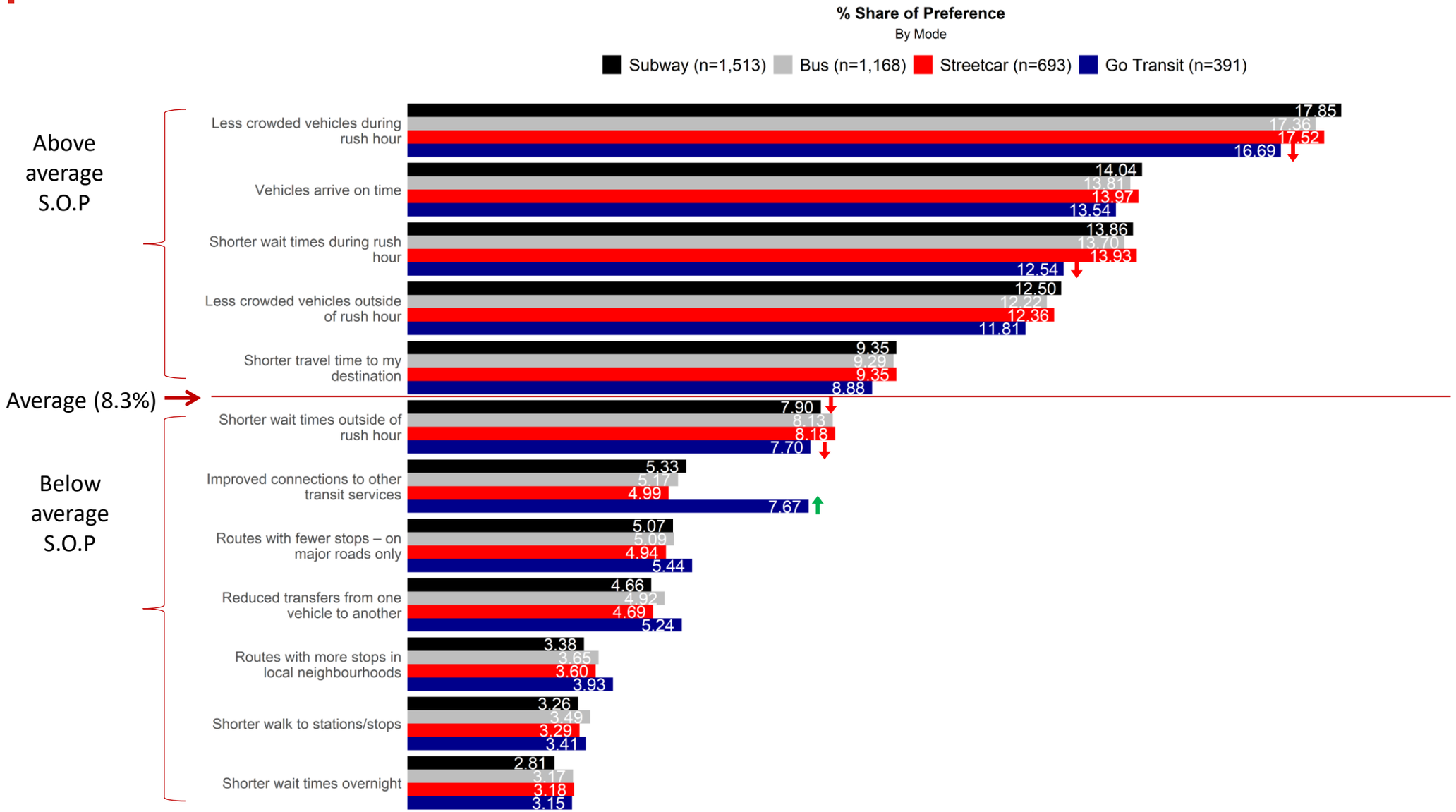
The relative importance of most service dimensions doesn't change by frequency of use.



Significantly higher/lower than other groups at 95% confidence

Importance of Improvements – Mode

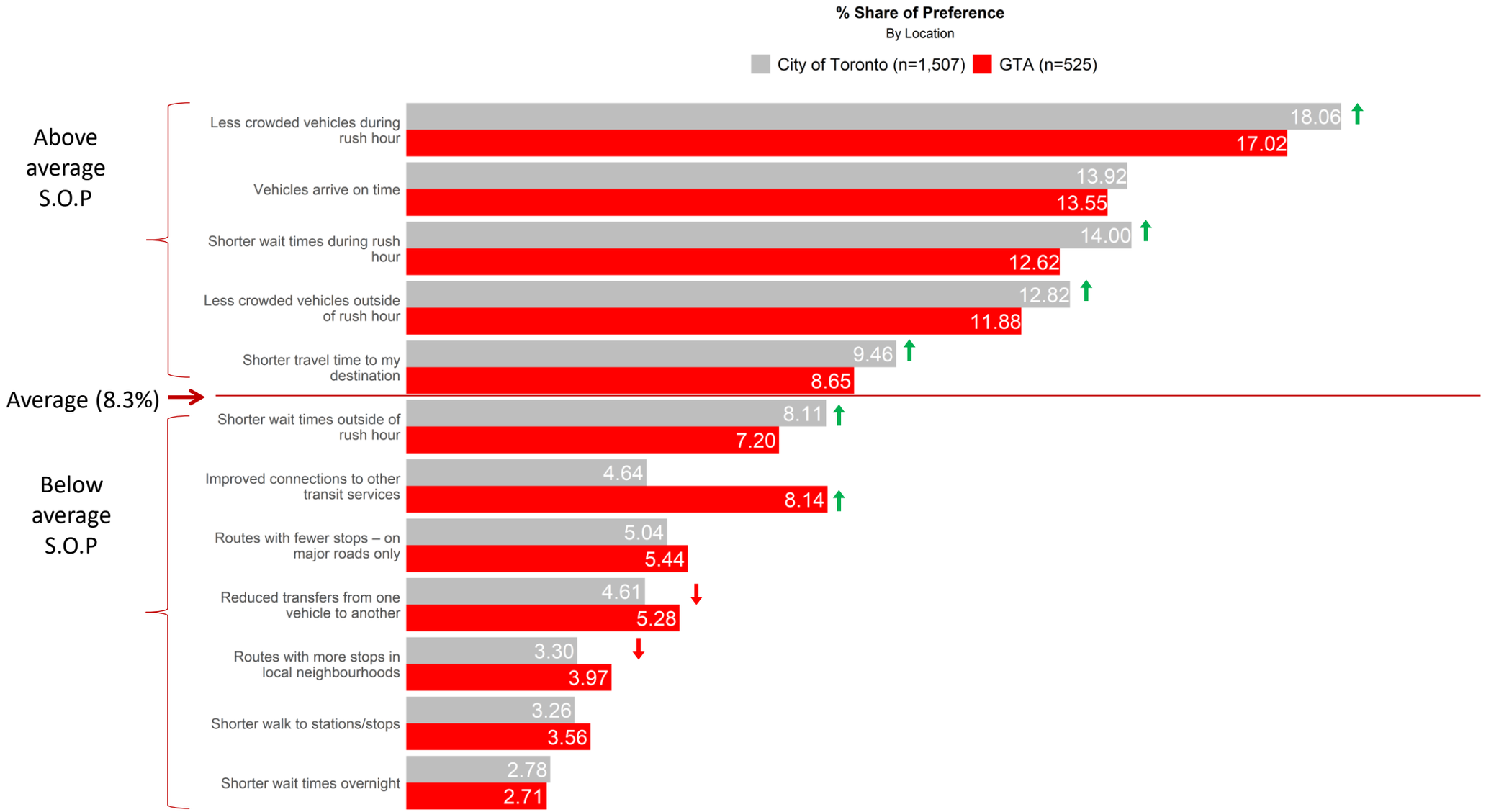
GO Transit users place higher importance on connections to other transit services.



Significantly higher/lower than other groups at 95% confidence

Importance of Improvements – Region

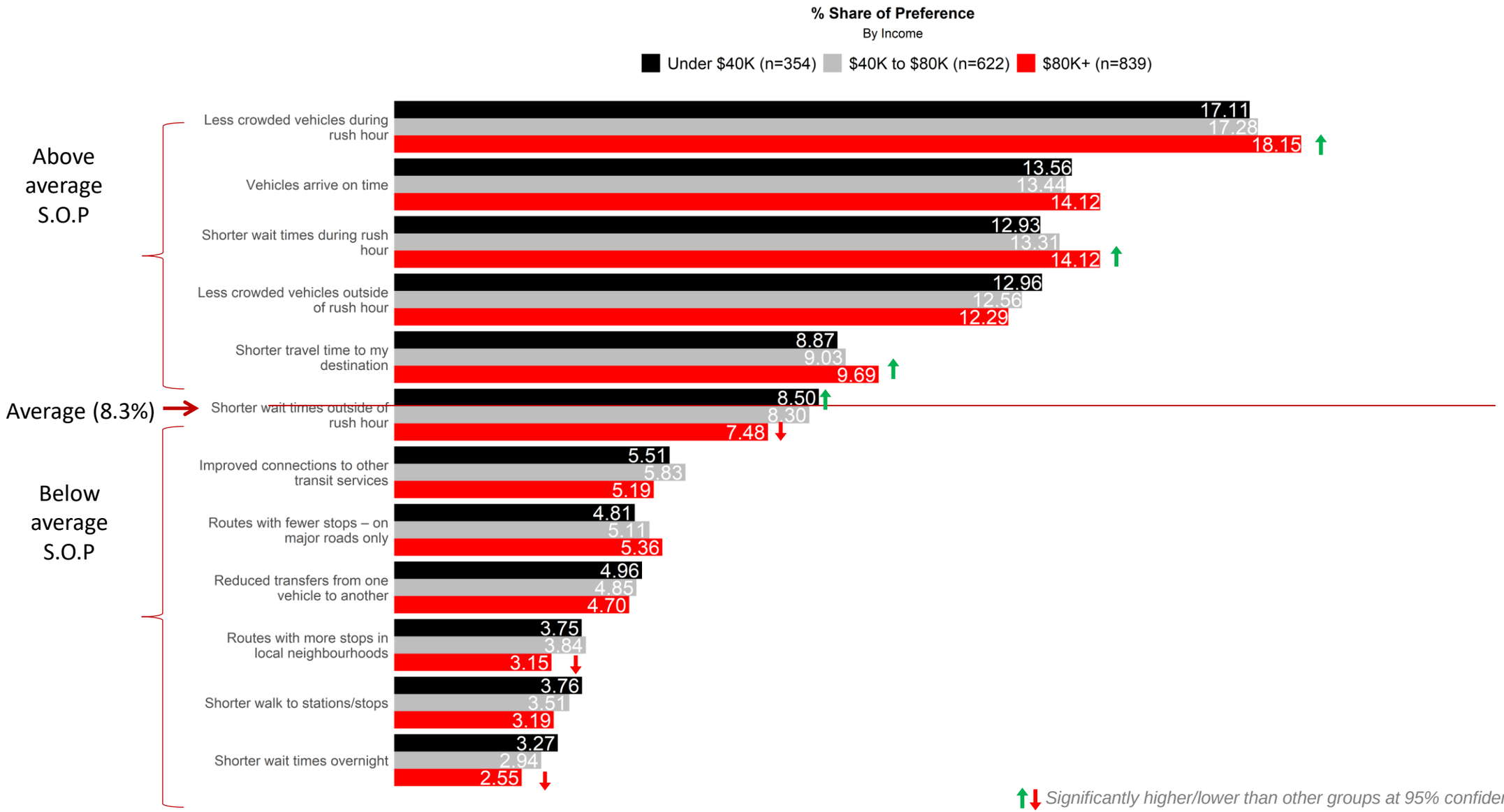
City of Toronto residents place higher importance on crowding than do GTA residents.



Significantly higher/lower than other groups at 95% confidence

Importance of Improvements – Household Income

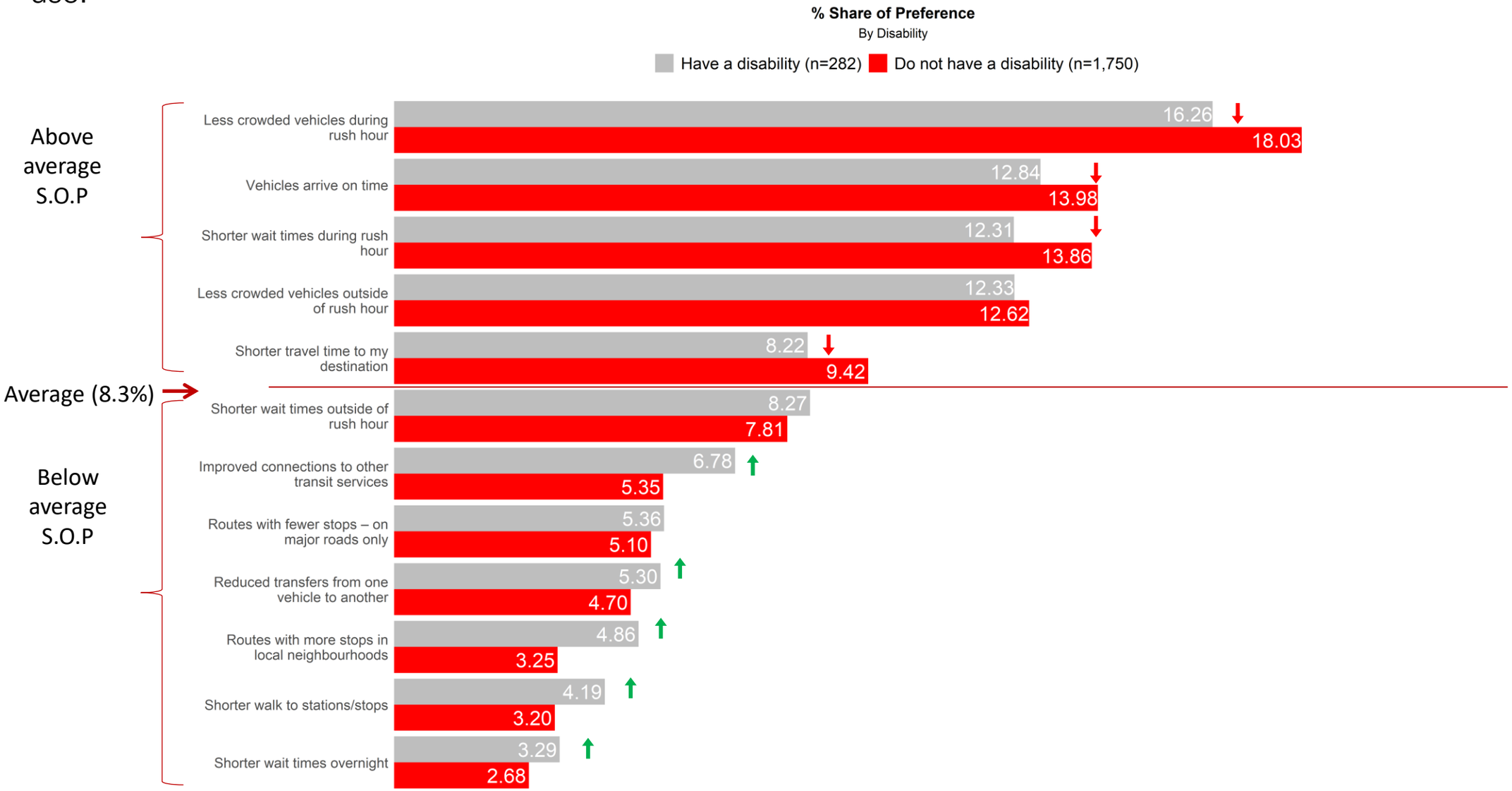
Lower income households place above average importance on wait times outside of rush hour.



Significantly higher/lower than other groups at 95% confidence

Importance of Improvements – Disability Status

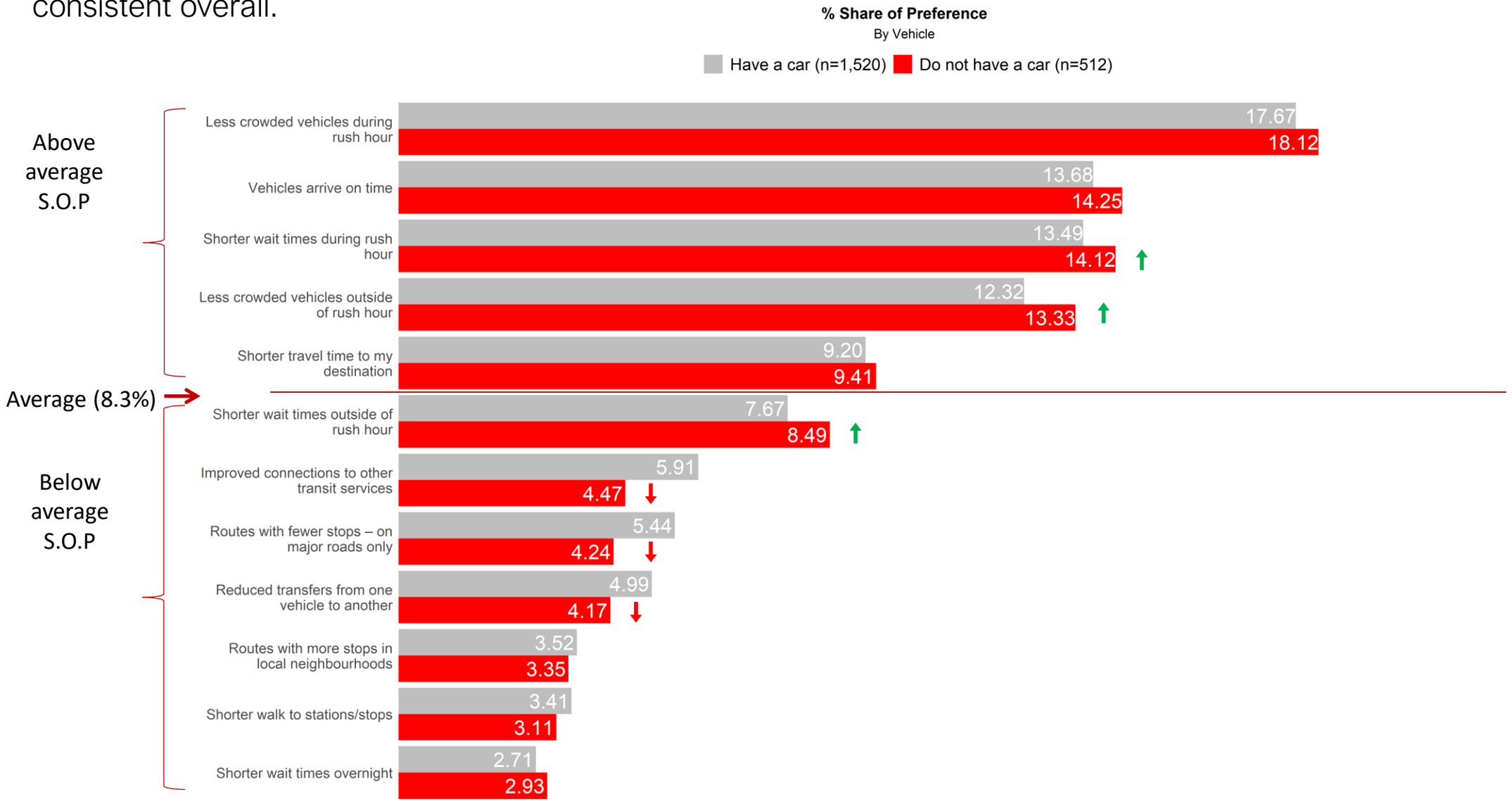
The priorities of persons with disabilities are consistent – but they hold broader concerns about accessibility and ease of use.



Significantly higher/lower than other groups at 95% confidence

Importance of Improvements – Vehicle Ownership

Households without access to a vehicle place higher importance on wait times; however, service priorities are consistent overall.

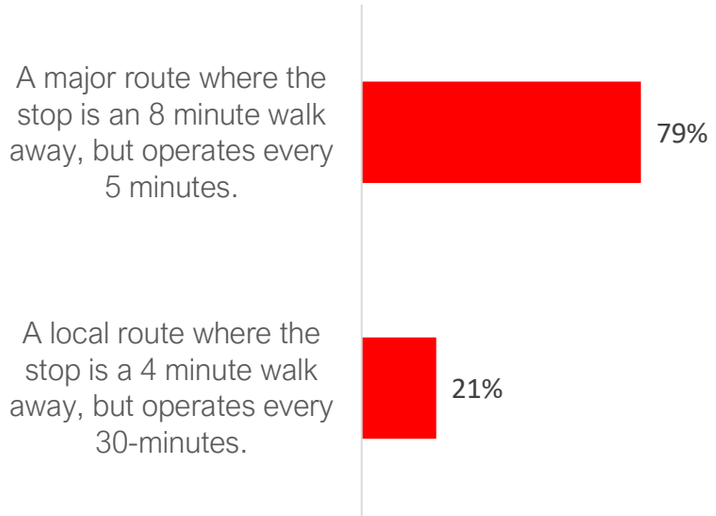


Significantly higher/lower than other groups at 95% confidence

Customer Preferences

Customers prefer transit scenarios that will the prioritize major routes, a reduced number of transfers, and more express service.

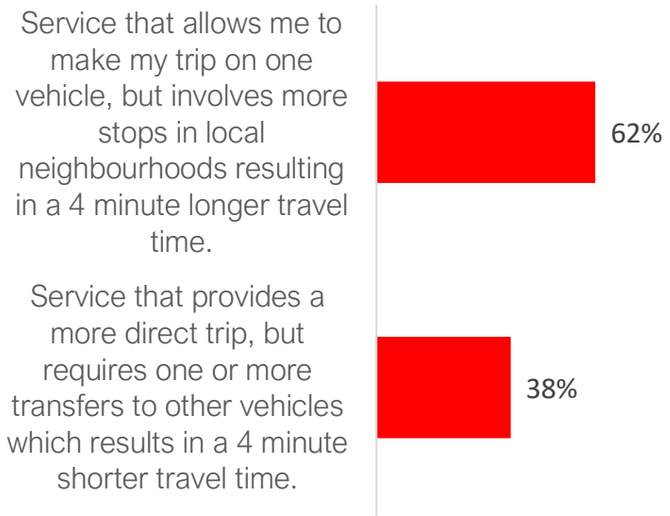
Travel preferences



Customers are more likely to prefer a **major route:**

- PRESTO fare typically used (83%)
- Those who live in Toronto (80%)
- Those who do not own a vehicle (85%)
- Those who do not have a disability (81%)
- Students (89%)
- Higher household income, $80K+ (81%)

Connections preferences



Customers more likely to prefer travelling on **one vehicle but more stops:**

- Travel on subway, streetcar, GO transit compared to those travelling on a bus. Those who take the bus are more likely to prefer a more direct trip.
- Those who do not own a vehicle (67%)
- Those who do not have a disability (64%)
- Female (68%)
- Retired (73%)

Express vs. local service

Customers more likely to prefer **express service:**

- Those who do not have a disability (86%)
- Working full-time (86%)
- Higher household income, $80K+ (87%)

Q3-5. Thinking about your travel preferences, select the option that you prefer for each scenario presented. I prefer... (Base: n=2,032)

Conjoint Analysis: Expected Impact of Crowding on TTC Usage

Methodology Considerations

'Conjoint analysis' is a survey-based statistical technique used in market research that helps determine how people value different attributes that make up an individual product or service.

In this survey conjoint analysis was conducted to examine the relationship between vehicle crowding and additional wait time that may be incurred during service reductions.

Respondents were presented with a wide range of scenarios (see example at right) and in each instance were asked to choose the scenario they preferred most, preferred least, and whether the scenarios chosen were more appealing than alternative forms of transit.

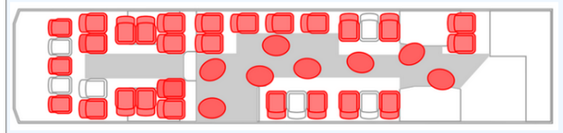
Example Question

Let's say you need to go to a certain destination for , and you are considering taking the TTC to get there.

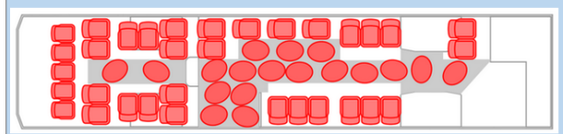
If you had a choice between the various levels of crowding and the additional wait time to get in the TTC vehicle from your usual trip, which ONE of these options would you prefer **MOST** and which one you prefer **LEAST**?

(1 of 10)

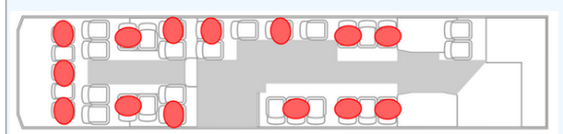
Option A

	Bus: 35 customers  25 minutes additional wait time from usual trip to enter vehicle
Prefer Most	☐
Prefer Least	☐

Option B

	Bus: 51 customers  5 minutes additional wait time from usual trip to enter vehicle
Prefer Most	☐
Prefer Least	☐

Option C

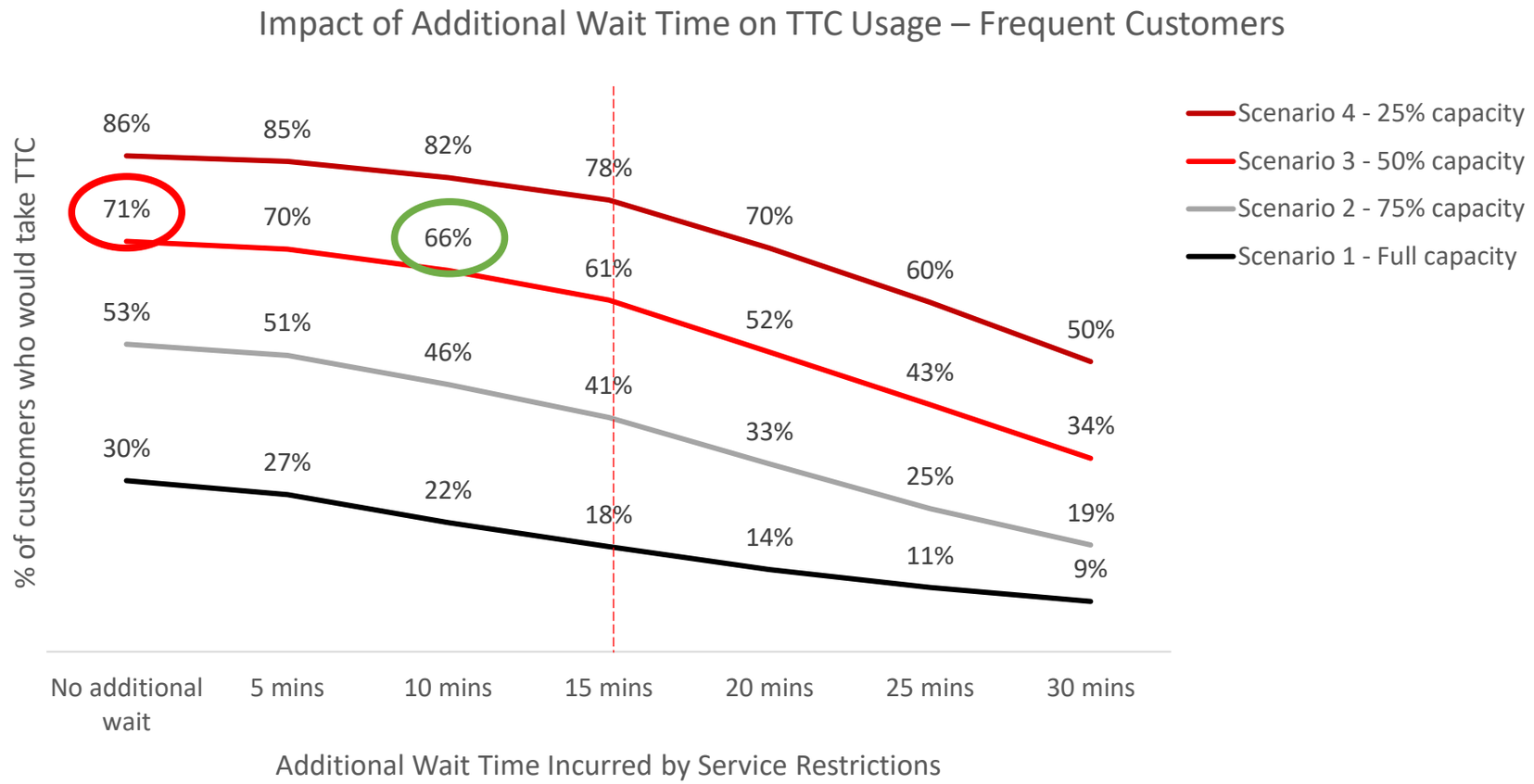
	Bus: 15 customers  10 minutes additional wait time from usual trip to enter vehicle
Prefer Most	☐
Prefer Least	☐

Given the alternative transportation options that are at your disposal, would you take the TTC in the scenario you preferred most above, or would you take another form of transportation?

- ○ Would take the TTC in the most preferred scenario above
- ○ Would take another form of transportation

Crowding, Capacity, and Wait Time

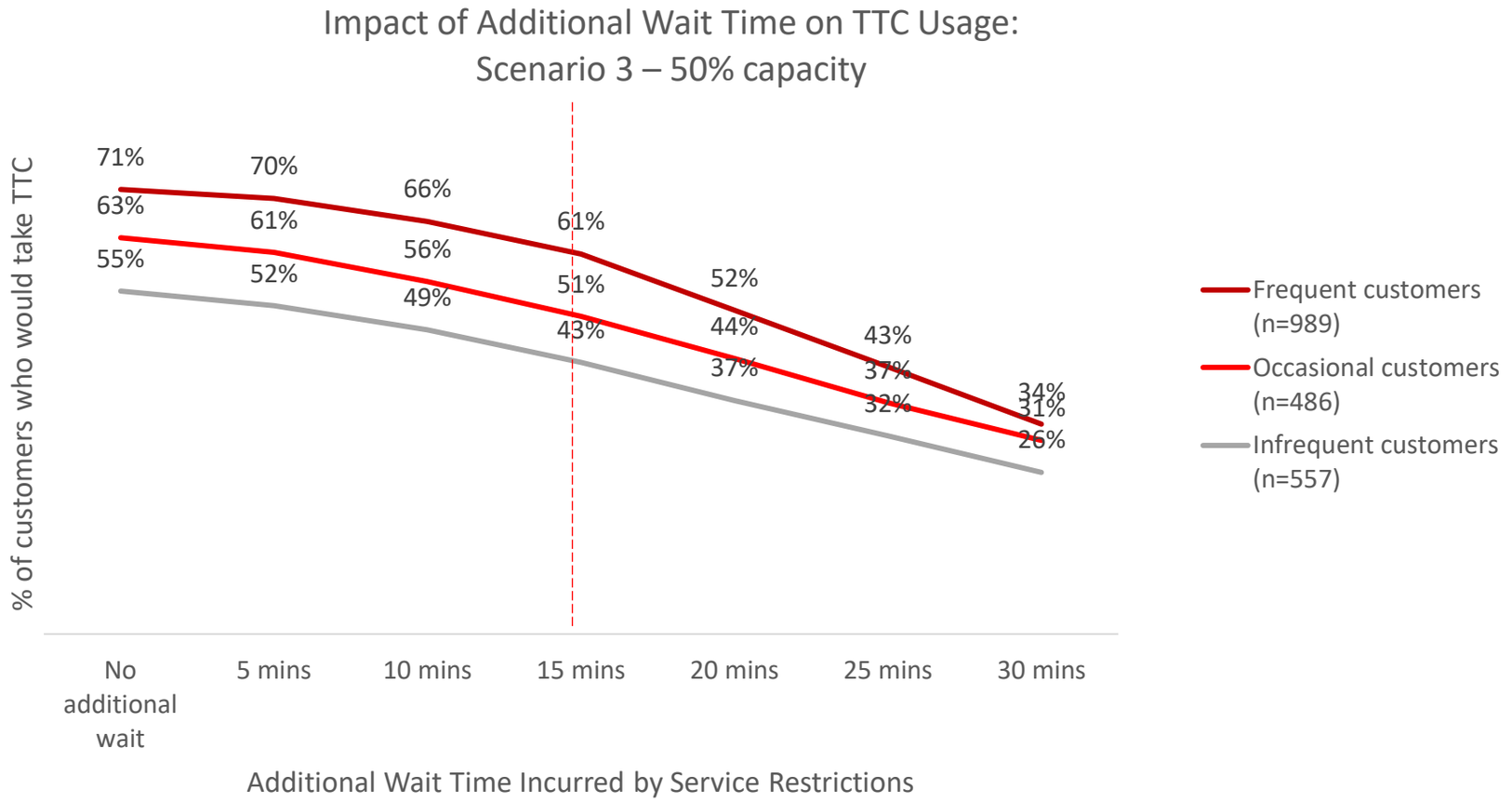
Two thirds of frequent customers would accept up to 10 mins of additional wait time to ride a vehicle at 50% capacity; however, as many as 30% of customers would not take the TTC even with no additional wait time.



CJ2. Given the alternative transportation options that are at your disposal, would you take the TTC in the scenario you preferred most above, or would you take another form of transportation? (n=989, Frequent TTC customers)

Crowding, Capacity, and Wait Time (By Frequency of Use)

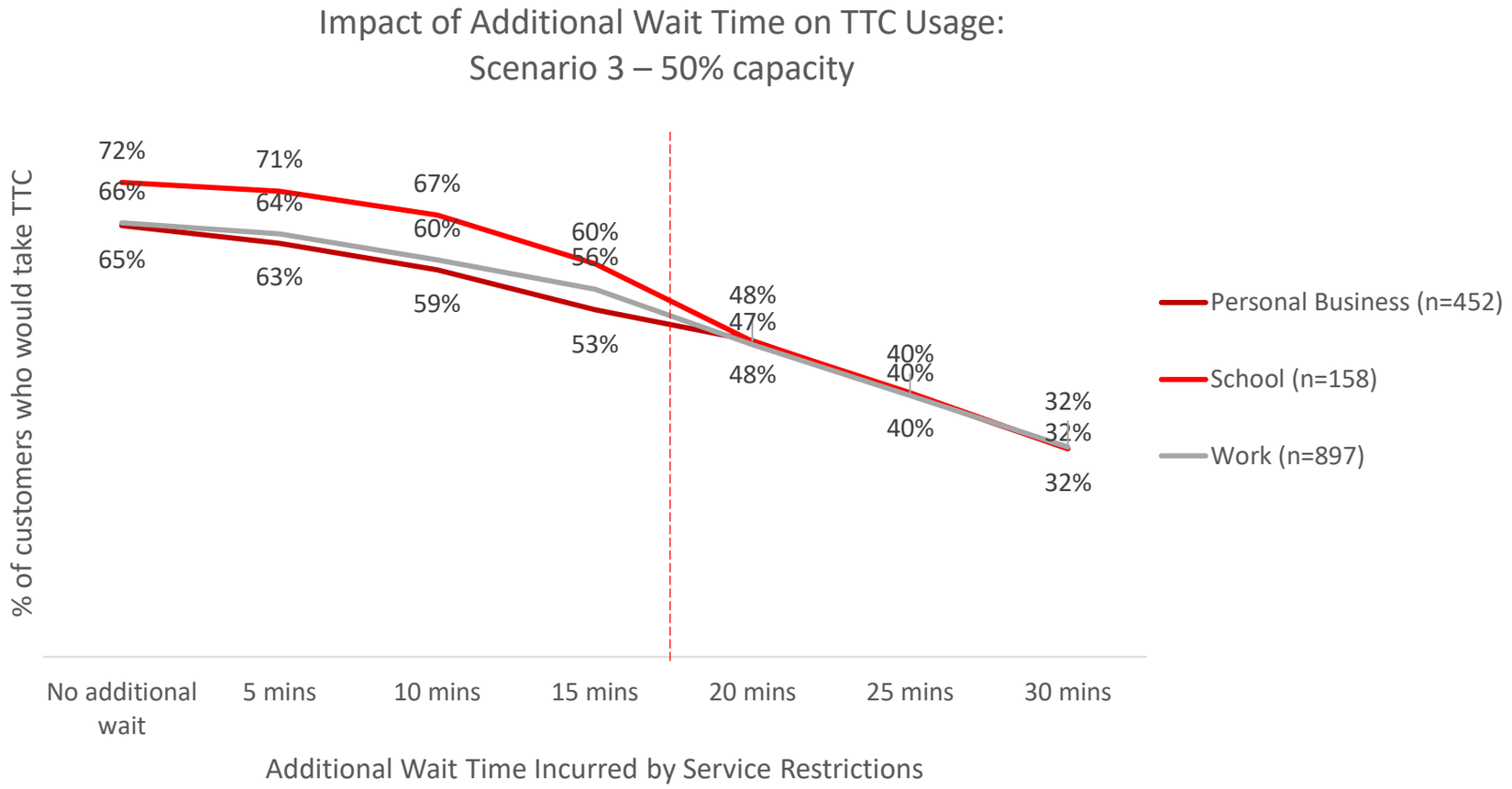
Occasional and infrequent customers are less likely to consider taking the TTC, even a vehicle at 50% capacity.



CJ2. Given the alternative transportation options that are at your disposal, would you take the TTC in the scenario you preferred most above, or would you take another form of transportation?

Crowding, Capacity, and Wait Time (By Purpose of Trip)

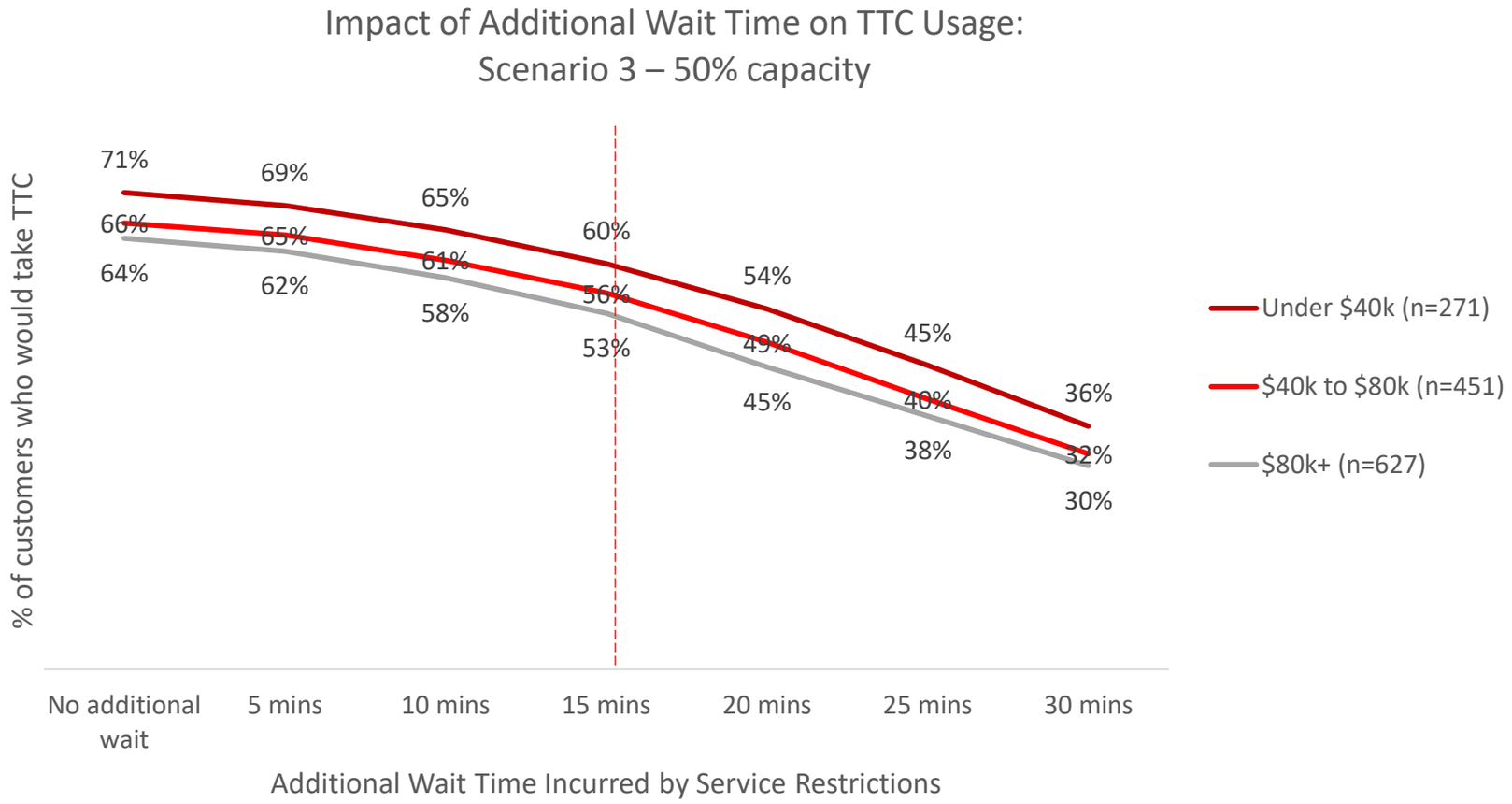
Tolerance for additional wait time is higher for school trips; up to approximately 20 minutes of additional travel time.



CJ2. Given the alternative transportation options that are at your disposal, would you take the TTC in the scenario you preferred most above, or would you take another form of transportation?

Crowding, Capacity, and Wait Time (Household Income)

Household incomes under $80K would tolerate longer additional wait times.

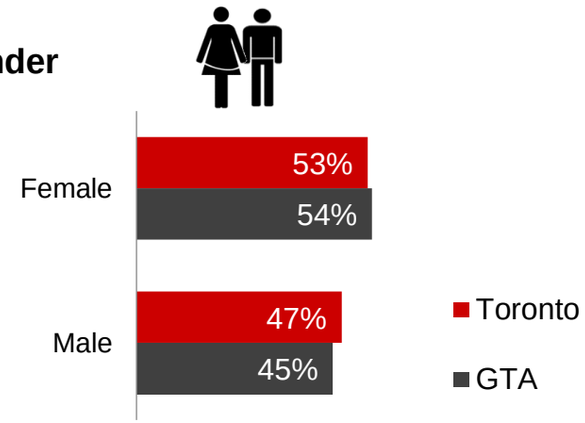


CJ2. Given the alternative transportation options that are at your disposal, would you take the TTC in the scenario you preferred most above, or would you take another form of transportation?

Customer Profile

Demographic Profile of Toronto and GTA Customers

Gender



Age Distribution

	Age 18-34	Age 35-54	Age 55+
Toronto	34%	38%	28% ↑
GTA	39% ↑	39%	22%

Disabilities

% Yes	Toronto	GTA
Vision difficulties	9%	11%
Hearing difficulties	3%	4%
Mobility difficulties (need of wheelchair/mobility scooter)	5%	5%
Need of a prosthetic aid	2%	3%

Ethnicity

	Toronto	GTA
White/European background	56%	53%
East Asian	17%	17%
South Asian	9%	14% ↑
Black/African or Caribbean	7%	6%
Southeast Asian	6%	4%
Middle Eastern or North African	2%	2%
Native/Indigenous	2%	1%
Other	3%	4%

Number of Vehicles

	Toronto	GTA
None	31% ↑	10%
One vehicle	51%	51%
Two vehicles	17%	30% ↑
More than three vehicles	2%	9% ↑

Average Number of Household Members

	18 yrs. old or over	Under 18
Toronto	2.1	0.5
GTA	2.5	0.6

Base: All customers n=2,032; Toronto n=1,507; GTA n=525

↑ *Significantly higher than other group*

Demographic Profile of Toronto and GTA Customers

Education Completed

	Toronto	GTA
Partial high school	1%	3%↑
Graduated high school	11%	10%
Partial community college/technical school	5%	6%
Graduated community college/technical school	14%	17%
Partial university	10%	12%
Completed university	58%↑	51%

Household Income

	Toronto	GTA
Under $40,000	18%	16%
$40,000 - <$80,000	30%	33%
$80,000+	42%	40%

Industry Most Recently Employed With

	Toronto	GTA
Finance, insurance & real estate	11%	10%
Communication & technology	10% ↑	7%
Services	9%	10%
Retail & wholesale trade	9%	10%
Education	9%	9%
Healthcare	8%	10%
Manufacturing & construction	6%	7%
Public administration	5% ↑	2%
Transportation	2%	2%
Utilities	1%	1%
Mining, oil & gas	1%	0%
Agriculture, forestry & fisheries		
Other	11%	12%
Not currently employed	16%	19%

Current Employment Status

	Toronto	GTA
Employed full-time	52%↑	46%
Employed part-time	8%	13%↑
Self-employed	7%	6%
Student	10%	15%↑
Unemployed	8%	7%
Retired	13%	10%

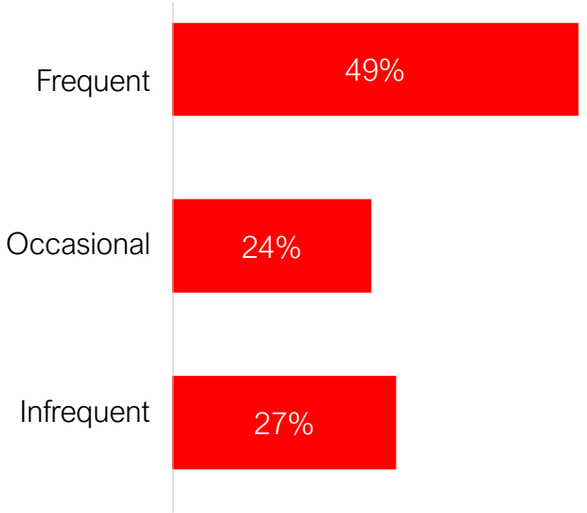
↑ *Significantly higher than other group*

Base: All customers n=2,032; Toronto n=1,507; GTA n=525

Customer Behaviours Prior to the COVID-19 Pandemic

Three quarters of TTC customers were using PRESTO to pay their fare, with the majority typically using PRESTO single fare.

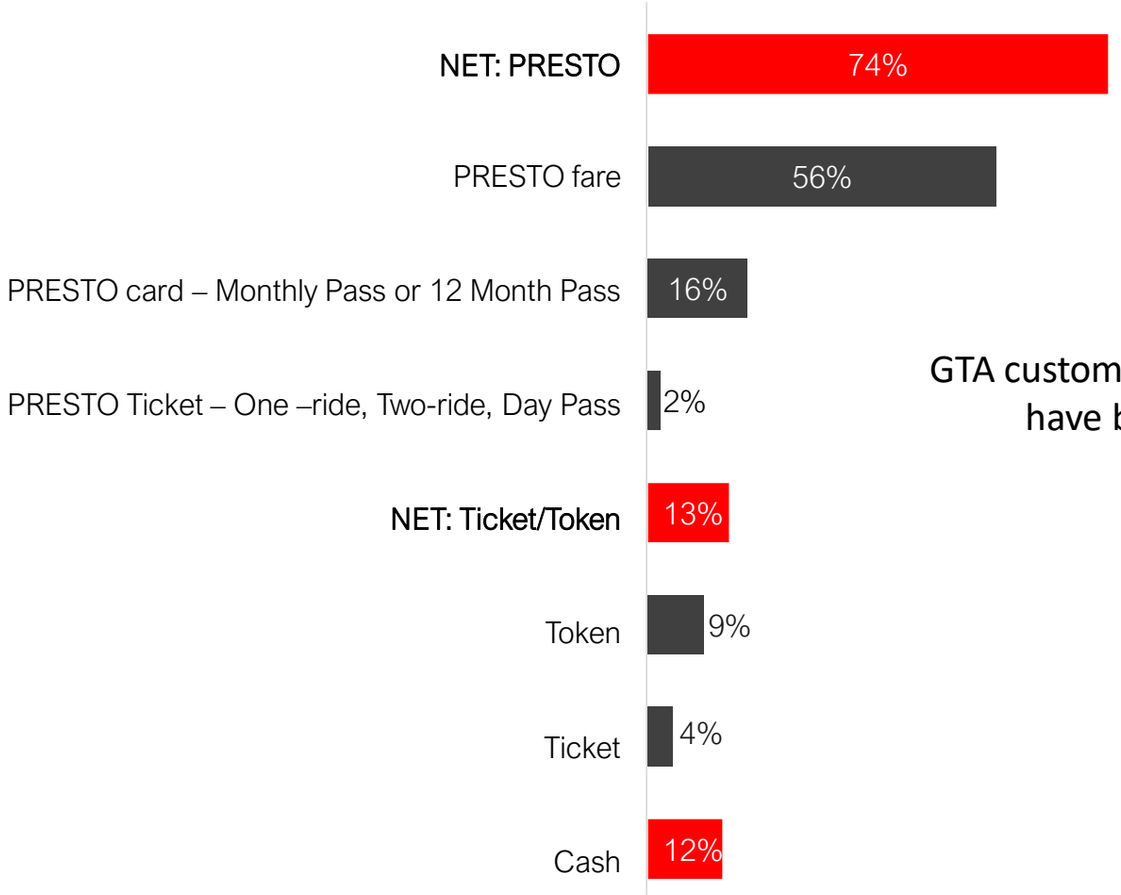
Frequency of Use (prior to COVID-19 pandemic)



Frequent customers are more likely to be:

- PRESTO users (58%)
- Travelling on streetcar to go to work (77%)
- Travelling on streetcar overall (68%)
- Do not own a vehicle (71%)
- Student (61%) or working full-time (52%)

Fare Payment

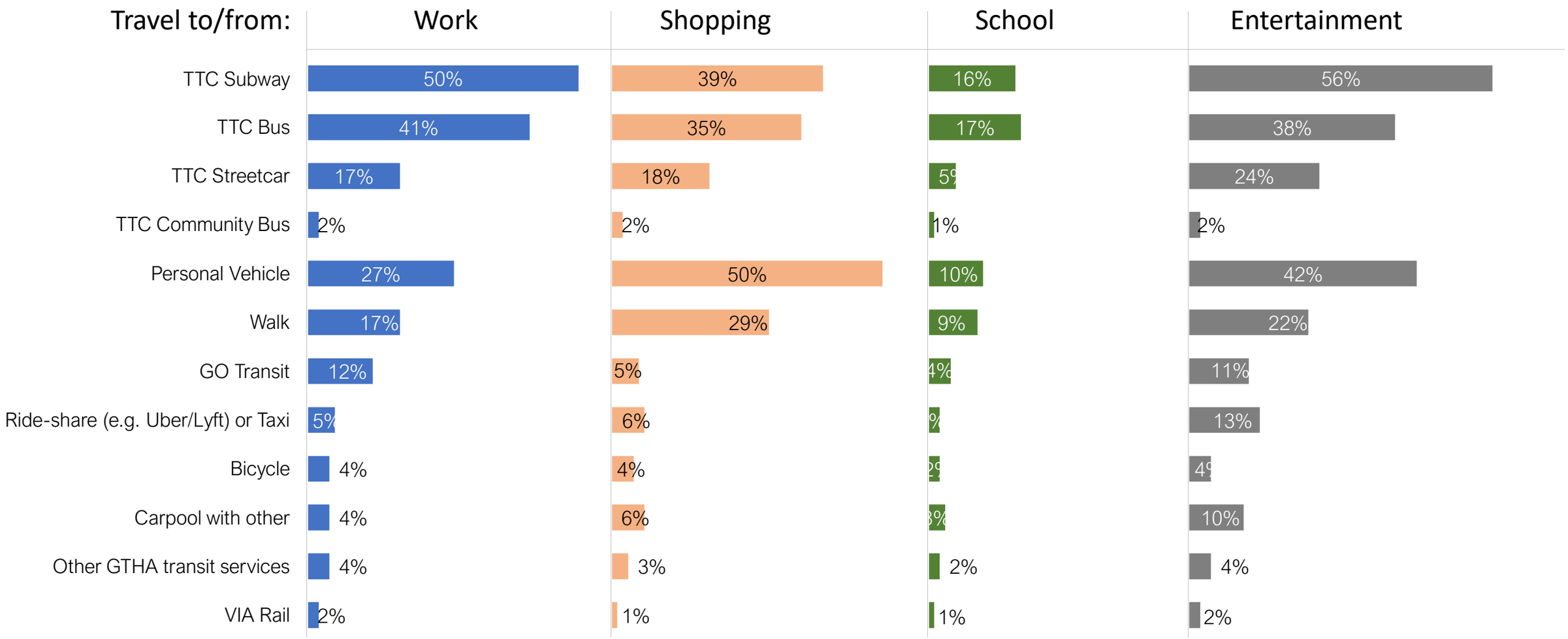


GTA customers are more likely to have been using cash (18%).

S3. Prior to he COVID-19 state of emergency, how often did you take the TTC? (Base: n=2,032)
S10. How did you typically pay your fare when riding the TTC? (Base: n=2,032)

Modes of Travel

Prior to the COVID-19 pandemic, the TTC was mainly used for travelling to and from work and entertainment.



S11. Prior to the COVID-19 state of emergency, which of the following modes of transportation did you typically use to travel to and from work, shopping, school, entertainment ?
(Base: n=2,032)

Appendix

Priorities for Transit – by Demographics

Customers who consider the following service attributes as **more important**

		Gender		Age			Household Income			Employment Status				Region	
	TOTAL	Male	Female	16-34	35-54	55+	<$40	$40K - <$80K	$80K+	FT/Self	PT	Student	Unemployed/ Retired	Toronto	GTA
Base	*2,032*	*945*	*1077*	*716*	*785*		*354*	*622*	*839*	*1153*	*184*	*238*	*400*	*1507*	*525*
Relieving/avoiding crowding on vehicles and at stops/stations	74%	67%	81%	75%	72%	76%	73%	71%	75%	72%	76%	79%	76%	75%	72%
Reducing travel time	38%	34%	42%	46%	37%	29%	40%	36%	39%	39%	39%	48%	31%	39%	36%
Improving service in areas that need service the most	37%	30%	42%	45%	35%	28%	40%	37%	35%	37%	38%	44%	32%	37%	35%
Enhancing experience at key stops	35%	31%	39%	41%	35%	29%	38%	36%	34%	35%	41%	44%	30%	35%	36%
Enhancing routes to support travel patterns	34%	31%	37%	39%	34%	28%	38%	34%	33%	35%	38%	36%	30%	34%	36%
Improving integration with other transit services	32%	31%	34%	37%	33%	26%	37%	31%	32%	32%	41%	34%	29%	30%	40%
Increasing frequency of service	31%	29%	33%	38%	33%	20%	32%	31%	31%	34%	38%	34%	22%	31%	31%
Improving reliability of service	31%	28%	34%	38%	31%	22%	35%	31%	29%	31%	35%	39%	24%	31%	30%
Improving first and last mile connections	30%	29%	30%	34%	31%	22%	31%	29%	30%	30%	32%	34%	25%	29%	33%

Significantly higher than other subgroups

Significantly lower than other subgroups

Priorities for Transit – by Behaviours

Customers who consider the following service attributes as **more important**

		Fare Used			Modes Used – For Work				Modes Used – Overall				Frequency of Use			Own Vehicle	
	TOTAL	Cash	Ticket/ Token	PRESTO	Subway	Bus	Streetcar	GO Transit	Subway	Bus	Streetcar	GO Transit	Frequent	Occasional	Infrequent	Own Vehicle	Do not Own Vehicle
Base	*2,032*	*253*	*266*	*1508*					*1513*	*1168*	*693*	*391*	*989*	*486*	*557*	*1520*	*512*
Relieving/avoiding crowding on vehicles and at stops/stations	74%	70%	71%	76%	73%	72%	74%	71%	75%	74%	76%	73%	77%	72%	72%	74%	75%
Reducing travel time	38%	36%	45%	38%	43%	46%	45%	45%	40%	43%	41%	43%	41%	36%	35%	38%	39%
Improving service in areas that need service the most	37%	36%	37%	37%	40%	42%	43%	40%	38%	41%	40%	41%	39%	34%	35%	37%	36%
Enhancing experience at key stops	35%	36%	39%	35%	38%	41%	43%	39%	36%	39%	39%	39%	38%	32%	34%	36%	33%
Enhancing routes to support travel patterns	34%	35%	34%	34%	38%	40%	45%	37%	35%	38%	39%	37%	36%	33%	32%	35%	32%
Improving integration with other transit services	32%	33%	36%	32%	36%	36%	37%	47%	34%	35%	34%	43%	33%	33%	31%	34%	29%
Increasing frequency of service	31%	29%	36%	31%	36%	40%	39%	35%	33%	36%	34%	34%	35%	29%	26%	32%	30%
Improving reliability of service	31%	32%	29%	31%	35%	37%	36%	38%	32%	35%	32%	36%	35%	28%	27%	31%	31%
Improving first and last mile connections	30%	28%	33%	30%	33%	34%	38%	37%	31%	33%	34%	35%	31%	29%	28%	31%	26%

Significantly higher than other subgroups

Significantly lower than other subgroups

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