

# **FIT 5147**

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Data Visualisation  
Project Presentation

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# Getting into trouble in New York City

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## Aim

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Awareness that public nuisance is at its peak in the holiday season and the government must increase security to protect the tourists and sustain the tourism industry

## Motivation

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Visualize the different types of crimes in NYC and the most crime-ridden boroughs

# Sheet - 1

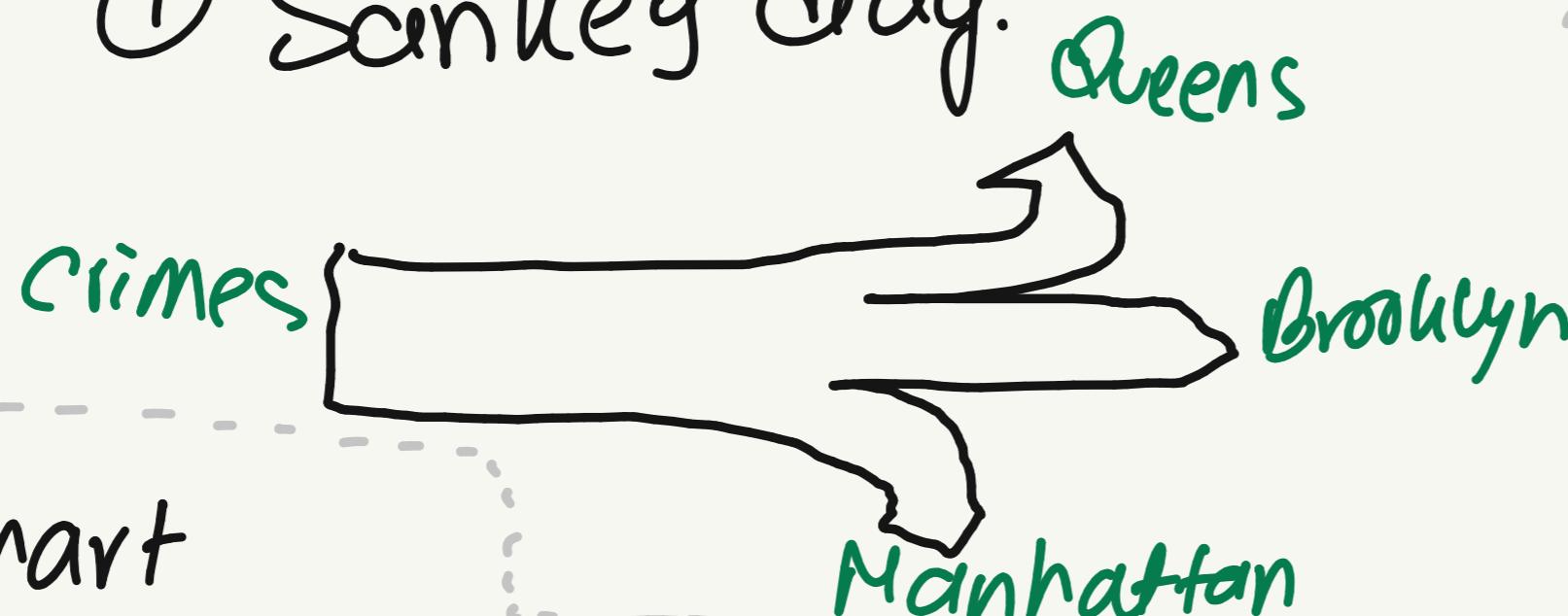
Ideas

## ② Donut chart

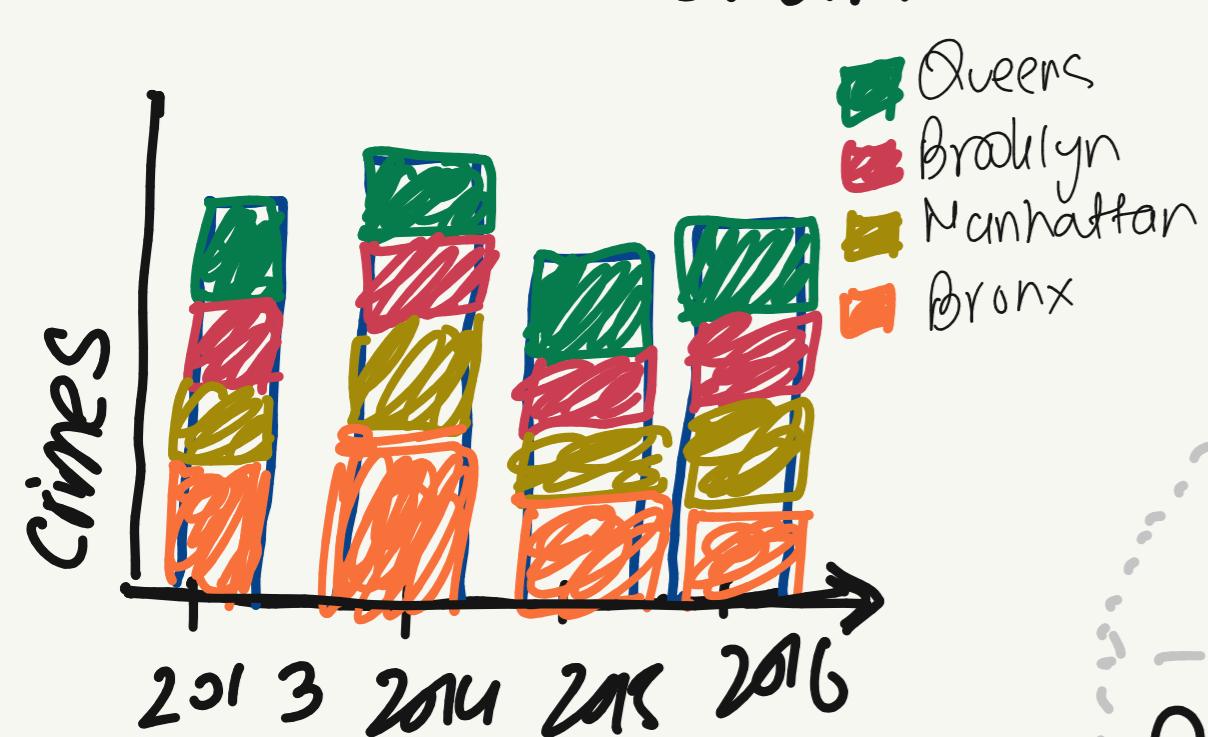


International  
domestic

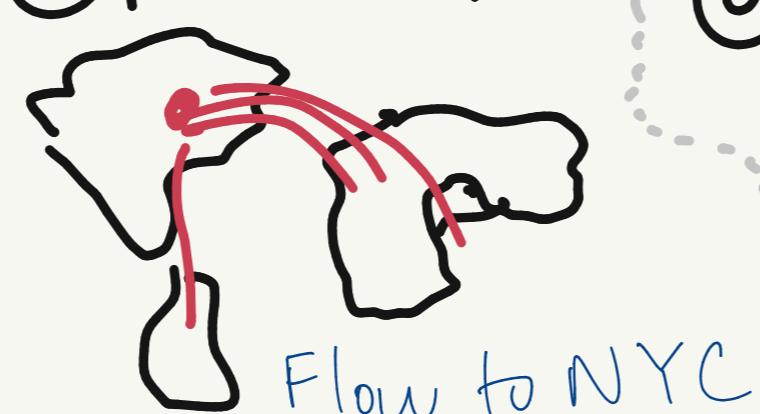
## ① Sankey diag.



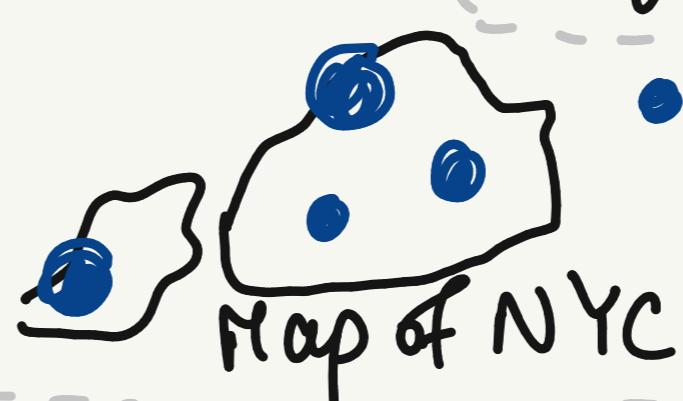
## ④ Stacked bar chart



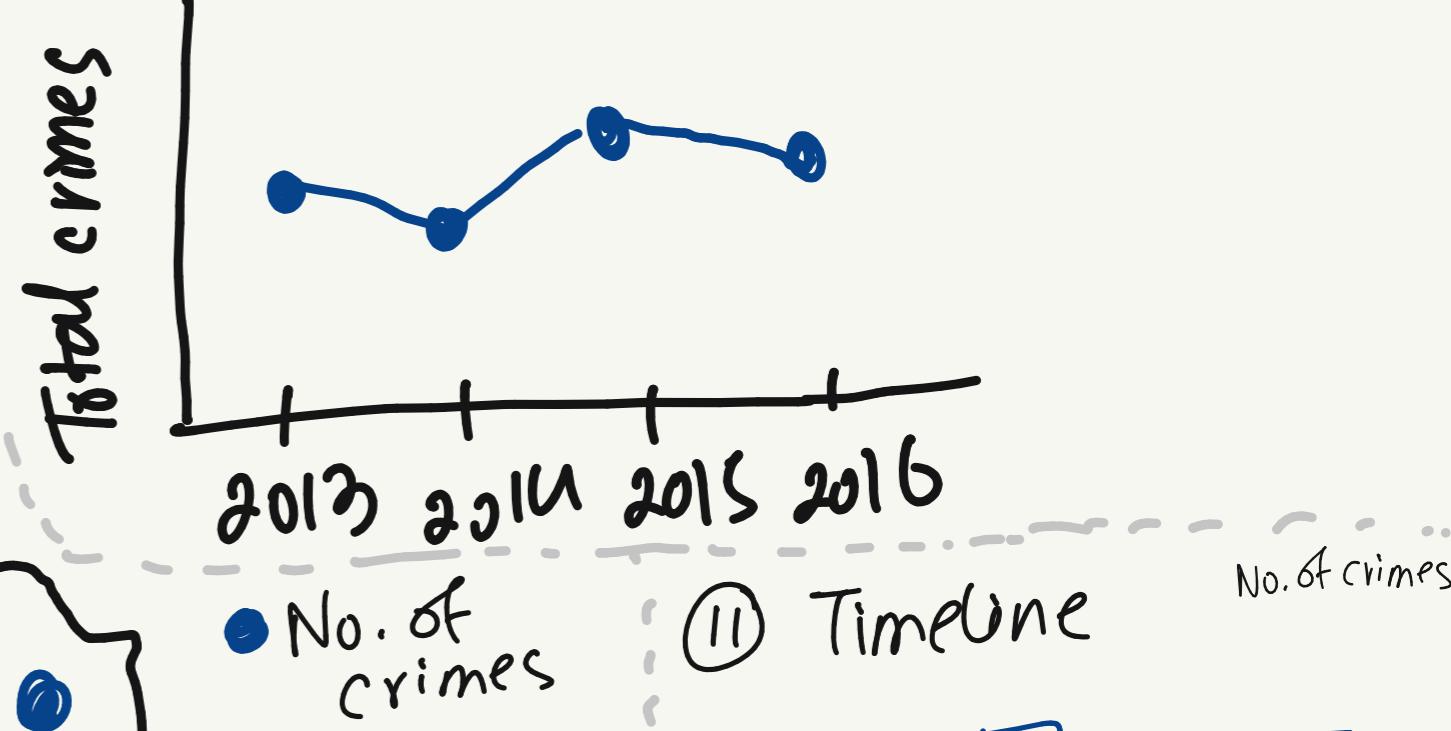
## ⑤ Flow map



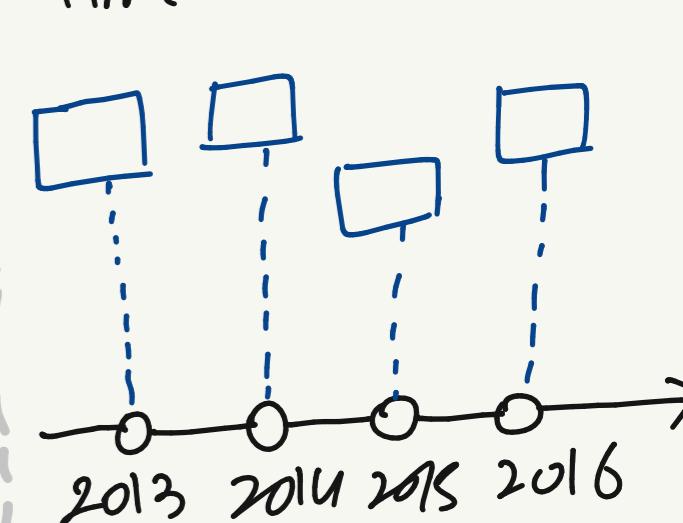
## ⑥ Bubble map



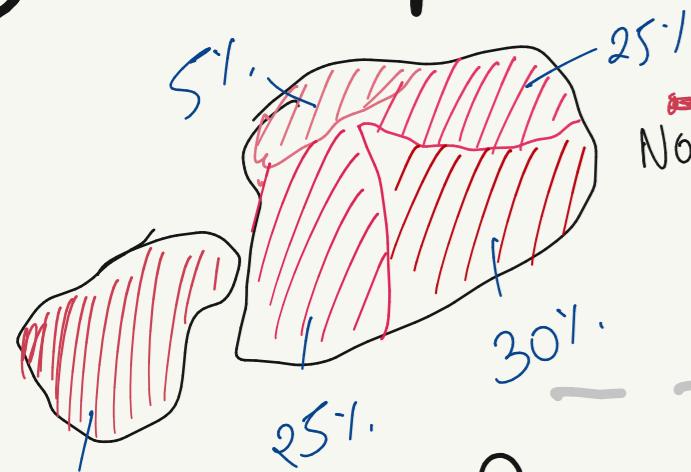
## ③ Line graph



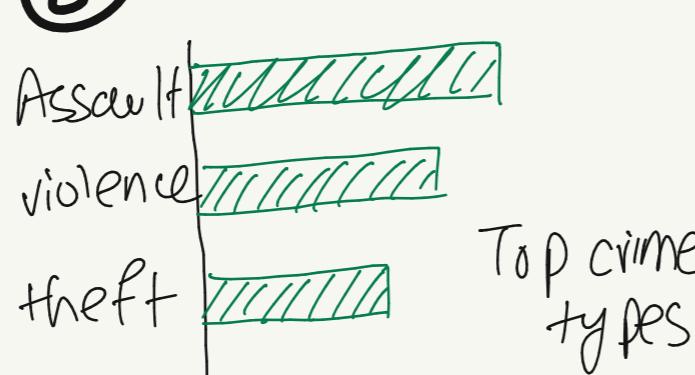
## ⑪ Timeline



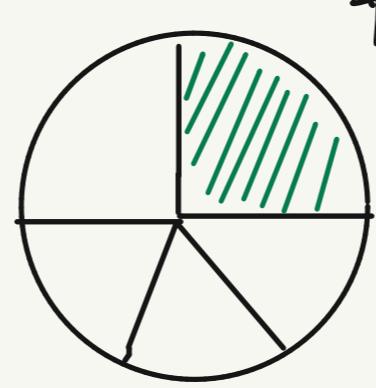
## ⑦ Choropleth



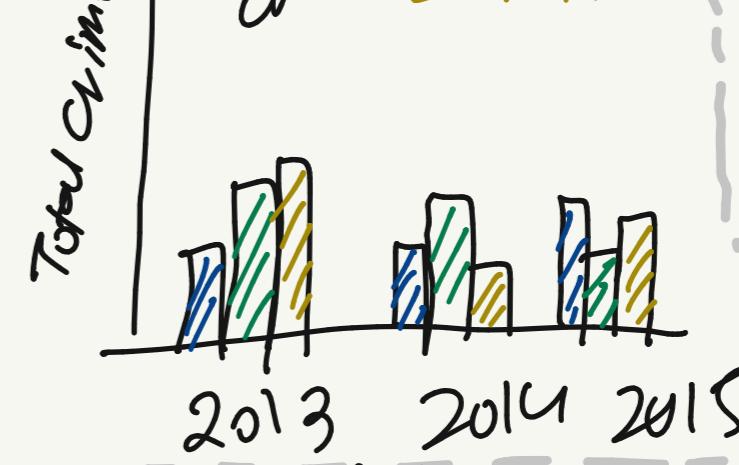
## ⑧ Row chart



## ⑨ Pie chart

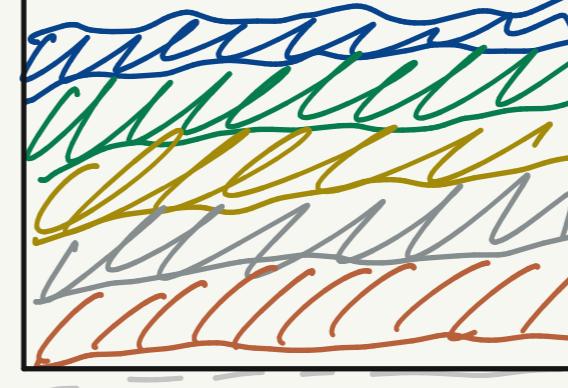


## ⑩ Grouped bar chart



## ⑪ Alluvial plot

International tourism to NYC



## ⑫ Pyramid chart



## ⑤ Flow map

Can be removed as bubble map can be used

8, 9  
3, 4, 10, 11, 13  
2, 14, 15  
6, 7

## ⑬ Pyramid chart

Can be removed as duplicate to other graphs

8, 9  
3, 4, 10, 11, 13  
2, 14, 15  
6, 7

## ① Sankey

Can be removed as duplicate to alluvial

8, 9  
3, 4, 10, 11, 13  
2, 14, 15  
6, 7

Combine & Define

3, 13, 9

Combined to top crime in bubble chart timeline

4, 6

Combine as bar chart on a map

6, 9

Combine as pie chart on a map to show top crimes in NYC

Categorize

Questions

Should the locations be showed geographically?

Does a filter for year make the information pop out better?

Can a trend in the crime rate be identified properly?

Is it necessary to differentiate between domestic and international travellers?

Can the different boroughs of NYC be differentiated?

**Layout**

donut chart

International  
domestic

**Operation**

**Info**

Title: FIT5147 data visualisation project  
Author: Samia Soudamini Senzuti  
Date: 10/10/2022  
Sheet no: 2

**bubble map**

% of total tourists

**Bubble chart in timeline**

Assault  
Robbery  
Theft  
Mischief

**Row chart**

2013 2014 2015 2016 2017

Manhattan  
Bronx  
Staten  
Brooklyn  
Queens

Total crime

**FOCUS**

Australia 25%  
Mischief year = 2017 total = 3K  
Manhattan total = 35K

2017

**Discuss**

+ve

-ve

**Color variables will help differentiate between elements**

**Highlighting will help focus on the element selected**

**Difficult to show different boroughs on the bubble chart, and for this reason the crime information per borough is shown separately**

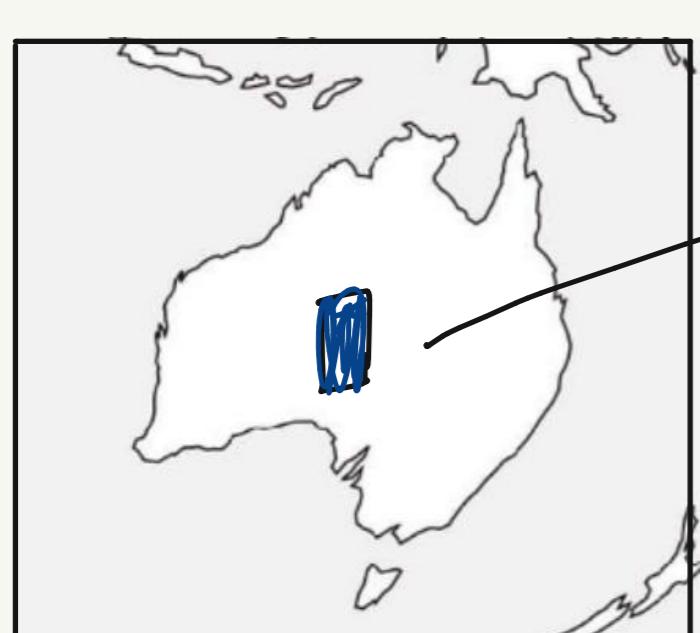
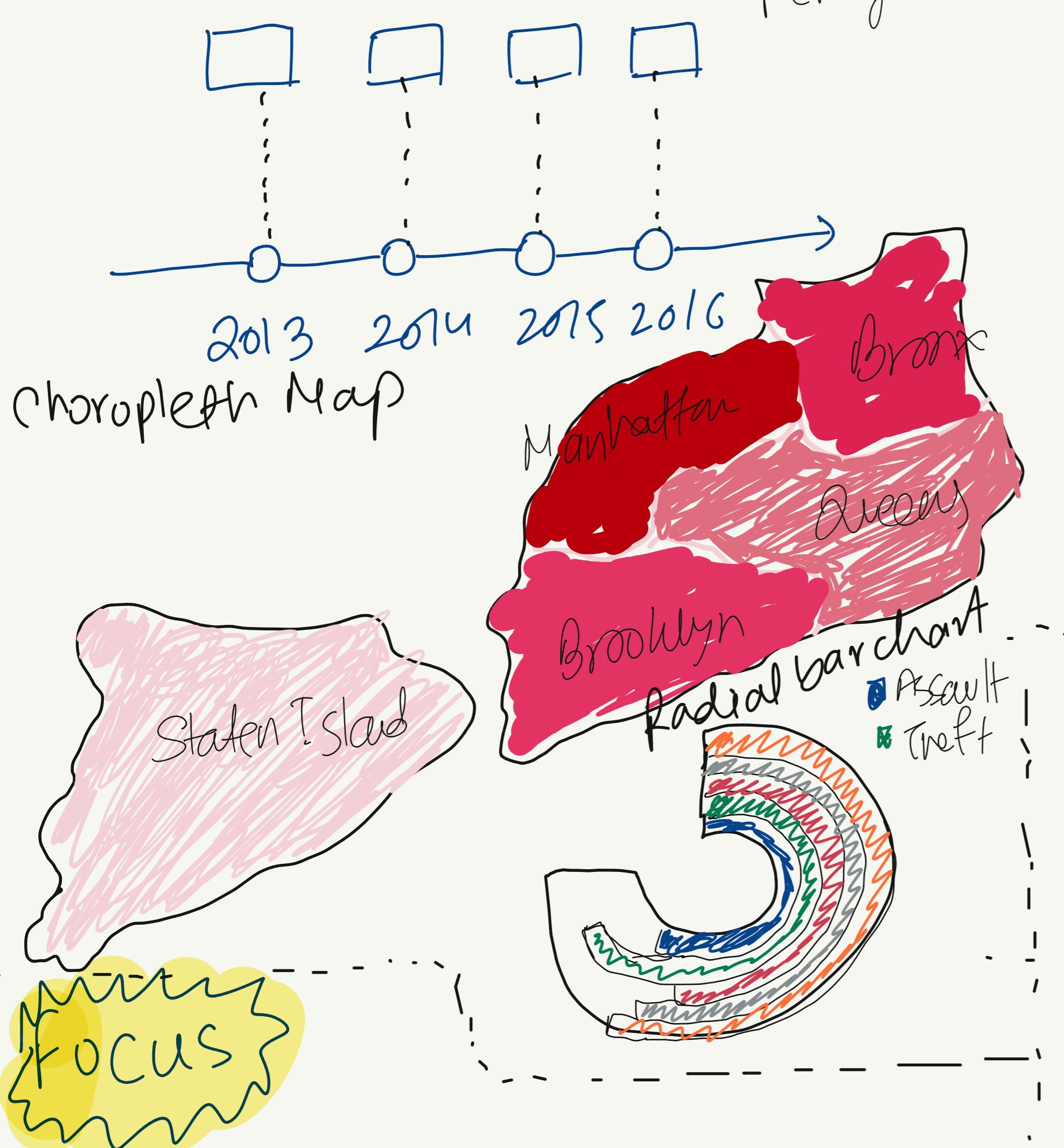
Layout

Barchart on map

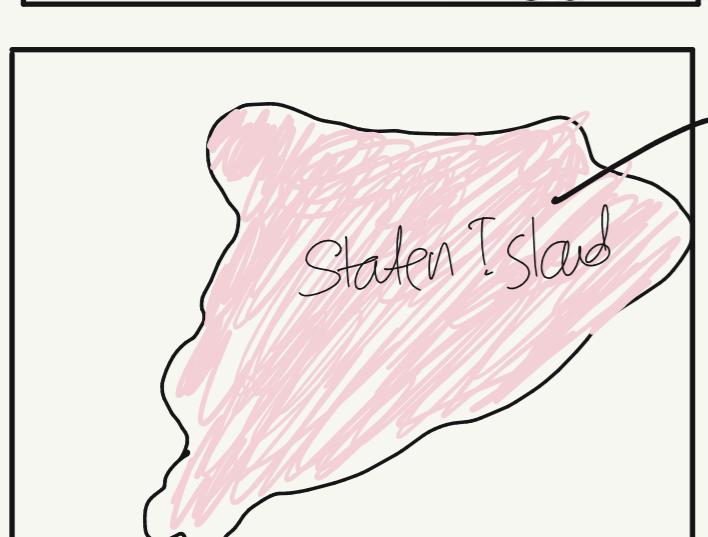


Timeline

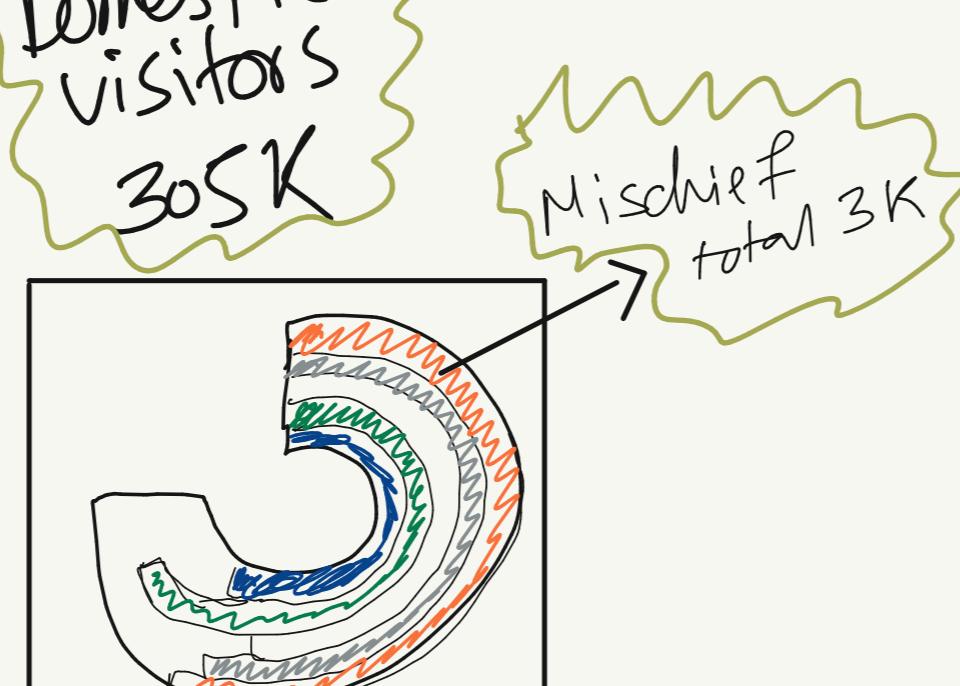
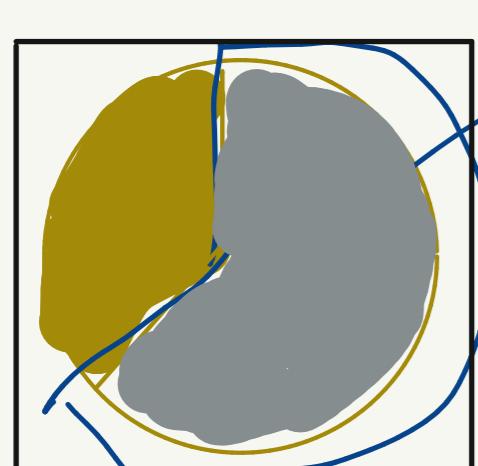
Total crimes per year



Australia arrivals: 25%



Staten Island crime: 15%



Domestic visitors

305K

Mischief total 3K

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Date: 10/10/2022  
Sheet no: 3

Info

Pie chart



International visitors  
Domestic visitors

Operation

Hovering on the bar on the barchart map will highlight and popup the location name and percentage of total tourists

Hovering on the borough on the choropleth map will highlight and popup the name and percentage of crime in that borough

Hovering on the piechart will highlight and popup total visitors (domestic or international)

Discuss  
+ve

The crime rate percentage is shown along with the borough information in the choropleth map which couldn't be shown on Sheet 1.

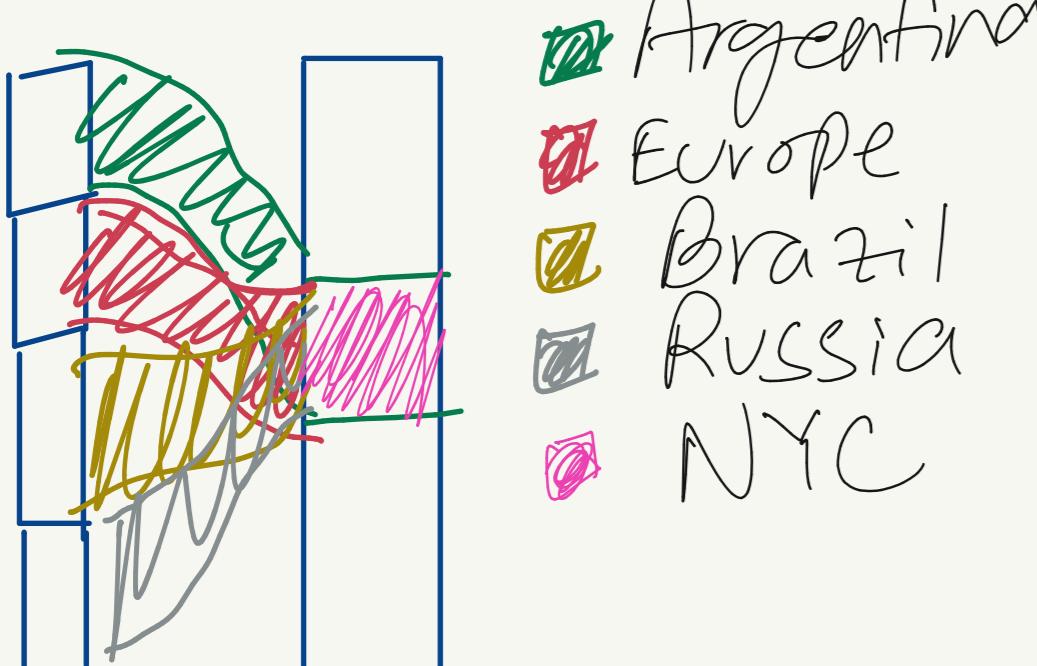
The timeline graph provides a textual information and communicates better

-ve

More user interactivity could be added.

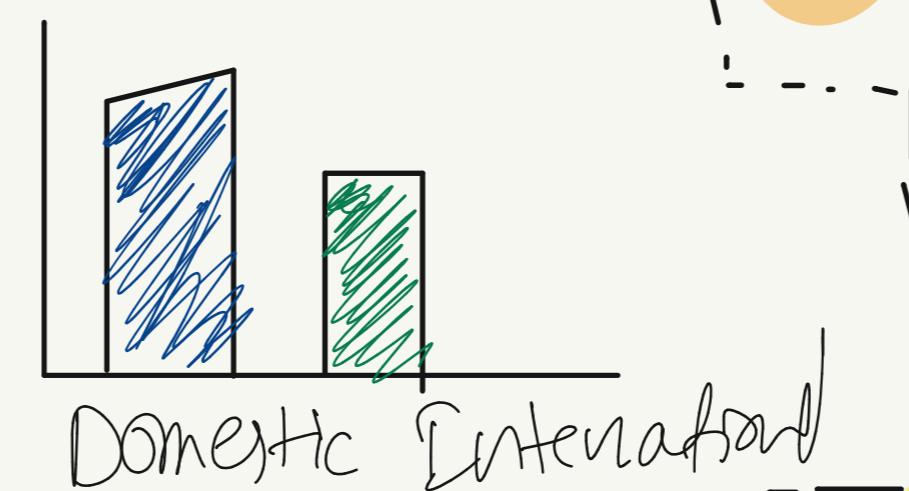
Drop down menu to change date, or crime type can be added to provide better user interactivity.

Layout  
 Alluvial plot



International countries

Bar chart

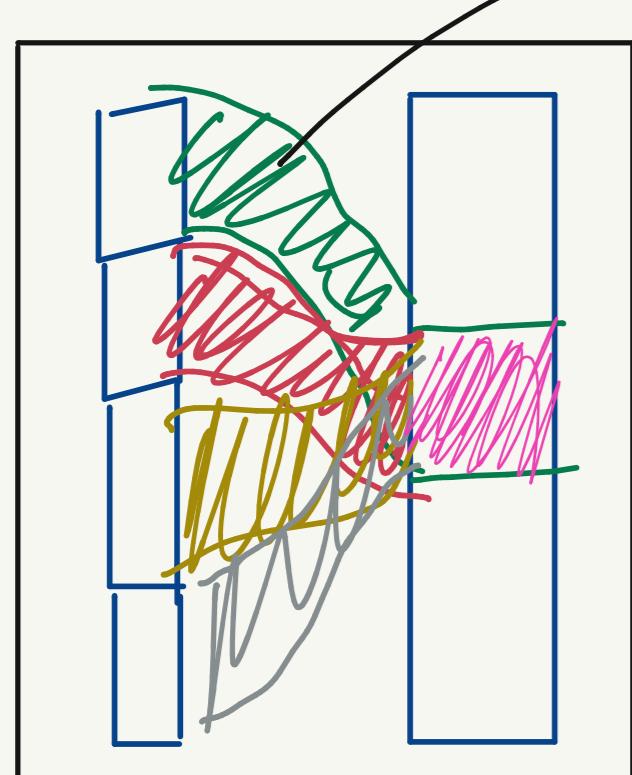


Assault  
 Robbery  
 Theft

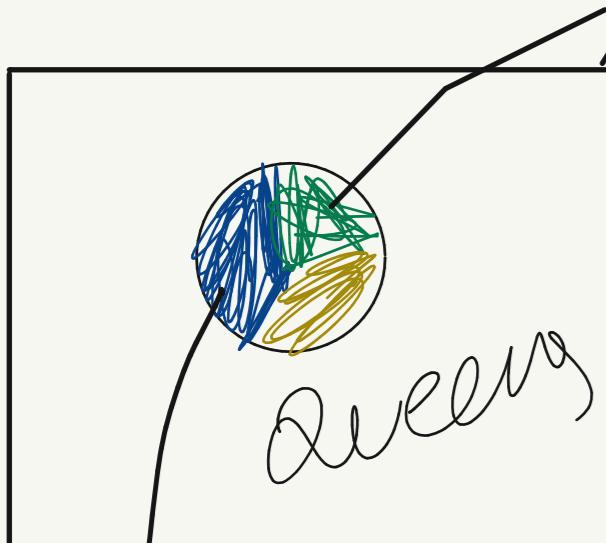
Pie chart on map



focus

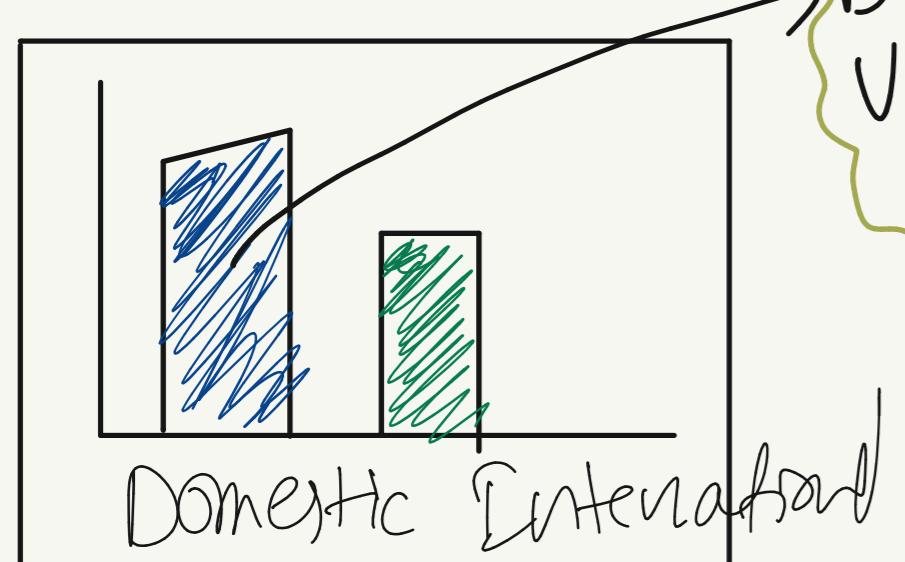


Argentina arrivals: 23%



Queens crime: 25%  
 robbery: 20%

Queens  
 crime: 25%  
 assault: 28%



Domestic visitors  
 305K

Discuss  
 +ve

The crime rate percentage can be shown in the map, along with the different crime types (with their percentages)

-ve

The negative side is that the year information is not included with it. The viewers can not compare crime rates per year.

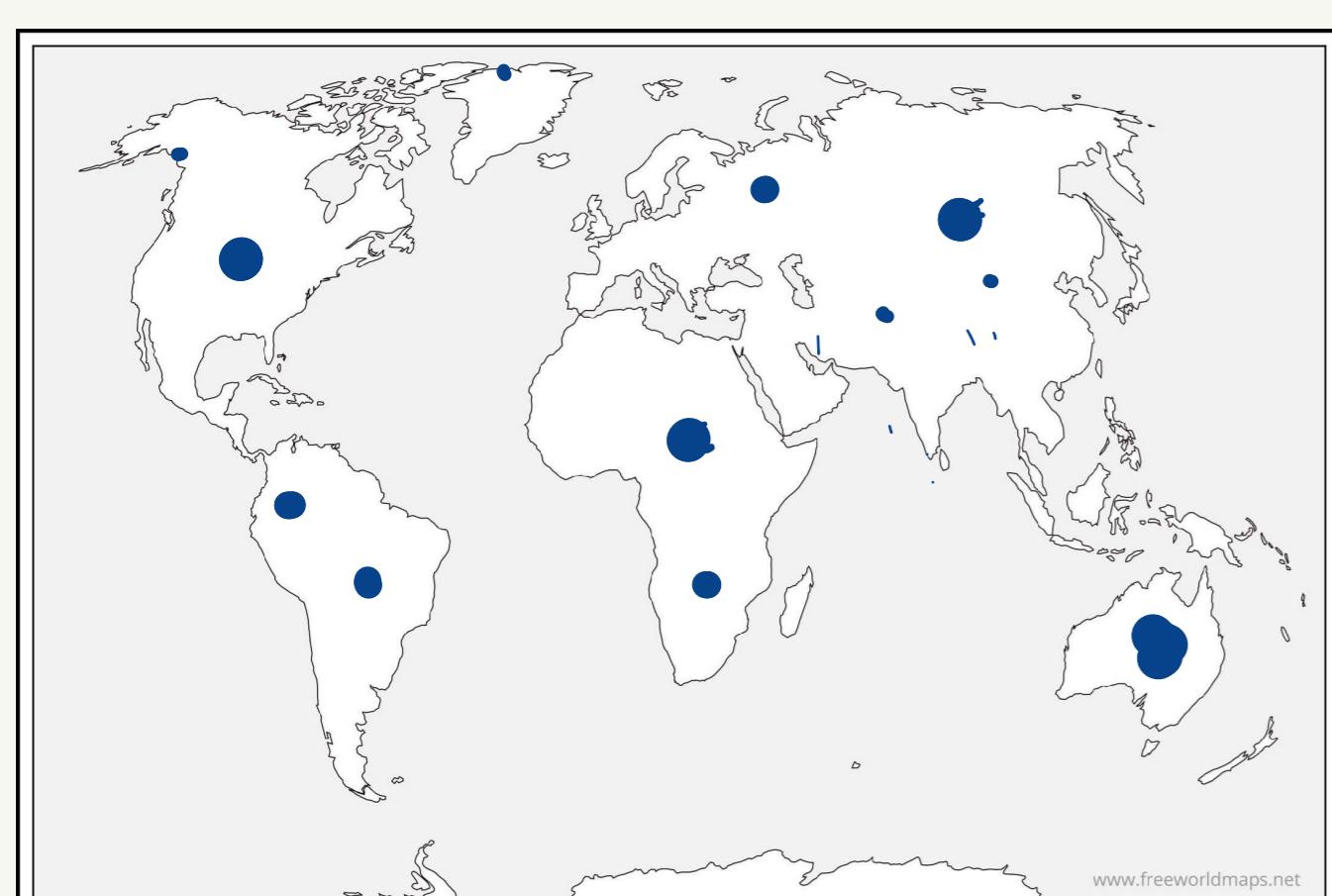
Title: FIT5147 data visualisation project  
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 Date: 10/10/2022  
 Sheet no: 5

Layout

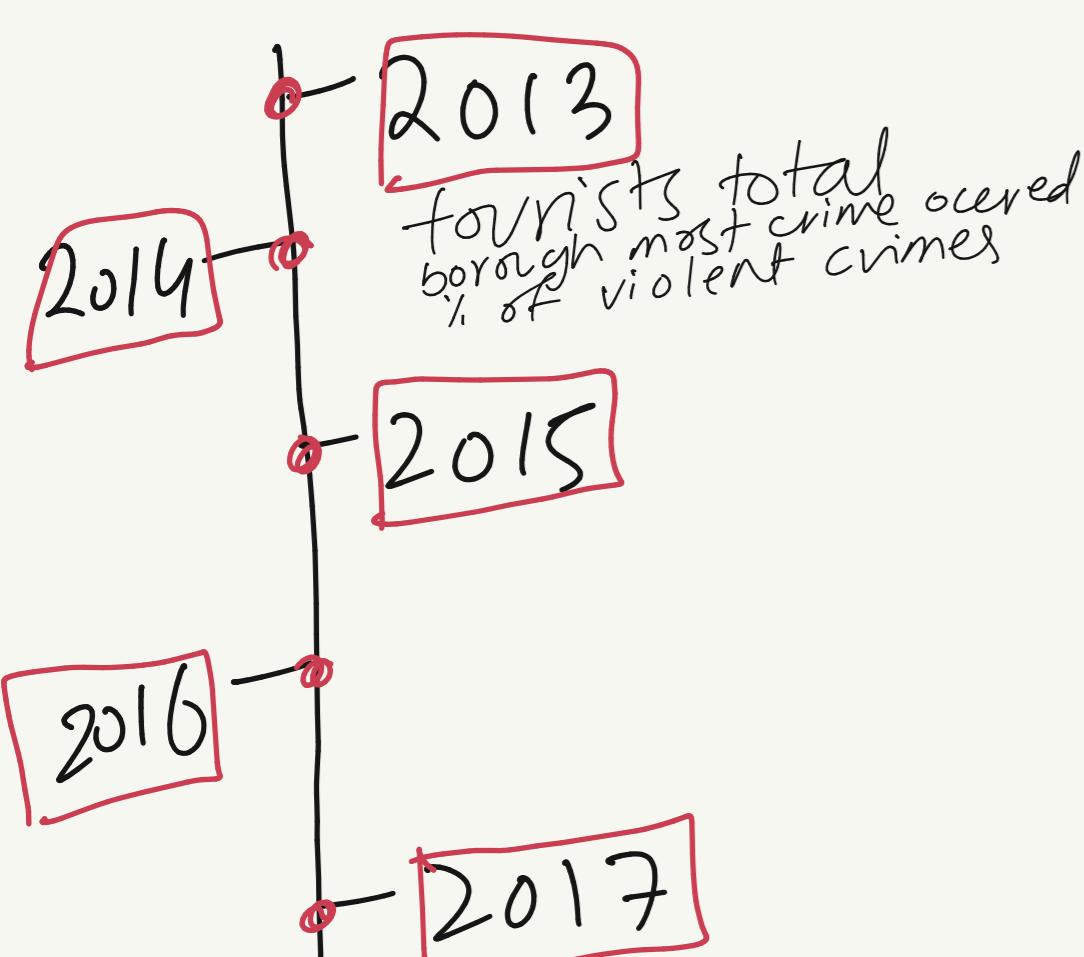
Pie chart



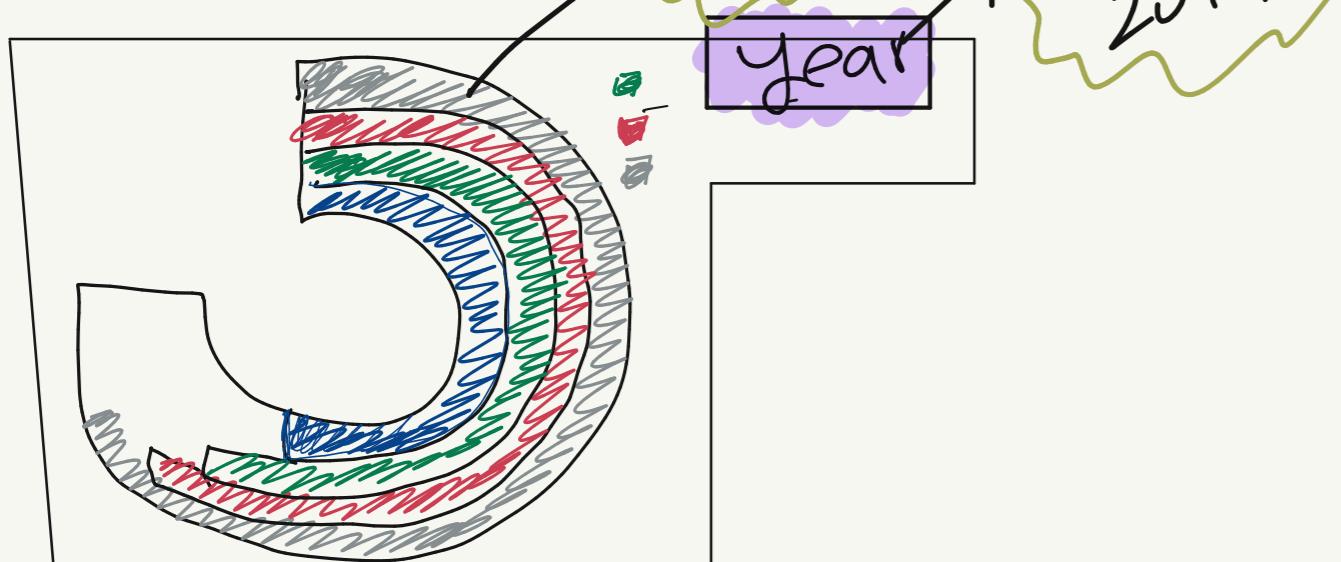
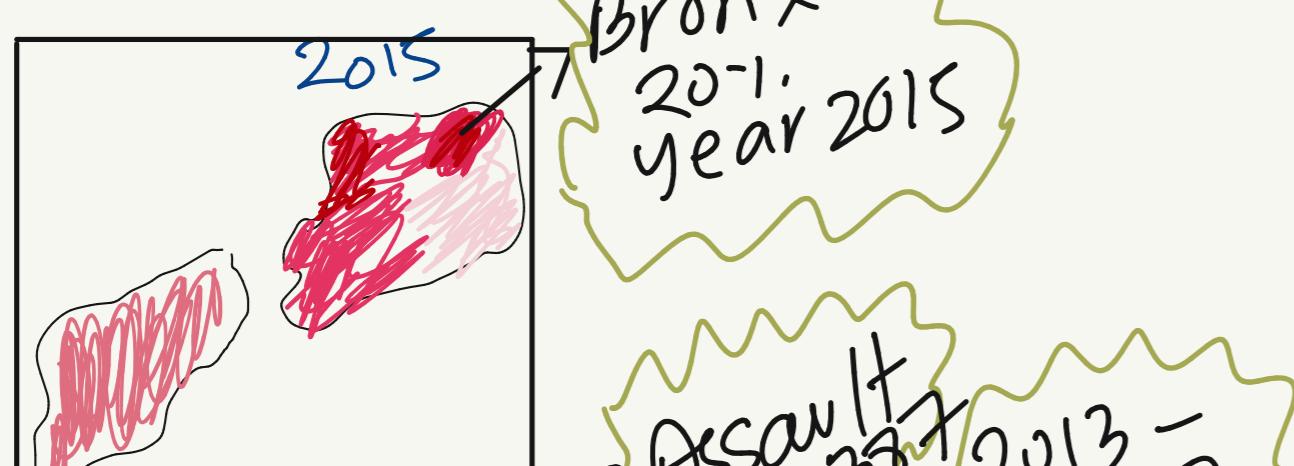
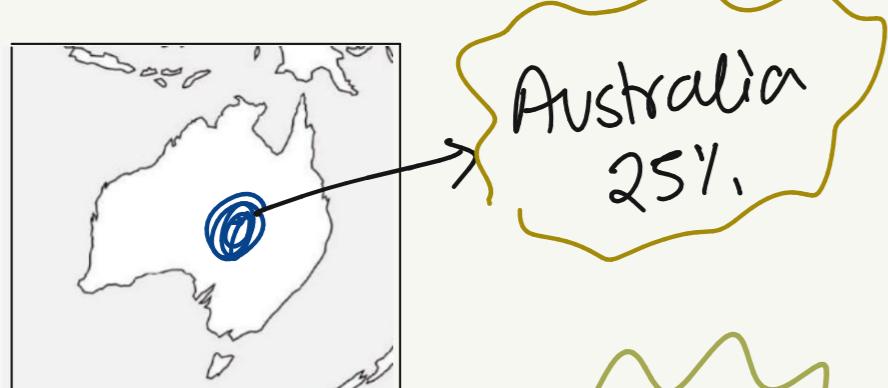
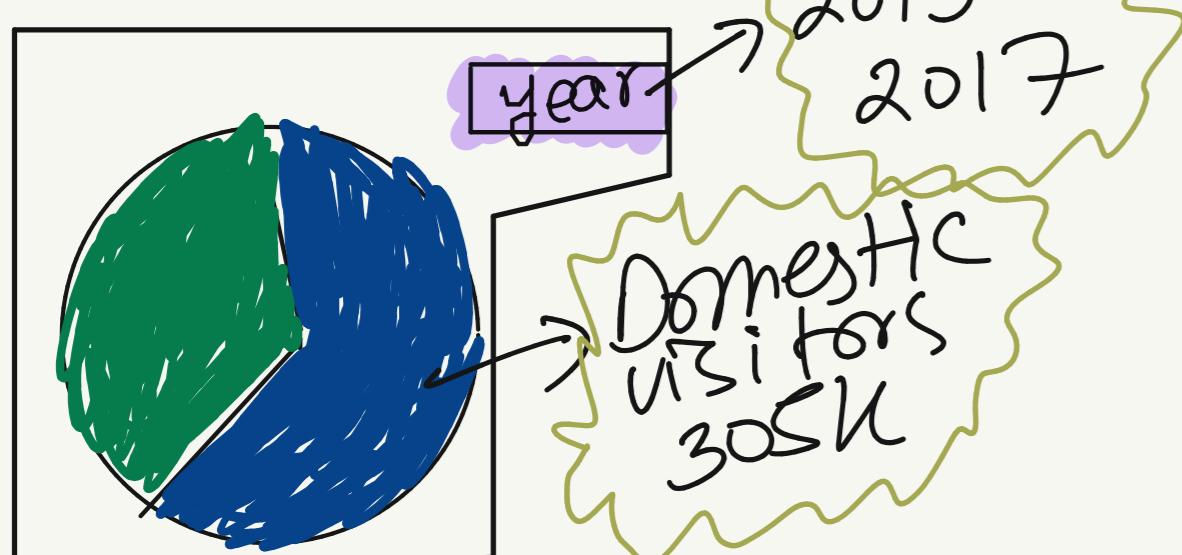
Bubble chart



Timeline

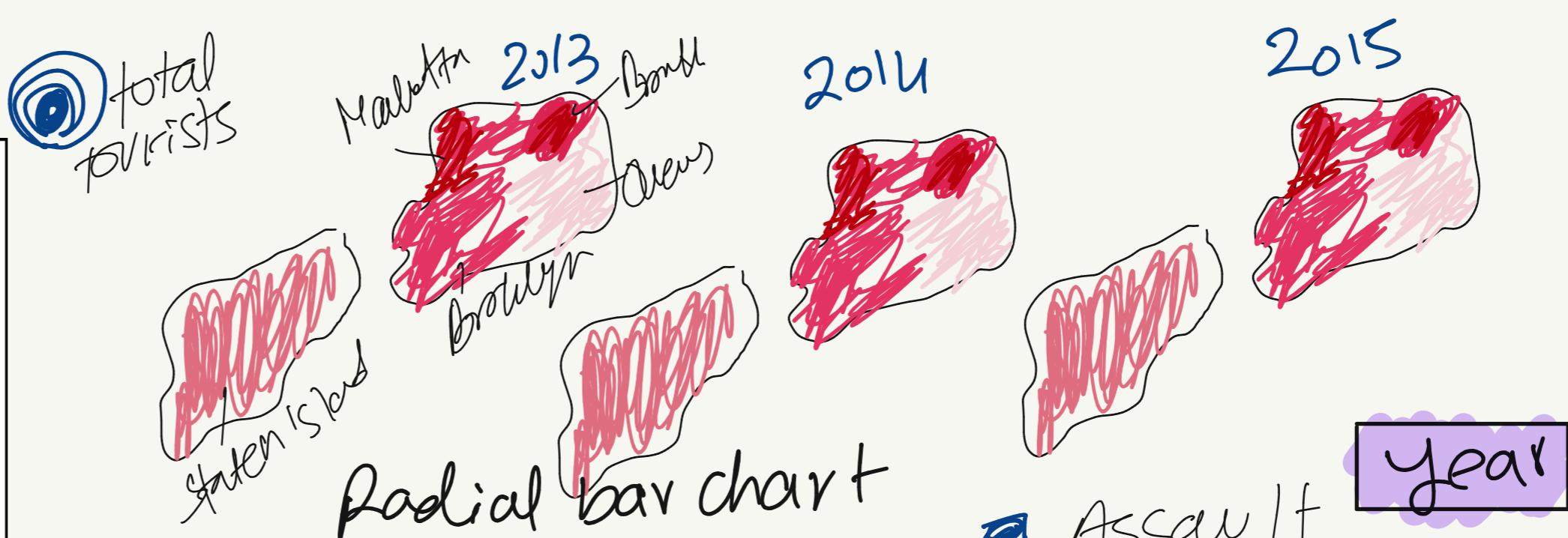


Focus

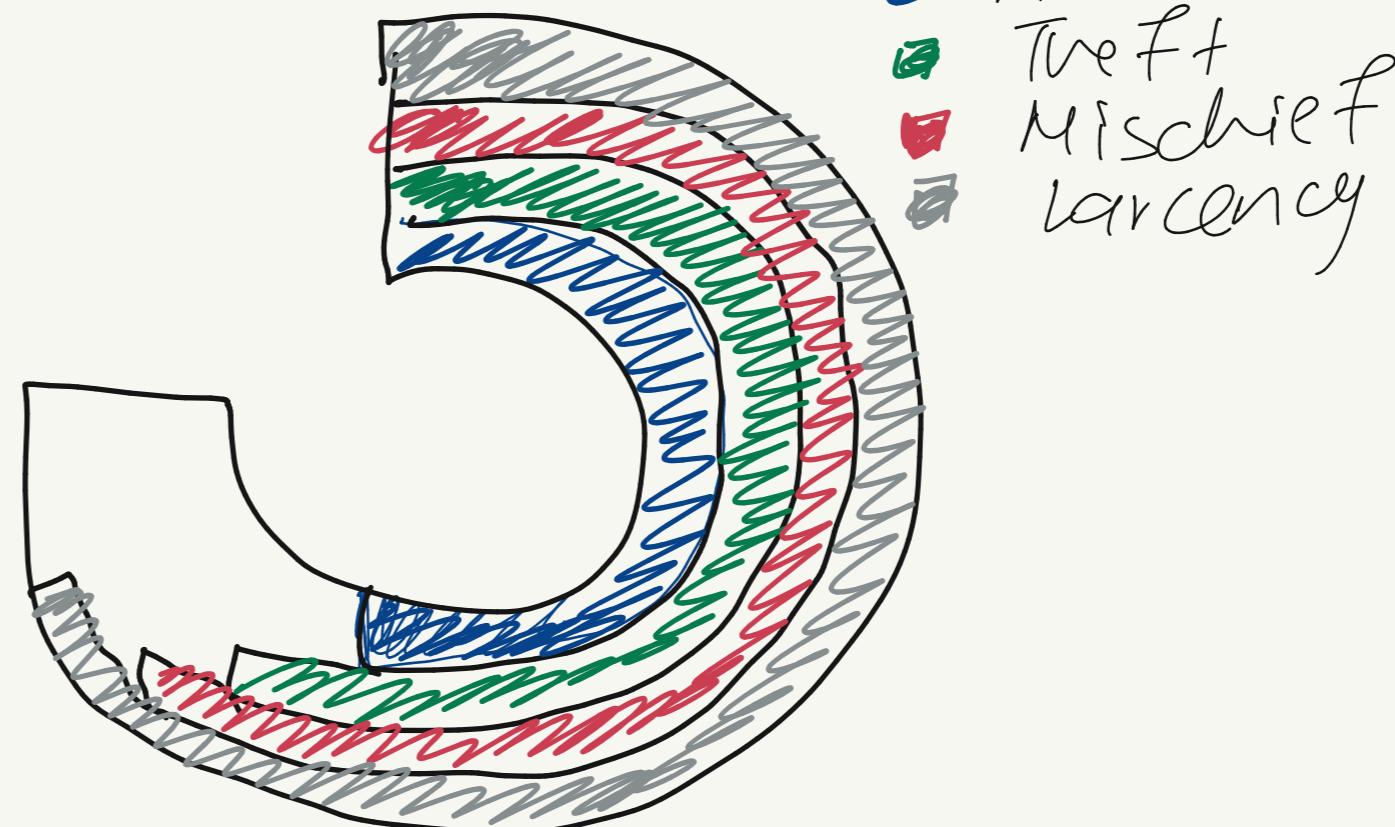


Info

Choropleth map



Radial bar chart



Operation

Two dropdown filters for pie chart and radial bar chart will allow users to filter between dates

Hovering over all of the charts will show their respective details like the name of the place or the type of crime and their percentages.

The timeline will provide users a textual data where in depth the tourist information, borough information and percentage of the crimes committed are displayed

Details  
- Dataset -

1. NYPD complaint Data from the year 2013 to 2016
2. Domestic and international Travels dataset
3. International visitors dataset
4. Holidays list dataset

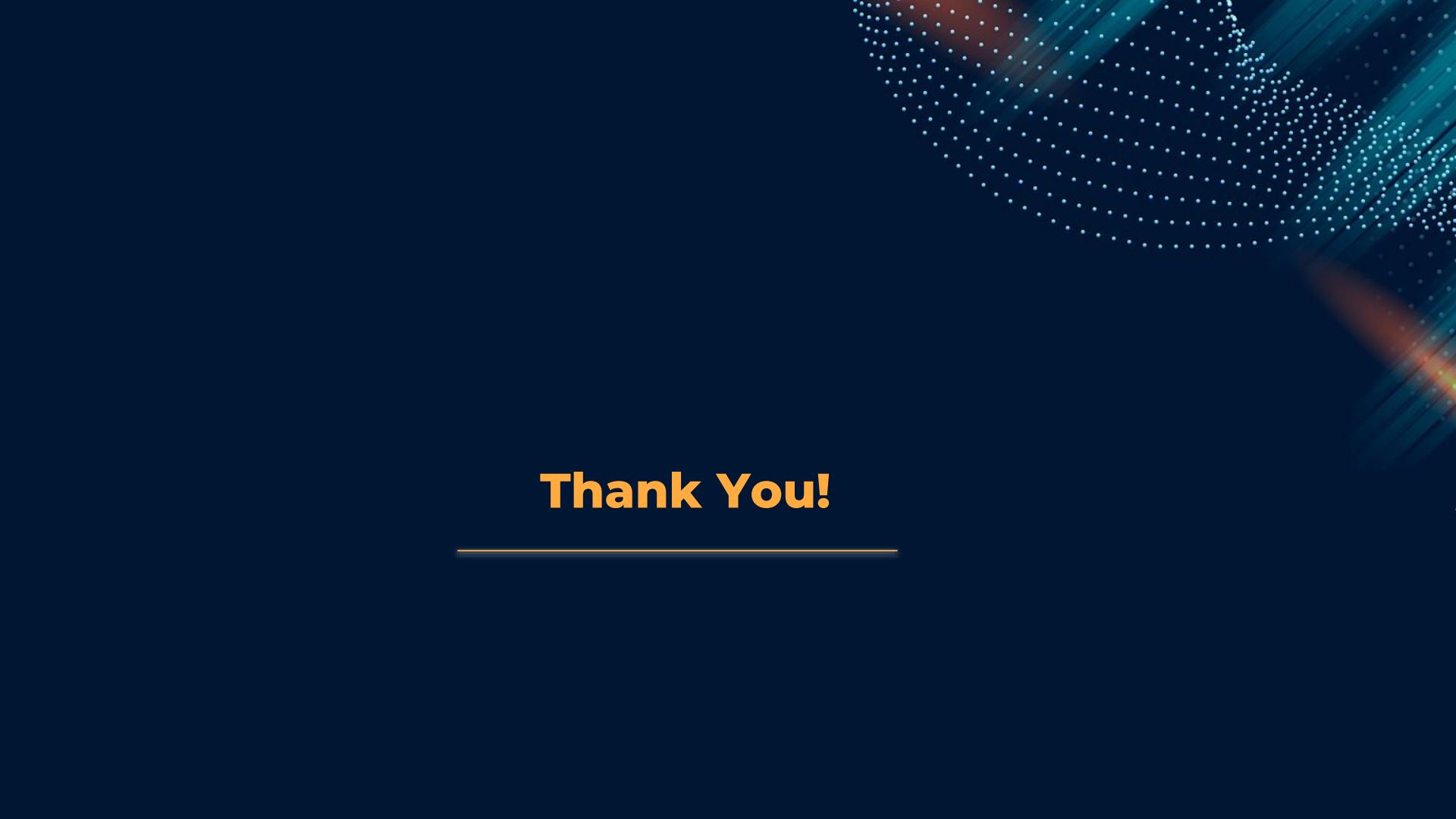
- Dependencies -

D3

- Estimates -

COST: N/A

DEADLINE: 24 October 2022



**Thank You!**

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