WomenTechWomenYes
Street Team Strategy

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Grettel Juárez
Kevin Liang
Yuwen Huang

WTWY Street Team Goal

Background

WTWY:

- Aims to increase participation of women in technology
- Hosts annual gala

Objectives

- Maximize gala attendees and contributions
- Extend diversity awareness

Goal

- Collect signatures and extend free invitations to gala
- Deploy street teams to entrances of subway stations

Challenge: Use MTA subway data to identify optimal subway station positions

Subway Data Analysis

Analysis Approach

- Analyzed MTA turnstile data from April through July 2019
- Identified:
  - Top 10 stations using the highest total traffic over the time period
  - Target days and times for street team deployment

Top 10 Results

Stations by Volume
(April - July 2019)

~9% total volume
Highest Priority

~11% total volume
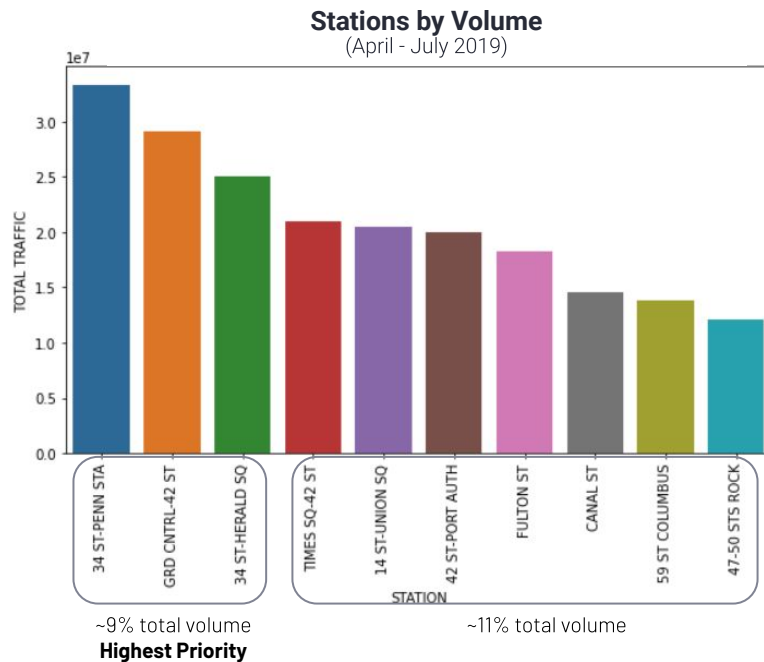
Top 10 Station Locations

1. 34 St-Penn Station

2. Grand Central Station

3. 34 St-Herald Square

4. 42 St-Times Square

5. 14 St-Union Square
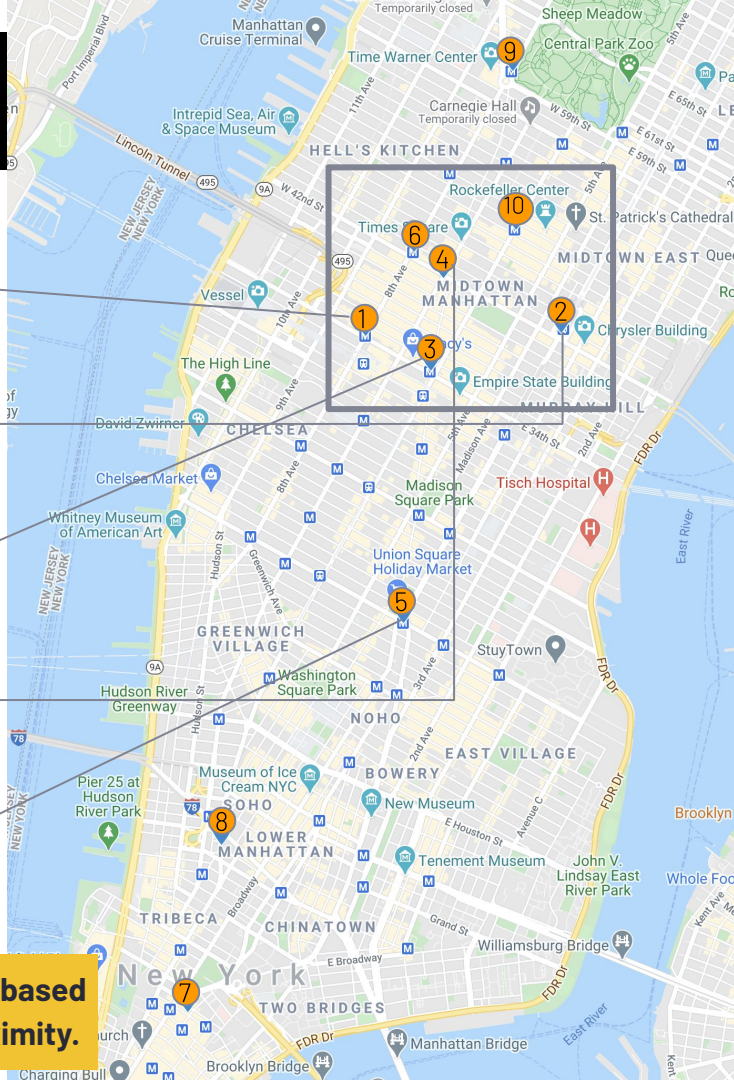
6. 42 ST-Port Authority
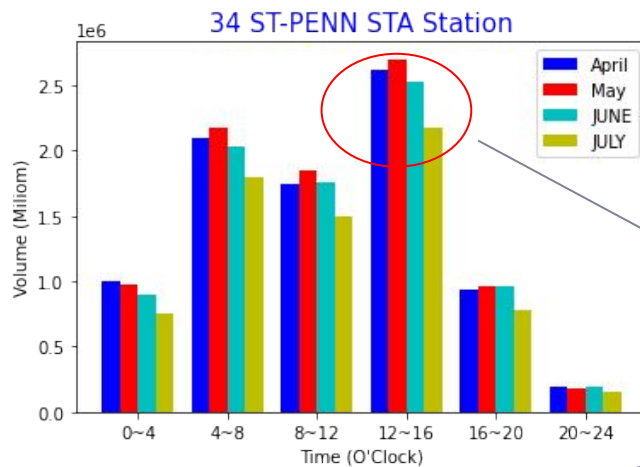
7. Fulton Street

8. Canal St

9. 59 St Columbus

10. 47-50th Sts Rockefeller Center

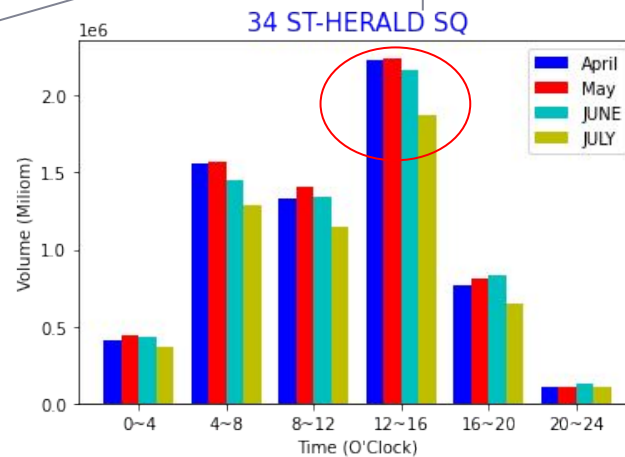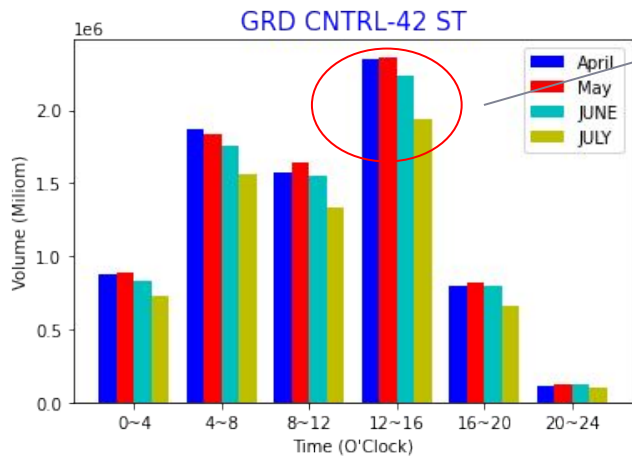**Target high volume stations based on street team size and proximity.**

Note: Stations have multiple entrances

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TOP 3 Stations: Hourly Traffic

30% total traffic occurs between 12 to 4pm
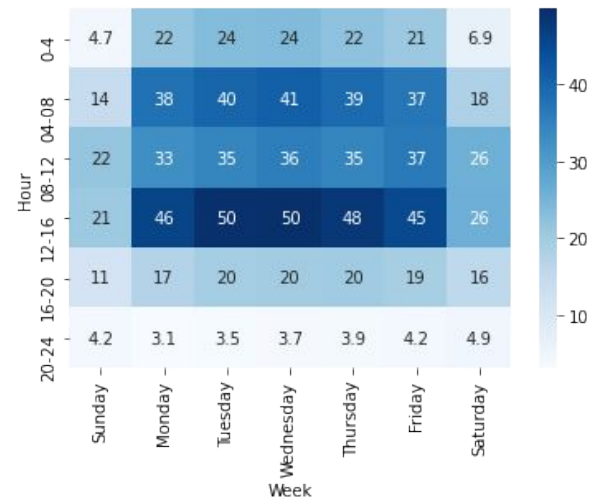
Target Days/Times

Avg Daily Volume By Day of Week

83%
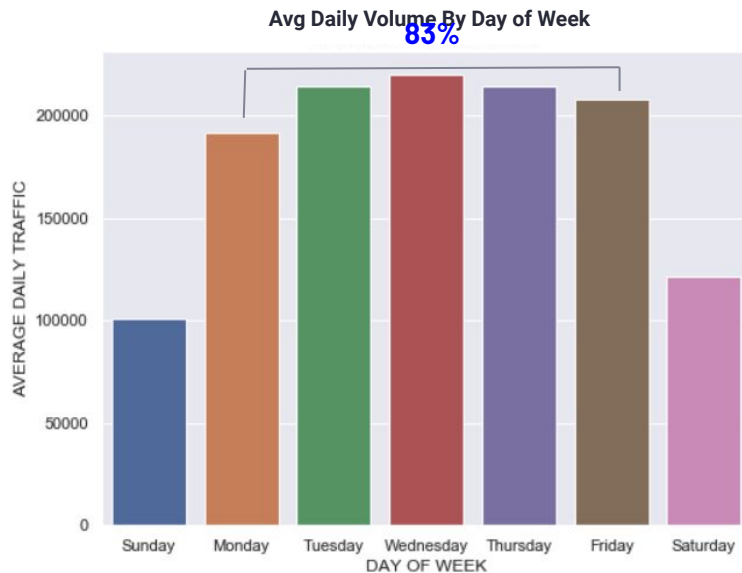
- Higher traffic volume observed on weekdays
- Mondays through Fridays make up **83%** of the week's volume

Total Traffic Volume by Day of Week & Hour Range
(Millions)

- Two periods consistently show heavier traffic and are optimal times for placing teams
  - 4AM-8AM
  - 12PM-4PM

Conclusion

What we found from turnstile data:

- TOP 10 Stations with highest traffic volume
- Weekdays had higher traffic than weekend
- Peak hours during a day: 12pm-4pm

Recommendations for WTWY:

- In order to efficiently advertise annual gala, we recommend campaign team focus on Top 3 Stations during weekdays 12pm-4pm
- Consider street team size and proximity when strategizing additional locations

Potential Further Improvements

- Target each NYC borough outside of only Manhattan to increase community reach and awareness
- Analyze wider range of data to further investigate subway station traffic trends
- Consider impacts of tourism to volumes
- Incorporate additional data set to potentially target locations with higher likelihood of gala attendance and contribution to the organization

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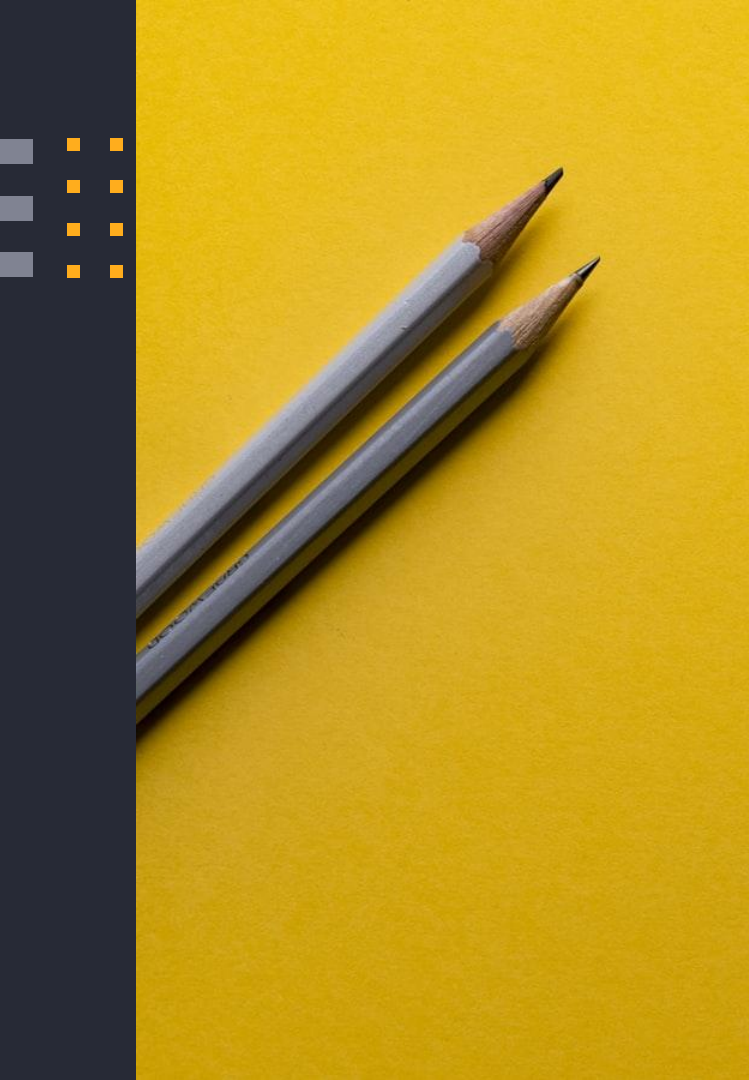
Thanks!

Any questions?

APPENDIX

Data Cleansing Approach

- Filtered for only subway station divisions: BMT, IND, IRT
- Removed duplicate records caused by "RECOVER AUD" in desc column
- Removed outliers: traffic volume > 14,400 (1 person per second)
- Used absolute values to calculate differences between record periods. This was done to address turnstiles decrementing instead of incrementing
- Modified station names for stations with numbers in the name. Those have the same name across several blocks on the same street

Top 10 Stations by Day of Week

Day of Week Heatmap by Station

station	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
34 ST-PENN STA	4	6.8	7.1	6.4	4.6	-13	-16
GRD CNTRL-42 ST	4.6	7.1	7.1	6.4	3.6	-13	-16
34 ST-HERALD SQ	3.3	6.2	7.4	6.1	5.6	-11	-17
TIMES SQ-42 ST	1.7	6.7	8.1	6.4	5	-10	-18
14 ST-UNION SQ	2.4	6.5	8	5.4	5.7	-9.9	-18
FULTON ST	4.3	7.1	6.9	6.4	4.3	-13	-16
CANAL ST	2.6	6.1	6.9	6.7	5.8	-9.8	-18
59 ST COLUMBUS	3.2	6.9	8.4	6.6	3.2	-11	-17
47-50 STS ROCK	4.3	6.9	7.2	6.3	4.3	-13	-16
42 ST-PORT AUTH	3.2	6.4	6.9	6.3	5.7	-11	-17

weekday

Values are normalized across rows within each
station to reflect differences in days of the week

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Hourly Traffic for Additional Stations