BIKE RENTAL ANALYSIS

BIKERENTSTER 2019 REPORT

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Outline

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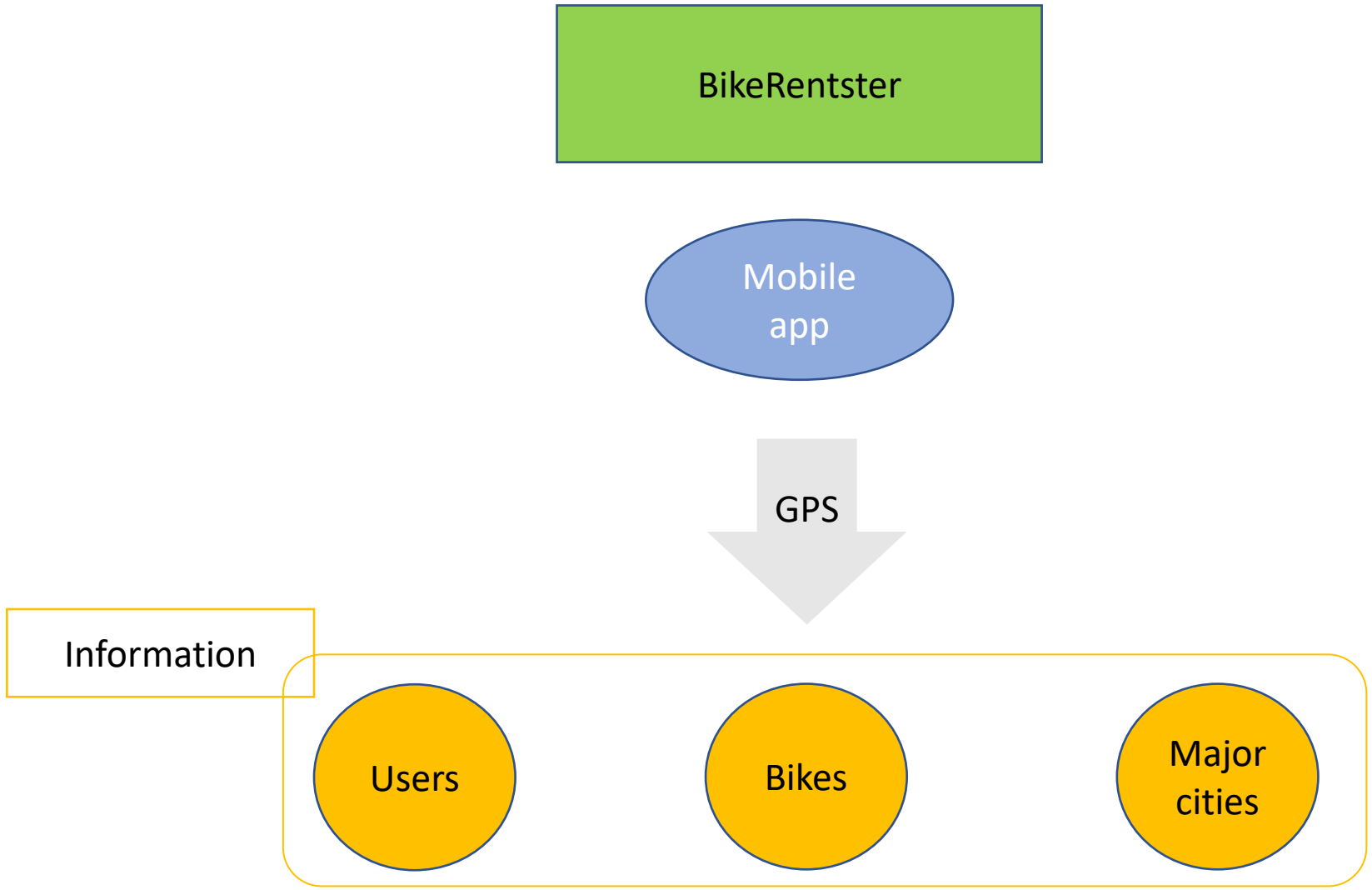
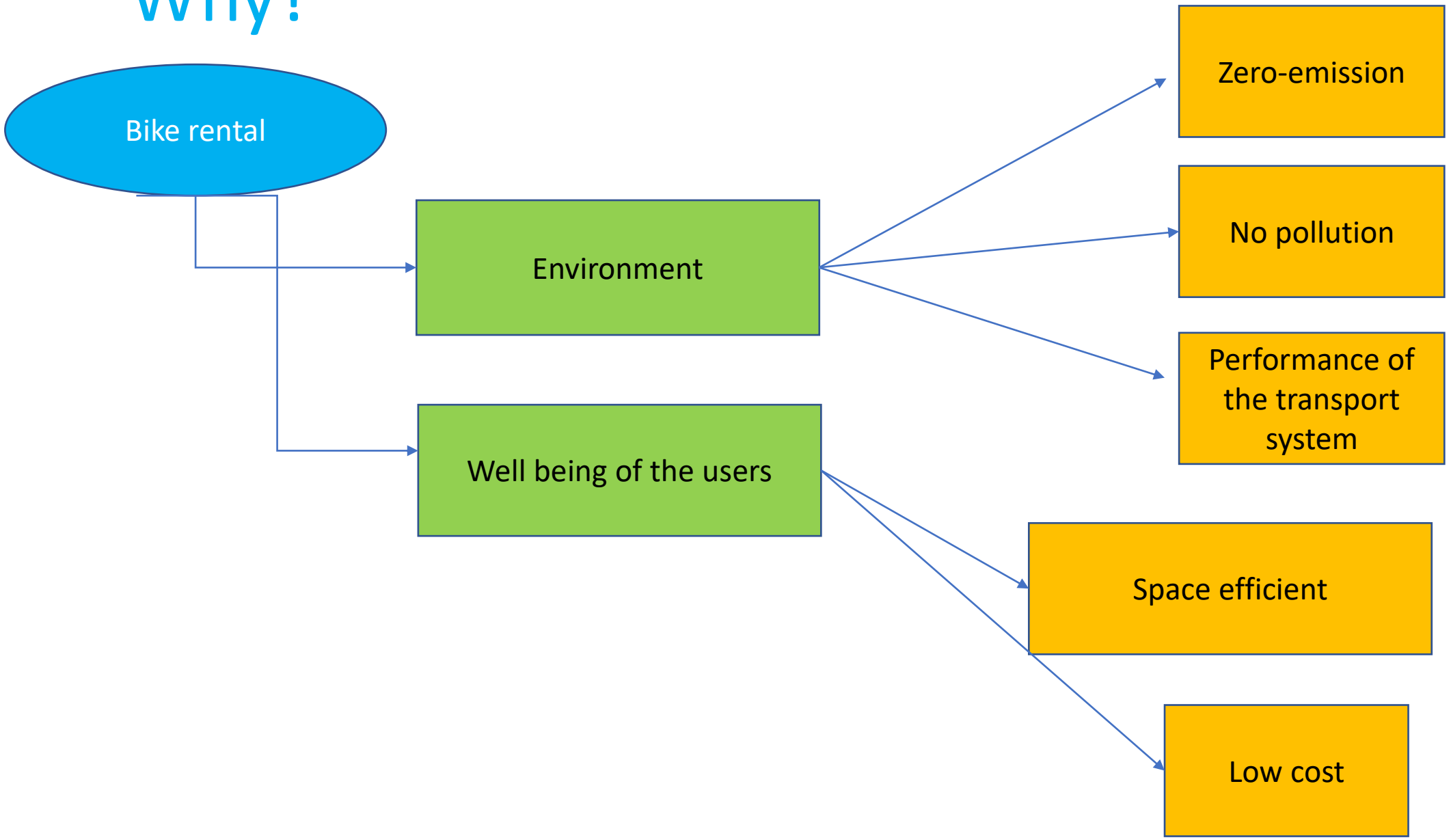
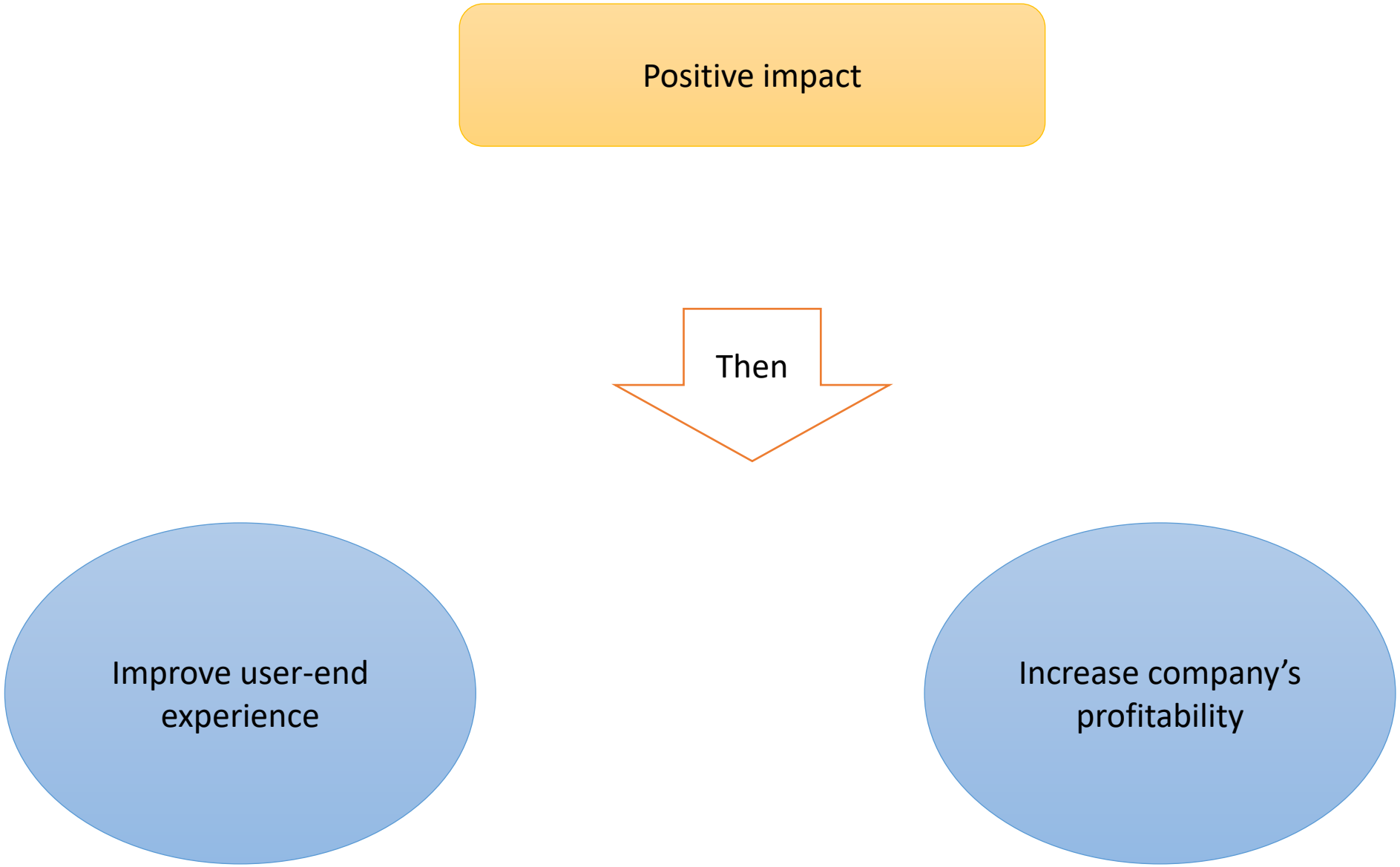
- Analysis
- Conclusion

Introduction



Why?


Bike rental
Environment
Well being of the users
Zero-emission
No pollution
Performance of the transport system
Space efficient
Low cost

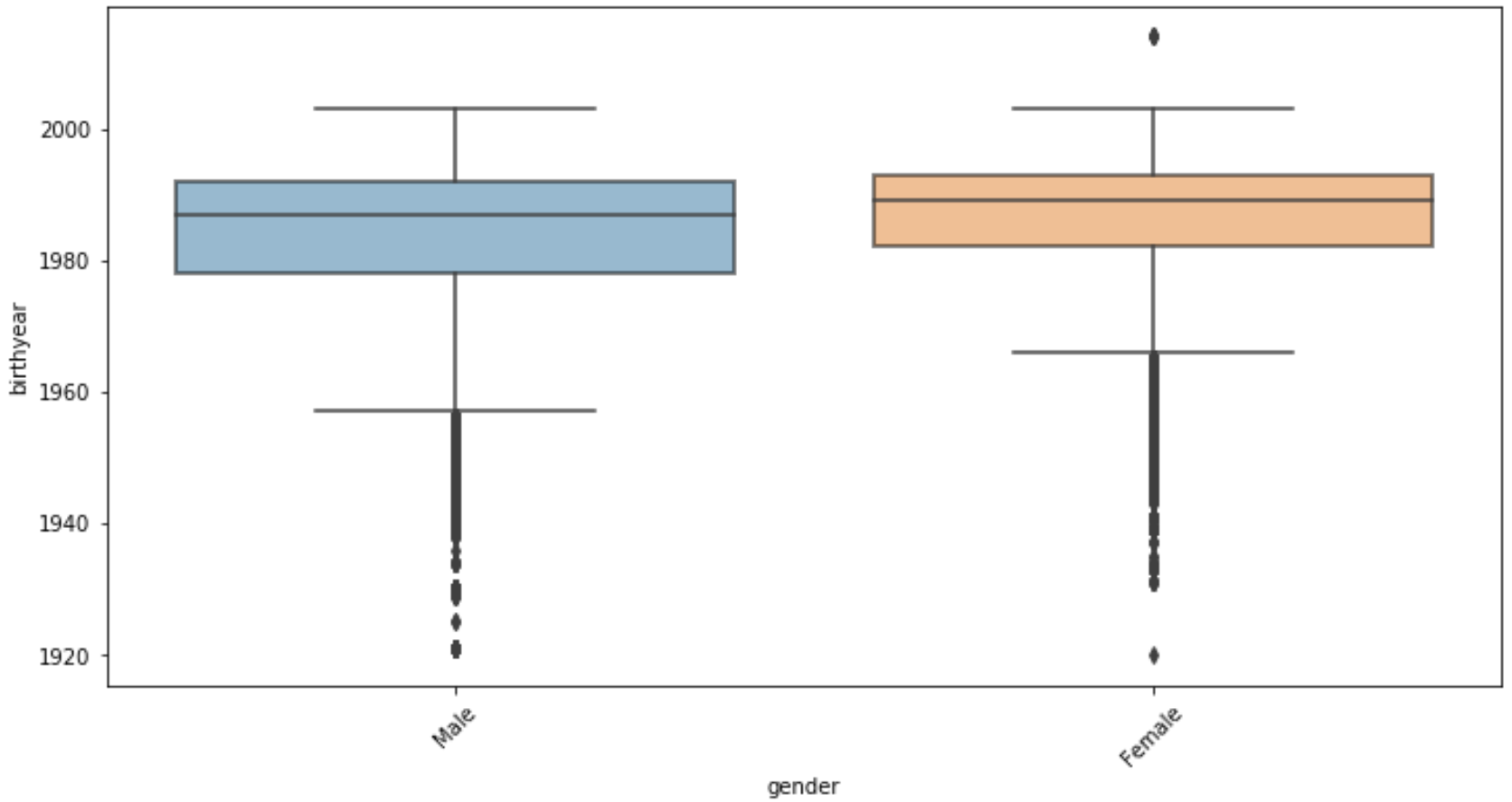

Positive impact
Then
Improve user-end experience
Increase company’s profitability

Objective

Understand the driving factors for bike rental usage

Use those insights to provide 3 strategic marketing recommendations

Before describing data used let’s have an overview of the market target.

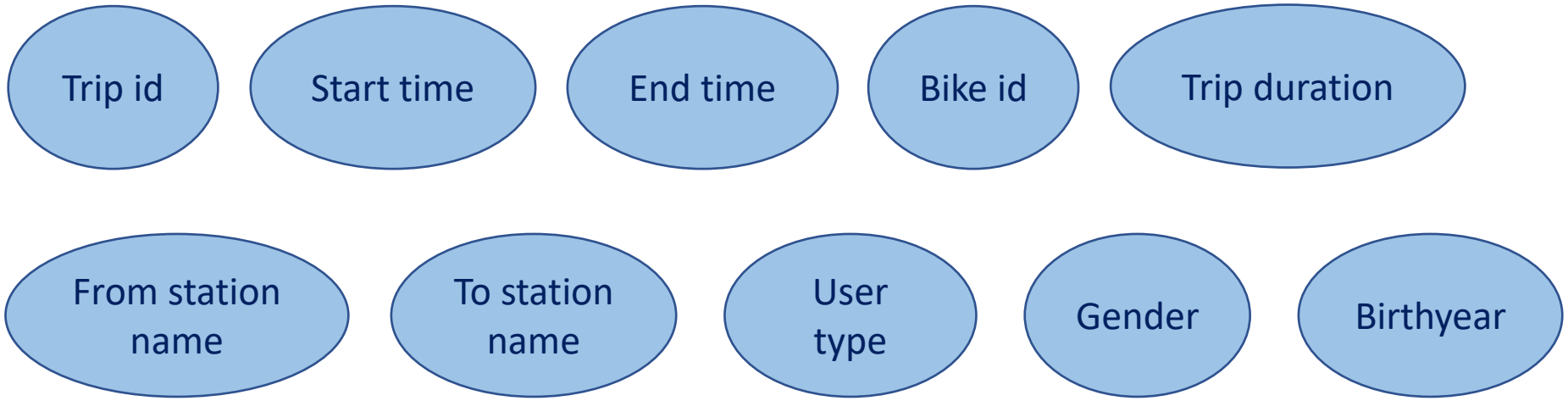


The majority of users are males, and they are in the 40-25 age group. Most of the females are younger than males.

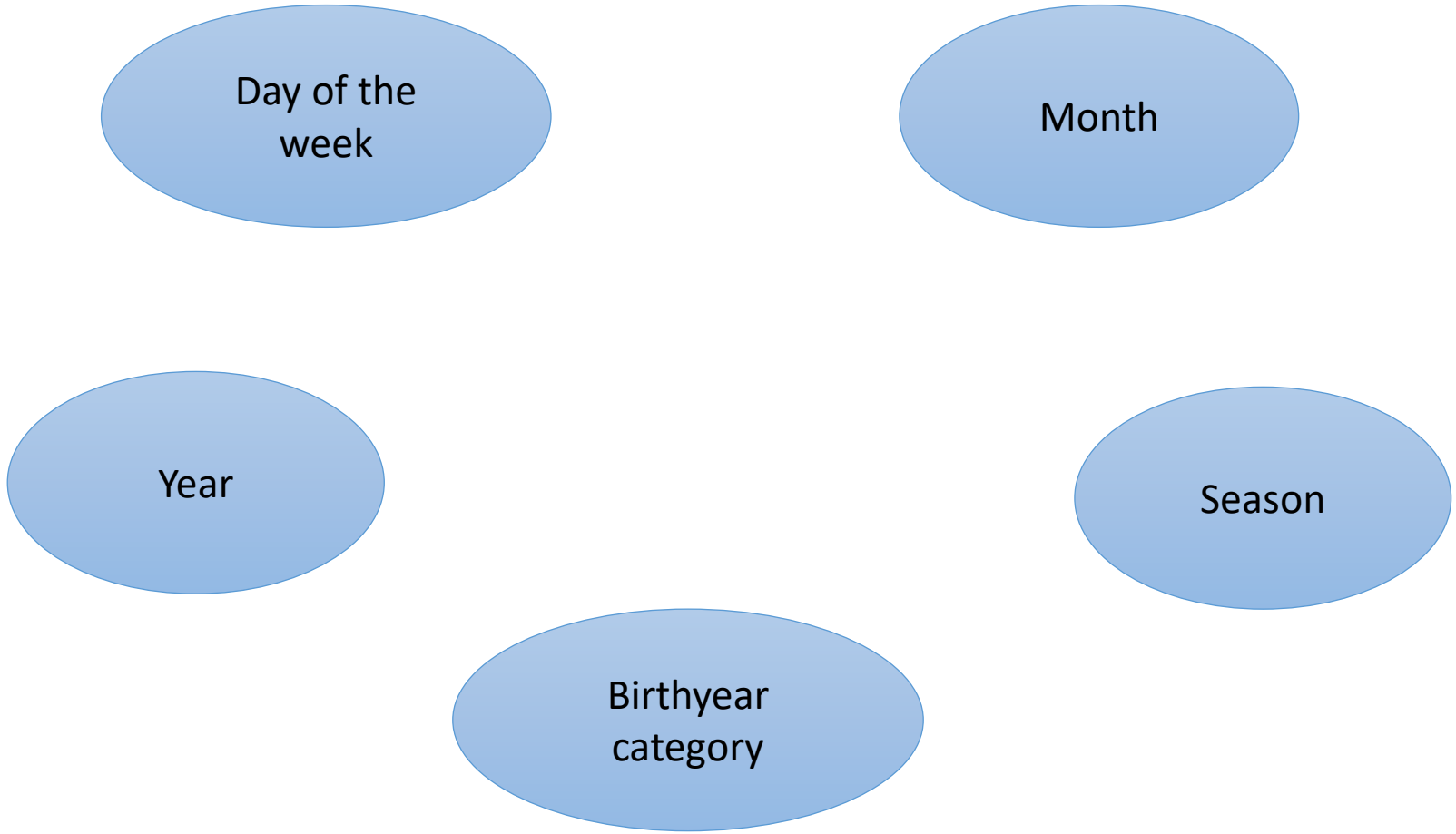
Data

Data description

Data used for the analysis was quarterly data for the year 2019. Data file size was beyond 500 MB



From the original variables were derived:



Data analysis tools

Python

- Numpy
- Pandas
- Matplotlib
- Seaborn

Excel

Data preprocessing

Missing values

- < 10% missing values and in gender and birthyear variables.
- Removed

Outliers

- Birthyear of 1700s, 1800s, and early 1900s.
- Replaced by 1992, the most frequent birth year.

Types and formats

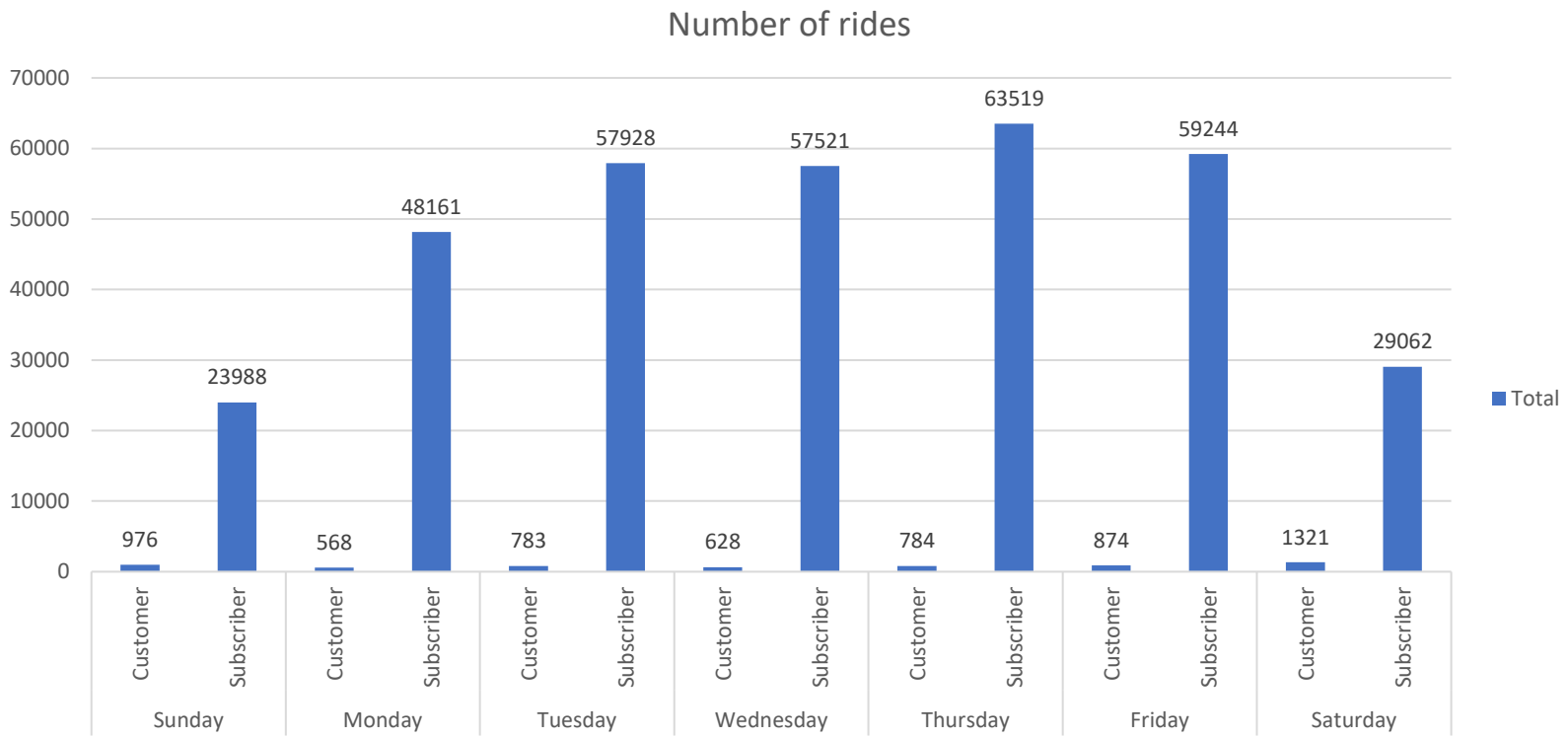
- Variables were assigned the right type and right format.
- For instance, dates variables in date format also numerical variables to not have a string type.

Storage extension

- Pickle extension which keeps data types of all variables.

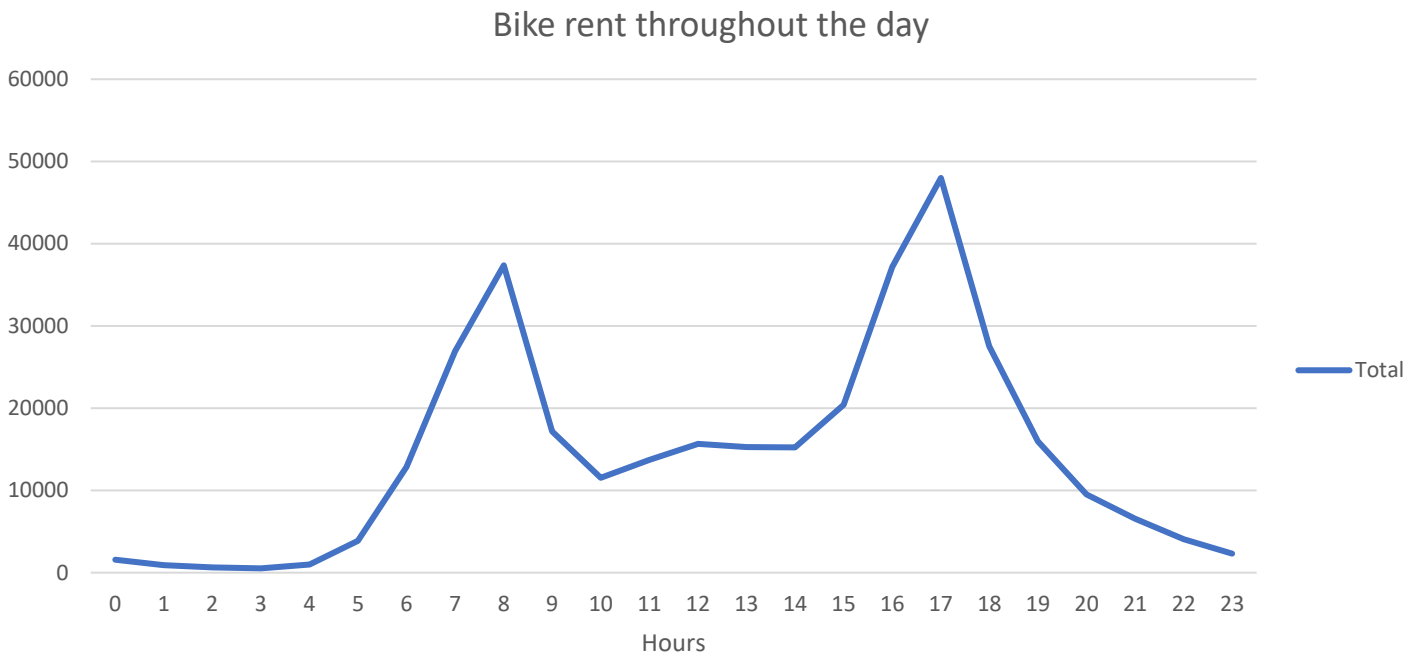
Analysis

First analysis is to identify the number of rides occasioned by the users and when they are most likely to rent a bike.



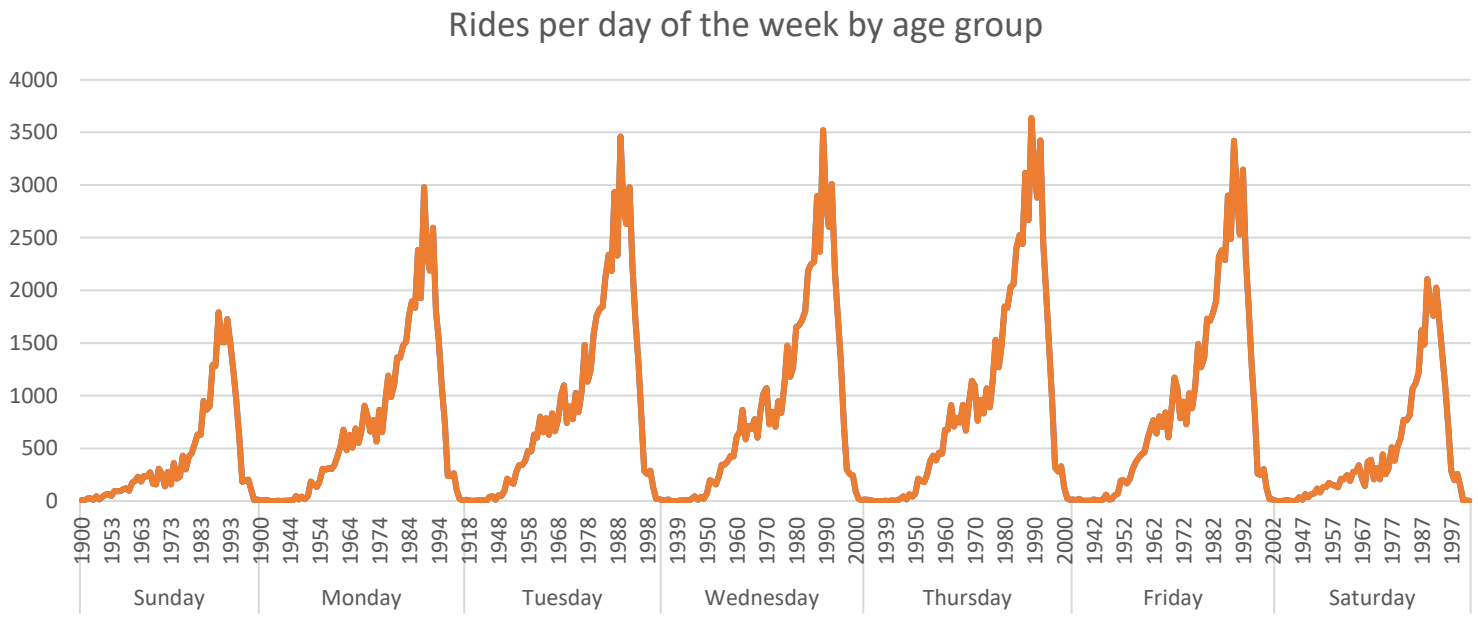
- Customers are more likely to use the bikes over the weekend while subscribers use them more often during the weekdays

At which frequency within a day?



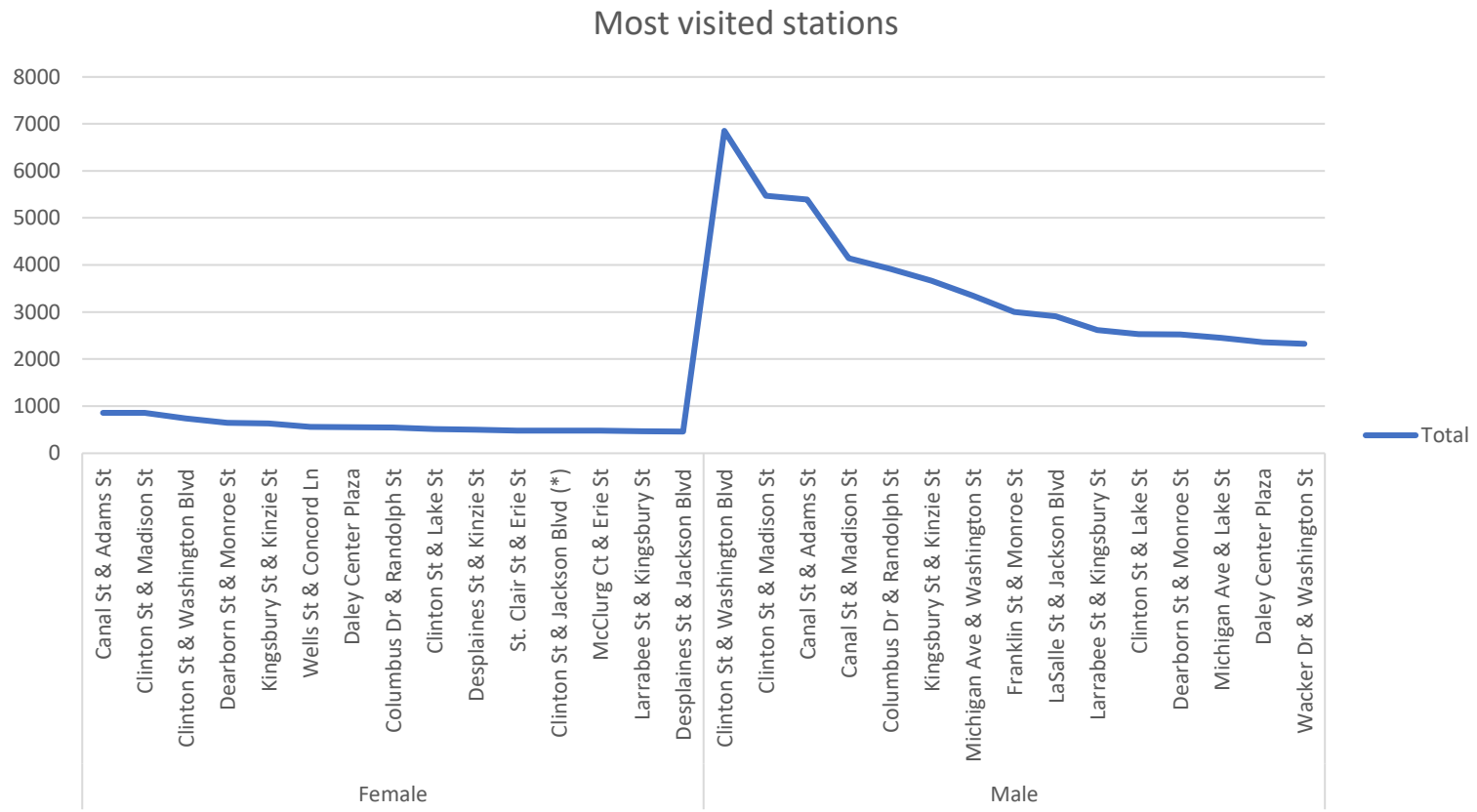
- A significant use of bikes around 7 and 8 am, and between 5 and 6 pm.
- At night time, especially from 1 to 4 am there is near to zero need of renting bikes.

The analysis also takes into account the age group of users and investigates if being at a certain age can influence the need for renting bikes.



- Young people ride more on weekdays than on weekends
- Most aged people tend to rent bikes on weekends compare to the younger ones.

It is also important to know when implementing strategies based on where there is high demand.



It could have been useful to have **geographic locations** of the stations to see the most taken trajectories. Having this information would have been useful to identify the market target and therefore improve it.

Conclusion

To conclude this analysis, marketing strategies that aim to increase rentals are drawn from data insights:

Given the different age groups and their time preferences for renting bikes, it was observed that there are fewer rides during the weekend. BikeRentster can propose a family pack discount targeting stations located near entertainment places. This can attract a lot of kids therefore parents.

The company can adopt a strategy of giving discounts on the third ride for non-subscribers which can only be used on a total of 3 following weekends. This discount will only be allowed to those who rented the bikes on weekdays, not those who rent on weekends. The strategy targets users who are interested in riding on weekends.

Organize interactive events for males and females separately and advertise the events. The strategy aims to incite women to massively participate when it is their turn and perhaps subscribe, this will decrease the gap between men and women.

Thank you