Uber Supply Demand Gap Analysis Presentation
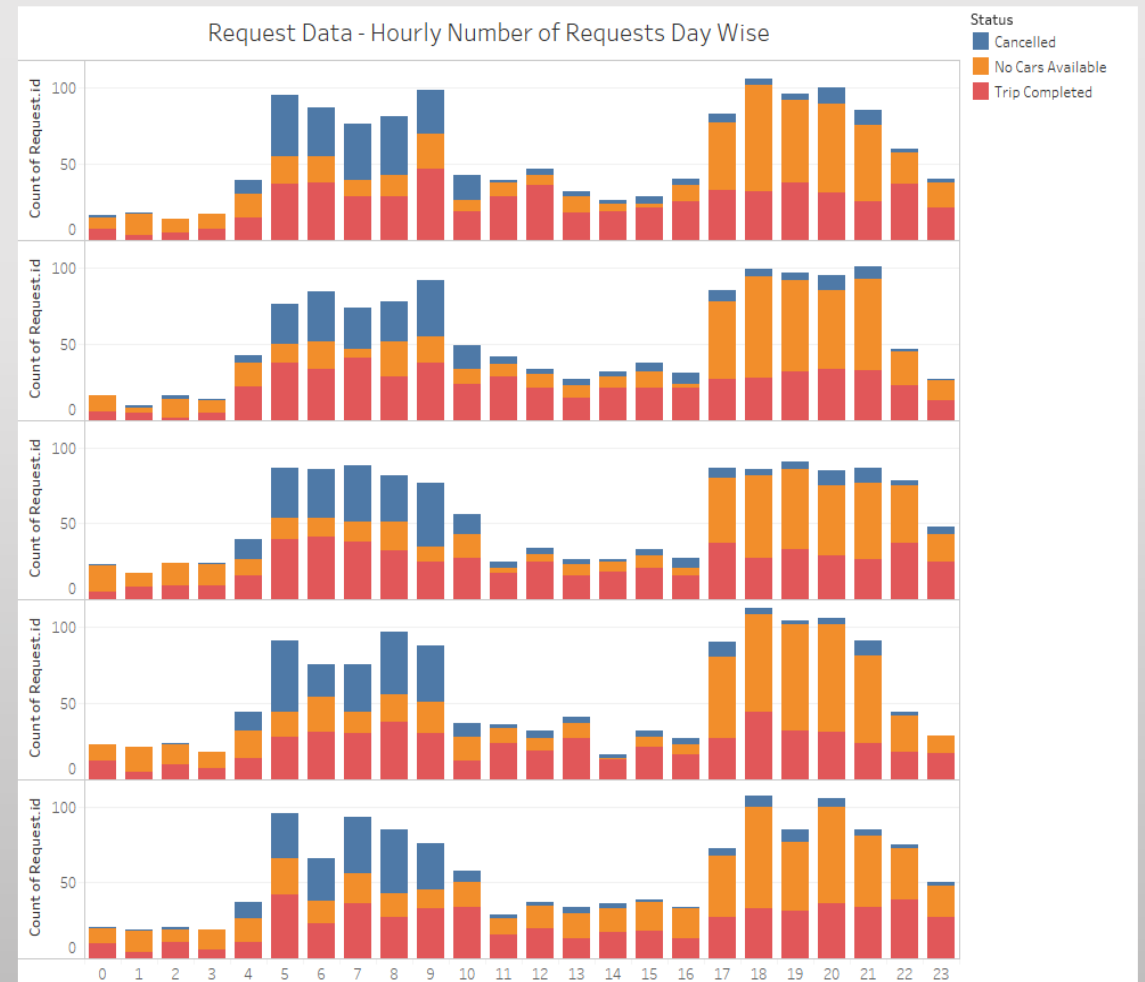
Data Exploration

- • Data set contains 6 columns:
- 1. Request.id
- 2. Pickup.point
- 3. Driver.id
- 4. Status
- 5. Request.timestamp
- 6. Drop.timestamp
- • Problem Statement: Find out the supply demand gap and suggest way to improve the situation
- • Based on the problem statement, we should focus on pickup point, status and driver id.

Data Cleaning and Manipulation

- • Possible data inconsistencies:
- 1. Duplicate values of Request ID
- 2. NA values in the columns of interest
- • Other Issues:
- 1. Request time stamp is an object here. Convert it to date time format.
- 2. Dates are separated by "/" and "-". Make this consistent for ease of data analysis.
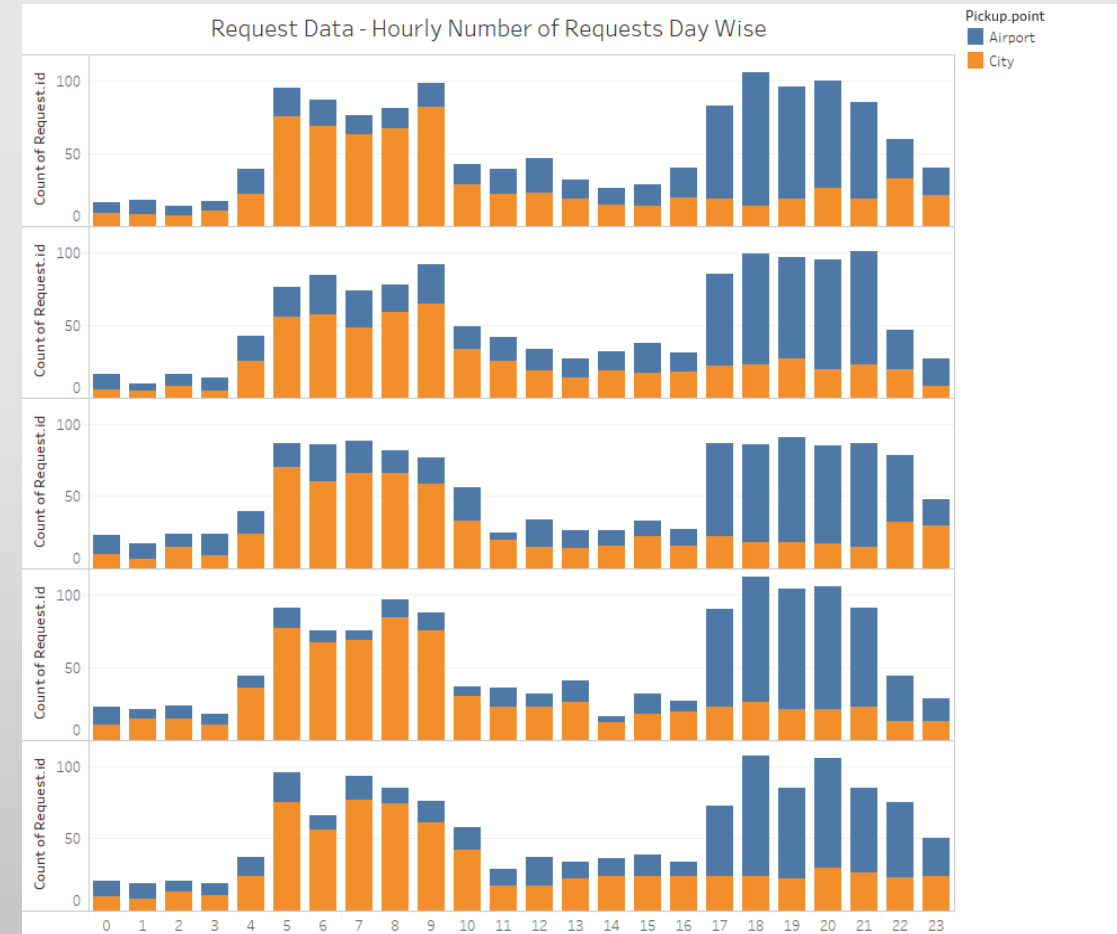
Analysing Trends For Each Day

- The pattern of requests is common
- for all the days for the status of
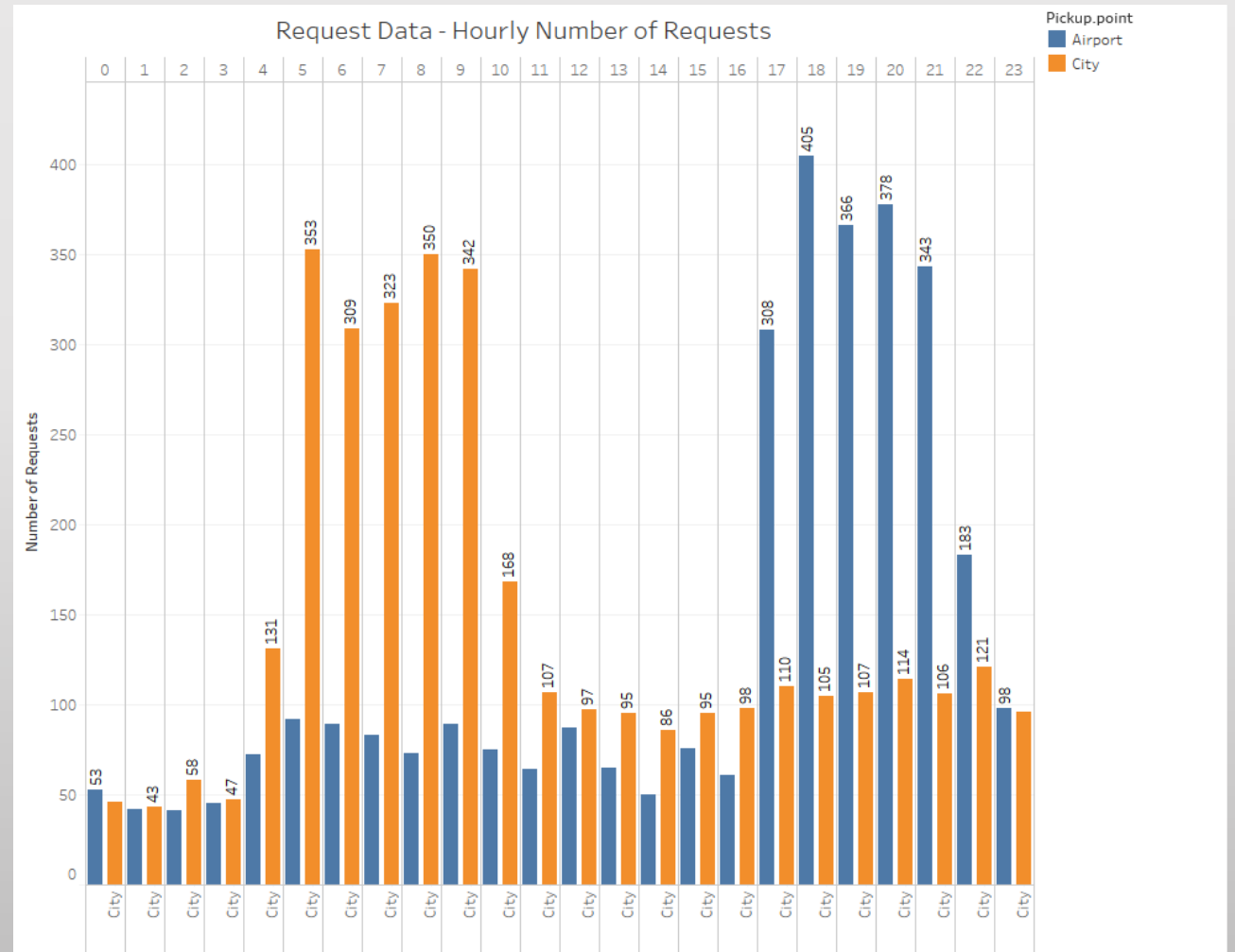- requests.
- Number of Requests

Analysing Trends For Each Day

- • The pattern of requests is common
- even for all the days for the pick up
- The point where the requests have been
- generated.
- Number of Requests

Combining Data For All Days

- • Previous graphs show that all the
- days show common trends.
- • Hence, the number of requests can
- Be clubbed together for further
- Analysis.
- • Conclusion:
- 1. The number of trips in the morning is
- high from the city
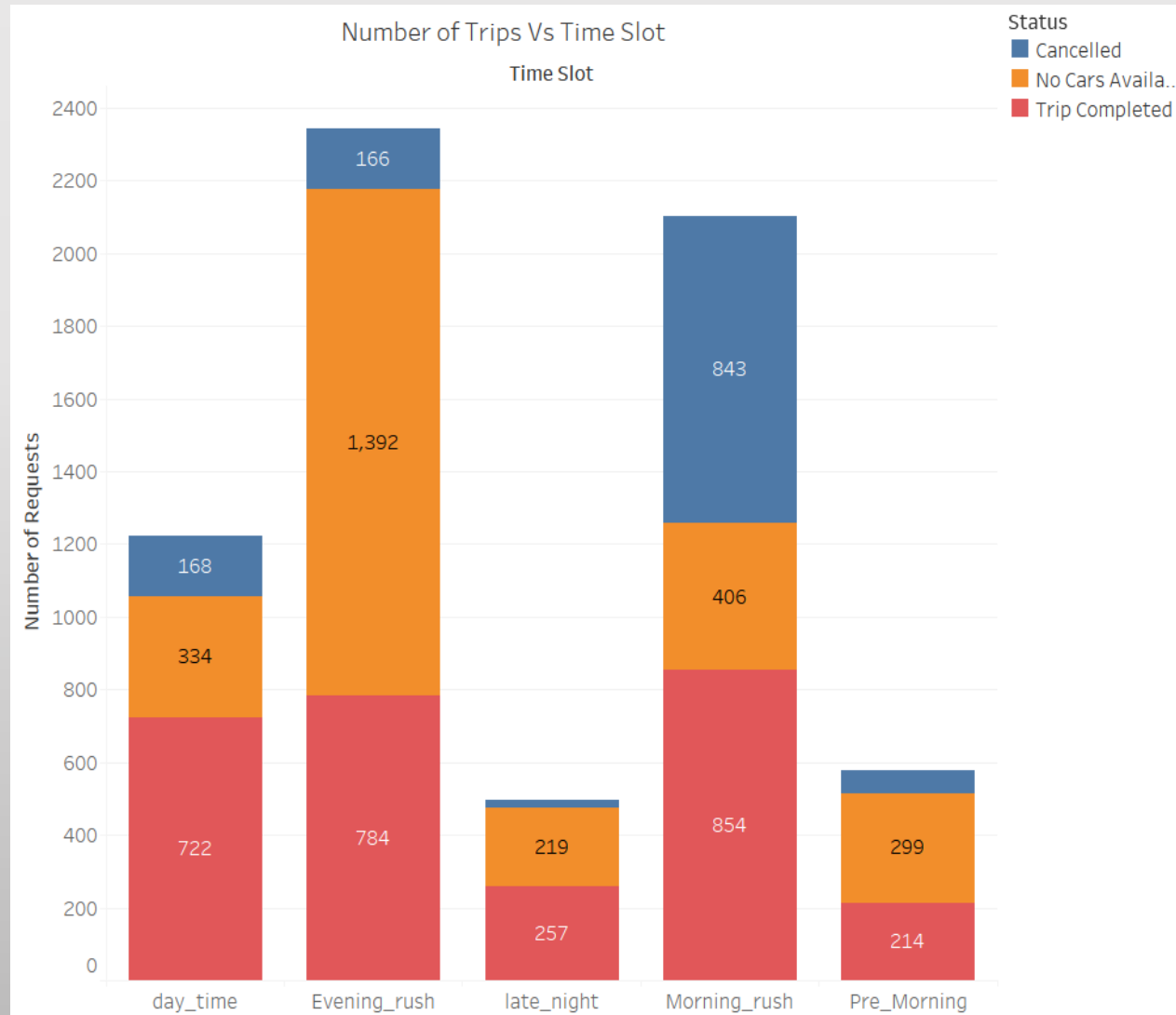- 2. The number of trips from the evening
- is high from the airport

Binning Time Into 5 Categories

- - Requests generated are divided into 5 homogenous categories based on the time of request

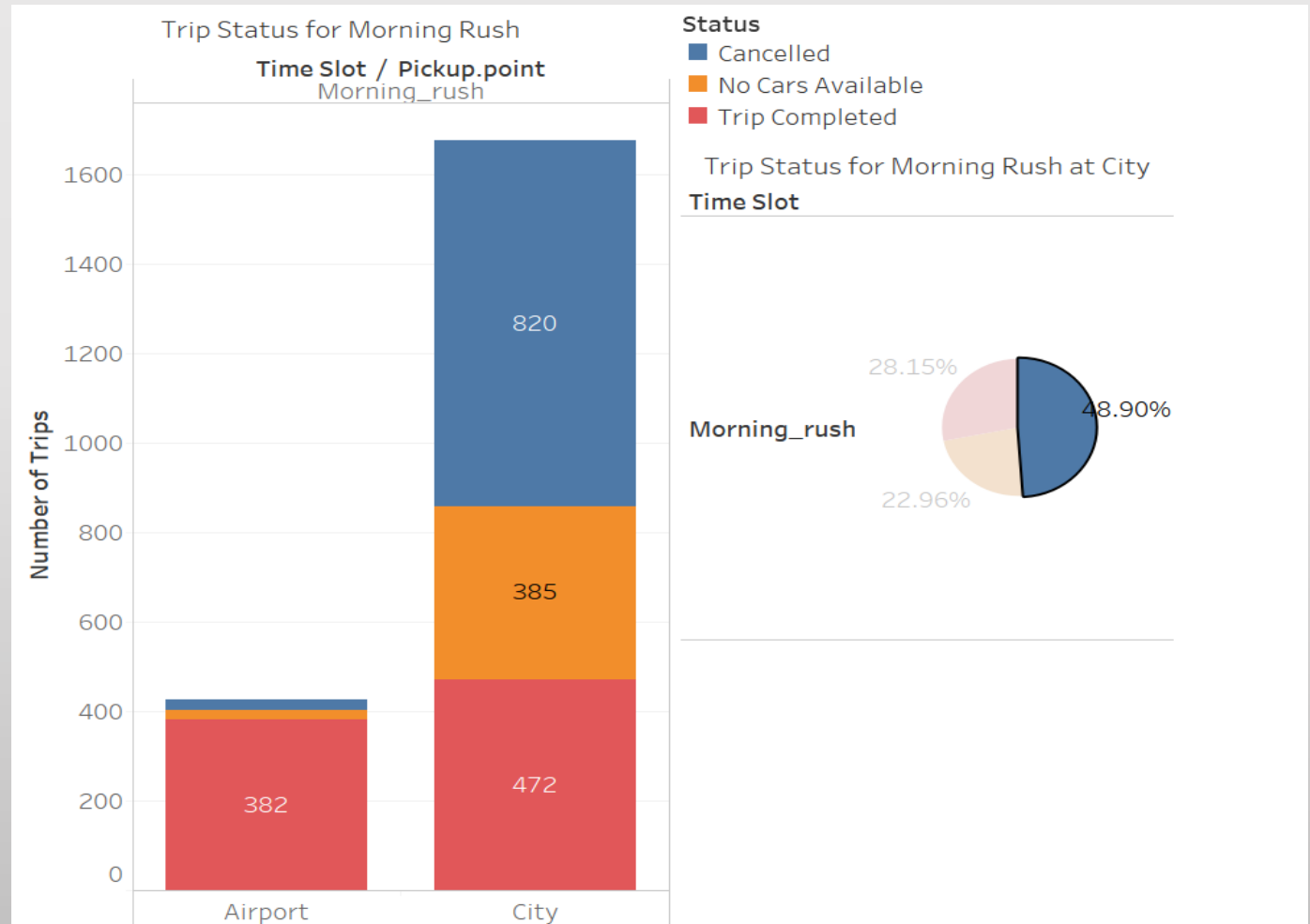| Time	Category
12 AM – 5 AM	Pre_Morning
5 AM – 10 AM	Morning_Rush
10 AM – 5 PM	Day_Time
5 PM – 10 PM	Evening_Rush
10 PM – 12 AM	Late_Night

Problem Identification – Morning and Evening

- • Graph clearly shows that the

- major problems are:

- 1. Cancelled trips during the

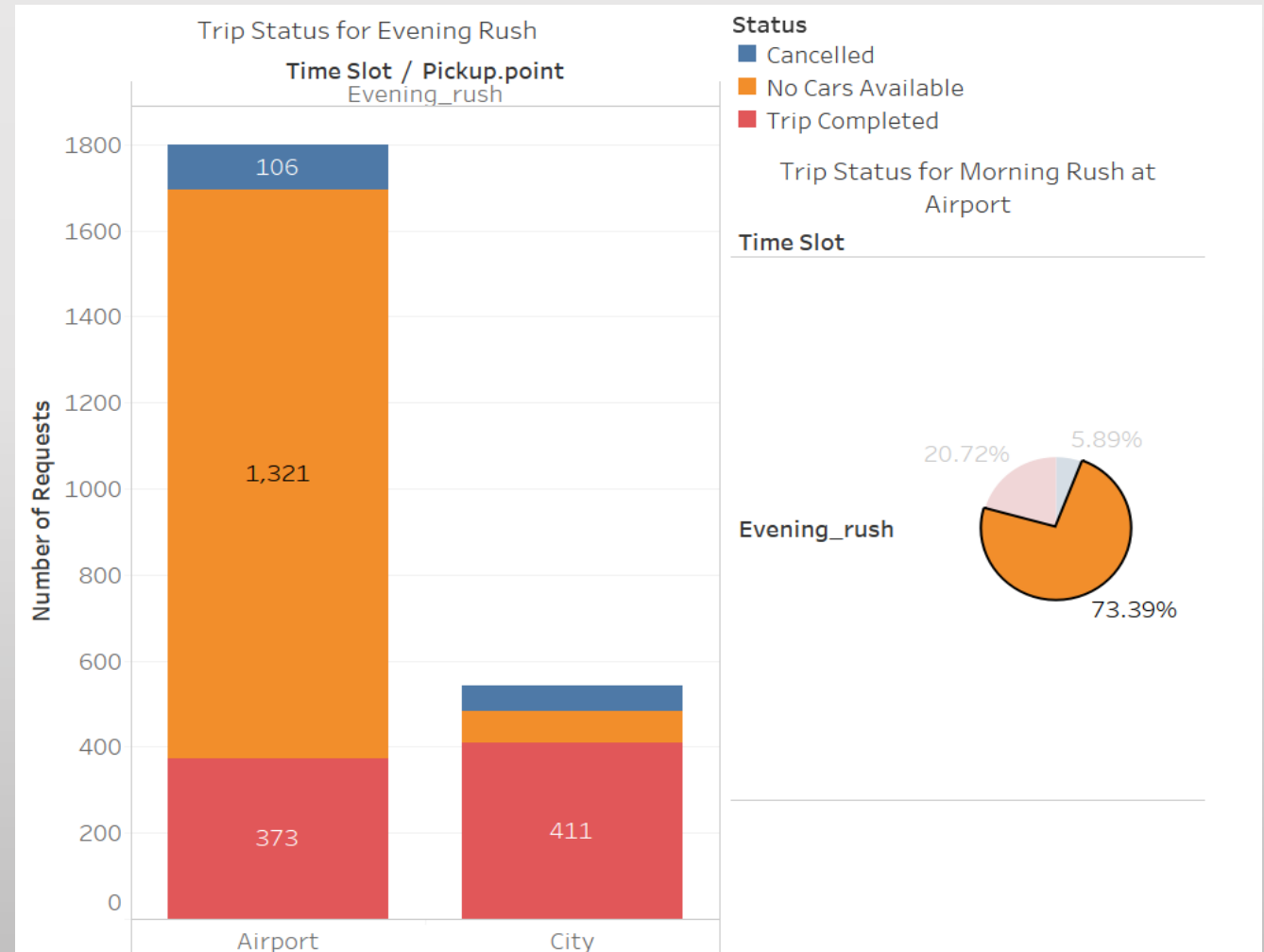- morning rush

- 2. Unavailability of cars during

- evening rush

Cancelled trips - 50 % of total trips from city

- • The supply from the city is 472,
- while the demand is 472 + 285
- + 820 = 1677 .
- • The difference between the
- demand and the supply is 1205.

No Cars - 70 % of total trips from the airport

- • The supply from the airport is
- 373, while the demand is 373 +
- 1321 + 106 = 1800.
- • The difference between the
- demand and the supply is 1427.

Recommendations

- • For the trips in the morning, drivers can be incentivized to make those trips.
- 1. They could be given a bonus for each trip they complete from the city to the airport in the morning
- rush. This will ensure that fewer trips are cancelled.
- 2. Uber can pay for the gas mileage of drivers to come back to the city without a ride.
- 3. Uber can increase the demand at the airport to reduce idle time by increasing marketing and price
- cuts for the passengers
- • For the evening, since the number of drivers is less, some of the ways are:
- 1. Drivers can again be given a bonus to complete a trip from the airport in the evening. This will ensure
- that the supply increases at the airport.
- 2. Uber can also pay drivers to come without a passenger to the airport
- 3. Another innovative way can be to pool the rides of passengers so that lesser number of cars can
- serve more passengers.