

BIXI Montreal Business Report

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Bixi Project Deliverable 1

## Introduction:

BIXI is a bike-sharing system in Montreal that runs from April to November every year and is growing in popularity especially in urban and recreational areas. These bikes offer a cost-effective and environmentally friendly way to get around places in Montreal, allowing users to beat the traffic, and overcome rush hour. In this report, information will be provided on the current realities of BIXI bike usage around the city. Although BIXI has already found success in many areas, there is still significant potential for further development. This can be done through seasonal promotions and novel marketing strategies. Findings on the usage of BIXI bikes and their most popular bike stations will be presented, alongside specific recommendations leading to possible growth of the overall business.

## Analysis on the Volume of BIXI Bike Usage:

There is a clear difference in BIXI bike usage between the years 2016 and 2017. The data shows a 19% increase in 2017, indicating growth of the company and the goal is to maintain this upward trend. Much of this increase in bike rides was observed in the summer months of June to September, where July 2017 saw an almost 50% increase in comparison to May 2017 (Figure 1).

Based on this data, it appears that BIXI has an opportunity to target a larger audience during these months. These warmer months are a great time to ramp

up marketing as well as introduce a promotion for non-members, attempting to convert them into members. The high visibility of BIXI bikes on the streets gives a greater chance for non-members to see the promotion and attract them to become potential members. The analysis also reveals that a higher proportion of customers are non-members during these summer months with about 24% of users being non-members in July (Figure 2). Introducing a summer promotion may also create a positive association between BIXI and its non-member customers. This positive association may lead to increased brand loyalty and leave non-members coming back to BIXI more frequently throughout other times of the year.

The average trip duration remained relatively stable throughout the year with no major fluctuations between the months. Most trips lasted around 13 – 14 mins per ride, suggesting that the bikes are primarily used for commuting and getting from one place to another. This is further supported by the finding that about 97% of total trips do not end where they started. Recognizing that the majority of BIXI users are commuters is important for the company's growth. The company can focus its marketing efforts on targeting the commuting community. With this

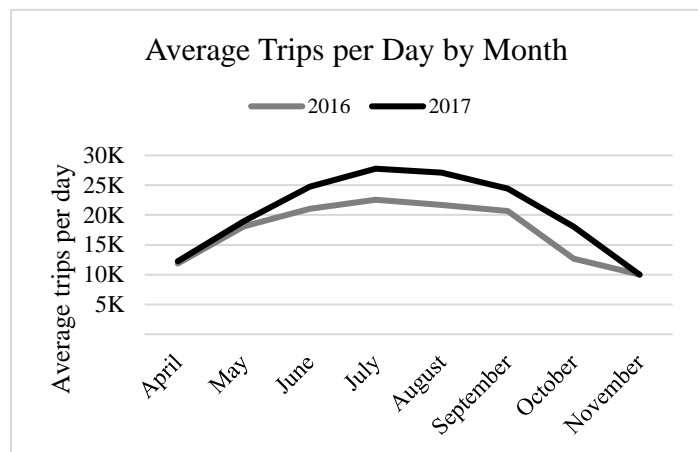


Figure 1.

information, BIXI could expand in areas with high commuter traffic by either setting up new stations or increasing bike availability. These areas would include train stations, universities, and business hubs in Montreal.

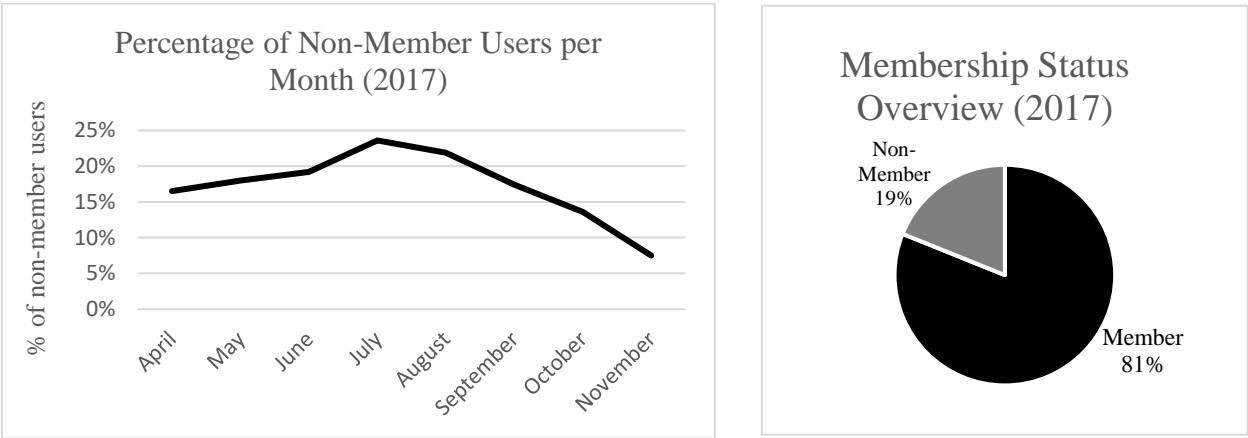


Figure 2.

Analysis on Bike Station Usage:

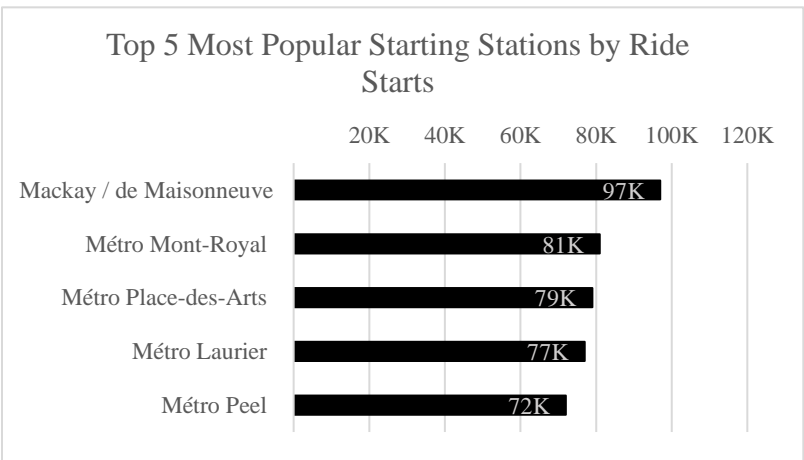


Figure 3.

Based on the analysis of the data, the station with the highest number of ride starts is Mackay / de Maisonneuve. This is followed by four different metro stations (Figure 3). The Mackay / de Maisonneuve intersection is right in the heart of downtown Montreal, a very dense area close to many offices, universities and residential apartments. This being the top station is consistent with the

idea that BIXI riders are primarily commuters. All five of these bike stations are in areas that are well-served by public transit and thus people may be using the BIXI bikes as their final ride to commute to specific places in Montreal, of which are not as easily accessible by bus or train. In the top station, Mackay / de Maisonneuve, it was found that most rides started and ended in the afternoon and evening, with the evening taking the top spot (Figure 4). This supports the hypothesis that majority of BIXI users are commuters. The analysis defines evening to be starting at around 5PM, which is where most people would come off work. These people are commuting from work so the bikes are a great way to beat rush hour and get home faster than they would using public transit. The afternoon and evening is also the time of day where most

people have free time to do go out and do activities. These activities could range from meeting with friends to visiting the museum, which is not far from the Mackay / de Maisonneuve station. BIXI bikes could be their main point of transportation to get to and from these outings. Additionally, going on a casual ride on the BIXI bikes could also be an outing in itself, since the bike station is near many nice routes through Mount Royal Park. Targeting the afternoons and evenings presents new marketing opportunities for promoting Bixi as a convenient alternative to rush hour traffic and a relaxing way to explore the city during the evening hours.

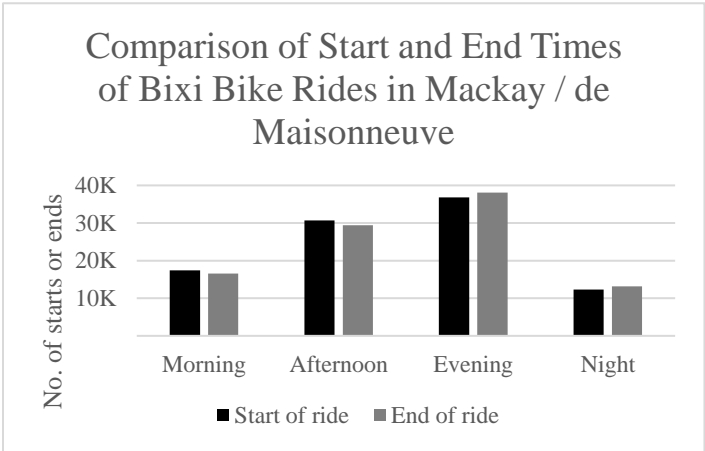


Figure 4.

Additionally, it provides an opportunity to position Bixi as a means of unwinding and enjoying the cityscape. This is also a crucial time where BIXI has to make sure bikes are available during peak hours, maybe even improving bike distribution in this main station, to account for the increase in business during the afternoon and evening.

It was also found that many of the BIXI stations with the highest proportion of round trips were in places where leisure biking would be popular (Figure 5). A round trip was defined as a trip that started and ended in the same station. These stations were situated close to parks,

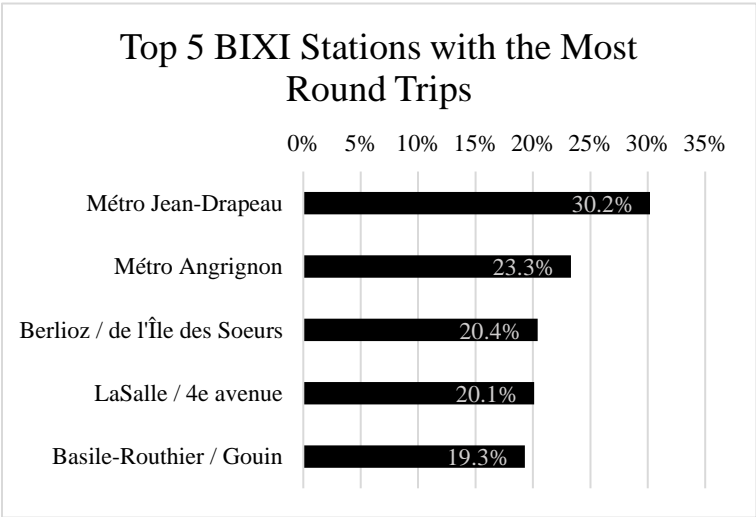


Figure 5.

and places by the river bank. For instance, both Jean-Drapeau and Angrignon stations are situated in scenic locations. Jean-Drapeau is on its own mini island and within a park, while Angrignon is close to both a park and a river. These are areas with scenic routes and recreational activities, causing riders to simply ride in the area. These parks are also likely to have designated bike lanes where bikers can safely enjoy the views and scenery. BIXI should capitalize on this recreational market and promote

their bikes to be not only good for commuters but also as an inexpensive way to enjoy one's time and the beauty of Montreal.

## **Final Recommendations:**

- Introduce promotions during summer months
- Temporarily reduced membership fee
- Membership free trial
- Partner with local Montreal businesses
- Increase presence on Social media through brand ambassadors
- In-app notifications
- Target commuters during rush hour
- Expand business to target recreational riders
- Offer multi-day passes for tourists

After a thorough analysis, there are many things that must be considered if BIXI wants to grow their business and gain even more success. The first thing would be a summer seasonal promotion for non-members, possibly including a temporarily reduced membership fee or a free trial for a week. BIXI could also take advantage of early membership promotions, for where non-members can commit to being members the following summer. Through this, BIXI would gain the commitment of these people and have them pay their membership ahead of time for a lower price. This will ensure that BIXI will gain its profit even before riders start using the bikes. The increased usage of BIXI bikes in the months of June to September must also be utilized by BIXI. Partnering with local businesses in Montreal could be one way to market their summer promotions. Presence on social media platforms such as Facebook or Instagram is also a great way to get expose people to possible summertime promotions. BIXI should hire some social media personalities in the Montreal area as brand ambassadors on a commission basis, paying them everytime they post an ad on social media or a new member signs up with their code. Marketing on social media could be particularly effective in bringing in younger members who are in University. Brand ambassadors must be young, charismatic individuals who have a strong influence on the university community. Gaining the loyalty of the younger customers will help build a foundation for maintaining them as BIXI members as they transition into working life as commuters. Using in-app notifications can also be a great way to target non-members who are using the bikes in the summer, reminding them of the great deals available when one becomes a BIXI member. As afternoons and evenings are the most popular ride times, it may be in the company's best interest to leverage this as a marketing strategy. BIXI should focus it's advertisements on "overcoming rush hour" or to enjoy the city of Montreal after a long work day. BIXI also has the opportunity to expand their business to not just commuters but sightseers and leisure cyclists. Establishing a bigger presence near parks, bike routes, and rivers where there are scenic views could be a whole new market for bike-sharing. BIXI could offer multiday passes for tourists and have guided bike tours instead of just routes on their app where people can go on a group bike session at one of these parks. It is crucial for BIXI to take advantage of these potential areas of growth for business in the bike-share community and establish themselves as a global leader in bike-sharing organizations.

## Methods:

Data for this study was cleaned and downloaded from BIXI Montreal's open data portal, provided by Brainstation. MySQL was used for Data querying and analysis. It was also found that there was indeed a difference in run time between questions 4.1 and 4.2 of Brainstation's Bixi Project Deliverable 1. The query in 4.2 making use of a subquery within the query showed a much faster run time. This is due to MySQL not having to process as much data as it would with a JOIN function, processing only the necessary data, in this case, the counts and the start station codes. Data Visualization was done through Microsoft Excel.

## References:

1. *Google Maps*. Google. (n.d.). Retrieved April 15, 2023, from <https://www.google.com/maps>
2. *Who we are*. BIXI Montréal. (n.d.). Retrieved April 15, 2023, from <https://bixi.com/en/who-we-are>
3. *2023 BIXI season: Good for me, good for all*. BIXI Montréal. (n.d.). Retrieved April 15, 2023, from <https://bixi.com/en/bixi-season#:~:text=BIXI%20%3A%20Good%20for%20me%2C%20good%20for%20all&text=This%20season%2C%20we'll%20have,going%20to%20be%20a%20blast!>
4. *Bixi Project Deliverable 1*. Brainstation Learning Portal. (n.d.). Retrieved April 16, 2023, from <https://synapse.brainstation.io/data-science-bootcamp/projects/676cb7f8-f26b-5ff6-b767-b8c812bbf9aa>