IDEAS

1. Scatterplot:

Life expectancy / Green area per capita

3. Bar chart (ranked)

Countries / Green area per capita

6. Treemap

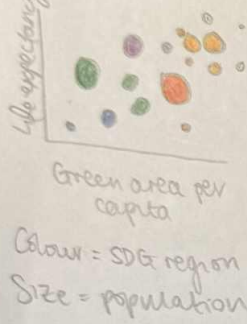Region / Region / Region

9. Radar map:

2. Bubble chart:

Life expectancy / Green area per capita

Colour = SDG region
Size = population

4. line chart

Avg green area / Years.

7. Choropleth map

Colour = avg. green area

Eg. Avg. life expectancy

10. Stacked bar chart

Attribute 3 / Attribute 2 / Attribute 1

5. Box plot

Avg. green area
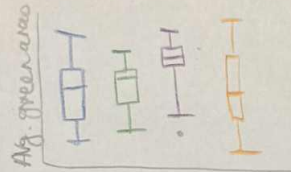
8. Parallel coordinates
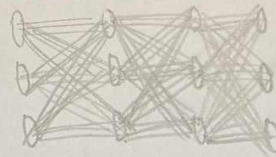
FILTER

Remove treemap
→ Other idioms show the same info in a similar way.

Remove duplicates?
→ Scatter vs. bubble

Must keep balance
→ some correlation, spatial + time.

CATEGORISE

Correlation - focused:
- scatterplot
- Boxplot
- Bar chart

Spatial:
- Bubble   - Radar
- Map

Temporal:
- line chart

Multivariate:
- Parallel coordinates
- Bubble?

COMBINE + REFINE

Scatter + line plots can show correlation over time

Map + symbols (eg. bubbles) for geography + ranking

Important to keep temporal idioms as the domain is a rapidly changing topic.

QUESTIONS:
- Does this have a clear story?
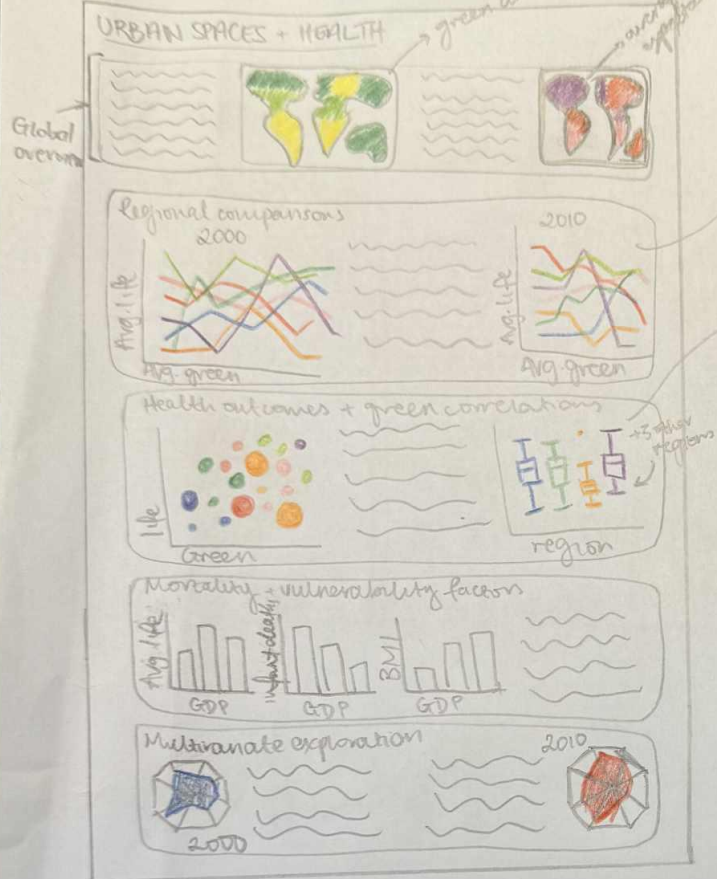- Does it have a good balance of simple + complex?

Author: Tia Davies
Date: 22/9/25
Sheet: 1
Task: 5 design sheets

LAYOUT

URBAN SPACES + HEALTH → green area per capita

→ average life expectancy

Global overview →

Regional comparisons
2000   2010
Avg. life   Avg. life
Avg. green   Avg. green

Health outcomes + green correlations
life
Green   region   +3 other regions

Mortality + vulnerability factors
Avg life / infant death / BMI
GDP   GDP   GDP

Multivariate exploration
2000   2010

OPERATION

FILTER
→ by region. Highlights
1 line for easy reading

Tooltip: for all idioms
- provides more in
depth + specific info.

Click to highlight
country/region across
entire visualisation

FOCUS

- No main focus as all graphs contribute
to the storytelling.

- User is meant to read the narrative
while exploring the visuals through
hovering, filtering + comparisons

- Big picture → focus + comparisons
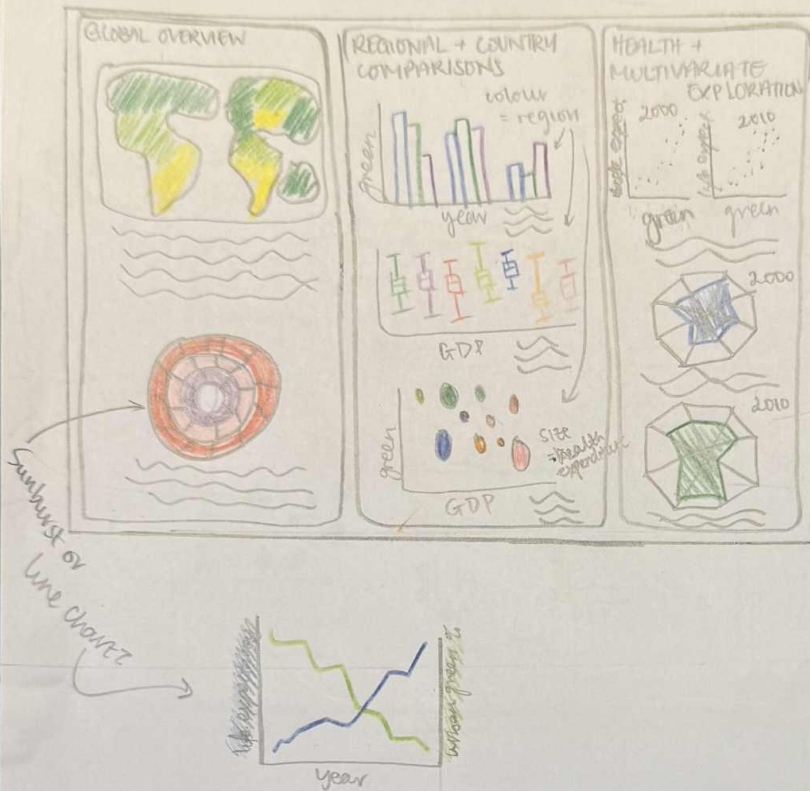
DISCUSSION

Pros:

- Both explanatory and
exploratory visuals

- Accessible with narration
+ powerful for analysis

Cons:

- Complex idioms could
be overwhelming to
novice users

- Information overload?

Author: Tim Davies
Date: 22/9/25
Sheet: 3
Task: 5 design sheets

LAYOUT

@GLOBAL OVERVIEW

REGIONAL + COUNTRY COMPARISONS

colour = region

green

year

GDP

green

GDP

SIZE → health expend

HEALTH + MULTIVARIATE EXPLORATION

2000   2010

green   green

2000

2010

Sunburst or line chart

year

OPERATION

Tooltips when hovering

Scroll to adjust range of years

2000 ○——○ 2020

Click on country/ region to filter entire dashboard

Drop down filter for region/year

FOCUS

Users are able to view multiple levels simultaneously
    ⌐ can compare insights across columns

Providing different levels of depth/detail means that there is no single focus. Visual attention is shared amongst all idioms.
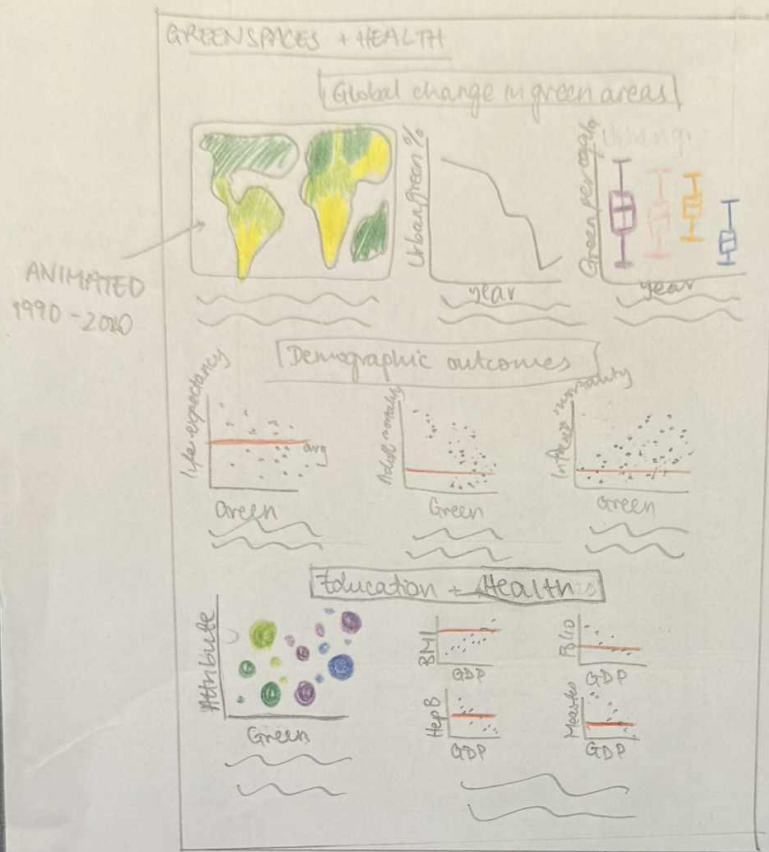
DISCUSSION

Pros:
  compact - allows for side by side comparison

  Clarity via grouping

Cons:
  Not as much narrative structure/ storytelling guidance

LAYOUT

Name: Tia Davies
Date: 23/9/25
Sheet: 4
Task: 5 design sheets.

GREENSPACES + HEALTH

[Global change in green areas]

ANIMATED
1990 - 2010

Urban green %
year

Green per cap%
year

Demographic outcomes

Life expectancy
Green

Adult mortality
Green

Infant mortality
green

Education + Health

Attribute
Green

BMI
GDP

Hep B
GDP

Polio
GDP

Measles
GDP

OPERATIONS

Scroll for temporal
narrative.

Drop down for year/
region

Click for highlighted
years or regions
throughout
dashboard.

Tooltips [year
country
region
value.]

FOCUS

Temporal + regional narrative
  ⤷ comparison is a main focus

Shows how green areas + health
evolve around the world

3 main section to focus on
  ⤷ breaks down into specifics
      the more the user scrolls

DISCUSSION

Pros:
Emphasises temporal
dynamics

Uses multiple attributes
rather than just
life expectancy

Cons:
Hard to keep the
narrative concise

Easy to overwhelm
users with idioms

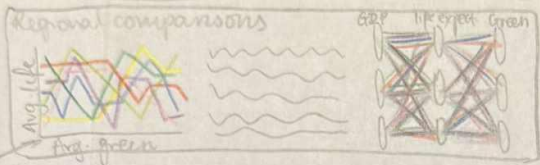LAYOUT - Based off sheet 2:

Name: Tia Davies
Date: 24/9/25
Sheet: 5
Task: 5 design sheets.

Green per capita
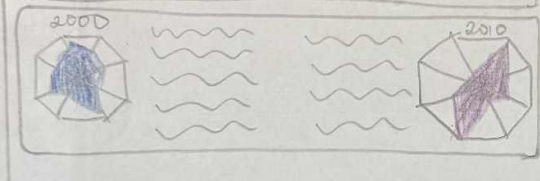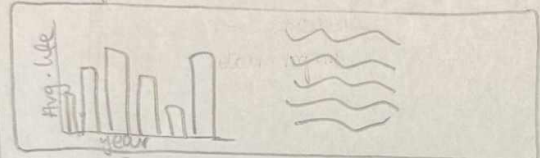
Avg life expectancy

URBAN GREEN SPACES & GLOBAL HEALTH

Introduction to main attributes

Regional comparisons

GDP life expt Graph

OR Bubble chart

Avg Life / Avg green

Avg. Life / year

Infant deaths / GDP   BMI / GDP   schooling / GDP

2000   2010

OPERATION:

Filter by region:
- bar at top of dashboard
- click on specific parts of map / graphs
- multi-select filter by region

Search bar:
  search for particular attributes?

Tooltips (for all idioms)
- Region   - Population
- Country
- Green per capita

FOCUS:

Storytelling poster that shows

global → regional → temporal

health ↙

Key idioms: choropleth maps, parallel coordinates, radar chart, bubble chart (if put in)
  ↳ complex idioms add depth to storytelling.

DETAILS:

Dependencies: Vega-Lite, Excel for data cleaning, VScode

Estimated time + effort
At least 3 days to build all idioms + 3 day for final design + layout

Specific requirements:
larger visualisation for clarity on small screens