

## OUR CLIENT

A green business which aims to raise environmental awareness and action in Singapore by helping organisations practice green policies.

## PROBLEM STATEMENT

To help Green Nudge reach out to more users in their social media platforms, we seek to analyse and research on the following:

- How GN's network is structured, and whether information is reaching to new followers or if an echo chamber is present.
- How GN can increase engagement on their social media sites.

## METHODOLOGY

Hashtag Analysis Content Generation Social Network Analysis

## TECHNOLOGIES USED

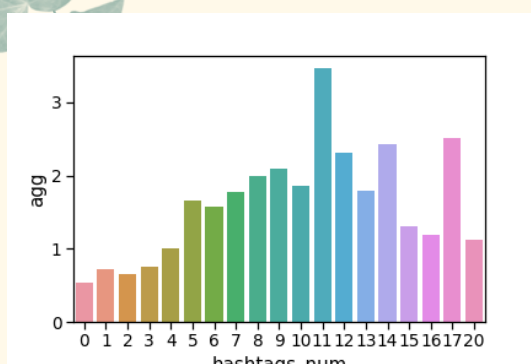


## TASK 1: HASHTAG ANALYSIS

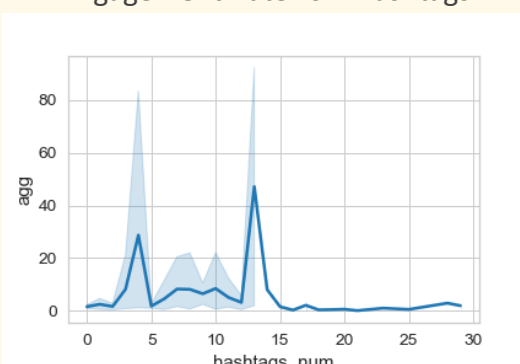
We sought to find out the right hashtags that Green Nudge can use on Instagram to be discovered by more non-followers.

### Optimal Number of Hashtags > Identify the optimal number

Optimal No. for Green Nudge: **11**  
Engagement Rate vs # Hashtags

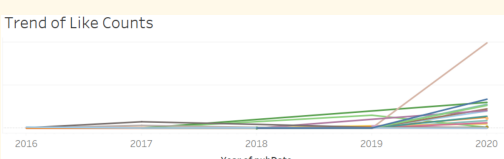
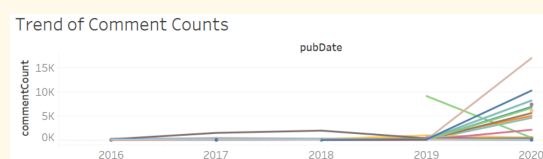


Optimal No. for Competitors: **13**  
Competitor Aggregated Engagement Rate vs # Hashtags



### Time Series Analysis > Determine effectiveness of # over time

#makegreengreatagain, #beachcleanup, #marinedebris, #ecobricks



### Hashtags Related Topics > Explore new ones & identify those of different genre

- Conducted LDA on 4 different topics on the post description
- Top 10 count of hashtags used in the same post
- Identify irrelevant hashtags: #greenup (clothing, fitness, garments), #makegreengreatagain (cars, racing) #SBF (cars)

## TASK 2: CONTENT GENERATION

### Topic Modelling & Sentiment Analysis

We conducted text analysis to sense trending environmental topics on social media and understand people's sentiments. Data was crawled from Twitter and Reddit based on selected environmental keywords.

### Topic Modelling

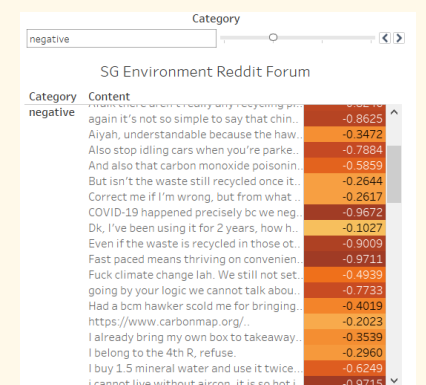
- Performed LDA on combined Twitter & Reddit dataset (**5828 rows**)

### Topics Generated

- Environmental Policies
- Energy use, emissions
- Recycling, plastic waste
- Nature conservation, biodiversity, wildlife
- Global warming, businesses taking action

### Sentiment Analysis

- Used Vader Lexicon on **254 posts** from 3 reddit environmental forums



### Competitor Analysis

We analysed the Top 10 Most Liked Posts by Green Nudge's top competitors on Instagram to draw inspiration from their engagement strategies.

### Competitors

@greenisthenewblackcom  
@wwfsg  
@oceanpurposeproject  
@zerowastesingapore  
@terravillage  
@secondsguru

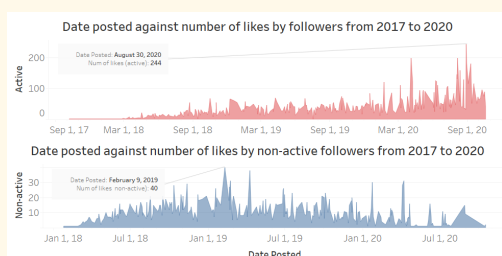
### Engagement Strategies

- Educational Posts
- Graphic/Shocking Media
- Interactive Posts
- Feature Stories
- Current Affairs Sharing
- General Sharing

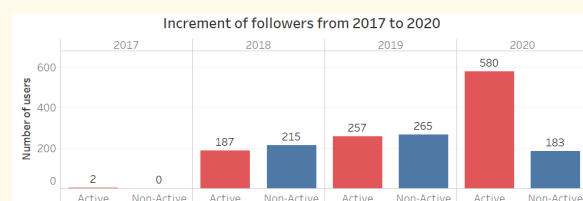
## TASK 3: POST LIKE ANALYSIS

### Follower Analysis > Identify presence of echo chamber

We analysed the activity of Green Nudge's followers and identified their demographics, from which we identified whether there was an echo chamber within Green Nudge's following.



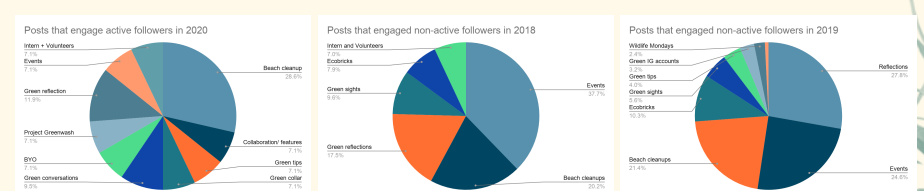
Active followers: activity follows steady increase  
Inactive followers: dip in activity towards and into 2020



**No echo chamber** as Green Nudge is steadily increasing their base of active followers → able to reach new individuals

### Post Analysis

We identified posts that engaged active followers in 2020 and engaged non-active followers in 2018-2019 and analysed their respective contents:



- Engaged active followers in 2020: beach clean-ups, green reflections, green conversations
- Engaged non-active followers in 2018-2019: Green Nudge's activities (i.e. green events consulting and activation), green reflections, beach clean-ups