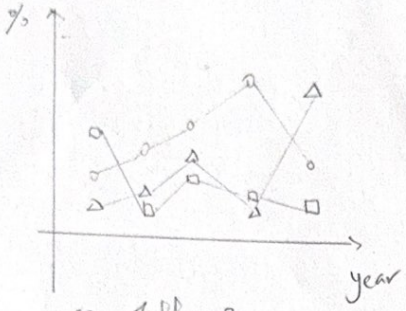
Filter

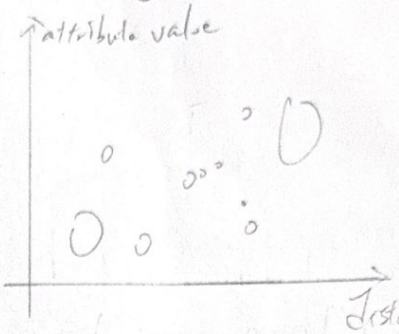
Trend for different measurements

- PM2.5 with different city

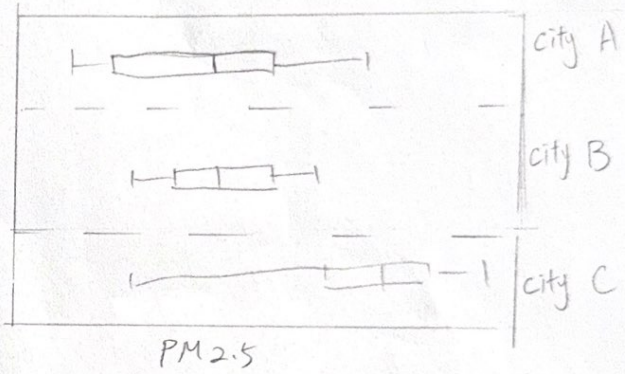


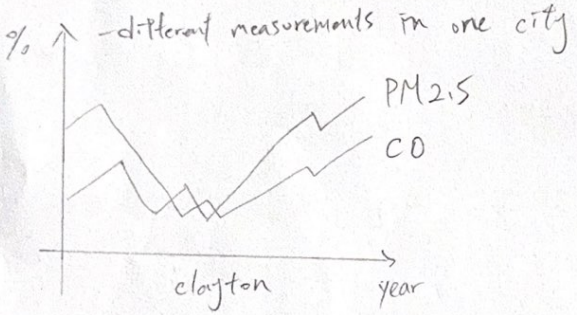
use different shape or color for cities

- finding City with worst Air Quality



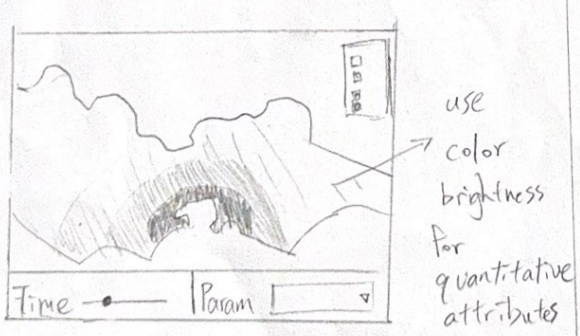
- each city's Max, Min, Avg data



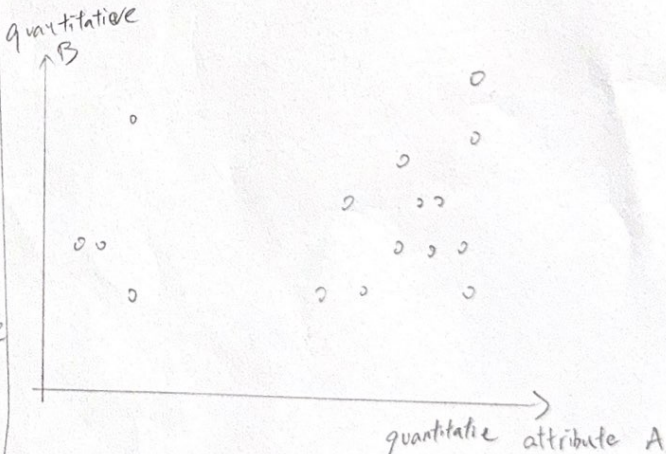


color hue lines for measurement

- one measurement value between cities, use map

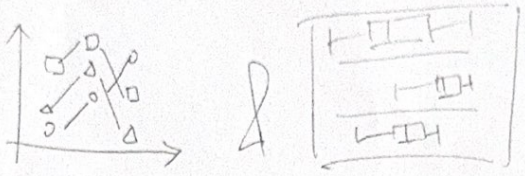


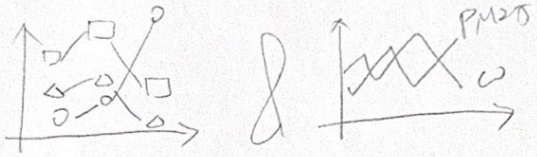
finding trend



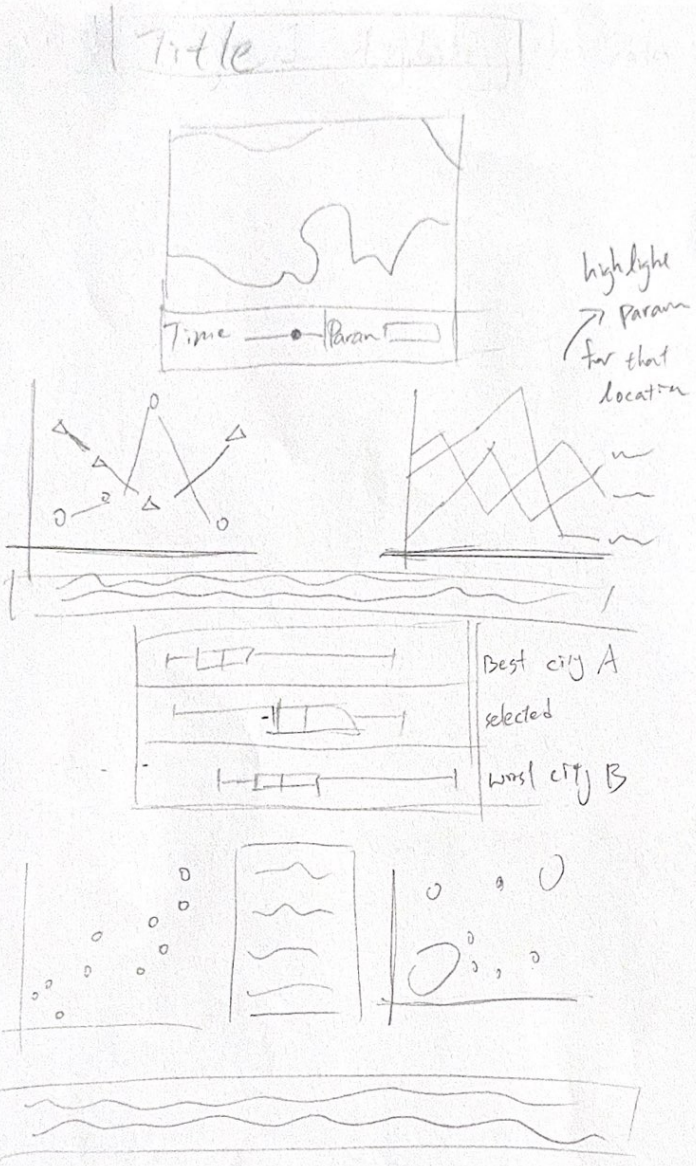
Combine

- heat map & scatter plot or bubble chart to show relationship between distance to CBD and Air Quality

-  to compare each city's AQ and the avg, max, min

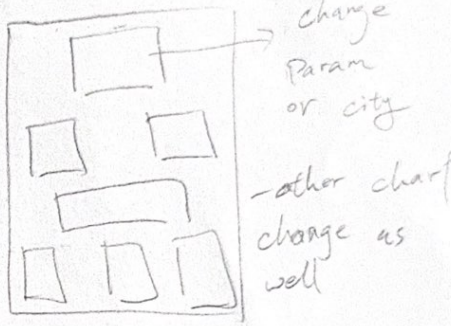
-  to show each city's extensive information

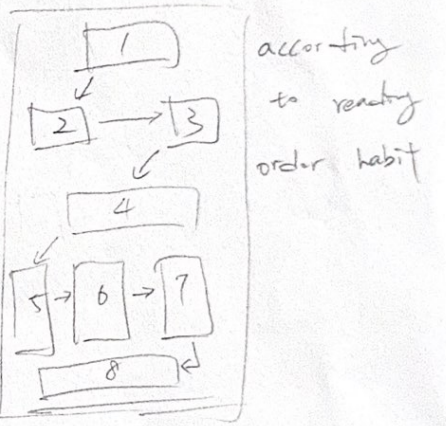
- large heat map & large box plot, can allow readers quickly understand each city's air condition



Story Telling

Operations





Tooltip: when hover on a location on a map, detail show

- graph 1, 2, 3 provide info regarding each param or city

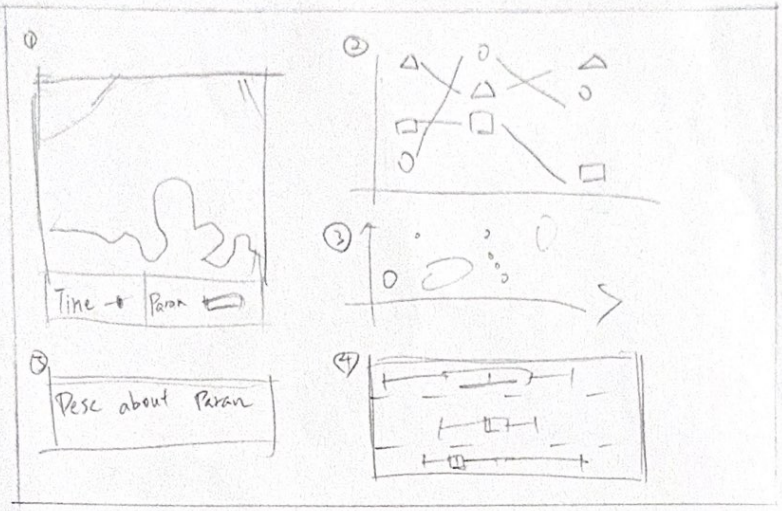
4, 5, 6, 7 focus on more comparison type graph

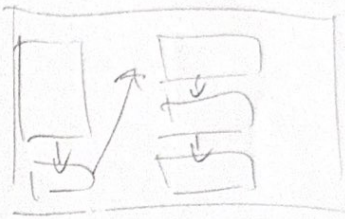
- focus on storytelling, the text box explain the graph & guide reader to understand the correlation between params

- will it be too much info at once ?

- will the reader be able to understand the bubble plot without much description

Focus on one Attribute





up to down
↓
left to right

7. heat map that show the attribute user selects

⑤: contains info that educates reader the parameter and how it effect humans

1. compare each city's value

3. find trend

4. real data comparison, selected attribute middle
top is best city, bottom is worst

-Add filter to choose location

box ⑤ will also change dynamically

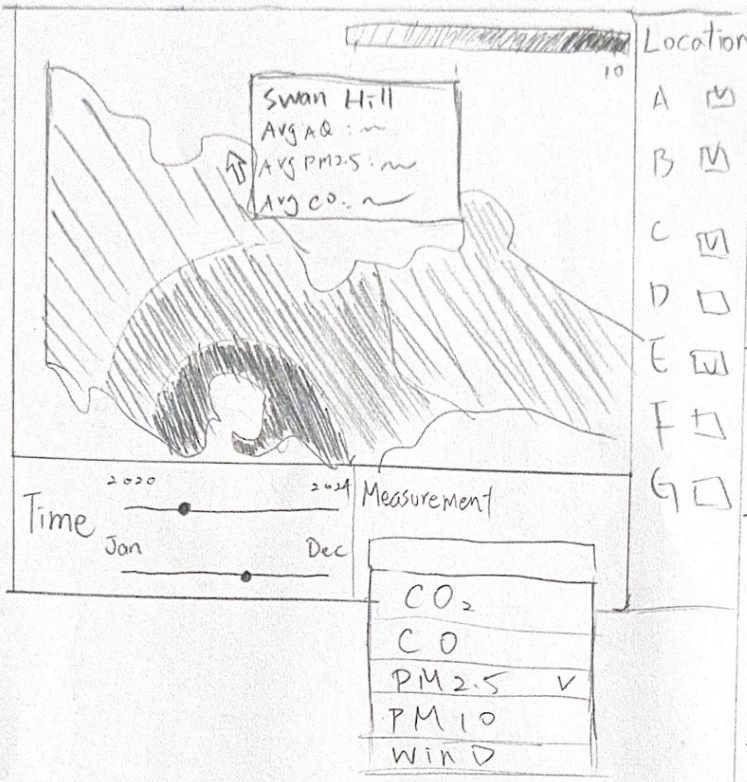
- focus on one measurement, show each city data, find trend → and then compare

- chart ③: x axis: distance to CBD; y: city population
bubble size: air quality

- chart ②: could also use color hue for nominal data
!

→not enough annotation

+ easier to understand cuz less graph
+ provide health info
- can't find correlation between params
-



Focus on Map

Operation:

- when hover to a location tooltip will appear
- location filter on the right, will influence other charts
- Measurement selection will also change the charts

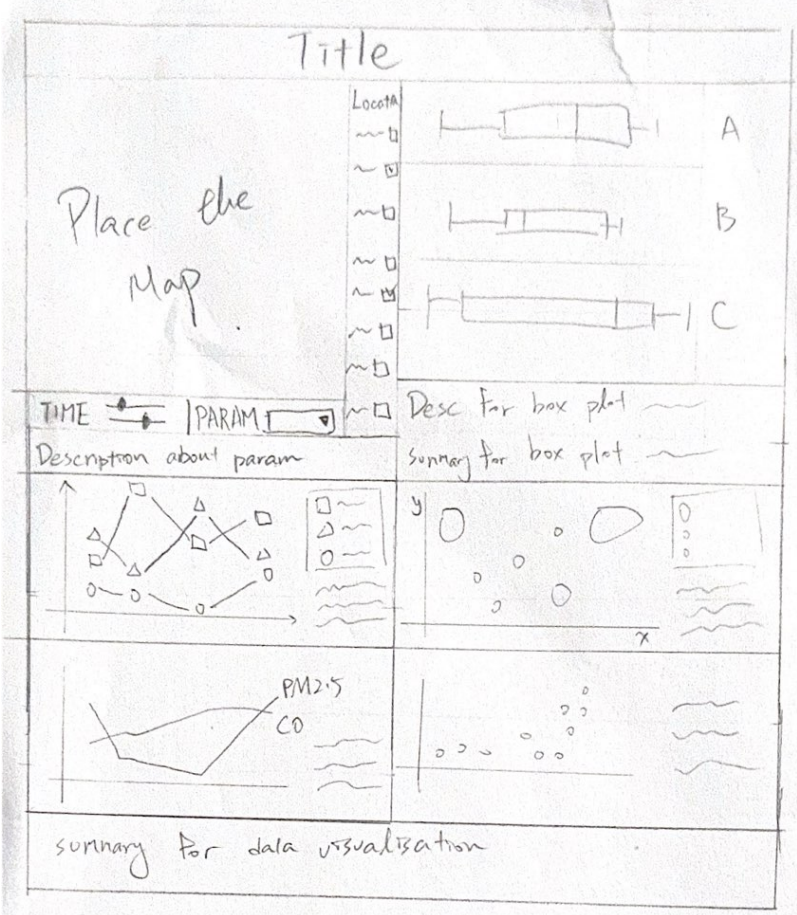
- only one measurement can be chosen at one time
- color brightness for quantitative attribute
-

-> might need little text box to indicate user

+ user can fully control what to see

- require more backend work

Final Design



Operation

- also have top to down left to right reading order
- map layout from sheet 4
- use sheet 2's grouping
- from 3's, avoid putting line chart for multiple param next two main chart so that can also focus on single attribute

Focus

- two main chart at top for better readability
- small desc next to four small charts to provide explanation
- box plot has larger text block for additional description

- good layout & whitespace for a clean visualisation
- multiple description for each param