

Presented by Angelica Vera  
8 November 2023

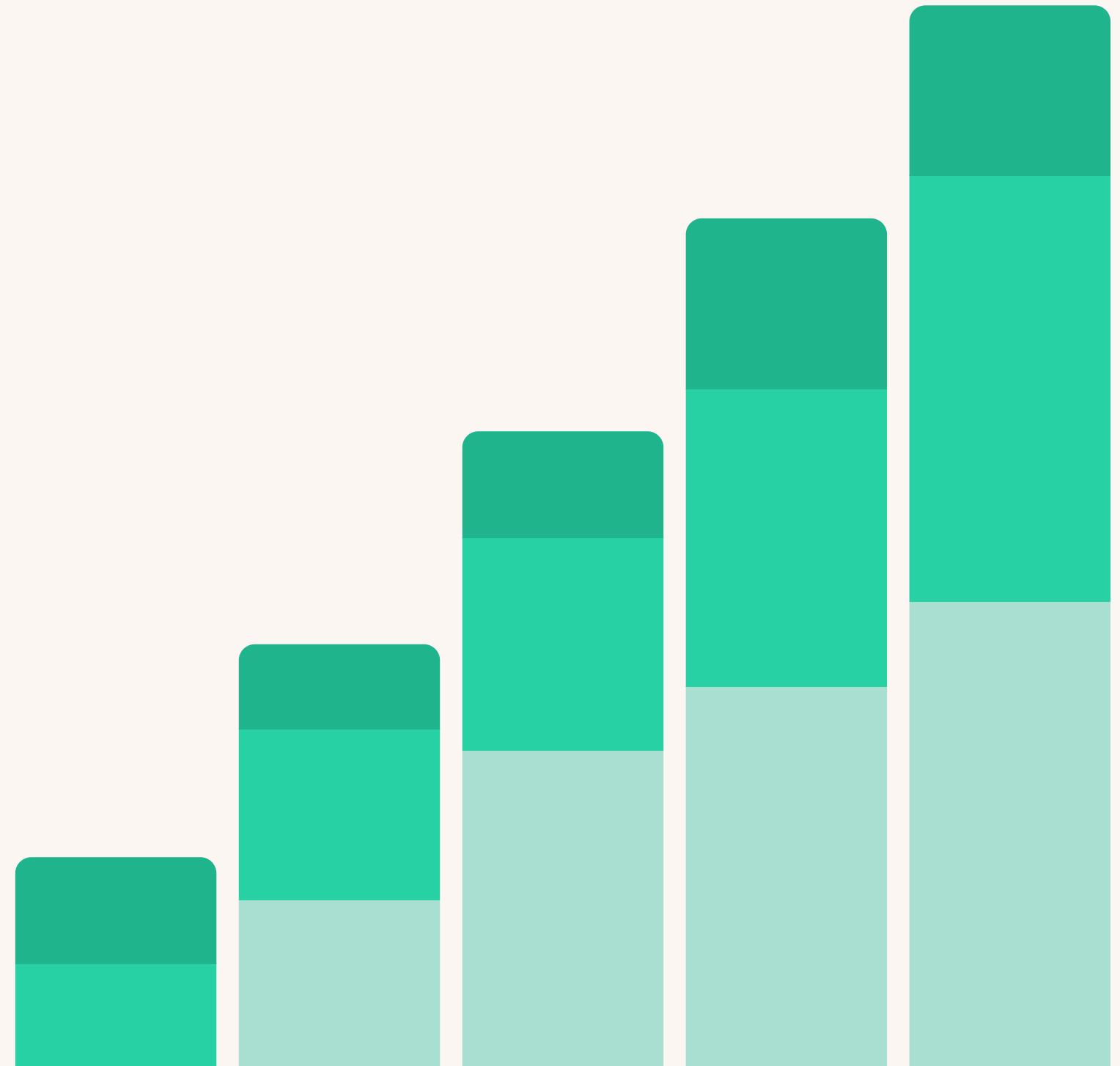
# NYC School Bus Delays

## Trends and challenges



# About the dataset

- Bus Breakdowns and Delays, found on NYC Open Data
- Provided by the Department of Education (DOE)
- Contains 600,000+ rows
- Each row is a report made by bus staff
- Columns include reason, estimated time of delay, date and time of occurrence, bus routes, borough, etc.
- Regularly updated dataset that became public in 2016





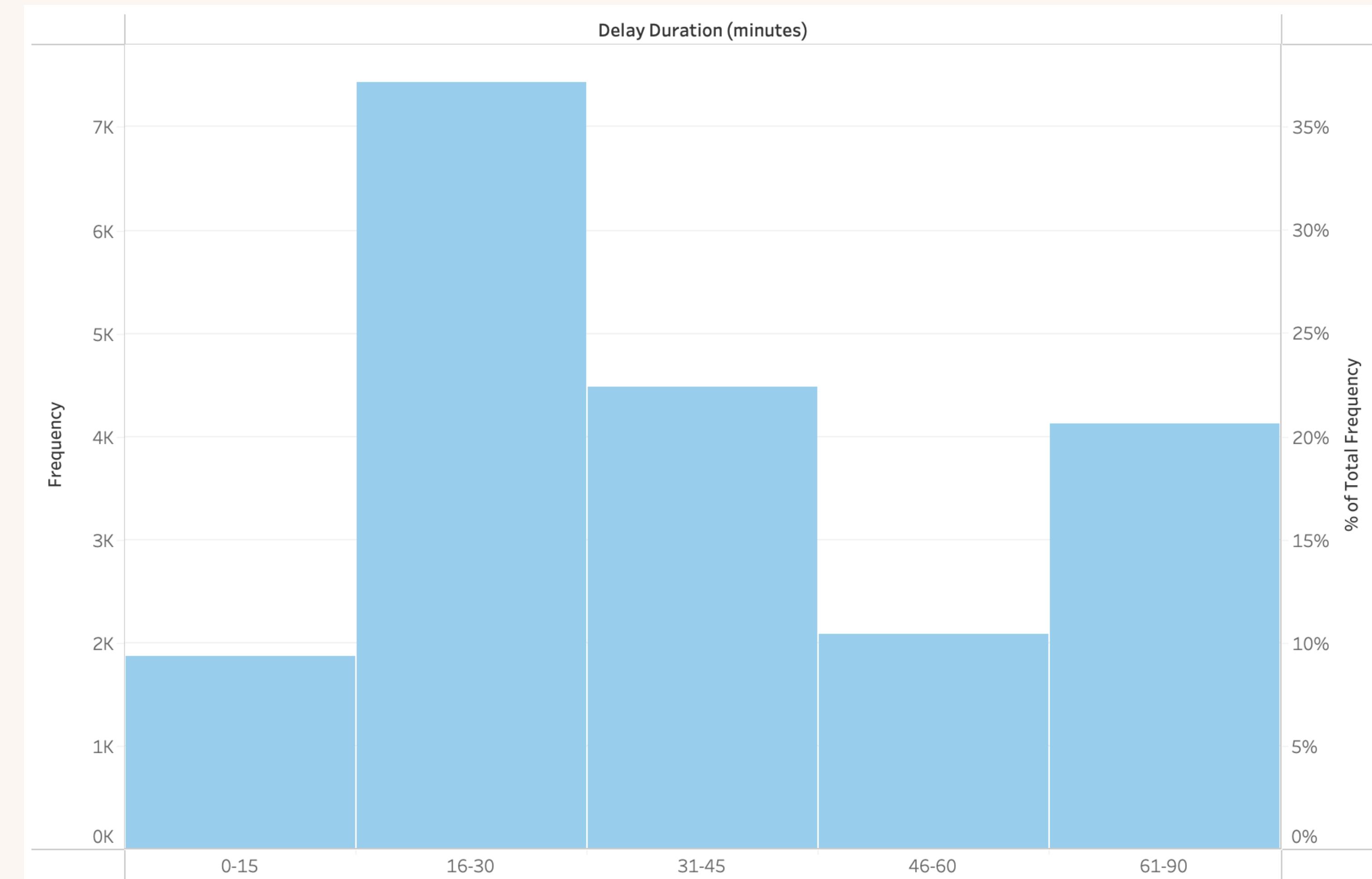
**What are the current causes of school bus delays in NYC?**

# 21,621

delays for the 2023-2024 school year so far

# Delay Duration

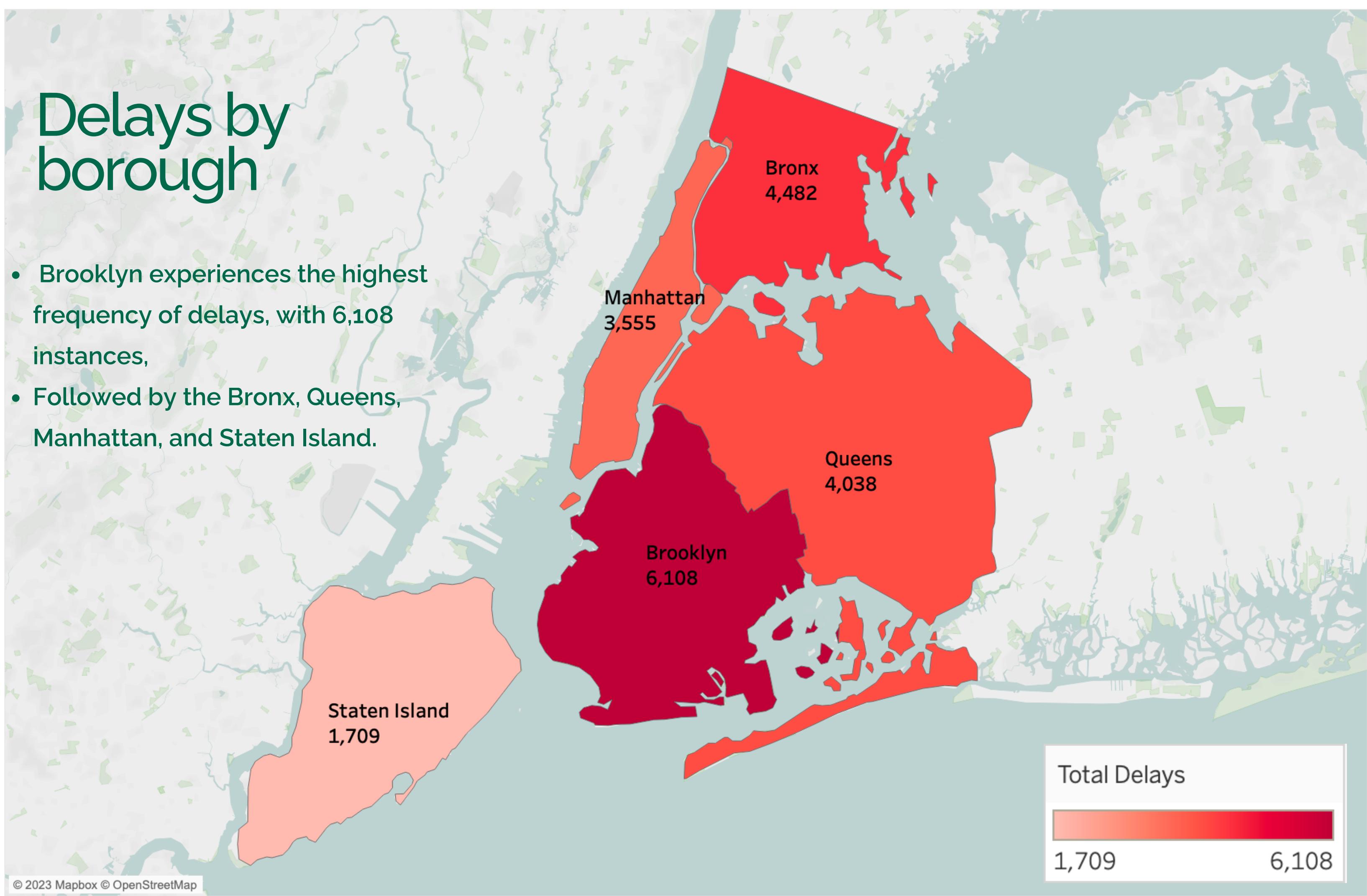
- Most of these delays are over 15 minutes
- Less than 10% fall into the 0-15 minute delay duration range
- This can negatively impact students



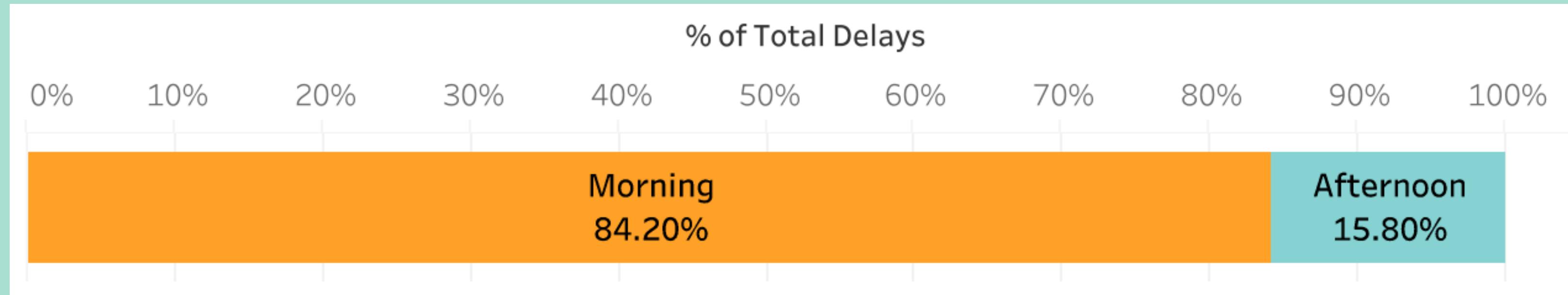
\*blank values were removed from the delay times to make this chart

# Delays by borough

- Brooklyn experiences the highest frequency of delays, with 6,108 instances,
- Followed by the Bronx, Queens, Manhattan, and Staten Island.



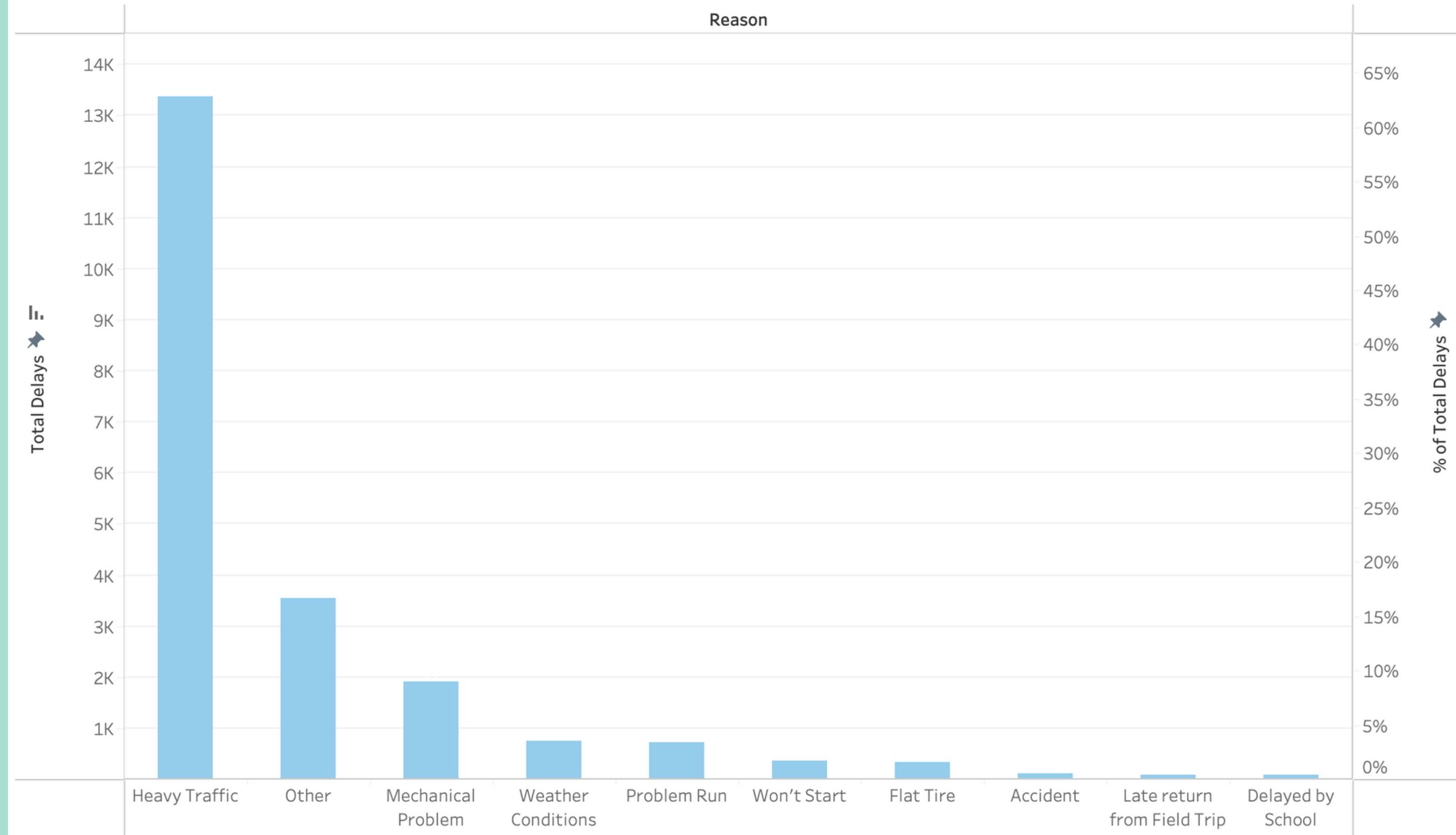
# Morning vs Afternoon Delays



- Approximately 84% of delays occurred in the morning
- We should really focus our energy on seeing what we can do to help the morning busses be on time

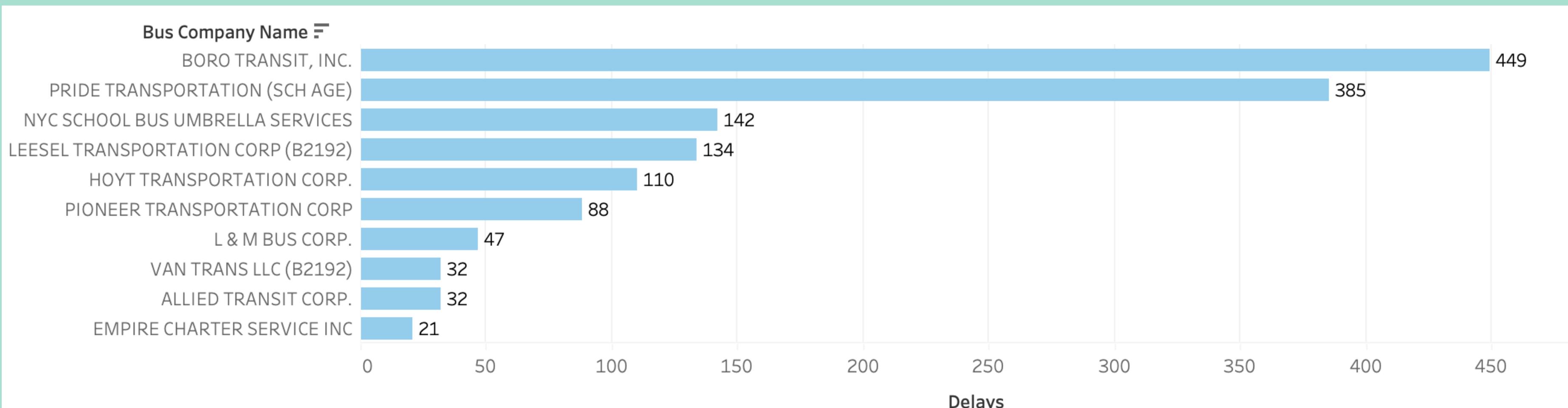
# Reasons for Delays

- Heavy traffic is the leading cause of school bus delays
- ~62% of delays were attributed to heavy traffic.
- 2nd highest delays were input as “other”



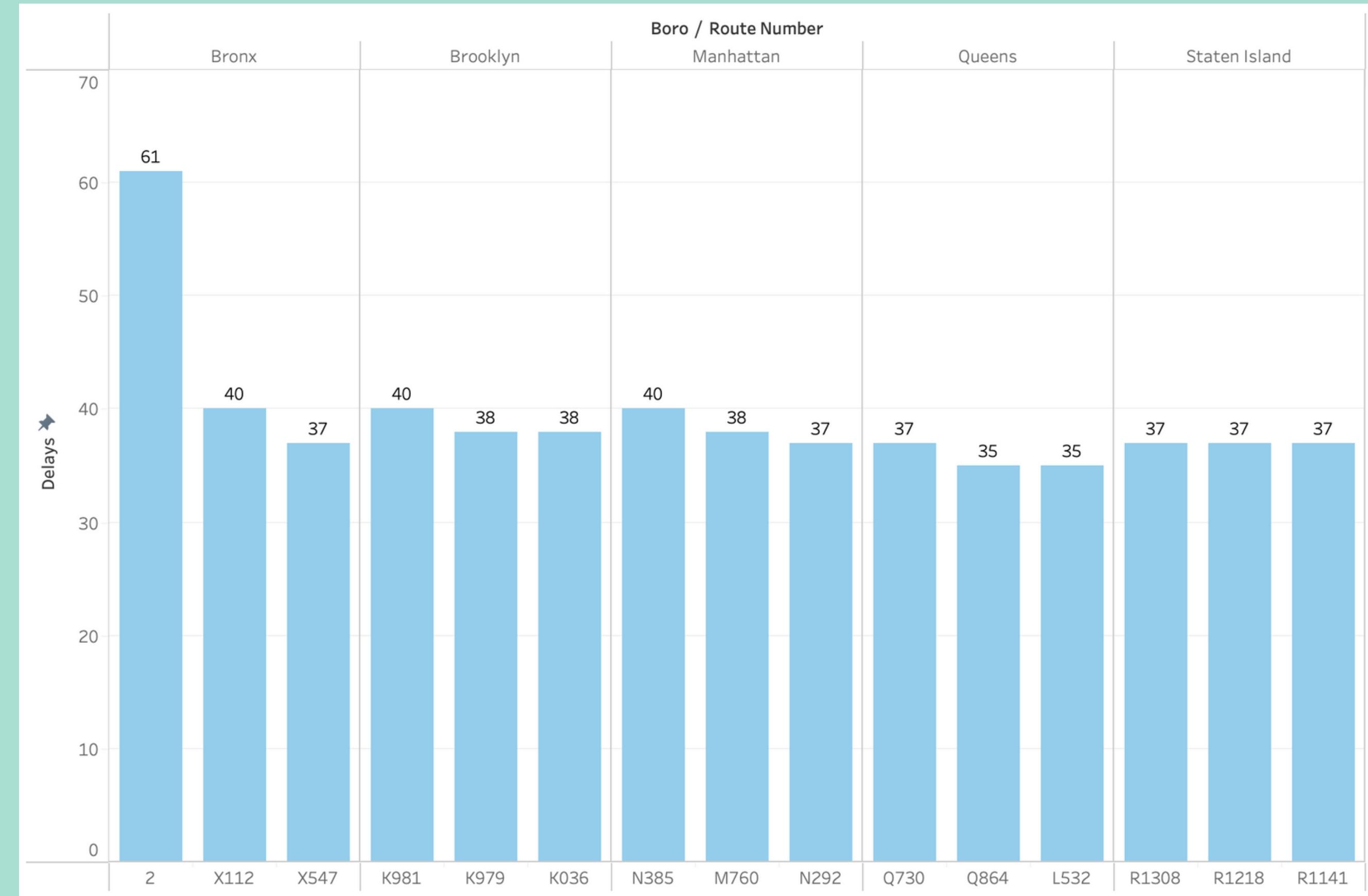
# Top 10 Bus Companies with Mechanical Type Delays

- Delay totals included flat tires and won't start issues
- Boro Transit Inc. and Pride Transportation have the highest frequency for this delay type
- That's more than double that of any other company
- It is unclear how many more buses these companies have compared to others



# Top 3 Delayed Routes Per Borough

- Route 2 in the Bronx has the highest frequency of delays, at 61
- Other routes exhibit delays in the range of 35-40 instances



# Challenges and proposed solutions

## Heavy Traffic

- Optimize problematic bus routes with frequent delays, specifically AM routes
- Explore innovative solutions, like real-time traffic monitoring (e.g., Waze)

## Unreliable contractors

- Communicate with companies about repeated issues
- Consider reliable alternative companies
- Mandate companies to conduct regular maintenance



# Other areas of concern

01.

The “Other” reason was responsible for the 2nd most delays.

- Seek clarity with surveys
- Future reports can include extra space to specify

02.

This data is regularly updated.

- Let's have regular check-ups with stakeholders to identify emerging trends and assess the effectiveness of the suggested solutions



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# Thank you very much!

