# CitiBikes Analysis – Summer 2018-2020 Review by Generation & Gender

*With COVID-19 having unprecedented impact, I have chosen to review June-July activity across 2018-2020.*

Overall Trips by Month/Year

While the overall number of trips dropped in 2020 compared to the previous two years, 2020 saw a dramatic decline in Subscriber numbers.

Female riders increased to reflect a successful gender outreach program, while male riders dropped noticeably.

Generation Z was the big growth market on previous years, however work should be done to increase subscriber numbers within this age group and Generation X which also has a much lower subscriber percentage compared to the Baby Boomers.

This could be explained as new customers decided/were forced to find other transportation options. Recommend marketing be focussed on capitalising these new customers and converting to subscribers.

Most Popular Start / End Stations

Notable difference in station activity – if you compare activity 2018-2019, there is a fairly consistent pattern of the most popular stations. The increase in customers versus subscribers in 2020 could answer this as new users utilise different stations.

With a default minimum trip value of 5,000, there is only a small number of stations for Female and Unknown gender, with a much greater spread for Males.

The Generation that appeared to be least affected in this area is Generation X.

Please note the changing X Axis reflecting the much smaller activity for the older generations.

Most Used Bikes

As per CitiBIke regulations, bikes that have been used for more than 1,500 miles or 1,000 trips (whichever is earlier) must undergo a service. Use either or both the Miles Travelled / Trips per Bike filters to identify those above this threshold.

Most Popular Stations - Commencing Trip & Completing Trip

As per previous graphs indicate, a wider range of starting and ending points have been accessed in 2020.

Males appear to be expanding into the east of the city, Females to both the north and east and Unknown across the city.

Station Activity – UserType

It appears that users in the outer boroughs are more likely to subscribe to the service rather than users in Manhattan. This map reflects the increase in Customer numbers over Subscriber numbers in 2020, particularly in Manhattan.

Average Trip Distance

2020 again has a significant impact on an increase of average trip distance and extensions of stations accessed compared to previous years.

Age / Gender

Total Trips per Year / Generation

While Millennials have remained steady across the three years, a 5% increase in Generation Z is pleasing and the focus should be on converting those to subscribers. Interesting to note a decrease in Generation X across the three years, while Baby Boomers is arguably more predictable as retirement beckons.

Total Trips by Generation/Gender

While Males are clearly taken the most trips, particularly amongst Millennials and Generation X, as we can see in later graphs trip duration and distance provide more context.

Average Trip Duration by Gender

In line with a shorter trip distance, males are less likely to have a longer trip duration in 2018-19, with a clear increase in 2020.

The Greatest Generation, Silent Generation and Baby Boomers are more evenly spread, potentially reflecting a mostly retired population with more leisure time.

# Trips per hour / Gender

Note that 2020 affected the time of day of travel dramatically - 2018 & 19 followed a clear trend of the 9-5 working day with spikes in the morning and evening.

2020 and potentially the change to working conditions due to COVID-19 flattened these spikes and spread the activity more evenly.

This is true across the Generation and Gender divide.

AvgTripDistance Per Weekday / Gender

Clear trend that the weekend results in a longer average trip distance for Generations you would expect to be working, while the older Generations who have potentially retired are more evenly spread.

While males are taking the most trips, they are generally travelling the least amount of distance.

AvgTripDistancePer Weekday/Generation

Clear increase in trip duration in 2020 across most Generations, while 2018 - 2019 show a consistent trend.

Whether users had more time or were looking to avoid the Subway due to COVID-19, this would be an interesting trend to track in 2021.