

UX Australia 2019, Sydney



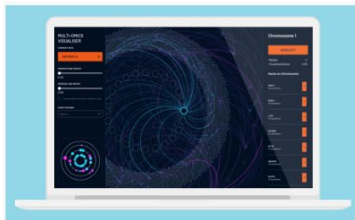
The Lorem Ipsum of data visualisation

How to design data-driven wireframes

Martin von Lupin
[@martinvonlupin](#)

I'm UX/UI Designer at data visualisation studio
Small Multiples in Sydney

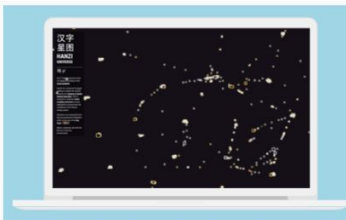




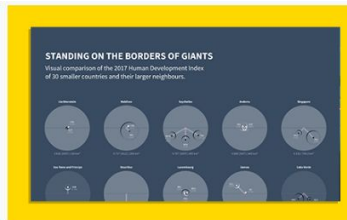
MULTI-OMICS VISUALISER
IGGY GET OUT



HOW TO PLAN A HOLIDAY USING DATA
SMALL MULTIPLES



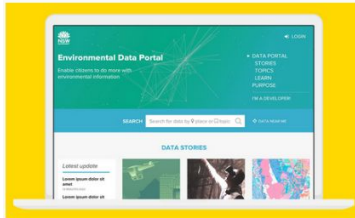
HANZI UNIVERSE
SMALL MULTIPLES



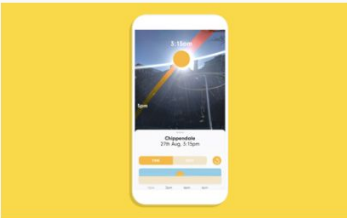
STANDING ON THE BORDERS OF GIANTS
COMPETITION: WORLD DATA VISUALIZATION PRIZE



SCHOOL PLANNING ASSISTANCE TOOL
DEPARTMENT OF EDUCATION



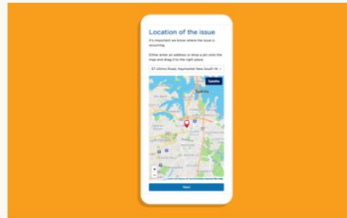
USER RESEARCH FOR NSW ENVIRONMENTAL DATA
PORTAL SEED
NSW DEPARTMENT OF PLANNING AND
ENVIRONMENT



HELLO, SUN. AUGMENTED REALITY APP
SMALL MULTIPLES



NOT A SINGLE ORIGIN
SMALL MULTIPLES



DIGITAL CONNECTIVITY - INTERACTIVE MAP
DEPARTMENT OF PREMIER & CABINET



SCHOOLS WEATHER AND AIR QUALITY WEBSITE
UNSW CLIMATE CHANGE RESEARCH CENTRE



AEROTROPOLIS - AN INTERACTIVE TOUCHSCREEN
DEPARTMENT OF PREMIER & CABINET



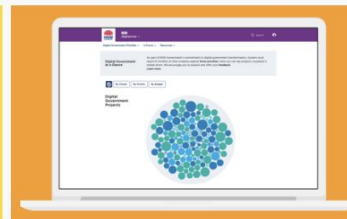
LOCAL GOVERNMENT REPORTING
AUDIT OFFICE OF NSW



MAPPING KEY INFRASTRUCTURE PROJECTS IN
AUSTRALIA
INFRASTRUCTURE AUSTRALIA



HELLO, SUN.
SMALL MULTIPLES



VISUALISING DIGITAL PROJECTS IN NSW
DEPARTMENT OF FINANCE, SERVICES &
INNOVATION

How to create wireframes for
data-driven products?



Wireframes

Placeholder
elements like
“Lorem Ipsum”
paragraph



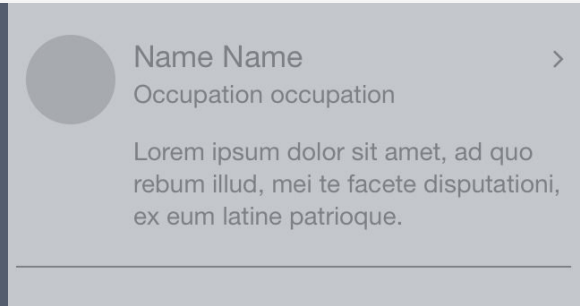
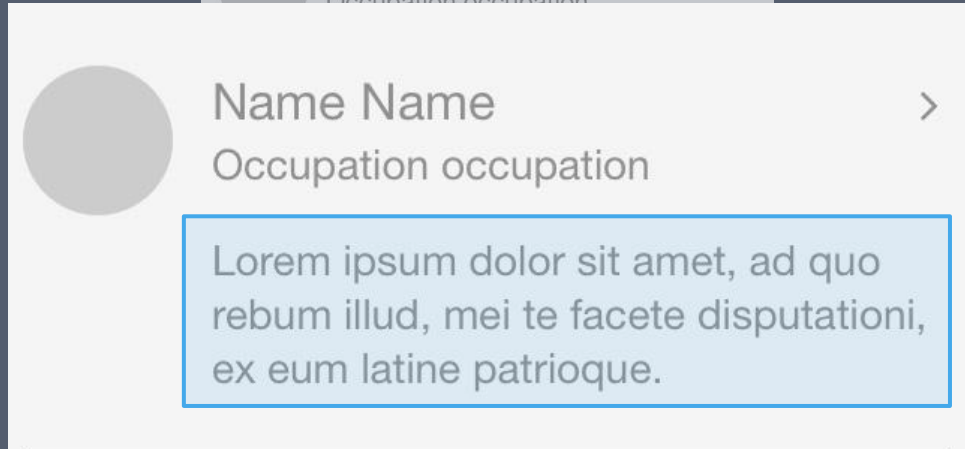
Wireframes

Placeholder elements like “Lorem Ipsum” paragraph



Wireframes

Placeholder elements like “Lorem Ipsum” paragraph



Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus accumsan eu purus in pharetra. Maecenas pretium, nibh ut fermentum egestas, metus justo viverra elit, id porta felis velit id libero. Integer non dui ullamcorper, scelerisque libero ut, tempus purus. In faucibus leo quis nunc vehicula iaculis. Mauris commodo leo eget imperdiet elementum. Pellentesque dolor odio, euismod eget tristique sit amet, porta at sem. Nulla eget nibh ultricies, bibendum tortor ut, sodales felis. Cras diam nulla, suscipit eu pellentesque vitae, sodales non urna. Nam ut volutpat magna. Donec sodales consequat efficitur. Nullam aliquam lorem quam, et sagittis velit sagittis nec. Praesent ultricies, justo nec finibus pulvinar, enim mi auctor sem, sit amet congue purus diam sit amet neque. Morbi imperdiet ipsum turpis, quis tincidunt nisl ultricies eget. Curabitur fringilla purus turpis, vitae molestie libero finibus vel.

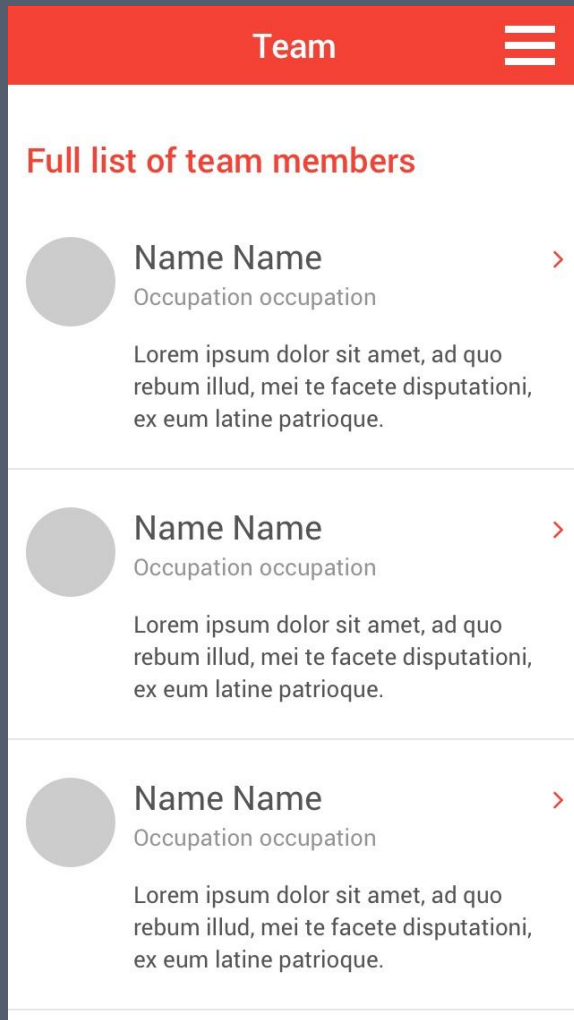
Wireframes

Placeholder elements like “Lorem Ipsum” paragraph



Design

Placeholder elements like “Lorem Ipsum” paragraph




Design

Replacing
placeholders with
meaningful but
random content


Team

Full list of team members




Jennifer Reid >
Data Coordinator

Lorem ipsum dolor sit amet, ad quo rebum illud, mei te facete disputationi, ex eum latine patrioque.



Jonnathan Michael Bennet >
Professor

Lorem ipsum dolor sit amet, ad quo rebum illud, mei te facete disputationi, ex eum latine patrioque.



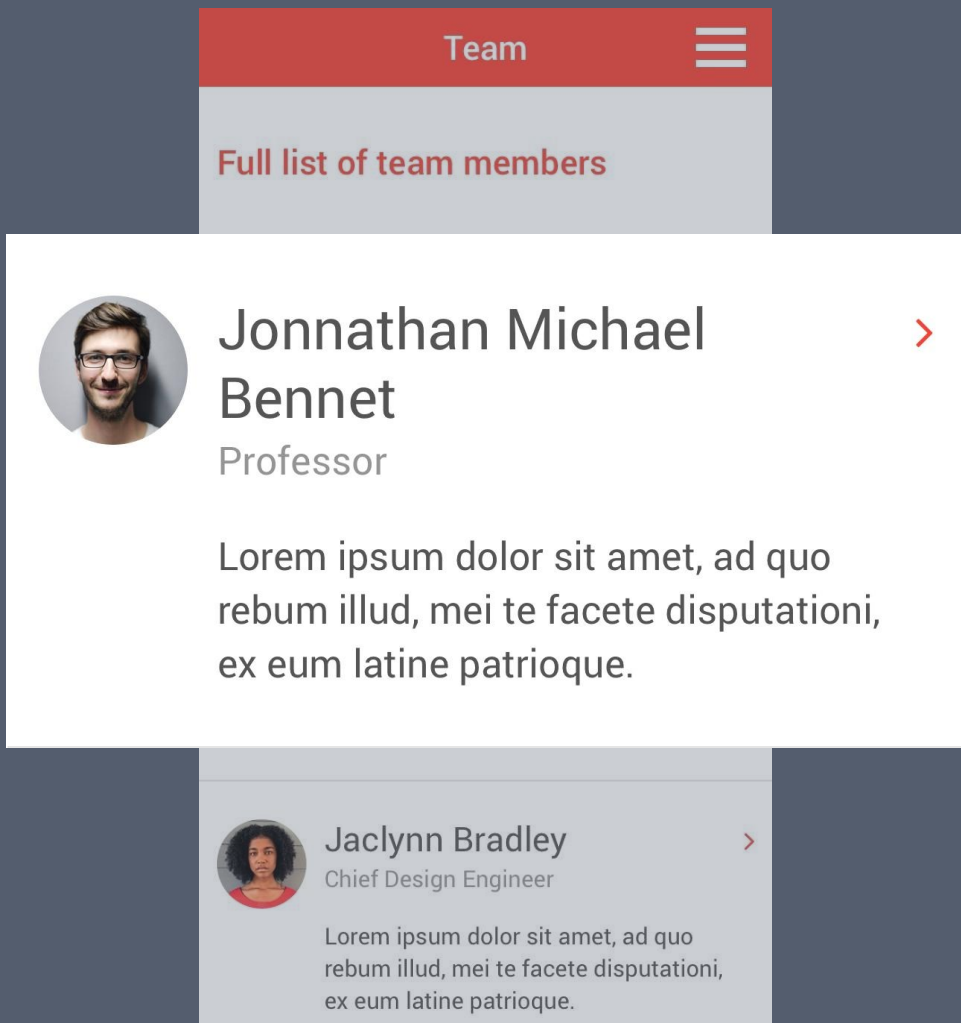
Jaclynn Bradley >
Chief Design Engineer

Lorem ipsum dolor sit amet, ad quo rebum illud, mei te facete disputationi, ex eum latine patrioque.



Design

Replacing
placeholders with
meaningful but
random content




Development


Final developed
version using
real content


The screenshot shows a mobile application interface for a team page. At the top, there is a red header with the word "Team" in white and a white hamburger menu icon on the right. Below the header, the text "Full list of team members" is displayed in red. The team members are listed in three rows, each separated by a thin white horizontal line. Each row includes a circular profile picture on the left, the name and role in the middle, and a red chevron icon on the right. The first member is Harry Morris, a Creative developer, with a bio mentioning full stack web development and UX/Visual Design. The second member is Steph Grace, a Design Practice Lead, with a bio mentioning user experience, UX research, and interaction design. The third member is Andrea Lau, a Director/Founder, with a bio mentioning user experience, data visualisation, and project management.

Team

Full list of team members

 **Harry Morris** >
Creative developer
Full stack web development | UX/Visual Design. Bachelor of Design Computing from the University of Sydney.

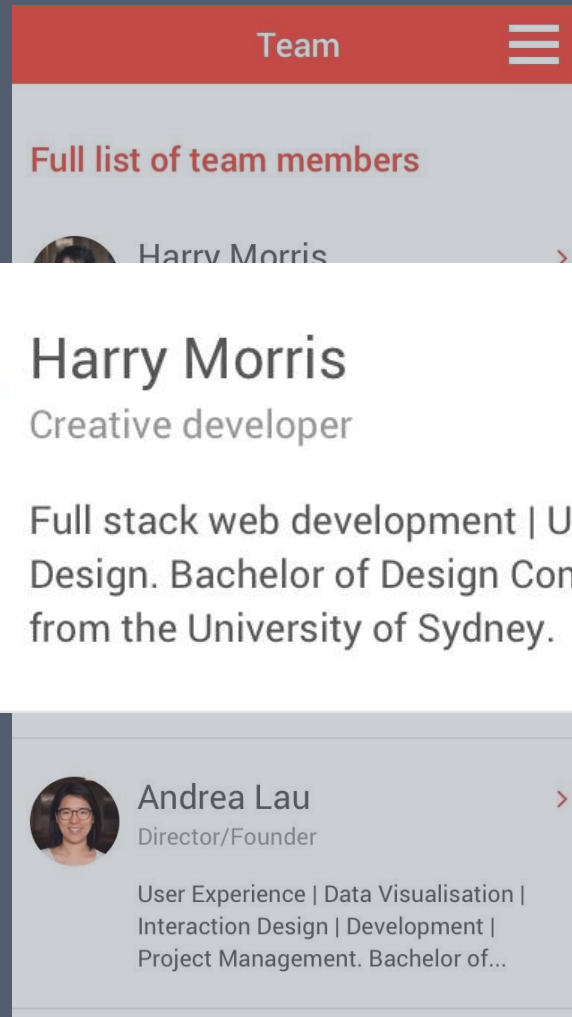
 **Steph Grace** >
Design Practice Lead
User Experience | UX Research | Interaction Design | Information Architecture. Bachelor of Design...

 **Andrea Lau** >
Director/Founder
User Experience | Data Visualisation | Interaction Design | Development | Project Management. Bachelor of...



Development

Final developed
version using
real content



The design process

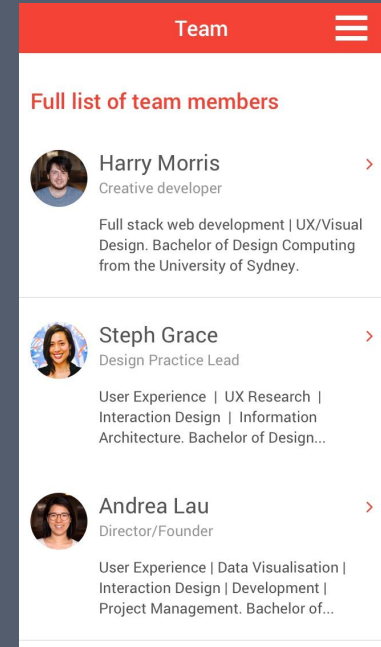
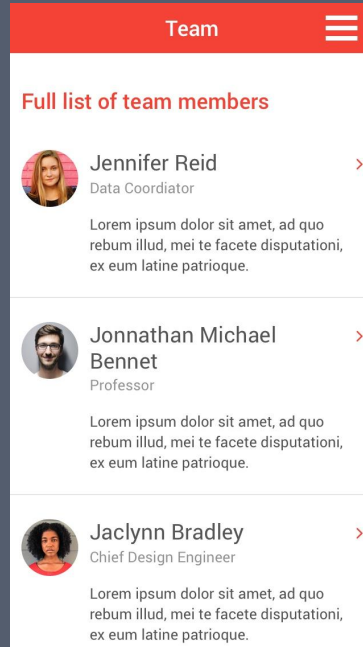
Wireframes



Design



Development



Wireframes contain the **basic structure** of a page very early in the process using placeholders.



Wireframes contain the **basic structure** of a page very early in the process using placeholders.

Meaningful **content** is added later in the design phase.



Wireframes contain the **basic structure** of a page very early in the process using placeholders.

Meaningful **content** is added later in the design phase.



What if **content** is
fundamental for the basic
structure?



What if ~~content~~ **data** is
fundamental for the basic
structure?



What is the **Lorem Ipsum**
of data visualisation?

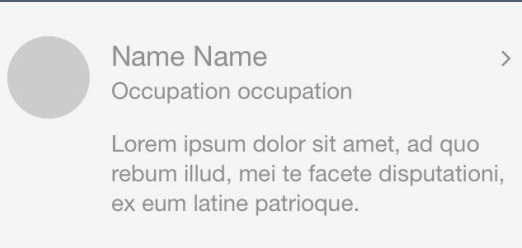


Let's put **data** into our
wireframes!



Content strategies

Placeholder content



A placeholder profile card with a grey circular profile picture, the text "Name Name" and "Occupation occupation", and a right-pointing chevron. Below is a paragraph of Lorem Ipsum text.

Name Name >

Occupation occupation

Lorem ipsum dolor sit amet, ad quo rebum illud, mei te facete disputationi, ex eum latine patrioque.

Meaningful but random content



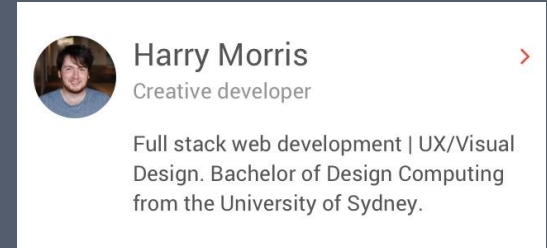
A profile card for Jaclynn Bradley with a circular profile picture, the text "Jaclynn Bradley" and "Chief Design Engineer", and a right-pointing chevron. Below is a paragraph of Lorem Ipsum text.

 **Jaclynn Bradley** >


Chief Design Engineer

Lorem ipsum dolor sit amet, ad quo rebum illud, mei te facete disputationi, ex eum latine patrioque.

Real content



A profile card for Harry Morris with a circular profile picture, the text "Harry Morris" and "Creative developer", and a right-pointing chevron. Below is a paragraph of real content.

 **Harry Morris** >

Creative developer

Full stack web development | UX/Visual Design. Bachelor of Design Computing from the University of Sydney.



Final design of a chart

July statistics

69.2

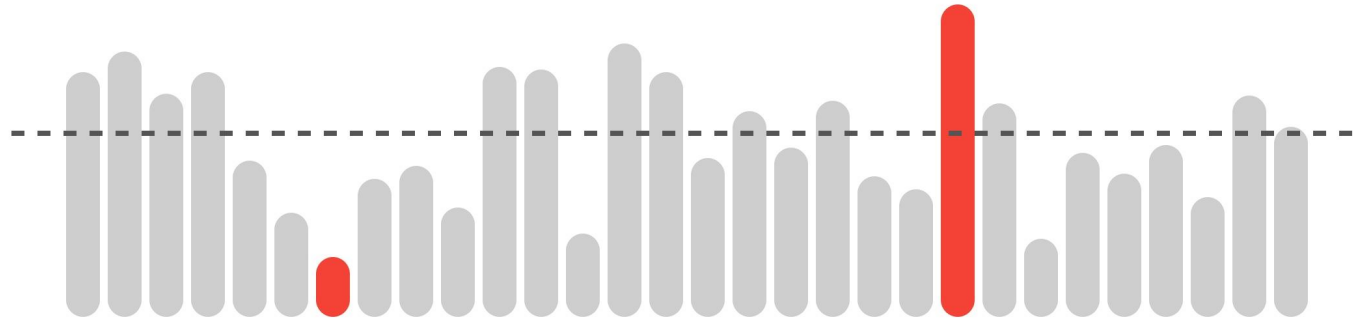
Average for last 30 days

23.3

Minimum

120

Maximum



How to design wireframes...

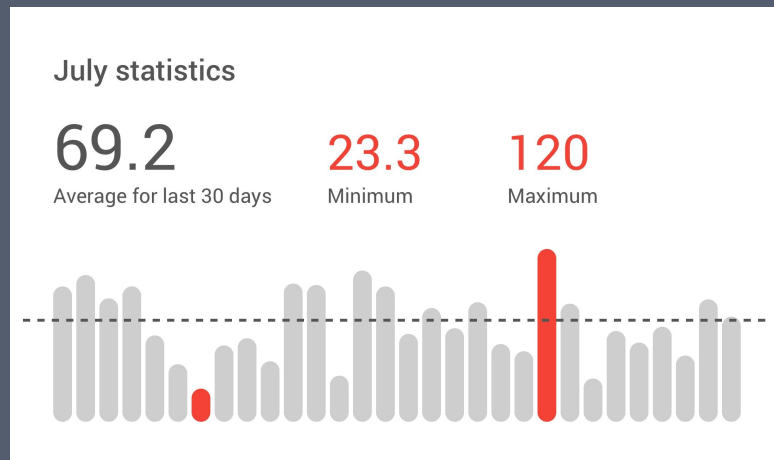
Wireframes



?

... to get to this?

Final design



Placeholder data

Meaningless
numbers and
placeholder
area for bar
chart

July statistics

123

Average for last 30 days

123

Minimum

123

Maximum

Barchart last 30 days
Average line



Meaningful data

Random but meaningful data.

All elements are there and chart and numbers make sense.

July statistics

70.6

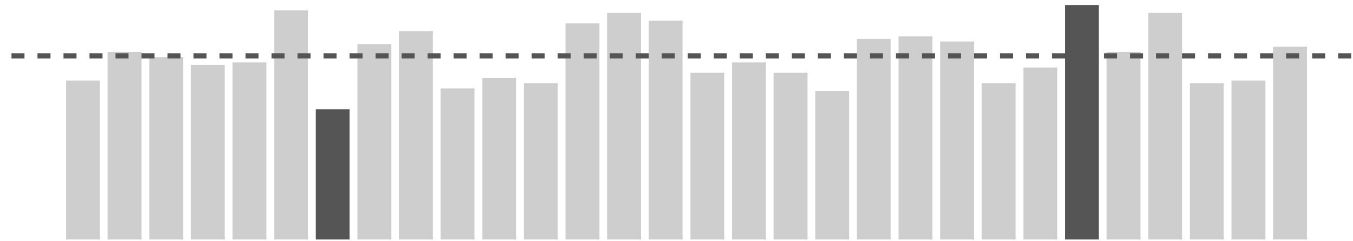
Average for last 30 days

50.0

Minimum

90.0

Maximum



Real data

Real data is applied to the chart and stats.

Difference in values larger than expected.

Several days share the minimum value.

July statistics

35.1

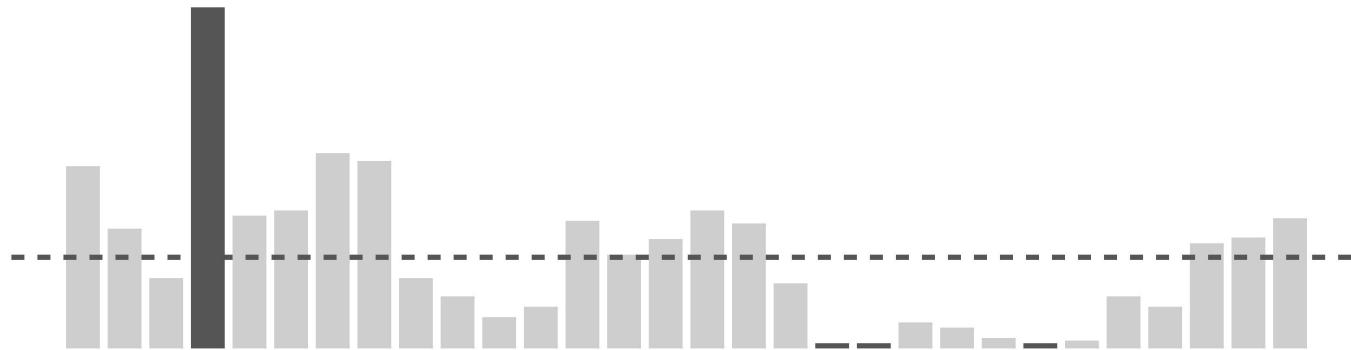
Average for last 30 days

0

Minimum

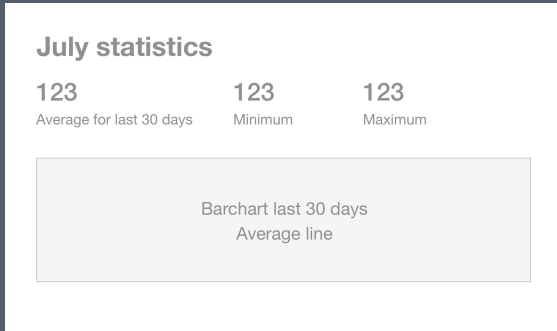
130.9

Maximum

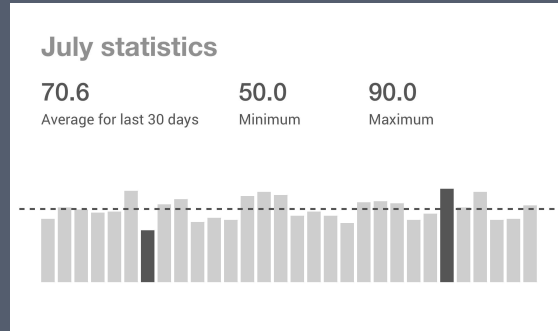


Strategies for datavis wireframes

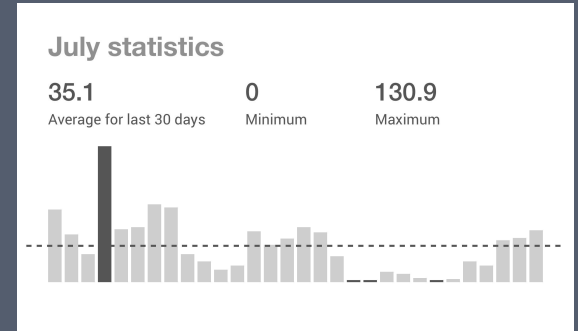
Placeholder data



Meaningful but random data



Real data

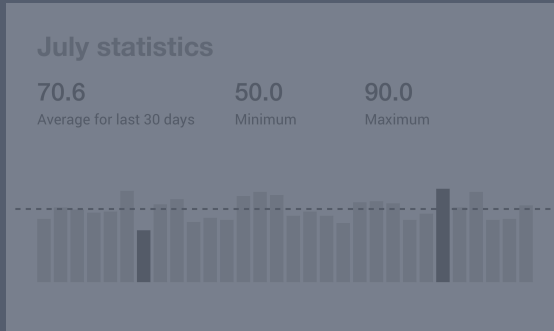


Strategies for datavis wireframes

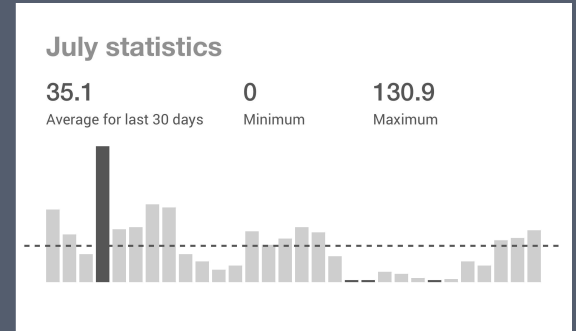
Placeholder data



Meaningful but random data

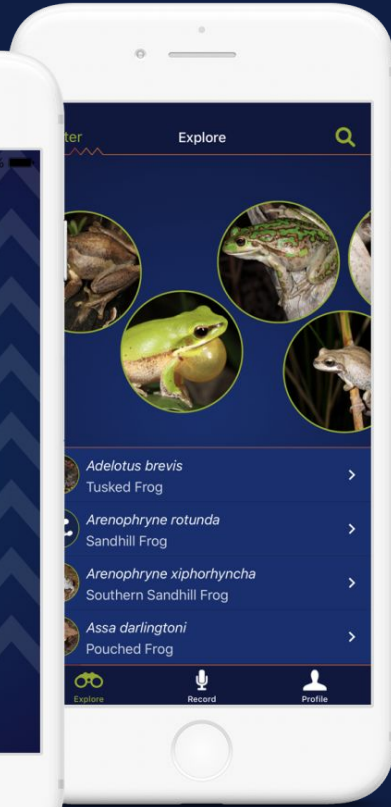


Real data



Visualising geo-referenced frog
recordings in Australia





Visualising geo-referenced frog recordings in Australia

Project brief

Interactive map of Australia with locations of all frog recordings from citizen science project “FrogID”.

Filter locations by

- frog species
- date range
- by LGA

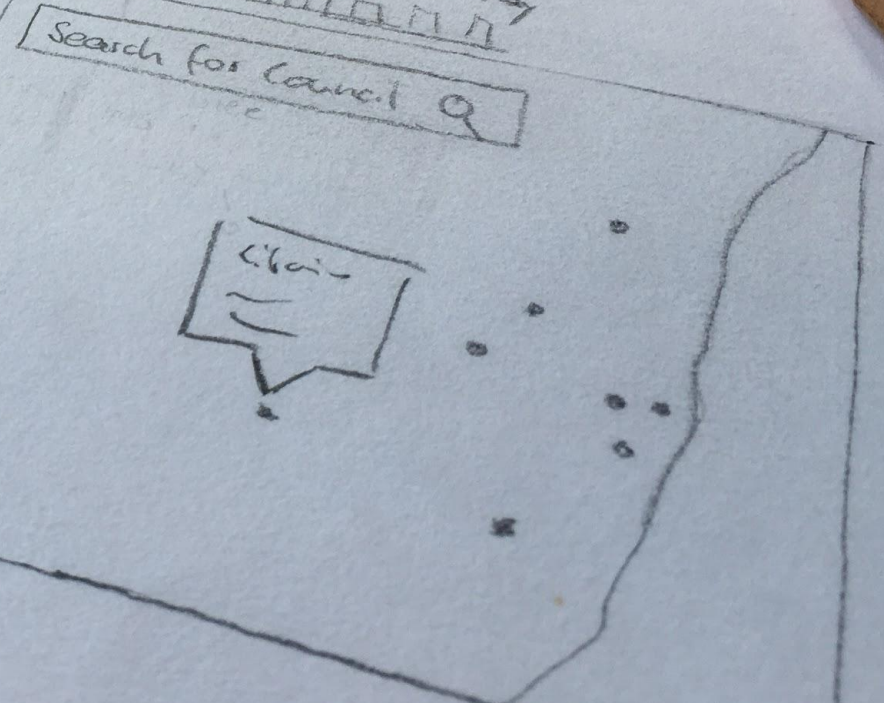
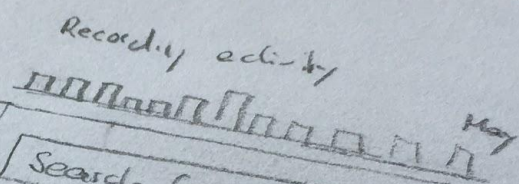


Live | Download

Search for frog

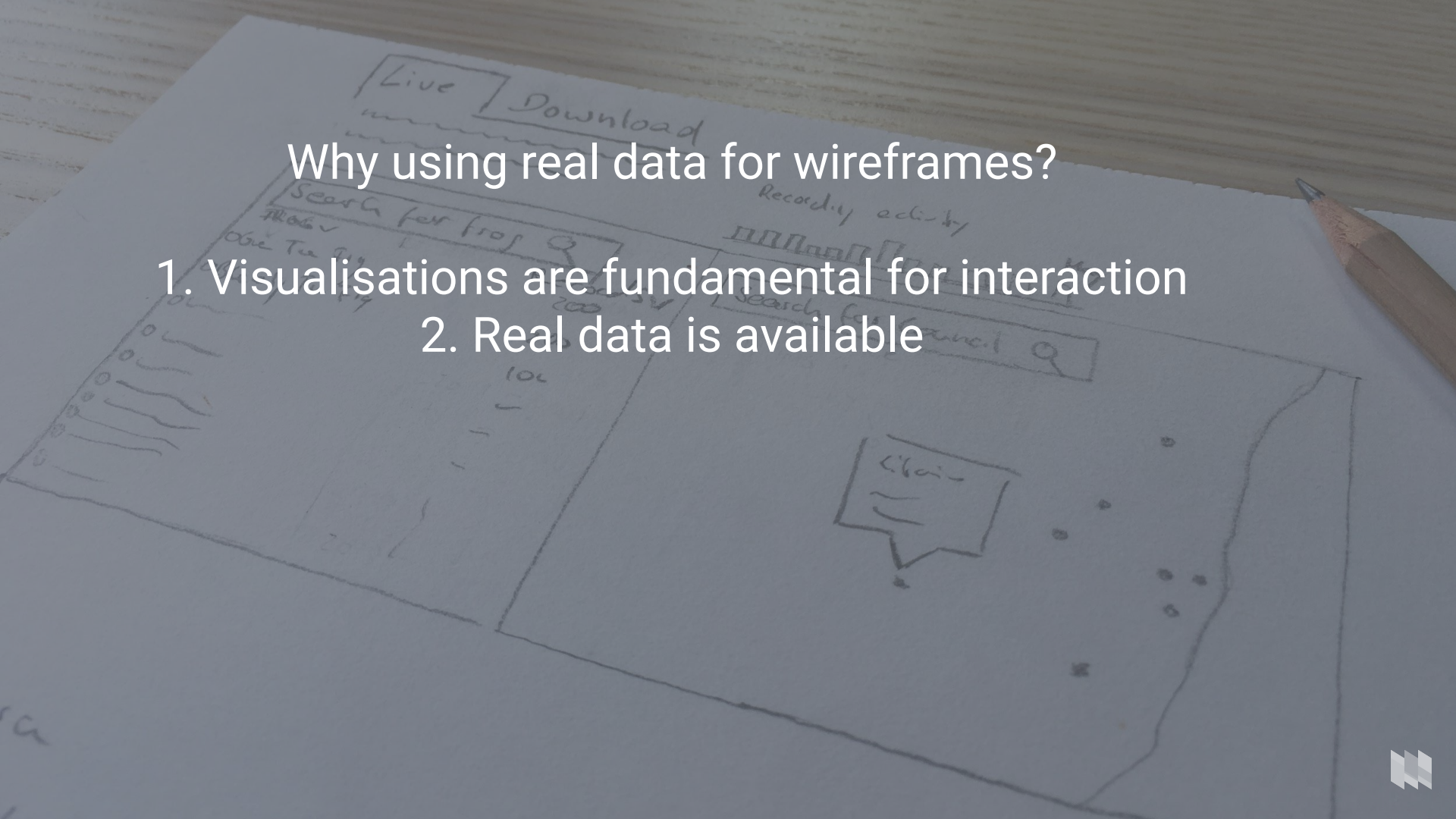
Records v

Obie Tu Fig	200
Obie Tu Fig	200
Obie Tu Fig	100
Obie Tu Fig	100
Obie Tu Fig	100
Obie Tu Fig	100
Obie Tu Fig	100
Obie Tu Fig	100
Obie Tu Fig	100
Obie Tu Fig	100
Obie Tu Fig	100
Obie Tu Fig	100



Why using real data for wireframes?

1. Visualisations are fundamental for interaction
2. Real data is available



Example of using
real data

Real data all the
way!

Data in map,
sidebar, bar
chart and
summary are all
for real.

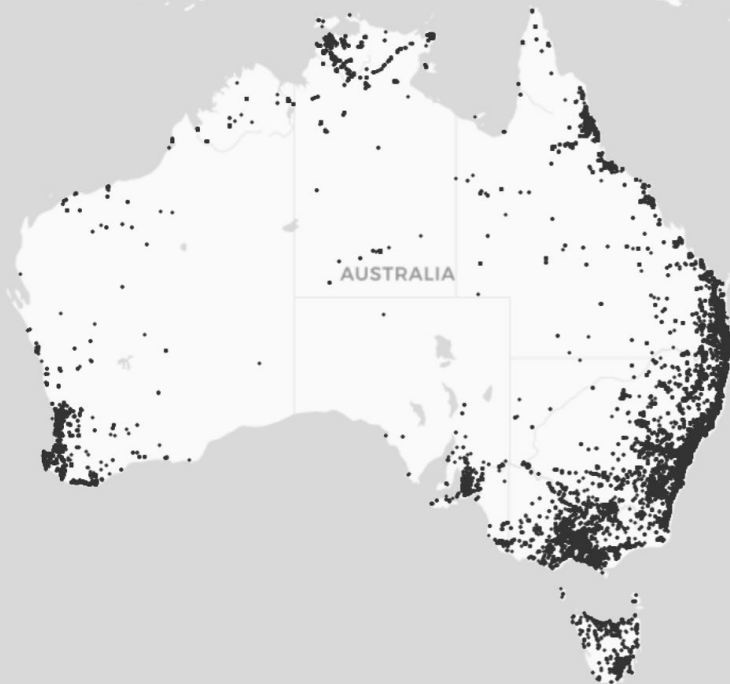


INDONESIA

PAPUA NEW
GUINEAEAST
TIMORSearch address or postcode

+

-



AUSTRALIA

Search for species 

Select a species to see the distribution on the map

Frog species

Records ▾

Common Eastern Froglet
Crinia signifera 10,575

Striped Marsh Frog
Limnodynastes peronii 8,819

Peron's Tree Frog
Litoria peronii 8,135

Eastern Dwarf Tree Frog
Litoria fallax 6,145

Spotted Marsh Frog
Limnodynastes tasmaniensis 4,202

Green Tree Frog
Litoria caerulea 3,676

Red Tree Frog
Litoria rubella 2,987

Brown Tree Frog
Litoria ewingii 2,771

Eastern Banjo Frog
Limnodynastes dumerilii 2,769

Eastern Sign-bearing Froglet
Crinia parinsignifera 2,355

Start

-

End

[View as table](#)**89,235**

× Records of frogs

186

Unique species

8,744

Unique users

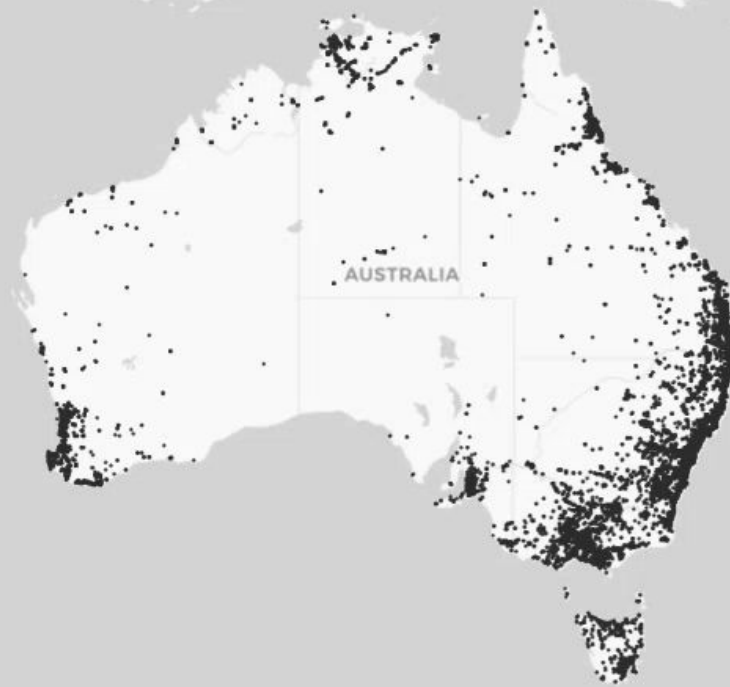


INDONESIA

PAPUA NEW
GUINEASearch address or postcode EAST
TIMORTONGA
ISLANDS

+

-



AUSTRALIA

Search for species 

Select a species to see the distribution on the map

Frog species

Records ▾

Common Eastern Froglet 10,575

Crinia signifera

Striped Marsh Frog 8,819

Limnodynastes peronii

Peron's Tree Frog 8,135

Litoria peronii

Eastern Dwarf Tree Frog 6,145

Litoria fallax

Spotted Marsh Frog 4,202

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Green Tree Frog 3,676

Litoria caerulea

Red Tree Frog 2,987

Litoria rubella

Brown Tree Frog 2,771

Litoria ewingii

Eastern Banjo Frog 2,769

Limnodynastes dumerilii

Eastern Sign-bearing Froglet 2,355

Crinia parinsignifera

Start

-

End

[View as table](#)

89,235

× Records of frogs

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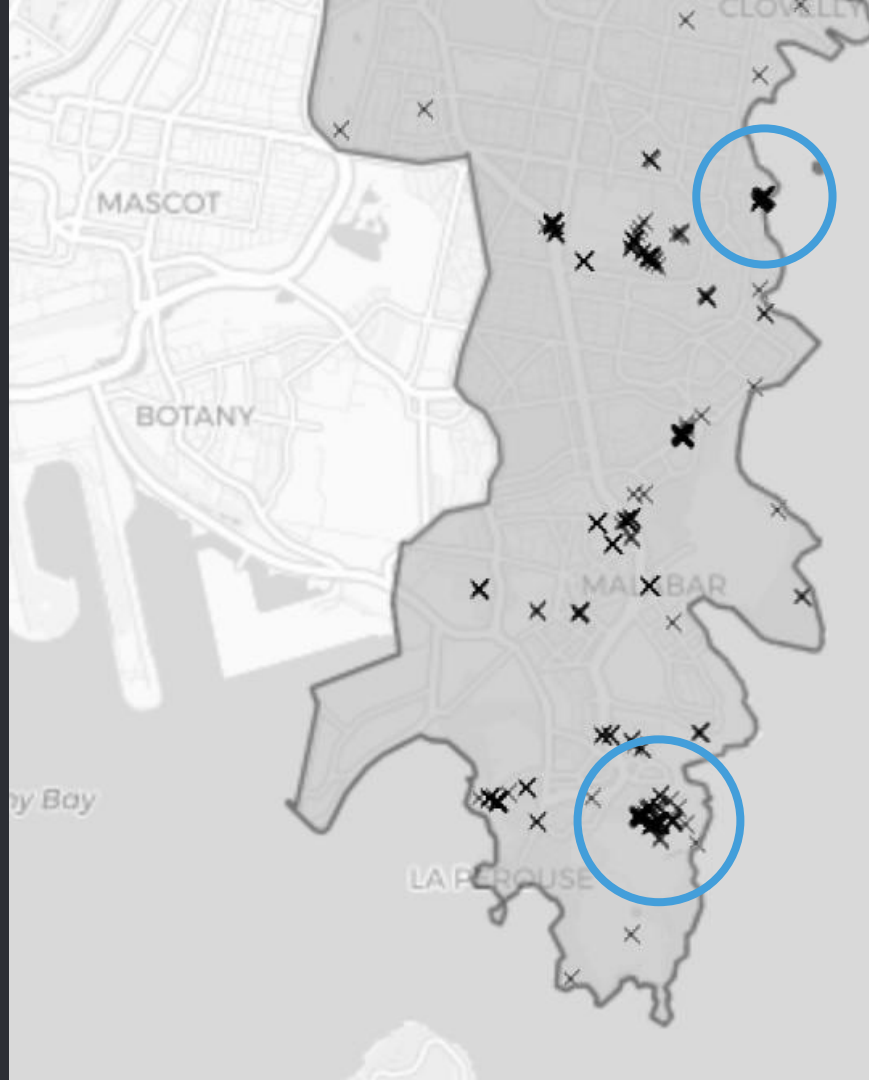




Real data time!!!

Example of using
real data

Surprise! There
are clusters of
locations that
challenge the
design.



GLEBE

ENMORE

BONDI

WAVERLEY

CLOXLEY

TEMPE

MASCOT

BOTANY

BANKSIA

BEXLEY

RAMSCATE

Botany Bay

LAFORSSE

+

-



Select a species to see the distribution on the map

Frog species

Records ▾

Striped Marsh Frog

138

Limnodynastes peronii

Common Eastern Froglet

118

Crinia signifera

Peron's Tree Frog

122

Litoria peronii

Eastern Dwarf Tree Frog

86

Litoria fallax

Green Stream Frog

2

Litoria phyllochroa

Eastern Sign-bearing Froglet

1

Crinia parinsignifera

Start

-

End

[View as table](#)

467

× Records of frogs

6

Unique species

58

Unique users

2018

2019



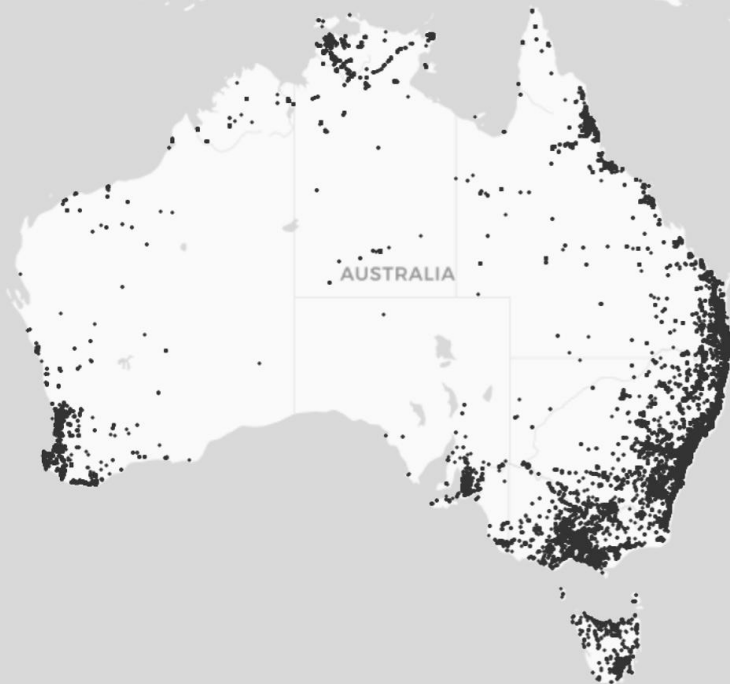
INDONESIA

PAPUA NEW
GUINEAEAST
TIMOR

Search address or postcode 🔍

+

-



AUSTRALIA

Search for species 🔍

Select a species to see the distribution on the map

Frog species

Records ▾

Common Eastern Froglet
Crinia signifera 10,575

Striped Marsh Frog
Limnodynastes peronii 8,819

Peron's Tree Frog
Litoria peronii 8,135

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Limnodynastes dumerilii 2,769

Eastern Sign-bearing Froglet
Crinia parinsignifera 2,355

Start

-

End

[View as table](#)**89,235**

× Records of frogs

186

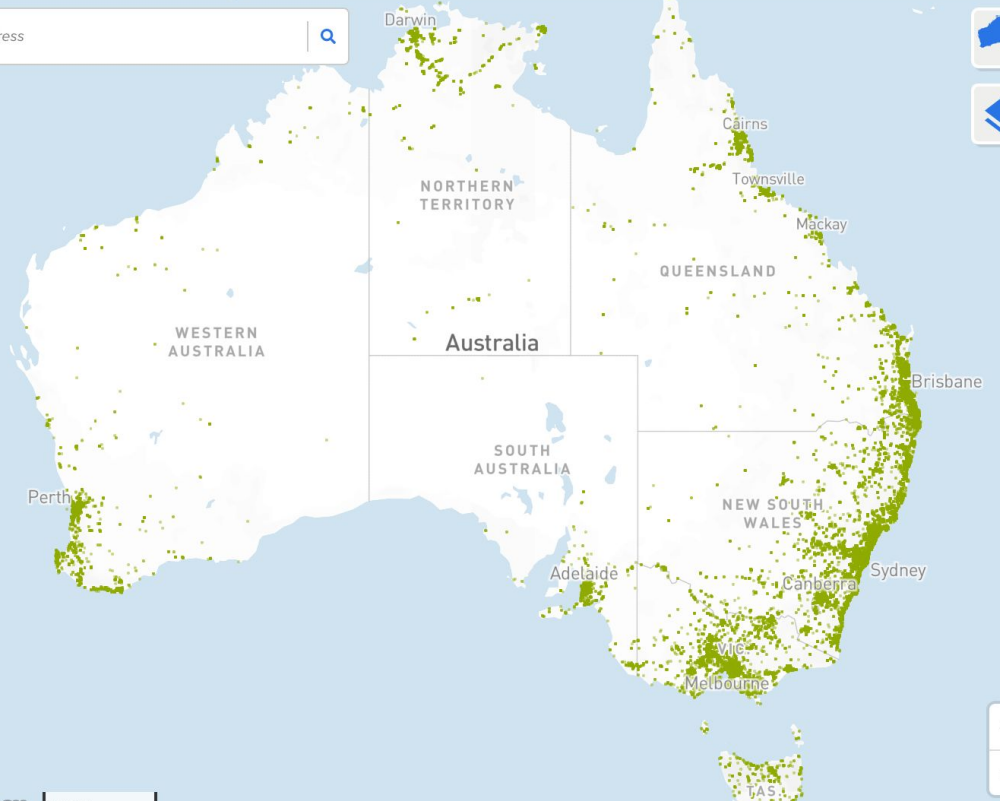
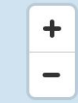
Unique species

8,744

Unique users



Search address



mapbox 500km

© Mapbox © OpenStreetMap Improve this map

Species

LGA

Search for species

Select a species to see the distribution on the map

Frog species Records ▾

Common Eastern Froglet

Crinia signifera 13,291

Striped Marsh Frog

Limnodynastes peronii 9,614

Peron's Tree Frog

Litoria peronii 8,422

Eastern Dwarf Tree Frog

Litoria fallax 6,402

Spotted Marsh Frog

Limnodynastes tasmaniensis 4,414

Green Tree Frog

Litoria caerulea 3,777

Brown Tree Frog

Litoria ewingii 3,438

Rattling Froglet

Crinia glauerti 3,208



Records of frogs 98,444

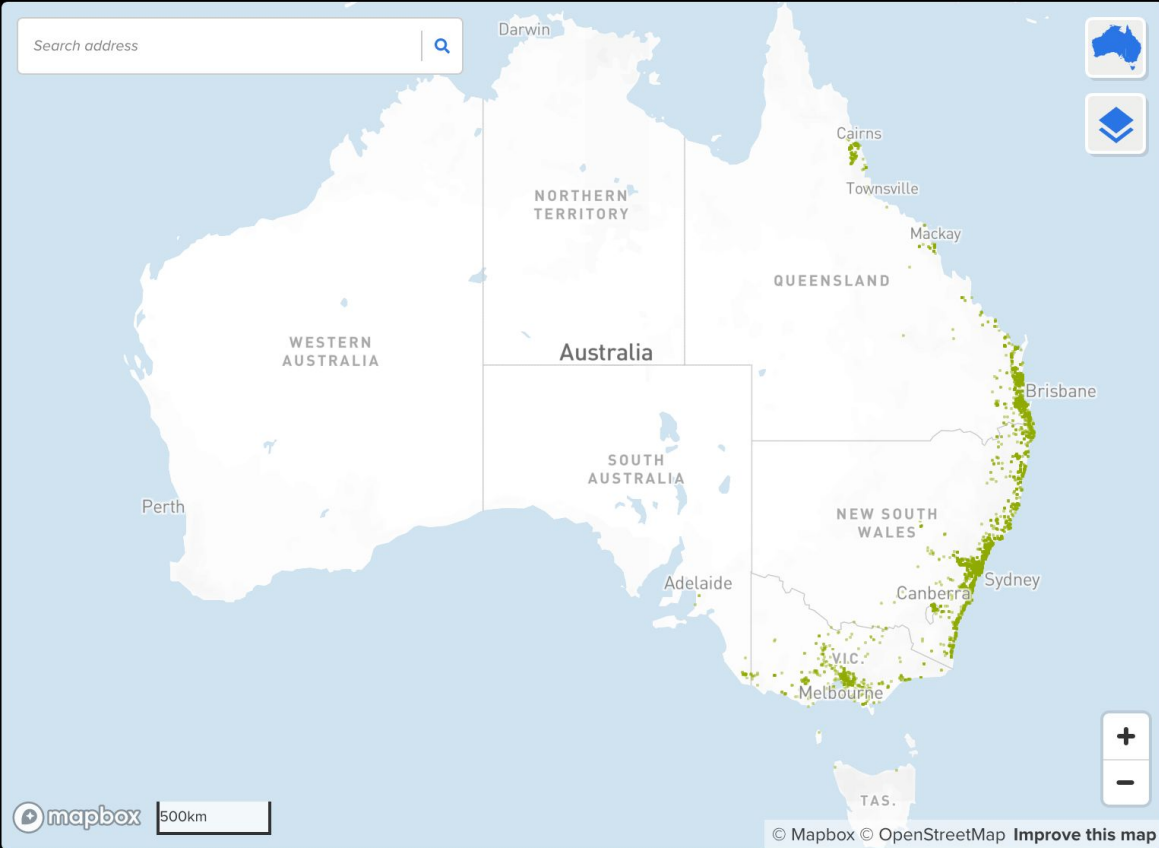
Unique species 154

Unique users 9,327

01 / 10 / 2017 - 27 / 08 / 2019

View as table





Species°

LGA

Search for species

Deselect "Striped Marsh Frog"

Frog species Records ▼

Common Eastern Froglet

Crinia signifera 13,291

Striped Marsh Frog

Limnodynastes peronii ▶

Peron's Tree Frog

Litoria peronii 8,422

Eastern Dwarf Tree Frog

Litoria fallax 6,402

Spotted Marsh Frog

Limnodynastes tasmaniensis 4,414

Green Tree Frog

Litoria caerulea 3,777

Brown Tree Frog

Litoria ewingii 3,438

Rattling Froglet

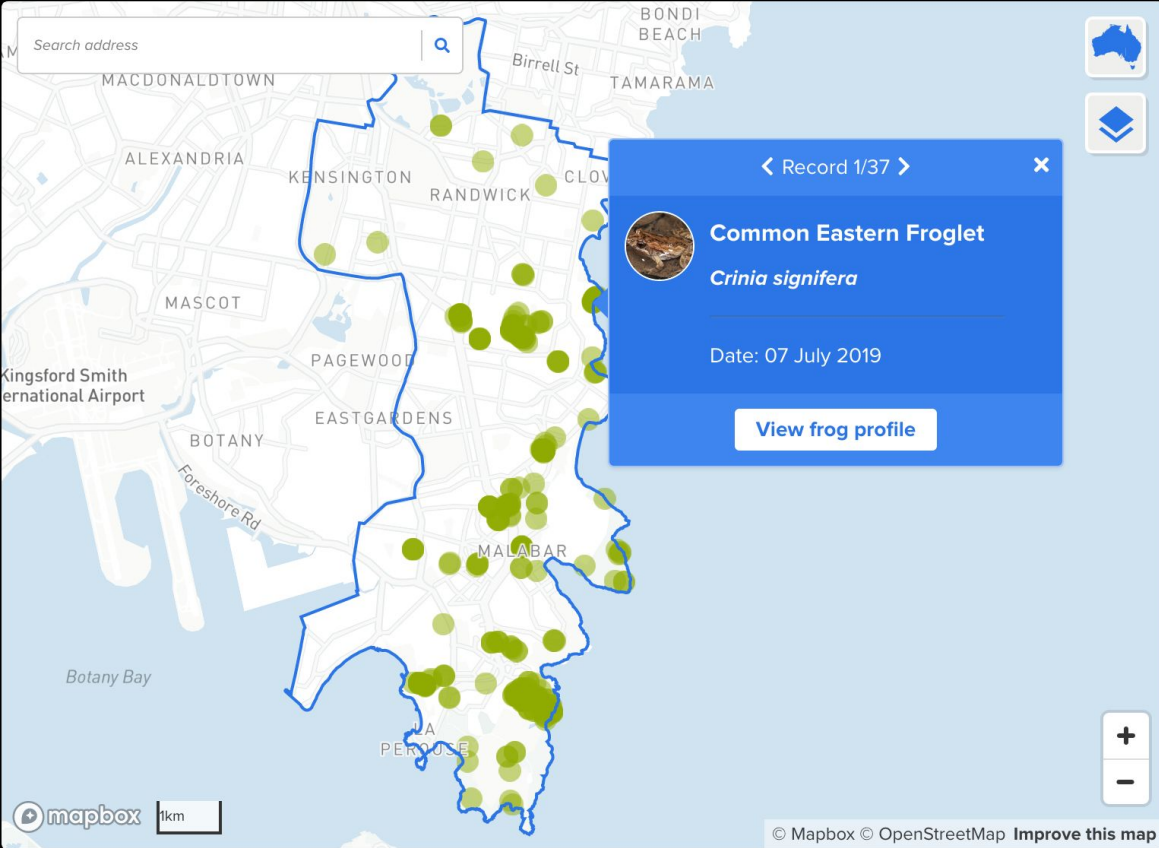
Crinia glauerti 3,208



- Records of frogs **9,614**
- ✦ Unique species **1**
- 👤 Unique users **2,980**

[View as table](#)









< Record 1/37 > X



Common Eastern Froglet
Crinia signifera

Date: 07 July 2019

[View frog profile](#)

Species LGA^o

Search for species

Select a species to see the distribution on the map

Frog species	Records ▼
Common Eastern Froglet <i>Crinia signifera</i>	137
Striped Marsh Frog <i>Limnodynastes peronii</i>	96
Peron's Tree Frog <i>Litoria peronii</i>	83
Eastern Dwarf Tree Frog <i>Litoria fallax</i>	56
Green Stream Frog <i>Litoria phyllochroa</i>	1



Looks awesome!



Why not **always** use real data
when designing wireframes?



Sometimes, there is no real
data available.



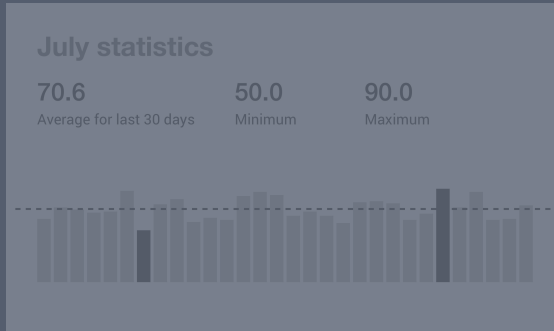


Strategies for datavis wireframes

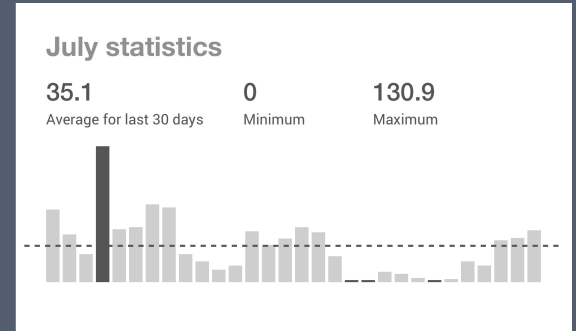
Placeholder data



Meaningful but random data



Real data

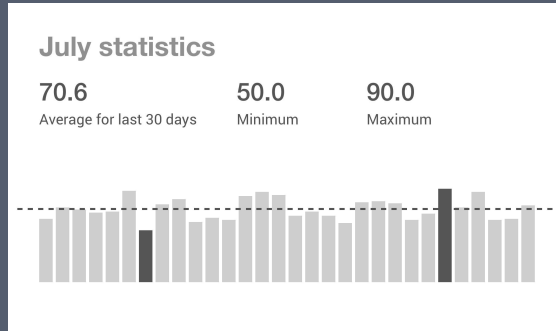


Strategies for datavis wireframes

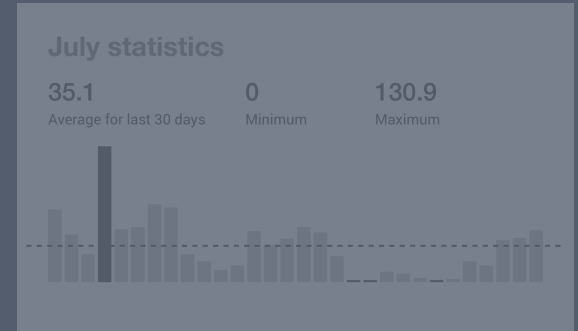
Placeholder data



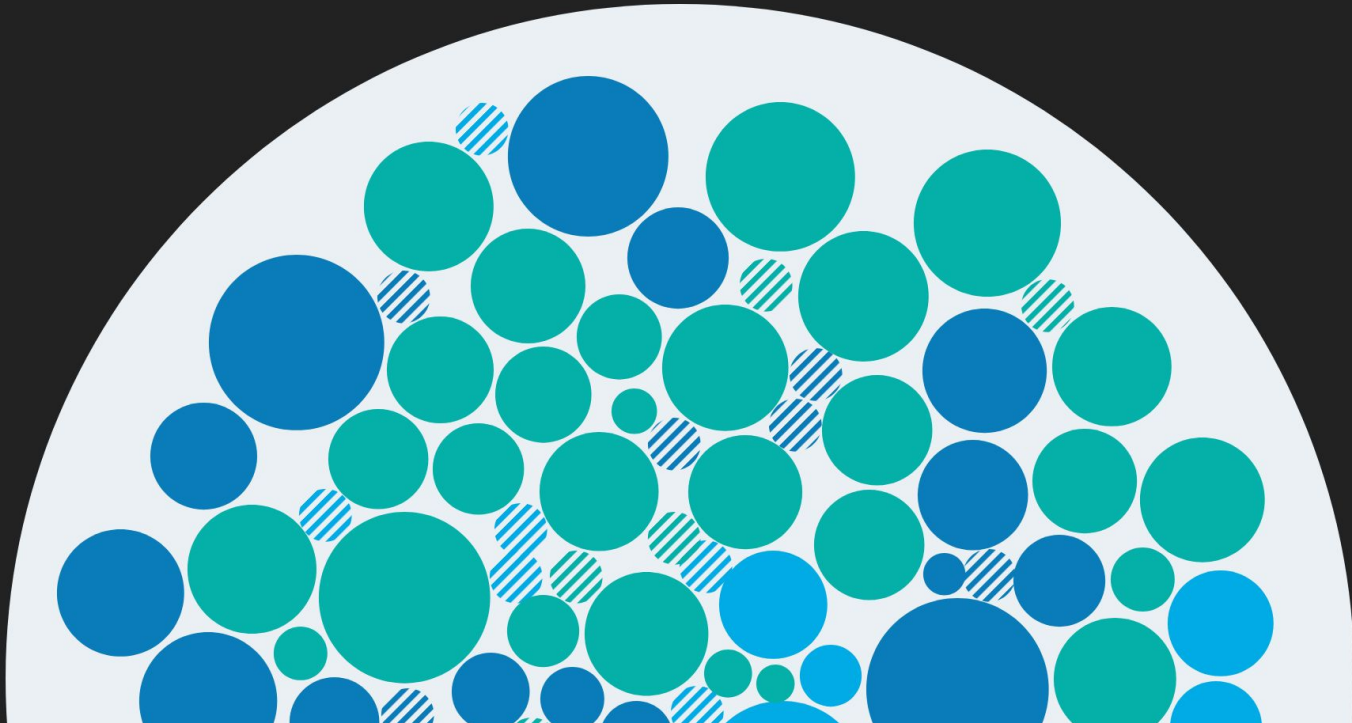
Meaningful but random data



Real data



Visualising clusters of NSW government agencies and their projects



Visualising clusters of NSW government agencies and their projects

Project brief

Interactive online visualisation of NSW government projects. Show alignment with the three priorities of the digital strategy.

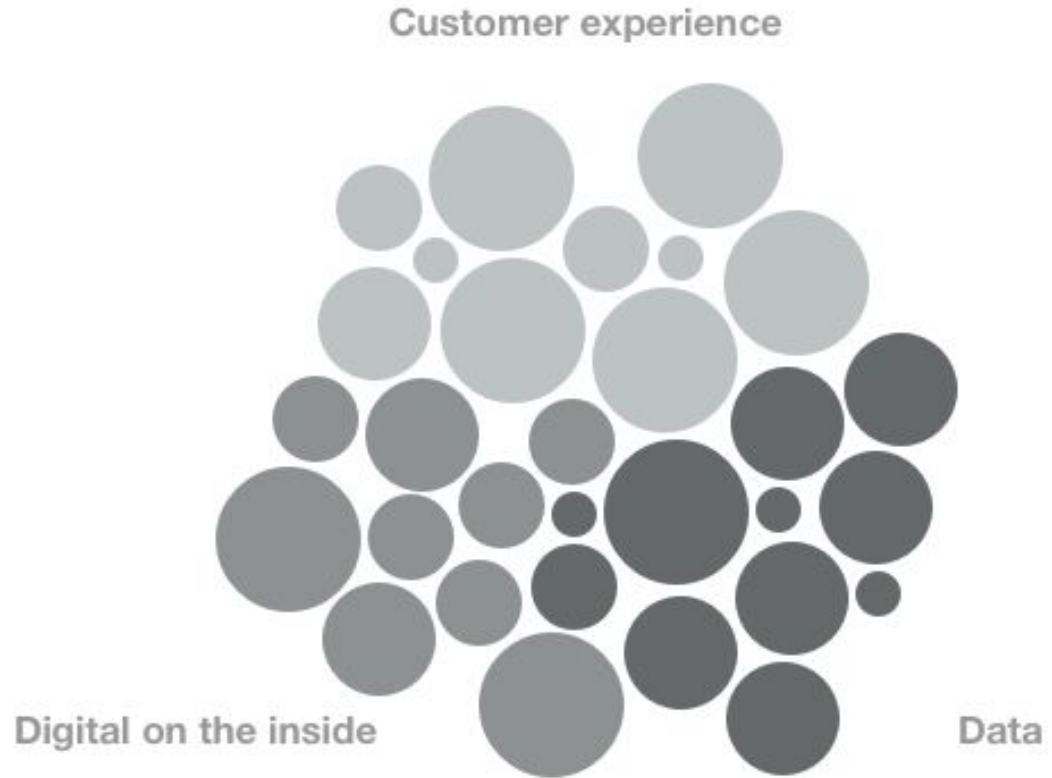
Arrange projects by

- Government cluster
- Priority
- Budget



Clusters of NSW government projects

- 30 projects
- 3 strategies
- 3 budget groups (major, medium, small)



Digital government at a glance

Lorem ipsum

Lorem ipsum 10 clusters
sine dolor 3 priorities lorem
ipsum budget by circle
area. Lorem ipsum 3
projects sine dolor ordered
by budget sum.



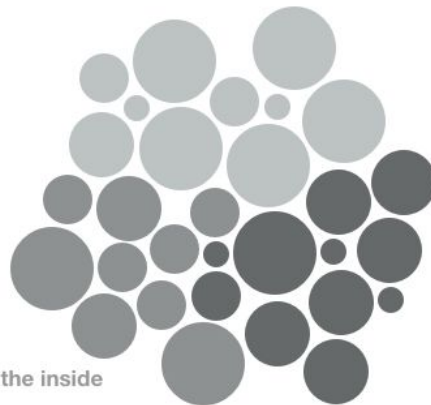
By cluster

By priority

By budget

Digital Government Projects

Customer experience



Digital on the inside

Data

less \$ ● more \$

- Customer experience
- Data
- Digital on the inside



Digital government at a glance

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Lorem ipsum 10 clusters
sine dolor 3 priorities lorem
ipsum budget by circle
area. Lorem ipsum 3
projects sine dolor ordered
by budget sum.



By cluster

By priority

By budget

Major projects

Project budget more than \$10,000,000



Medium

Project budget more than \$1,000,000



Small projects

Project budget less than \$1,000,000



less \$ ● ● more \$

- Customer experience
- Data
- Digital on the inside



Digital government at a glance

Births



Cluster: **Finance, Services and Innovation**

Agency: **Service**

Priority: **Digital on the inside**

Budget: **\$10,500,000**

Supporting clusters:
Industry, Premier and Cabinet, Treasury

Project excerpt:

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Lorem ipsum dolor sit amet, consectetur adipiscing elit.

[Find out more >](#)

less \$ ● ● more \$

- Customer experience
- Data
- Digital on the inside



By cluster

By priority

Births

Budget: **\$10,500,000**



[Find out more >](#)

Major projects

Project budget more than \$10,000,000



Medium

Project budget more than \$1,000,000



Small projects

Project budget less than \$1,000,000



Digital government at a glance

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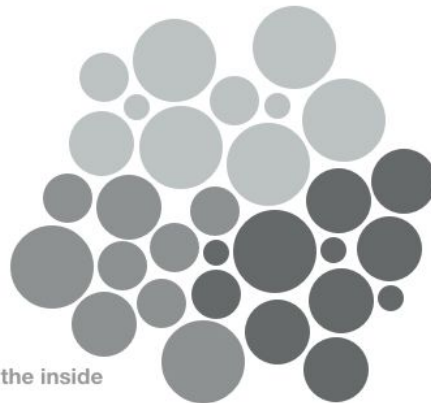
By cluster

By priority

By budget

Digital Government Projects

Customer experience



Digital on the inside

Data

less \$ ● more \$

- Customer experience
- Data
- Digital on the inside



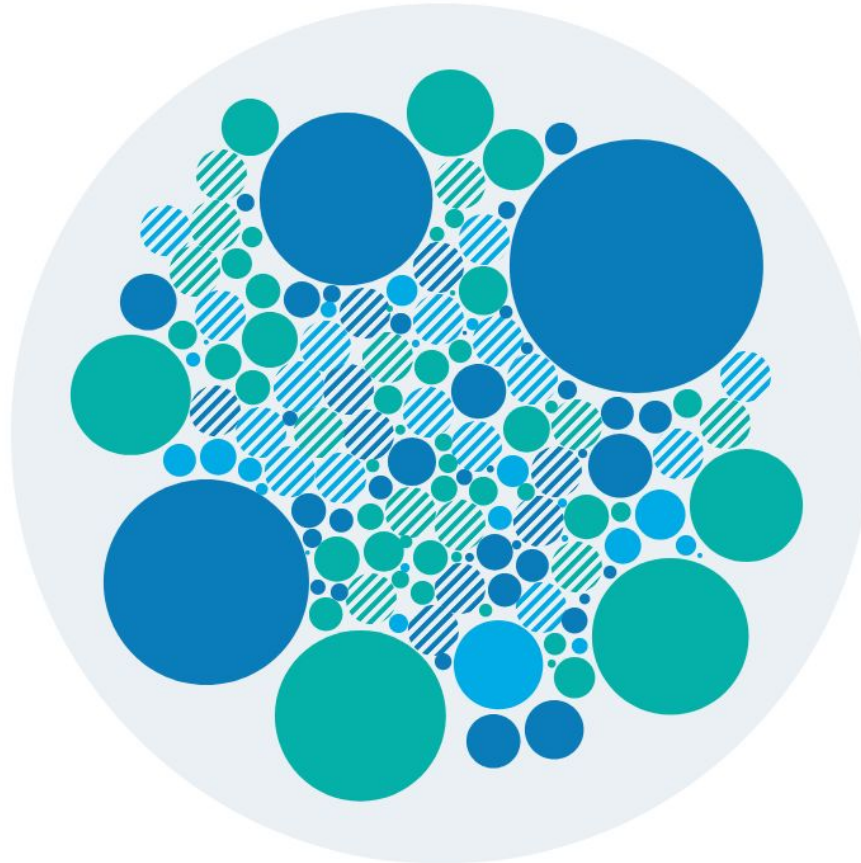


By Cluster

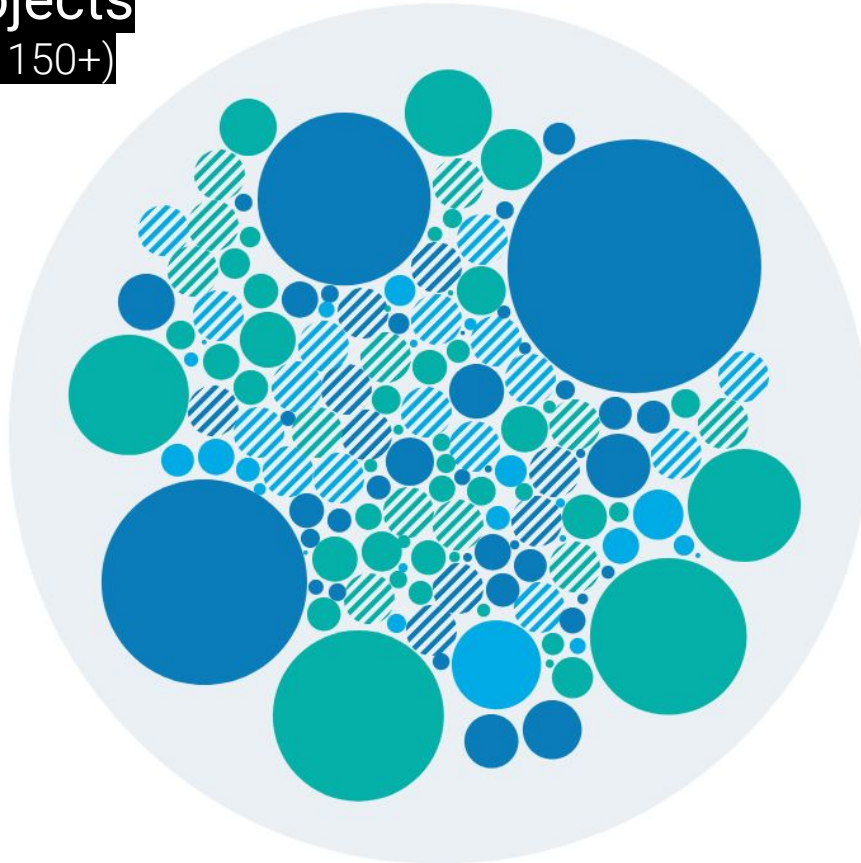
By Priority

By Budget

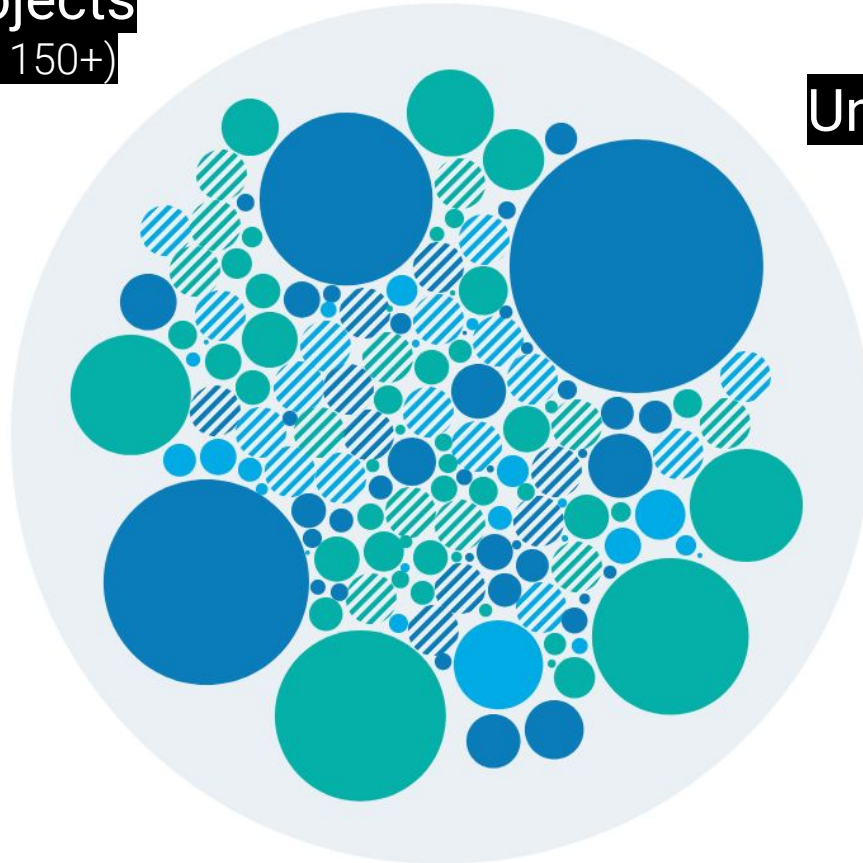
Digital Government Projects



More projects
(not 30 but 150+)



More projects
(not 30 but 150+)



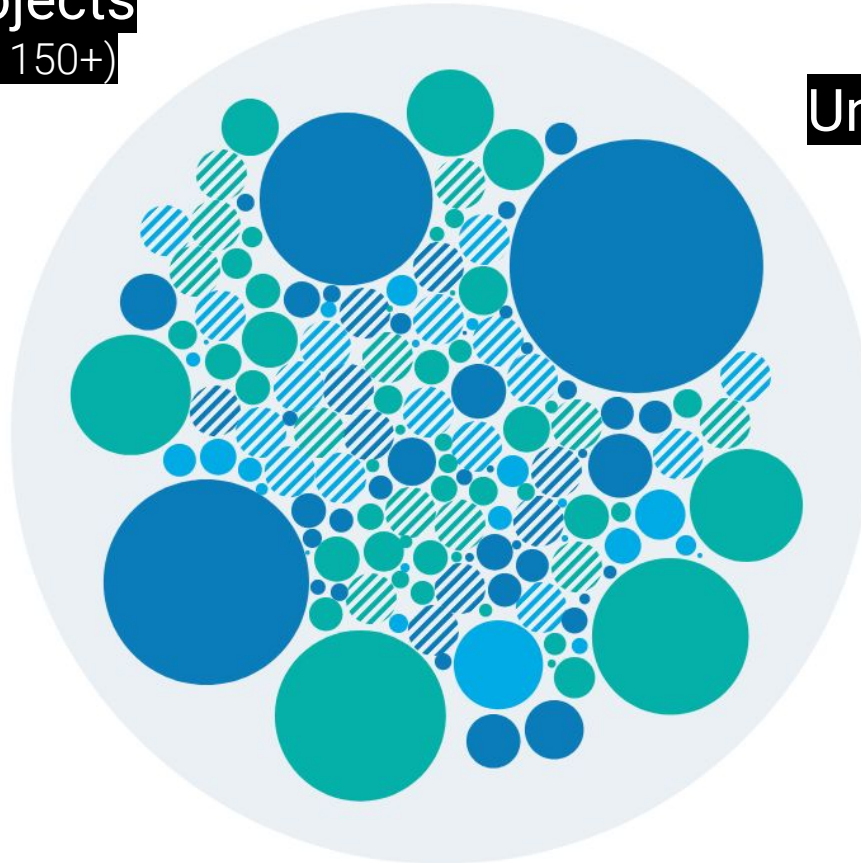
Unknown budget
(pattern)



More projects
(not 30 but 150+)

Unknown budget
(pattern)

Huge difference
in budget
(bubble size)



Clusters of NSW government projects

Projects with small budgets are too small to be clickable.

Projects with large budgets attract too much attention.



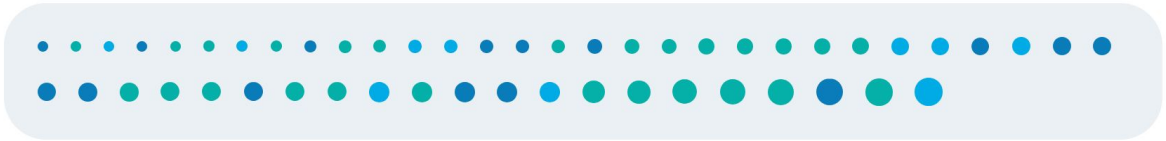
Small Projects

Projects budget less than \$1,000,000



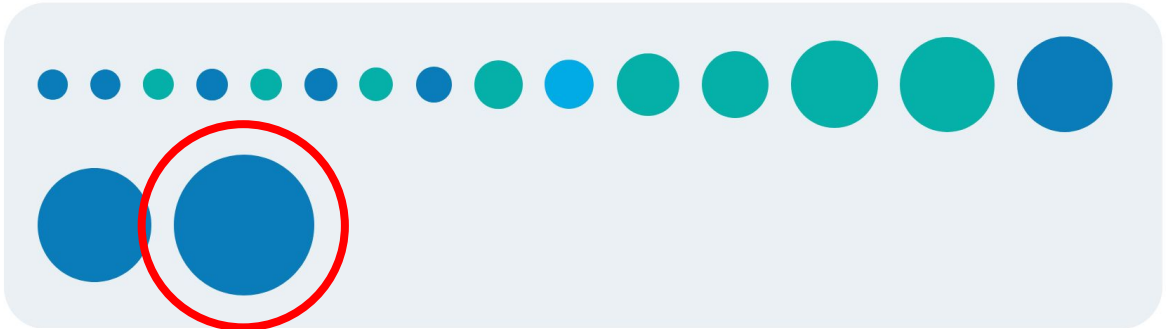
Medium Projects

Projects budget more than \$1,000,000



Major Projects

Projects budget more than \$10,000,000

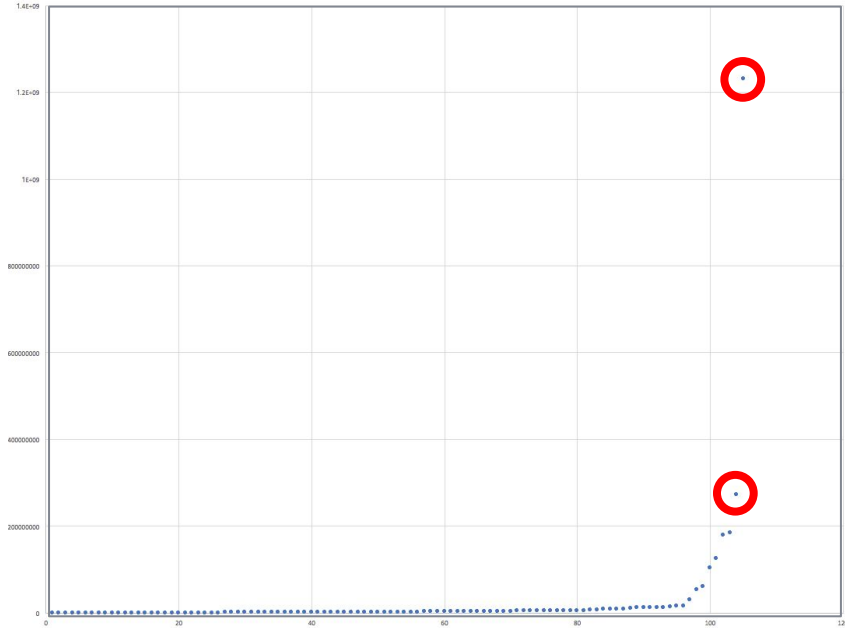


Clusters of NSW government projects

Changing the scaling of circle sizes: Linear vs logarithmic.

Linear scaling emphasises outlier.

Linear scale

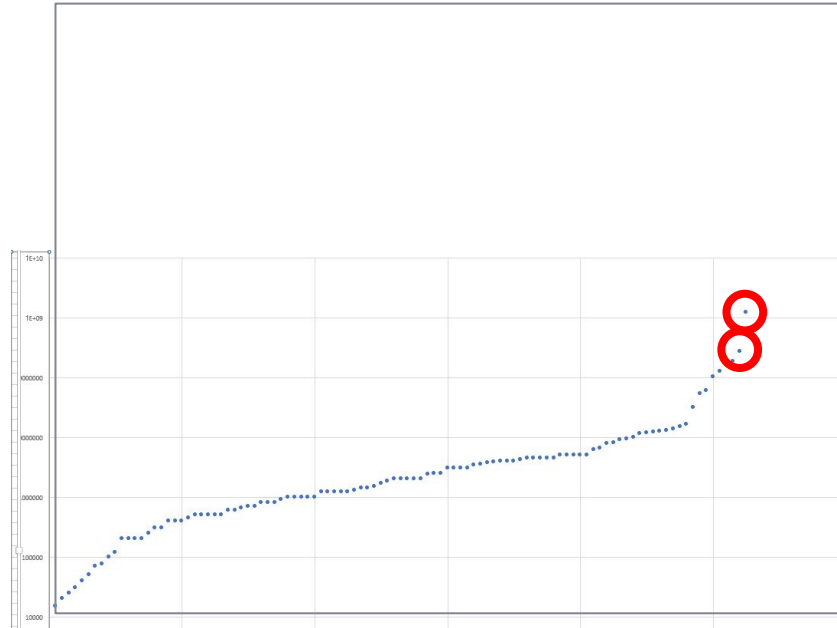


Clusters of NSW government projects

Changing the scaling of circle sizes: Linear vs logarithmic.

Logarithmic scaling brings outliers closer together.

Logarithmic scale



Clusters of NSW government projects

Small projects appear larger and large projects appear smaller.



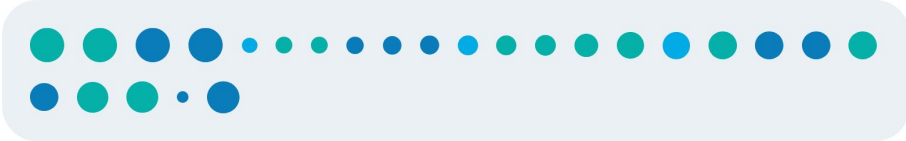
By Cluster

By Priority

By Budget

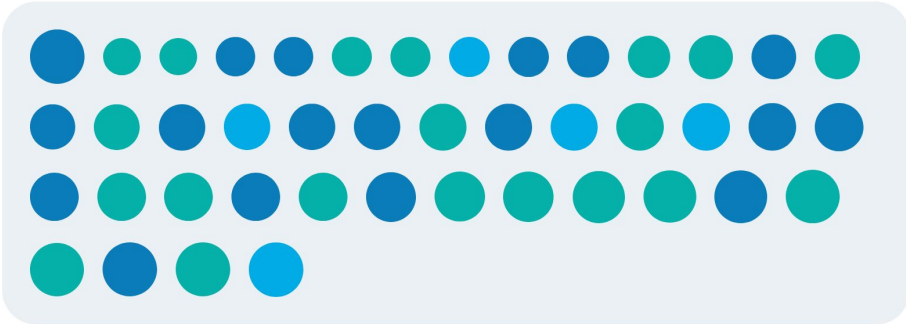
Small Projects

Projects budget less than \$1,000,000



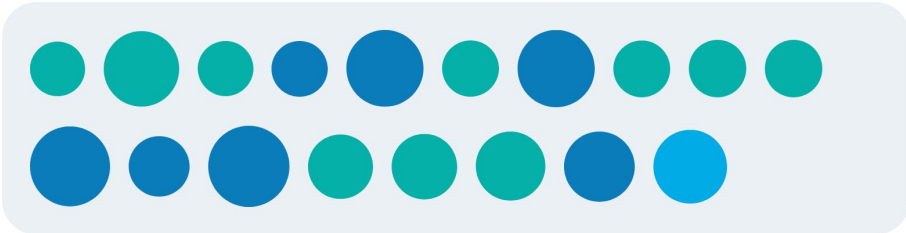
Medium Projects

Projects budget more than \$1,000,000



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By cluster

By priority

By budget

Major projects

Project budget more than \$10,000,000



Medium

Project budget more than \$1,000,000



Small projects

Project budget less than \$1,000,000



less \$ • more \$
● Customer experience
● Data
● Digital on the inside



By Cluster

By Priority

By Budget

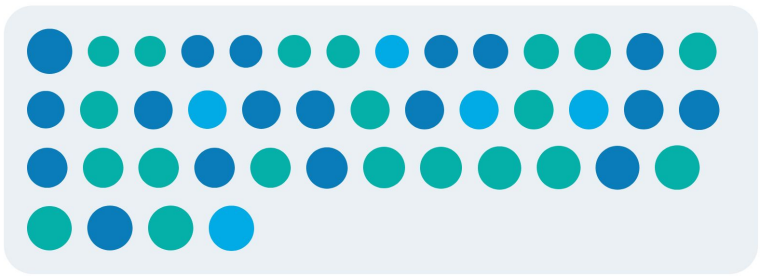
Small Projects

Projects budget less than \$1,000,000



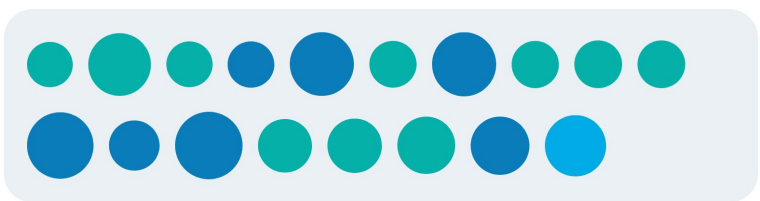
Medium Projects

Projects budget more than \$1,000,000



Major Projects

Projects budget more than \$10,000,000



Budget Not Specified



Project Budget

Less \$ More \$

Budget not specified

Digital Government Priority

Customer Experience

Digital On The Inside

Data

Clusters of NSW
government projects

Push for detailed
information about
key parameters in
order to generate
random but
meaningful data

Get your key parameters right

Total number: ~~30~~ 150 projects

Minimum budget: ~~\$250K~~ \$15K

Maximum budget: ~~\$10.5M~~ \$273M

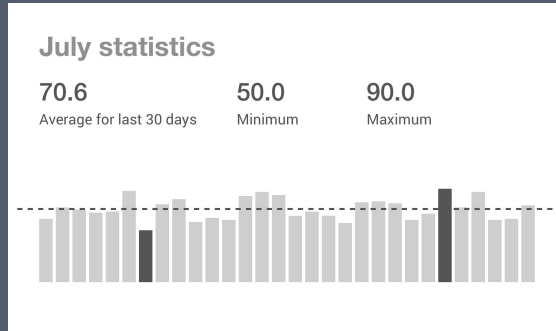


Strategies for datavis wireframes

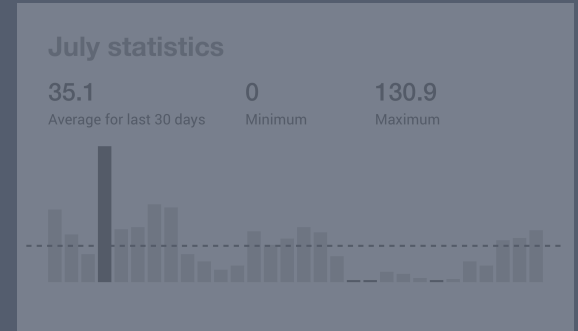
Placeholder data



Meaningful but random data

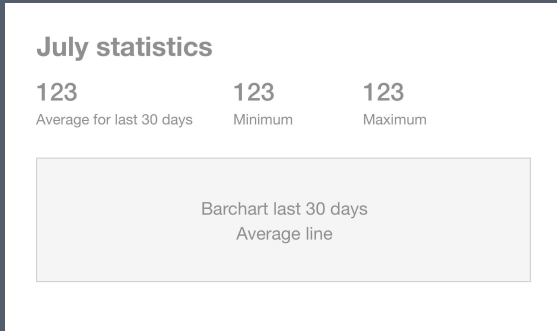


Real data

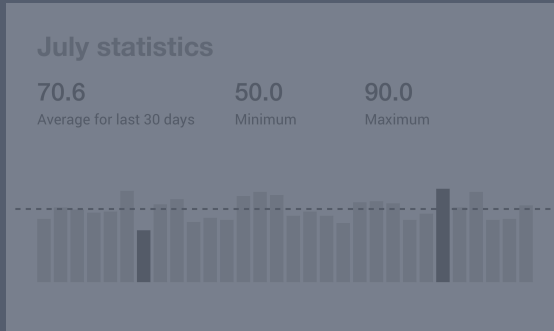


Strategies for datavis wireframes

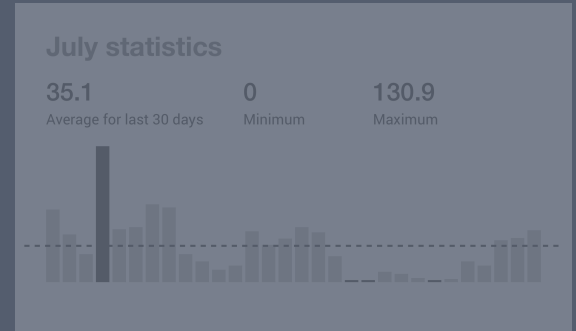
Placeholder data



Meaningful but random data



Real data



Portal for data on poverty and inequality in Australia

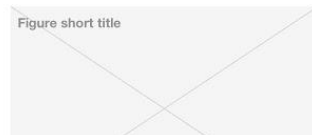
Who is affected



Load more figures

[Filter view by "How has it changed?"](#)

Trends



Portal for data on poverty and inequality in Australia

Project brief

Create a website that showcases existing figures and charts about poverty and inequality in Australia. Include filters to let the user explore figures by theme.



Portal for data on poverty and inequality in Australia

Placeholder elements used for charts; only one actual chart shown to communicate look and feel.

Data and figures

Browse all resources including charts, videos and maps by using the tag filters or the keyword search. You can download data of charts and view more details such as the methodology behind the data.

Main topic

Poverty Inequality

Categories

How does Australia compare?

Income inequality

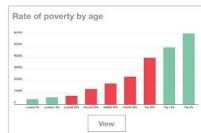
Headline figures Components of income Who is affected? Trends

Wealth inequality

Headline figures Components of income Who is affected? Trends

Search

Headline figures



Load more figures

Filter view by "How has it changed?"

Components of income



Load more figures

Filter view by "How has it changed?"

Who is affected



Load more figures

Filter view by "How has it changed?"



Portal for data on poverty and inequality in Australia

Placeholder elements used for charts; only one actual chart shown to communicate look and feel.

Data and figures

Browse all resources including charts, videos and maps by using the tag filters or the keyword search. You can download data of charts and view more details such as the methodology behind the data.

Main topic

Poverty Inequality

Categories

How does Australia compare?

Income inequality

Headline figures

Components of income

Who is affected? Trends

Wealth inequality

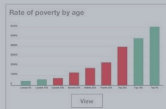
Headline figures

Components of income

Who is affected? Trends

Search Q

Headline figures



View

Load more figures

Filter view by "100"

Components of income



View

View

View

Load more figures

Filter view by "100"

Who is affected



View

View

View

Load more figures

Filter view by "100"

Trends



View

View

View

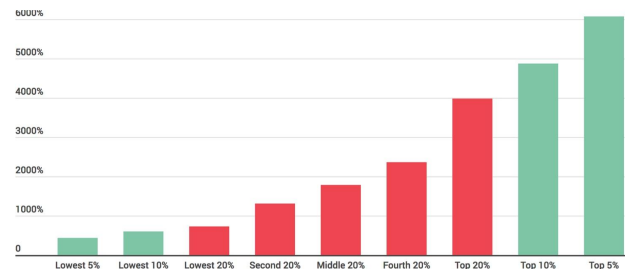
Load more figures

Filter view by "How has it changed?"

Figure short title

View

Rate of poverty by age

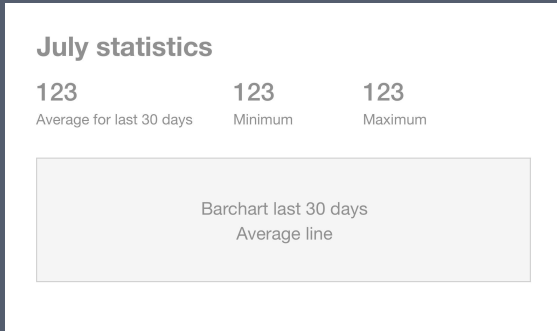


View

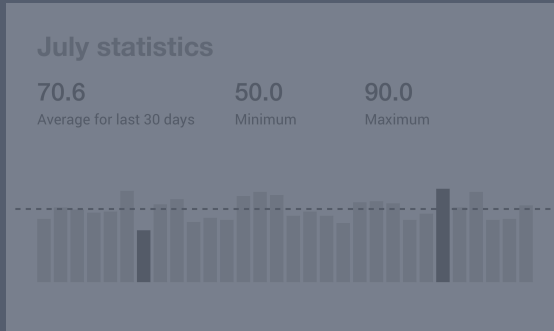


Strategies for datavis wireframes

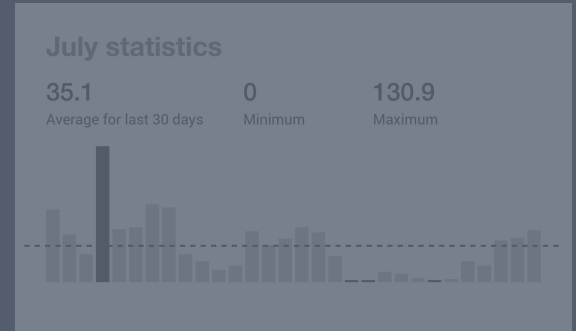
Placeholder data



Meaningful but random data

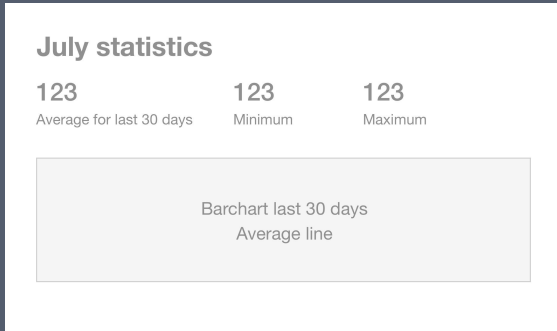


Real data

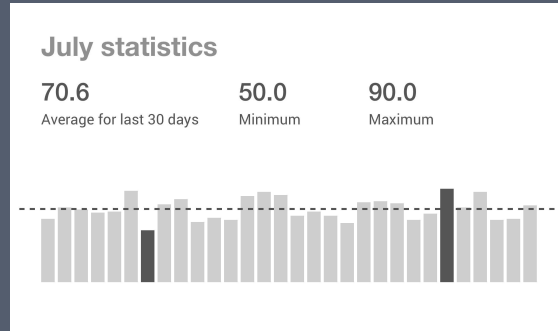


Strategies for datavis wireframes

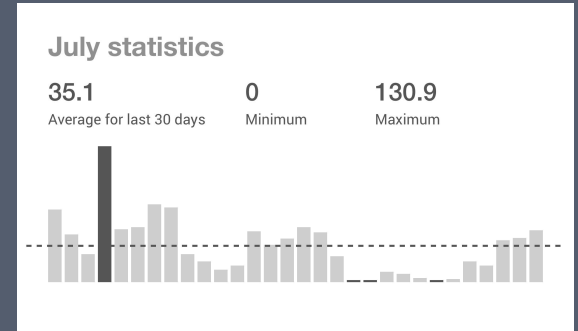
Placeholder data



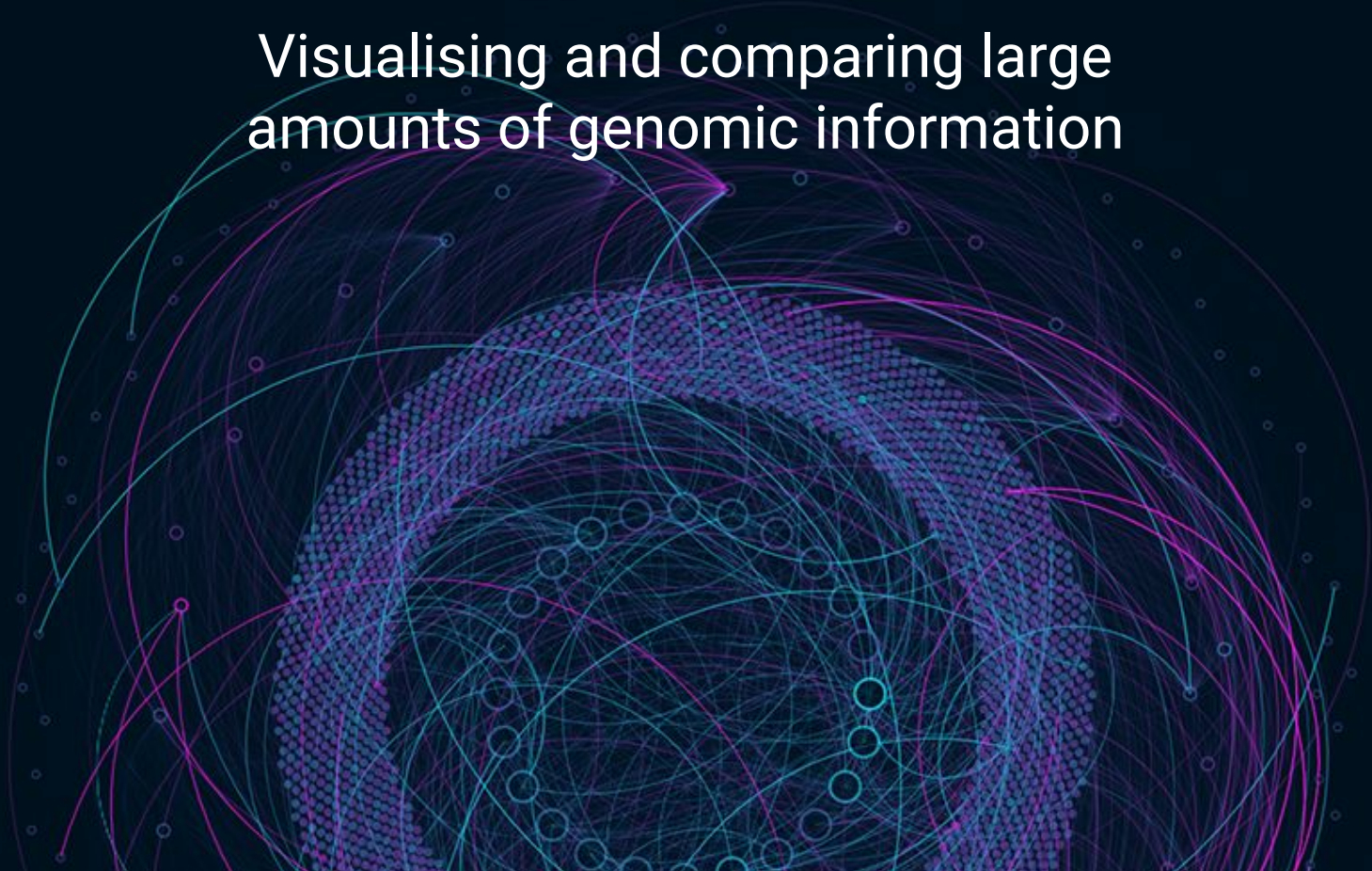
Meaningful but random data



Real data



Visualising and comparing large amounts of genomic information



Visualising and comparing large amounts of genomic information

Project brief

Explore network of chromosomes, mRNAs, microRNAs and proteins to support study of neurodegenerative diseases like Alzheimer's.



Multi-Omics Visualiser

CURRENT DATA

PATIENT A >

MINIMUM NODE WEIGHT



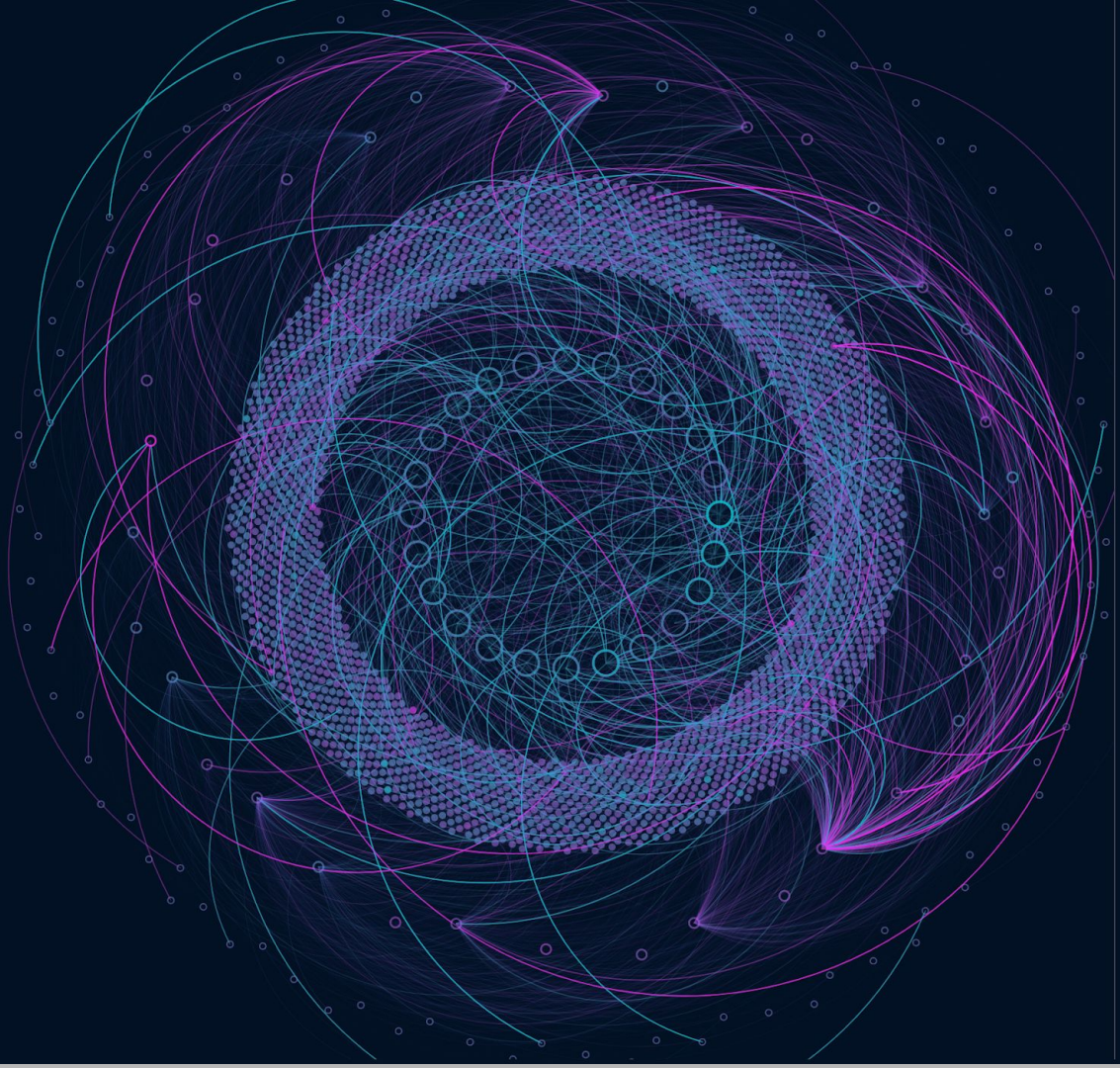
MINIMUM LINE WEIGHT



SHOW NODES WITHOUT CONNECTIONS

SHOW PATHWAY

Select... ▾



Multi-Omics Visualiser

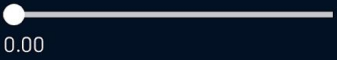
CURRENT DATA

PATIENT A >

MINIMUM NODE WEIGHT



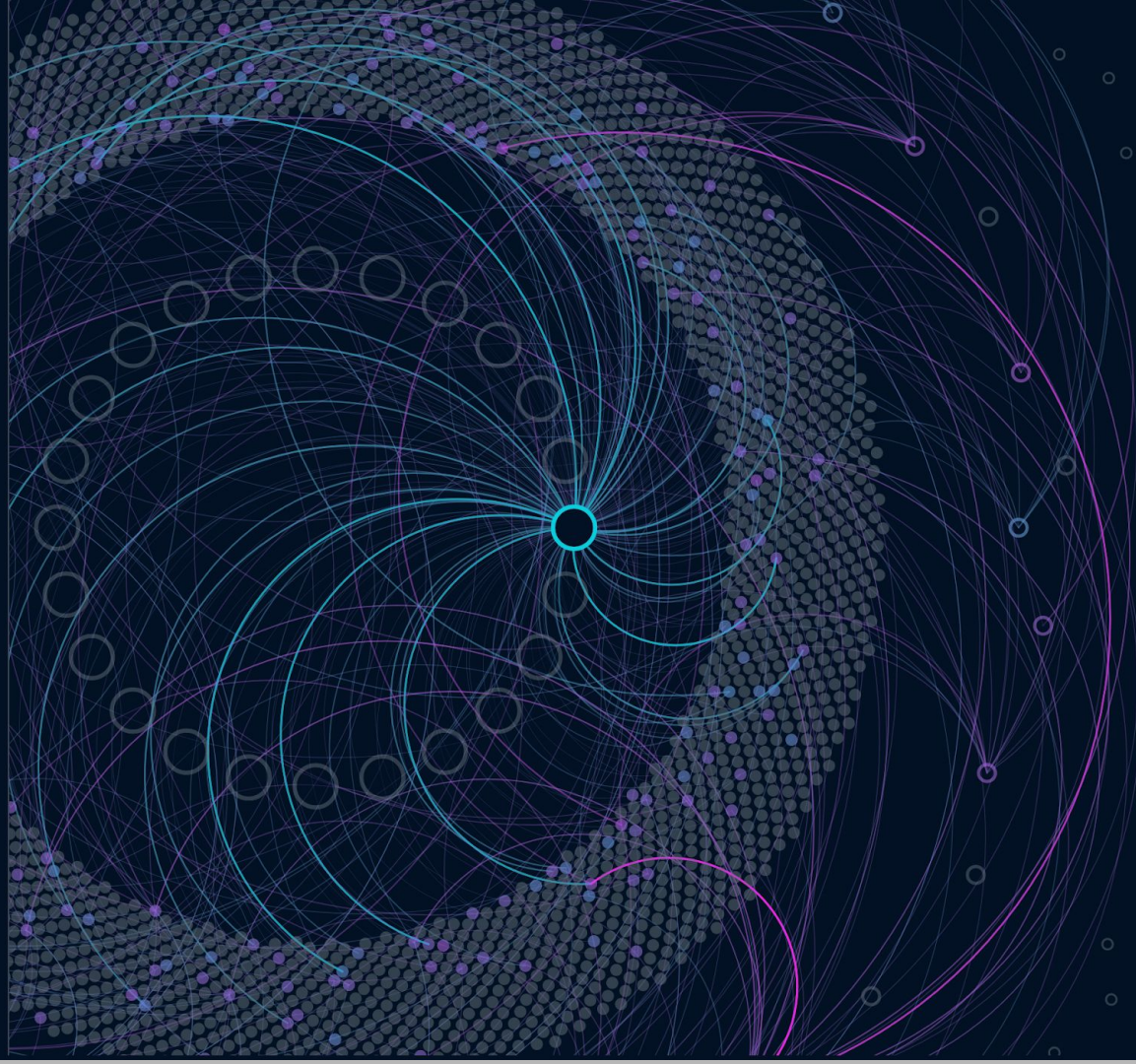
MINIMUM LINE WEIGHT



SHOW NODES WITHOUT CONNECTIONS

SHOW PATHWAY

Select... v



Chromosome 1

DESELECT

Weight +1
Visualised Genes +425

Genes on chromosome

GN64* 18 variations v

RHOU* 16 variations v

LYST 15 variations v

KIF26B* 14 variations v

KIF1B 13 variations v

ZNF678* 13 variations v

How would you create wireframes for something that complex?

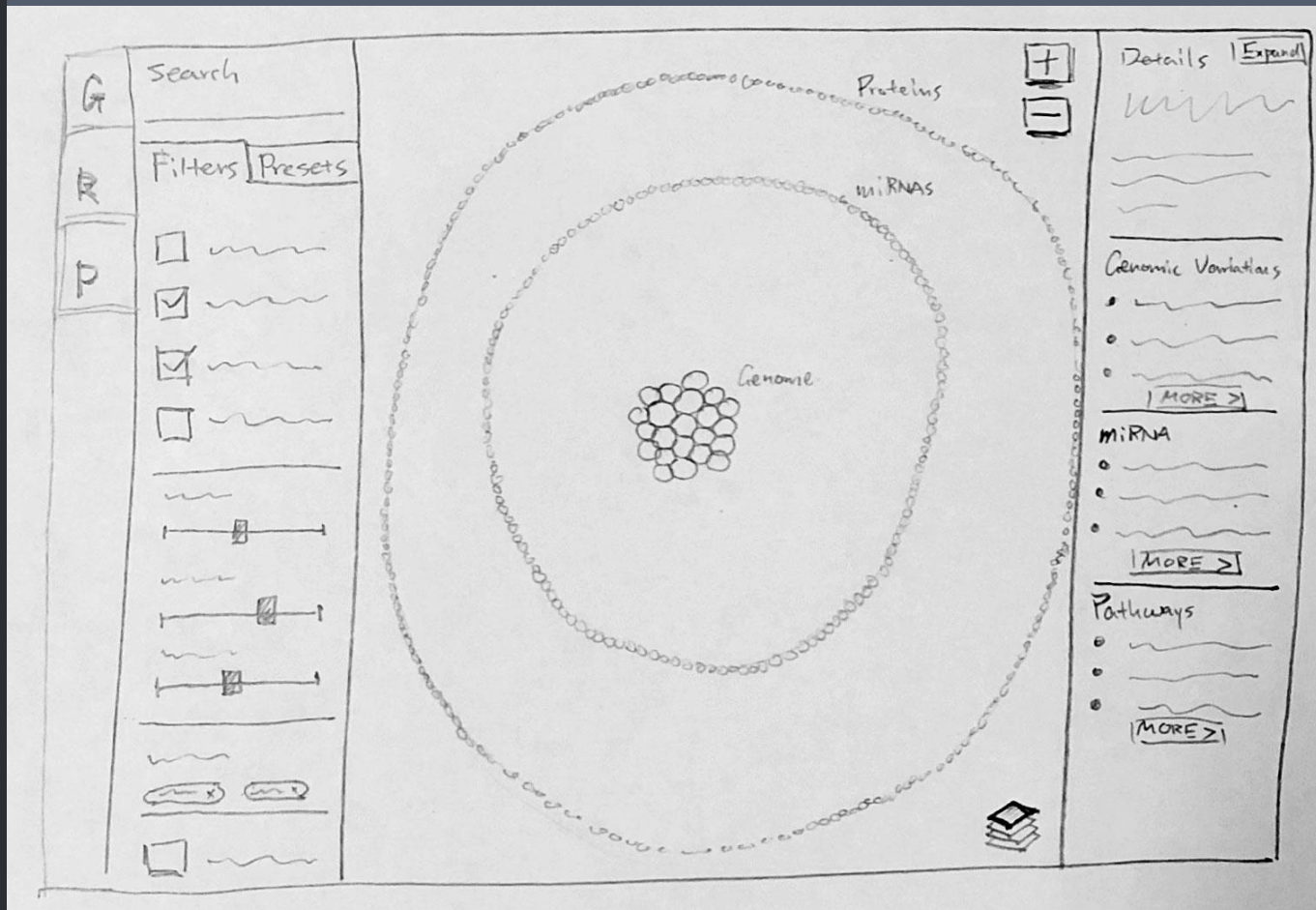


You don't.



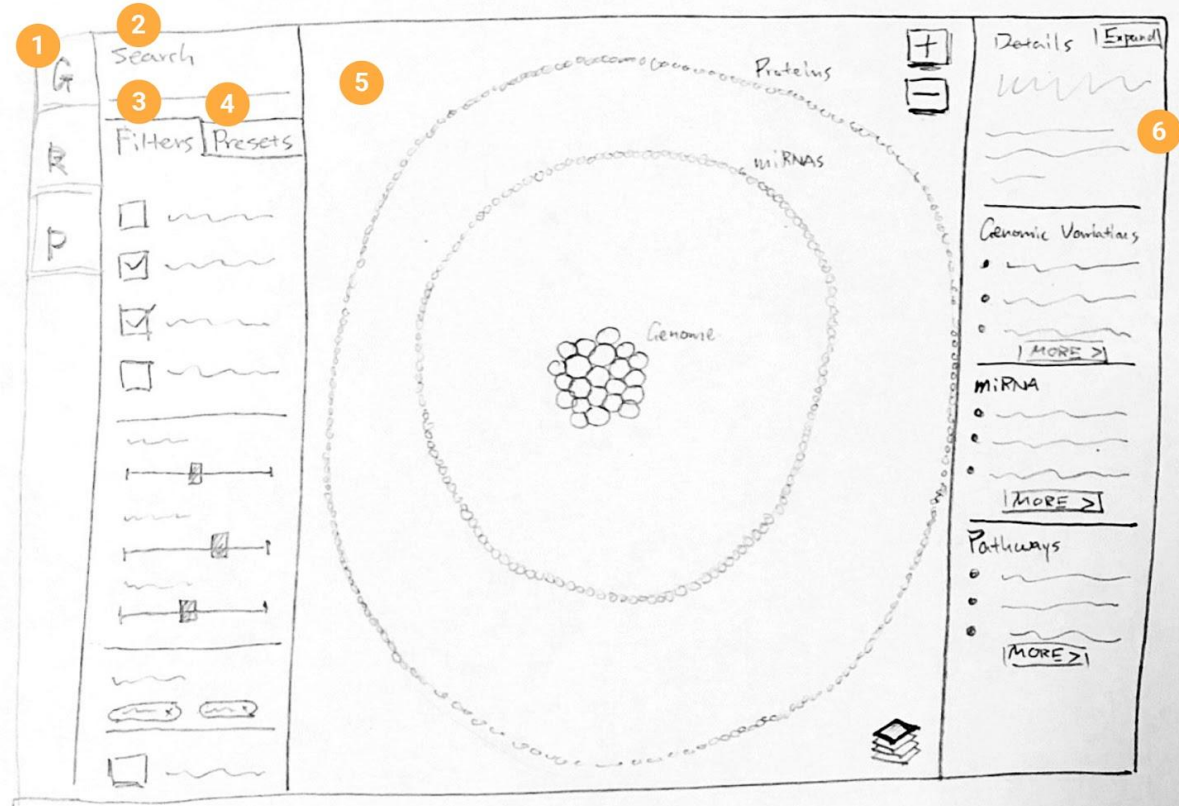
Visualising and comparing large amounts of genomic information

Sketches + detailed annotations to communicate visuals, interactions and insights.

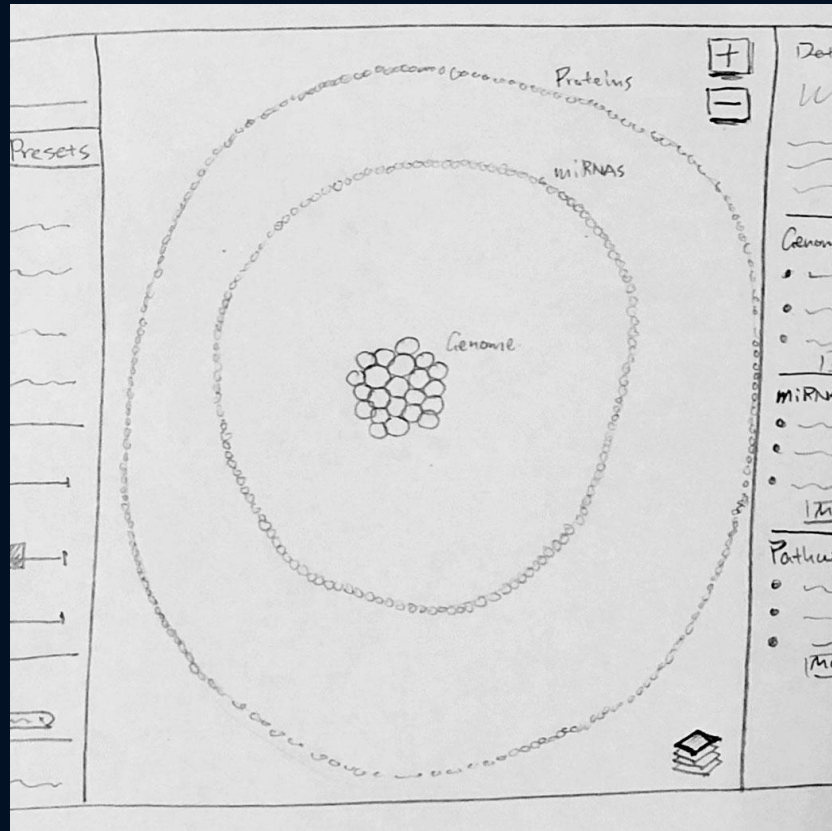


Notes

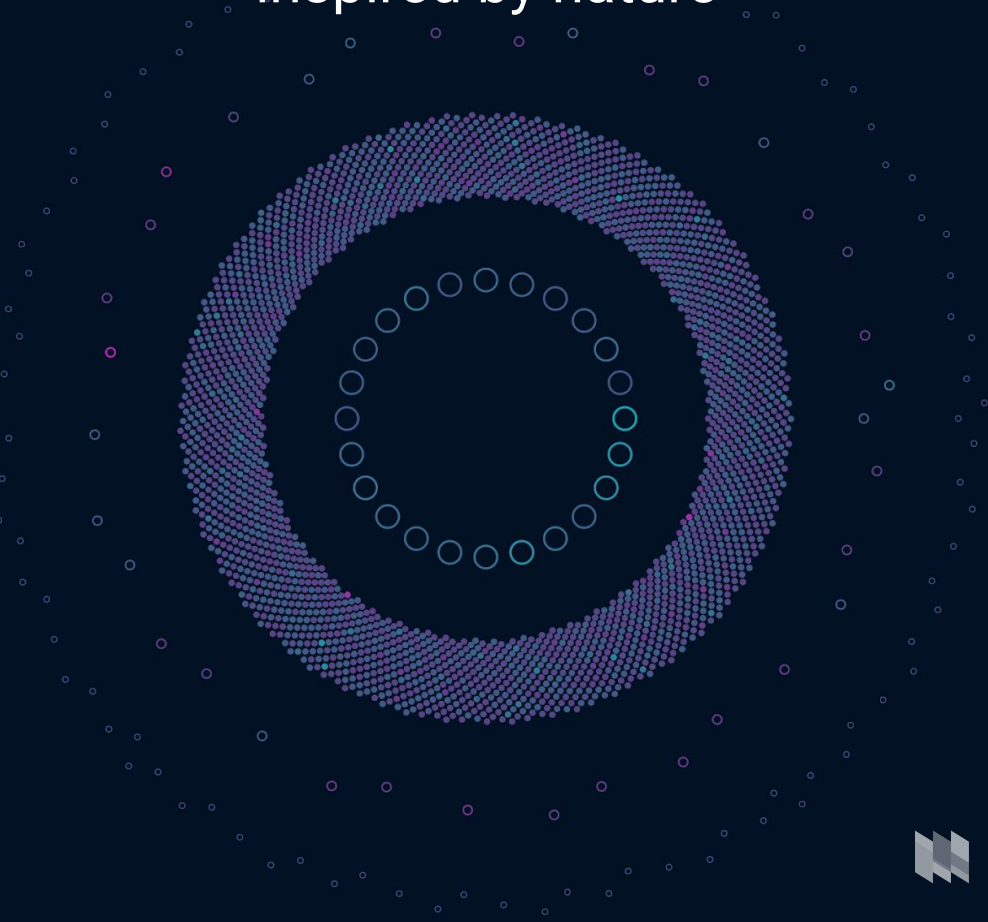
1. 'Realms': Visualisation layers containing Genome (G), miRNA (R), Proteome (P) can be independently turned on or off
2. Search across *realms* by entity ID
3. Filters: build criteria based on research goals to determine what entities and connections to show
4. Presets: add research data and/or reference or example data sets to the visualisation
5. Interactive visualisation
 - a. Entities from the same realm are grouped together
 - b. Each realm occupies a defined, non-overlapping region
 - c. Unified symbology for entities to reduce complexity
6. Display detailed information on selected entity



Flat concentric circles

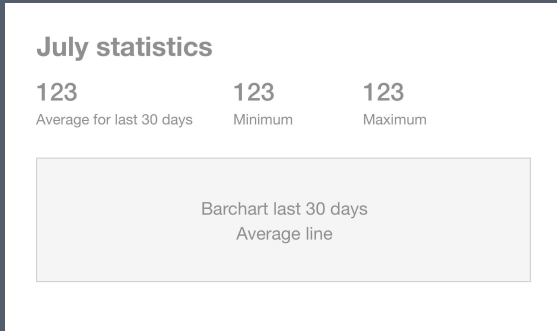


Dense arrangement inspired by nature

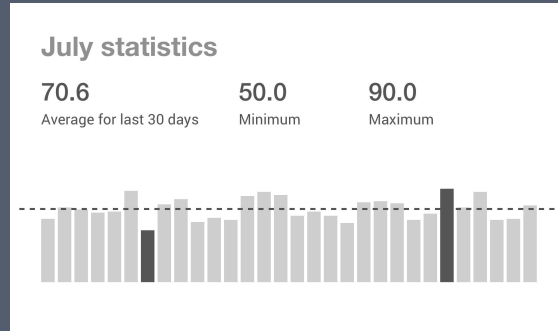


Strategies for datavis wireframes

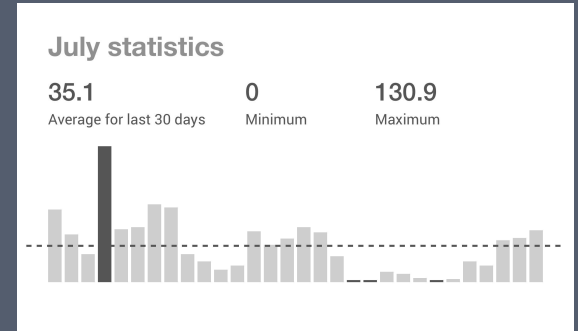
Placeholder data



Meaningful but random data



Real data



If data visualisation is fundamental for the structure or interaction use

Placeholder
data

Meaningful but random
data

Real
data

July statistics

123 123 123
Average for last 30 days Minimum Maximum

Bar chart last 30 days
Average line

July statistics

70.6 50.0 90.0
Average for last 30 days Minimum Maximum

July statistics

35.1 0 130.9
Average for last 30 days Minimum Maximum



If you don't have real data use

Placeholder
data

Meaningful but random
data

Real
data

July statistics

123
Average for last 30 days

123
Minimum

123
Maximum

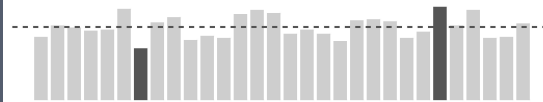
Bar chart last 30 days
Average line

July statistics

70.6
Average for last 30 days

50.0
Minimum

90.0
Maximum



July statistics

35.1
Average for last 30 days

0
Minimum

130.9
Maximum



If data visualisation is not fundamental for the structure or interaction use

Placeholder
data

Meaningful but random
data

Real
data

July statistics

123 123 123
Average for last 30 days Minimum Maximum

Bar chart last 30 days
Average line

July statistics

70.6 50.0 90.0
Average for last 30 days Minimum Maximum



July statistics

35.1 0 130.9
Average for last 30 days Minimum Maximum



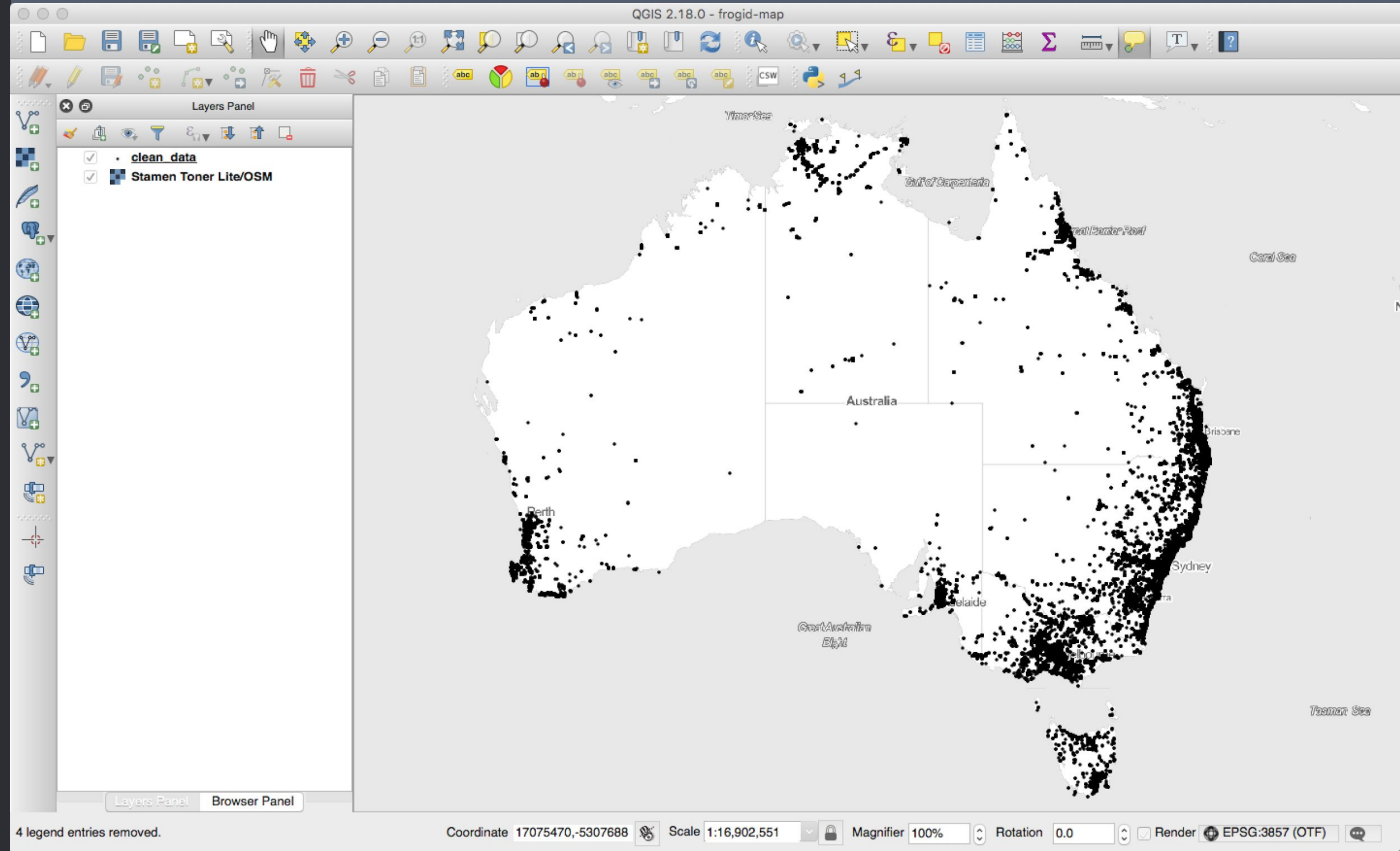
How to build wireframes that
contain random or real data?



Import graphics

Create charts
using external
software.

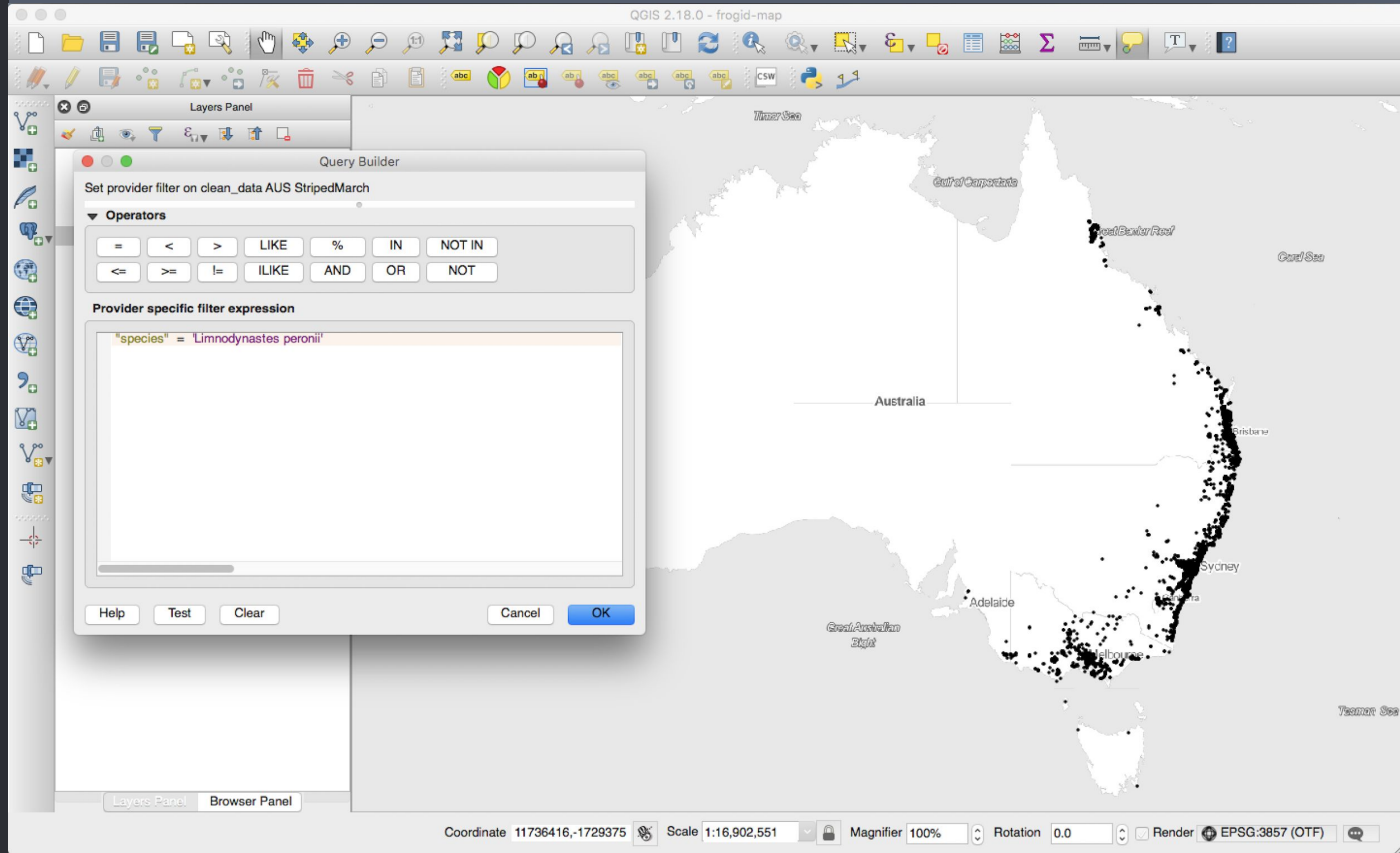
Maps for FrogID
project were
screenshots
taken from QGIS.



Import graphics

Create charts using external software.

Maps for FrogID project were screenshots taken from QGIS.



 Sketch

+

 Data Populator



{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}

{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
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{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}

{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
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{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}



PAGES

- Brownbag
- Symbols

Artboard

- list-item copy 14
 - top-border
 - Aa {Common}
 - Aa {Latin}
 - Aa {Clean count}
 - Shape/Fill-Rect/Gray dark
- list-item copy 13
 - top-border

Filter

Populate with JSON

Please select the JSON file you'd like to populate your design with and configure the options.

JSON File

/Users/martin 1/Documents/55_fr Browse

Data Path ?

Root Level

Data Options

- Randomize data order
- Trim overflowing text (area text layers)
- Insert ellipsis after trimmed text

Default Substitute ?

e.g. No Data

Layout Options

Create grid

Rows Margin

Columns Margin

```

1  [
2  {
3    "Latin": "Crinia signifera",
4    "Clean count": "10,575",
5    "Common": "Common Eastern Froglet"
6  },
7  > {
12 > {
17 > {
22 > {
27 > {
32 > {
37 > {
42 > {
47 > {
52 ]

```

Reload

Cancel Populate

3 Notifications

Multi x Multi Y 0

348 W 57 H

Select group's content on click

RESIZING

Pin to Edge Fix Size Preview

PROTOTYPING

Fix position when scrolling

APPEARANCE

No Layer Style

Opacity (Normal) 100%

STYLE

Shadows

MAKE EXPORTABLE

{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}

{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}

{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}
{Common} {Latin}	{Clean count}



Common Eastern Froglet <i>Crinia signifera</i>	10,575
Striped Marsh Frog <i>Limnodynastes peronii</i>	8,819
Peron's Tree Frog <i>Litoria peronii</i>	8,135
Eastern Dwarf Tree Frog <i>Litoria fallax</i>	6,145
Spotted Marsh Frog <i>Limnodynastes tasmaniensis</i>	4,202
Green Tree Frog <i>Litoria caerulea</i>	3,676
Red Tree Frog <i>Litoria rubella</i>	2,987
Brown Tree Frog <i>Litoria ewingii</i>	2,771
Eastern Banjo Frog <i>Limnodynastes dumerilii</i>	2,769
Eastern Sign-bearing Froglet <i>Crinia parinsignifera</i>	2,355

Rattling Froglet <i>Crinia glauerti</i>	2,317
Roth's Tree Frog <i>Litoria rothii</i>	1,896
Whistling Tree Frog <i>Litoria verreauxii</i>	1,637
Slender Tree Frog <i>Litoria adelaidensis</i>	1,542
Tusked Frog <i>Adelotus brevis</i>	1,521
Bleating Tree Frog <i>Litoria dentata</i>	1,477
Marbled Frog <i>Limnodynastes convexiusculus</i>	1,420
Tyler's Tree Frog <i>Litoria tyleri</i>	1,332
Graceful Tree Frog <i>Litoria gracilentia</i>	1,298
Northern Sedge Frog <i>Litoria bicolor</i>	1,184

Motorbike Frog <i>Litoria moorei</i>	1,151
Bumpy Rocket Frog <i>Litoria inermis</i>	1,110
Cane Toad <i>Rhinella marina</i>	1,027
Quacking Frog <i>Crinia georgiana</i>	980
Broad-palmed Rocket Frog <i>Litoria latopalmata</i>	976
Striped Rocket Frog <i>Litoria nasuta</i>	822
Western Banjo Frog <i>Limnodynastes dorsalis</i>	811
Giant Burrowing Frog <i>Cyclorana australis</i>	710
Ornate Burrowing Frog <i>Platyplectrum ornatum</i>	704
Dusky Toadlet <i>Uperoleia fusca</i>	668

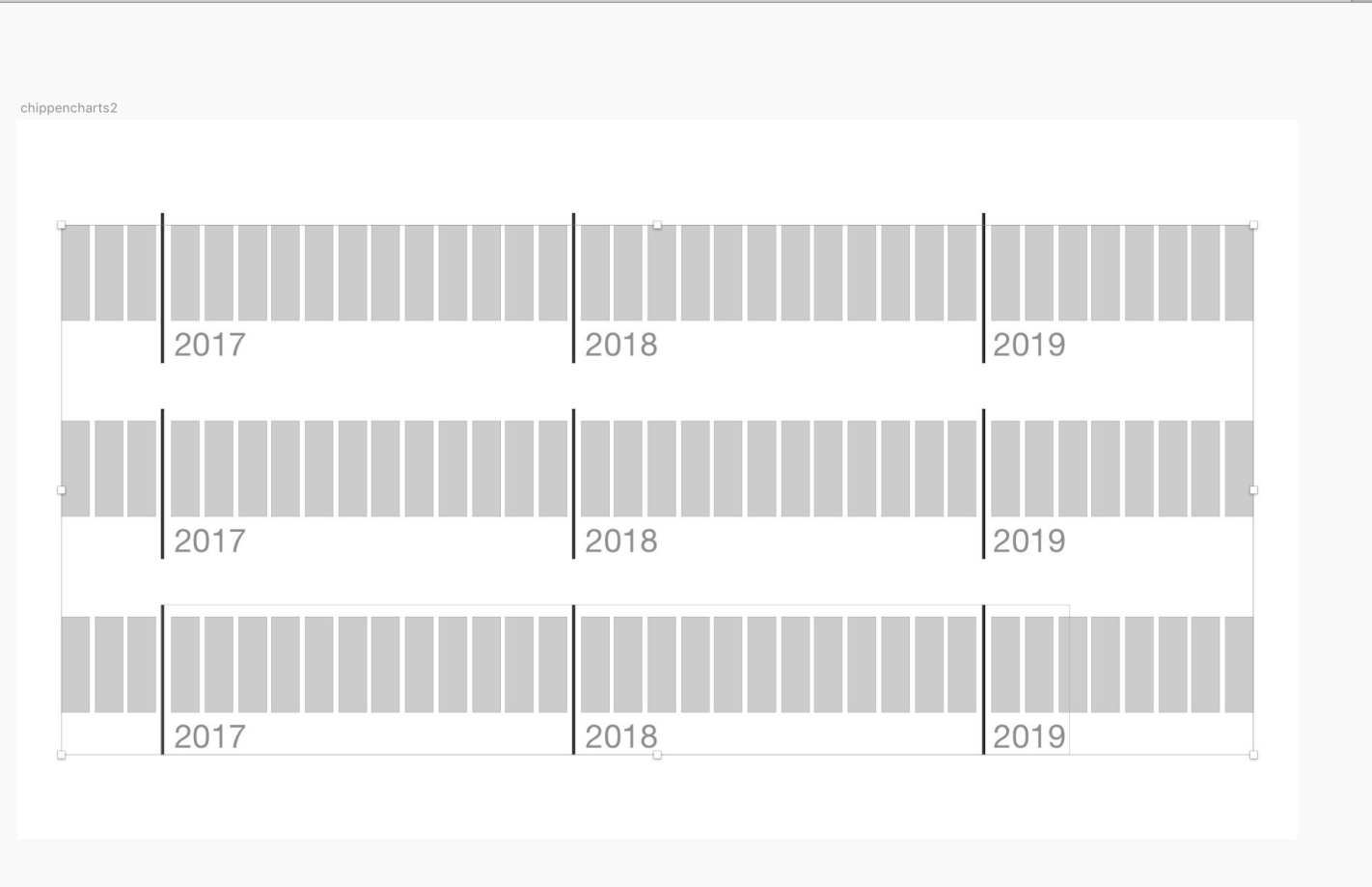


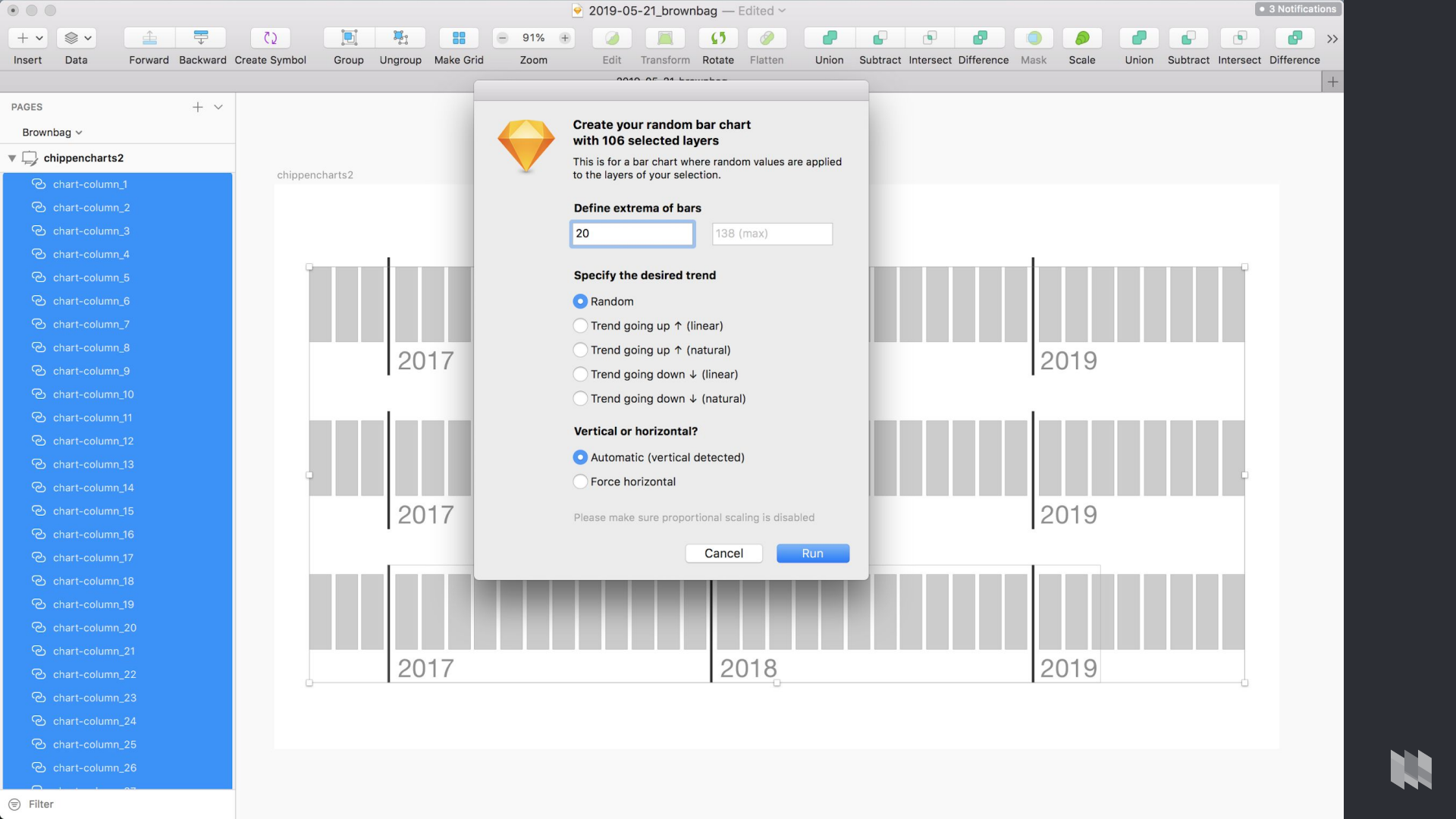


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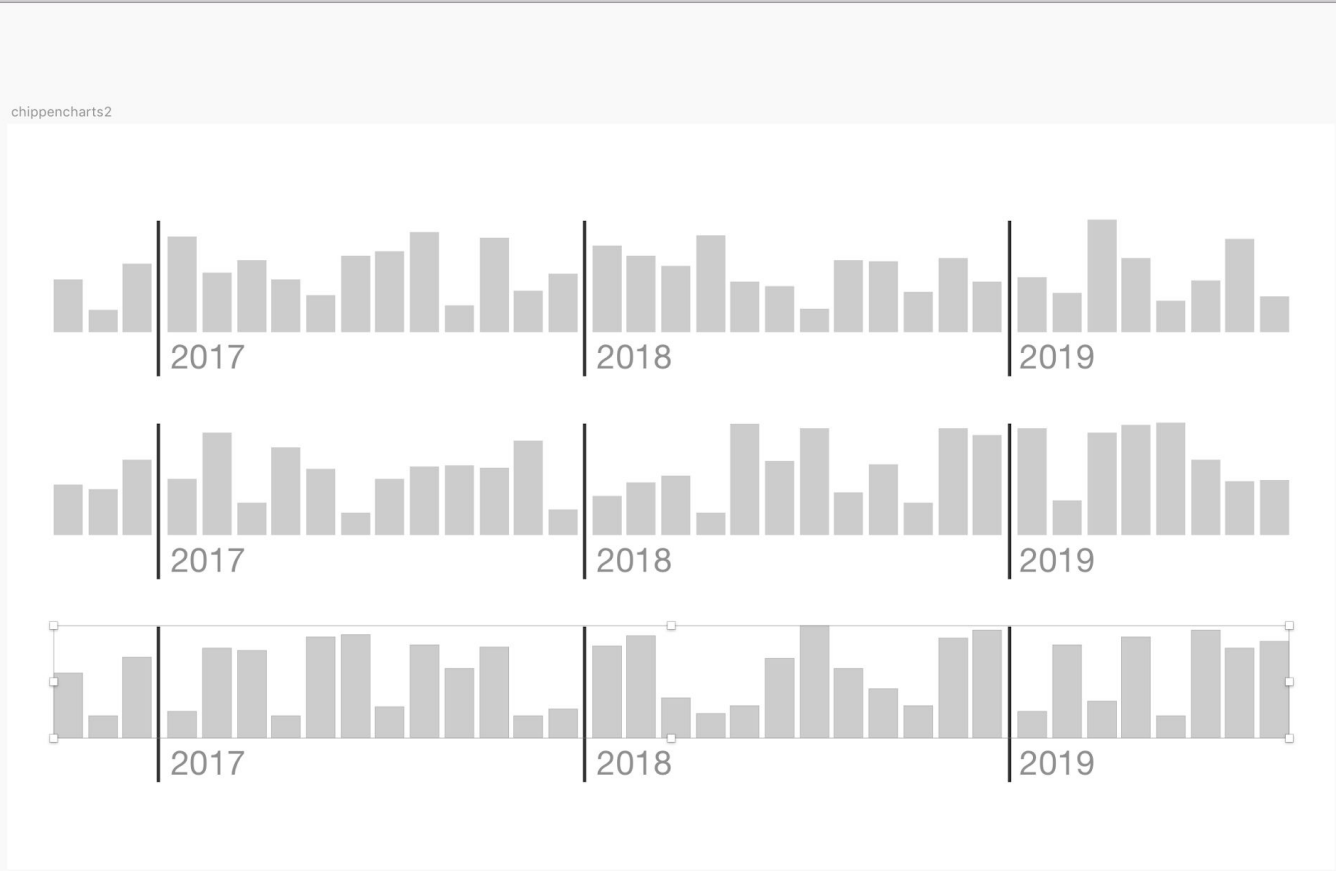


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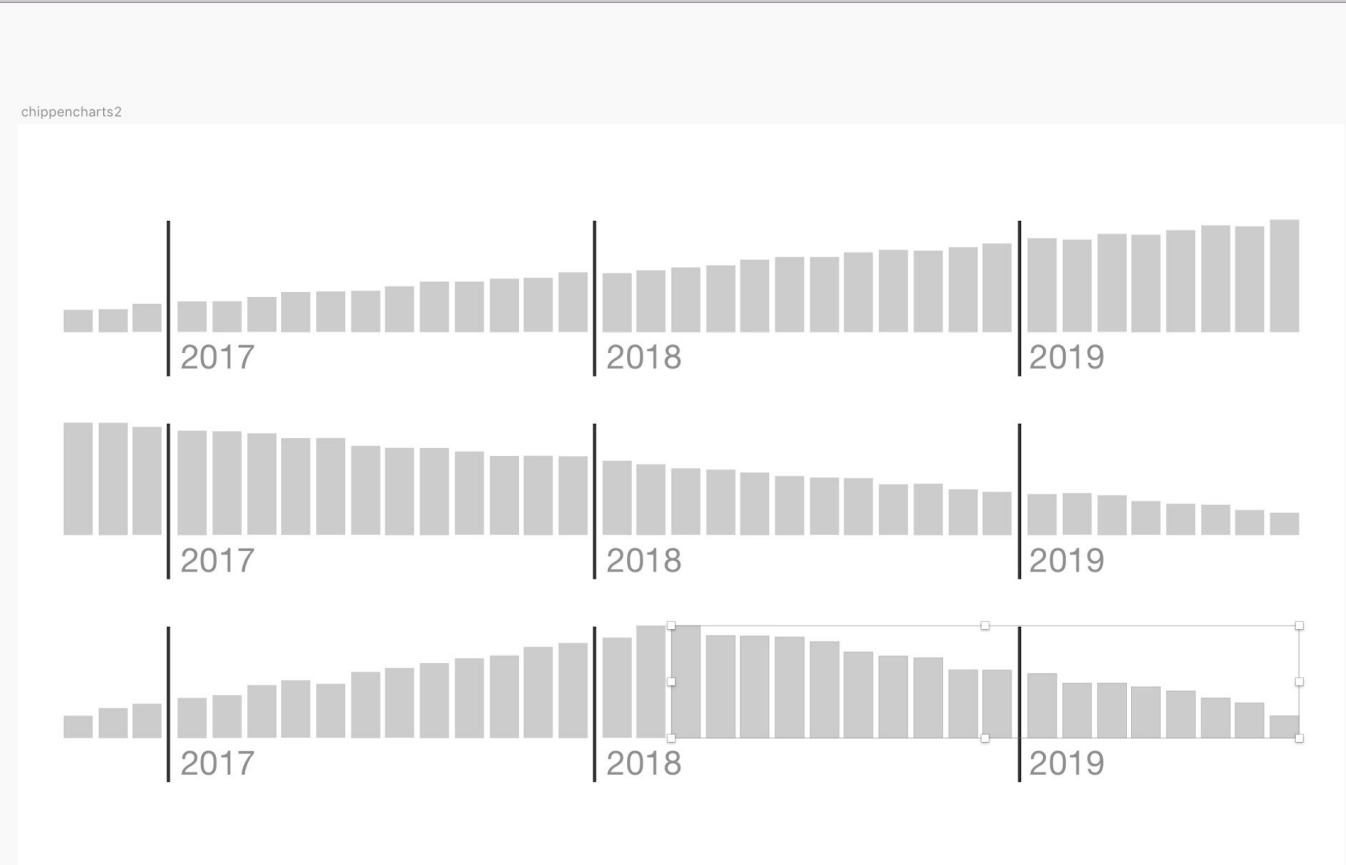
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35 vertical bars with random data (20px-100px)



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 - chart-column_3 { :35.8}
 - chart-column_4 { :42.1}
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 - chart-column_8 { :57.5}
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 - chart-column_16 { :90.8}
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 - chart-column_20 { :89.3}
 - chart-column_21 { :84.5}
 - chart-column_22 { :81.1}
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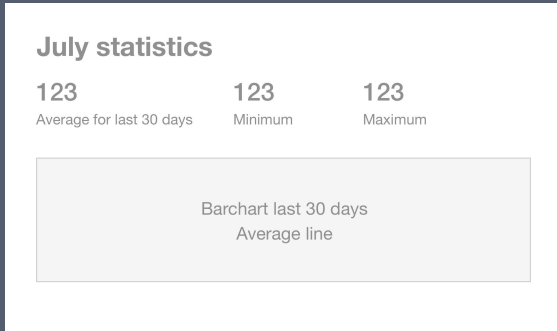


18 vertical bars with trend going down ↓ (natural) (20px-100px)

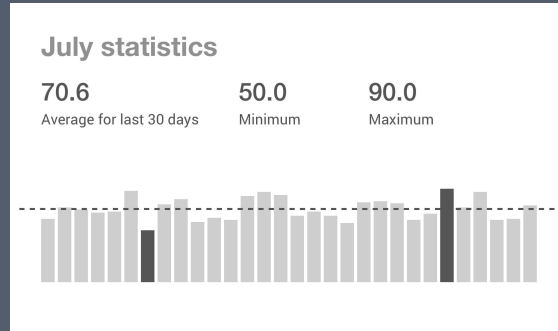


Strategies for datavis wireframes

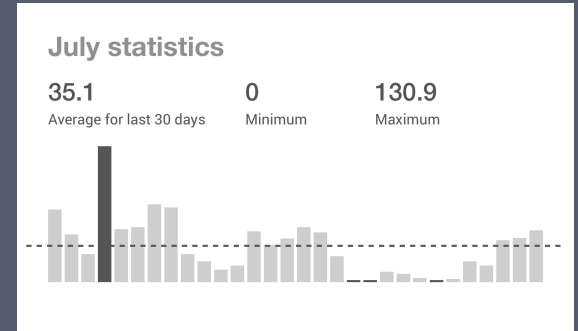
Placeholder data



Meaningful but random data



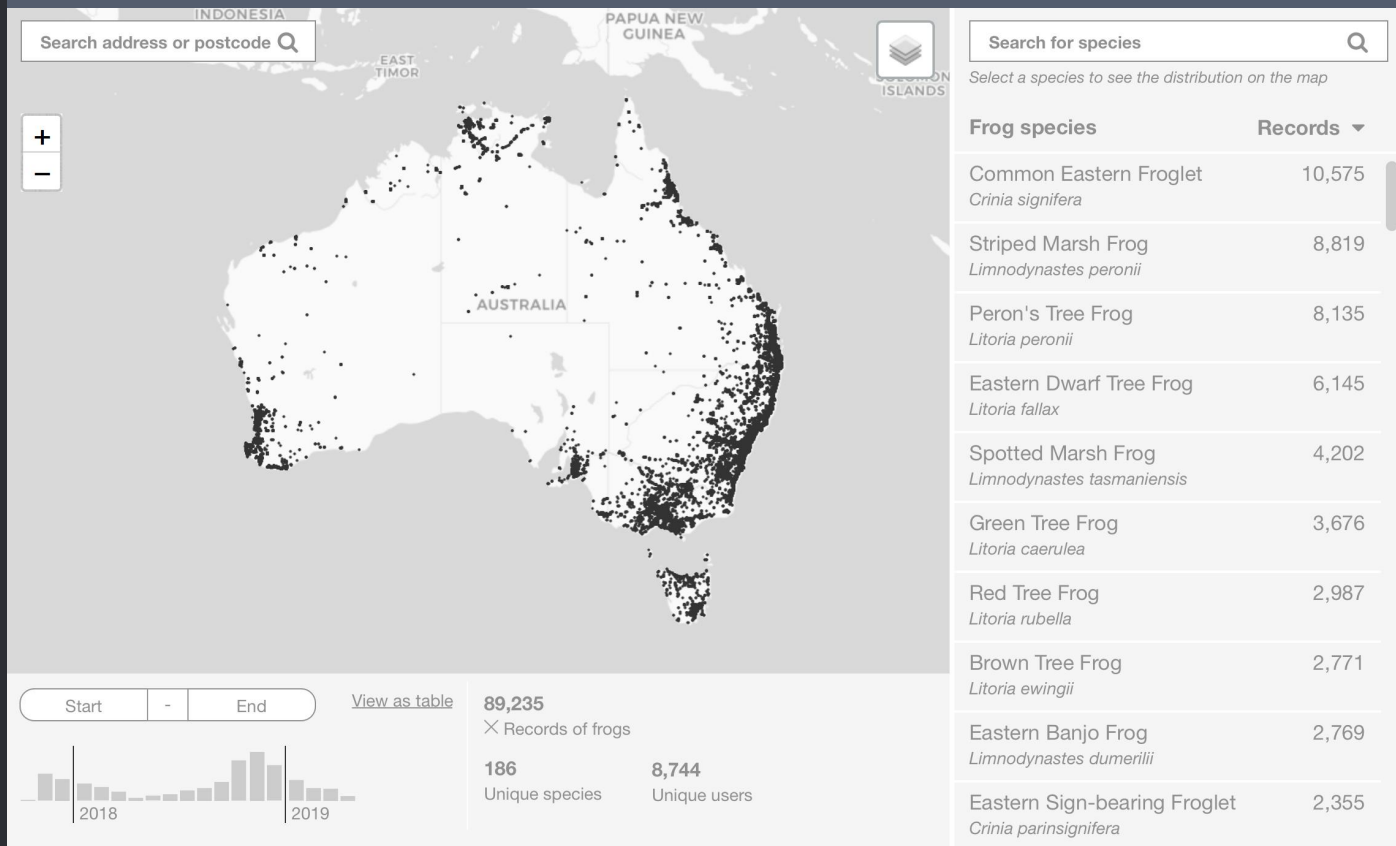
Real data



Example of using real data

Real data in datavis wireframes is great for:

- Testing the design
- Spot challenges very early and communicate with team
- Having educated convos with clients



Using real data in wireframes is fun
and the clients love it.





Thanks.

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[@martinvonlupin](#)



Let's have a chat!

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