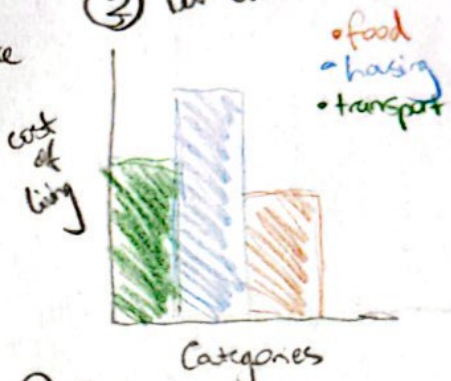
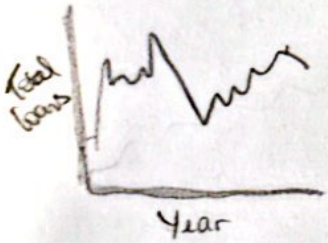
IDEAS

① Chloropleth map of VIC

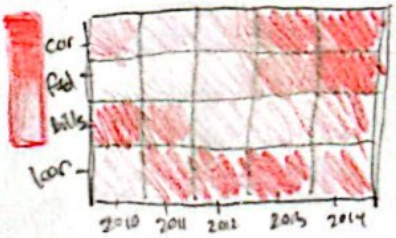
② Bar Chart



③ Line Chart



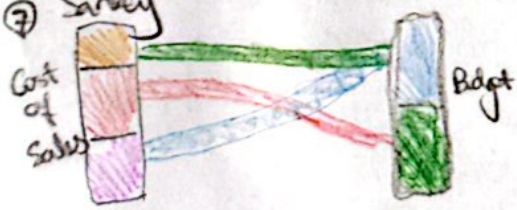
④ Heatmap



⑤ Area Chart

⑥ Pie Chart

⑦ Sankey



⑧ Map

COMBINE & REFINE

- Combine map w/ bar chart to show the geographical & categorical breakdowns of the cost of living
- Use heatmap alongside line chart to show housing price trends over time across States
- Potentially have scatter plot showing housing affordability alongside area chart of loan commitments

FILTER

- Sankey Diagram is too visually overwhelming & hard to interpret in a simple dashboard
  - ↳ Too Complex
- Radical plot is not effective to communicate relationships between categories
  - ↳ Hard to interpret

Pie Chart not necessary if bar chart shows the category breakdowns more efficiently
  - ↳ Redundant

CATEGORIES

Quantitative
- Housing prices
- Loan commitments
- Mortgage
- Cost of living

Categorical
- Australian States
- Expenditure categories (Housing, food etc.)

Relationships
- Housing prices vs loan commitments
- Salaries vs cost of living
- Expenditure vs cost of living

QUESTIONS

- How does cost of living vary across Aus states?
- What are the main factors driving the cost of living in Aus?
- What states are experiencing the highest cost of living increases over time?

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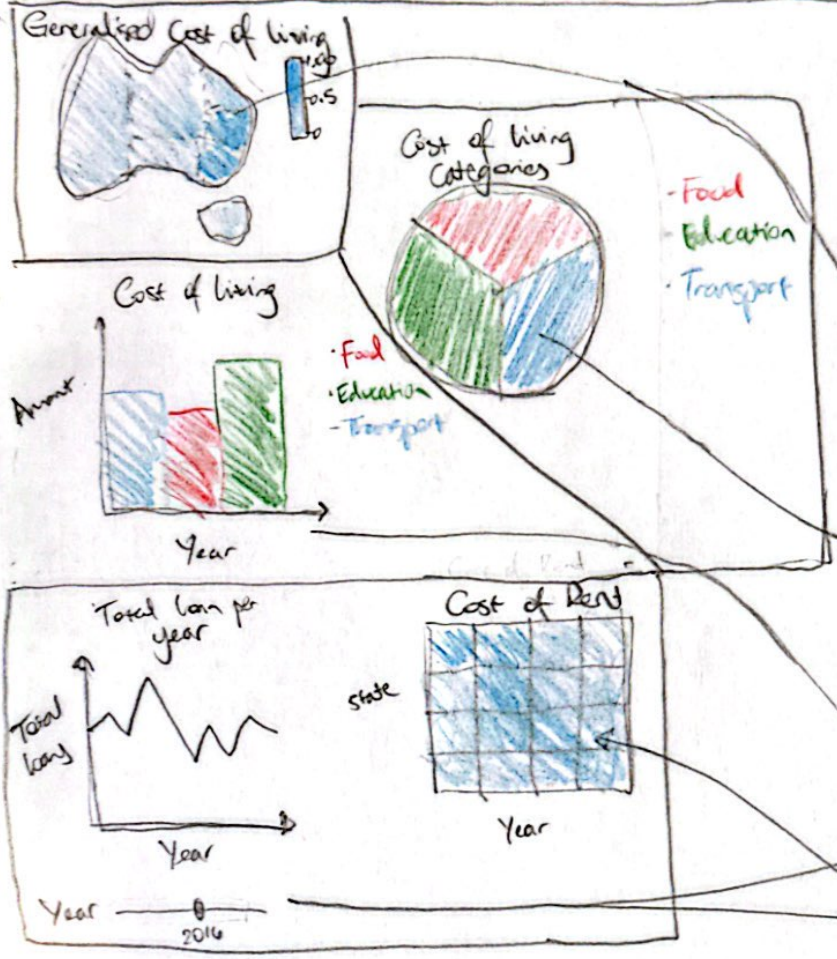
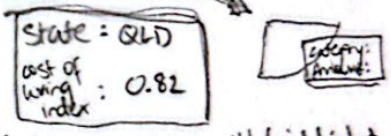
LAYOUT

Title: Layout 1
Author: Chris How
Date: 14/10/24
Sheet: 2
Task: layout for visualisation



OPERATION

- Tooltip to demonstrate detailed information on different states



- clicking a state will highlight relevant data points.
- Filter by year to see changes in category per year
- Heatmap is color coded, users can filter by year to see how values have changed in different states

FOCUS

→ The map will be the main focus of this visualisation as it gives an immediate geographical overview of cost of living trends in Australia.

→ From here, focus will shift downwards to the breakdown of living costs by category (through Bar Chart & Pie Chart), then finally down to housing & property-specific data.

→ Flow is from broad overview to specific insights.

DISCUSSION

Pros

→ layout flows logically from general (map) to specific (charts), which will help users engage with the information progressively.

→ use of interactive filters will encourage user exploration & deeper insights.

Cons

→ Map may dominate the space, leaving less room for detailed breakdowns.

→ If filters/dataset is updated frequently, performance issues could arise, especially w/ large datasets being visualised interactively.

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LAYOUT

Title: Layout 2
Author: Chris How
Date: 14/10/24
Sheet: 3
Task: Layout for visualisation

OPERATION

- Summary Text
  - Serves as an introduction, doesn't require interaction, but provides useful context for users to understand their visualisations.
- Users can click on a state to filter their pie & scatter plots to focus on the data for a specific region.
- Same as year filtering. Users can see the change in map data for each state through the year filter.
- Breakdown of the cost categories that is introduced in the pie chart.

FOCUS

→ Design brings the pie chart to the forefront, providing a quick glance at cost category proportions before diving into geographical & temporal data.

→ Scatter plot & map offer geographical & historical perspective on cost of living data.

→ User follows journey from quick overview, to geographical insights & finally to trends over time.

DISCUSSION

Strengths

→ Vertical flow, works well for users who prefer scrolling & consuming info in a linear matter.

→ pie chart draws attention to cost categories first, making it easier for users to understand what contributes to the overall cost of living.

Weakness

→ Vertical layout might be less appealing to users who prefer data all on screen at once.

→ pie chart may take focus away from more critical charts like the map or historical data like scatter

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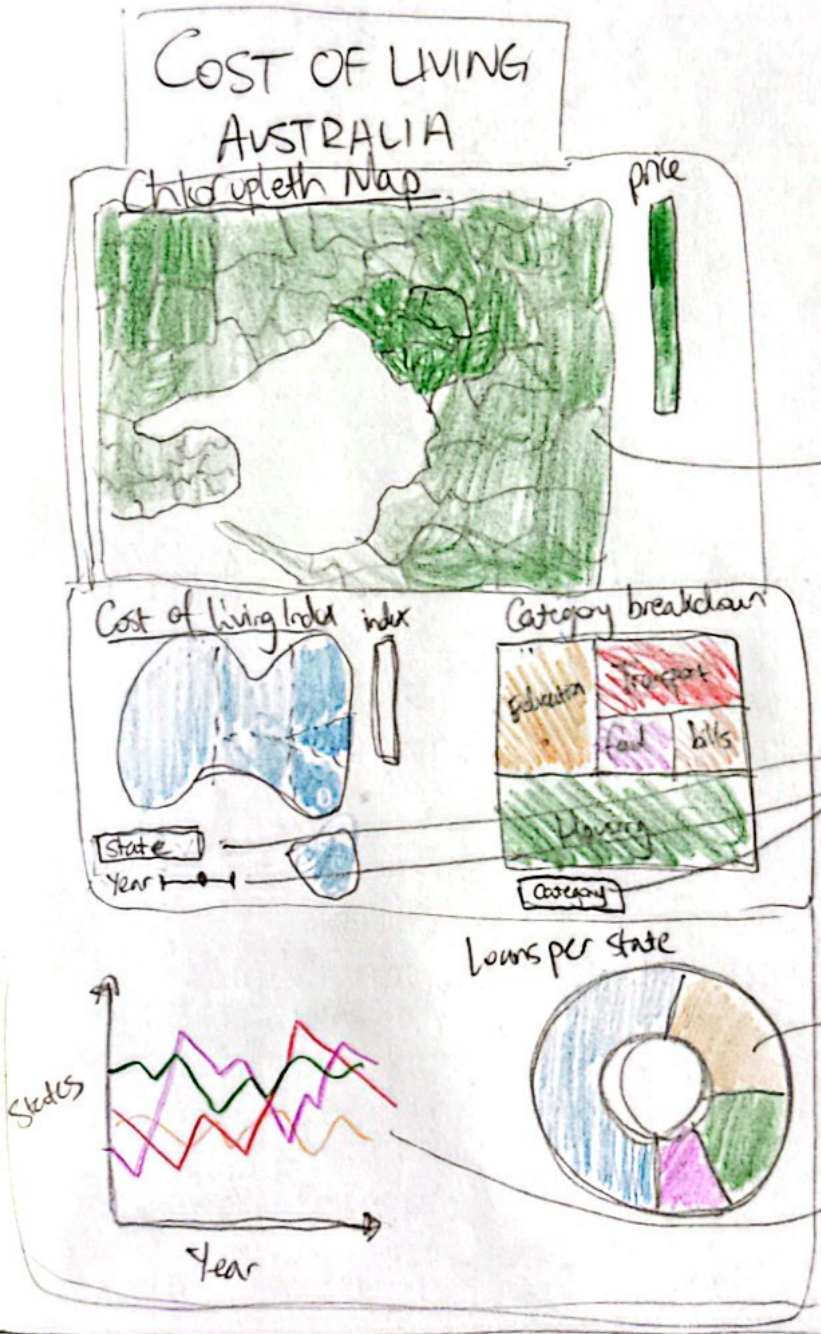
LAYOUT

Title: Layout 3
Author: Chris Haw
Date: 14/10/24
Sheet: 4
Task: Layout for visualisation



OPERATIONS

Chloropleth map
→ users can hover over cities in Victoria to view detailed info on cost of having per suburb in Victoria

Sidebar filters
State ↓ NSW VIC ACT
Year 2016
Adjusts map & charts on the page.

Donut chart is dynamic, hovering over slices will display detailed info through tooltips.

line chart incorporates historical data over year for multiple states.

FOCUS

→ Chloropleth map allows users to get an immediate understanding of cost differences in Vic suburbs.
→ Other charts provide categorical breakdown & temporal analysis.
→ Each section is separated clearly, no visualisation overwhelms others.

DISCUSSION

Strengths

→ Clear, structured view of data. Modular design makes it easier to focus on individual charts.
→ balanced interaction of different types of data.

Weakness

→ Chloropleth map of Vic shouldn't be the forefront diagram as the topic is of Australia.
↳ Doesn't make sense for this graph to be first.

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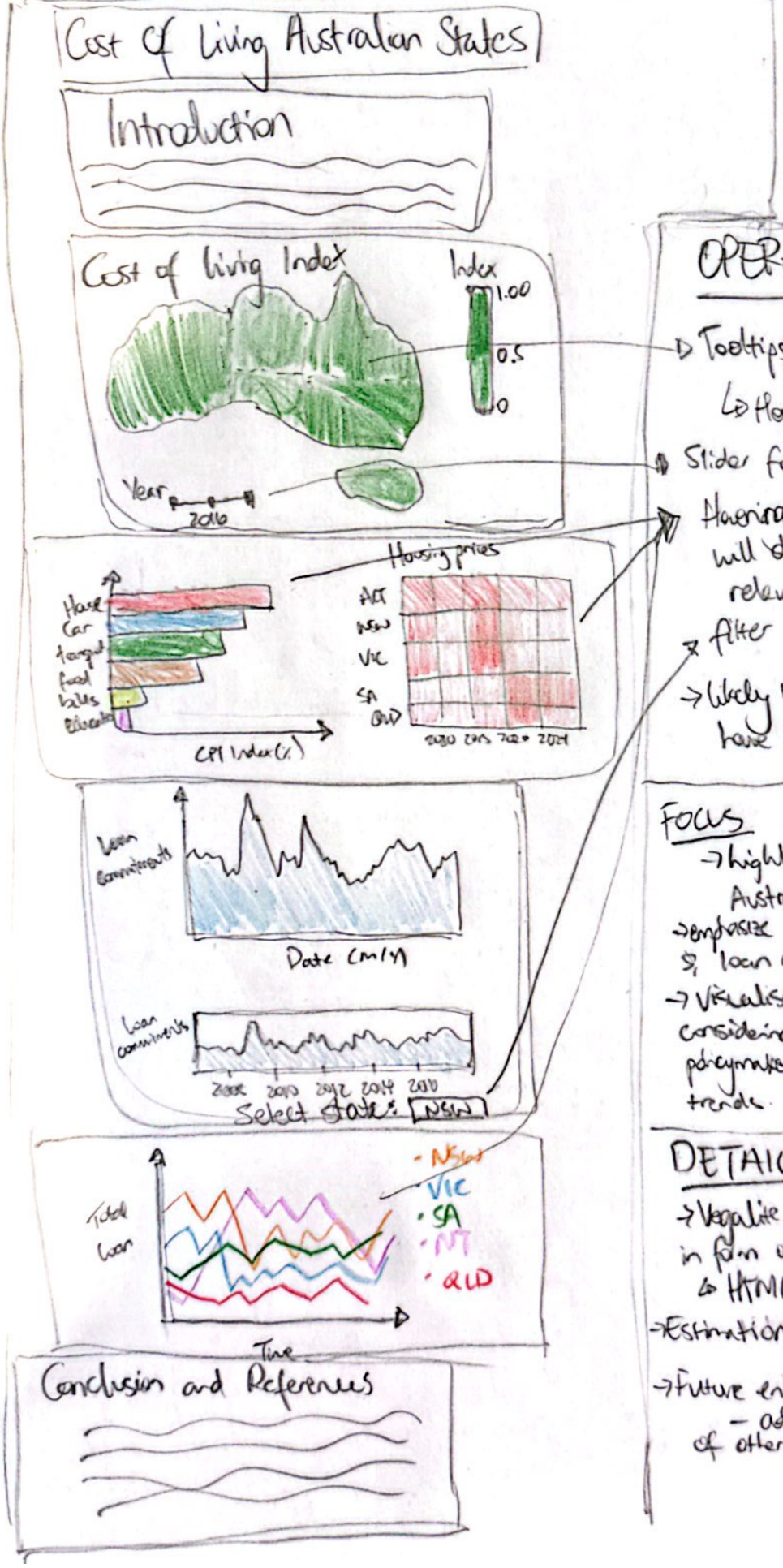
LAYOUT

Title: Final Design Sheet
Author: Chris How
Date: 14/10/24
Sheet: 5
Task: Final layout



OPERATIONS

- Tooltips (Generalised index: 0.85, State: VIC)
  - Hover over to see details
- Slider for interactivity and history
- Hovering over any of these sections will display the data for the relevant graphs.
- Filter by States of Australia
- → likely to contain more graphs that will have filter & interactivity components.

FOCUS

- → highlight disparities in cost of living in Australia.
- → emphasize relationship between housing costs & loan commitments.
- → Visualisation is aimed at individuals considering relocation within Australia, policymakers, researchers analysing economic trends.

DETAIL

- → Vegalite for visualisation. Datasets imported in form of csv.
  - HTML to view, CSS to style.
- → Estimation: at least 4 days to complete
- → Future enhancements:
  - add more breakdowns (detailed) of other categories other than housing.

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