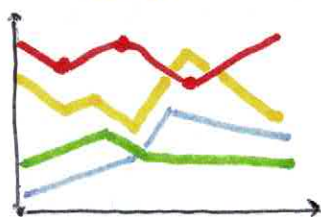


IDEAS

Notes in circulation - the quantity of each denomination

① Line Graph



② Stacked area chart

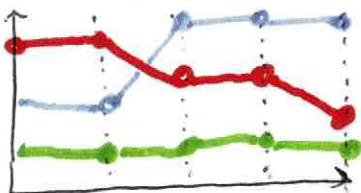


③ Streamgraph

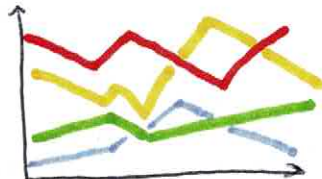


Payment Method Spenditure - \$\$ spent with each method

① Bump chart

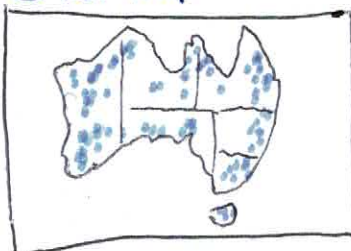


② Line chart

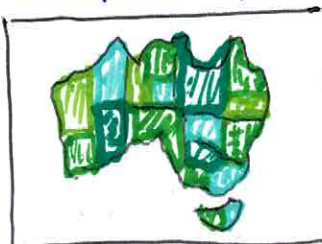


ATM Locations in AUS - distribution of ATMs in AUS

① Dot Map

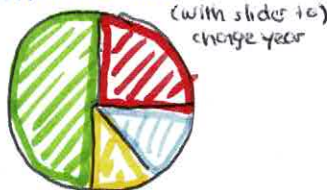


② Choropleth Map



Customer Payment Patterns - age, payment size, payment purpose

① Pie chart



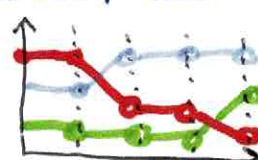
② Dot Plot



FILTER

Payment Method Spenditure

① Bump chart



- Not feasible
- Focused on ranking rather than the total change

Notes in circulation

① Line chart



- not as informative as other options
- Multiple charts don't show change in overall total

CATEGORIZE

current usage of cash in Australia



cash spending patterns



accessibility of cash

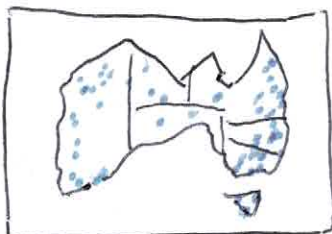


customer patterns

COMBINE & REFINES

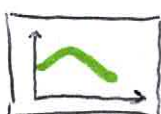
ATM Locations in AUS

- combine map and chart showing ATM withdrawals
- a slider filter can be used to change year on the map.



Customer Payment Methods

- the pie chart with year slider could be changed to a line chart with multiple panels.



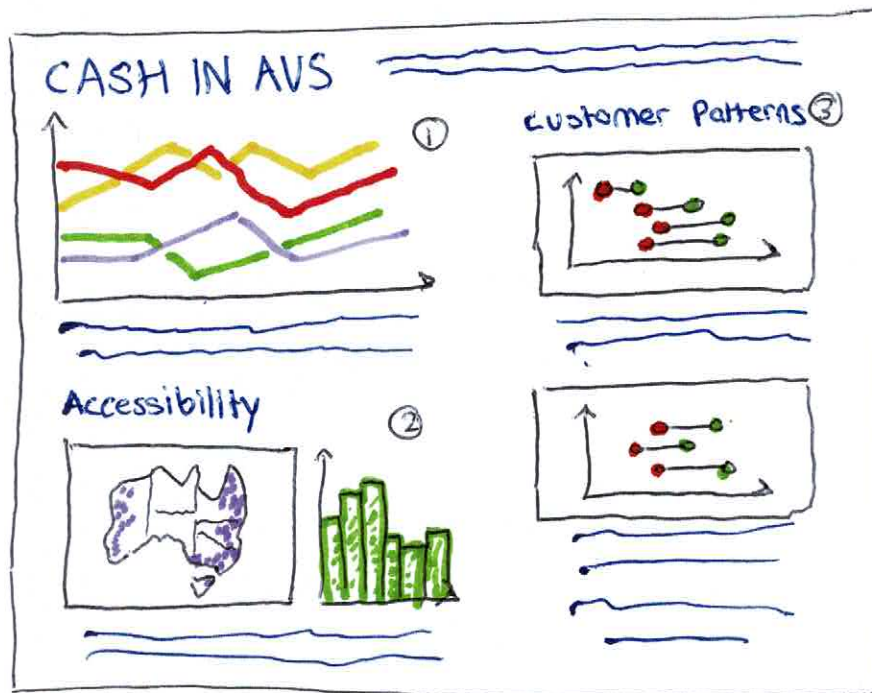
ATM Locations in AUS

- include a dot map and choropleth
- choropleth is done on a state level in multiple panels

QUESTIONS

- Is the streamgraph or stacked area chart better for showing the reducing totals?
- Are panel charts better for showing % change over a year or pie charts with a year slider?

LAYOUT



① cash usage

- multiple line chart
- compares % use of different payment methods

② accessibility

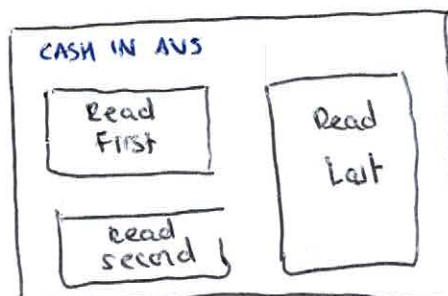
- dot ~~plot~~ and column chart
- shows distribution of ATM locations across AVS
- column chart shows the amount withdrawn from ATMs
- less ATMs = less access to cash

③ customer dot plot

- dot plots
- compares % of Australians between 2007 and 2022 using payment methods
- plot 1: compares payment size
- plot 2: compares age groups

FOCUS

- Largest graph is the multiple line chart on different payment methods. It highlights declining use of cash, the most important takeaway for the reader.
- Accessibility shows the reducing number of ATMs
- Customer Patterns shows the underpinning causes of the above sections.



Title: Dashboard View

Author: Ethan Baines

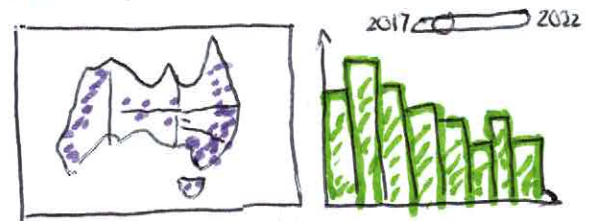
Date: 03/10/2024

Sheet: 2

Task: Design a Dashboard layout

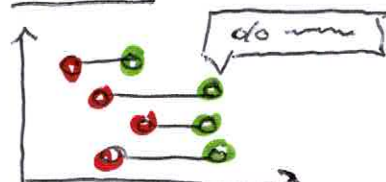
OPERATION

Dot Map + Column Chart



- year slider to change the year shown on the map.
- the column chart will ~~hide~~ grey out bars that are not the selected year

Dot Plot



- tooltip to highlight the % change between points

DETAIL DISCUSSION

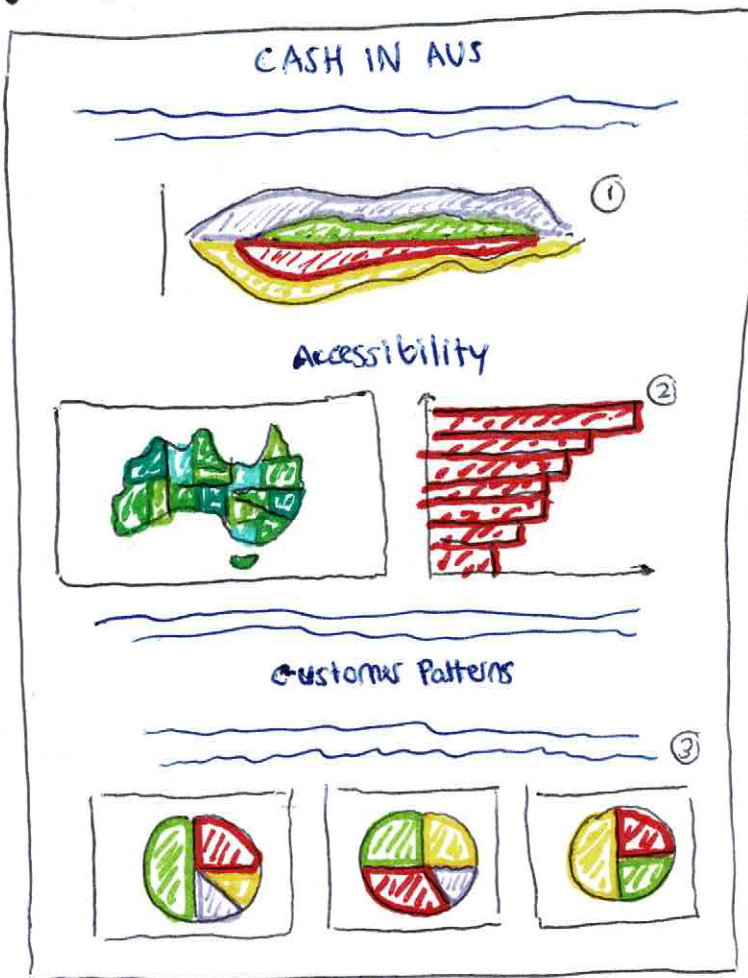
advantages

- easy to understand (low cognitive load for the reader)
- column layout is easy to implement and well segmented

disadvantages

- lacks storytelling. No hero graph to frame the user's focus
- dot plot doesn't show change over time.

LAYOUT



- ① notes in circulation
 - stream graph
 - shows quantity of each note in circulation over the years
- ② accessibility
 - choropleth and ordered bar
 - choropleth shows ATMs per 1000 people
 - ordered bar ranks the suburbs
- ③ customer patterns
 - donut charts
 - shows payment method usage by age, payment size and purpose

FOCUS

- The main chart of this visualisation is the streamgraph. It shows the user the current problem to inform the reader for the remainder of the layout.

Title: Poster #1

Author: Ethan Baines

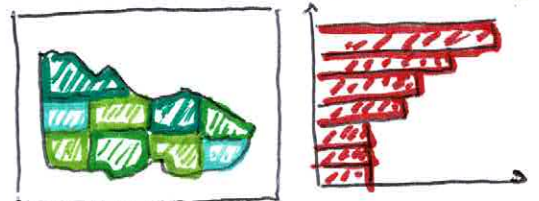
Date: 03/10/2024

sheet: 3

Task: Design a poster layout

OPERATION

Choropleth



- ① year slider to change the year shown on the map
- ② dropdown to change the state the map focuses on

Donut charts



- ① year slider to change the year associated with the data

DISCUSSIONS

advantages

- the layout supports storytelling, guiding the user through the charts
- streamgraph room for more visualisations

disadvantage

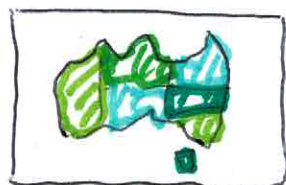
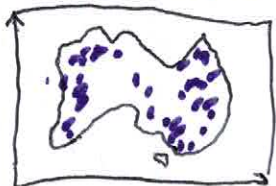
- too much whitespace
- donut chart slices could get too small with multiple categories

LAYOUT

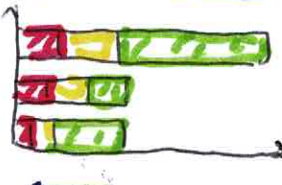
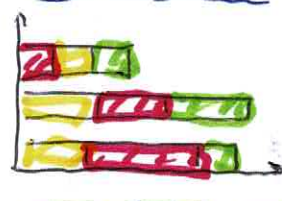
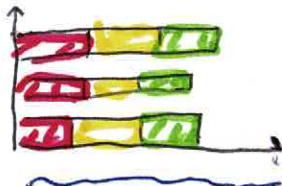
CASH IN AUS



Accessibility A



Customer Patterns



Title: Poster #2

Author: Ethan Baines

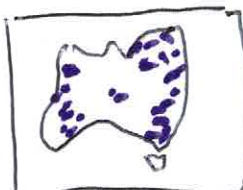
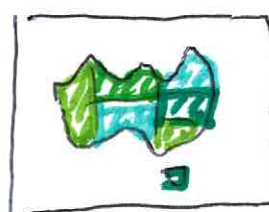
Date: 03/10/2024

Sheet: 4

Task: Design a poster layout with alternative idioms

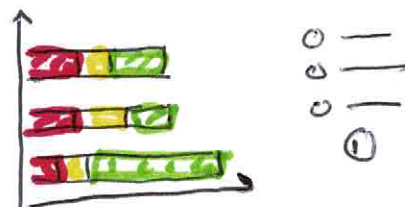
OPERATION

Choropleth + Dot Map



① year slider to change the year shown on the map

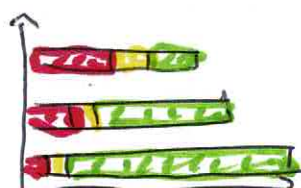
stacked Bar chart



① interactive legend to increase/reduce the opacity of all of the other segments

FOCUS

- split into 3 clear sections. Intro, Accessibility and customer patterns
- compared to previous designs this one includes stacked bar charts



- The aim is to show the part-to-whole relationship while displaying trends.

DISCUSSIONS

advantages

- good storytelling. clear sight lines.
- combines multiple map charts

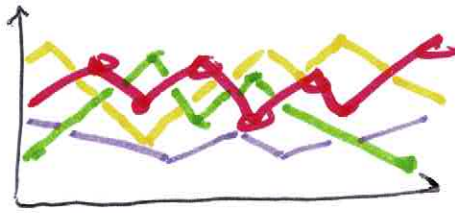
disadvantages

- multiple "stacked" idioms may limit the details as smaller segments are harder to distinguish.

LAYOUT

CASH IN AUS

Payments



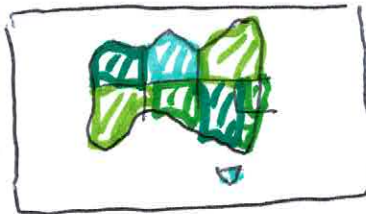
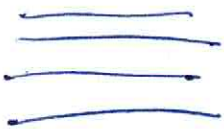
Accessibility



Customer Patterns



Demographics



Title : Final Layout

Author : Ethan Baines

Date : 03/10/2024

Sheet : 5

Task : Design the final layout

OPERATION

Choropleth



① year slider to change the year shown on the map

Line chart



① interactive legend to reduce the opacity of the other segments

FOCUS

- Line chart offered better opportunity to explore trends
- Dot Plot offered the best way to show the change between two years. Only the change in cash usage will be shown for each year
- Stacked Area chart, is more readable than streamgraph for audience.
- choropleth better than dot plot as it won't be clustered at major cities.

DISCUSSIONS DETAILS

Dependencies

- Github for source control
- HTML, CSS + VegaLite
- Excel for data cleaning

Time frame

- Idioms 3 days + Layout 3 days

Requirements

- How to clean and normalise data for choropleth?