

Email from clients:

Hi Team:

I am emailing you on behalf of RCompanyInc (RCI) looking to place new ads for our smart yoga mats in subway stations. At this point of time we are evaluating different ad agencies to strategize our approach. We would like hear your proposals on target subway stations and the best way to efficiently market our product.

The smart yoga mat tracks your performance and progress. It links to your computer or smartphone, as well as Bluetooth-enabled speakers.

Our target market includes not only those who already do yoga, but also those looking for an exercise mat, those looking for the perfect gift for someone, and those who need a new gadget to motivate them to exercise.

Because our budget is limited, we would appreciate your suggestions on how to maximize our exposure. We have flexibility in buying ads -- either placing one at many stations, or placing several within the same station.

Best,
RCI Person A

Problem Statement

RCompanyInc is looking for advice on the best strategy for placing advertisements in subway stations for their new Smart Yoga Mats©. As their budget is limited, they would like to know the best locations within the New York Subway system to focus their efforts. MTA offers several advertising options within stations, however, RCompanyInc is focusing primarily on platform advertisements, rather than ads within subway cars.

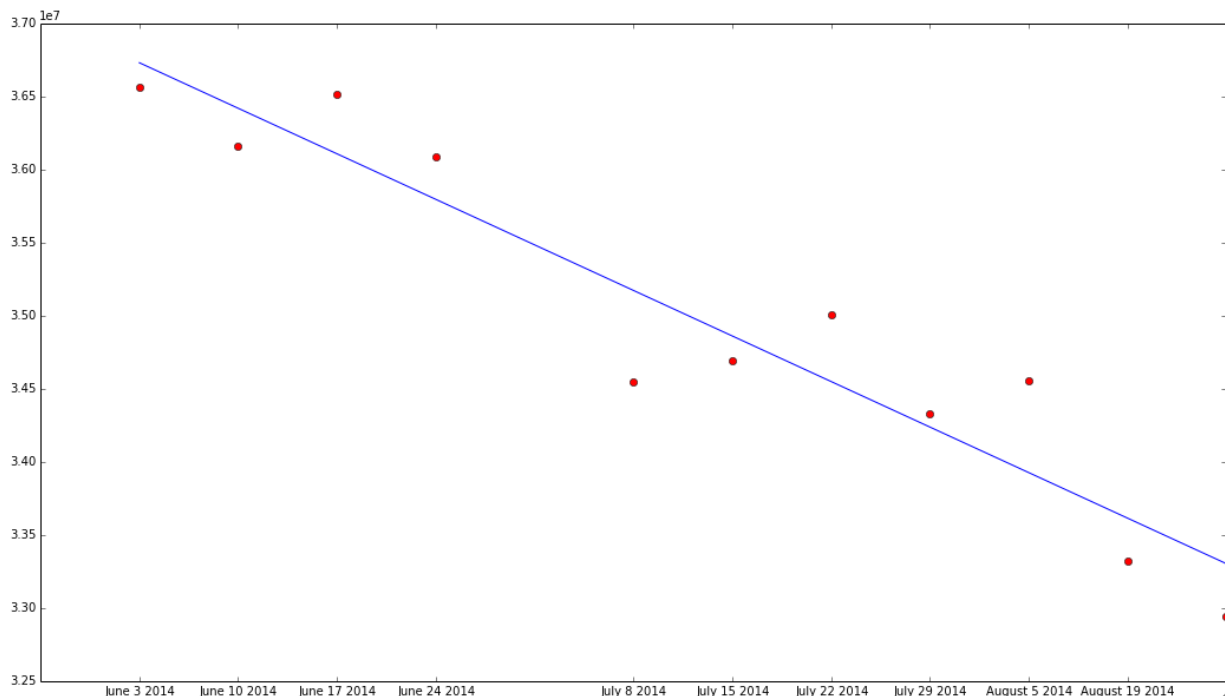
Preliminary Results

As a starting point for our communication, we think it is better to advertise during the peak season when there is a high commuter rate as well as in selected stations where more commuters are passing through. Here is what we found in terms of the subway stations where the highest number of commuters are passing through (Number of Entrances) and months where we see more commuters using subways.

Highest Number of Turnstile Entrances

1. 34th St - Penn Station
2. 42nd St - Grand Central Station
3. 34th St - Herald Square
4. 14th St - Union Sq
5. 42nd St - Times Sq

Weekly commuter count (all stations)



Based on the average weekly ridership since the beginning of June (excluding the July 4th holiday, and shown in the plot above), we think that it is better to advertise earlier in the summer. (Need to consider the MTA rates for advertising over the year). If the advertising rates are high during the summer then we should think about alternative strategies.

What else we can do with MTA data

A next step with the MTA dataset would be to rank the entry booths in terms of passenger entries. Given your limited budget, focusing just on parts of the stations may be a more cost-effective method depending on how the MTA prices ads. As the entry booth areas are generally chokepoints in traffic flow, these are promising areas to look at.

At the moment we have only looked at MTA data since May, but it would be simple to grab the past three years worth of data. We've found a seasonal trend in total passengers over summer 2014, and with several years worth of data we can confirm if this is an annual trend, as well as give an idea of passenger levels throughout the year. This would allow you to target your advertisements for the most effective times of the year.

What we could do with more data

We believe that it would be very useful to have a map of, and to know, where the stations are located in relation to yoga and fitness studios, fitness centers, beaches, parks, and any other places we might find people practicing yoga; distance to these places would be a contributing factor towards our model. Furthermore, we would need to know where these products are being sold, and superimpose the vendors' locations on the map and factor this into our model as well.

In addition to the static establishments that cater towards people practicing yoga (like yoga studios and fitness centers), we would like to learn about major sporting and/or health-related events (such as conferences and conventions). Knowing about when these events happen would also be factored into our model as these events might attract the right kind of customers.

We have identified supplemental data sources that can help us determine which stations see traffic containing the target audience for your product:

- MTA has Metrocard sales data, which details the types of metrocards used at each station. We can use this to determine the demographic profile of the neighboring area and the percentage of commuters that regularly use a station. A relevant finding is the connection between the use of unlimited cards and shifts in area gentrification ([WSJ study linking metrocard usage to area demographics](#)).
- The MTA also publishes information on previous advertising initiatives in subway stations. This can help us locate the stations that have seen success in marketing

sports and health related products. In conjunction with other market research, we can determine the typical advertising strategies for similar products.

We also propose implementing a short-term effectiveness study, where we place ads in various stations and, using polls of people exiting the stations, we determine whether people are seeing and responding to the ads.

It may be prudent to contact an advertising consultant to consider whether we want to target commuter stations (where people would see the ads five times a week, but while in a rush), or those stations with the highest weekend traffic (where people may see the ads fewer times per week, but may be more receptive to the ad when viewing it).

Another important consideration is the average wait time at a given station, which would augment the level of exposure to your ads. Using data on the average frequency of trains along each line, as well as planned MTA construction, we could determine the stations where passengers spend the most idle time. Ads at these locations could prove especially effective.

Conclusion

We enjoyed working through the data we came across so far, and are excited to delve deeper into this project because we are just as passionate as you are about products that find new ways to help people maintain health and fitness.