Project Vote
Amy Busefink
Deputy Director
1420 K Street NW, Suite 700
Washington, DC 20005

17 January 2018

Dear Mrs. Busefink,

Our analytics team is looking to further your mission to increase voter registration in New York City before the June 28, 2018 deadline. With concerns around declining citizen participation, we believe strongly in your goals of Project Vote, to ensure that every eligible citizen is able to register, vote, and cast a ballot that counts. We are aware that one of your advertising strategies is to distribute flyers to the general public in order to educate and encourage the populace, and we believe we can help your cause by analyzing NYC metro transit traffic. Considering the scarcity of a non-profit NGO's resources, intelligent targeting could help maximize the efforts of your volunteers and make a significant impact in the community.

With your 20 years of experience with the 'Get Out to Vote' program, we believe we can attain record levels of voter turnout. We would like to provide a compelling argument for suggestion points for high foot-traffic areas, times which would result in the most citizen engagement, and help allocate volunteer resources effectively.

If you believe this service could be of value to you, please get in touch with us at analytics@dede.org. We would love to collaborate with your organization, thank you.

Best regards,
Diane, Edward, Davis, Emy
DEDE Associates Group (Pty) Ltd.

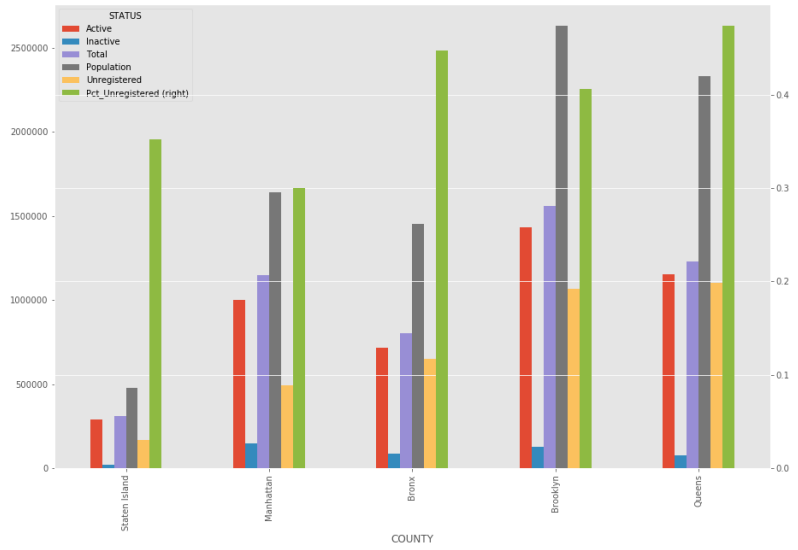
# DEDE Associates – Project VOTE Proposal

**Project Background:**

Project Vote is looking to increase New York City voter registration. They've identified street teams that hand out flyers advertising Project Vote and the New York DMV registration website as a potential avenue to extend their reach. Due to the size of the city and the limited resources Project Vote controls, the NGO has decided to explore the world of analytics to see if an efficient way of identifying good locations to deploy street teams exists. Luckily for Project Vote, DEDE Associates has offered to step in to help identify the best metro stations in New York City that Project Vote should consider sending volunteers to. What follows is DEDE's preliminary report on best metro stations for one borough in the city. If Project Vote decides to accept our services, we would be happy to continue our investigation into other boroughs or parts of the country.

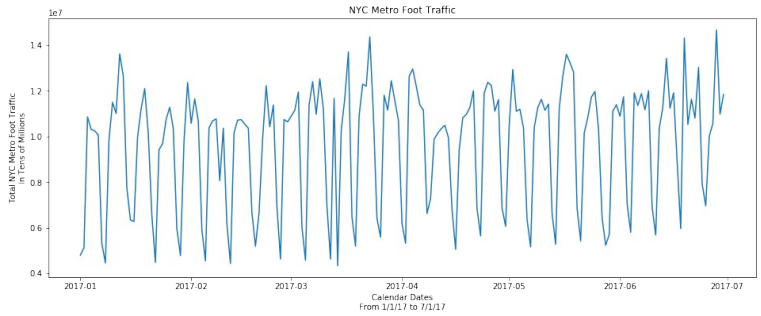
**Preliminary Results:**

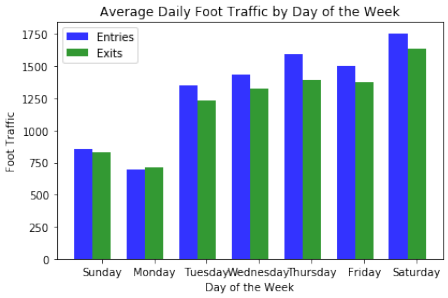
To showcase our analysis, we chose the New York City borough with the worst voter registration rate in 2016 as the starting point of our report. Using a public dataset that identified registration rates by area code, we tallied rates for each borough and arrived at the conclusion that Queens struggles the most with registering eligible voters:




Diving deeper, we used the MTA's publicly available turnstile entries and exits dataset to filter for factors that determined good times to hand out fliers: this being time of day, day of the week, and specific metro station in Queens. The goal was to identify which were the busiest periods at

the busiest stations in Queens. Our preliminary analysis showed that weekday may be a big factor to determining this:



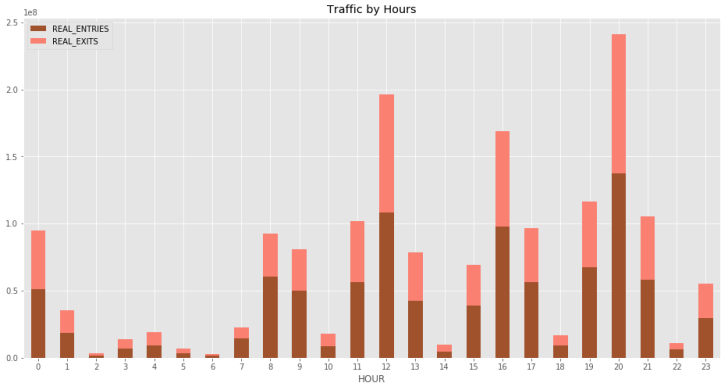




We then calculated the metro stations in Queens with the highest foot traffic (entries + exits) per weekday. On the left are the raw calculations with team size just half the number of turnstiles. On the right is the weighted traffic per day calculated by dividing 2 * raw traffic by number of turnstiles. Multiplying by 2 weights the amount of turnstiles by assuming one volunteer can handle two turnstiles at a time.

| Day Of The Week | Station | Traffic by Day | Number Of Turnstiles | Team Size |
|---|---|---|---|---|
| Monday | MYRTLE-WYCKOFF LM | 161937 | 13 | 7 |
| | JUNCTION BLVD 7 | 139524 | 12 | 6 |
| | JAMAICA CENTER EJZ | 139154 | 21 | 11 |
| | QUEENSBORO PLZ 7NQW | 138668 | 6 | 3 |
| | ASTORIA DITMARS NQW | 130391 | 8 | 4 |
| Tuesday | MYRTLE-WYCKOFF LM | 168341 | 13 | 7 |
| | JAMAICA CENTER EJZ | 149962 | 21 | 11 |
| | QUEENSBORO PLZ 7NQW | 143222 | 6 | 3 |
| | JUNCTION BLVD 7 | 142900 | 12 | 6 |
| | ASTORIA DITMARS NQW | 141395 | 8 | 4 |
| Wednesday | MYRTLE-WYCKOFF LM | 173758 | 13 | 7 |
| | JAMAICA CENTER EJZ | 157986 | 21 | 11 |
| | QUEENSBORO PLZ 7NQW | 152277 | 6 | 3 |
| | JUNCTION BLVD 7 | 149521 | 12 | 6 |
| | ASTORIA DITMARS NQW | 147844 | 8 | 4 |
| Thursday | MYRTLE-WYCKOFF LM | 169631 | 13 | 7 |
| | QUEENSBORO PLZ 7NQW | 147518 | 6 | 3 |
| | JUNCTION BLVD 7 | 148913 | 12 | 6 |
| | JAMAICA CENTER EJZ | 147836 | 21 | 11 |
| | ASTORIA DITMARS NQW | 146079 | 8 | 4 |
| Friday | MYRTLE-WYCKOFF LM | 167638 | 13 | 7 |
| | WOODHAVEN BLVD MR | 155168 | 11 | 6 |
| | JUNCTION BLVD 7 | 145014 | 12 | 6 |
| | ASTORIA DITMARS NQW | 140451 | 8 | 4 |
| | JAMAICA CENTER EJZ | 138870 | 21 | 11 |
| Saturday | MYRTLE-WYCKOFF LM | 141707 | 13 | 7 |
| | WOODHAVEN BLVD MR | 117732 | 11 | 6 |
| | QUEENSBORO PLZ 7NQW | 113384 | 6 | 3 |
| | JAMAICA VAN WK E | 112138 | 7 | 4 |
| | JUNCTION BLVD 7 | 100421 | 12 | 6 |
| Sunday | MYRTLE-WYCKOFF LM | 114441 | 13 | 7 |
| | QUEENSBORO PLZ 7NQW | 87899 | 6 | 3 |
| | WOODHAVEN BLVD MR | 84912 | 11 | 6 |
| | JAMAICA VAN WK E | 83720 | 7 | 4 |
| | 103 ST-CORONA 7 | 78460 | 9 | 5 |

| Day Of The Week | Station | Traffic by Day, Weighted | Number Of Turnstiles | Team Size |
|---|---|---|---|---|
| Monday | QUEENSBORO PLZ 7NQW | 46223 | 6 | 3 |
| | ASTORIA DITMARS NQW | 32598 | 8 | 4 |
| | JAMAICA VAN WK E | 32259 | 7 | 4 |
| | 103 ST-CORONA 7 | 24224 | 9 | 5 |
| | 85 ST-FOREST PK J | 23546 | 4 | 2 |
| Tuesday | QUEENSBORO PLZ 7NQW | 47741 | 6 | 3 |
| | ASTORIA DITMARS NQW | 35349 | 8 | 4 |
| | JAMAICA VAN WK E | 34574 | 7 | 4 |
| | 103 ST-CORONA 7 | 24832 | 9 | 5 |
| | 85 ST-FOREST PK J | 24432 | 4 | 2 |
| Wednesday | QUEENSBORO PLZ 7NQW | 50759 | 6 | 3 |
| | ASTORIA DITMARS NQW | 36961 | 8 | 4 |
| | JAMAICA VAN WK E | 35590 | 7 | 4 |
| | 103 ST-CORONA 7 | 25806 | 9 | 5 |
| | 85 ST-FOREST PK J | 25790 | 4 | 2 |
| Thursday | QUEENSBORO PLZ 7NQW | 49638 | 6 | 3 |
| | ASTORIA DITMARS NQW | 36520 | 8 | 4 |
| | JAMAICA VAN WK E | 35563 | 7 | 4 |
| | 103 ST-CORONA 7 | 25348 | 9 | 5 |
| | 85 ST-FOREST PK J | 25316 | 4 | 2 |
| Friday | QUEENSBORO PLZ 7NQW | 45848 | 6 | 3 |
| | ASTORIA DITMARS NQW | 35113 | 8 | 4 |
| | JAMAICA VAN WK E | 33192 | 7 | 4 |
| | WOODHAVEN BLVD MR | 25861 | 11 | 6 |
| | 103 ST-CORONA 7 | 24648 | 9 | 5 |
| Saturday | QUEENSBORO PLZ 7NQW | 37795 | 6 | 3 |
| | JAMAICA VAN WK E | 28035 | 7 | 4 |
| | MYRTLE-WYCKOFF LM | 20244 | 13 | 7 |
| | WOODHAVEN BLVD MR | 19622 | 11 | 6 |
| | ASTORIA DITMARS NQW | 19616 | 8 | 4 |
| Sunday | QUEENSBORO PLZ 7NQW | 29300 | 6 | 3 |
| | JAMAICA VAN WK E | 20930 | 7 | 4 |
| | MYRTLE-WYCKOFF LM | 16349 | 13 | 7 |
| | ASTORIA DITMARS NQW | 15785 | 8 | 4 |
| | 103 ST-CORONA 7 | 15692 | 9 | 5 |

Finally, we investigated what might be the best time periods each day based on foot traffic. Based on one hour chunks, we found the following slots were the busiest when combining entries and exits:




**What Else We Can Do:**

Further analysis of the MTA dataset could include many other factors. Looking at the other four boroughs for instance to find the top stations there, could be of use to Project Vote. One challenge this might introduce however is the prevalence of tourists at more popular stations. In Manhattan for instance the Times Square station likely has a high percentage of tourist travelers as do others, so steps to eliminate this would have to be taken. One way to do this would be to look at external data to identify the most tourist heavy stations to then eliminate those stations from consideration or prorate their traffic at a certain non-tourist percentage rate.

Another interesting application of this analysis would be to design a weighted factor algorithm that recommends how many volunteers should work a certain metro station based on the factors we've already analyzed. For instance, a simple web app could be coded that has a full year's worth of MTA data. Project Vote could then feed the app the number of volunteers they have available for the next week for each day's time slots and the app would then spit out which are the best metro stations to position volunteers at, and how many volunteers for each time slot per station per weekday.

**Conclusion:**

We hope you've enjoyed reading through our preliminary analysis. If you like what you see, we'd love to discuss extending the project's scope and timeline. DEDE Associates is committed to your NGO's mission of broadening political activism in our country and we'd be very excited to get the chance to continue working with you.