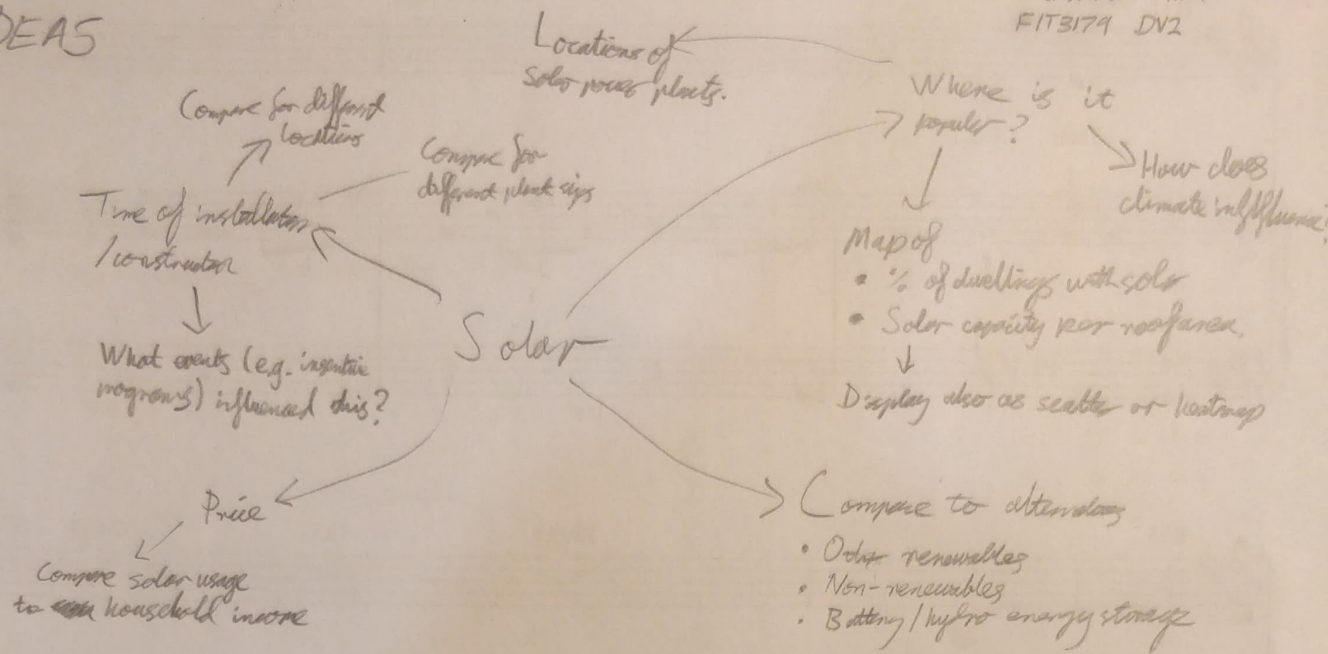


IDEAS



FILTER

- Many metrics to quantify solar usage (e.g. total capacity, capacity per household, % of households with solar).
- These can be different options for the same plot / map.

GROUP

- Almost all ideas could be visualised over time, either as a channel or with interactivity
- Map of solar capacity and map of major plant locations could be combined (Maybe too dense?)

COMBINE + REFINE

- Focus on solar in Australia
- Focus on solar, not renewables in general
- Divide into
 - Where (Map of large solar plants, household usage, attempt to explain)
 - When (cumulative / monthly time series, etc.)

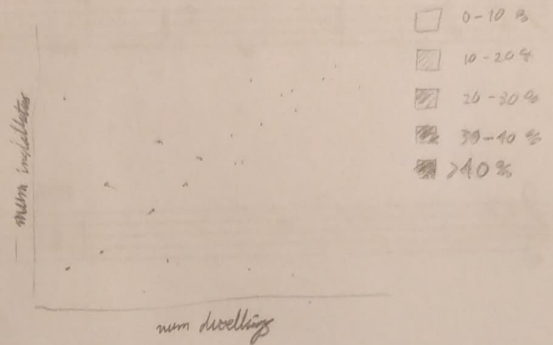
QUESTION

How have Australians adopted solar power in the last 20 years?

LAYOUT

✓ State: Victoria

✓ % dwellings with solar



OPERATIONS

- Hover:
 - Highlights corresponding point / suburb
 - Displays tooltip with name / number
- Dropdowns:
 - Select state to show
 - Select data to show
- Legend:
 - Legend / colours shared between visualisations

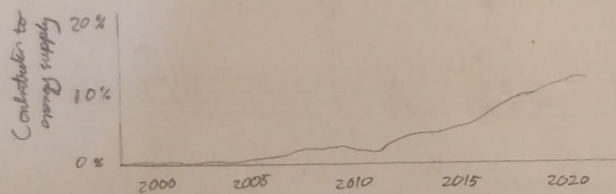
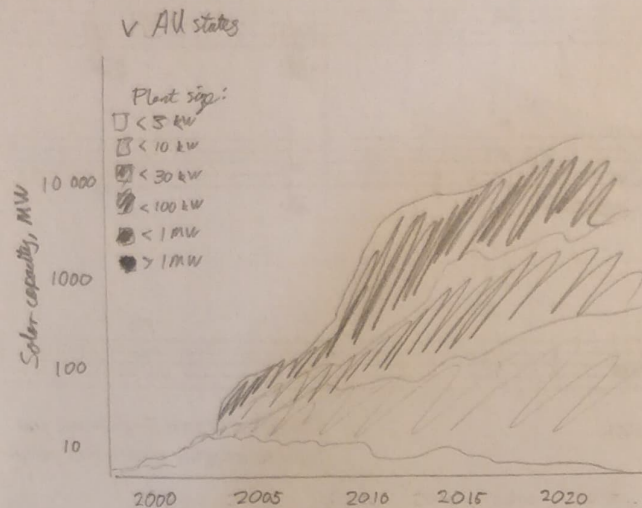
FOCUS

- Two coupled plots help explain to the reader why a value is what it is e.g. is a suburb shaded dark because lots of solar or small sample size?
- Colours are consistent and suit topic (warm, sunny colours)

DISCUSSION

- Need to work out how to effectively annotate.
- Is two side-by-side too space inefficient? Would stacked vertically be better?
- Concerned that capital cities will be hard to view in map: too dense
- Potential solution to above issues: Guided tour, gives control and pans / zooms map automatically.

LAYOUT



OPERATIONS

- Tooltip shows more info about data point, hopefully on both plots
- Dropdown sorts data by state
- (Maybe) toggle to switch between linear / log y-axis

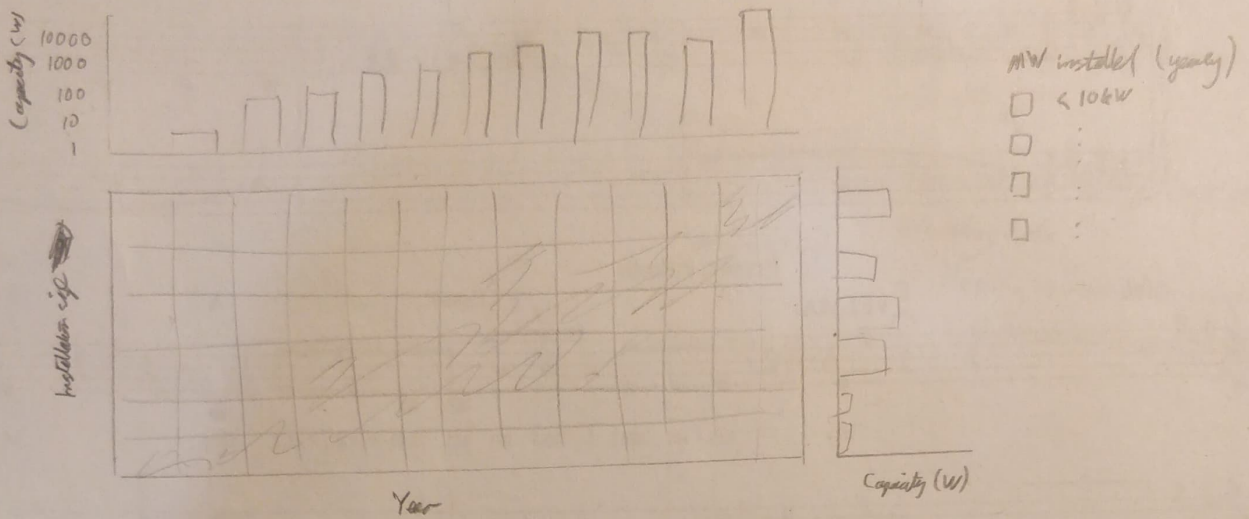
FOCUS

- Top plot has interesting info, bottom plot puts data into context for Australia / state
- Top plot will hopefully show presence of different plant sizes in different states over time

DISCUSSION

- What is more subtle: stacked area or stacked bar?
- Log y-axis will be required to see any early data, but may not make the exponential growth obvious
- Alternative bottom plot: Average installation size vs. time
- Total alternative: year heatmap. Plant size and state on axes. Marginal histograms.

LAYOUT



OPERATIONS

- Tooltip on heatmap and histogram shows more info
- (Maybe) option to toggle log y-axis/x-axis

FOCUS

- Will hopefully show lots of interesting trends in one visualization, including:
 - Increase in yearly installed capacity
 - Profile of installer sizes
 - Increase in avg install size over time

DISCUSSION

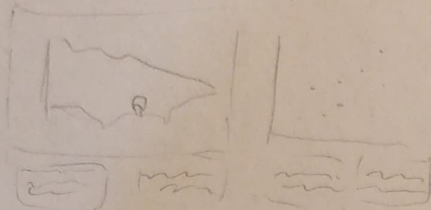
- Need to define/differentiate installer size vs capacity
- Complicated visualization: Hopefully not too complicated!
- Unable to show monthly variation without having very many heatmap squares
 - Solution: replace heatmap with discrete points in XY scatter?

LAYOUT

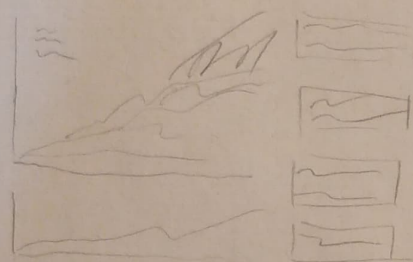
5DS Sheet 5
Christopher Hall 19/04/22
FIT31079 DV2

HEADING

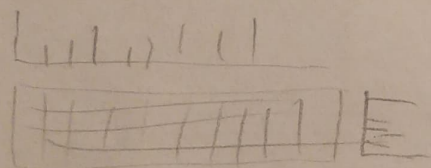
Title 1



Title 2



Title 3



Sources, etc.

FOCUS + OPERATION

Individual visualisations as designed in pages 2-4.

Add annotations explaining / highlighting interesting data.

- Hovering mouse over annotation highlights relevant data point(s)

Page 2 vis
100vh
(padding)

Page 3 vis
100vh

Page 4 vis
100vh

ALGORITHMS

- Data is smaller than last time, so will try to aggregate on front and this time just for simplicity.
- If that fails, pre-compute into new CSV
- Not much else

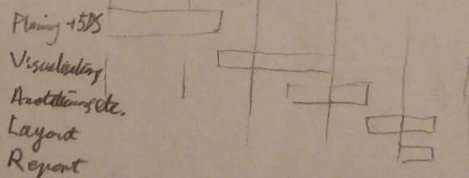
ESTIMATES

Costs: None

Hardware req'd: Computer

Timeline:

W8 W9 MSB WD W11 WR



DEPENDENCIES

- Website written in Typescript React
- Vega-lite for plots / maps