

# Business Analytical Plan for Rosetta Stone

## Group 9:

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# Agenda

## Appendix

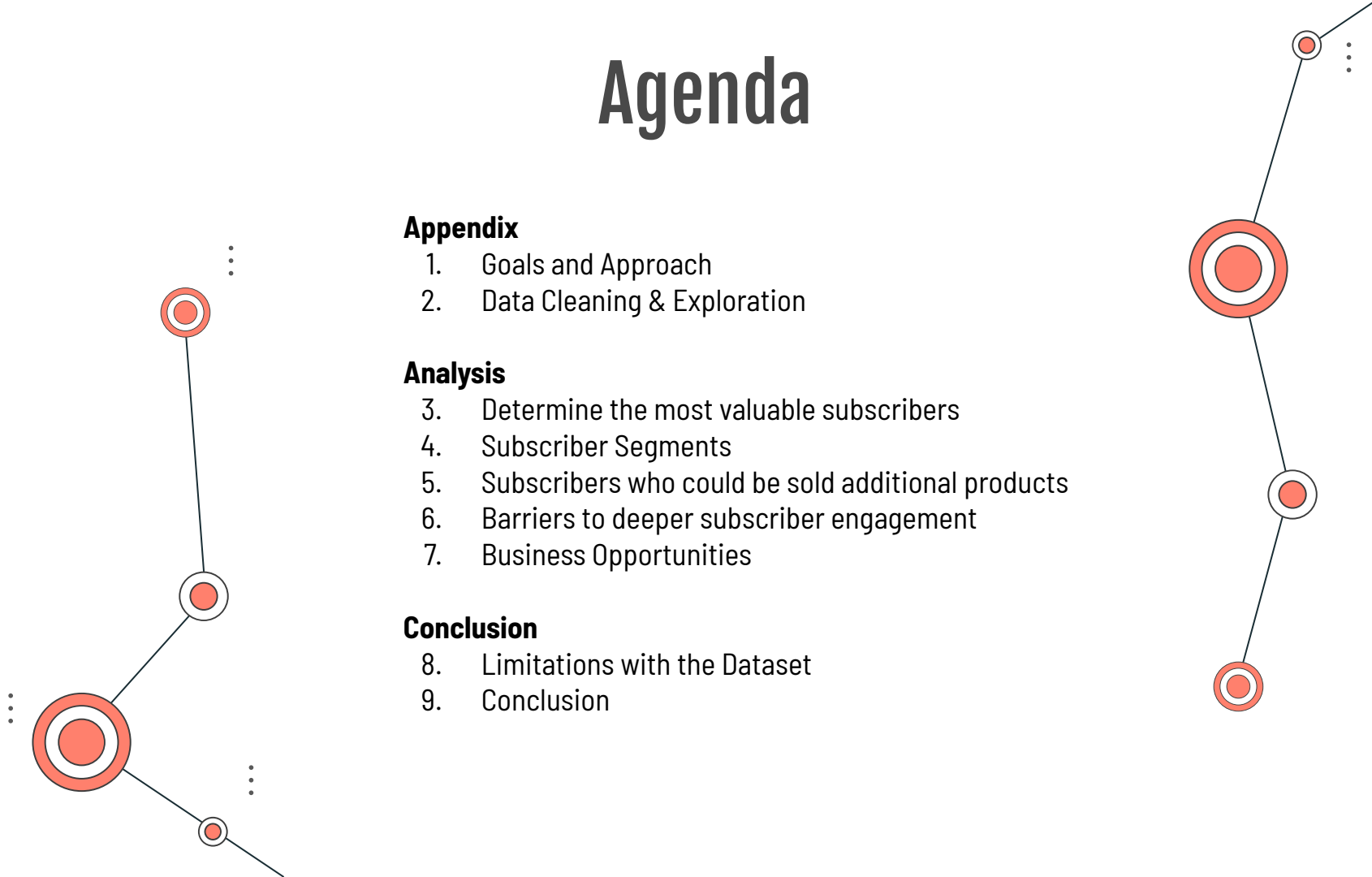
1. Goals and Approach
2. Data Cleaning & Exploration

## Analysis

3. Determine the most valuable subscribers
4. Subscriber Segments
5. Subscribers who could be sold additional products
6. Barriers to deeper subscriber engagement
7. Business Opportunities

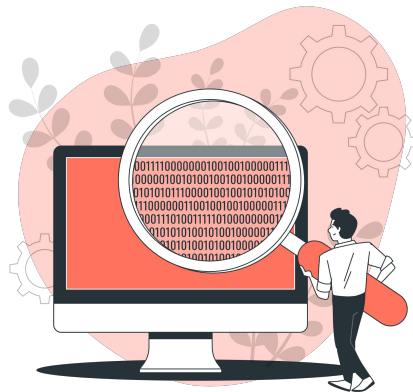
## Conclusion

8. Limitations with the Dataset
9. Conclusion



# Goals

1. Determine the most valuable subscribers by using a point system
2. Determining Customer Segments
3. Identify the most likely subscribers who could be sold additional products or services
4. Identify the subscriber profile of those not continuing with their usage of the product and identify the barriers to deeper subscriber engagement where possible
5. Additional business relevant opportunities by evaluating subscribers in different countries

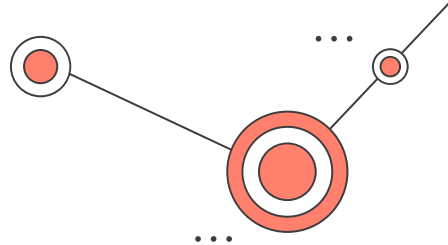


# Approach

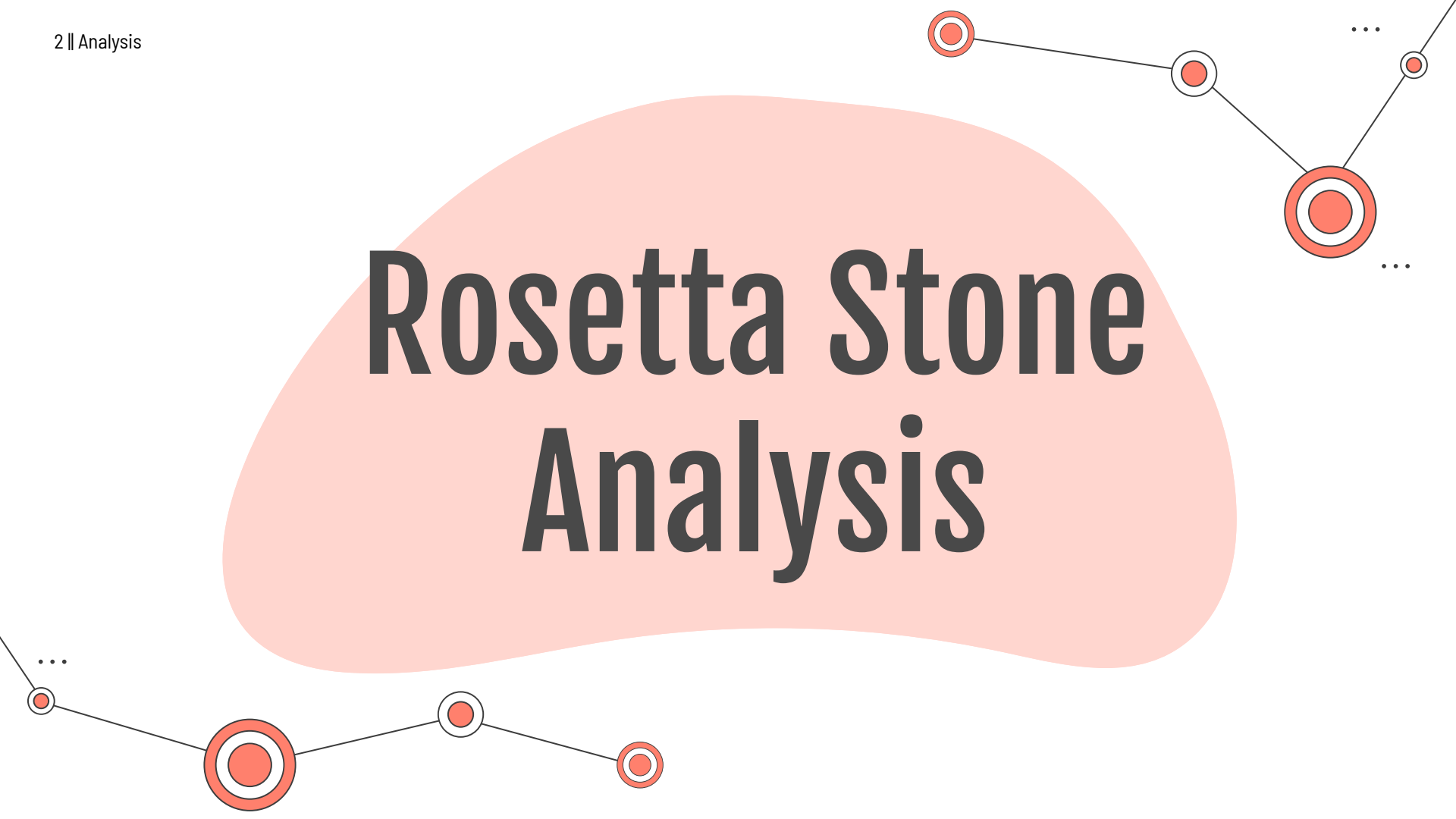
- Mainly analyzed this dataset in Excel
- Graphs including histogram, scatterplot etc are used for visualization
- Regression model

# Data Cleaning & Exploration

- Outliers and some data points with NAs are removed
- Identify the variables that have great impact on subscribers
  - Impactful variables:
    - Subscription Event Type
    - Subscription Start Date
    - Subscription Expiration
    - Auto Renew
    - Country
    - Lead Platform
    - Email Subscriber
    - Push Notifications
    - Send Count
    - Open Count
- We did not see use in the App Activity dataset



# Rosetta Stone Analysis





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# Goal 1. Determine the most valuable subscribers

- Linear Regression to determine the impact of variables on Purchase Amount (USD)
- Point system to determine the most valuable subscribers
- Total points depends on multiple variables:
  - Language
  - Country
  - Subscription event type
  - Auto renew
  - Lead Platform
  - Email subscriber
  - Push notification
  - Subscription Type
  - Email Open Count
- On a scale from 0 - 9 points



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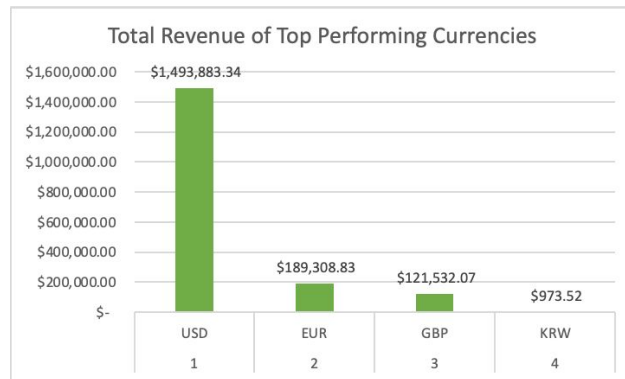


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# Goal 1. Determine the most valuable subscribers

## Country

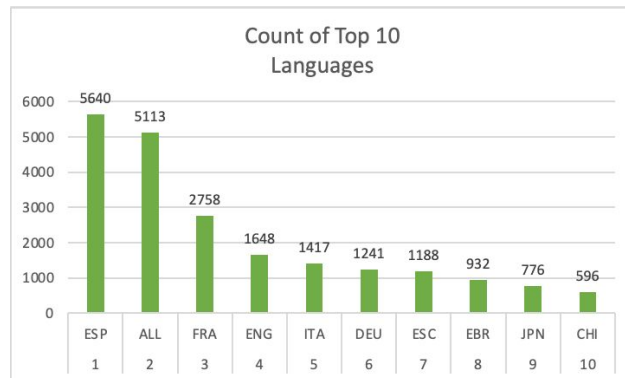
- Top 4 Currencies that generated the most total revenue
  1. US Dollar
  2. Euro
  3. Great British Pound
  4. South Korean Won
- Converted all purchase amounts to USD to be on the same scale
- Removed all rows that had a purchase amount greater than \$1,000



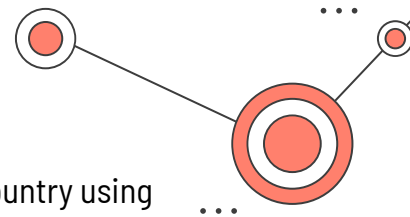
## Language

- Top 10 Languages that subscribers learned

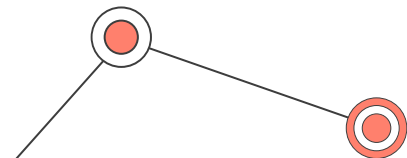
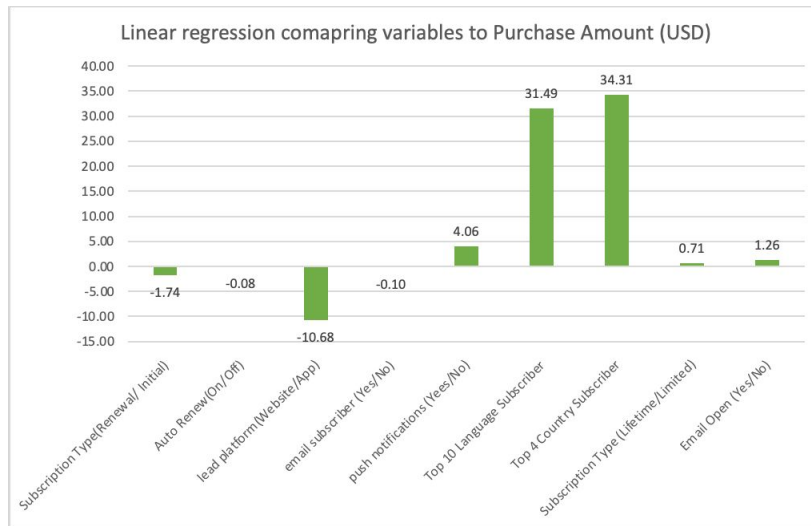
- |        |         |
|--------|---------|
| 1. ESP | 6. DEU  |
| 2. ALL | 7. ESC  |
| 3. FRA | 8. EBR  |
| 4. ENG | 9. JPN  |
| 5. ITA | 10. CHI |



# Goal 1. Linear Regression



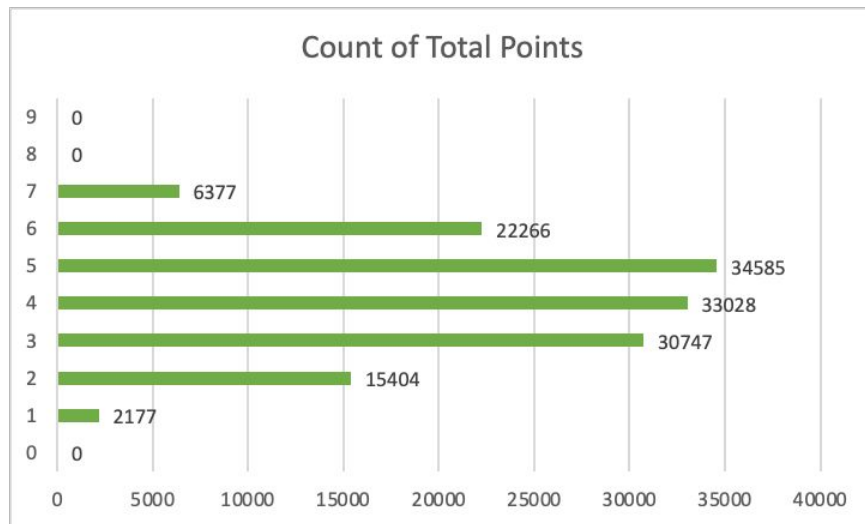
- Removed NULL values under "Purchase Amount (USD)"
  - # of rows went from 40,102 -> 26,923
- Removed all rows that had a purchase amount greater than \$1,000
  - # of rows went from 26,923 -> 25,433
- Subscribers who come from a country using a top 4 currency increases the purchase amount by \$34.31
- Subscribers who purchase a top 10 language increases the purchase by \$31.49
- Subscribers using the Web as the preferred platform decreases the purchase by \$10.68





# Goal 1. Point System

- Not a single subscriber fit the criteria of the perfect subscriber of achieving 9/9 points
- Through the point system, we can identify which subscribers are most valuable depending on the business approach
  - Subscribers with 1-2 points can be as valuable as subscribers with 3-7!



## Goal 2. Subscriber Segments

- Most subscribers (73.79%) are first time subscribers
- Most have auto renew off (64.32%)
- Most use websites rather than apps (63.07%)
- About half of them have email subscription
- Most of them have push notifications on (68.62%)
- Most people didn't use the free trial (84.21%)

- Points 0-2:
  - Subscribers who lose interest faster
    - Ex: New Years Resolution
- Points 3-7:
  - Subscribers who are dedicated to learning a language





## Goal 3. Subscribers who could be sold additional products or services

- More advertisements are needed on the free trial.
  - Chance of renewing subscription are higher after free trial
  - Less commitment with free trial
- Email and websites are good ways for advertisement.
  - More popular than the app



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## Goal 3. Subscribers who could be sold additional products or services

Willingness to Buy More	COUNT of Willingness to Buy More
0	7281
1	21167
Grand Total	28448

- Find the subscribers who open their emails at least 50% of the time
- 74.41% of subscribers are willing to buy more



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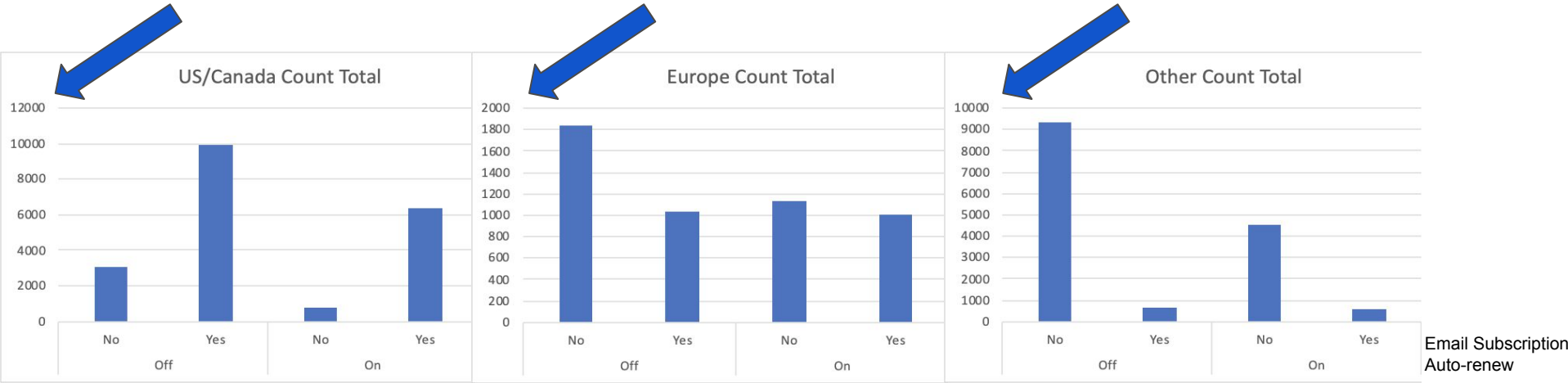


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# Goal 3. Subscribers who could be sold additional products or services



- US/Canada users are a potential target audience as they subscribe and open more emails when compared to Europe and Others.





## Goal 4. Barriers to deeper subscriber engagement

- User preference of setting, such as:
  - Auto-renew option
  - Email subscribe option
  - Push notification option
- What can be done:
  - Advertisements are needed
    - Advertisements should be sent out through emails or displayed on websites
  - Advertise free trials more
    - Higher chances for customers who have used the free trial to renewing the subscription



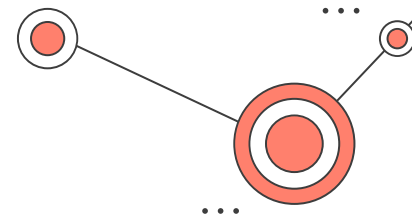
# Goal 5. Business Opportunities



- Limited deals offered to customers who already had push notification on
- Create a daily mission/task in a game form to retain daily user interaction
  - an option is given to customers to turn push notifications on to remind there are mission to be done or new missions available
  - reward points or resources that can be used within the program

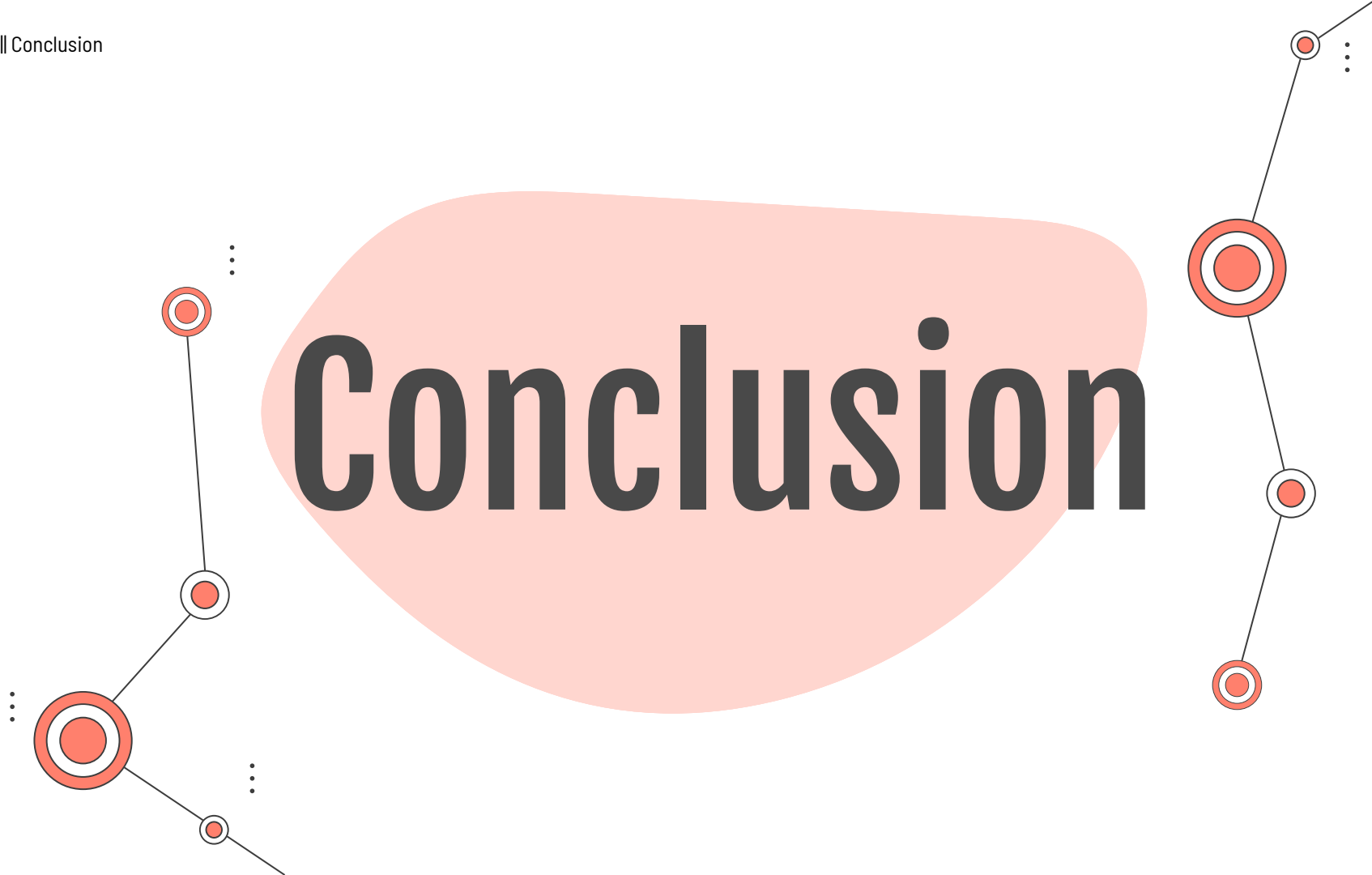
## Goal 5. Business Opportunities

- By finding where currency is coming from, we found the languages spoken by users are predominantly English, Spanish, German, and French
  - The only languages available on the website are English and Spanish, it is meant for people in US/Canada and Europe
- Opportunity to promote a discount if someone wants to learn Arabic, Chinese, Japanese, or Korean
- Opportunity to advertise more educators discounts, once word gets around can offer less discounts
- Points 0-2 needs to focus on retention and initial incentives
- Points 3-5 needs to focus on smaller but more frequent incentives
- Points 6-9 needs to be offered the best promotions and deals





# Conclusion



# Limitations with the Dataset

- App Activity Dataset
- Did not use columns that wouldn't impact revenue
- Null values

## Conclusion

In order for Rosetta Stone to meet their business goals they need to:

- Keep their most valuable customers happy
- Use their emails and website to promote deals and specials
  - Invest more in promotion overall
- Incentivise daily use and push-notifications
- Promote languages that will captivate audience for a long time

