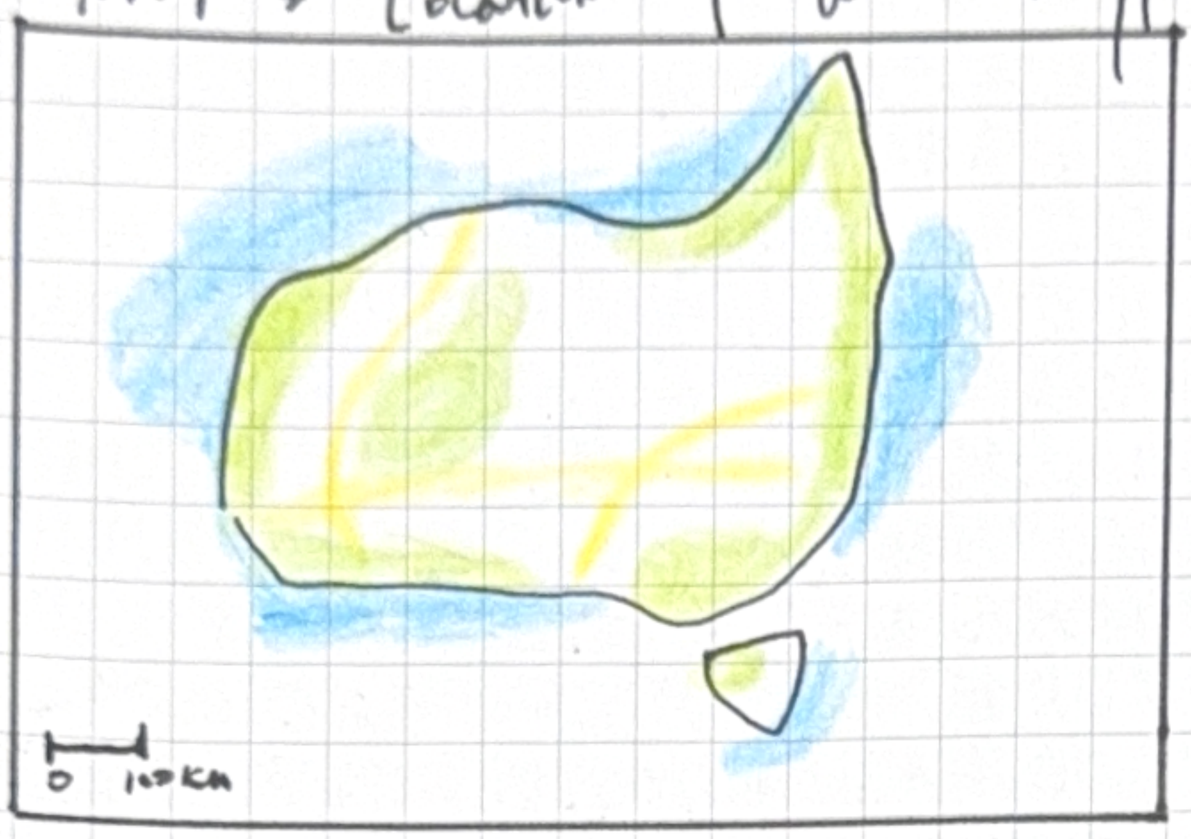
IDEAS

climate change → temperature rise → mammal range changes

Keywords: biodiversity loss
climate change
animals

Map → Location of animals / type



= marine animals

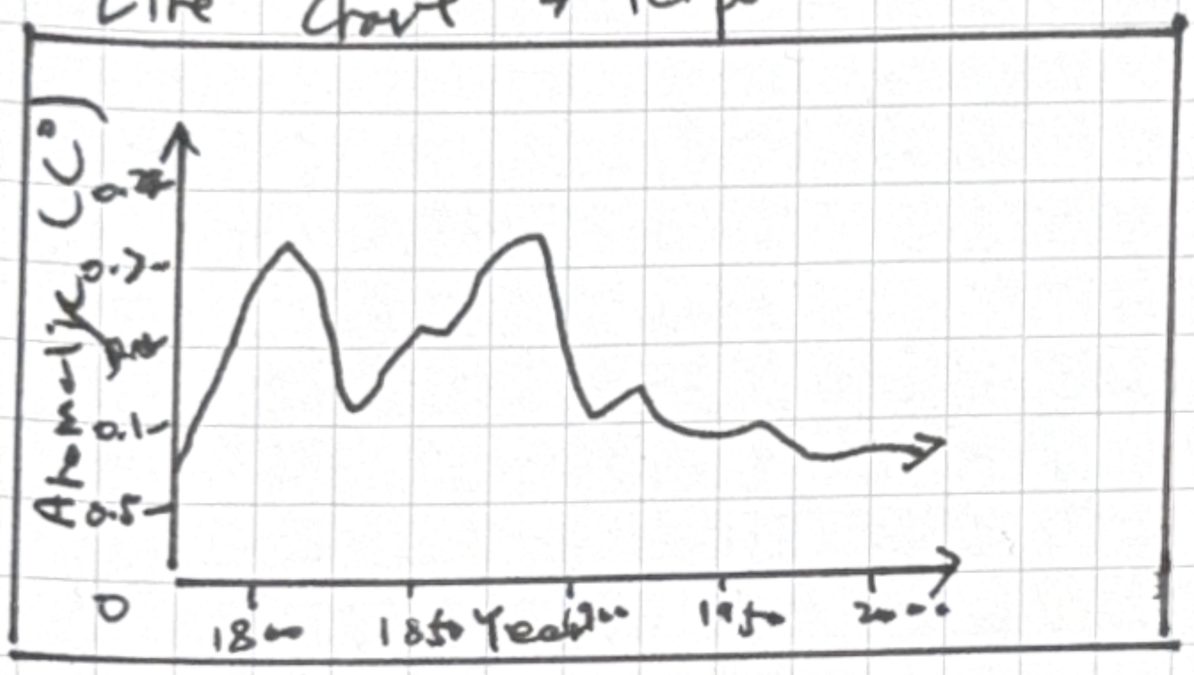
= mammals

= freshwater animals

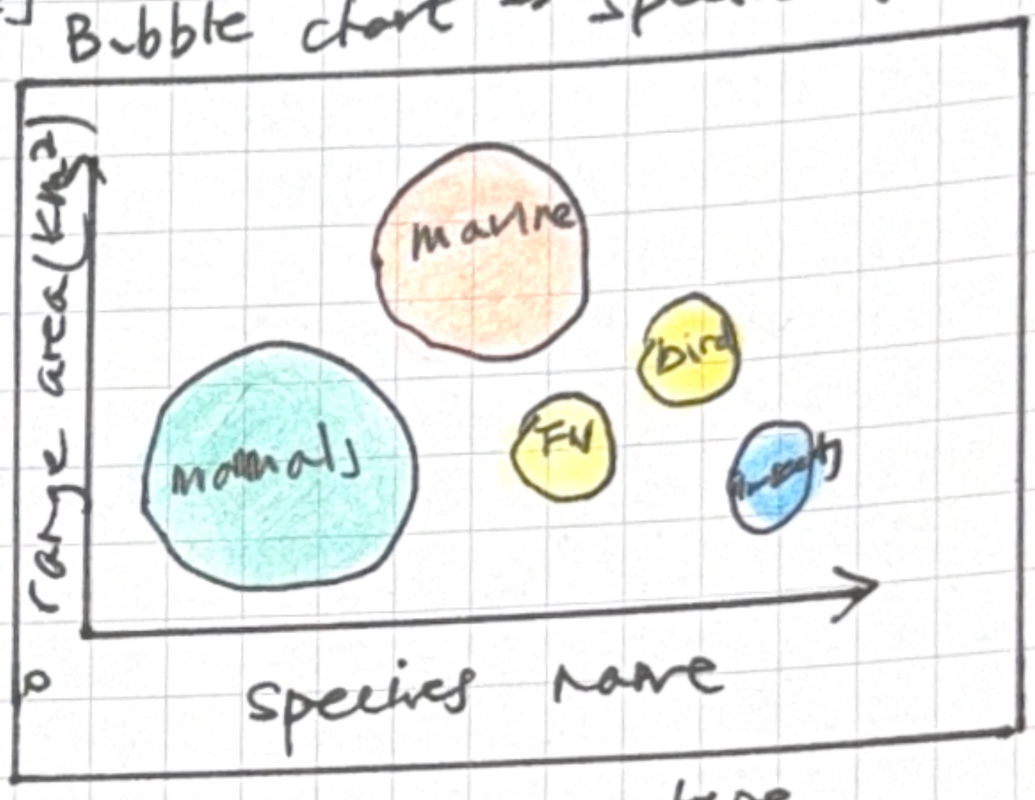
QUESTIONS

- Which regions have the highest concentration?
- How has global temperatures changed?

Line chart → Temperature anomalies

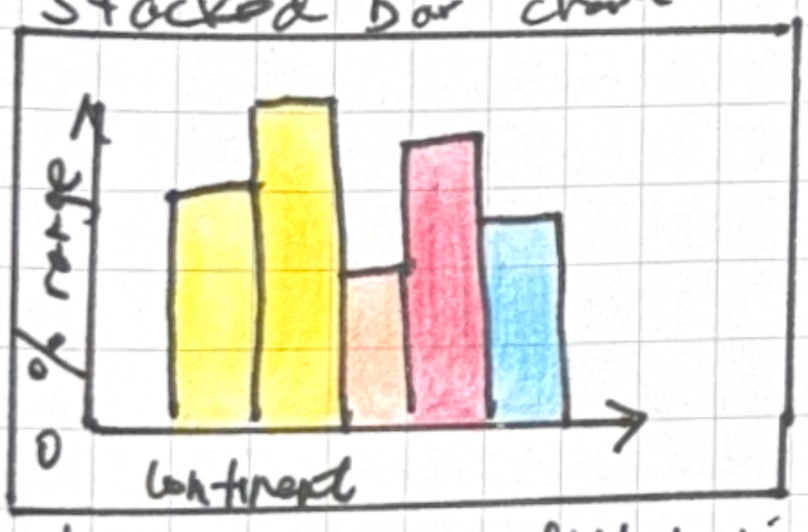


Bubble chart → species type
range size vs



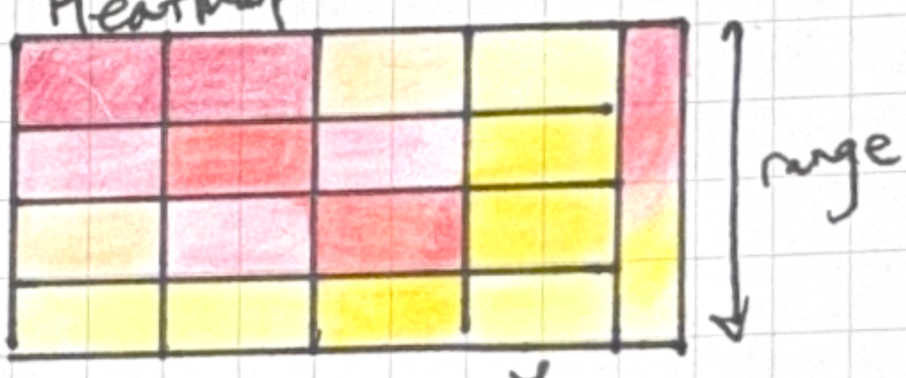
* colour = range type

Stacked bar chart



Mammal range distribution by continent

Heatmap



Temp. anomaly vs Year

FILTER

- heatmap
- line chart
- map
- bubble chart

CATEGORIES

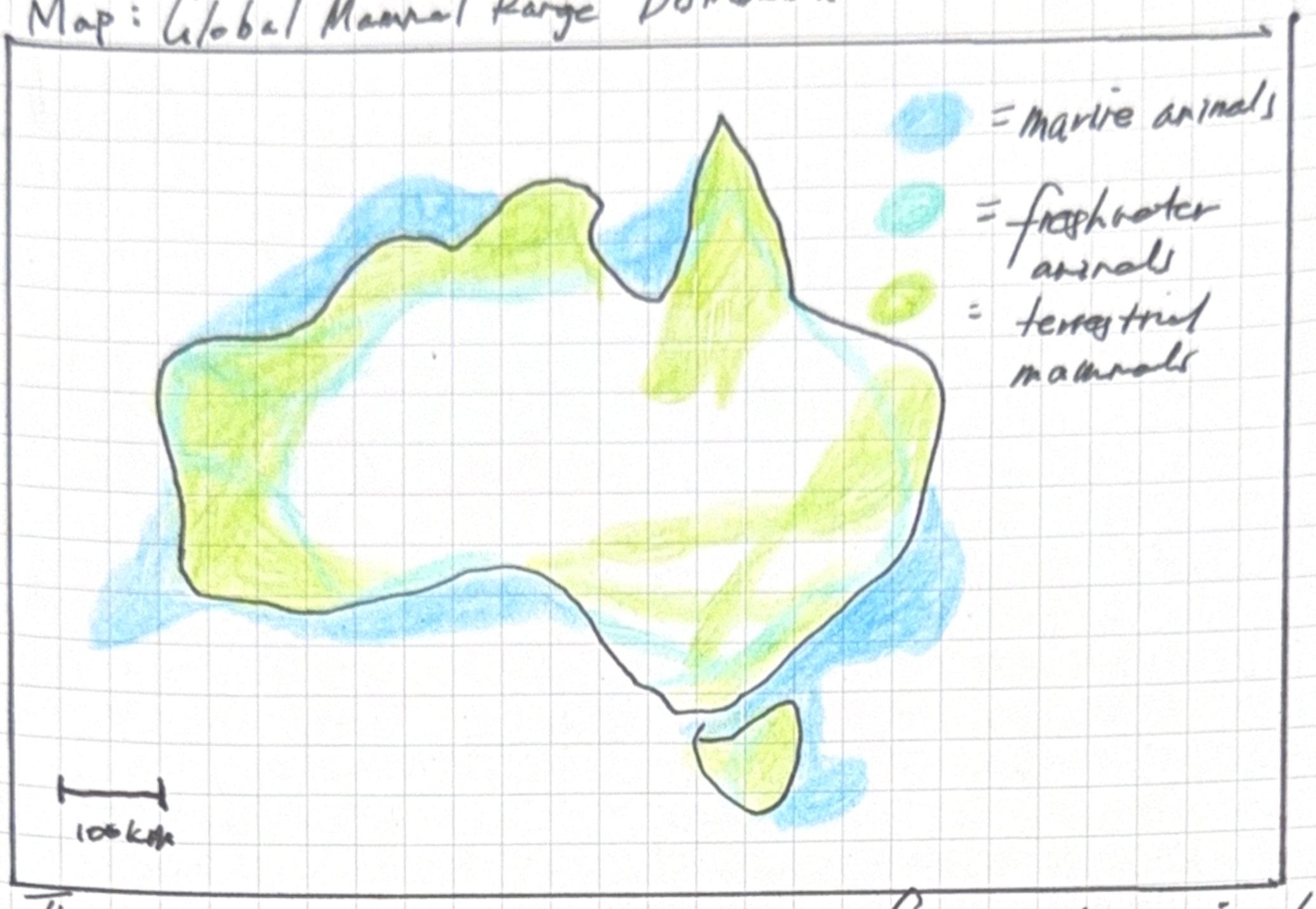
- geospacial view → map
- trend view → line chart
- correlation view → bubble chart
- composition view → bar chart

COMBINE + REFINE

trend view + interaction
map + colours (range)
annotations + legends

LAYOUT

Map: Global Mammal Range Distribution

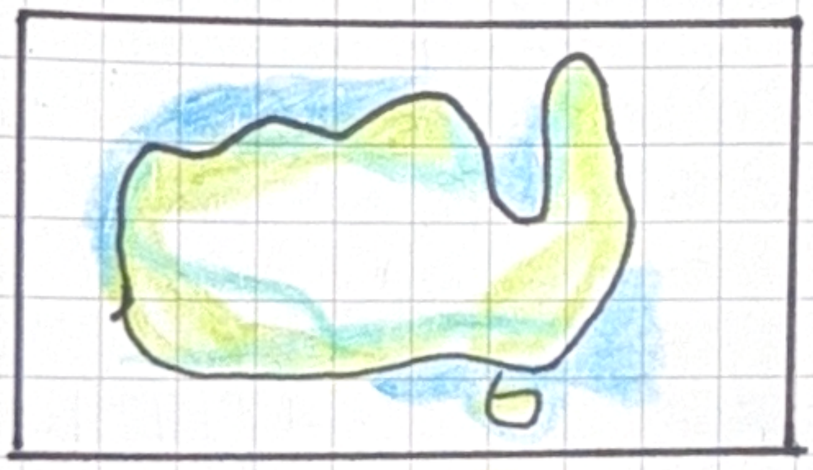


This map visualizes the global distribution of mammal species based on their primary habitat type.

FOCUS

- comparison of mammal habitats across regions
- analysis of biodiversity and conservation efforts
- visualize spatial extent of mammal habitats

COMPONENTS + OPERATIONS



- colour by range type
- tooltip displays species name/type
- legend filter for range type

PROS + CONS

PROS

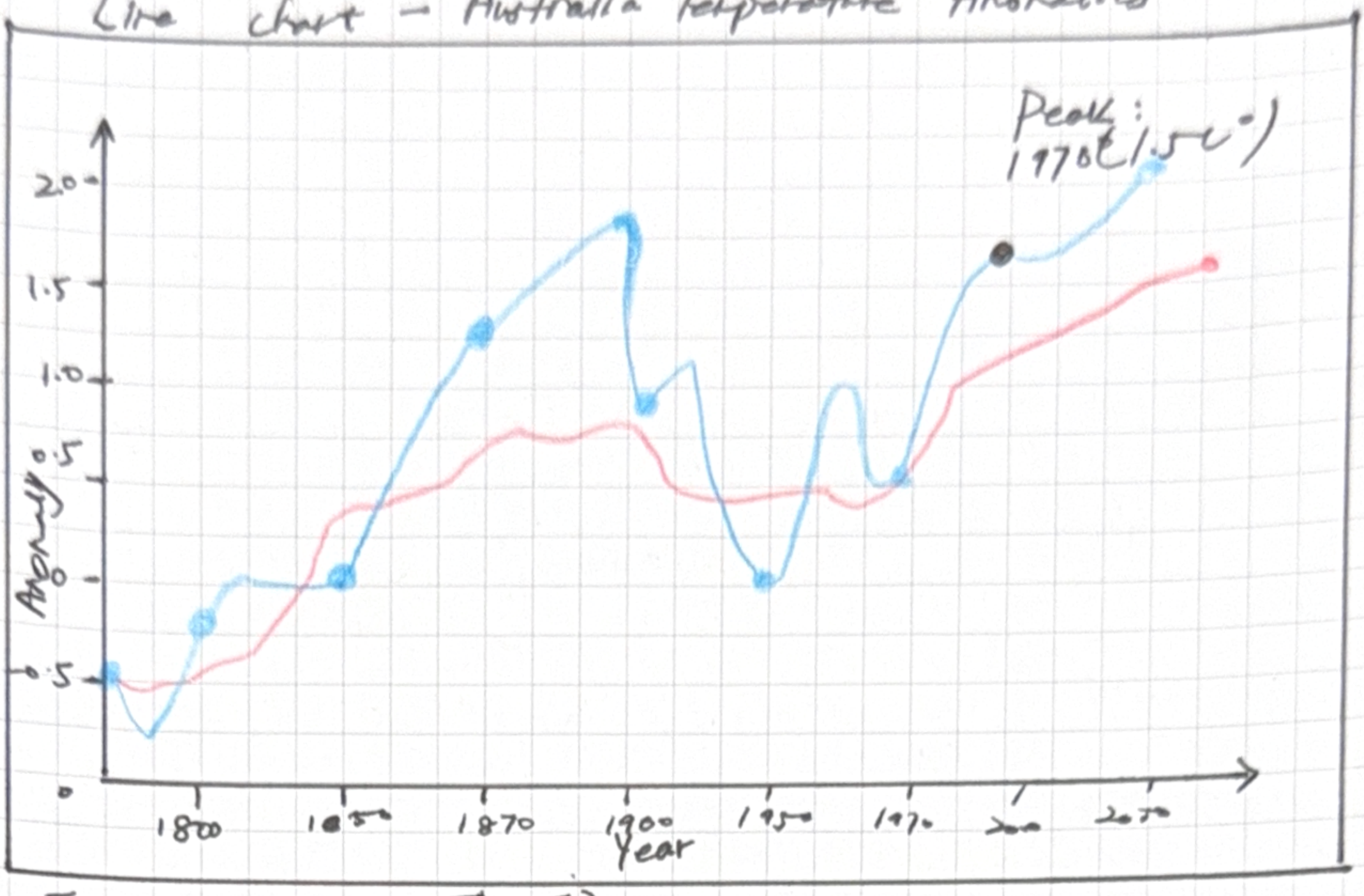
- Clear spatial context
- intuitive colour coding
- interactive legend
- effective for communication

CONS

- potential clutter
- lack of quantitative scale
- no direct correlation to temperature

LAYOUT

Line chart – Australia Temperature Anomalies

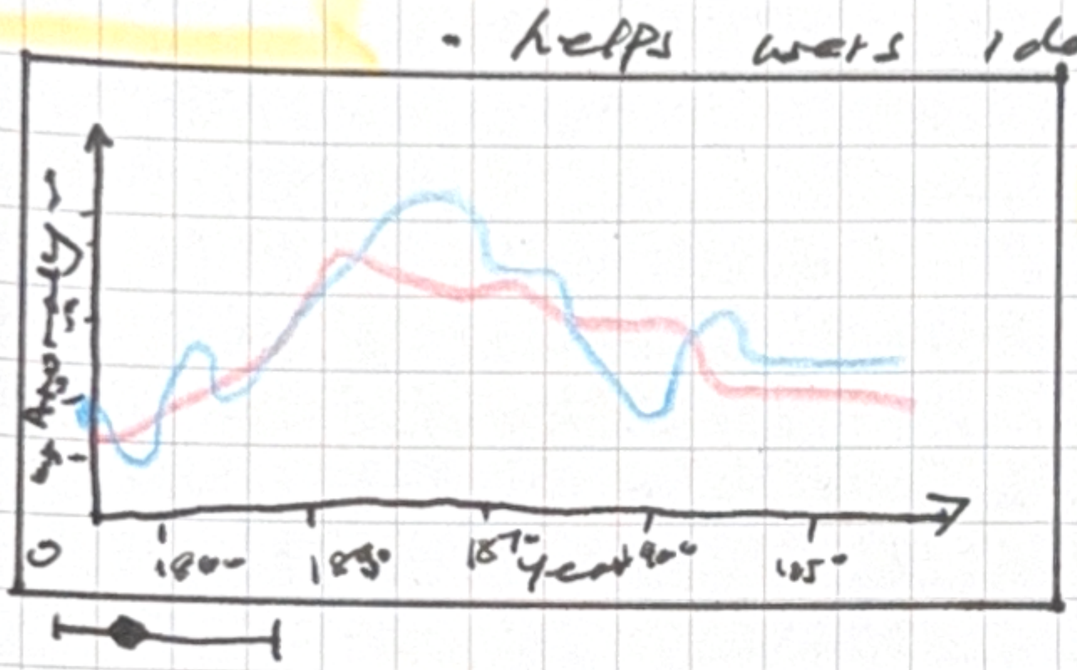


From : 1873

To : 2000

FOCUS

- show change across space
- visualizes movement and relationships
- helps users identify spatial patterns, flows, gradients



COMPONENTS + OPERATIONS

- range sliders to filter start year and end year
- tooltips : hover interaction showing exact year and anomaly (C°).
- visually compare early vs recent decades

PROS + CONS

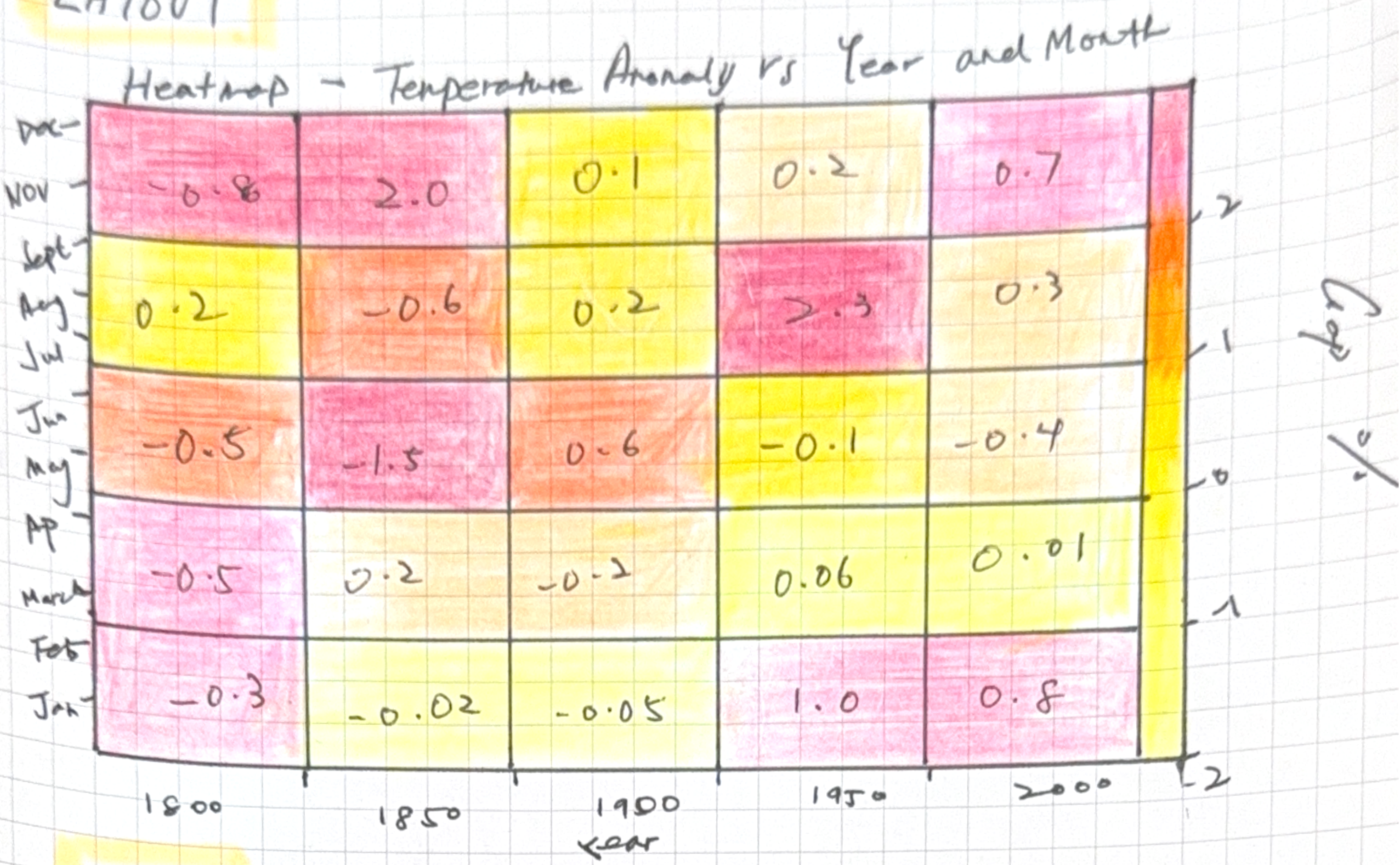
PROS

- clear temporal trend
- high quantitative precision
- simple, minimal design
- effective storytelling potential
- sliders enhance exploration

CONS

- limited dimensionality
- scale perception bias
- baseline interpretation
- static line can feel abstract

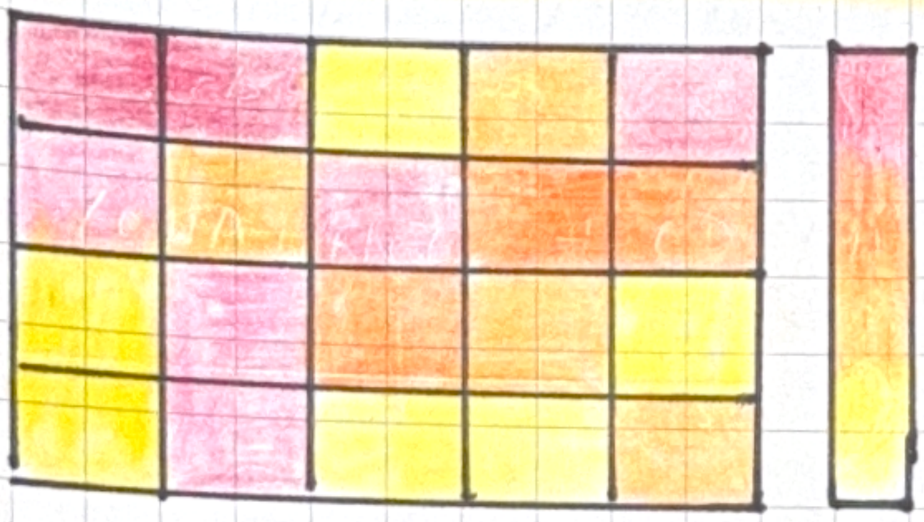
LAYOUT



FOCUS

- explore how temperature anomalies vary seasonally and historically
- visually emphasises long term warming trends
- visualise seasonal changes in temp. anomalies

COMPONENTS + OPERATIONS



- colour encoding (hue + intensity)
- each cell encodes one year/month combination
- colour legend
- interactive tooltips show numeric values and exact dates
- compare function allows users to analyse anomalies
- filter function

PROS + CONS

PROS

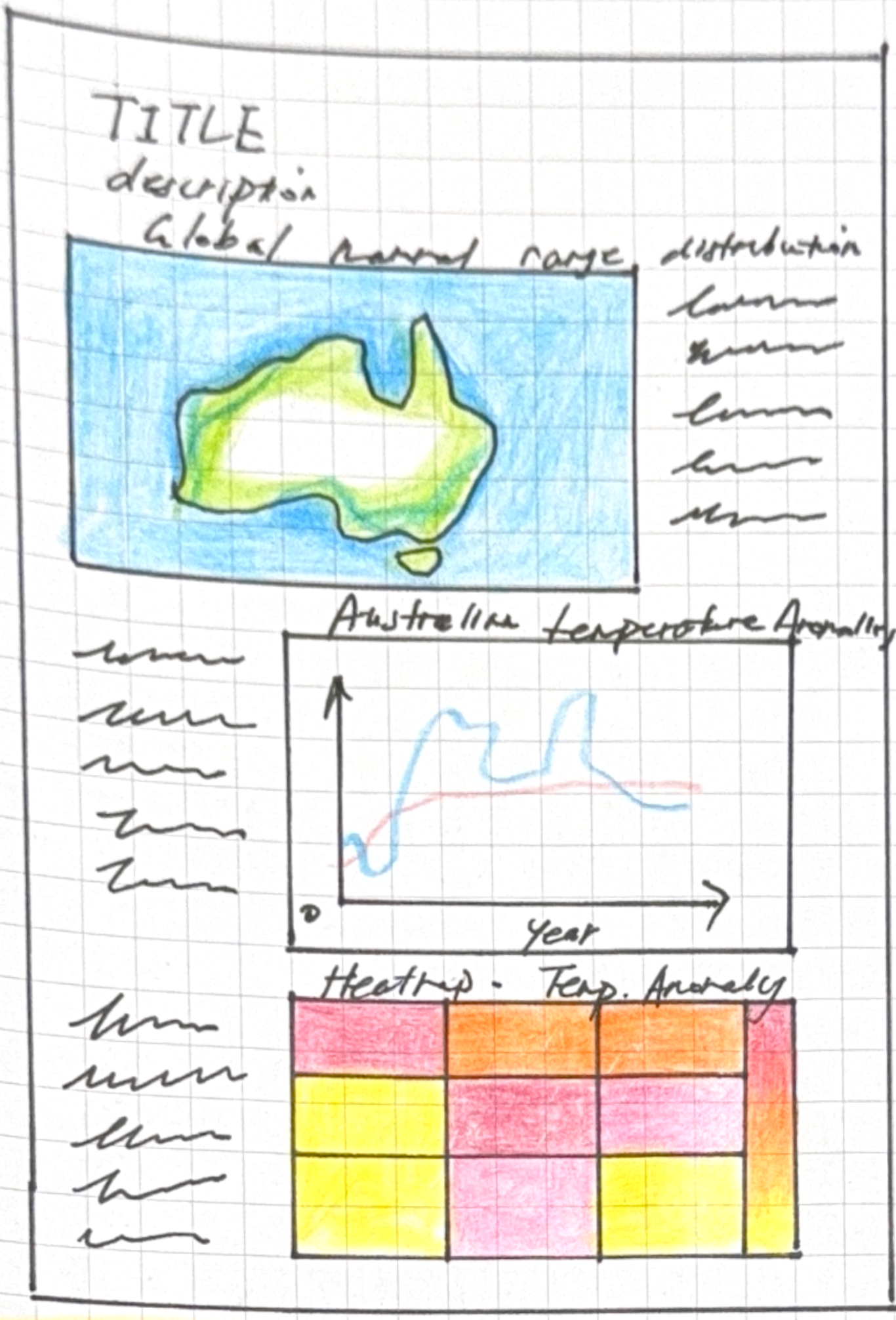
- clear visual pattern of warming
- compact overview of large data
- colour gradient supports quick comparison
- tooltips enhance precision

CONS

- seasonality may dominate
- potential clutter
- no spatial context

LAYOUT

Dashboard View



COMPONENTS + OPERATIONS

- users can click legend to view ranges of terrestrial mammals only
- users can compare temps. by dragging sliders

map (geo spatial view) displays mammal ranges using colour

- users can filter map to specific animal types

shows global temperature anomalies

explore seasonal temp. anomalies

FOCUS

- to explore the relationship between global climate change and mammal habitat distribution
- combine spatial and temporal perspectives
- connect rising temperature trends with habitat distribution

PROS + CONS

PROS

- integrated spatial + temporal storytelling
- clean, accessible layout
- strong data credibility
- effective interactivity

CONS

- static relationship between map and chart
- potential performance issues
- colour overlap
- limited depth of analysis