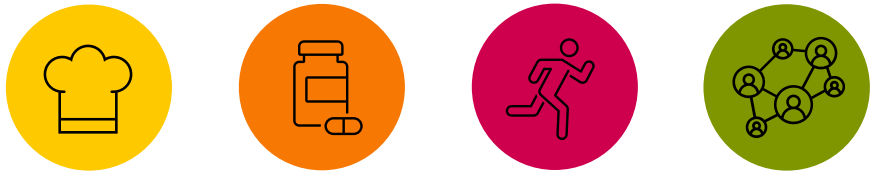
A scoop in every kitchen

TEAM WRAAP

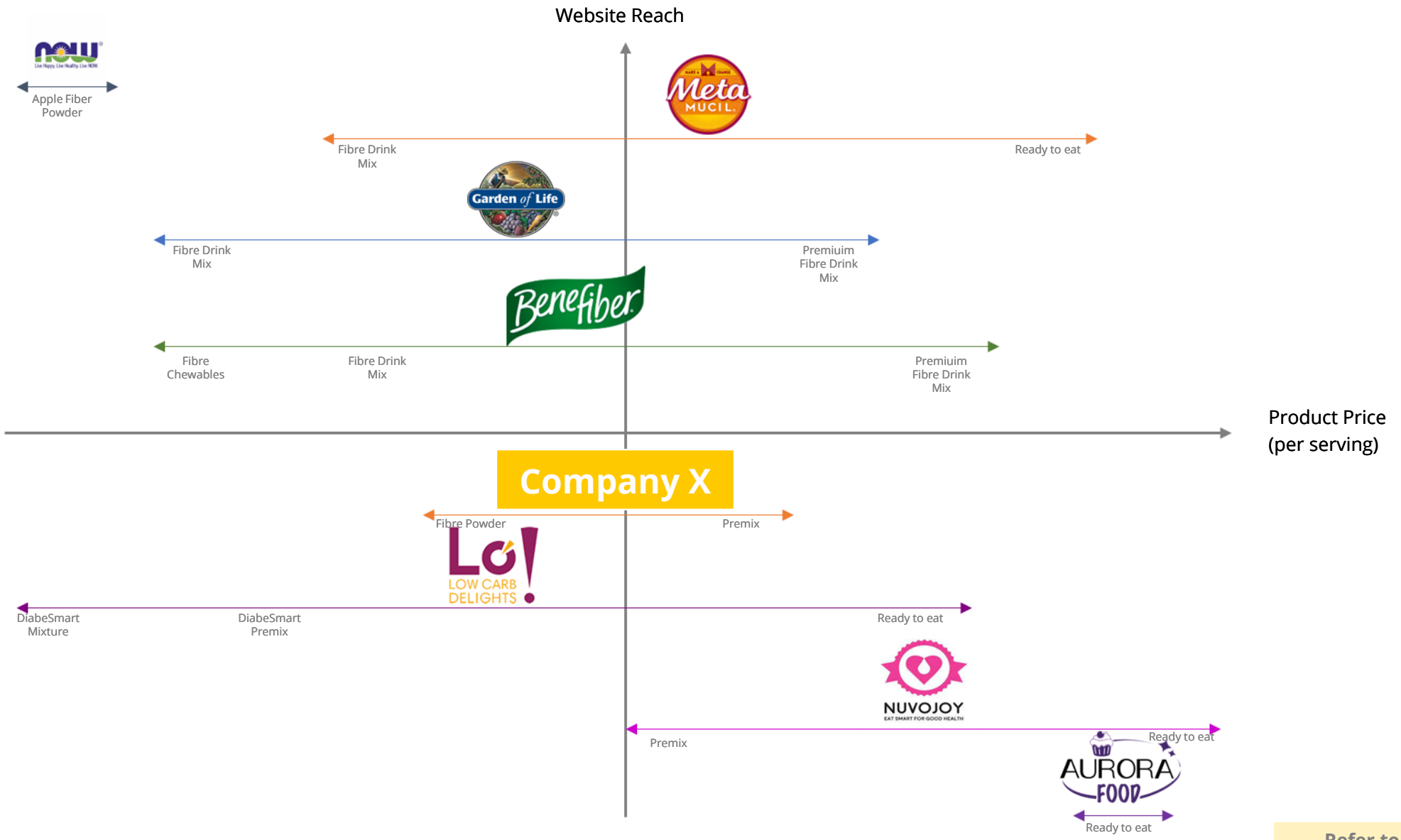
Our Key Message

Through competitors' analysis and your data, we have identified 4 key customer segments



And have developed recommendations to address their pain points across the customer journey map

COMPETITIVE LANDSCAPE



Refer to Annex B

CUSTOMER SEGMENTS

#Homemaker

They care for their families and ensure family members consume healthy meals. They are typically females aged 35 and above and recipe seekers.

#Circumstantial

People who need to maintain a healthy diet due to medical conditions such as diabetes, gluten intolerance, and heart conditions, aged 25 and above.

#Health-nut

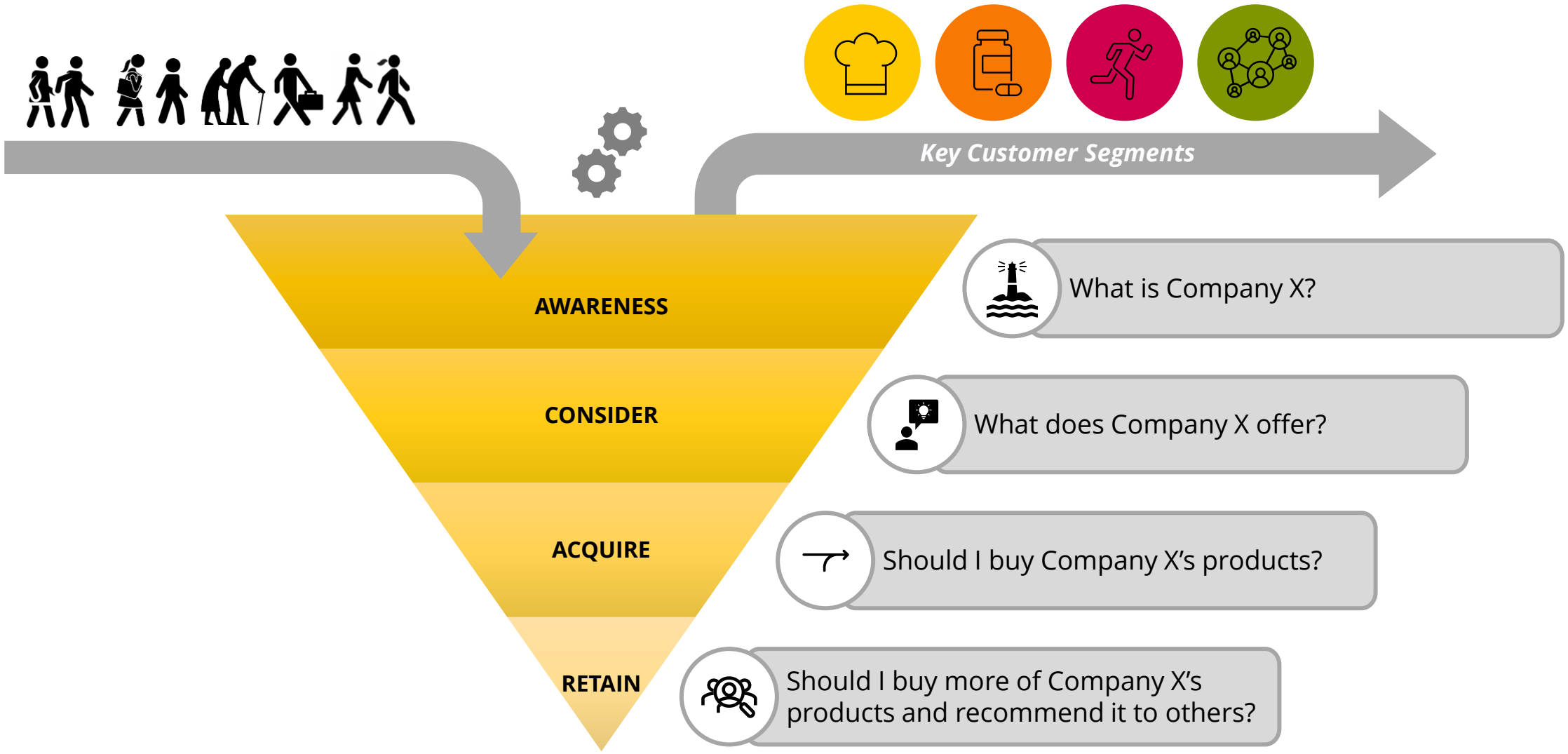
They are the health-conscious people and fitness enthusiasts who are willing to consume vitamins and supplements. They have a young age range from 25 - 40 years old.

#Impressionable

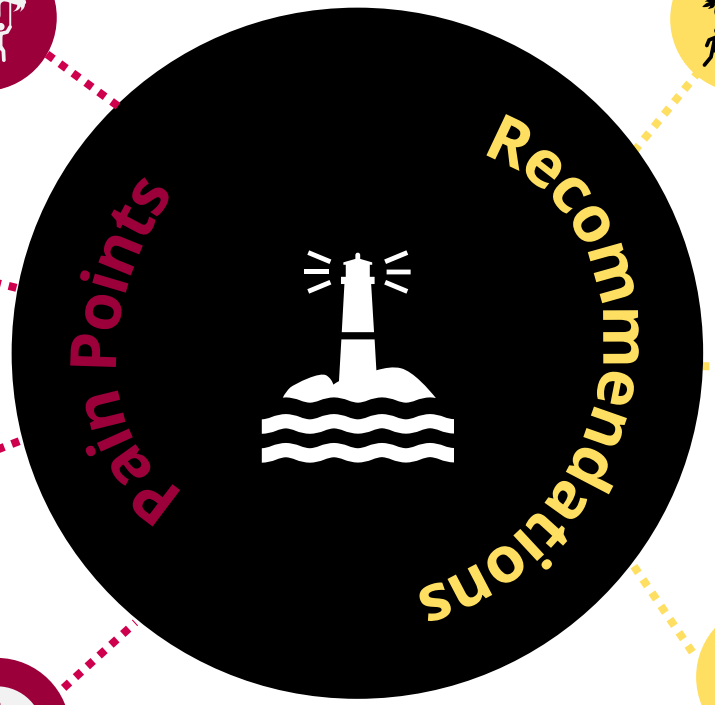
They are easily influenced by ads featuring celebrities and influencers. They are young adults in their 20s and 30s.

Refer to Annex C

OUR CUSTOMER JOURNEY



AWARENESS



How to eat healthier during festive seasons?

How do my favorite celebs stay healthy?

What are the healthier options?

How do I get easy to assimilate info?

Occasions

Run occasion related campaigns to share how Company X's products can be integrated in festive food
#homemaker #circumstantial #health-nut #impressionable

Celebrities & Influencers

Engage local celebs and influencers to promote products in an entertaining way
#impressionable

Info-sharing

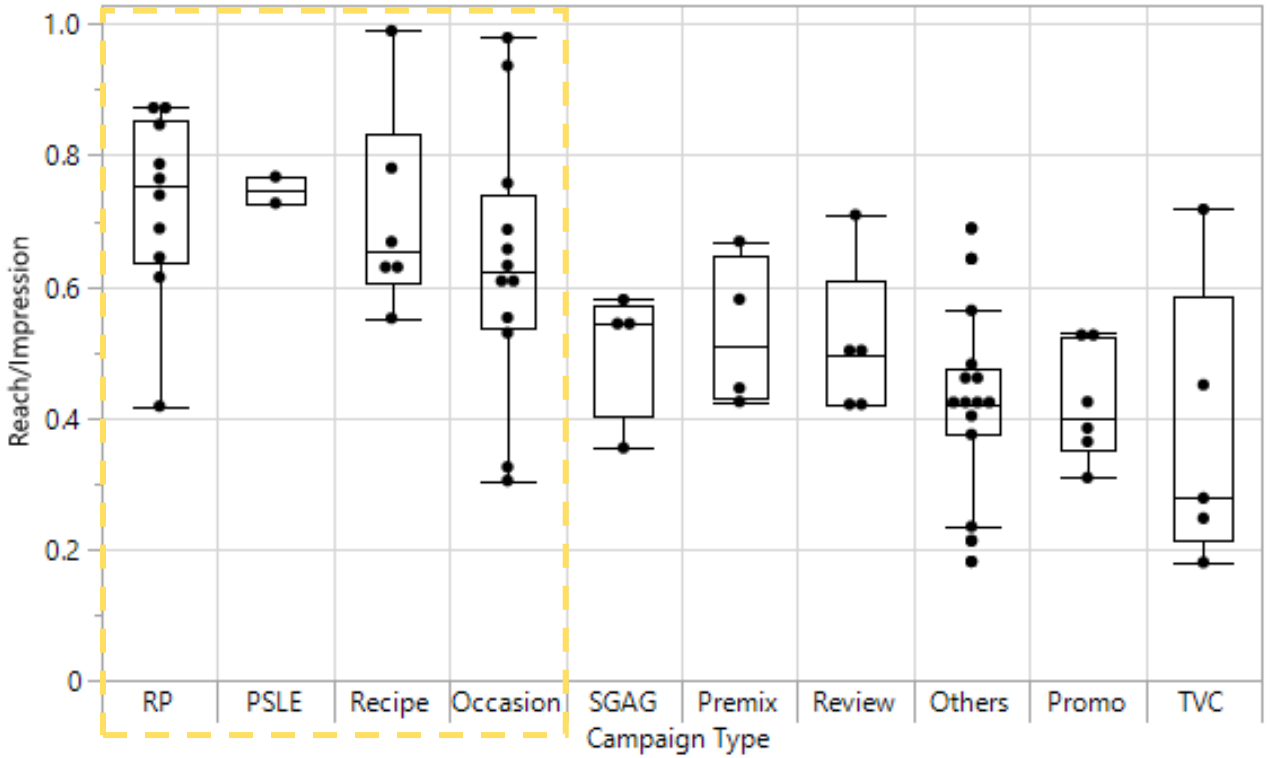
Run info-sharing GA campaigns
#homemaker #circumstantial #health-nut

AWARENESS

Occasions

- FB: Occasion-related campaigns have one of the highest reach to impression ratio (average of 0.62).
- Recommendation: Company X should run more occasion-related campaigns to share how Company X's products can be integrated in festive food

FB Campaign Types



Refer to Annex D

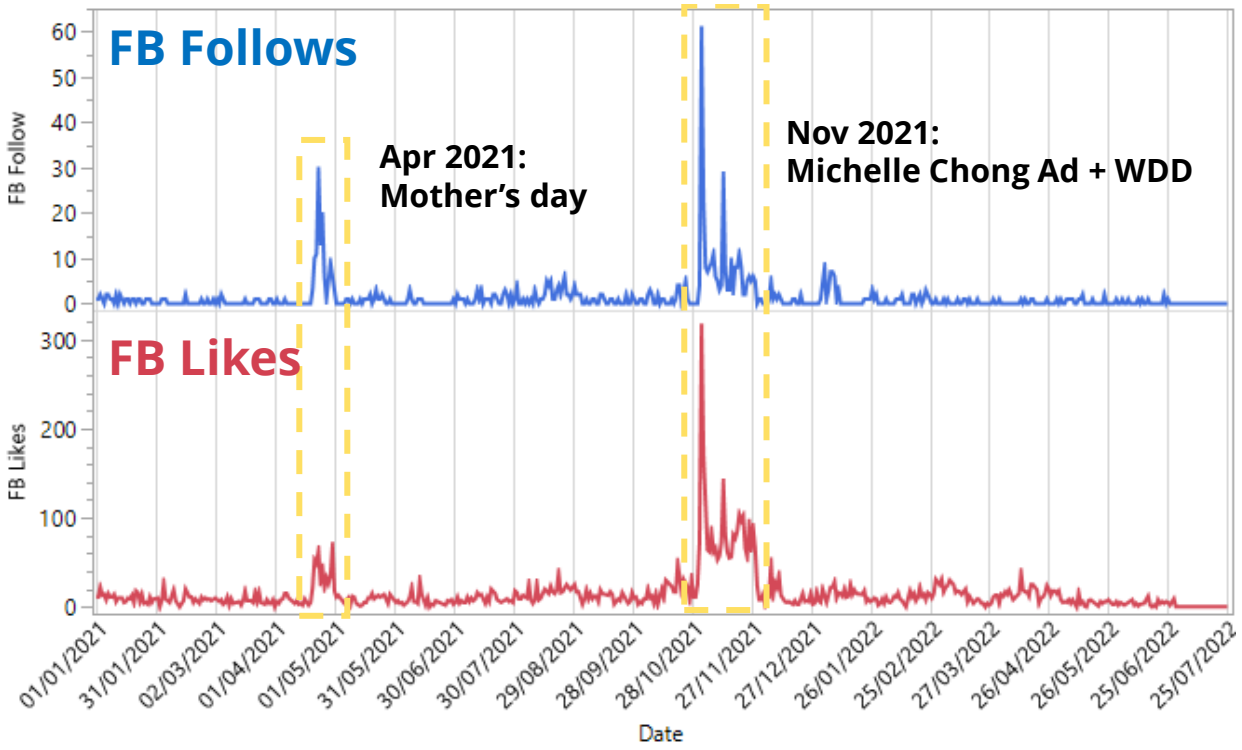
AWARENESS

Info-sharing

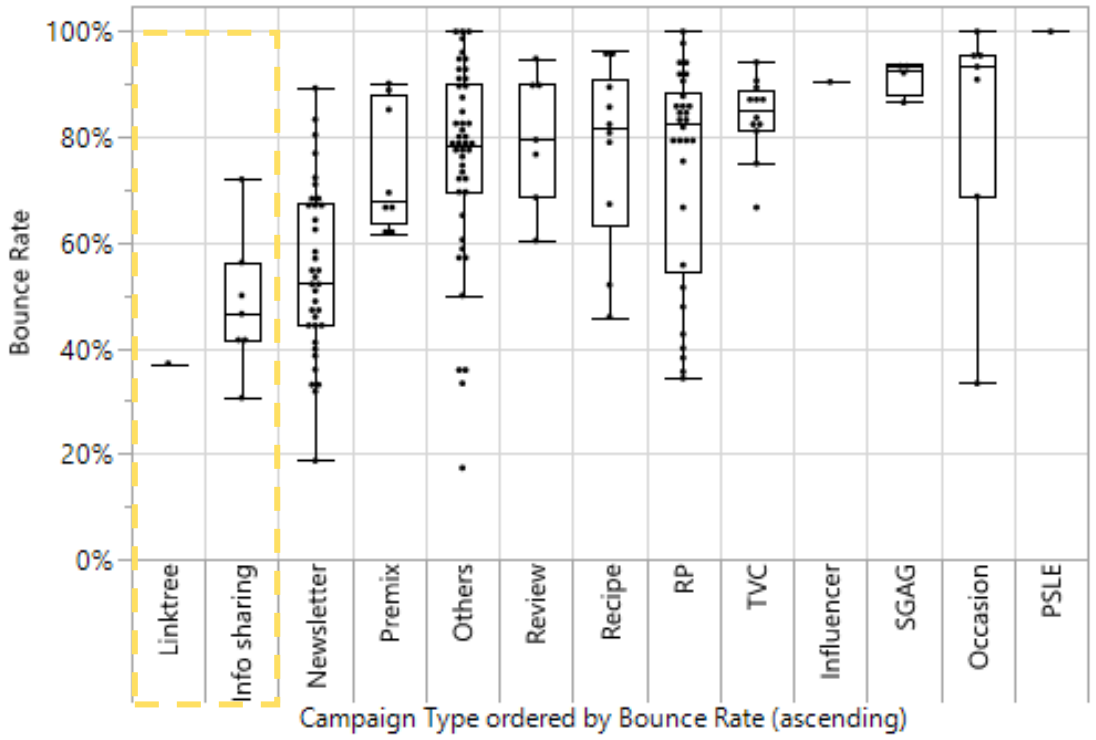
Celebrities & Influencers

- Celebrity and occasion-related campaigns caused a spike in FB follows and likes.
- Linktree and info-sharing GA campaigns have the lowest bounce rates (average of ~50%).
- Recommendations:
  - Engage local celebs and influencers to attract impressionables.
  - Can share bite-sized information about healthy eating.

Facebook Metrics



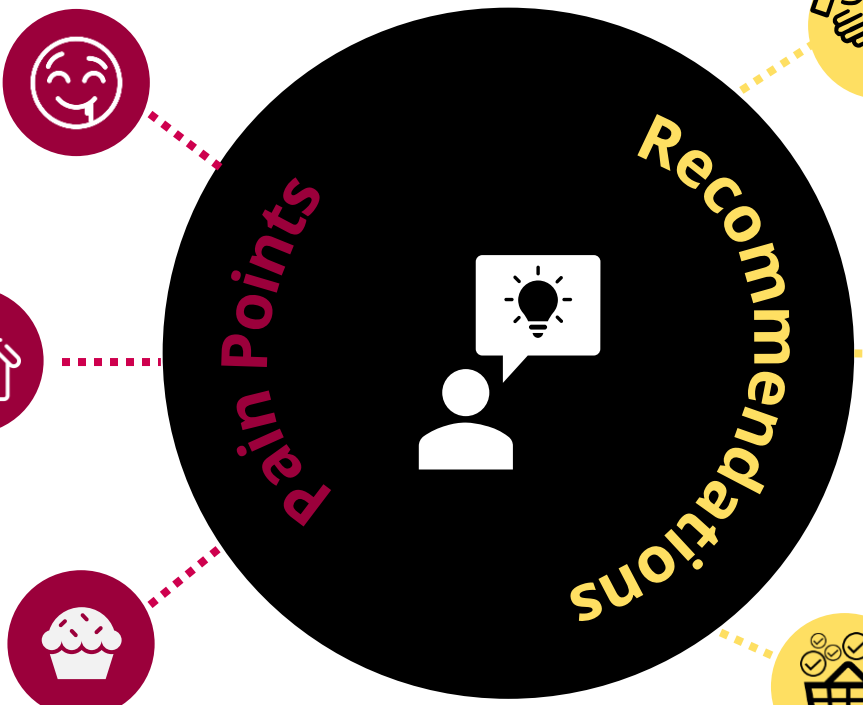
GA Campaign Types



Refer to Annex E

Refer to Annex F

CONSIDER



Is healthy food tasty?

How to meet all my family members' needs?

How to satisfy my sweet tooth in a healthy way?

RP Campaigns

RP campaigns allow customers to taste Company X's products in renown partners' food

#homemaker

Recipe Campaigns

Run recipe blogs/ campaigns with good UI (easy to use, informative, and aesthetically pleasing)

#homemaker #health-nut

Product Variety

Diversify your product lines to meet a variety of customers' needs and indulgences

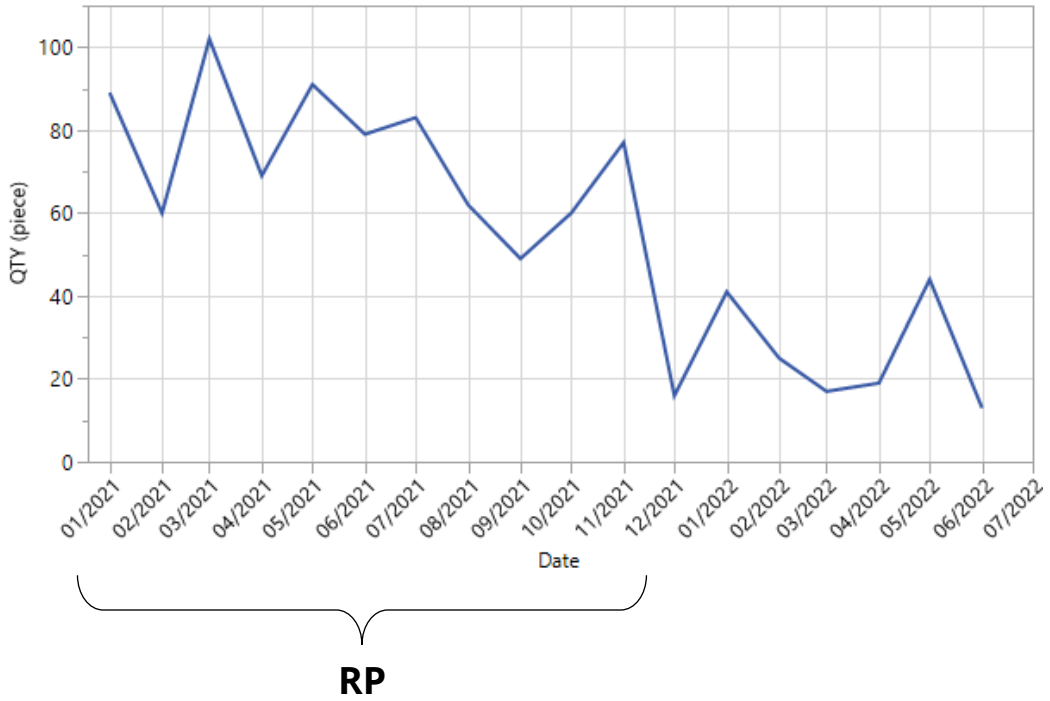
#homemaker #circumstantial #health-nut

CONSIDER

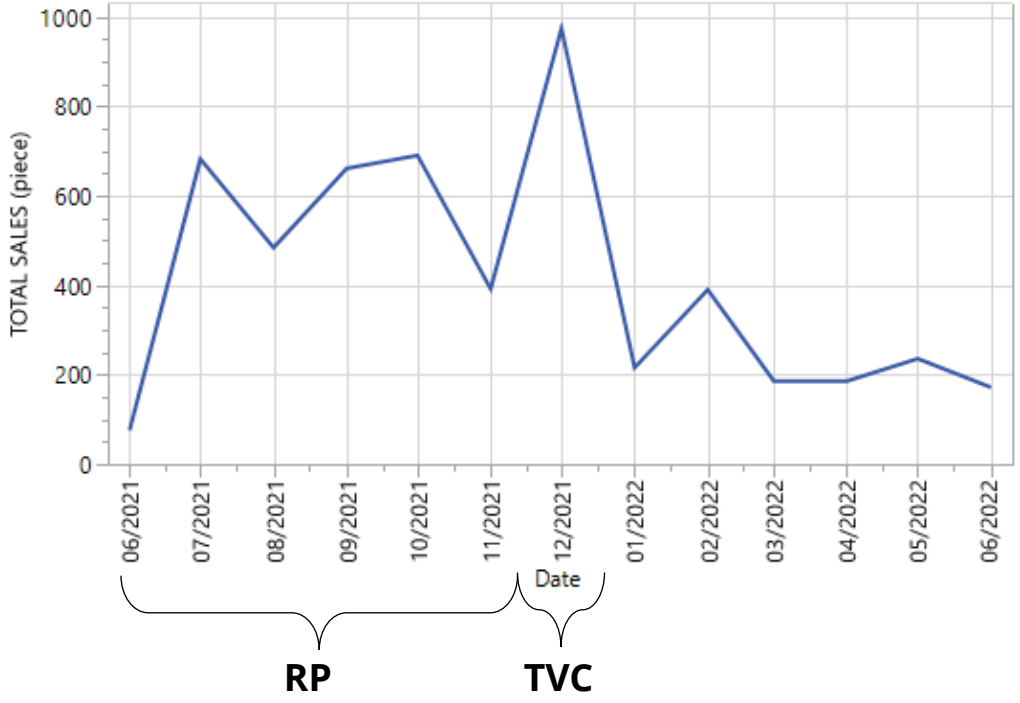
RP Campaigns

- There were 10 FB and 7 IG RP campaigns from Feb 2021 to Nov 2021. There was only 1 Google Ads RP campaign after Nov 2021.
- RC products had higher sales in 2021 when there were more RP campaigns.
- Recommendation: Company X should run more RP campaigns to give customers an opportunity to try RC products through other food providers' products.

SG Online Sales Chanel – RC Product Type



Online Retail Sales – CR-250 and CR-700



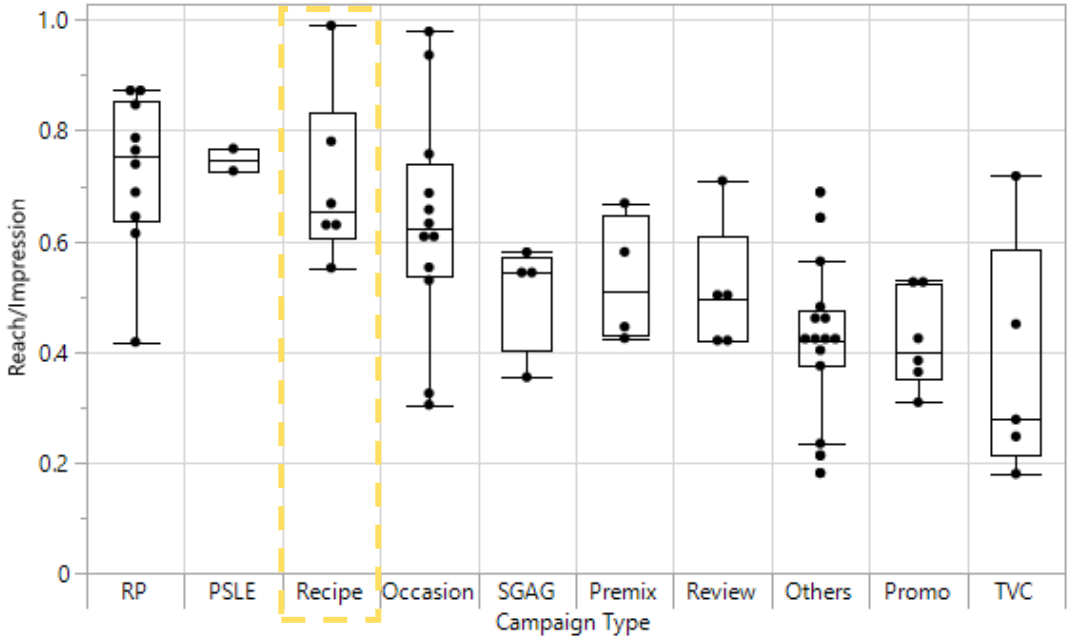
Refer to Annex F

CONSIDER

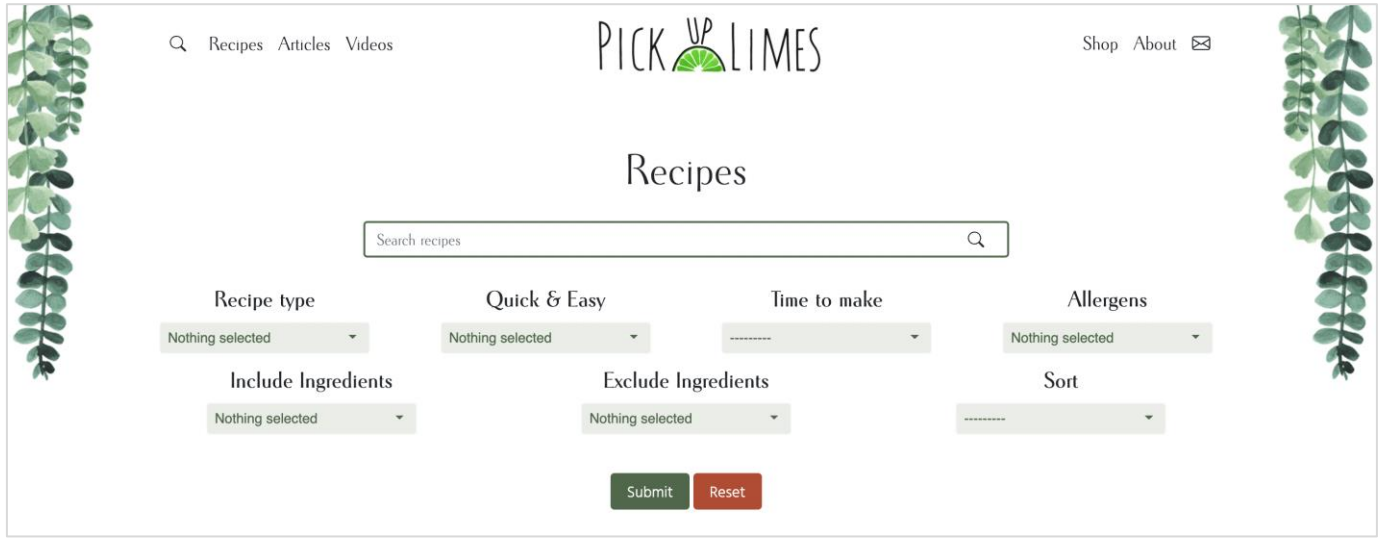
Recipe Campaigns

- Recipe-related FB campaigns have one of the highest reach to impression ratio (average of 0.7).
- Recommendations:
  - Run more recipe-related FB campaigns.
  - Create a dedicated recipe page on its website with an easy-to-navigate and aesthetically pleasing user interface where site visitors can look up recipes of their interest.

FB Campaign Types



Example of a good recipe search page: https://www.pickuplimes.com/



CONSIDER

Product Variety

- Based on competitors' analysis, Company X competitors have diverse product lines and/or target a specific customer segment by including more features (e.g., Probiotics, high protein, Keto, etc.).
- Recommendation: Company X should diversity its product line to cater to a variety of needs.

Lo! Low Carb Delights

- KETO SMART RANGE ›
- DIABE SMART
- PROTEIN CHEF
- MEAL SUBSCRIPTION ›
- DIWALI GIFTING
- DEALS & DISCOUNTS

NUVOJOY — EAT SMART FOR GOOD HEALTH

- Premixes
- Ready-To-Eat
- Natural Sugar Alternatives
- Natural Juice Powders
- Bundles and Starter Kits
- Baking Accessories and Gift Bags
- Beverage Mixes

Benefiber

- Benefiber Original
- Benefiber Advanced Digestive Health
- Benefiber Advanced Digestive Health Prebiotic Fiber + Probiotics
- Benefiber Healthy Shape
- Benefiber Prebiotic Fiber + Probiotics Gummies

Garden of Life

- Probiotics
- Protein
- Vitamins
- Minerals
- Herbals
- Collagen
- Sport Performance
- Omega-3s
- Food

Meta Mucil

- All Products
- Powders
- Capsules
- Fiber Thins
- Gummies

Refer to Annex B

ACQUIRE

How to make simple and healthy meals?

Where can I buy the product?

Pain Points

Recommendations

Advertisements

Increase ads on online retailers, such as Shopee, Lazada, Amazon, and iHerb

#homemaker #circumstantial #health-nut #impressionable

Spread your 'product'

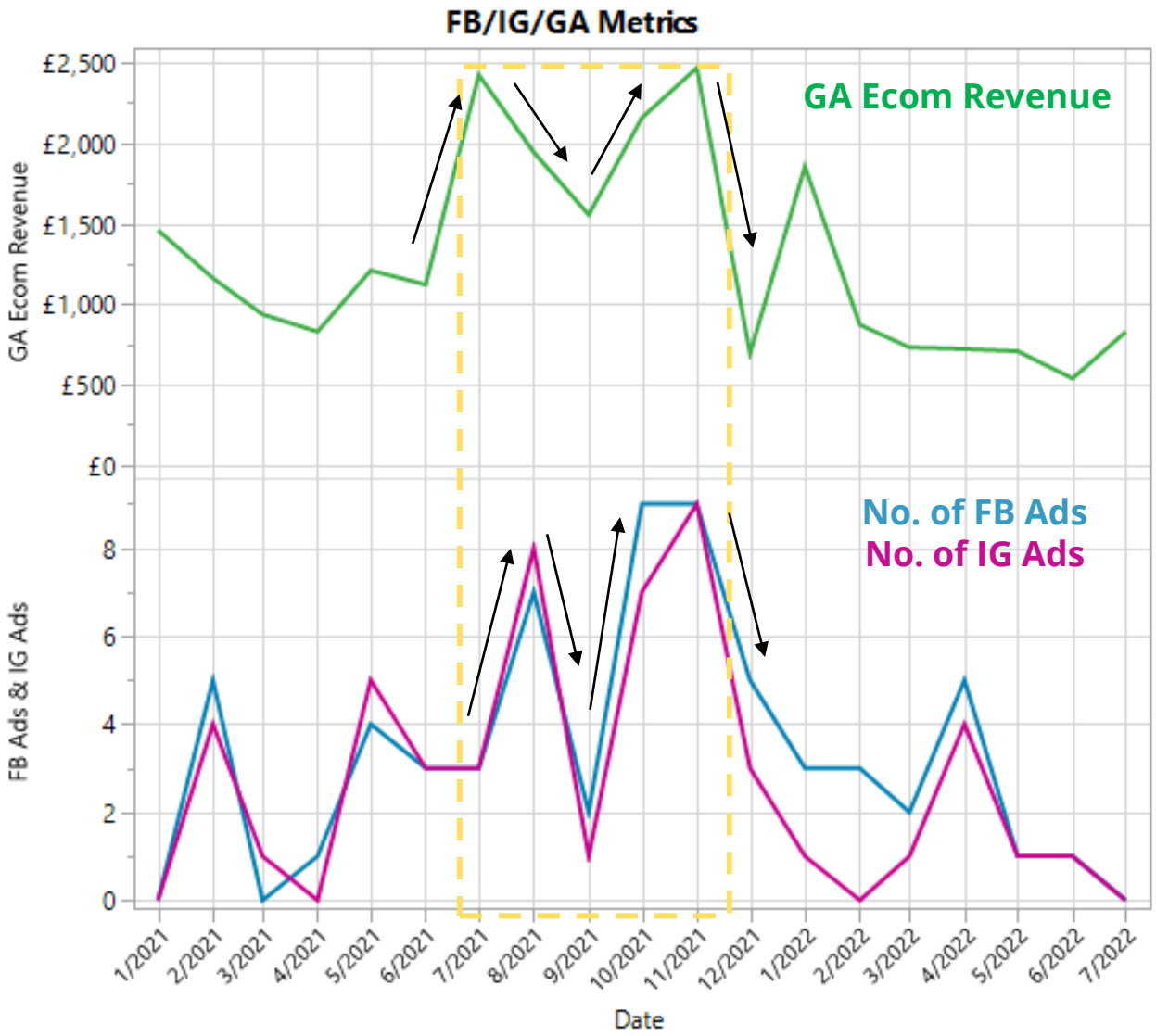
Reach out to untapped territories and sell your product from the stores

#homemaker #circumstantial #health-nut #impressionable

ACQUIRE

Advertisements

- GA Ecom revenue trends with social media (FB and IG) ads volume, suggesting that social media ads are effective in convincing customers to purchase Company X's products.
- Recommendations:
  - Increase social media ad frequency
  - Explore other social media platforms such as YouTube and TikTok as well as online retailers' platforms, such as iHerb, Shopee, Lazada, and Amazon.

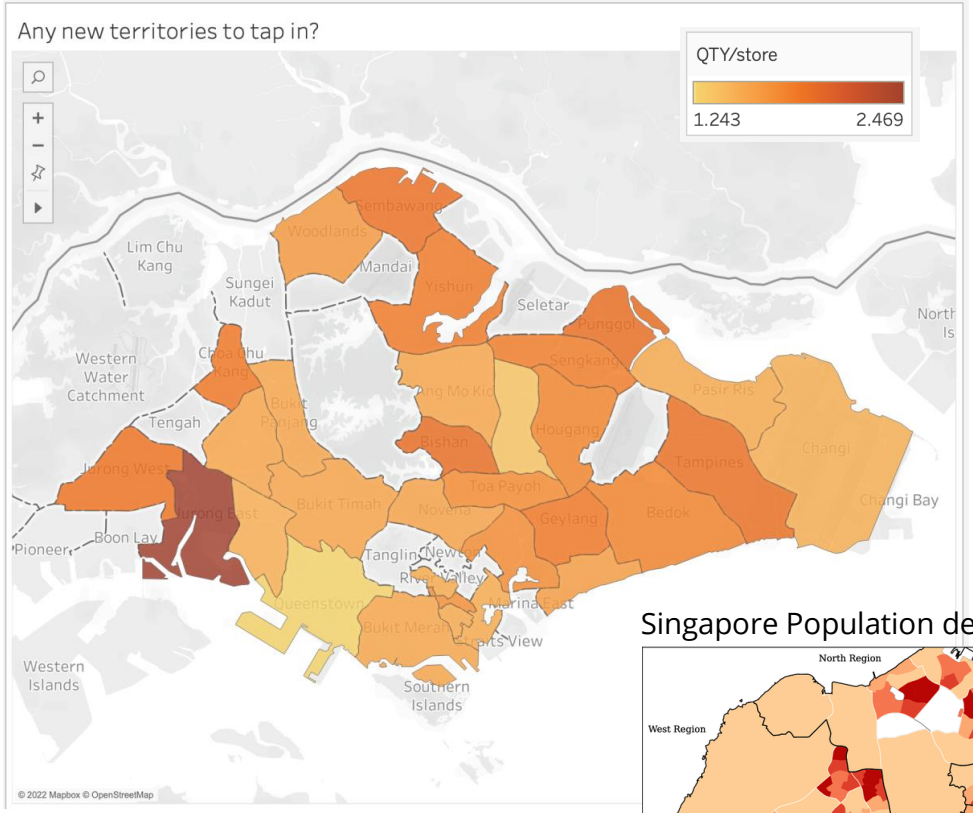


ACQUIRE

Spread your ‘product’

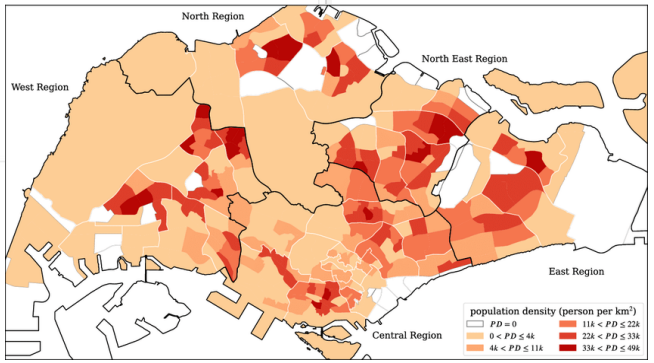
- In general, quantities sold per store matches the Singapore population and affluent density with some notable exceptions.
- Sales is good in the west while other residential regions such as Tampines and Novena have lower number of sales.
- Recommendations:
  - Consider doing supermarket in-store events in these region to engage interested consumers.

Quantities sold/store by NTUC and Prime based on Retail data



(Data has been log transformed)

Singapore Population density



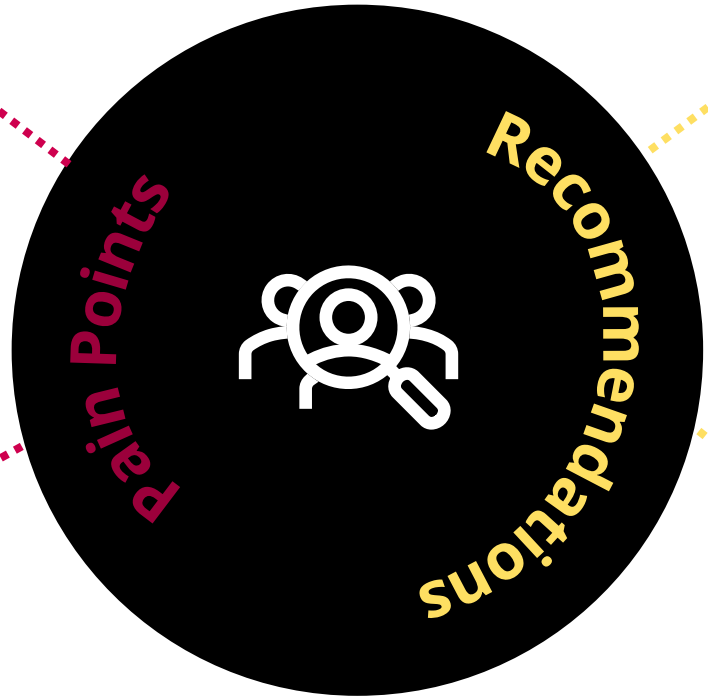
Refer to Annex GB

B2C

RETENTION

What rewards/discounts does Company X provide over others?

How do I receive my groceries periodically in a convenient manner?



Loyalty Programs

Offer rewards, discounts, and other special incentives to attract and retain customers

#homemaker #circumstantial #health-nut

Subscription Model

Rely on pre-planned & recurring purchases. The value of a subscription is the recurring, predictable revenue

#homemaker #circumstantial #health-nut

RETENTION

Loyalty Programme

Loyalty Programme
Why?

Q1 2022 Global Loyalty & Rewards Market Survey

- **80% want to shop for a brand with a loyalty programme**
- **75% say loyalty programs encourage them to spend more**

Traits of a loyalty programme

Deloitte 2021 Consumer Loyalty Playbook

- **85% cite monetary rewards as important attributes**
- **60% think personalized rewards are important**

RETENTION

Subscription Model

Subscription model
Why?

Shopify Plus Subscriptions Research

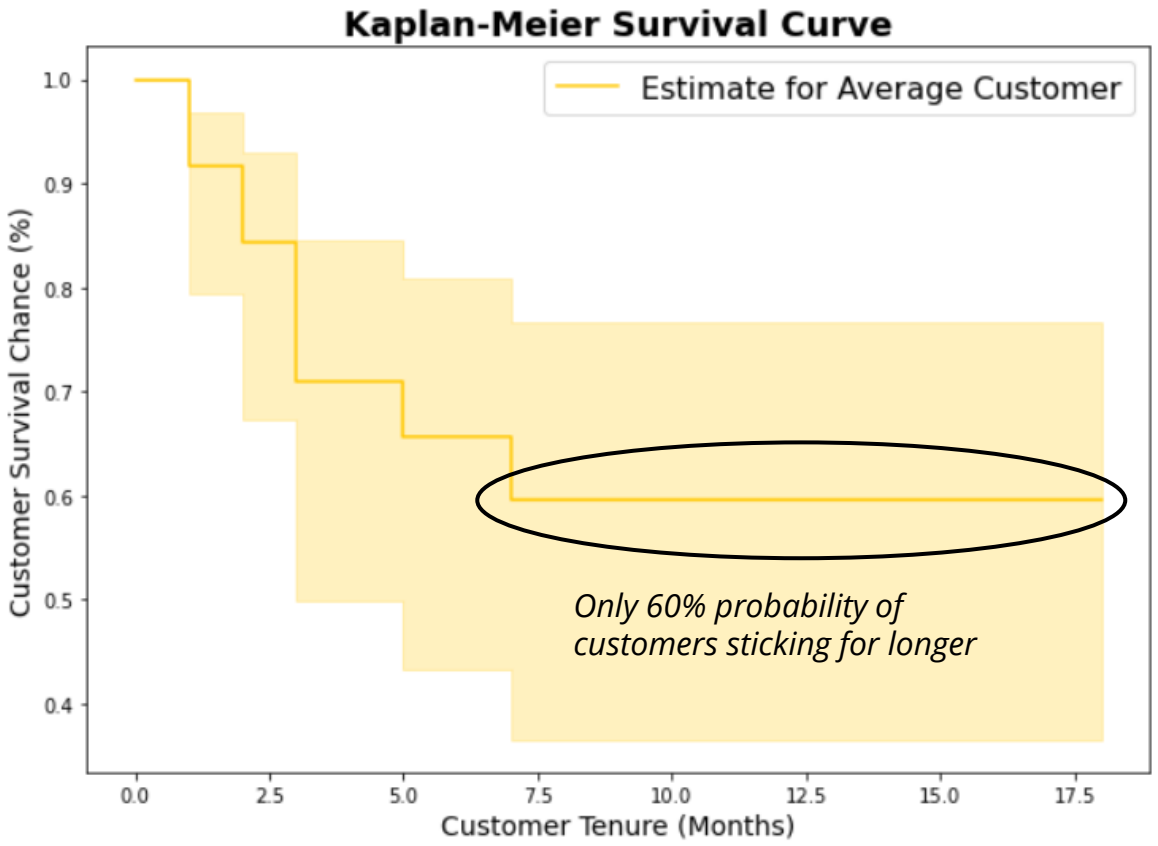
- 60-70% chance to sell to an existing customer
- 7% is the average churn rate for B2C businesses

Traits of a subscription model

McKinsey & Company E-commerce research

- 60% women account for subscriptions
- 25 - 44 years are more likely to opt for it

RETENTION



The Problem:
Most of Company X's B2B customers had less than 80% probability to stick over the tenure.

Refer to Annex H

B2B

RETENTION

Pain Points

What industries can I target to improve my customer retention?

How can I enhance retention through my sales channel?

How can I enhance my sales approach for better customer retention?

Recommendations

Industry

Focus on Foodservice and retail, which have 50% probability of sticking

Sales channel

Further leverage SG distributors and SG key accounts sales channels

Salesperson

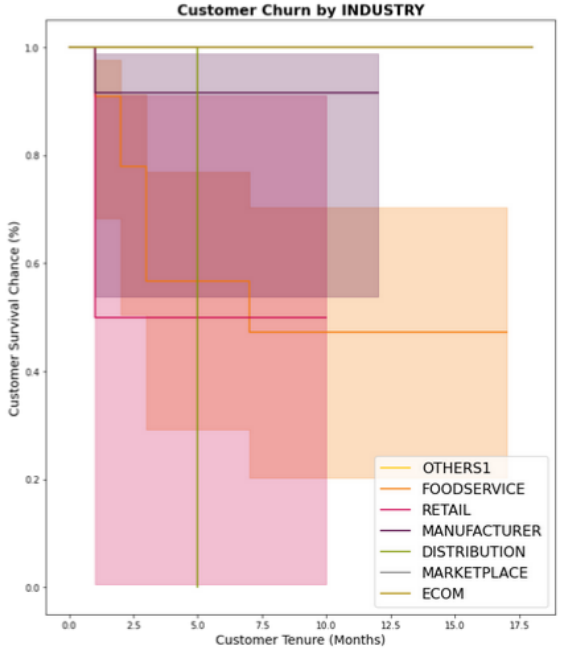
Improve training for FX and LS salesperson to better retain customers

Refer to Annex H

B2B

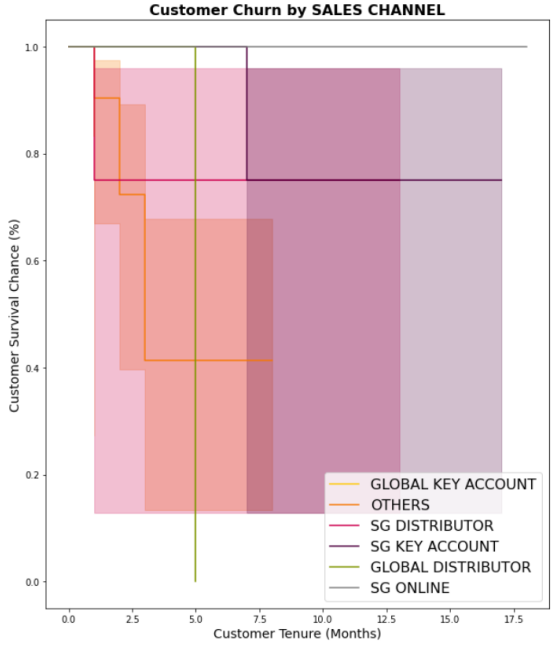
RETENTION

Industry



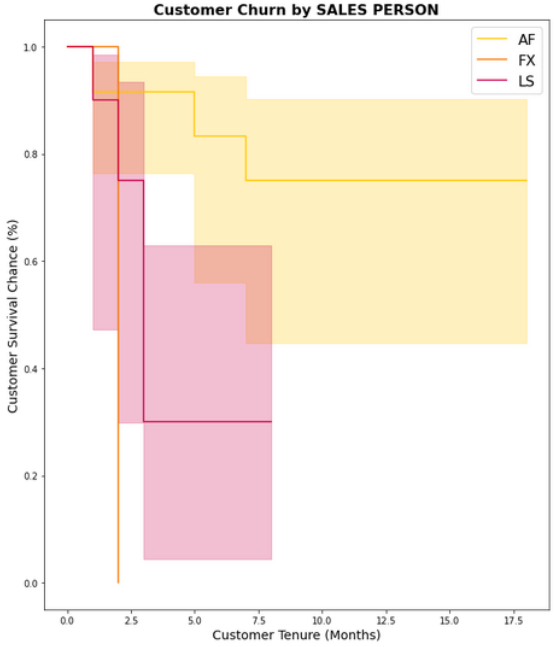
- Only 2 of 5, ecom and manufacturers, stick over the period 80% of the time.
- Focus on Foodservice and retail, which have 50% probability of sticking.

Sales Channel



- SG online has the highest probability of brining customers while SG distributors and key accounts have over 70% surviving probability.
- Leveraging these two sales channel can enhance customer retention.

Salesperson



- Only FX salesperson's customer stick around for longer.
- Improving training for FX and LS salesperson to better retain customers.

Refer to Annex H

SUMMARY

Homemaker | Circumstantial | Health-nut | Impressionable

Key Customer Segments

AWARENESS

Run occasion and info-sharing campaigns.
Engage celebs and influencers to promote products.

CONSIDER

Run RP and recipe campaigns and improve website UI.
Increase product variety.

ACQUIRE

Run ads on more social media sites and online retailers' platform.

RETAIN

B2C – Introduce loyalty programmes and subscription model.
B2B - Focus on foodservice & retail, SG distributors & key accts.

Thank you!

Aishwarya Maloo

Audrey Tan Tong

Prachi Ashani

Raunak Kapur

Chua Wee Yuan

ANNEX

ABCDEF Framework

ABCDEF	Description
Audience	Management and Analytics team of Company X
Business Question	Company X's business provided the following questions: • Marketing/promo activities effectiveness return on ad spend - what work / did not? • Insights on the Target Audience on marketing platform? • How marketing activities has co-relation impact on sales (if any at all) - what can we do better or any new ideas?
Category	Analytical, Strategic Dashboard
Data	Sales, Retail, Marketing data are available. Lack of product information and customer retention data (customer satisfaction surveys, customer referrals, etc.)
Ethics	Data has been anonymized by Company X. Data provided is business data that does not reveal the identity of customers
Formulate Analytical Questions	What are the types of marketing activities by Company X? How much reach, clicks, and revenue did they achieve? Which marketing platform has the highest reach, click through rate, and conversion rate? Who are Company X's competitors? What are Company X's competitors' strategies to improve sales? What is the churn rate of Company X's customers?

High Level Data Cleaning

Sales

1. Standardize all units of measurement

```
In [ ]:
df1.assign(Amount=lambda x:x['QTY']*12 if x['UNIT OF MEASUREMENT']=='carton' else x['QTY'])
df1.assign(Amount=lambda x:x['QTY']*2 if x['SELLING SKU CODE']=='CR250-2' else x['QTY'])
df1.assign(Amount=lambda x:x['QTY']*4 if x['SELLING SKU CODE']=='CR250-4' else x['QTY'])
```

Facebook Page

2. Integrate and Rename columns

AD Date	FB_Reach	FB_Likes	FB_Follow	FB_Paid reach	FB_Amount Spent	Insta_reach	Insta_followers	Insta_New followers
2021-01-01T00:00:00	21879	11	1	1733	31.49	838	40	3
2021-01-02T00:00:00	22213	11	1	1503	30.83	822	51	3
2021-01-03T00:00:00	21519	22	2	1654	29.61	409	32	5
2021-01-04T00:00:00	22058	13	1	1589	28.99	876	36	3
2021-01-05T00:00:00	20176	14	0	1390	29.66	649	34	5
2021-01-06T00:00:00	15845	8	2	1391	29.6	863	30	1
2021-01-07T00:00:00	17850	15	2	3174	35.08	1303	25	3
2021-01-08T00:00:00	33719	11	1	3298	29.95	1796	50	4
2021-01-09T00:00:00	18279	11	1	3784	30.83	2144	35	1
2021-01-10T00:00:00	19918	14	0	4624	30.17	2079	31	5
2021-01-11T00:00:00	29687	6	2	4694	29.97	2068	16	4
2021-01-12T00:00:00	28201	10	0	4175	23.41	1946	20	5
2021-01-13T00:00:00	14702	10	2	4247	22.89	1768	27	2
2021-01-14T00:00:00	14084	10	1	3648	20.16	2001	39	1
2021-01-15T00:00:00	15647	5	0	3320	20.05	2464	54	1
2021-01-16T00:00:00	16925	6	1	3614	19.85	2222	38	2
2021-01-17T00:00:00	17630	10	1	4098	20.35	1808	22	3
2021-01-18T00:00:00	17868	9	0	3899	19.71	1376	27	11
2021-01-19T00:00:00	14337	13	1	3522	19.74	1742	13	10
2021-01-20T00:00:00	17891	5	1	3650	19.69	2373	30	6
2021-01-21T00:00:00	11809	18	0	3591	19.93	1811	23	8
2021-01-22T00:00:00	13180	16	1	1837	11.38	463	23	4
2021-01-23T00:00:00	25299	6	1	0	0	189	18	6
2021-01-24T00:00:00	14869	14	0	0	0	209	16	4
2021-01-25T00:00:00	7132	4	0	0	0	47	22	4
2021-01-26T00:00:00	11195	5	1	0	0	471	16	4

Retail

3. Introduce ‘Area’ and ’Amount’

```
df2.assign(Amount=lambda x:x['SALES UNIT (piece)']*10 if x['PRODUCT CODE']=='CR-250-TSP2 else x['SALES UNIT (piece)'])
df2.assign(Amount=lambda x:x['SALES UNIT (piece)']*20 if x['PRODUCT CODE']=='CR-700-TSP2 else x['SALES UNIT (piece)'])
```

OUTLET/Online Cust	Area
TP 823-TAMPINES	Tampines
TP 823-TAMPINES	Tampines
PGF 108-PUNGGOL FIELD	Punggol
PGF 108-PUNGGOL FIELD	Punggol
CPV 263-COMPASSVALE	Sengkang
CPV 263-COMPASSVALE	Sengkang
JS 01- ALJUNIED	Geylang
JS 01- ALJUNIED	Geylang
HG 106-HOUGANG	Hougang
HG 106-HOUGANG	Hougang
BK 991-BUANGKOK	Sengkang
BK 991-BUANGKOK	Sengkang
PRIME FOOD & GROCER (TC)	Tampines
PRIME FOOD & GROCER (TC)	Tampines
BR 106-BIDADARI PARK	Bishan
BR 106-BIDADARI PARK	Bishan
JW 763-JURONG WEST	Jurong West
JW 763-JURONG WEST	Jurong West
JW 962-JURONG WEST	Jurong West
JW 962-JURONG WEST	Jurong West
TW 142-TECK WHYE	Choa Chu Kang
TW 142-TECK WHYE	Choa Chu Kang
YB 461-YISHUN	Yishun

Annex A: Assumptions

Unit of Measurement conversion: All units were standardized to piece

- 1 carton = 12 pc
- 0.5kg = 1 pc
- 1 N/A = 1 pc
- For Sets, CR250-4 = 4 pc; CR700-2 = 2 pc

QTY

- Negative QTY values are assumed to be returns and are excluded from the analysis

Product type

- For the Product Types below, Selling SKU Code, Unit SKU Code, and Unit of Measurement are N/A.
- Delivery, display fee, discount, lab test, listing fee, processing fee, promotion
- The name of the product type suggest that it may not be an actual product, hence these product types are excluded from analysis

Cost

- For simplicity, we assume that the cost of CR-250-TSP2 is SGD10 and CR-700-TSP2 is SGD20

Annex B: Competitor Analysis

	Company X	Lo! Low Carb Delights	Aurora Food	Nuvojoy	now	Garden of Life	Meta Mucil	Benefiber
Monthly visits	28,211	18,1961	<5000	<5000	500,000	432,705	461,176	245,875
Unique Visitors	16,034	10,865	<1000	<1000	299,251	272,035	369,916	164,370
Visit Duration	01:23	1:09	N/A	N/A	01:57	2:58	00:57	1:01
Pages Per Visit	2.11	3.89	N/A	N/A	3.18	3.09	1.72	1.56
Bounce Rate	43.67	40%	N/A	N/A	56.22%	53.07%	69.36	75%
Geography	1) US (28%) 2) Singapore (15%) 3) Indonesia (12%)	1) India (89) 2) Australia (3) 3) US (2)	1) Singapore	1) Singapore	1) US (58%) 2) Canada (5) 3) UK (25)	1) US (88%) 2) Canada (2.6%) 3) Inida (1%)	1) US 75% 2) Canada 9% 3) Aust (3%)	1) US 51% 2) UK 8% 3) Aus 5%
Demographics (Gender, Age Group)	53% Male 25-34: 30% 35-44: 22%	54% Male 18-24: 35% 25-34: 35%	N/A	N/A	57% Female 25-34: 26% 35-44: 20% 45-54: 15%	63% Female 25-34: 24% 35-44: 20% 45-54: 16%	62% Female 25-34: 21% 35-44: 21% 45-54: 18%	58% Female 25-34: 25% 35-44: 18%
Relevant Products	Fibre Mix Premix	Premix	Ready-to-eat	Premix	Supplements	Supplements	Supplements	Supplements
PRICE per Serving	Fibre Powder$0.6 Premix $0.8	Premium Premix $0.5 Premix $0.3 Diabetes Meal Plan $1.1	Ready-to-eat $1.59	Ready to eat $1.5-2 Premix $0.7	Apple Fibre $0.4 PhyslliumHusk $0.3	FibreMix Drinks 0.6 Premium Fibre SuperFood mix Drink $1.5	Fibre mix drink $0.7 Fibre Crisp $1.7	Fibre Chewables $0.6 Fibre mix drink $0.8 Fibre Supplement Stock Packs $1.6

Competitors data retrieved from Similarweb and website scrapping

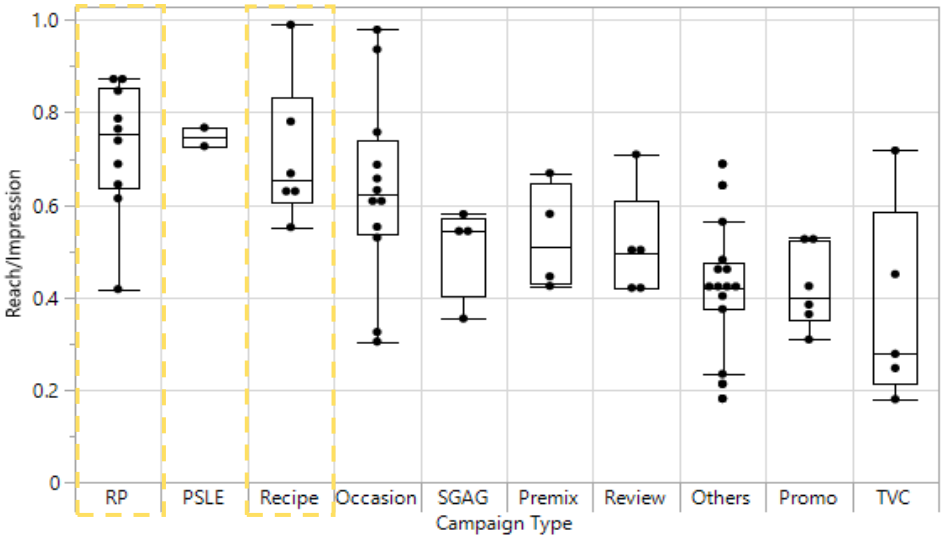
Annex C: Customer Segments (1/2)

Due to lack of detailed information on customer demographics and product information, reasonable assumptions were made to derive Company X's key customer segments.

Homemakers

Since RP and recipe campaigns have high reach to impression ratio, it is assumed that Company X's potential customers are home makers who would like to try Company X's products before buying and refer to recipes to cook for their families.

Facebook Campaign Types



Circumstantial

It is observed from campaign names Company X targets diabetes patients who consume low-GI food. There are also other common chronic illnesses that require low-GI food intake and other dietary restrictions. Hence, this group of customers with medical needs fall under this segment.

Campaign name	Ad set name
RFFA FP Promo ad - Oct 21	Diabetics & Pre-diabetics
WDD-IGgiveawayNov21	Health conscious Millennials
WDD-FBgiveawayNov21	35-64 Grocery Shoppers, Health Conscious, Diabetic
WDD-testimonials-Nov21	35-65+ Grocery Shoppers, Health Conscious, Diabetic
MCTraffic-Nov21	35-64 Grocery Shoppers, Health Conscious, Diabetic
MCEngagement-Nov21	35-64 Grocery Shoppers, Health Conscious, Diabetic

WDD = World Diabetes Day

Annex C: Customer Segments (2/2)

Due to lack of detailed information on customer demographics and product information, reasonable assumptions were made to derive Company X's key customer segments.

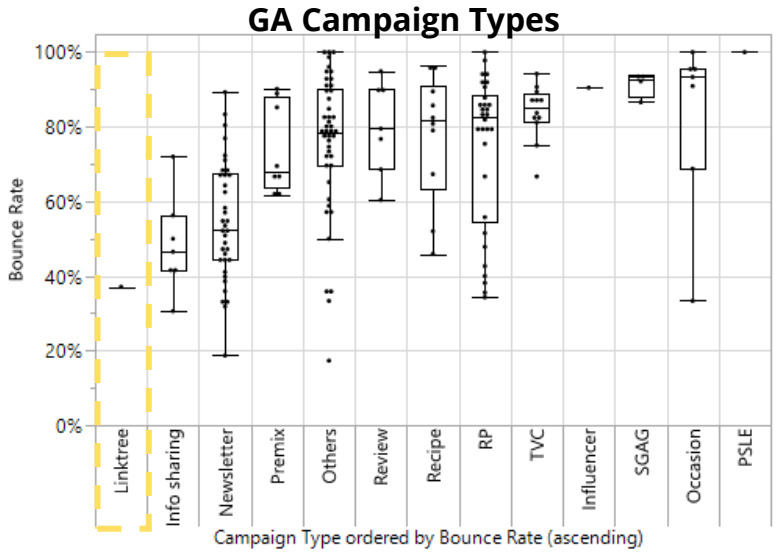
Health-nut

It is observed from the campaign names Company X targets health-conscious customers. We also understand from competitor's analysis that fitness enthusiasts tend to purchase such products or supplements.

Campaign name	Ad set name
RFFA FP Promo ad - Oct 21	Health-conscious Silvers
RFFA FP Promo ad - Oct 21	Health-conscious Millennials
MCTraffic-Nov21	Health conscious Foodie Millennials
MCEngagement-Nov21	Health conscious Millennials
RFFA-traffic-FebMar22	Foodie & health-conscious Millennials 25-34
Premixes-VD-traffic-Feb22	Foodie & health-conscious Millennials 25-34
Salmon Kamameshi	30 - 55, Female, cooking & health
Mothersday-reach-AprMay22	Foodie & health-conscious 25 - 44
Salmon Rc with AF	30 - 55, Female, cooking & health
RFFA-reach-MayJune22	Health conscious and cooking 35 - 64

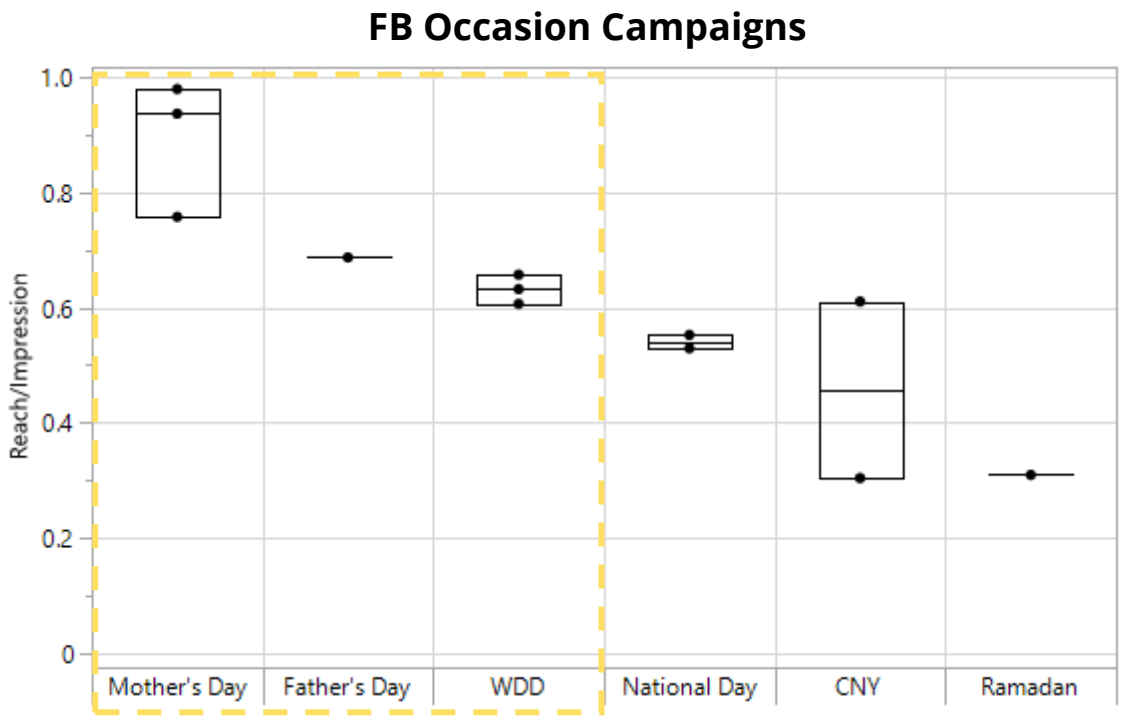
Impressionable

As mentioned in earlier slides, the Michelle Chong (local celeb) ad resulted in a spike in FB follows and likes. In addition, Linktree campaigns (assumed to refer to influencers) also have low bounce rate. Therefore, there is a group of customers that became aware of Company X through celebrities and influencers.



Annex D: Occasion-related Campaigns

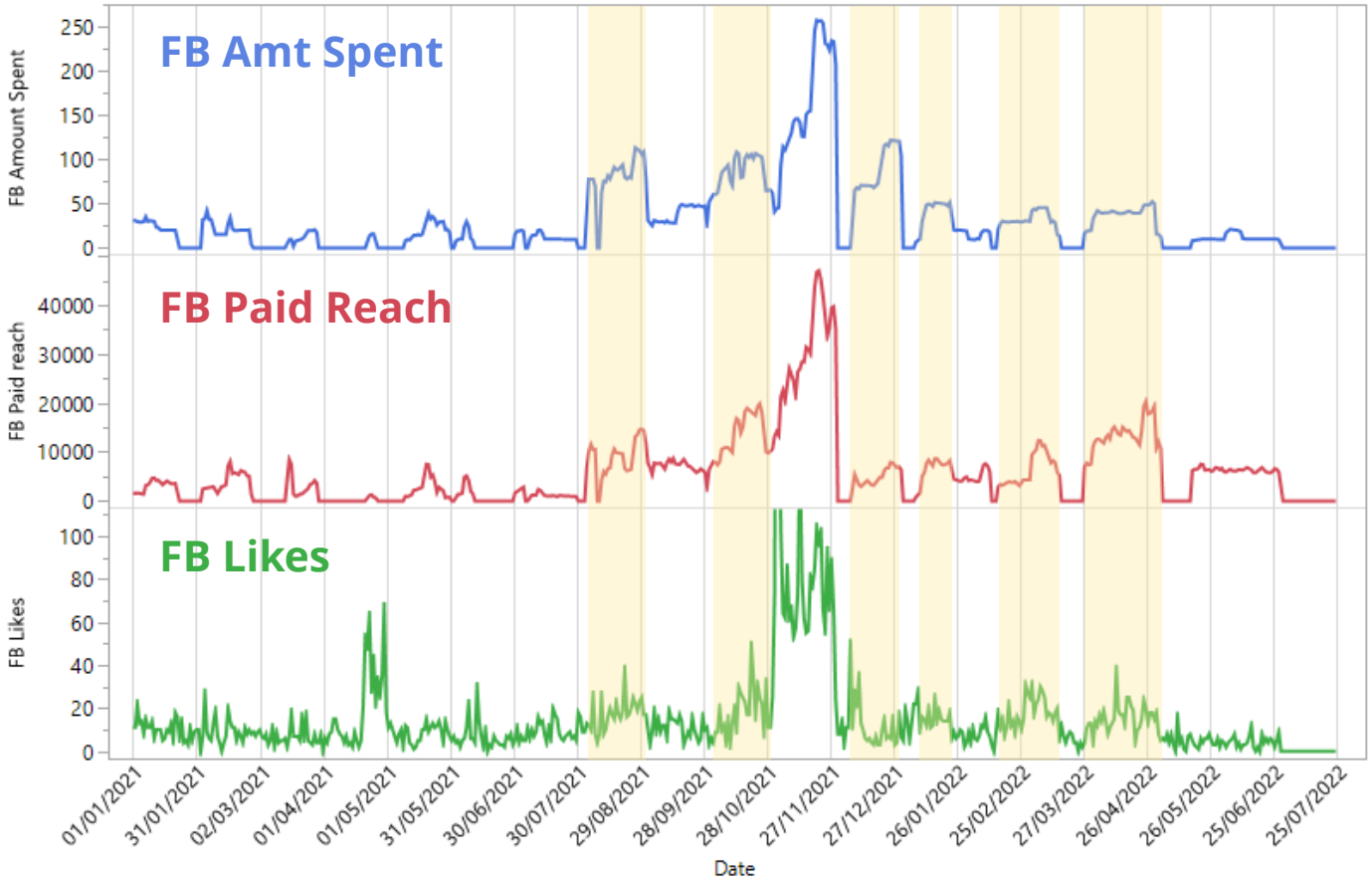
- As mentioned in earlier slides, occasion-related FB campaigns have one of the highest reach to impression ratio (average of 0.62).
- Amongst the occasion-related campaigns, Mother's Day, Father's Day and World Diabetes Day (WDD) have the highest reach to impressions ratio (>0.6).
- Recommendation: Company X should invest more in Mother's Day, Father's Day and (WDD) campaigns, and further experiment the effectiveness other occasions that they have yet to run campaigns for.



Annex E: FB Expenditure

- During periods with higher FB expenditure FB likes also increased. FB expenditure is therefore effective in increasing brand awareness.
- Recommendation: Company X should continue to invest in FB ads.

FB Page Metrics



Annex F: Campaign Type Clarification

Clarification of info-sharing and RP campaigns:

List of Info-sharing GA campaigns

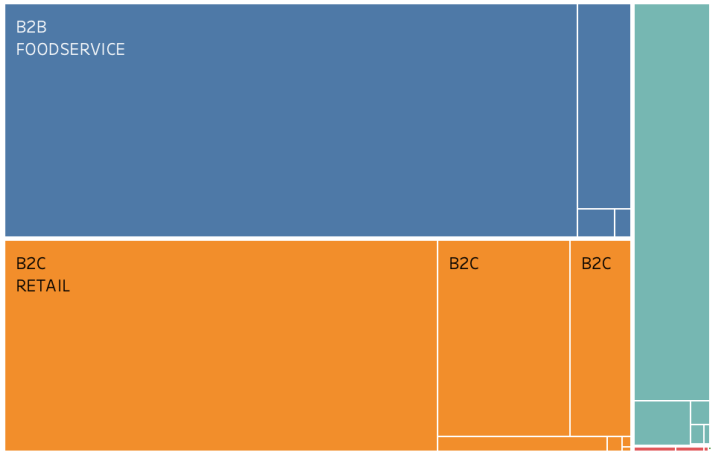
Campaign Name
outbrains-natives-ads-how-to-eat-healthier
self-care-blog
types-of-rice
gi-and-its-impact-on-our-health
are-carbs-bad
self-care blog
benefits-and-sources-of-fibre

Examples of RP campaigns

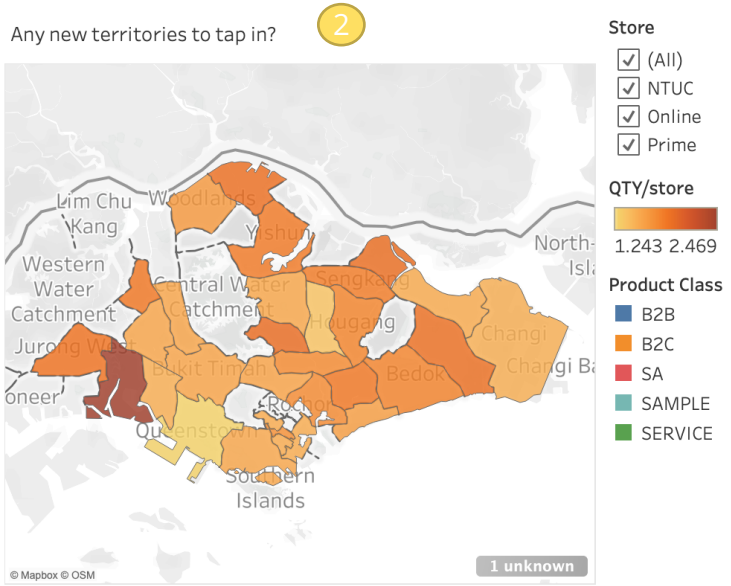
Campaign Name
RP Support_Dumpling Darlings
RP Collage_Feb21
RP Collage_Feb21
RP Support - BTK & YK - May 21
RP support - Collins, Don, Colonial & BKKJam - May21
RP Support - Ah Yat, Lotus & Yum Cha - Jun21
RP support - BTK video_traffic_RFFA_Jul21
Support RP - SweeHengCff_Aug21
Support RP - SweeHengCff_Aug21
BD support-Shihlin-Nov21

Annex G: DB to understand the market

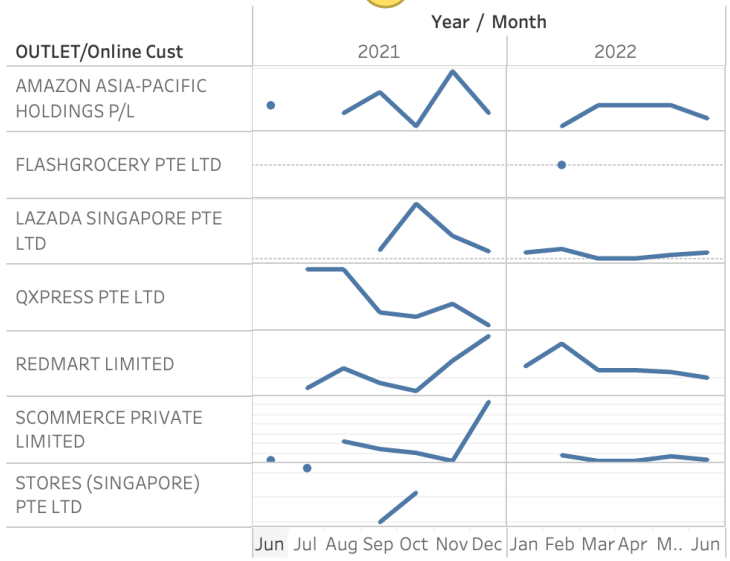
Which is my target industry? 1



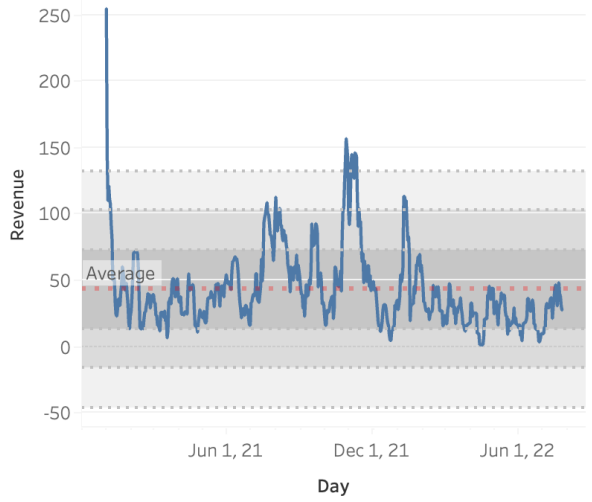
Any new territories to tap in? 2



How are the online retailers doing? 3



And from my website? 4



1. Tree Map: Depicting the business model to focus on (B2B, B2C and so on).

2. Choropleth Map: Shows the number of products sold in each territory.

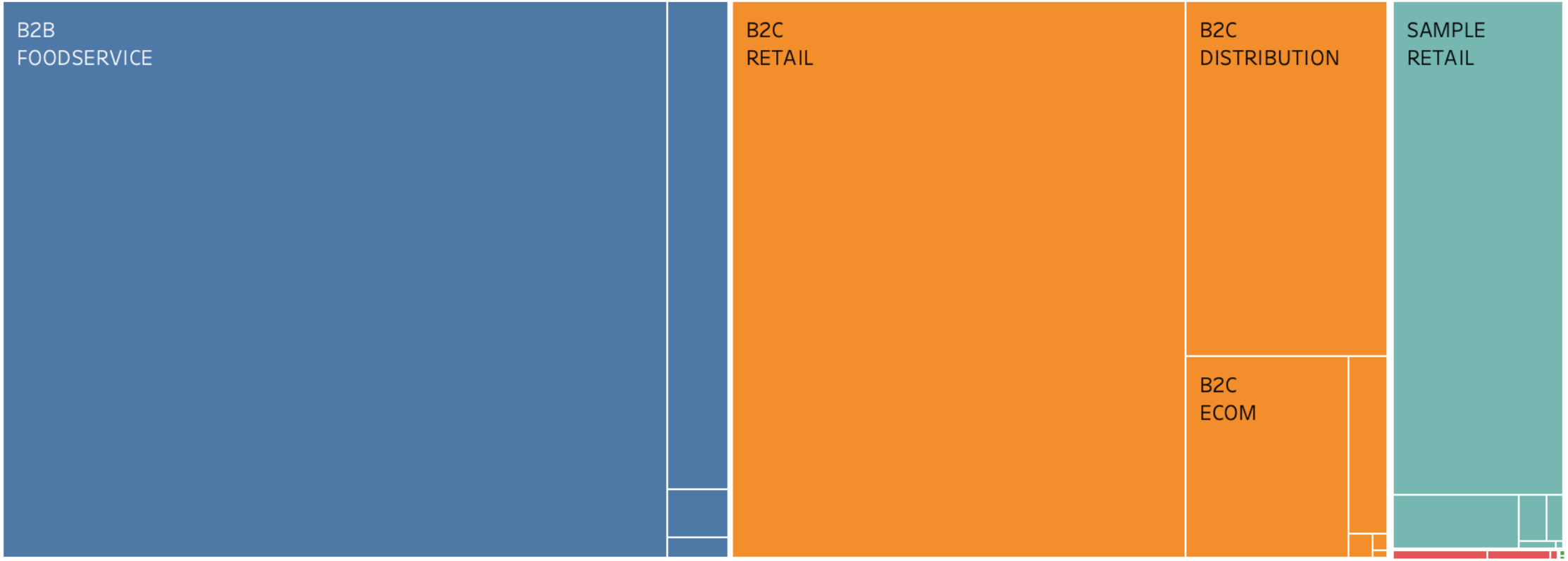
3. Sparkline: Comparing the online sales from the retailers websites.

4. Control Chart: Understanding the revenue generation using the Nelson's points.

Click here to access the interactive dashboard

Annex GA: What is my ideal business model?

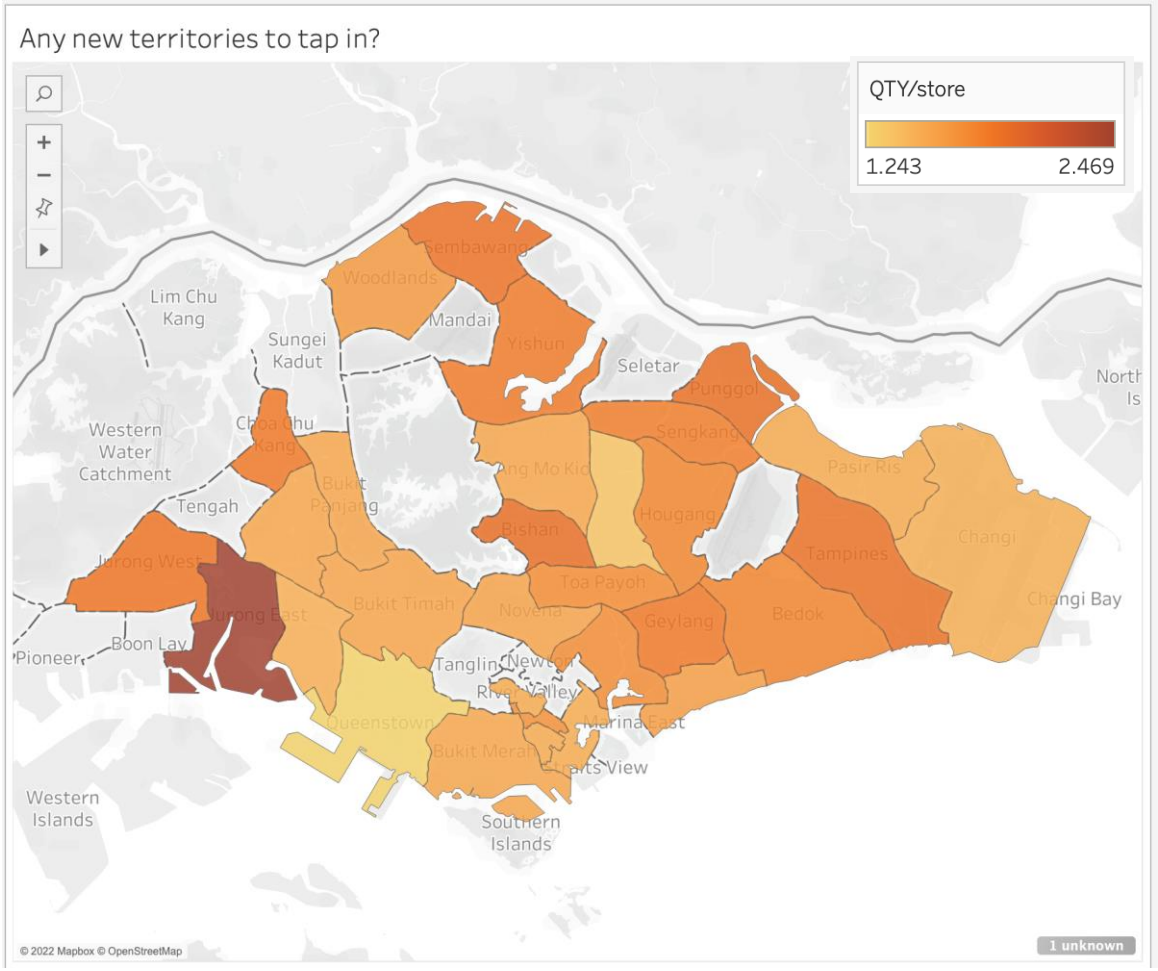
Which is my target industry?



Click here to view the interactive chart

Analysis: From this plot, most of its customers are in 'Food Service' Industry in the B2B business model while it comes from Retail in the B2C business model. It's B2B game is stronger than B2C!

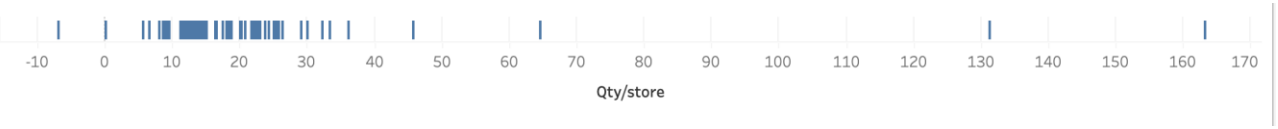
Annex GB: Is my sales across SG uniform?



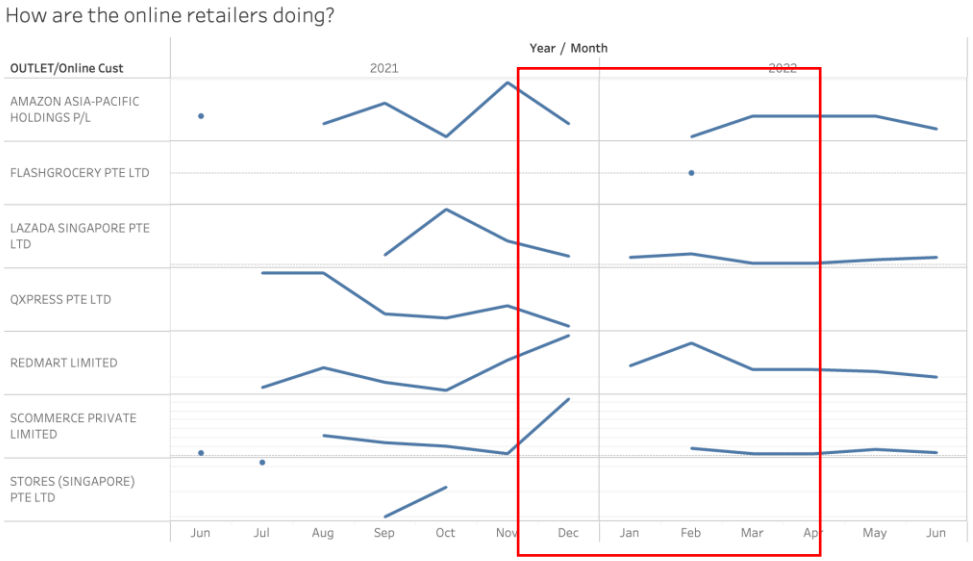
Click here to view the interactive chart

Analysis: Looking at the graph, we saw skewed distribution in 'QTY/store'. As a result, this was transformed using the log distribution.

From here we can notice that Company X has a good hold of the customers in the west while other regions are yet to be focused on. Residential areas such as Tampines and Novena have considerably low amount of sales compared to Jurong East/West.



Annex GC: What about the 'online' market



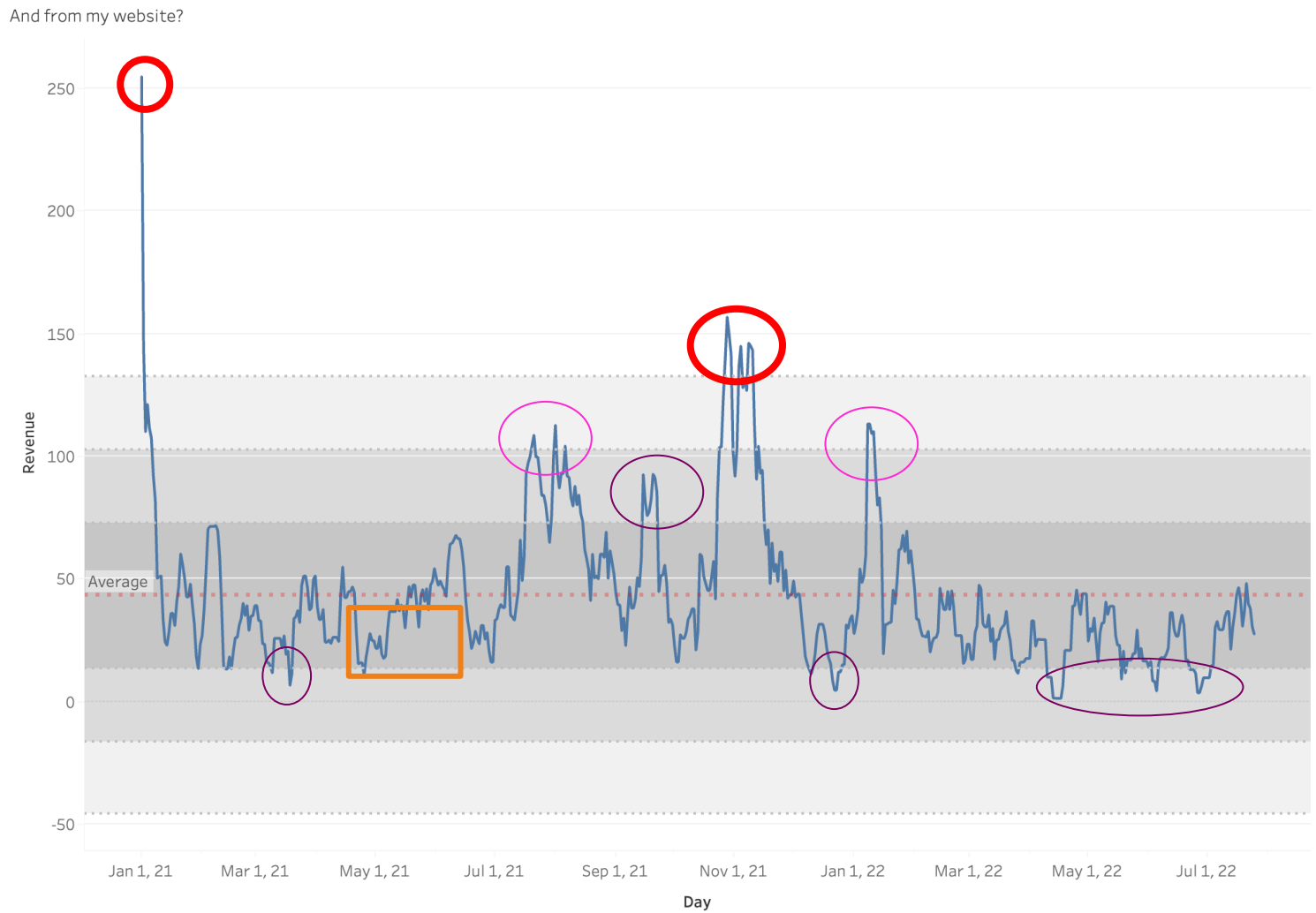
Click here to view the interactive chart

Analysis: There has been a decrease in sales from end of 2021 and start of 2022. This is a matter of serious concern and Company X can reach out to retailers to understand this decline in sales.

They can do this by doing Sentiment Analysis on the comments provided by the customers on the retailer's website or do a NPR or Customer Satisfaction Score on the ratings given.

Annex GD: Sales from Company X's website

Click here to view the interactive chart



Nelson rules

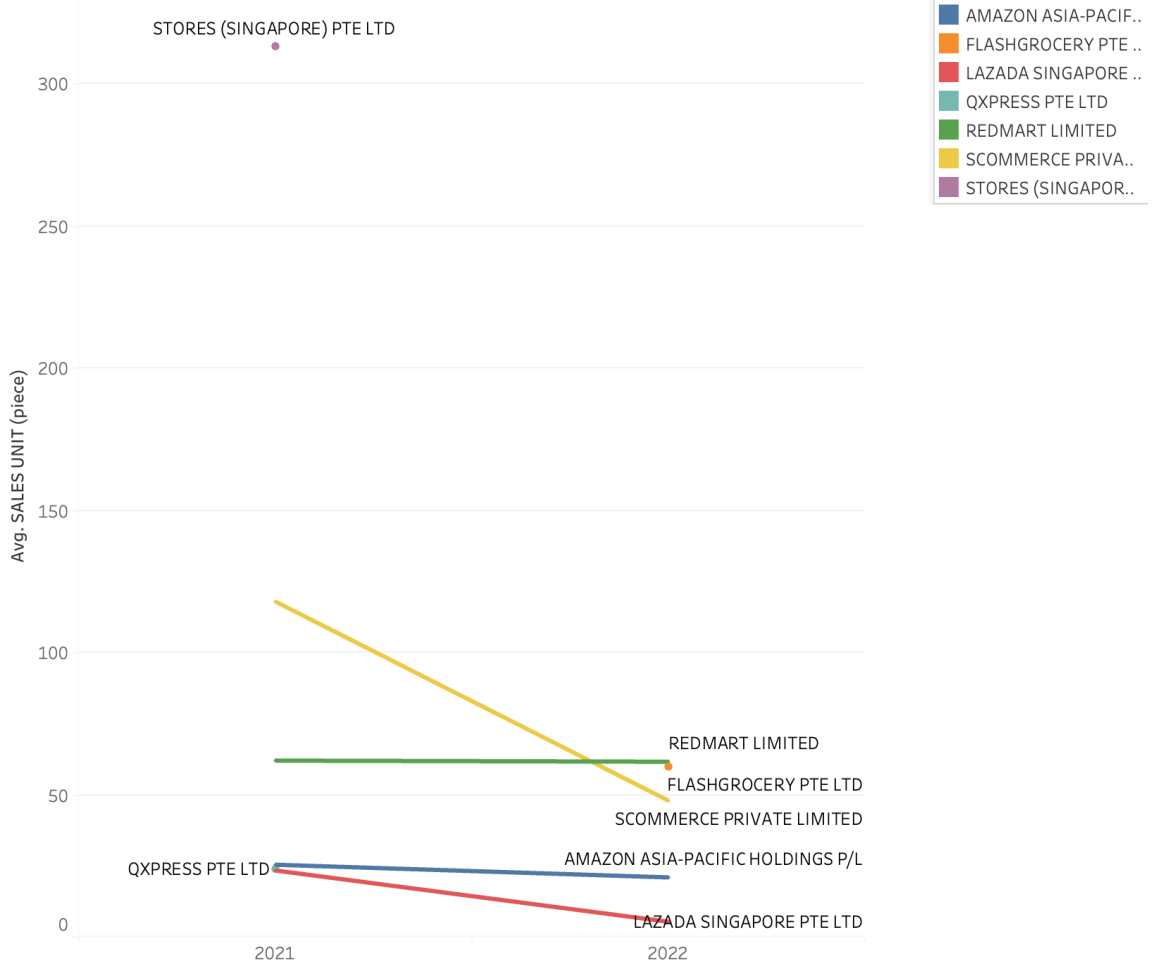
- Out of control (Needs attention)
- Medium out of control (Can be looked upon)
- Slightly out of control
- Trend (Area of focus)

What do we understand from the rules?

- Revenue in Jan and Nov 2021 seem to above 3 SDs and hence out of control. The reason behind this drastic increase in sales on these days could be from Foodservice industry ordering in bulk.
- Sales in May and June saw an upward trend in revenue.
- Sales in the 2022 was slightly out of control (in May-June).
- Sales from the website was good in Jan 22 but it seemed to go down in the subsequent months.

Annex GE: Sales made by ecom retailers

How are the retailers doing?



Click here to view the interactive chart

What is the general trend?

Except Redmart, all other stores saw a decrease in sales in 2022 and Scommerce saw a sharp decline in sales in 2022

Are all loyal?

Some retailers did not continue with Company X in the upcoming year.

Annex H: Survival Analysis (1/3)

01

What and Why:

We use survival analysis to determine customer churn for Company X. We use survival analysis over other regression model as it can deal with censorship data.

02

The data:

We analyze the 'Sales' sheet to determine the stickiness of Company X's clients. We track purchase of each client over the tenure.

Data cleaning python snippet

```
churn_data = pd.read_csv('Sales.csv')
# transform tenure and churn features
churn_data['Tenure'] = churn_data['Tenure'].astype(float)
churn_data['Churn'] = churn_data['Churn'] == 'Yes'
churn_data['CUSTOMER CODE'] = churn_data['CUSTOMER CODE'].str.replace(r'ALF', '').astype(int)
churn_data['STATUS'] = churn_data['STATUS'].str.replace(r'\d\d*\. ', '')
churn_data['SEGMENT'] = churn_data['SEGMENT'].replace('0', 'NA')
churn_data['INDUSTRY'] = churn_data['INDUSTRY'].replace(['OTHERS', '0'], 'OTHERS1')
```

03

The assumptions:

If a customer has not purchased in the last three months, we assumed that the customer has churned.

04

Data cleaning:

- CUSTOMER CODE field is converted to INT from STR by eliminating the prefix 'ALF.
- We eliminate numeric and special characters from STATUS field.
- We replace '0' value in the SEGMENT field with 'NA'.
- We replace '0' and 'OTHERS' values in the industry field with 'OTHERS1'.

Annex H: Survival Analysis (2/3)

01

Kaplan Meier Curve:

- We look at the survival rate for the average customer using a Kaplan-Meier survival curve. We fit a KM survival curve to the customer churn data, and plot our survival curve with a confidence interval.
- The survival curve is cumulative. Meaning, that after 17.5 months, the chance of a customer continuing product purchase is just shy of 60%.

02

Cox Proportional Hazard Model:

- To examine the effects of different features, we use the Cox Proportional Hazards Model.
- 'Hazards' can be thought of something that would increase/decrease chances of survival.
- Since some data fields in in our dataset are highly correlated, we use 0.1 penalizer while calibrating the model.

Kaplan Meier Curve snippet

```
# fitting kmf to churn data
t = churn_data['Tenure'].values
churn = churn_data['Churn'].values
kmf = lifelines.KaplanMeierFitter()
kmf.fit(t, event_observed=churn, label='Estimate for Average Customer')# plotting kmf curve
fig, ax = plt.subplots(figsize=(10,7))
kmf.plot(ax=ax)
ax.set_title('Kaplan-Meier Survival Curve', fontsize = 18, fontweight = 'bold')
ax.set_xlabel('Customer Tenure (Months)', fontsize = 14)
ax.set_ylabel('Customer Survival Chance (%)', fontsize = 14)
mpl.rcParams['axes.prop_cycle'] = mpl.cycler(color=["#FFC900", "#F77803", "#CE004E", "#4F003F",
plt.legend(fontsize=16)
plt.show()
```

Cox Proportional Hazard Model snippet

```
ohe_features = ['STATUS', 'SALES PERSON', 'SALES CHANNEL', 'INDUSTRY', 'SEGMENT']
churn_hazard = pd.get_dummies(churn_data,
                              drop_first=True,
                              columns=ohe_features)
features_to_drop = ['CUSTOMER CODE', 'SUB-SEGMENT']
churn_hazard = churn_hazard.drop(features_to_drop, axis=1)
```

```
cph = lifelines.CoxPHFitter(penalizer=0.1)
cph.fit(churn_hazard, duration_col='Tenure', event_col='Churn', show_progress=False)
cph.print_summary()
```

Annex H: Survival Analysis (3/3)

Cox Proportional Hazard Model - Summary

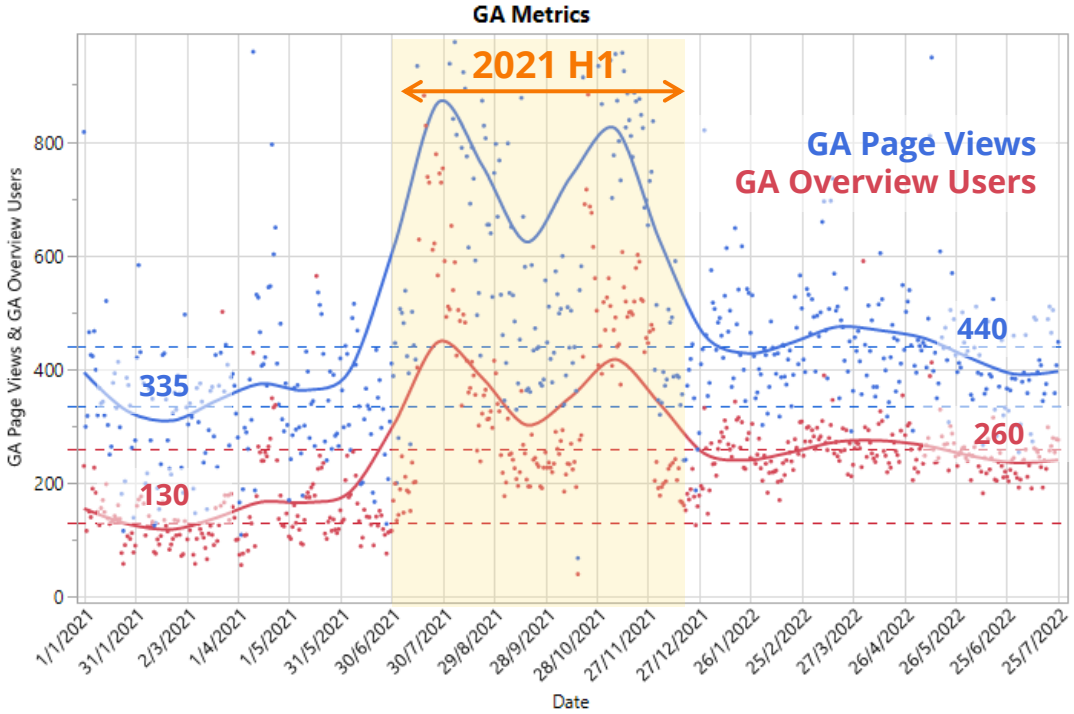
model	lifelines.CoxPHFitter
duration col	'Tenure'
event col	'Churn'
penalizer	0.1
l1 ratio	0.0
baseline estimation	breslow
number of observations	48
number of events observed	11
partial log-likelihood	-28.03
time fit was run	2022-11-01 13:14:30 UTC

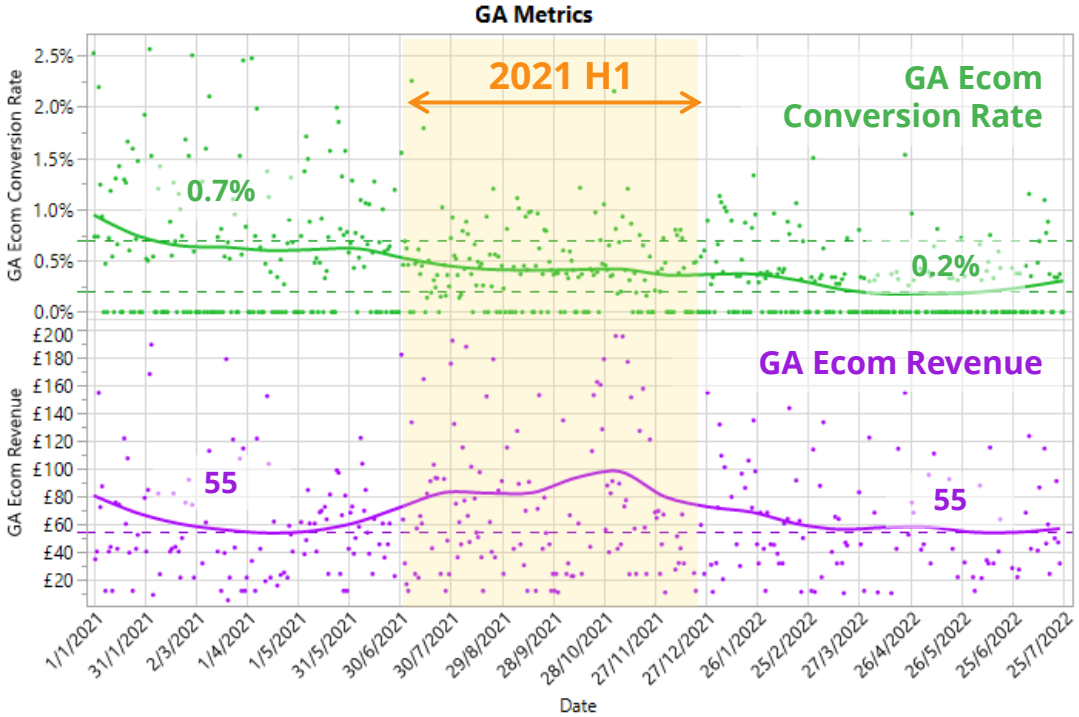
Concordance	0.91
Partial AIC	116.07
log-likelihood ratio test	14.70 on 30 df
-log2(p) of ll-ratio test	0.01

	coef	exp(coef)	se(coef)	coef lower 95%	coef upper 95%	exp(coef) lower 95%	exp(coef) upper 95%	cmp to	z	p	-log2(p)
STATUS_DROP	0.67	1.96	1.08	-1.45	2.79	0.23	16.32	0.00	0.62	0.53	0.90
STATUS_LEAD	-0.28	0.75	2.80	-5.78	5.21	0.00	183.65	0.00	-0.10	0.92	0.12
STATUS_PROSPECT	0.10	1.10	0.85	-1.57	1.77	0.21	5.88	0.00	0.12	0.91	0.14
SALES PERSON_FX	1.15	3.15	1.32	-1.44	3.74	0.24	41.97	0.00	0.87	0.39	1.38
SALES PERSON_LS	0.55	1.74	0.76	-0.94	2.05	0.39	7.78	0.00	0.73	0.47	1.10
SALES CHANNEL_GLOBAL KEY ACCOUNT	0.93	2.53	1.12	-1.27	3.13	0.28	22.90	0.00	0.83	0.41	1.29
SALES CHANNEL_OTHERS	0.39	1.48	0.73	-1.04	1.82	0.35	6.17	0.00	0.54	0.59	0.76
SALES CHANNEL_SG DISTRIBUTOR	-1.18	0.31	1.18	-3.49	1.14	0.03	3.12	0.00	-1.00	0.32	1.65
SALES CHANNEL_SG KEY ACCOUNT	-0.49	0.61	0.88	-2.21	1.23	0.11	3.42	0.00	-0.56	0.58	0.80
SALES CHANNEL_SG ONLINE	-0.64	0.53	1.66	-3.90	2.62	0.02	13.68	0.00	-0.39	0.70	0.51
INDUSTRY_ECOM	-0.62	0.54	1.95	-4.45	3.20	0.01	24.46	0.00	-0.32	0.75	0.42
INDUSTRY_FOODSERVICE	0.19	1.21	0.75	-1.27	1.66	0.28	5.23	0.00	0.26	0.80	0.32
INDUSTRY_MANUFACTURER	0.09	1.09	0.86	-1.60	1.77	0.20	5.88	0.00	0.10	0.92	0.12
INDUSTRY_MARKETPLACE	-0.61	0.54	2.64	-5.78	4.56	0.00	95.14	0.00	-0.23	0.82	0.29
INDUSTRY_OTHERS1	-0.64	0.52	1.24	-3.07	1.78	0.05	5.95	0.00	-0.52	0.60	0.73
INDUSTRY_RETAIL	0.58	1.79	1.55	-2.47	3.63	0.08	37.62	0.00	0.37	0.71	0.50
SEGMENT_B2B INGREDIENT	-0.32	0.72	2.77	-5.74	5.10	0.00	163.36	0.00	-0.12	0.91	0.14
SEGMENT_B2C	0.92	2.50	1.27	-1.56	3.40	0.21	29.89	0.00	0.72	0.47	1.09
SEGMENT_BAKERY	0.27	1.31	1.28	-2.23	2.78	0.11	16.10	0.00	0.21	0.83	0.27
SEGMENT_CATERING	-0.62	0.54	2.51	-5.55	4.30	0.00	73.69	0.00	-0.25	0.80	0.31
SEGMENT_CHARITY	-0.82	0.44	2.45	-5.62	3.98	0.00	53.69	0.00	-0.33	0.74	0.44
SEGMENT_MARKETPLACE	-0.62	0.54	1.95	-4.45	3.20	0.01	24.46	0.00	-0.32	0.75	0.42
SEGMENT_NA	0.22	1.25	0.80	-1.35	1.80	0.26	6.02	0.00	0.28	0.78	0.36
SEGMENT_PACKAGED FOOD	-0.61	0.54	2.55	-5.61	4.38	0.00	79.56	0.00	-0.24	0.81	0.31
SEGMENT_RESTAURANT	0.05	1.05	0.78	-1.48	1.58	0.23	4.86	0.00	0.06	0.95	0.07
SEGMENT_STAPLES	-0.78	0.46	1.77	-4.25	2.69	0.01	14.68	0.00	-0.44	0.66	0.60
SEGMENT_SUPPLEMENTS	-0.61	0.54	2.55	-5.61	4.38	0.00	79.56	0.00	-0.24	0.81	0.31
SEGMENT_TREATS	-0.44	0.64	1.59	-3.57	2.68	0.03	14.65	0.00	-0.28	0.78	0.36
SEGMENT_WEBSITE	-0.61	0.54	2.64	-5.78	4.56	0.00	95.14	0.00	-0.23	0.82	0.29
SEGMENT_WHOLESALER	3.91	49.71	1.84	0.30	7.52	1.34	1839.53	0.00	2.12	0.03	4.88

Annex I: Boost Customer Retention

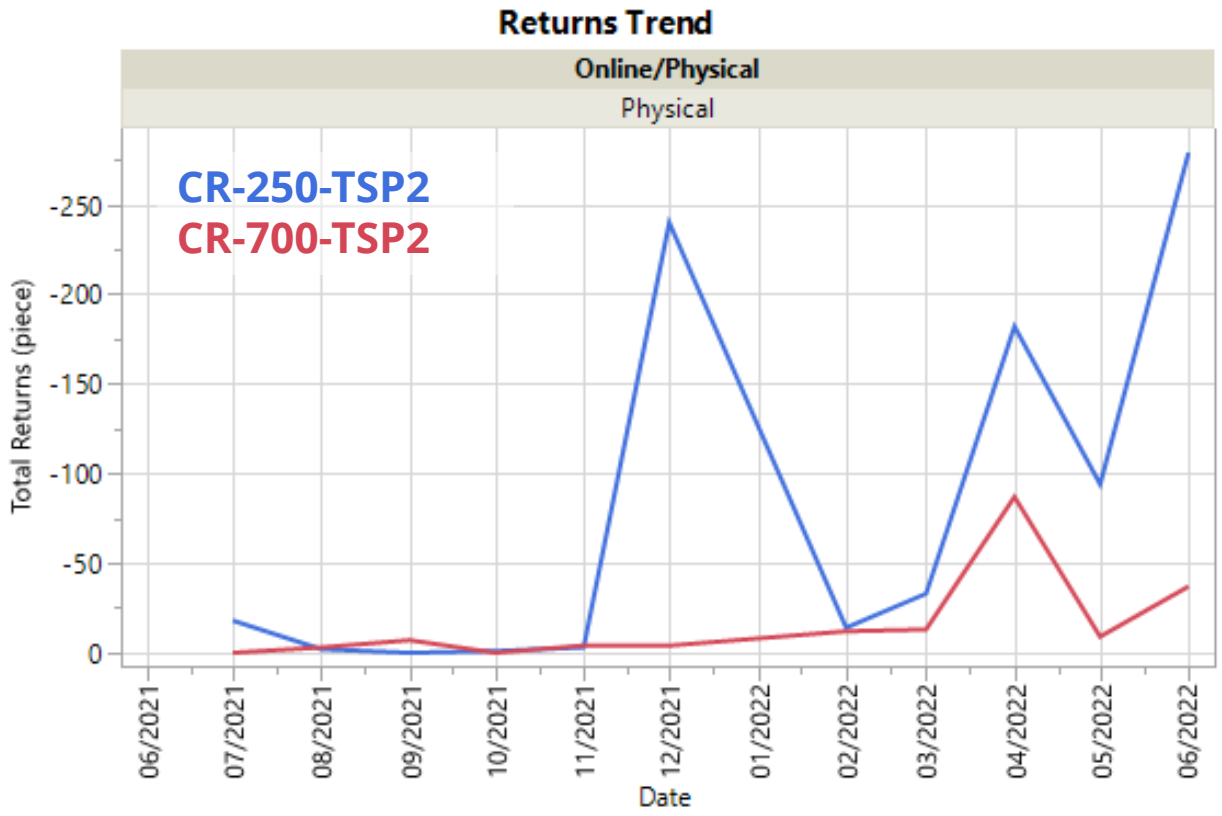
- After successful campaign period in 2021 H2
  - Baseline of GA page views and overview users increased. This suggests that overall brand awareness and interest increased.
  - However, GA Ecommerce revenue returned to pre-2021 H2 level and GA Ecommerce conversion rate did not increase (in fact it has been on the decline). This suggests that customer retention is poor since customers are not repurchasing after the campaign period.
- Recommendation: Customer acquisition is not sufficient; Company X needs to invest more in customer retention and collect customer retention sensors such as customer satisfaction rate, customer referrals, and repurchase rate.





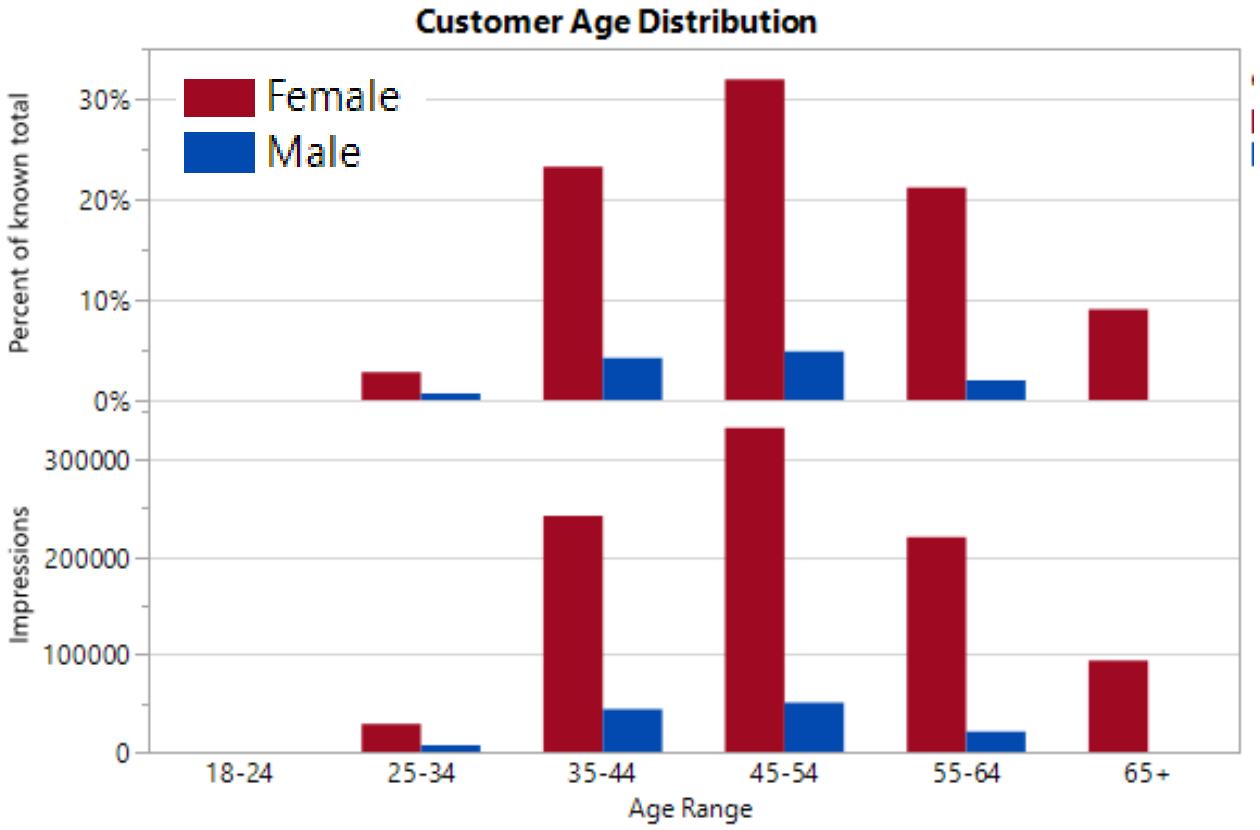
Annex J: Boost Customer Satisfaction

- Quantity of returns is on the rise. (Negative sales quantity are assumed to be returned goods).
- Recommendation: Company X should investigate if these are due to defective or expired products and provide support to customers to increase customer satisfaction.

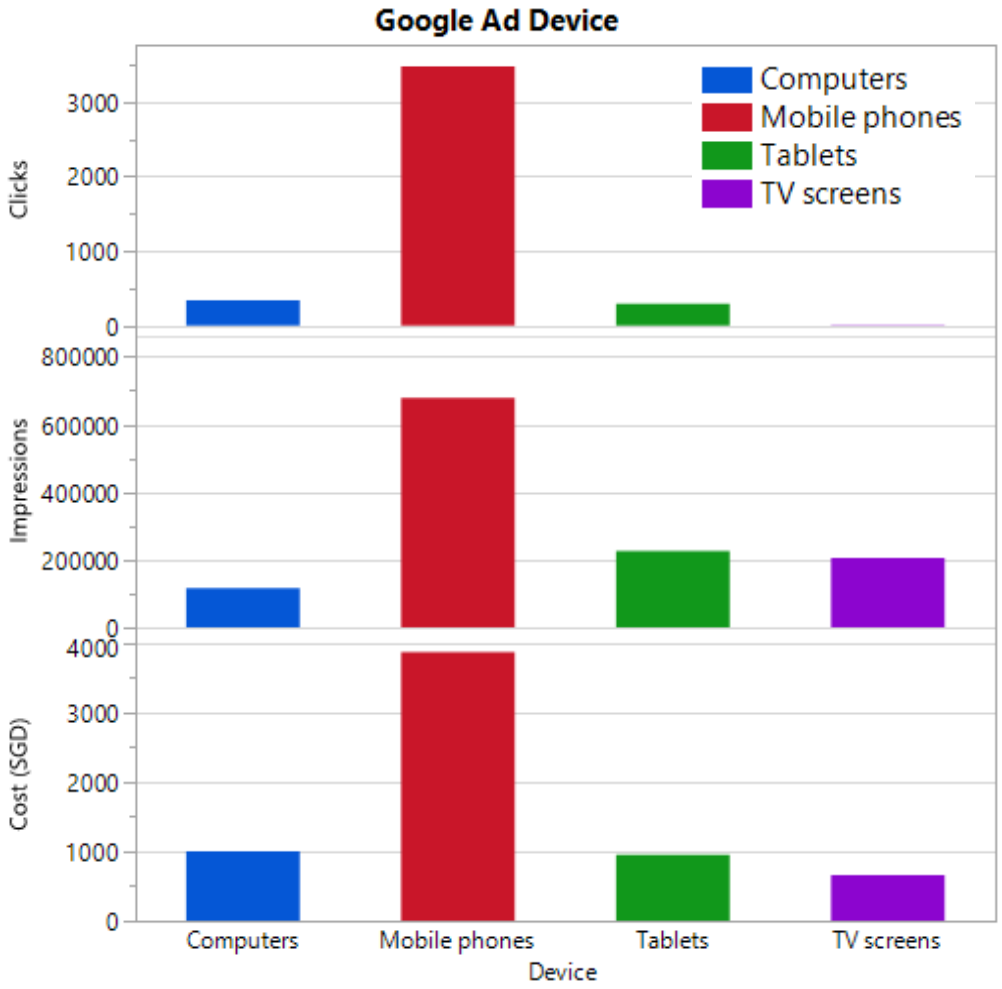


Annex K: Customer Demographics

- Majority of Company X's customers are females (88.2% of customers)
- They are between 35 to 64 years old (86.6% of female customers).



- The main mode of viewing ads and purchasing is through their mobile phones (84.7% of clicks and 59.7% of cost).



ADDITIONAL INFORMATION

SOCIAL MEDIA

Social Media Campaigns

Total Cost = $6,488.54

Total Clicks = 4099

Avg CTR = 0.38%

Avg CPC = $1.7

Avg Reach/Impression = 0.55

Avg Reach/Impression = 0.58

Total Cost = $13,886.58

Total Clicks = 18,381

Avg CTR = 0.86%

Avg CPC = $0.76

- FB and IG campaigns have comparable reach to impression ratio.
- IG campaigns have higher CTR and CPC than GA campaigns.
- Based on limited campaign data, **FB ≈ IG > GA campaigns.**
- Recommendation: Company X should invest more in FB and IG campaigns than GA campaigns.

Social Media Snapshots

Avg CTR = 1.66%

Avg Reactions per Post = 19

New Followers = 730

Total Reach = 20,487,626

Total Paid Reach = 3,402,806

Amt Spent = $19,229.64

Avg CTR = 0.18%

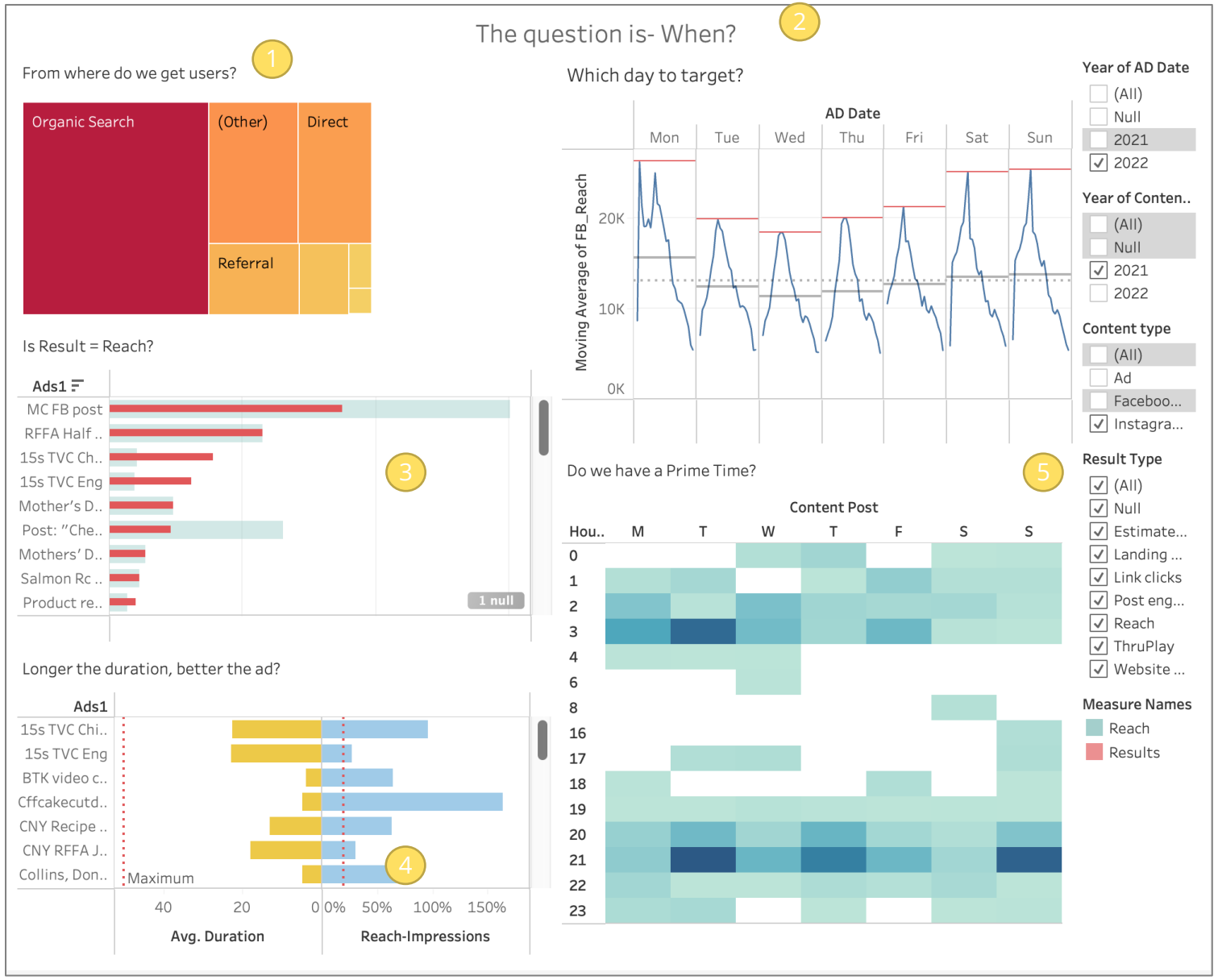
Avg Reactions per Post = 11

New Followers = 815

Total Reach = 577,601

- FB outperforms IG in CTR, reactions per post, and reach.
- FB is more effective in creating awareness of Company X's products than IG.
- Recommendation: Company X should focus more on FB then on IG.

DB: Understanding ads posted on social media



1 Tree Map: Depicting the percentage of users from the channel.

2 Time Series Plot: Moving Average of reach obtained from Facebook Ads faceted by the weekday.

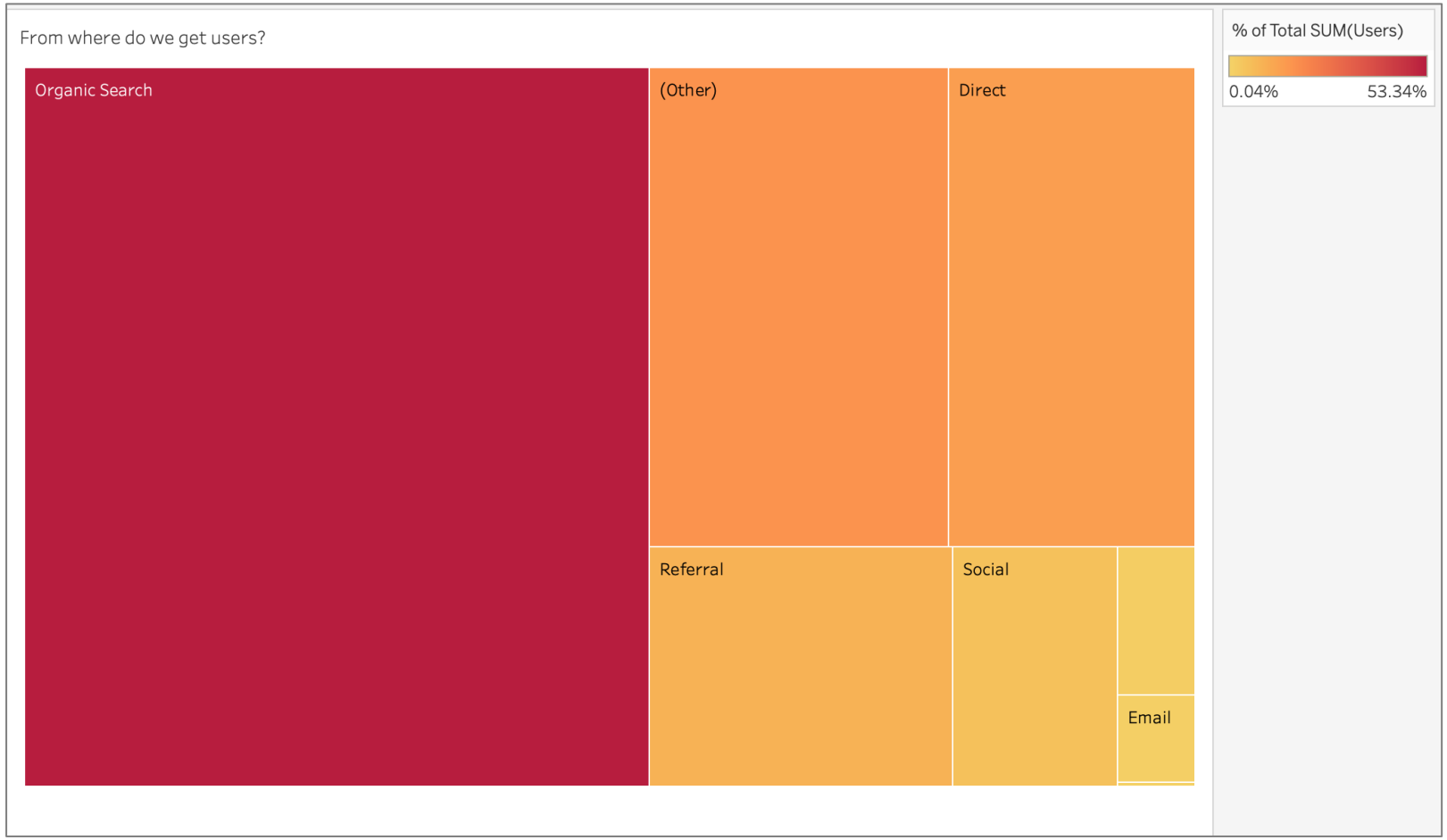
3 Bullet graph: Comparing the result and reach numbers based on the result type

4 Pyramid graph: Comparing the duration of the Instagram ads and the ratio of reach to impressions.

5 Heat Map: Analyzing the ideal time (In terms of hours) to post the next Instagram or Facebook ads (based on the filter).

Click here to access the interactive dashboard

Which channel dominates the most?

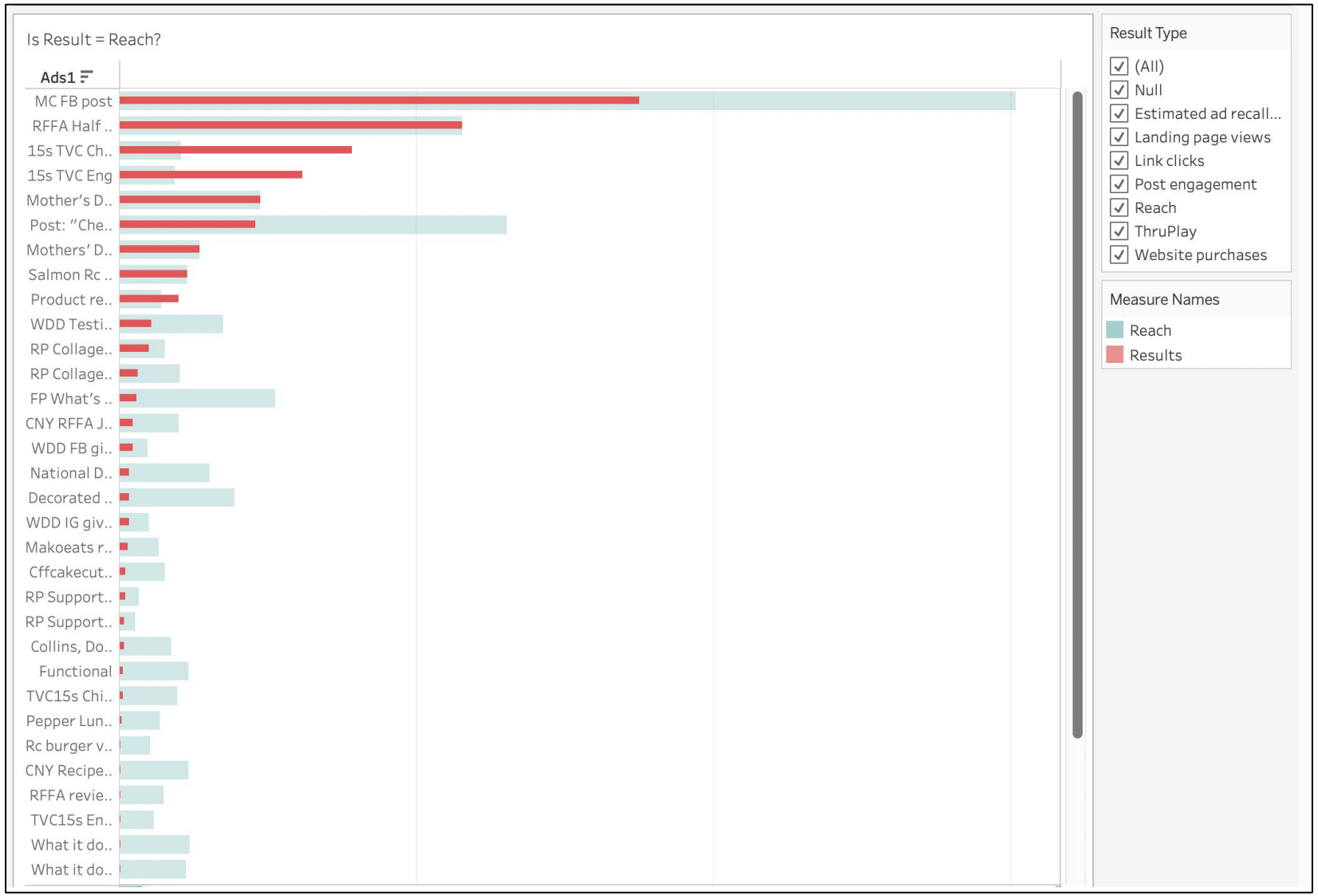


Analysis: From this plot, we can see that most of the users (53.4%) are drawn to the products through Organic Search.

Surprisingly, only 4.73% of the users are drawn by Social Media and this becomes our area of focus.

Click here to view the interactive chart

What kind of ads attracts users?



Click here to view the interactive chart

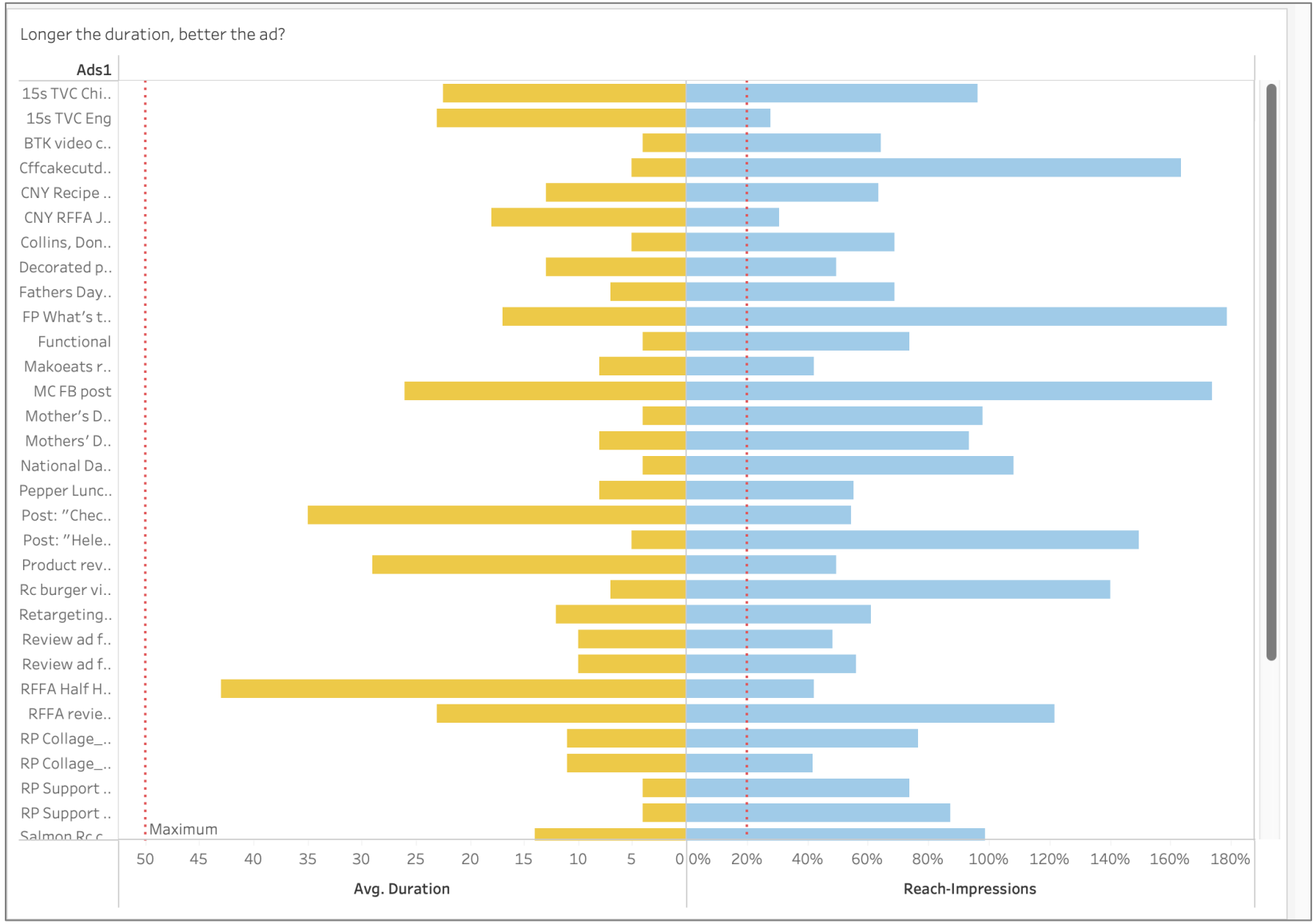
Analysis: Based on the result type, we noticed that Ads which have a high reach may not necessarily produce a high result.

Ads which were a success:
15s TVC Chinese, 15s TVC English produced a high result of result type *Thruplay* compared to its reach.

Ads to focus more attention on:
Review Ad for RFFA did not produce a high result through website purchases compared to its reach.

Next steps: Content and the duration for these ads can be reviewed to see where can we attract more users.

Does length matter?



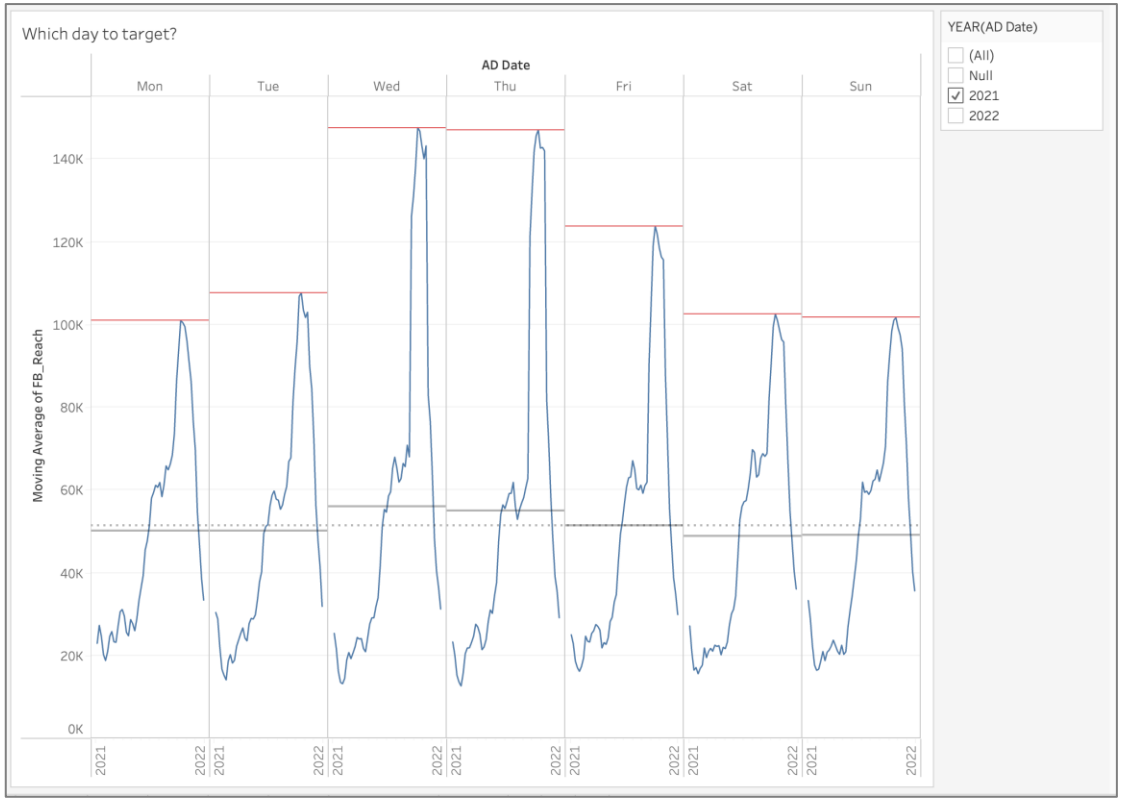
While the graph in yellow depicts the duration, the one in blue depicts the ratio of reach to impressions. A threshold of 20% is kept which means that an ad whose ratio less than 20% should not be considered.

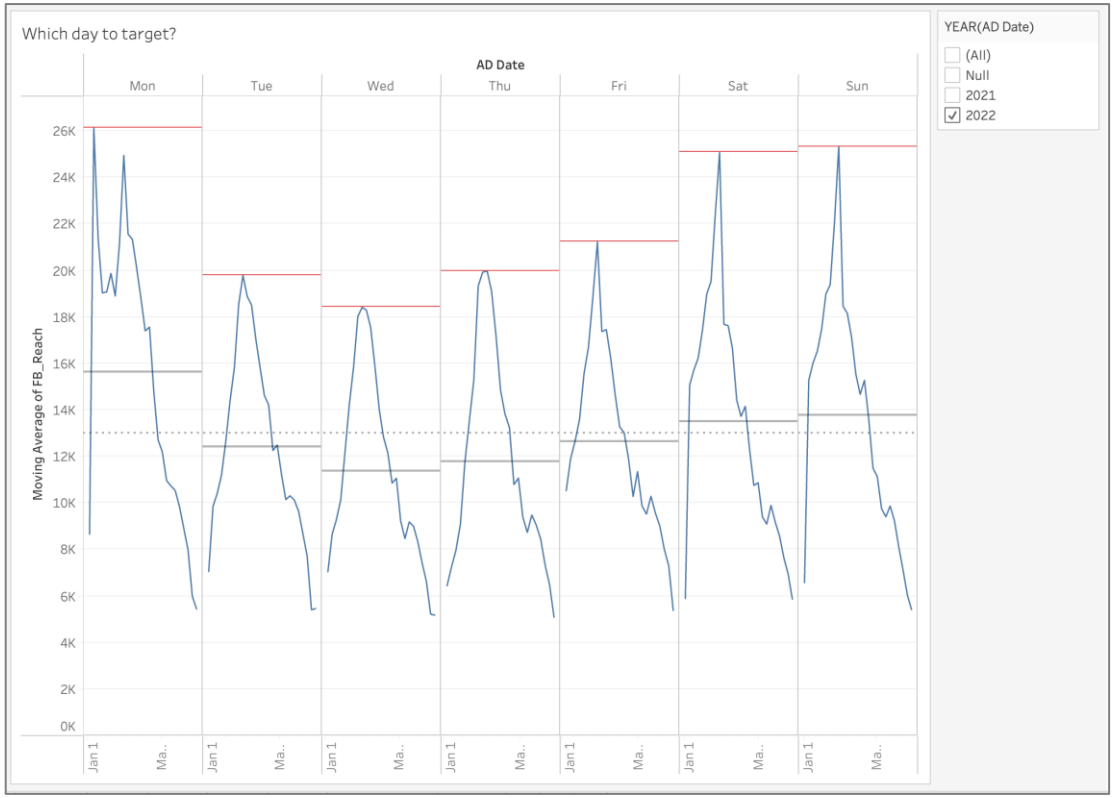
Analysis: The result seems to be content driven as ad with high duration may not produce reach to impression ratio.
Ads such as *FP what's trending ad* was able to produce a ratio of 1.79 but was on Instagram for just 17 days. This could mean that other factors such as day, time of post and the content too plays a role.

Surprisingly, most of the ads which have a high ratio are not on Instagram for a relatively long time. This could mean such posts are festive or the content may be current affairs driven which drives the attention of the users.

Click here to view the interactive chart

When can I get attention?



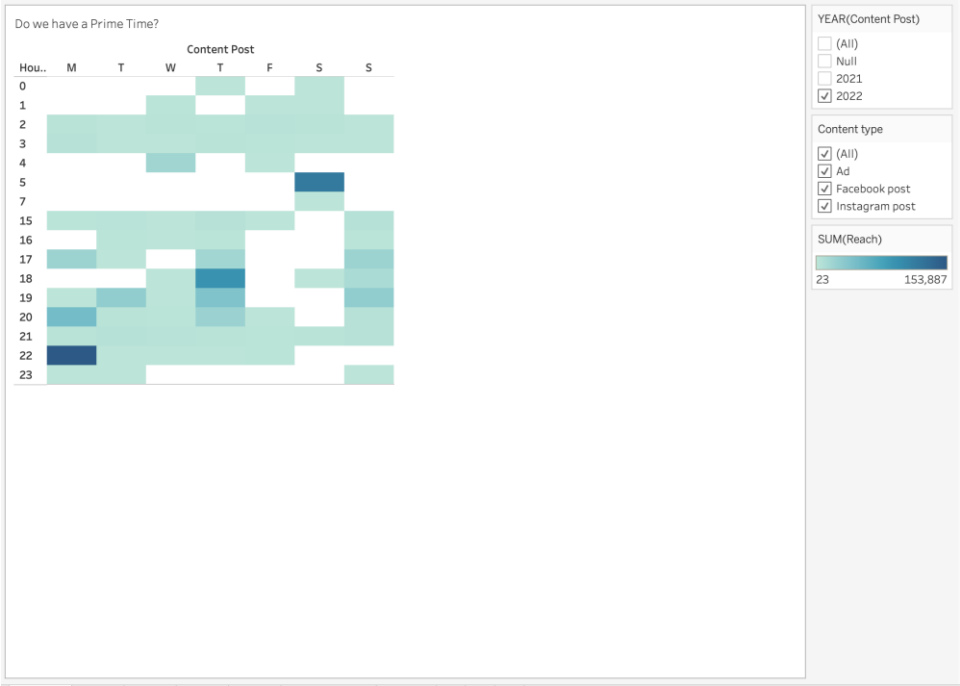


To smoothen the time series graph, we used Moving Average considering the previous 7 days.

Analysis: In the year 2021, October, November saw a high peak in Facebook Ads reach while August saw a dip in reach. Also surprisingly, Wednesday, Thursday saw the highest peak compared to other days of the week.

But on filtering 2022, the company is able to reach out to more people on weekends (The data provided is until June) and Mondays. January was more Monday friendly where we saw an peak in users during the 4 Mondays in January.

Prime time to post the ads?

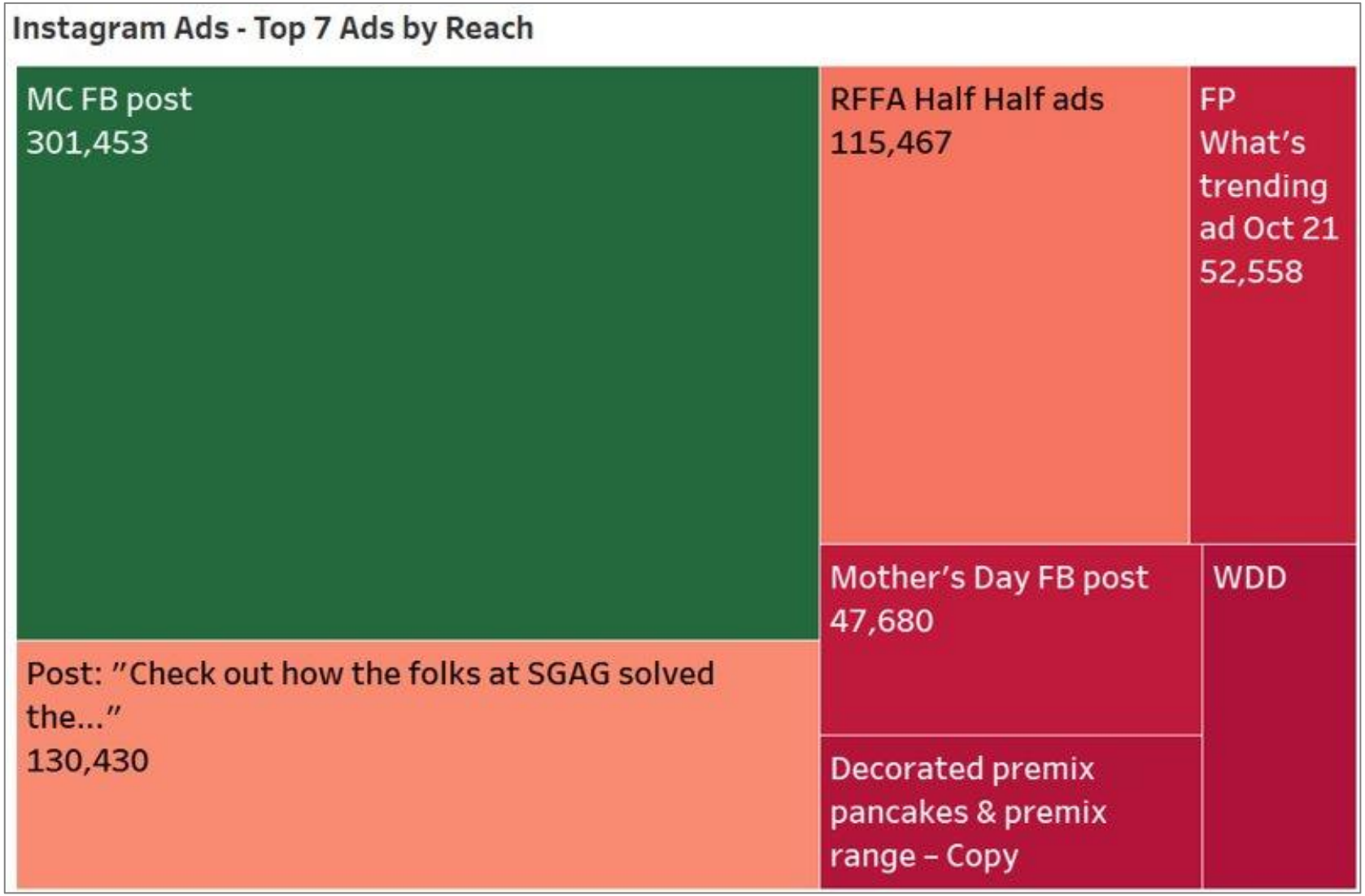


Click here to view the interactive chart

This heat map can help us let us know when is the prime time to post the next ad.

Analysis: The best time to post is after dinner (around 8pm, 9pm) as at this time, we can reach out to maximum users. One of the Facebook Ads was able to reach out to 310K users when it was posted at 5 am on a Tuesday. This could be an occasion specific ad which was posted then but looking at the trend, it is best to post it in the evening whether on a weekday or on a weekend.

Instagram ads by reach



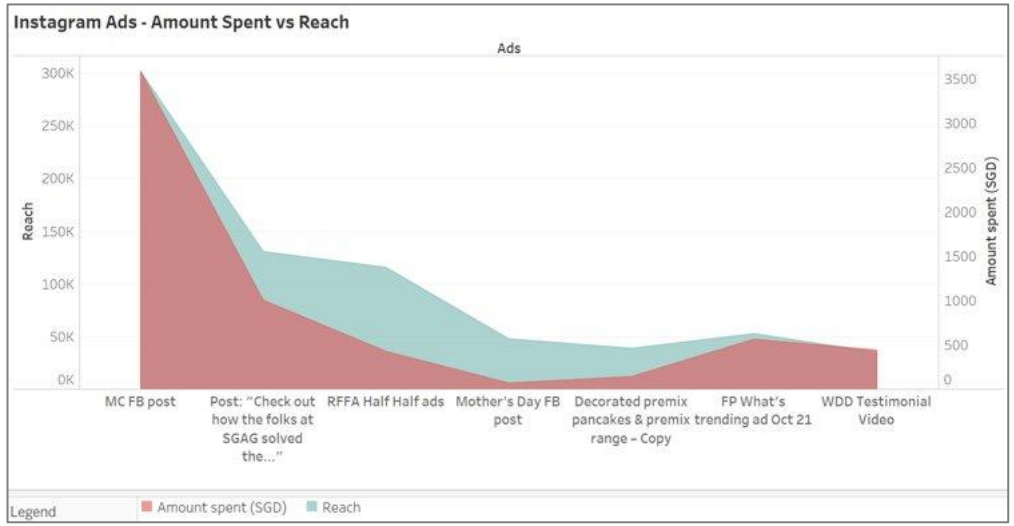
Observations

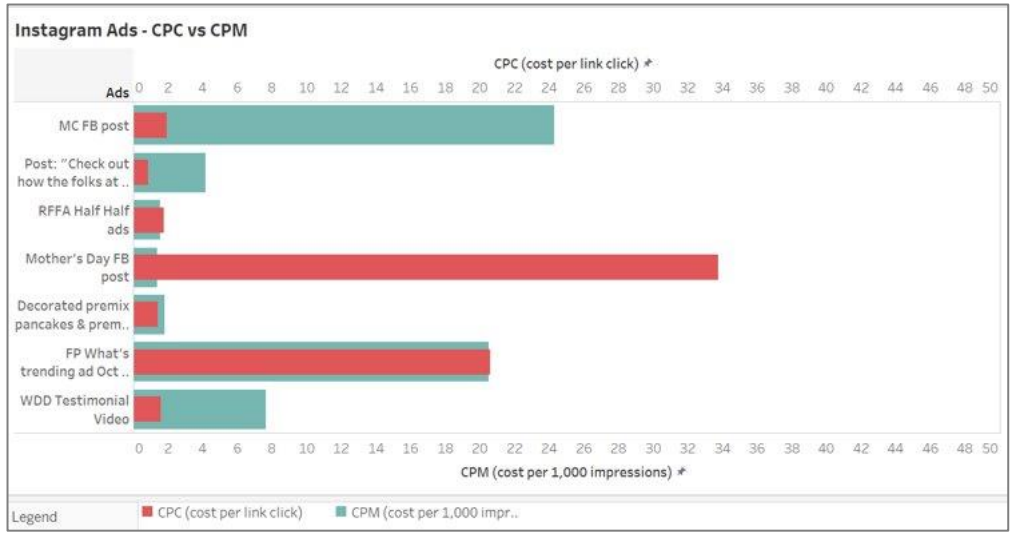
- One specific paid ad campaign generated over 300k reach. The following two ad campaigns in comparison, generated one third the reach of the top campaign.

Insight

- Expenditure in social media content leads to increased digital engagement with people.

Instagram ads spend





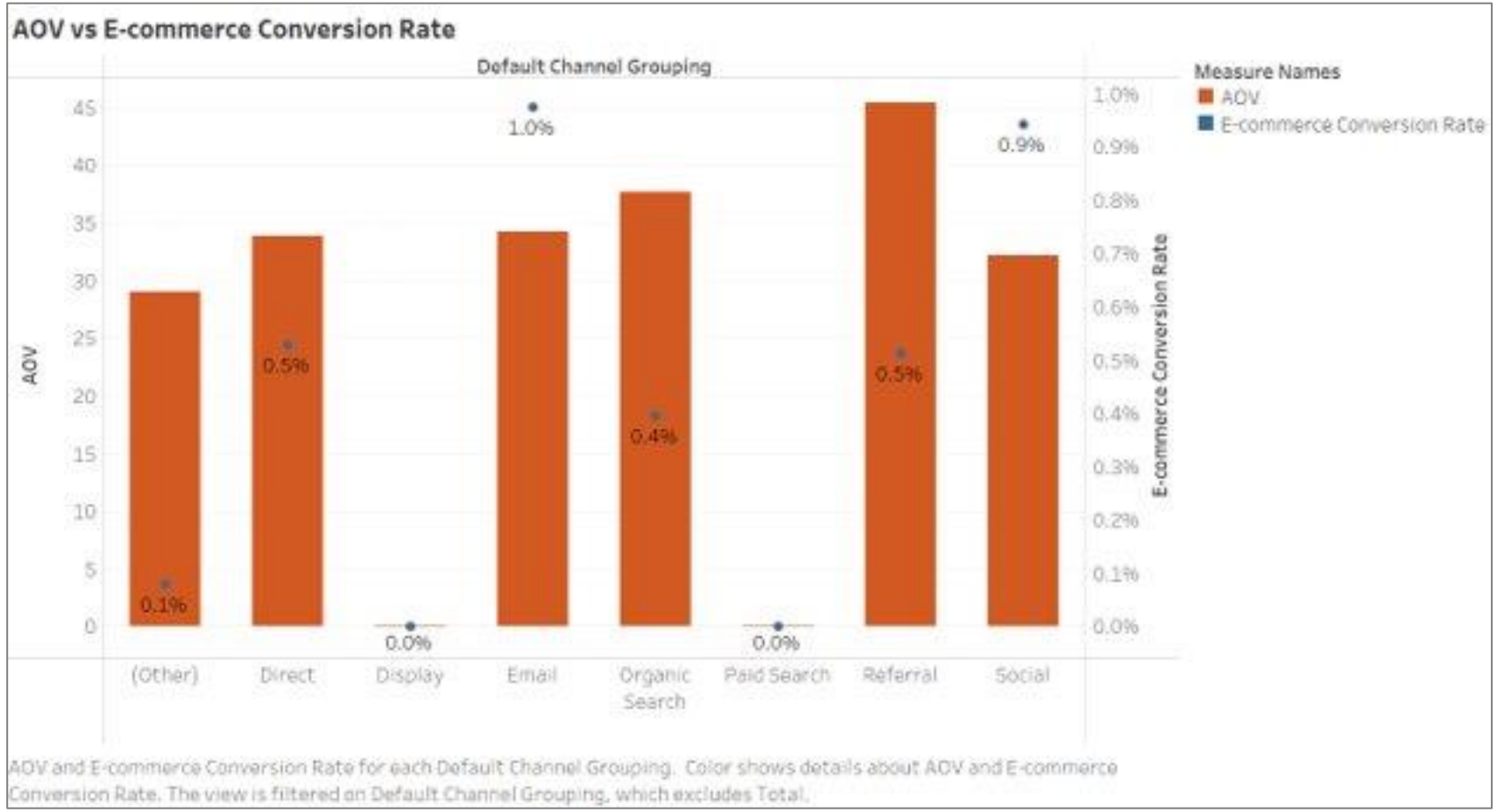
Observations

- An ad campaign with high amount spent generated reach that justified the cost. The CPC was for this ad campaign was low while the CPM was high. This was contrasting to CPC and CPM ads with low amount spent.

Insight

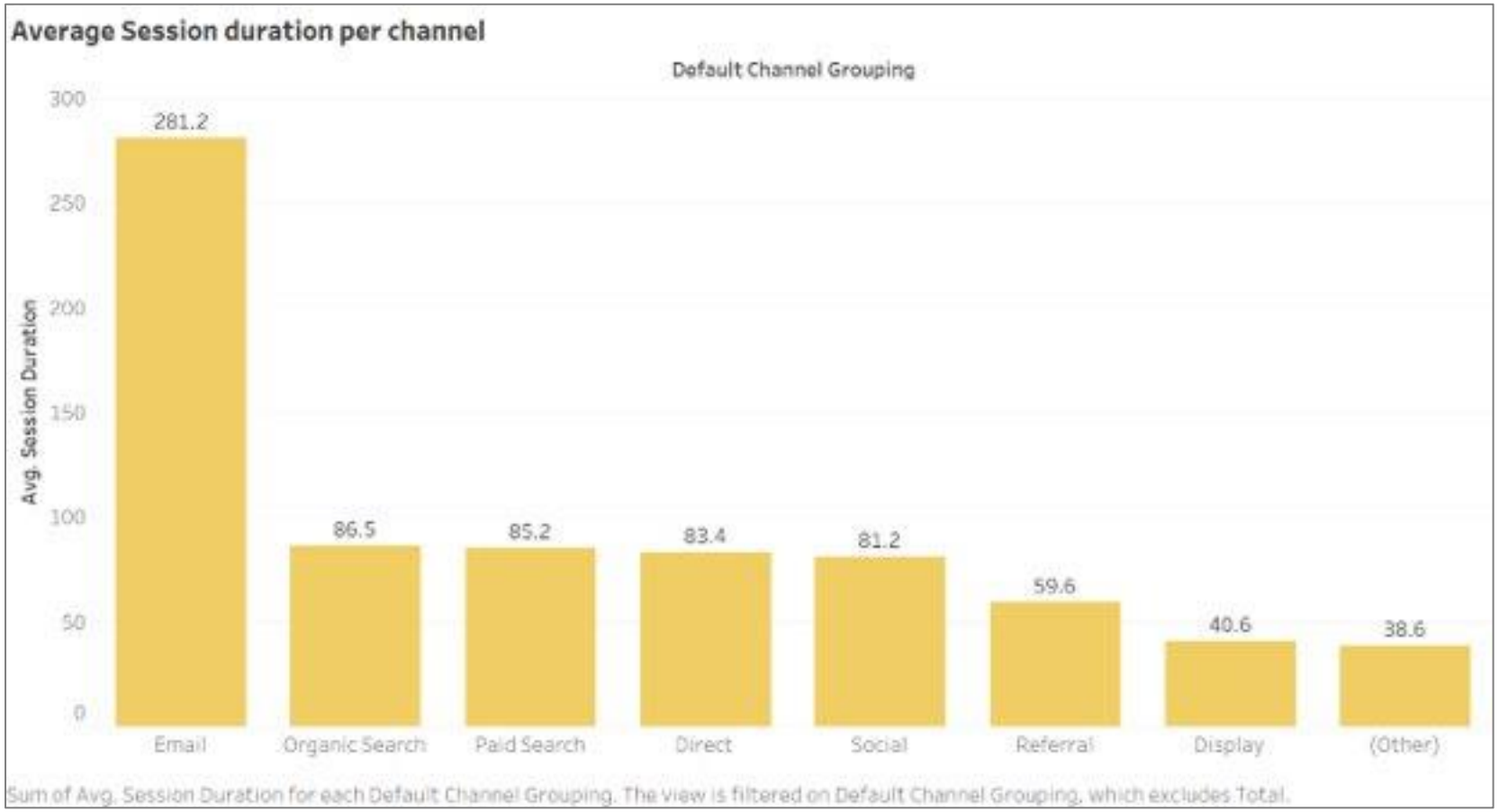
- Invest in developing, deploying, and frequently displaying campaigns to reach more audience.

Ecommerce conversion by channel



Observation: The highest E-Commerce conversion is observed for email, closely followed by social media, their corresponding AOV in the range of SGD 30-35. In comparison referrals garnered the highest AOV of SGD 46 with e-com conversion rate of 0.5%.

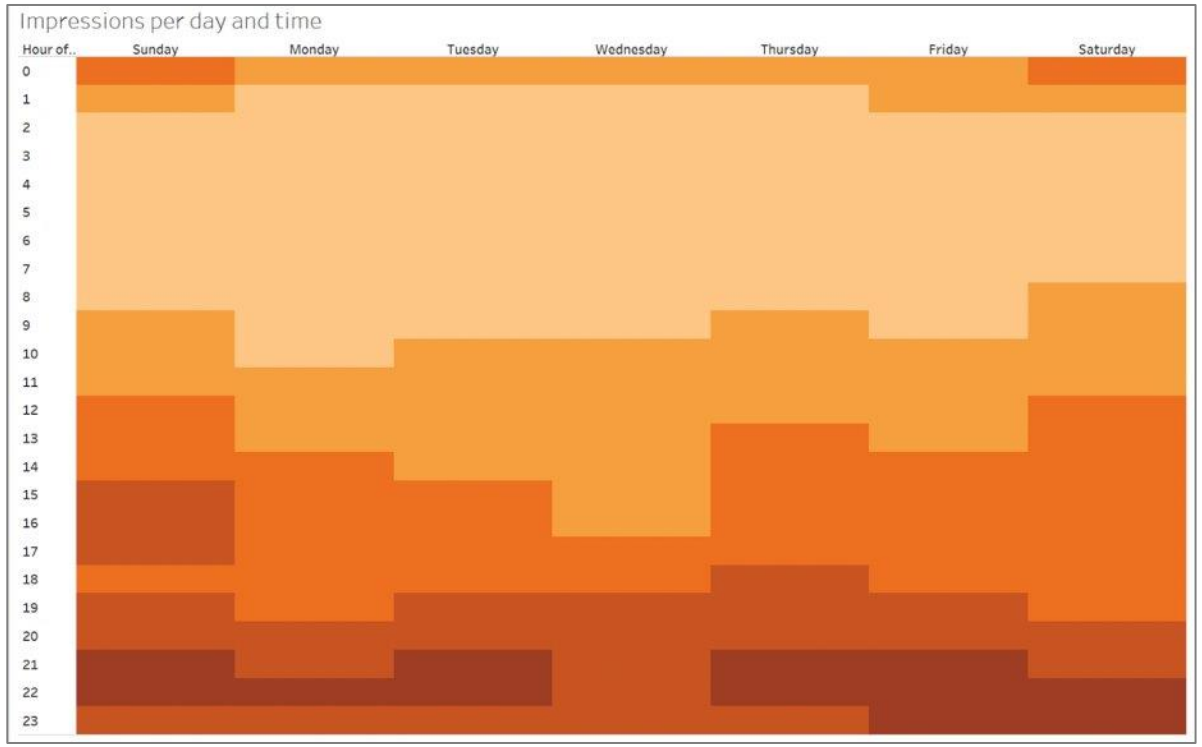
Emails are the low hanging fruits

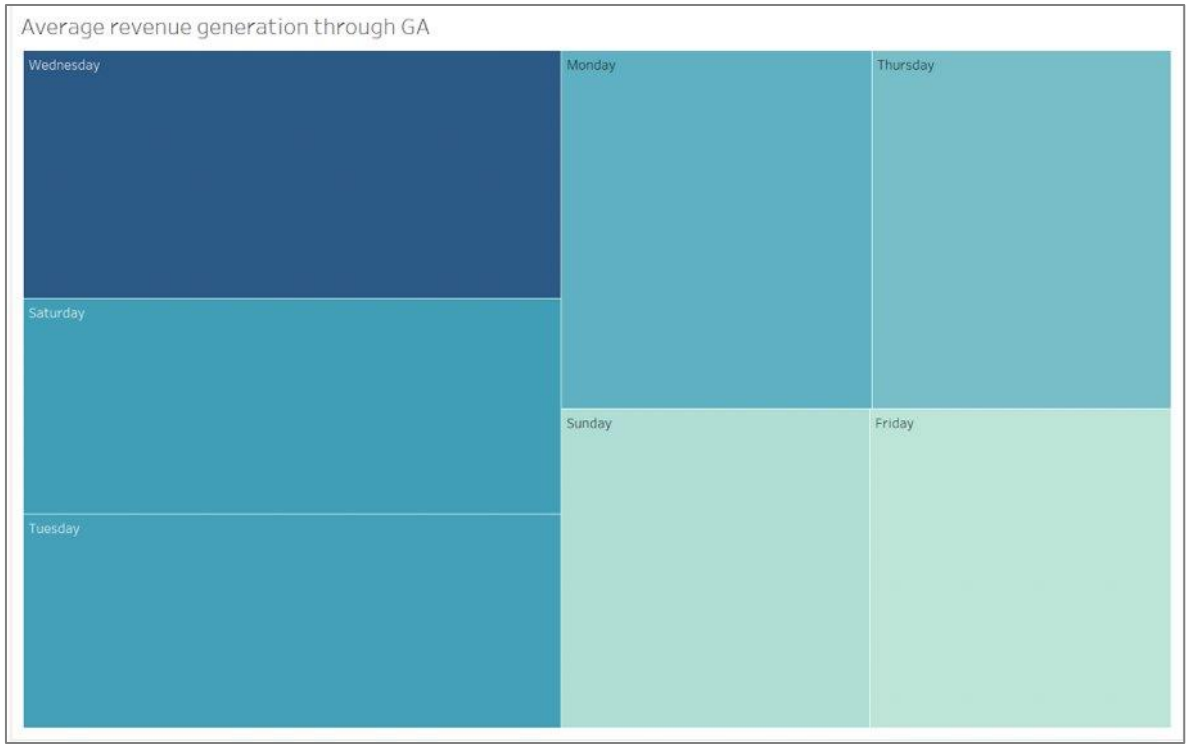


Observation: the average session duration is the highest for emails.

Insight: Emails are the low hanging fruit in paid marketing, the efforts there should continue as the e-commerce conversions are high. Social media and referrals spend should be increased to maximise conversion.

Best time to post





Observation:
Impressions are the number of times a content is displayed, no matter whether it is clicked or not. Here, the company is paying to generate visibility for its users.
The company maximizes visibility on most days except Wednesday post 9 pm. Friday, Saturday and Sunday witness an increase in spend from 10 – 12 pm. Conversely, if we look at the average revenue generated per day (right graph), Wednesday records the highest average revenue from all the days.

Insight: Increase visibility of impressions on Wednesdays to leverage users to potentially spend more.