

Uber Supply – Demand Gap

Business Objective

- To identify the root cause of the problem (i.e. cancellation and non-availability of cars) and recommend ways to improve the situation from City to Airport and vice versa.

Strategy

- Analyse the given data and find the supply-demand gap for particular time slot and try to get the solution for the same.

Data

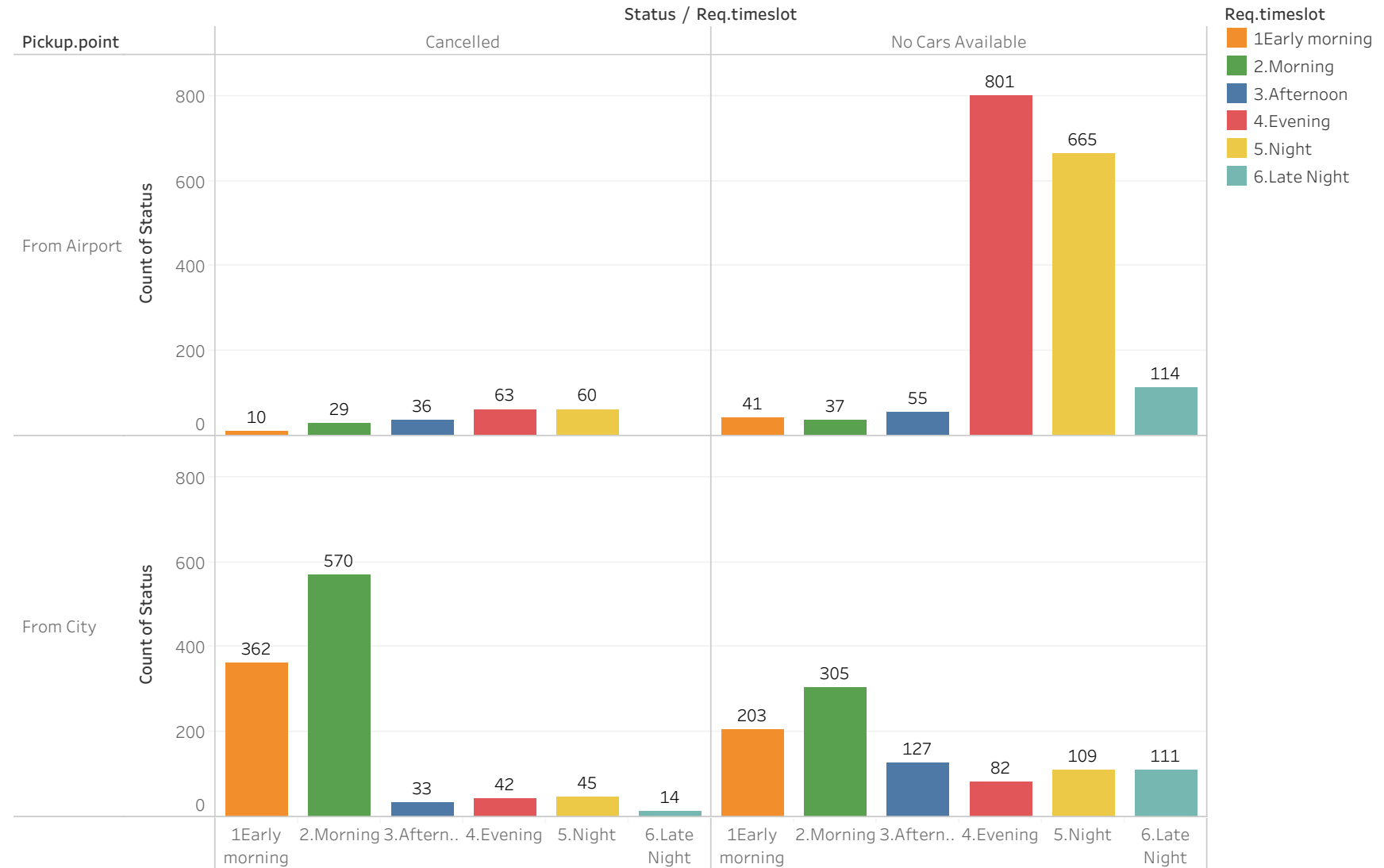
- 6745 requests
- Status of the trip like completed, cancelled and no cars available.
- Time of request and drop for completed trips
- Time of request and driver id for showing which driver cancelled the trip
- Time of request for no cars available

Uber Supply-demand gap analysis

- The analysis is divided into four parts:
 - Identify the most pressing problems for Uber.
 - Find out the gap between supply and demand and show the same using plots
 - Reason for this issue for the supply-demand gap?
 - Recommending some ways to resolve the supply-demand gap.

Sheet 1

- We can see that in the morning hours Drivers tend to cancel the trips to Airport
- Where as there are no cars available for the requests from the Airport in the evening hours
- There are 2 major problems here
 1. Drivers cancelling the trips in the morning from City to Airport
 2. No Supply of cars in the airport during evening hours



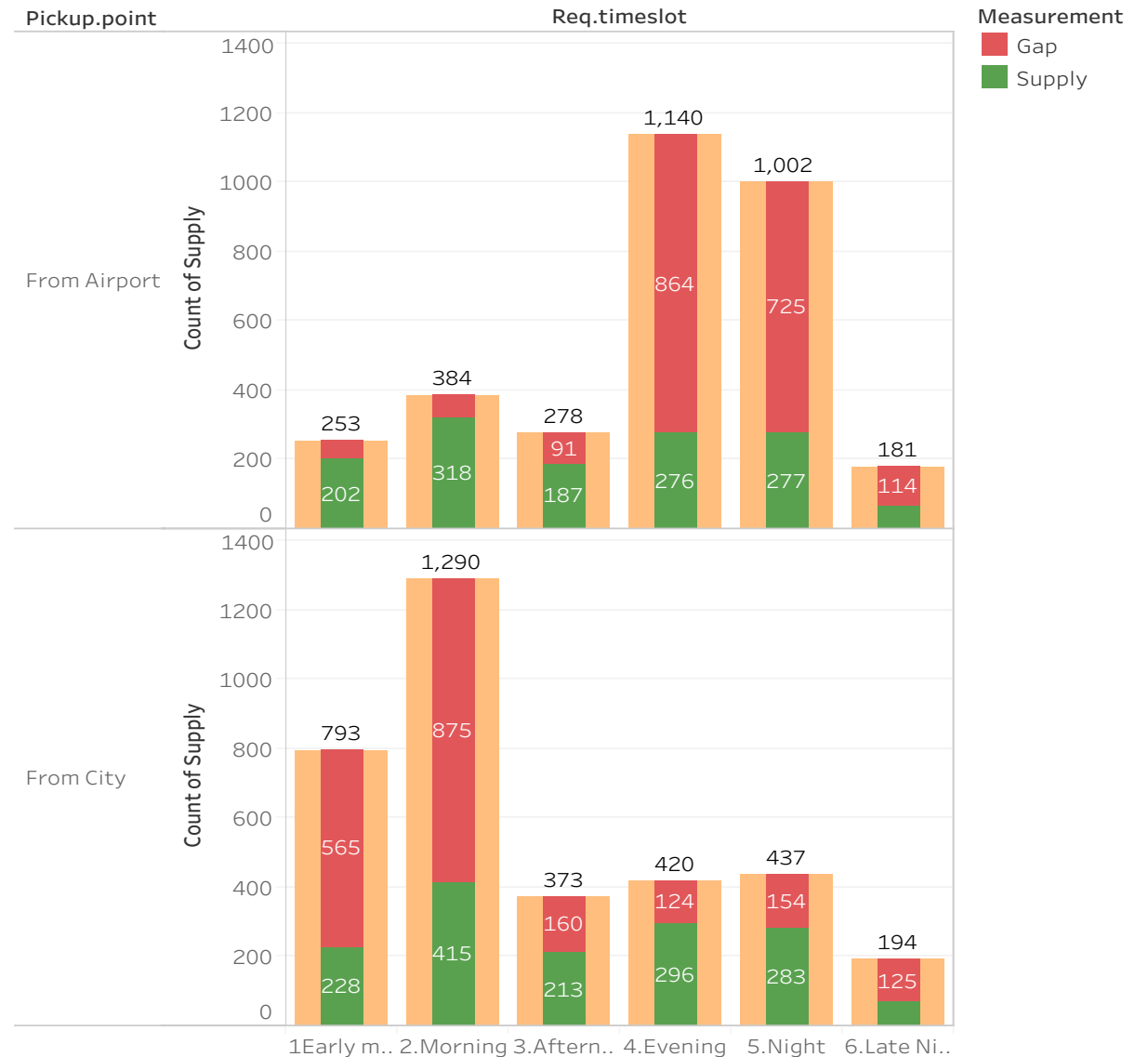
Count of Status for each Req.timeslot broken down by Status vs. Pickup.point. Color shows details about Req.timeslot. The marks are labeled by count of Status. The view is filtered on Status, which keeps Cancelled and No Cars Available.



Find out the gap between supply and demand

- There is lot of Gap between supply and demand in the morning session from the city
- There is also lot of gap between supply and demand in the Airport at Evening time.
- By comparing previous graph with this graph, we get the clear problem what Uber is facing for demand-supply gap
 - Drivers cancelling trip to Airport from city in the morning
 - No supply of cars in the airport at Evening

Sheet 3



Count of Supply and sum of Number of Records for each Req.timeslot broken down by Pickup.point. The marks are labeled by count of Supply. For pane Count of Supply: Color shows details about Supply.



Reason for this issue for the supply-demand gap?

These are few observation from the graph, from which we will get the insight of why there is supply-demand gap -

- There are lot of demand/requests from city to airport in the morning time (4am to 12pm)
- Where as there is no demand in the airport at morning times (4am to 12pm)
- The demand for cabs in the airport is high only in the evening and night times (4pm to 12am)
- Hence the driver going from city to airport in the morning might not get the trip back to city immediately. He might need to wait for longer period in the airport.
- And if cars don't go from City to Airport in the morning/Afternoon there wont be any supply in the Airport in the evening

Recommend some ways to resolve the supply-demand gap

- By deducting incentives given to driver if he cancels more than 20% of his trips. By this at least some cancellation of trips from city to airport can be avoided
- To match the supply demand in airport, We can do the following

We can go speak to some politicians showing the data that people are facing problems in the Airport for travelling back to city. Even after there is lot of public transport available at the evening time still there is lot of demand for the transport. Hence if everyone get together and at least change the Domestic flight timing such that Arrival and departure of flights will match, then it will help public and solve the problem. And this not only helps for our Uber company, it may also help government planning the public transport such that demand and supply matches.

If we are able to convince then then next step would be with the help of politicians we can contact Airport Authority of India and present the solution for them.