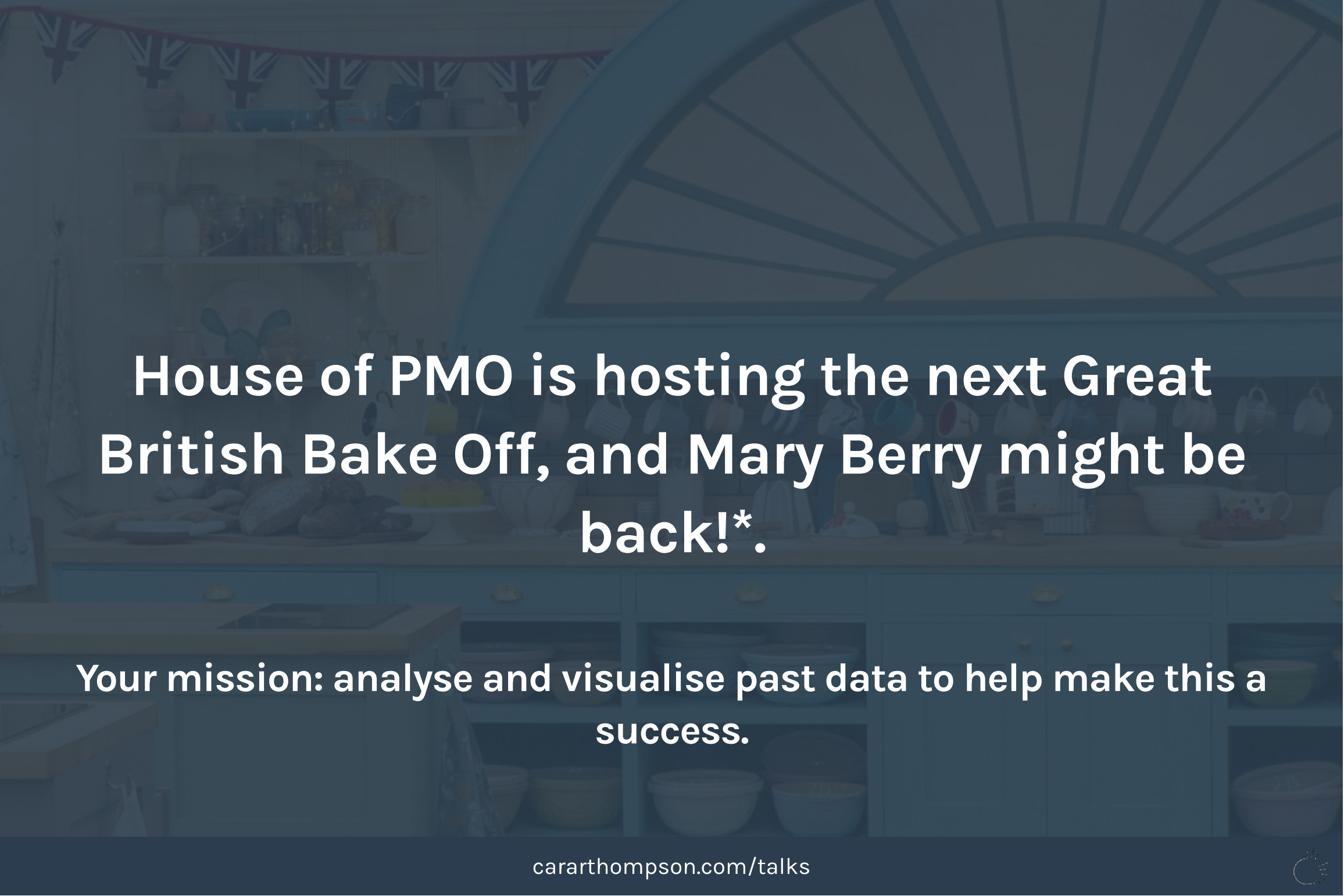


The Great PMO Bake Off

PMO Insights | 16th Nov 2026

Cara R Thompson, Data Visualisation Consultant



House of PMO is hosting the next Great British Bake Off, and Mary Berry might be back!*.

Your mission: analyse and visualise past data to help make this a success.


IRRESISTIBLE
NETFLIX

We have an hour to design
and create two graphs
by hand



So, what's the plan?

Ingredients

- Data from Seasons 1-10
- Two users who need to make sense of different things
- Some tips on building a graph that answers their questions
- Pen and paper exercises, with QR codes to help
- Icing: Red-Amber-Green scale



So, what's the plan?

Method

- Project managers
- End-users
- Designers
- Stakeholder anxiety managers...



So, what's the plan?

- Step 1: Refine the focus
- Step 2: Choose the right type of graph
- Step 3: Build a useful colour palette
- Step 4: Draw a graph
- Step 5: Clarify the message
- Add icing if there's time



Let’s build some sympathy...

Dashboard A

- *“Look at all this content you could watch!”*
- “How long is each episode and what is this show actually about?”

Dashboard B

- *“Look at all these products you could buy!”*
- “How do I find my wishlist again?”



Step 1: What's the focus?



Figuring out the story's focus

What's the *real* question behind the question?

- Can you give me data on XYZ?
- Yes, but... why? (and why? again)

If you show them the graph you have in mind, what question will they ask?

- Make a graph that answers *that* question



Figuring out the story's focus

Who

- Who are the primary end users of your visualisations?
- What are **their** goals?
- Do we need to define different users...?
  - Define them, pick one, make something for that user



Figuring out the story's focus

Bake-Off data by series

Series	Viewers start	Viewers end	Hosts	Judges	Choc bakes	Rasp bakes	Orange bakes
1	2.24	2.75	Mel & Sue	Paul & Mary	20	6	8
2	3.10	5.06	Mel & Sue	Paul & Mary	30	12	6
3	3.85	6.74	Mel & Sue	Paul & Mary	25	8	7
4	6.60	9.45	Mel & Sue	Paul & Mary	21	9	9
5	8.51	13.51	Mel & Sue	Paul & Mary	28	15	10
6	11.62	15.05	Mel & Sue	Paul & Mary	20	6	6
7	13.58	15.90	Mel & Sue	Paul & Mary	28	7	12
8	9.46	10.04	Noel & Sandy	Paul & Prue	7	2	9
9	9.55	10.34	Noel & Sandy	Paul & Prue	14	6	11
10	9.62	10.05	Noel & Sandy	Paul & Prue	13	5	5



Figuring out the story's focus

Facts

- What are they trying to do with the data?
- What have they previously struggled to do / to make sense of?
- What would make **them** say the visualisation is successful?



Figuring out the story's focus

Feelings

- What do they currently find most frustrating in their interactions with the data?
- What in this data has potential to keep them up at night?
- How can we provide a solution for this?



Figuring out the story's focus

Priorities

- Orientation, grouping, real estate
- Colours, annotations, styling



A silly example



A silly example

I’m planning an expedition to the islands where the Palmer Penguins live. I need to see at least 2 penguin species on my trip, but I can only go to one island.

I’m terrified of penguins with long beaks.

Help me plan my trip. You can only show me one slide.

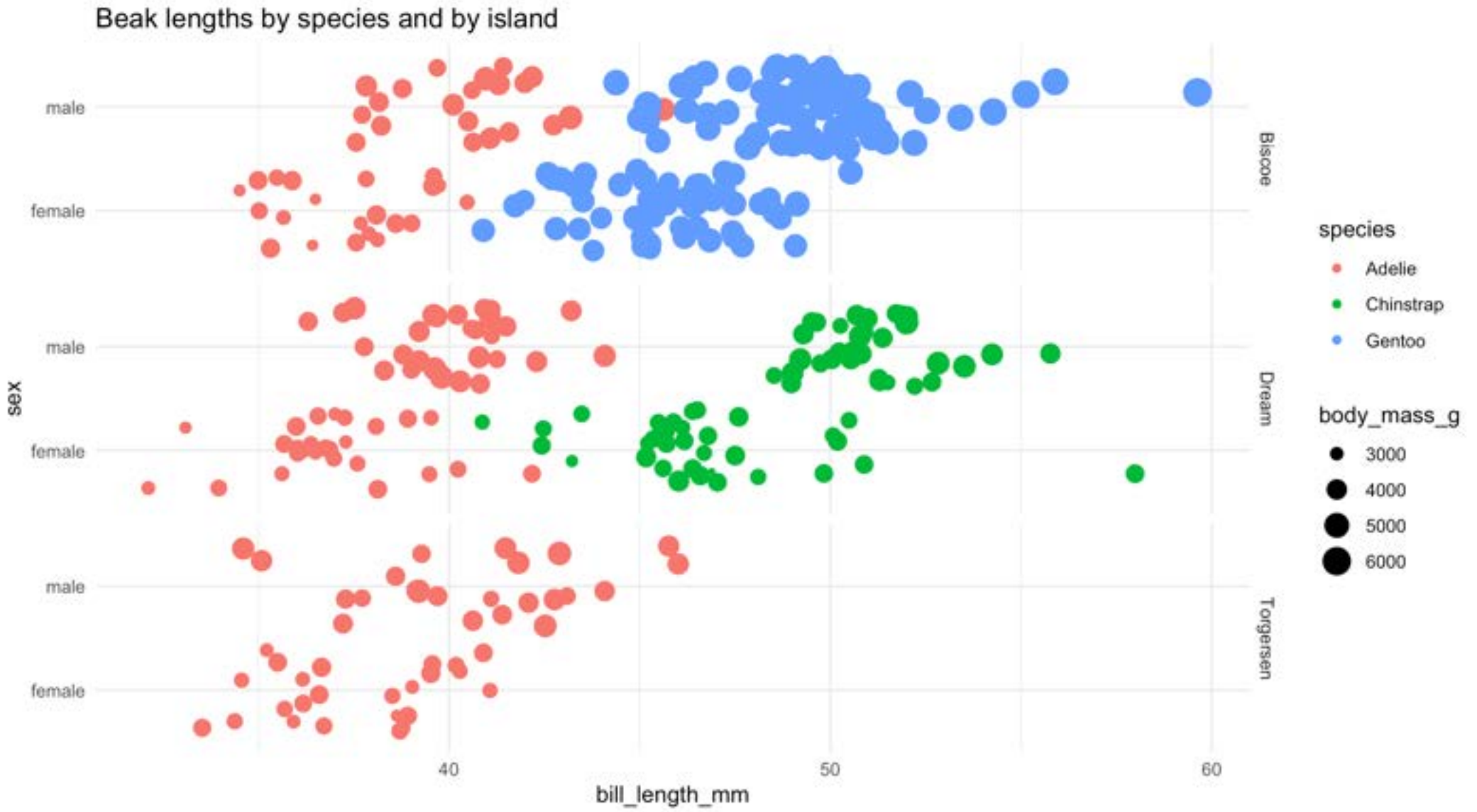


What do I need to know?

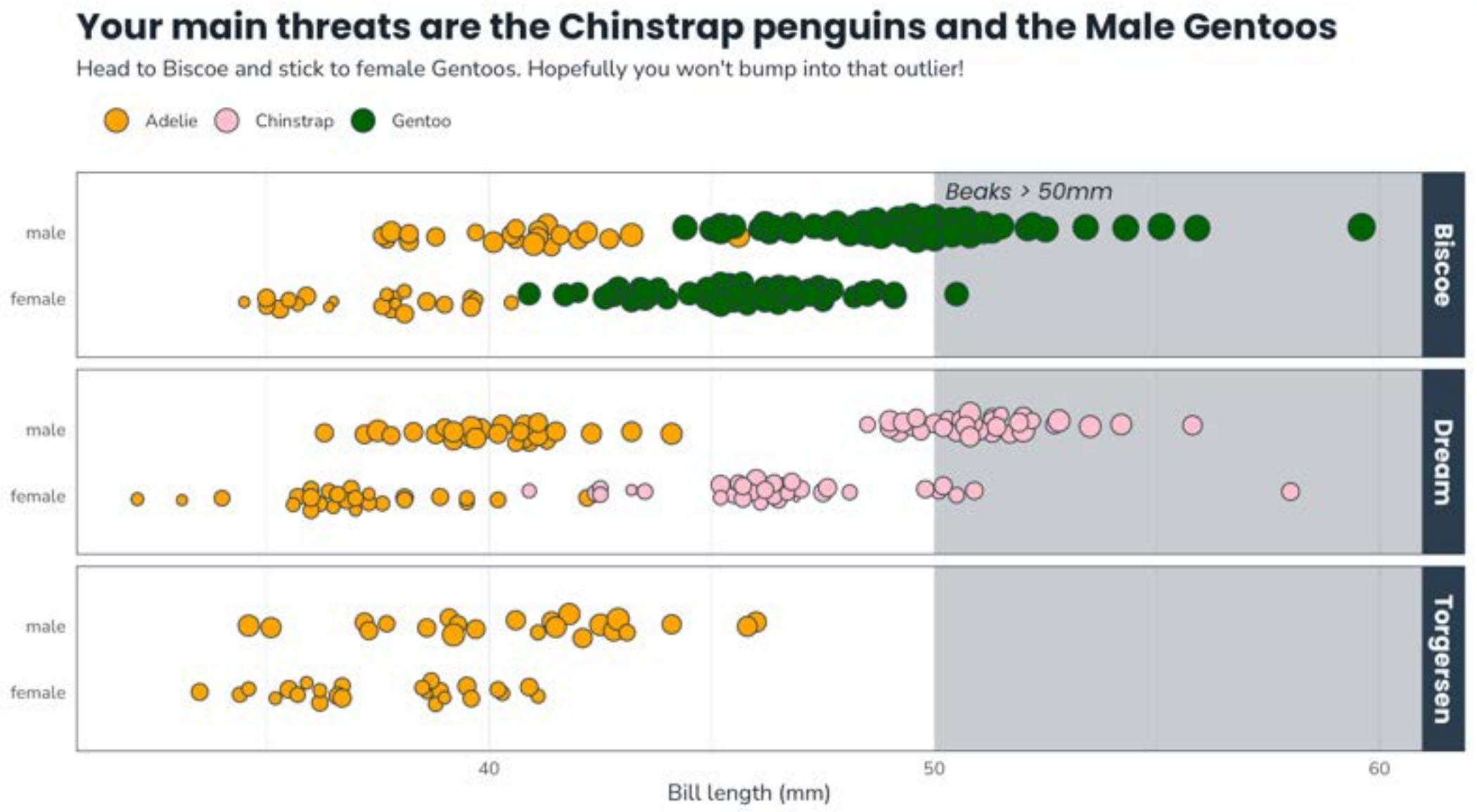
- Which islands have more than 2 species?
- Which penguins have scary long beaks?
- Raw data; who knows what the outliers might be like!
- Which island looks least scary?
- Anything else it would be helpful to know?



That's a lot!


Beak lengths by species and by island
male
female
male
female
male
female
sex
Biscoe
Dream
Torgersen
40
50
60
bill_length_mm
species
Adelie
Chinstrap
Gentoo
body_mass_g
3000
4000
5000
6000

That’s a lot!


Your main threats are the Chinstrap penguins and the Male Gentoos
Head to Biscoe and stick to female Gentoos. Hopefully you won't bump into that outlier!
Adelie
Chinstrap
Gentoo
Beaks > 50mm
male
female
Biscoe
male
female
Dream
male
female
Torgersen
40
50
60
Bill length (mm)

Pick a user, any user

Cara

“How can we make sure we get enough viewers?”

What even *is* enough?

Aaron

“How much chocolate do I need to buy?”

Did oranges really overtake chocolate a few seasons ago?



What should the focus be?

- What are their goals?
- What are they trying to figure out?
- What are they worried about?
-  What do they *need* to see immediately?

How can you help?

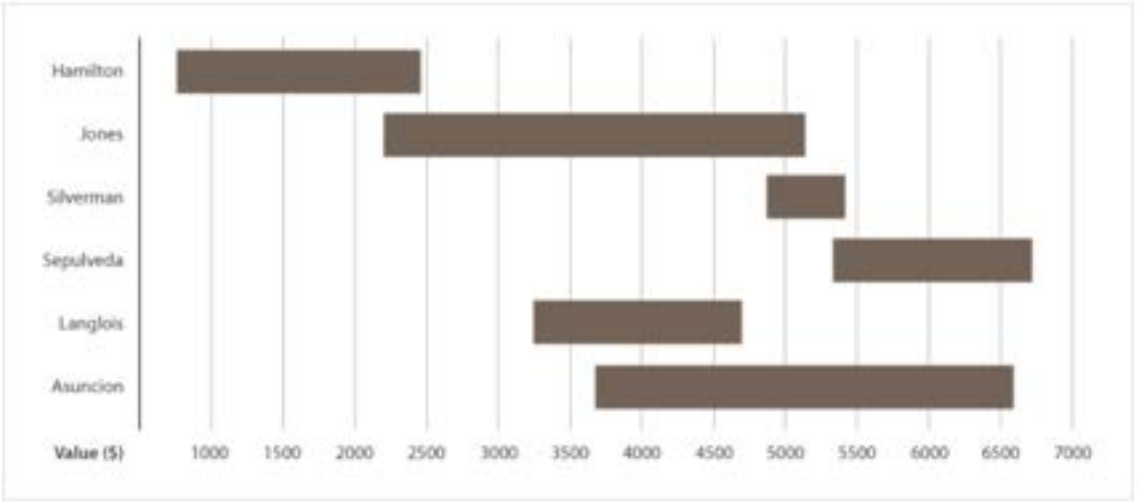
- What variables do you need to show?
- What context do you need to provide?



Step 2: Choose the right type of graph

A super helpful resource

The Data Visualisation Catalogue - Severino Ribecca



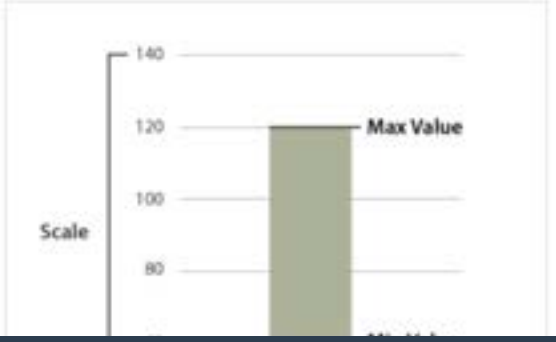
Description

Also known as a Range Bar/Column Graph, Floating Bar Graph, Difference Graph, High-Low Graph.

A chart used to display dataset ranges between a minimum and maximum value. Span Charts are ideal for comparing ranges, typically between categories.

Be aware that Span Charts focus the reader on only the extreme values and give no information on the data points between the minimum and maximum values, such as on the averages or the data distribution.

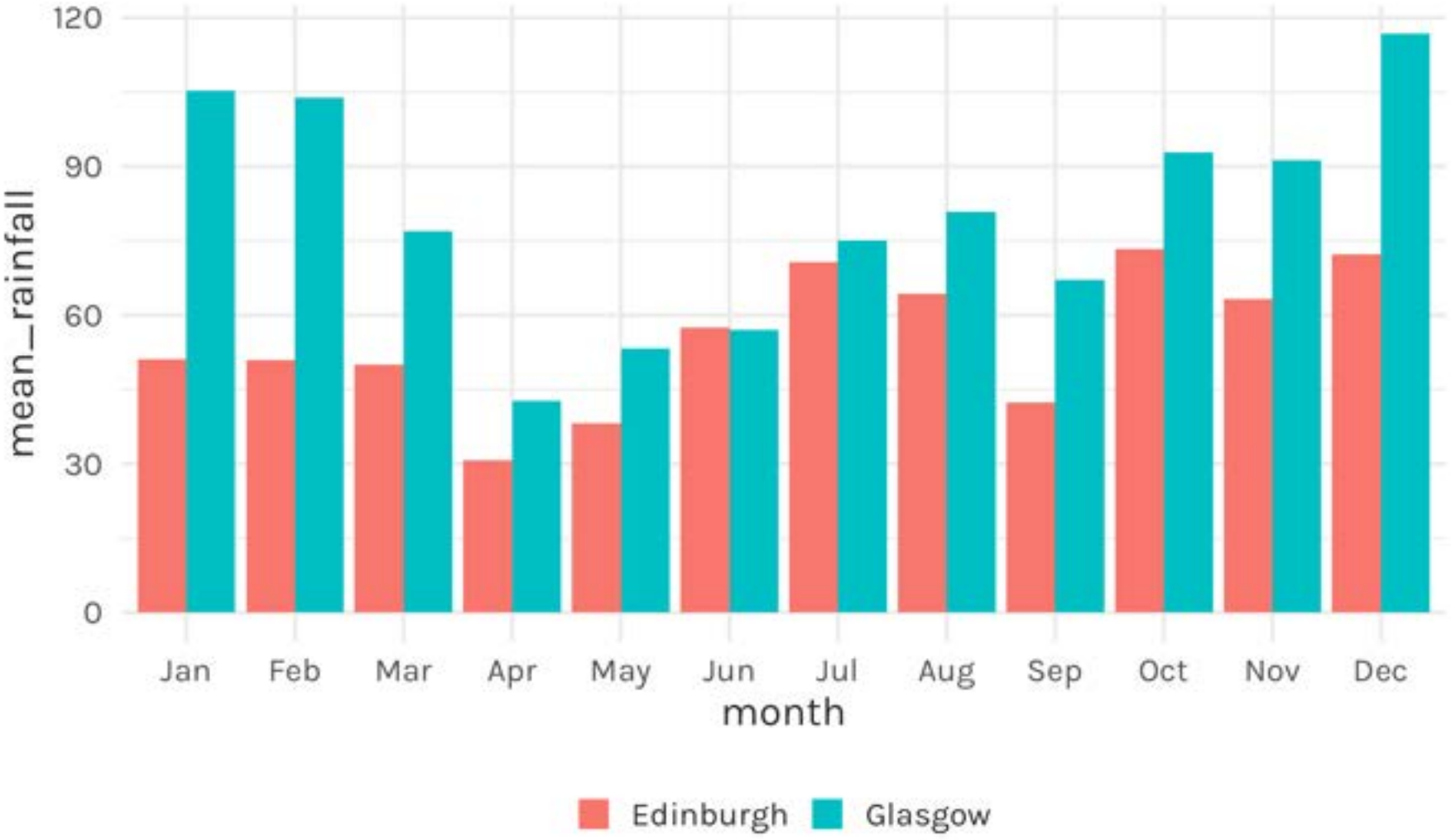
Anatomy





The humble bar graph

Use colour wisely



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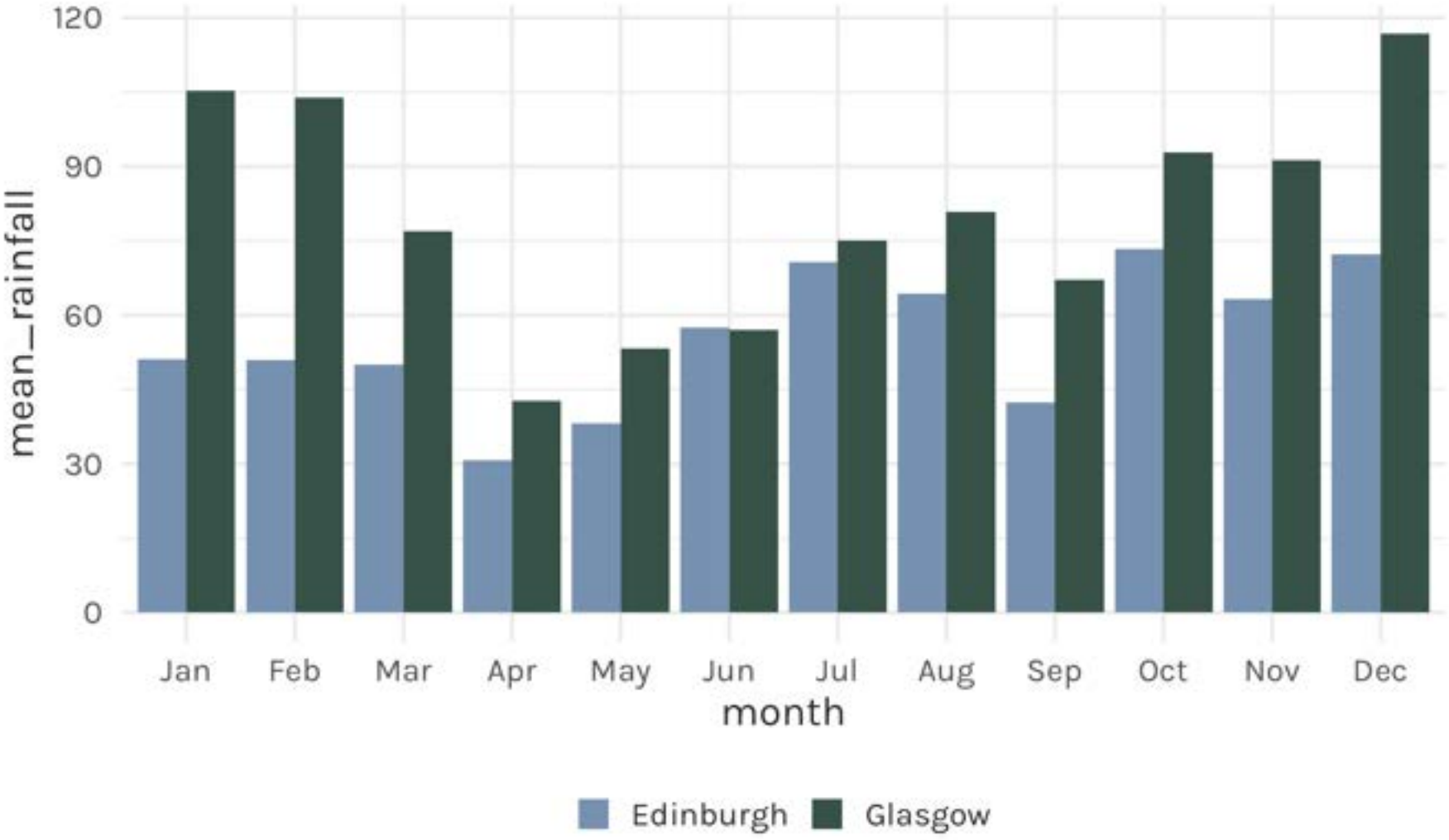

The humble bar graph

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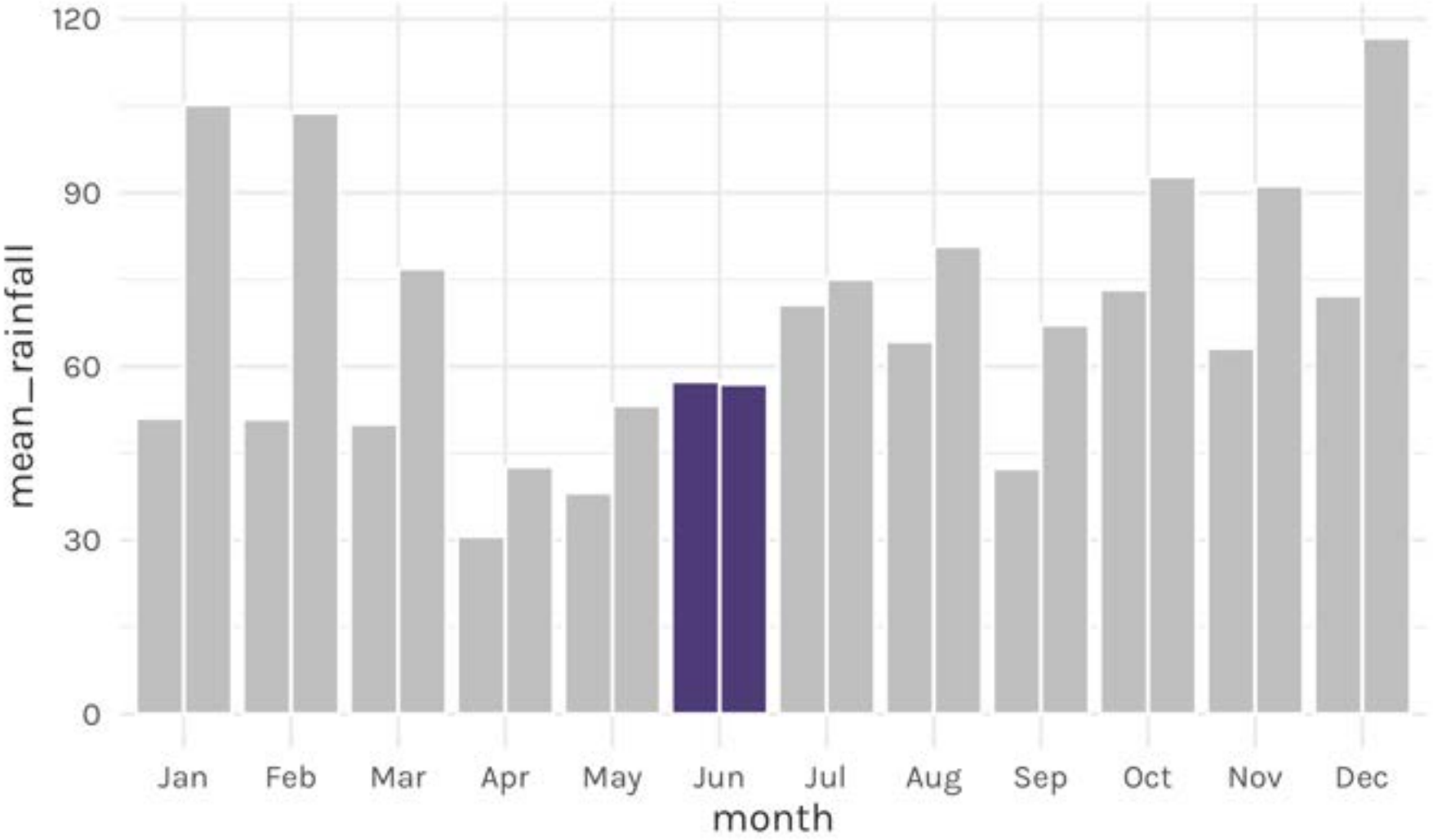
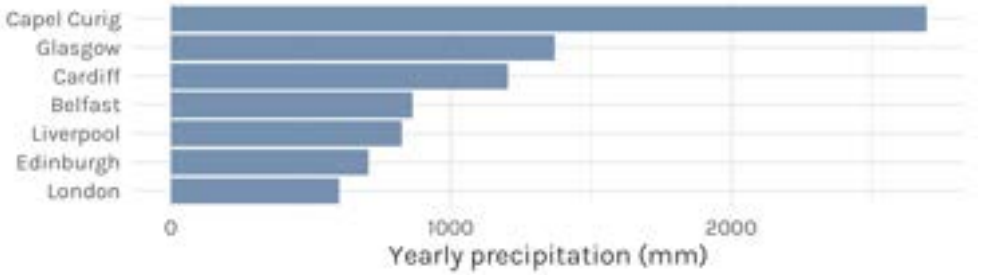
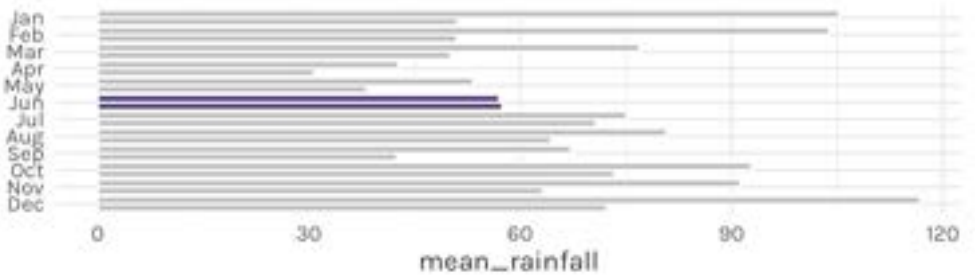


The humble bar graph

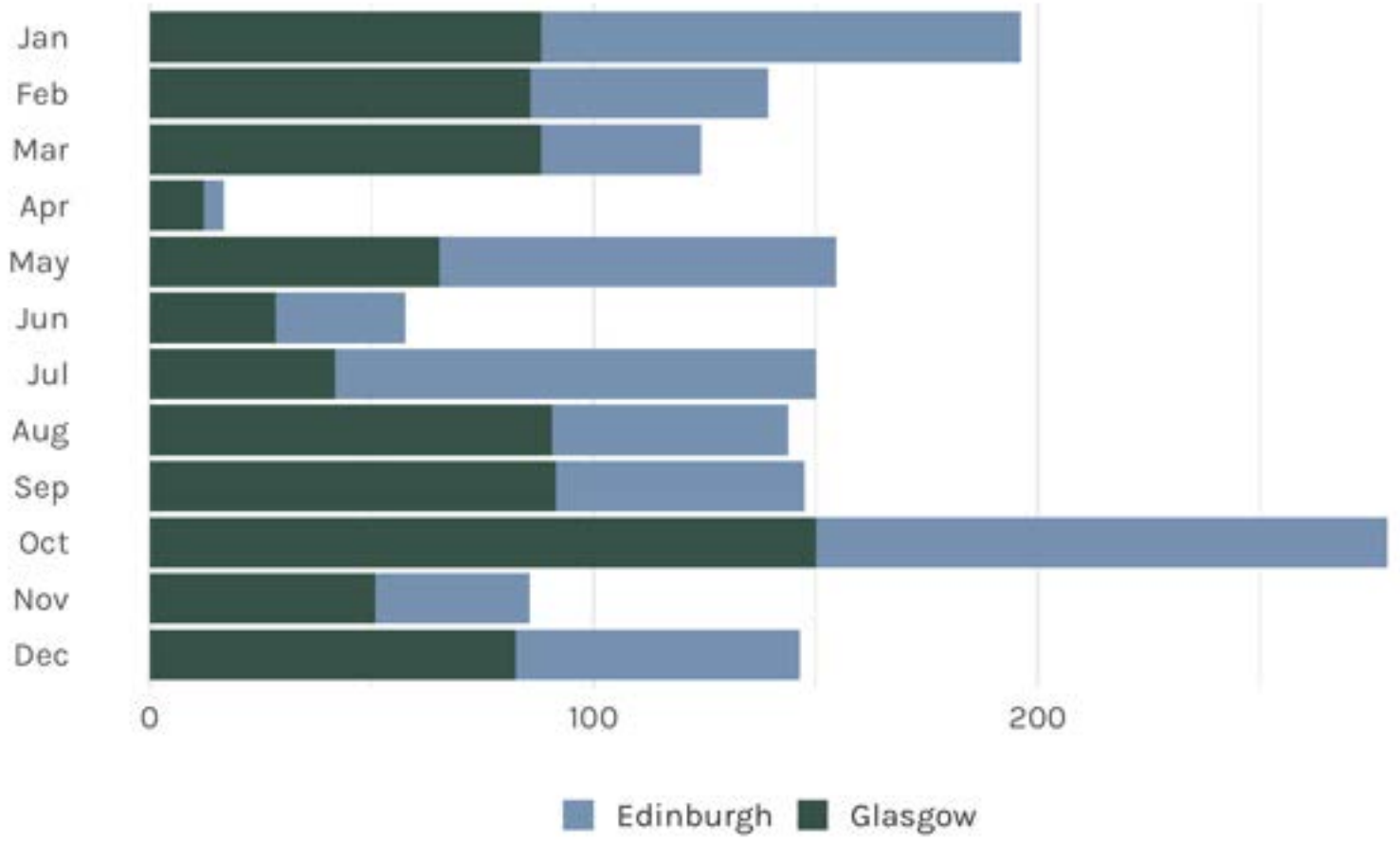
- Use colour wisely
- Use order sensibly
- Consider flipping it on its side
  - Time
  - Movement towards a goal
  - Progress





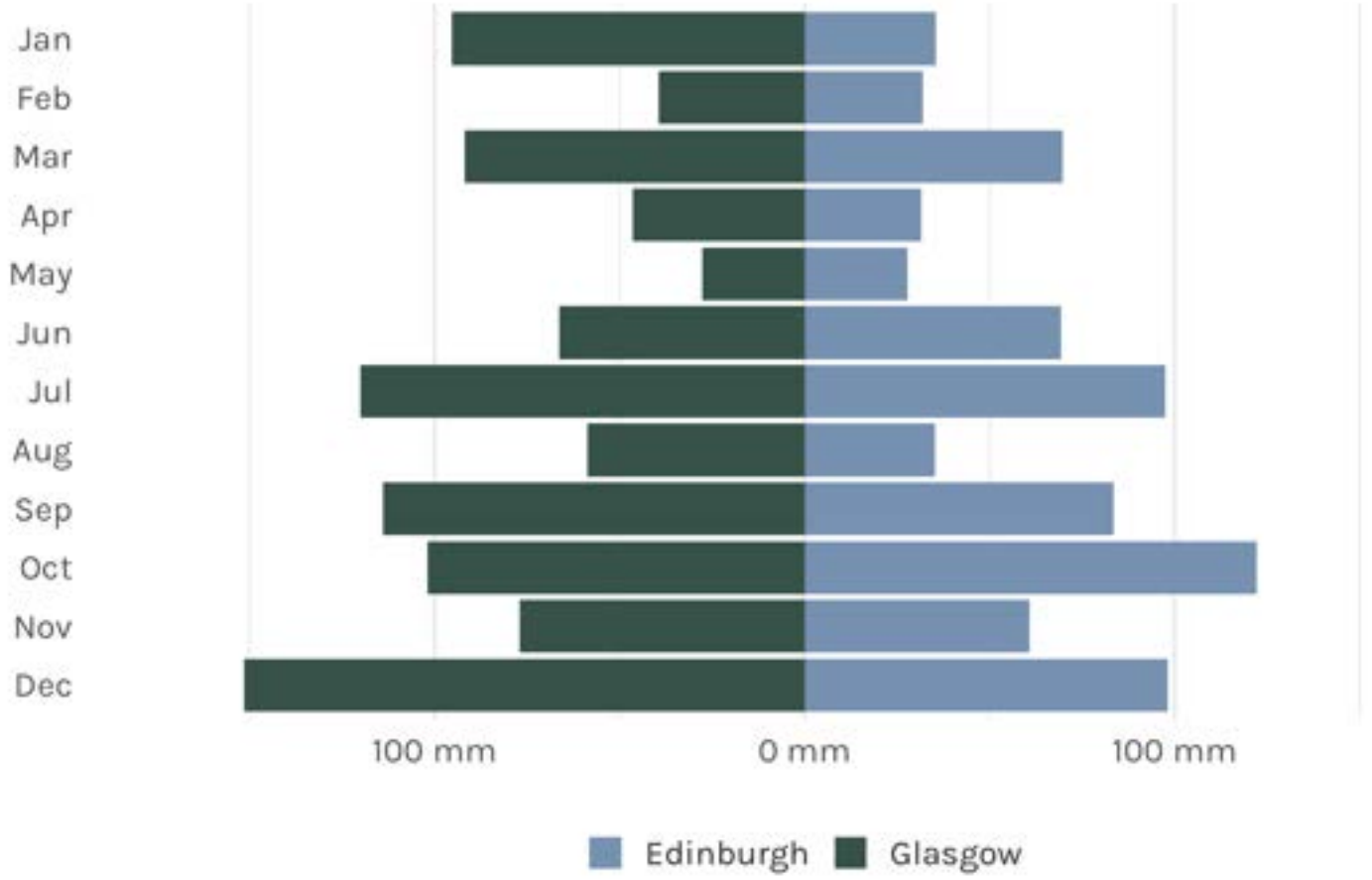
The humble bar graph and its foodie friends

Stacked bars - only if the sum of the stack makes sense!



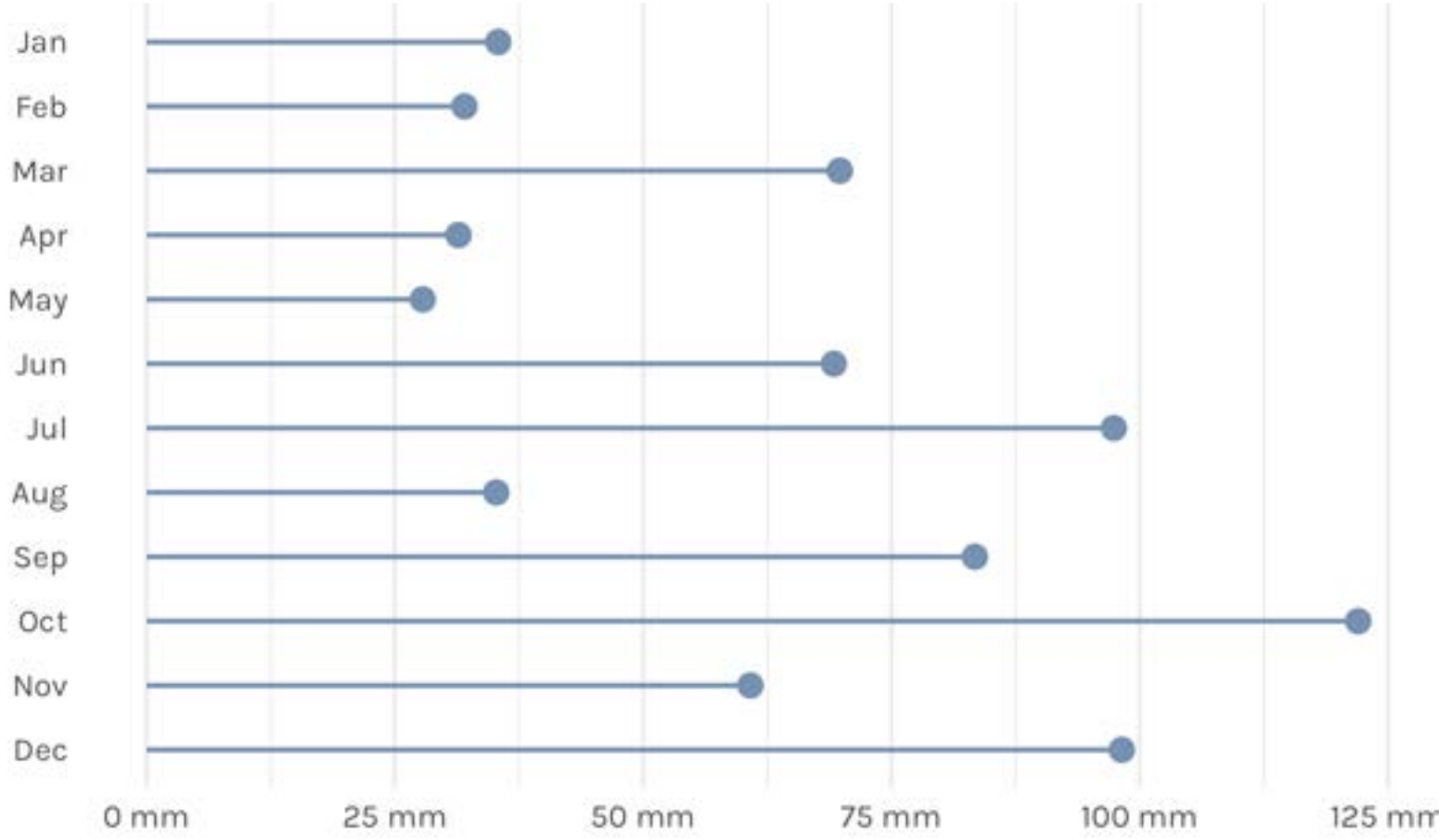
The humble bar graph and its foodie friends

Diverging bars - easier comparison between months within each city



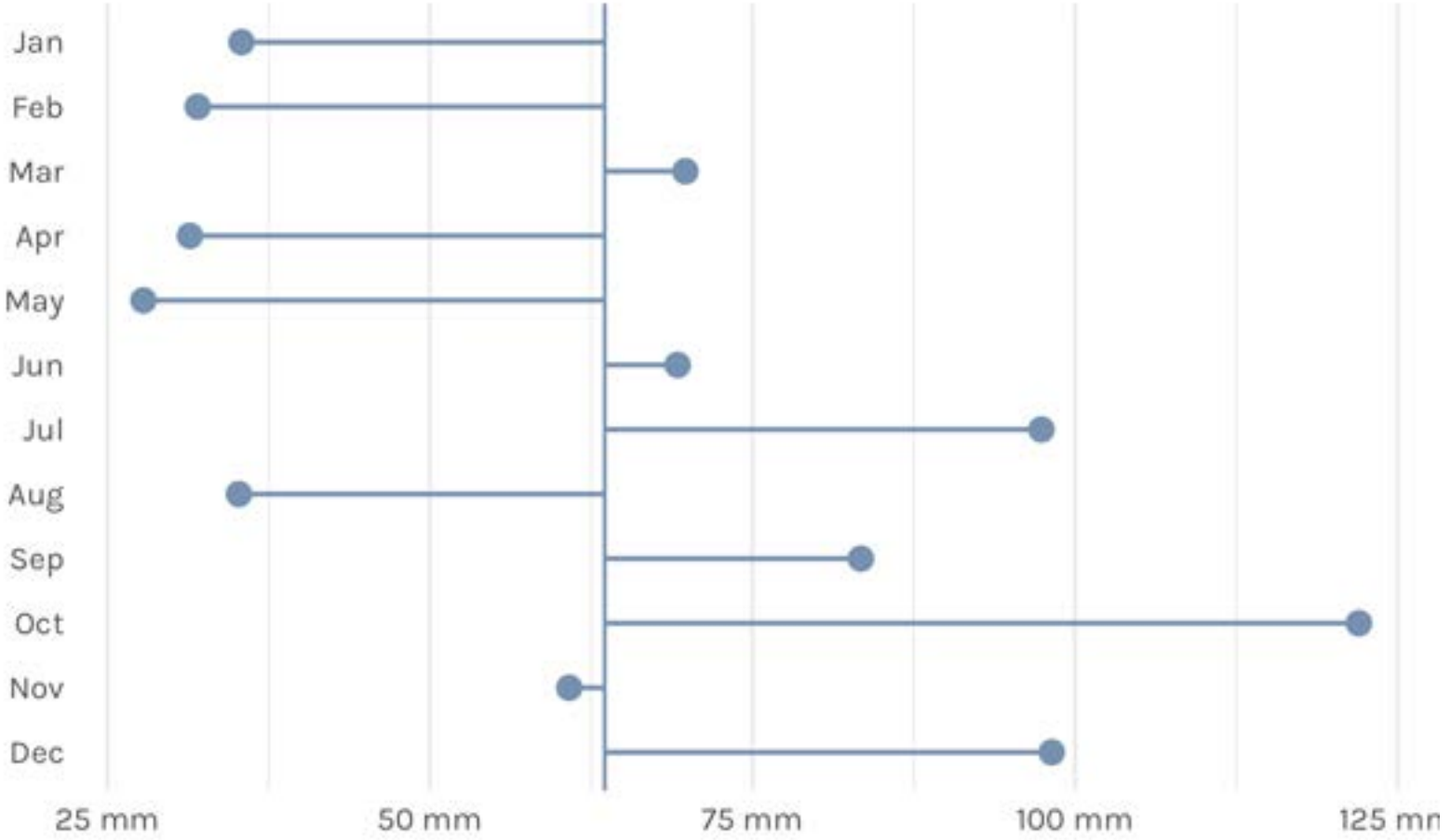
The humble bar graph and its foodie friends

Lollipop chart



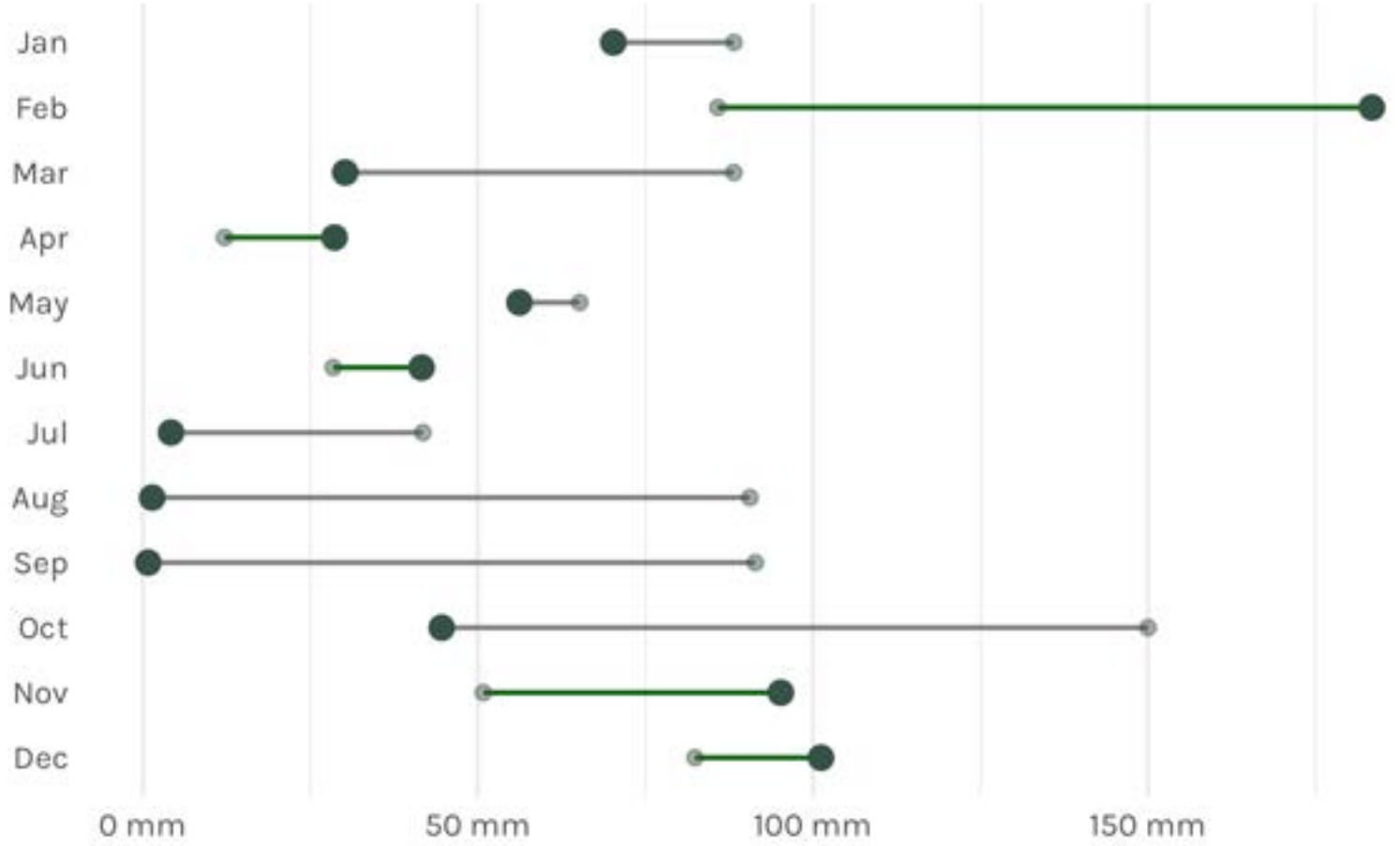
The humble bar graph and its foodie friends

Lollipop chart - comparing each point to a baseline



The humble bar graph and its foodie friends

Dumbbell chart - focus on the difference



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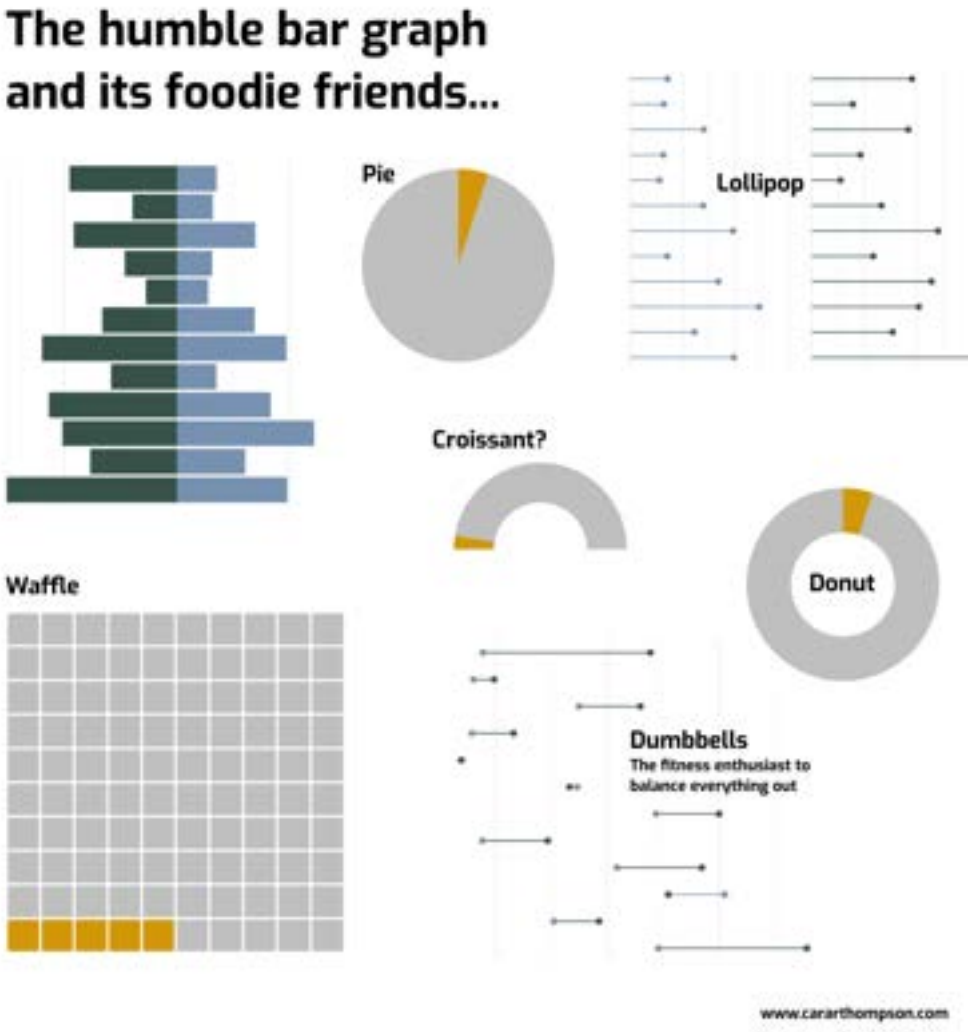
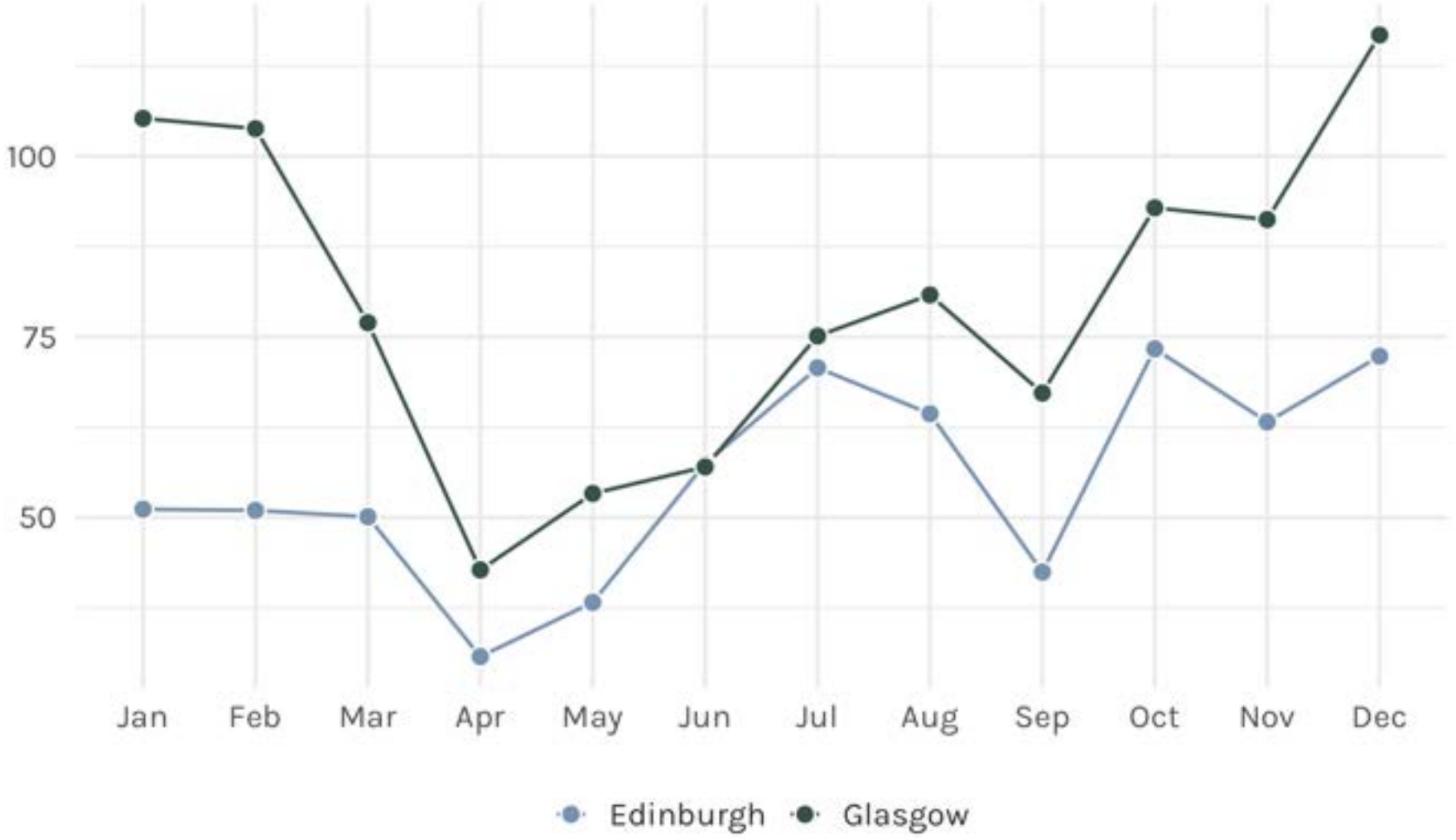


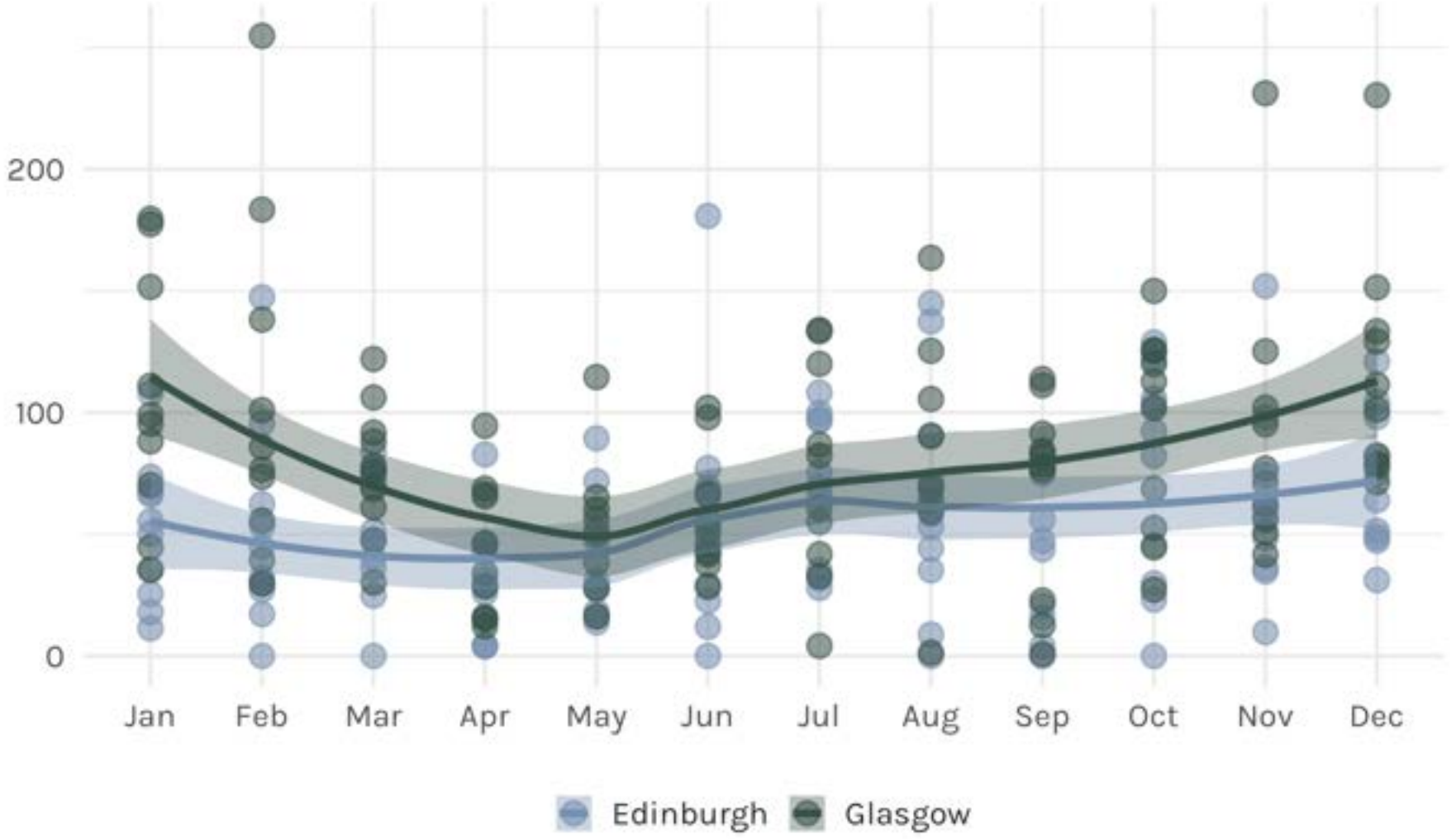
Changes over time

Line + dot plot - emphasise values



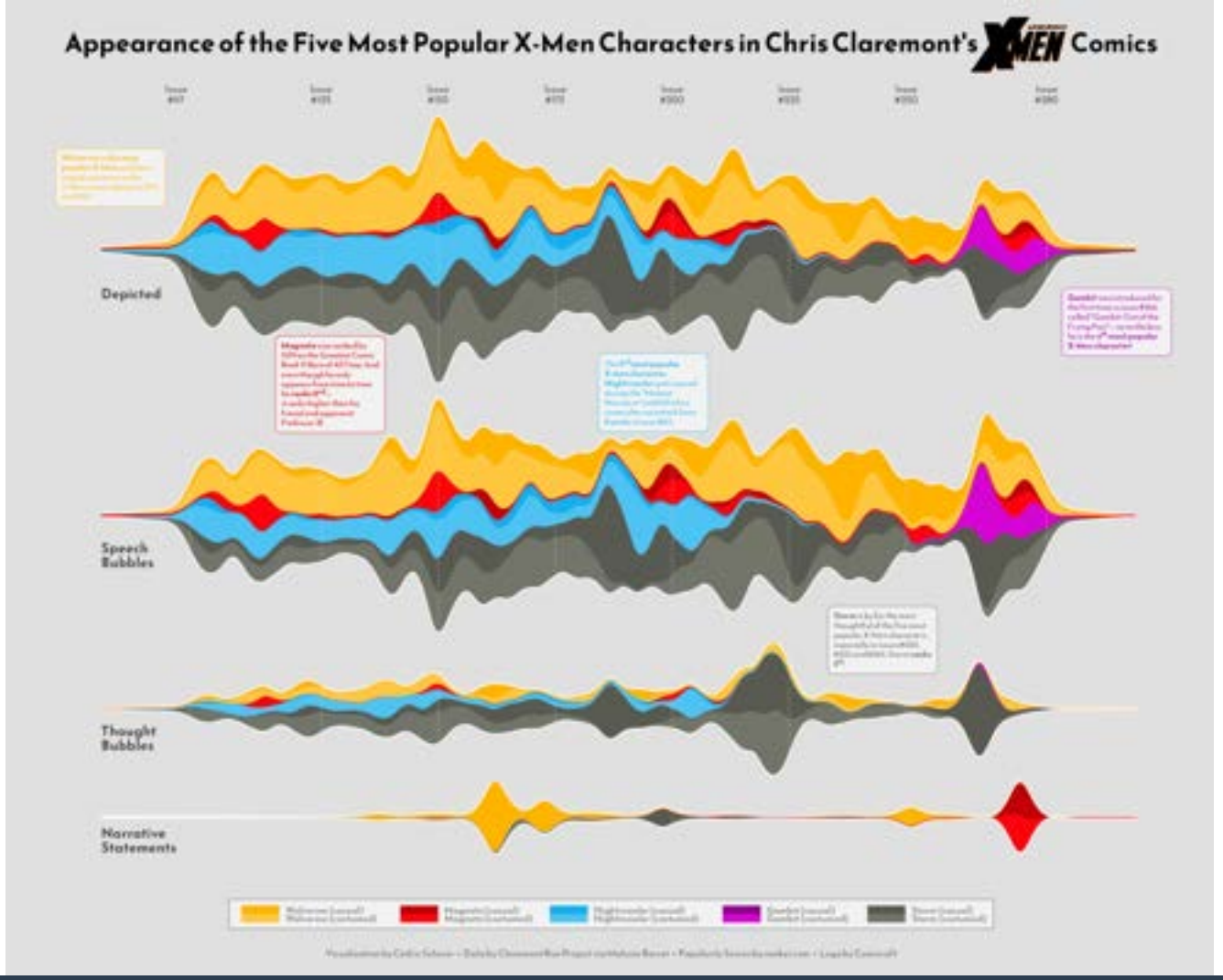
Changes over time

Smoothed line plot - emphasise trajectory + show detail



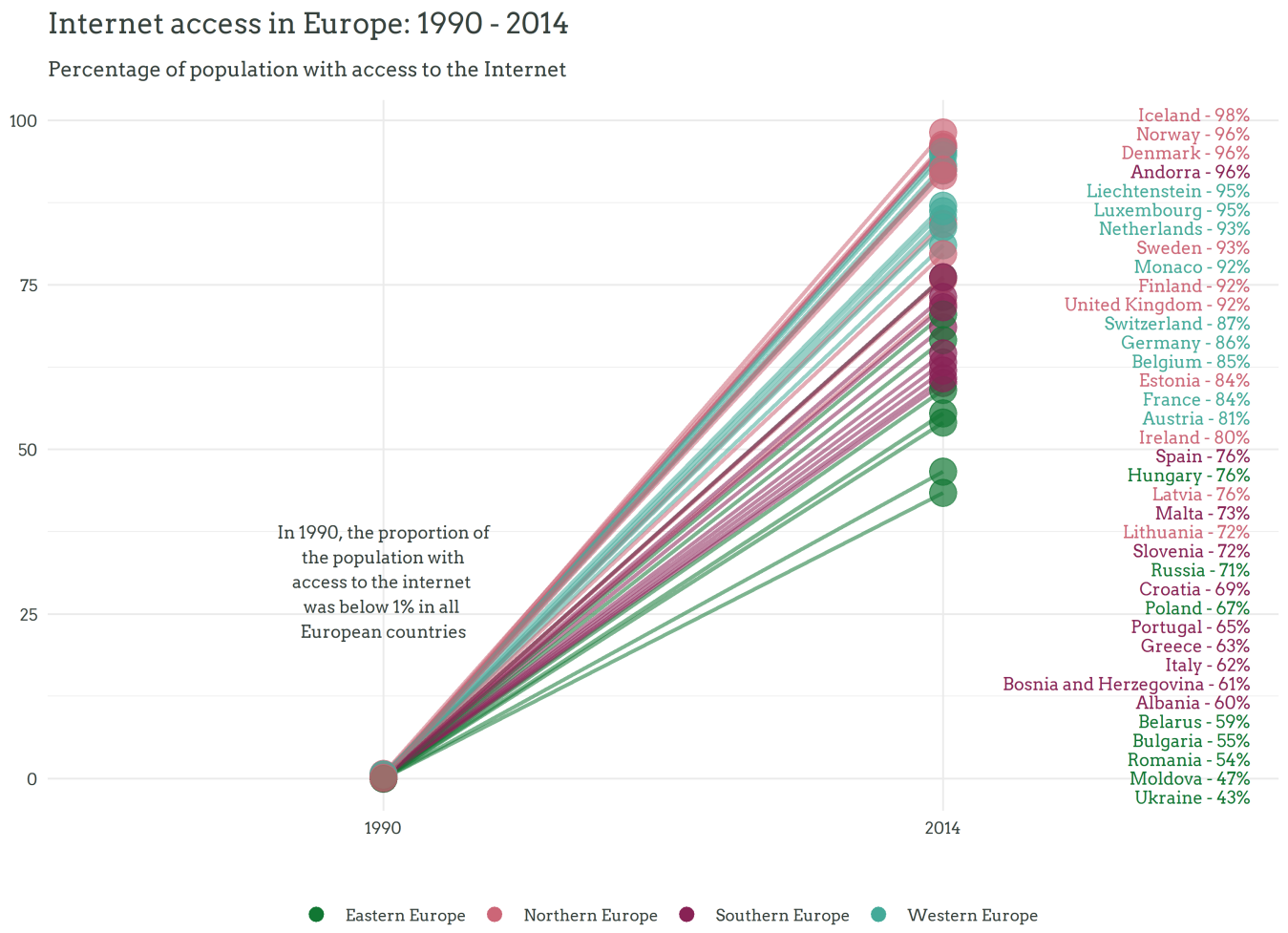
Changes over time

Stream graph - where relative proportions are more important



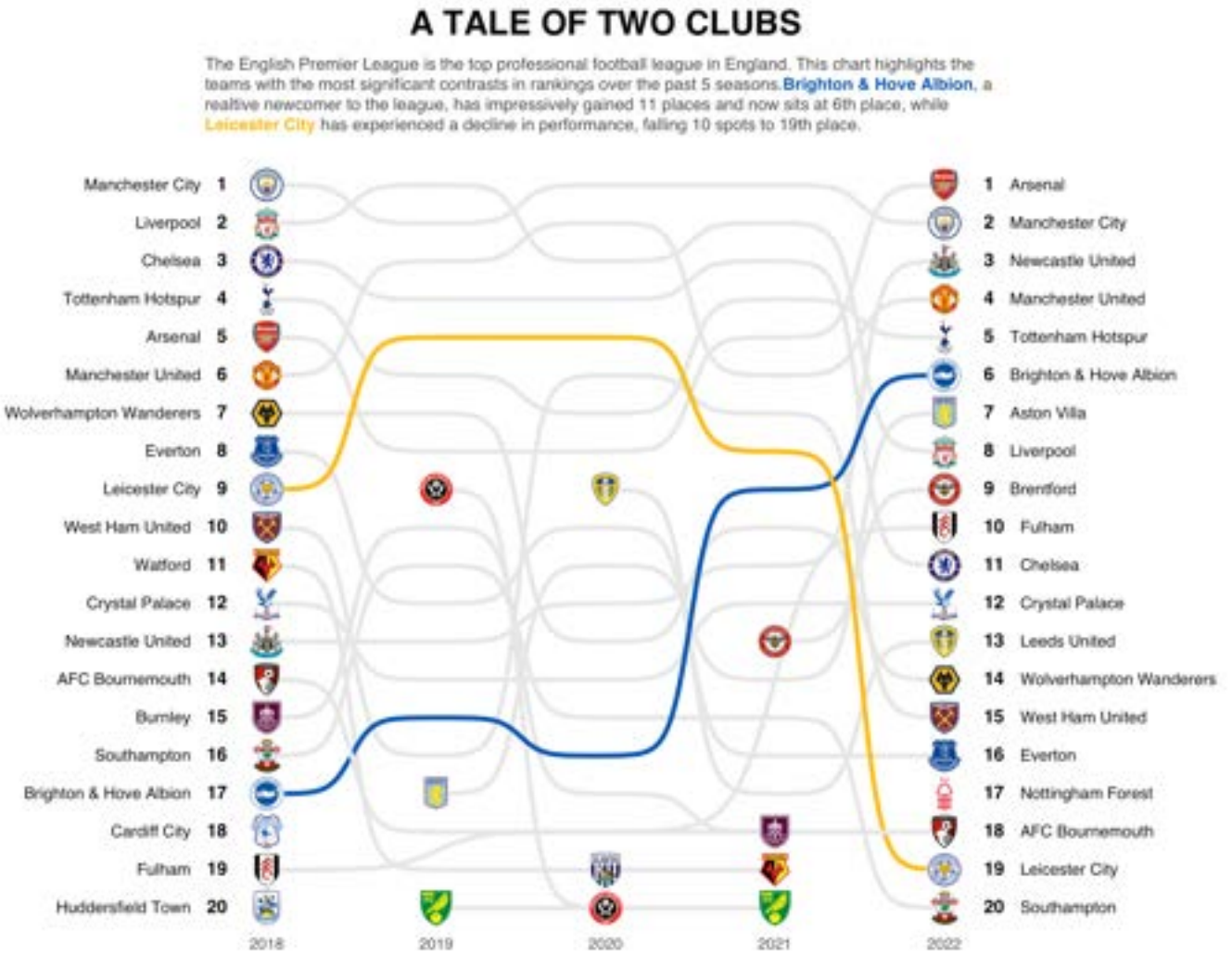
Changes over time

Slope graph - comparisons between snapshots

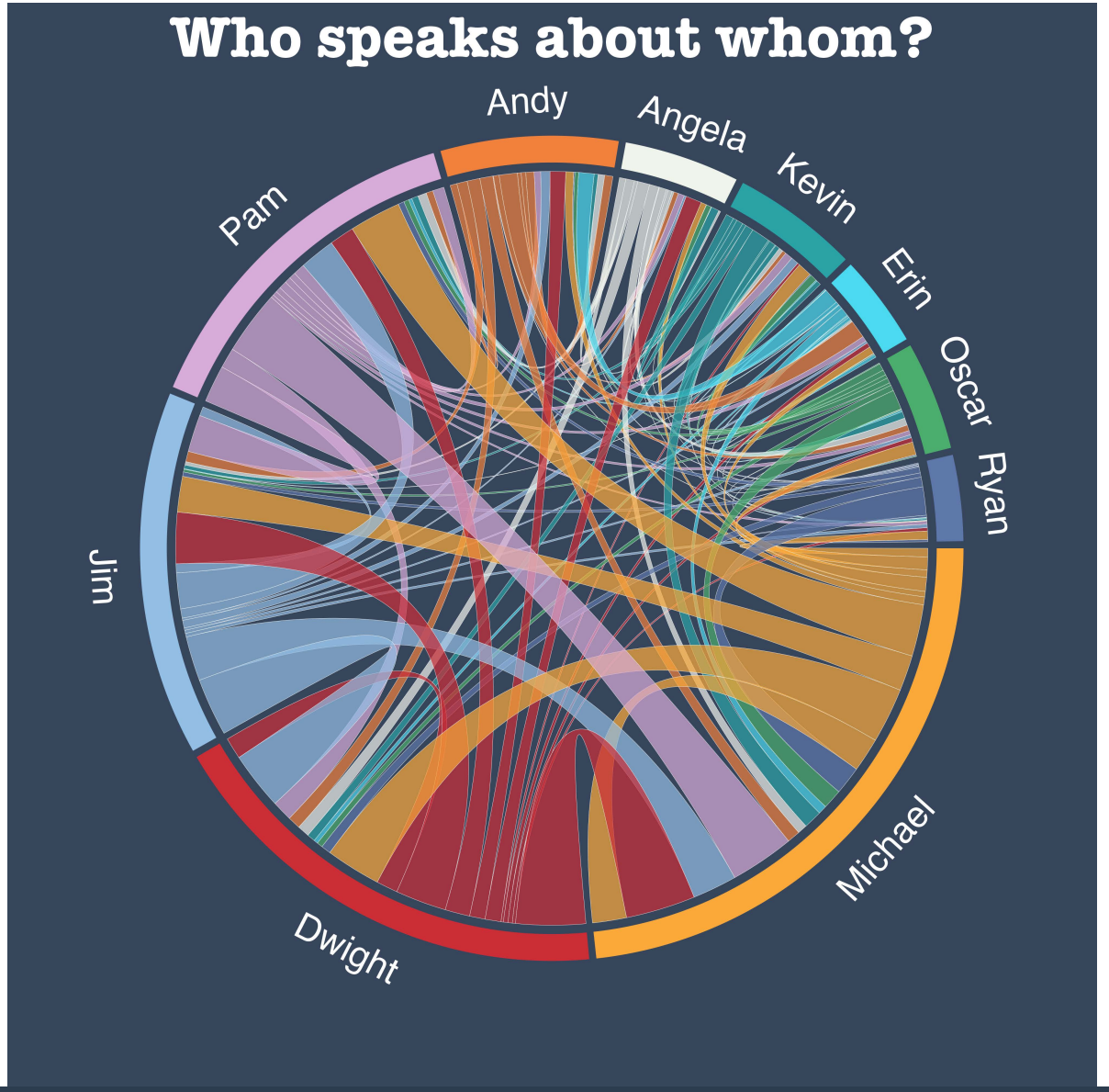


Changes over time

Bump plot - evolution of rank



The power of small multiples



The power of small multiples



What goes where?

- What is the key question you need to answer?
- What type of graph does that best?
- What goes where (x / y / colours)?



Step 3: Choose a useful palette

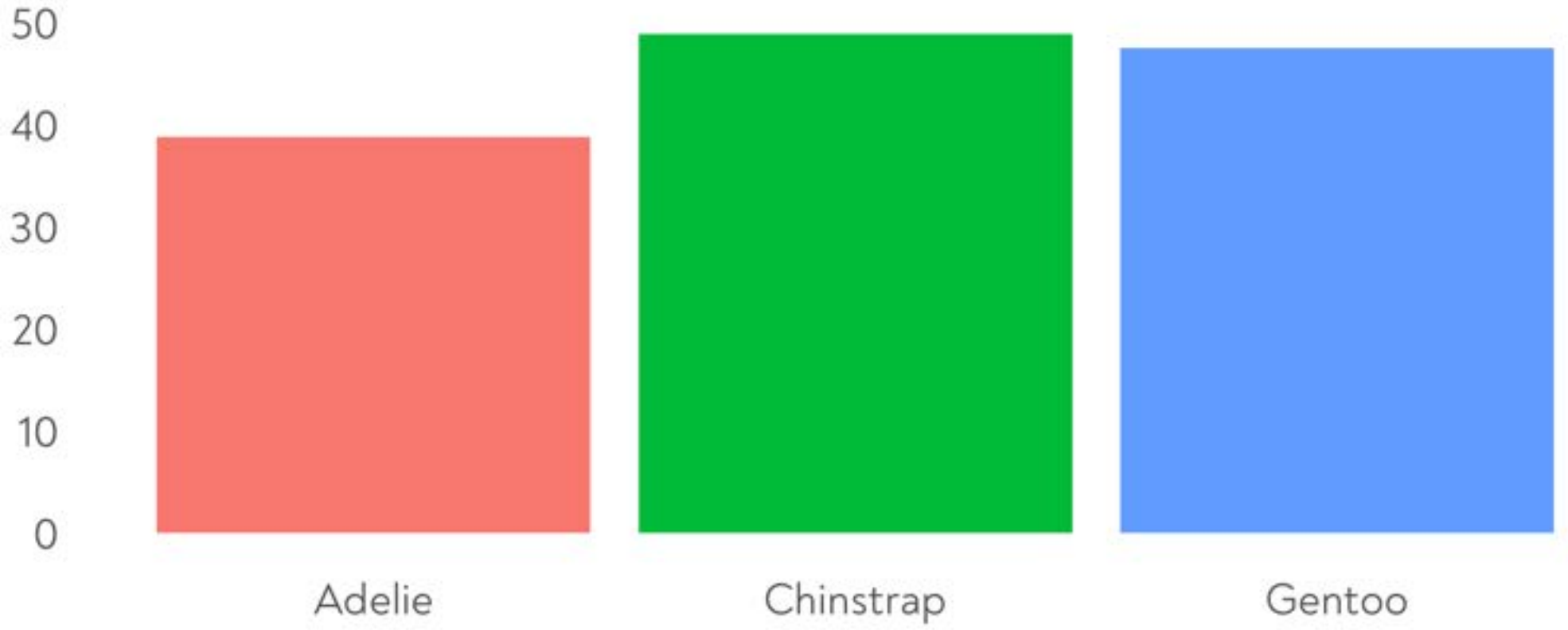


Intuitive colour palettes



The Great Penguin Bake Off

The penguins had a baking competition to see which species could make the best banana loaf. Each species was given bananas of a different level of ripeness.



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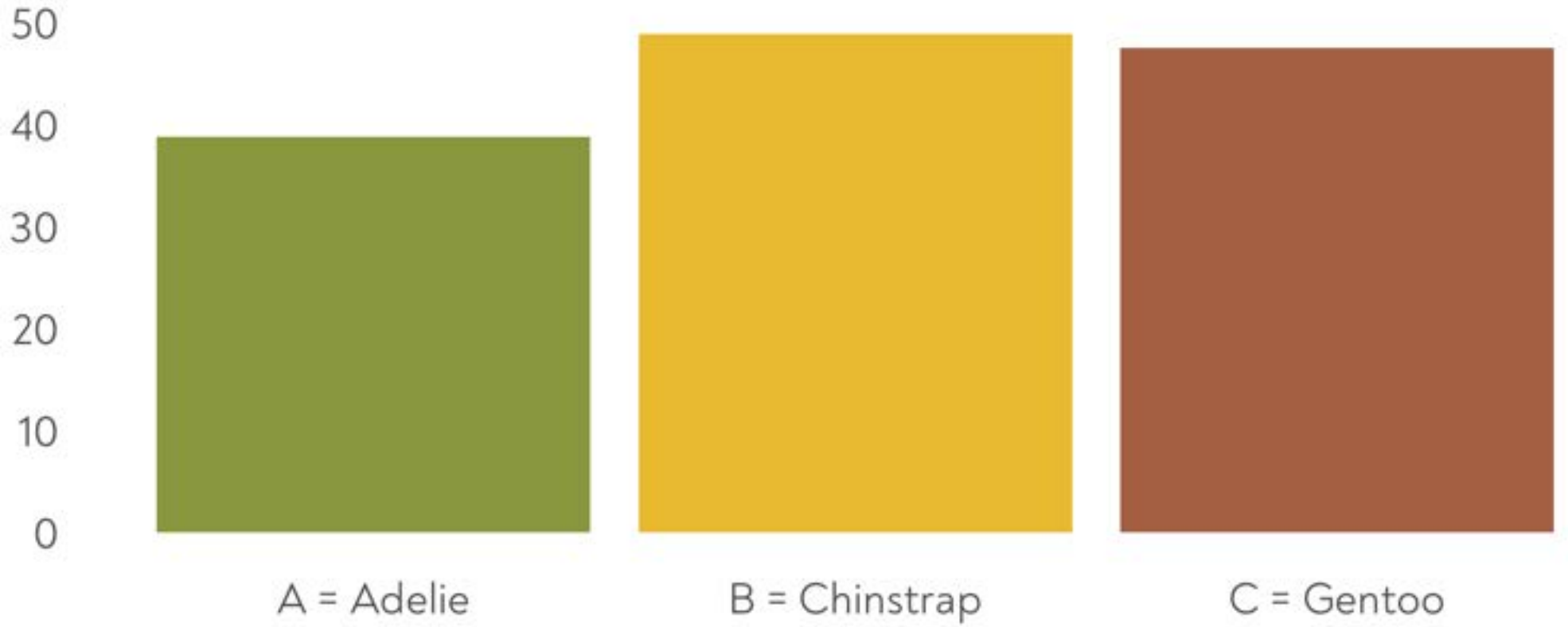
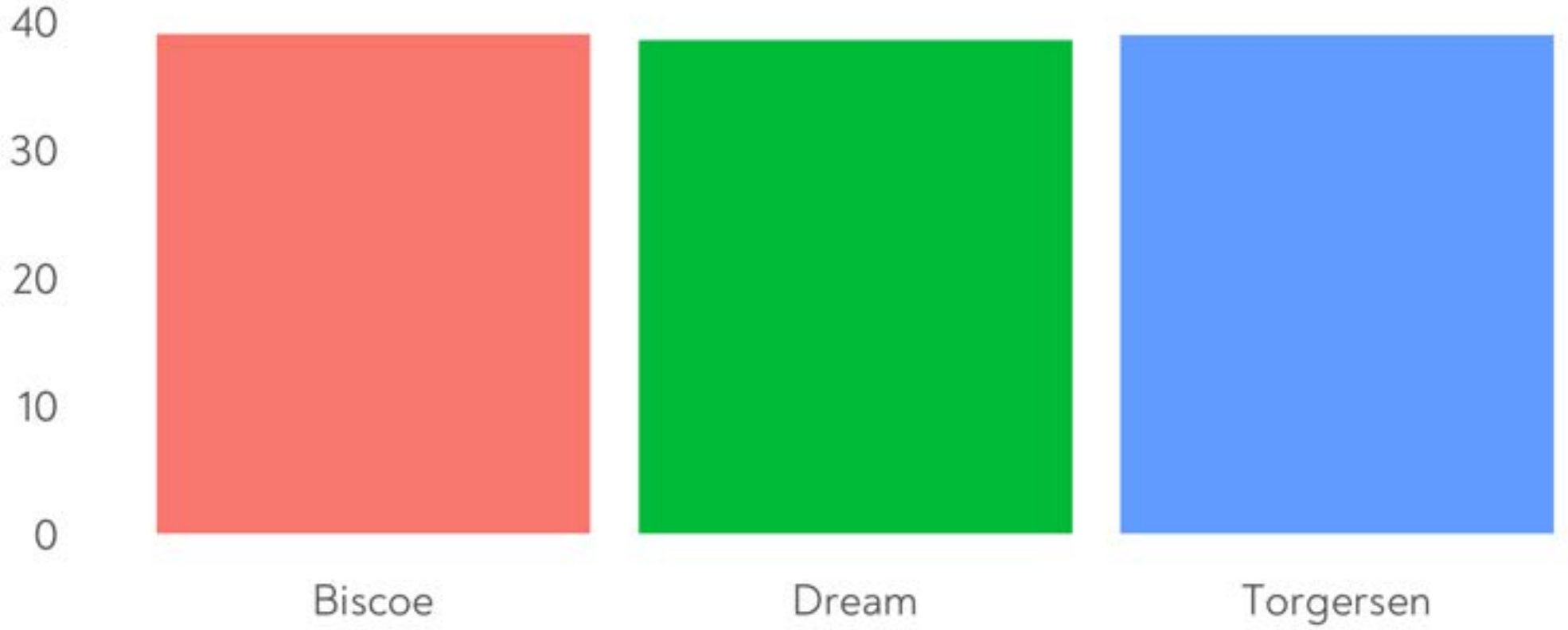


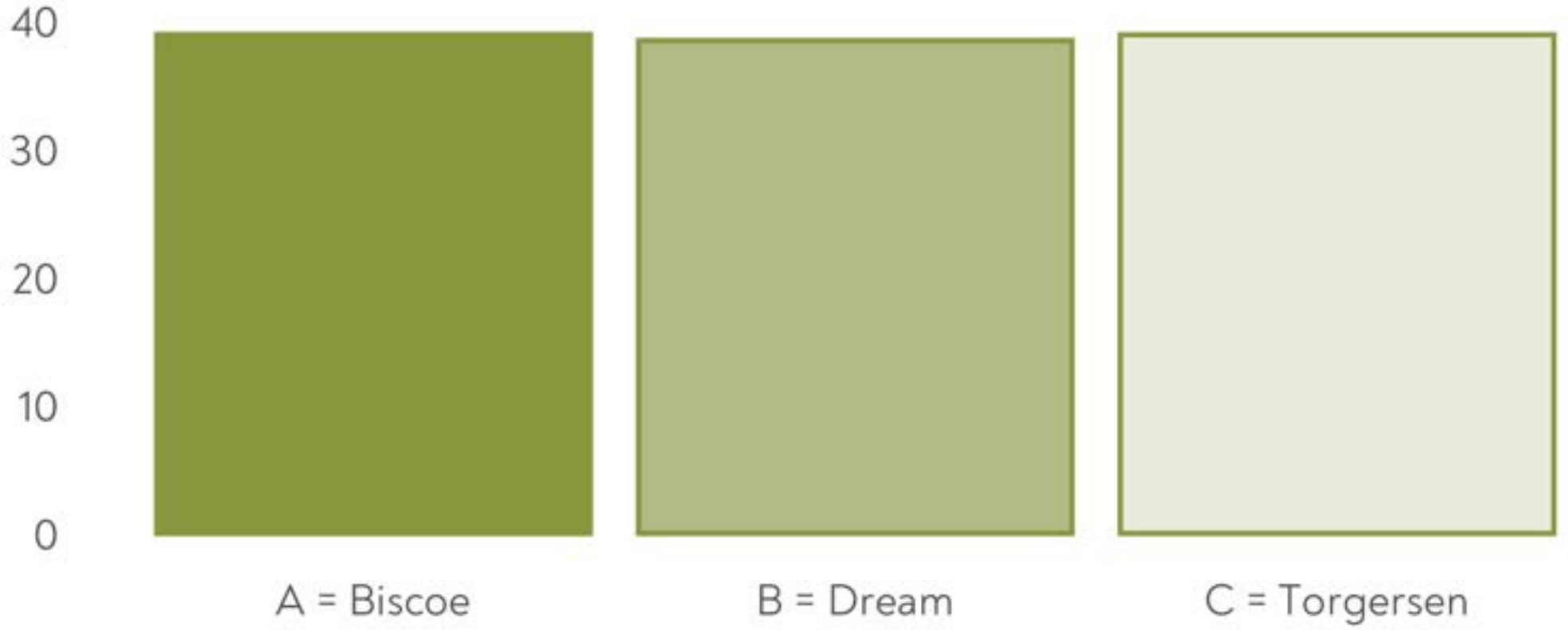
The Great Penguin Bake Off

The Adelie penguins decided to experiment with different quantities of banana in their mix. Each island chose a different quantity.



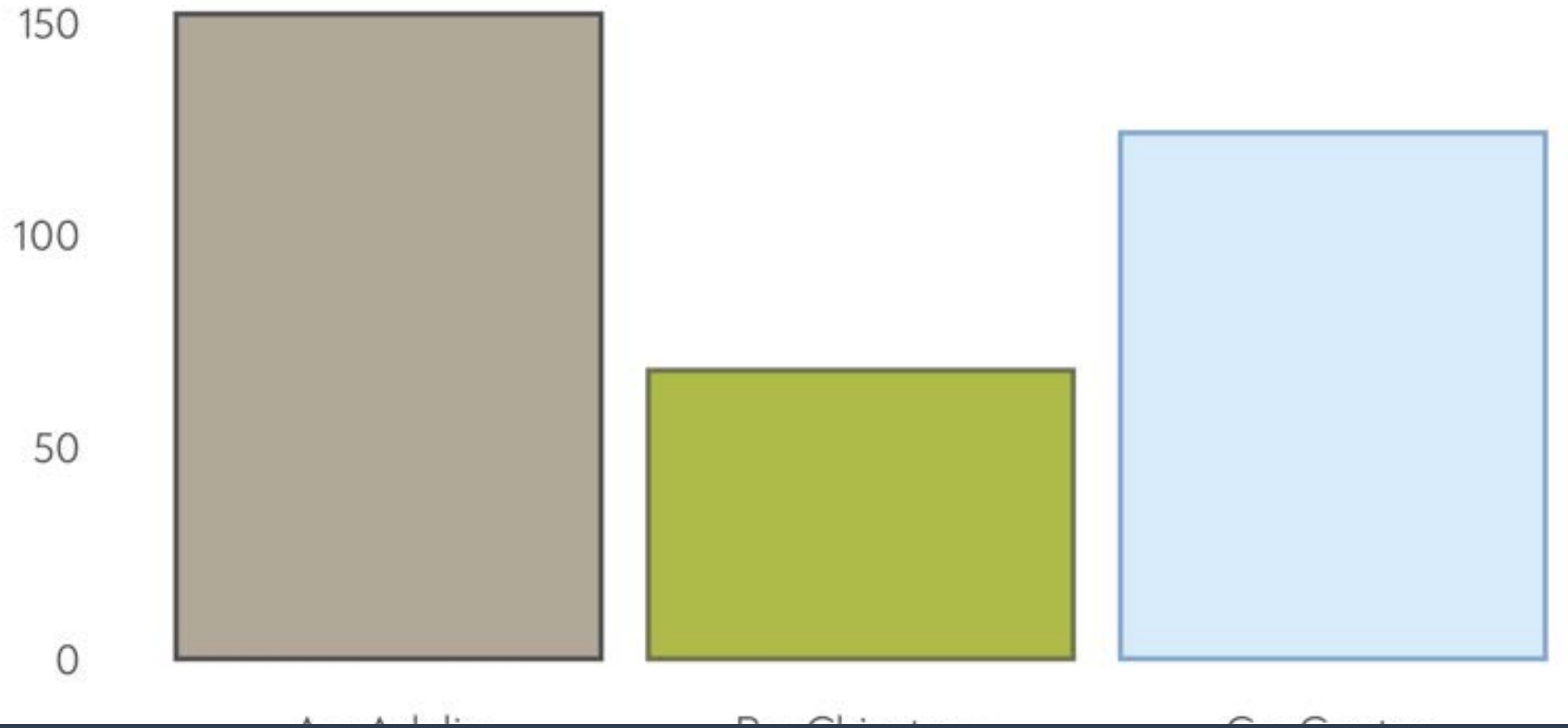
The Great Penguin Bake Off

The Adelie penguins decided to experiment with different quantities of unripe banana in their mix. Each island chose a different quantity.



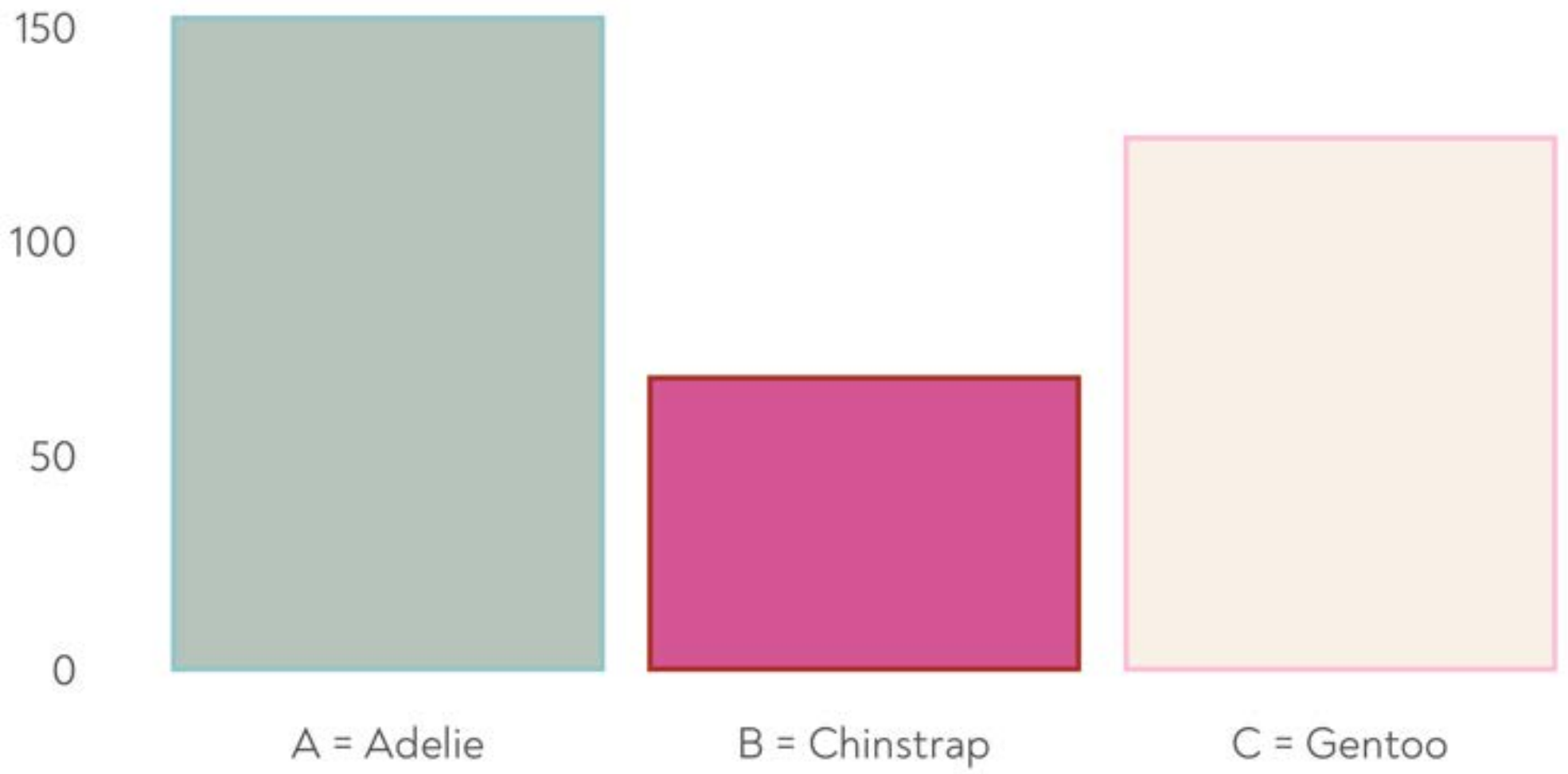
The Great Penguin Bake Off

They decided to go on a retreat to plan their bakes in different locations



The Great Penguin Bake Off

Each species was allowed to invite a different mentor.




PENGUIN
THE GREAT BRITISH
BAKE OFF

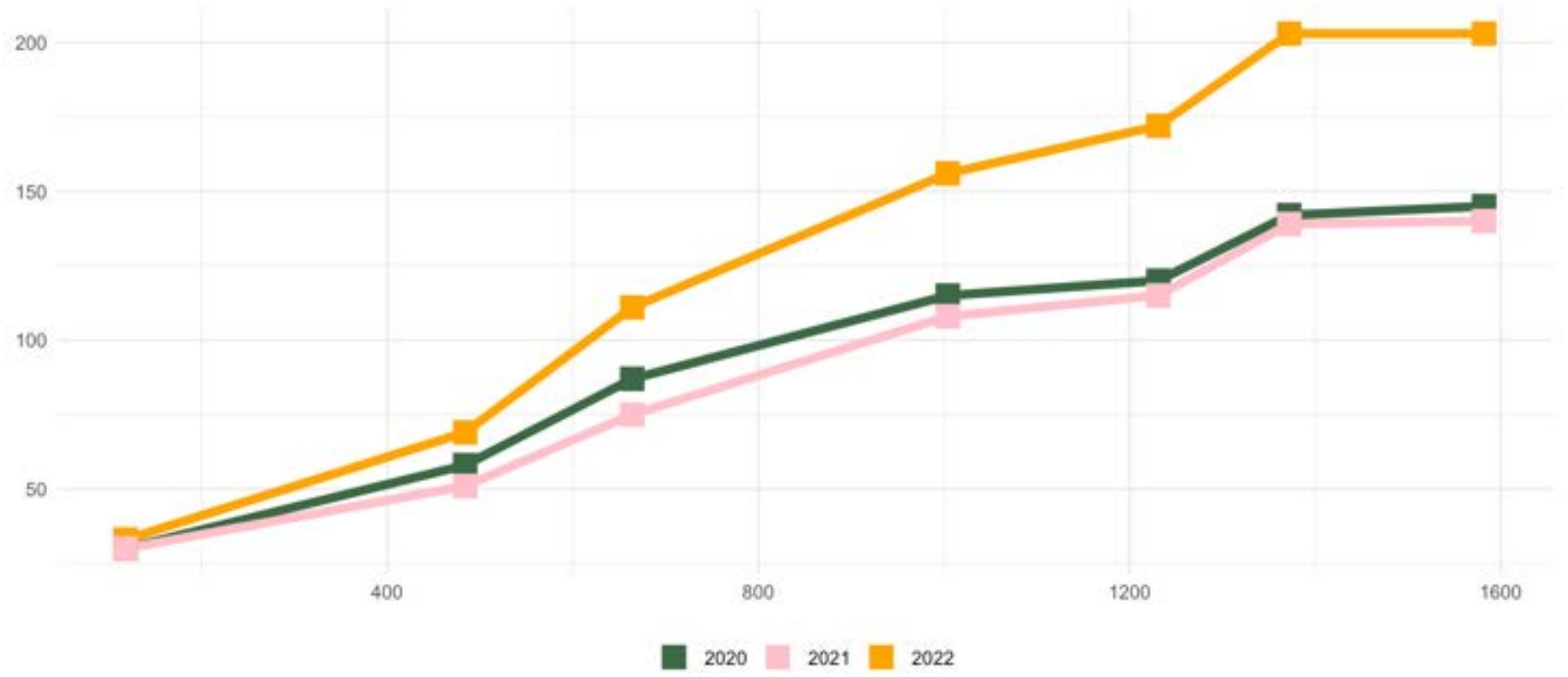
Intuitive colour palettes

It’s all about making it easier to remember what is what



Would shades be better than a rainbow?

How does the most recent year compare to the others?



Would shades be better than a rainbow?



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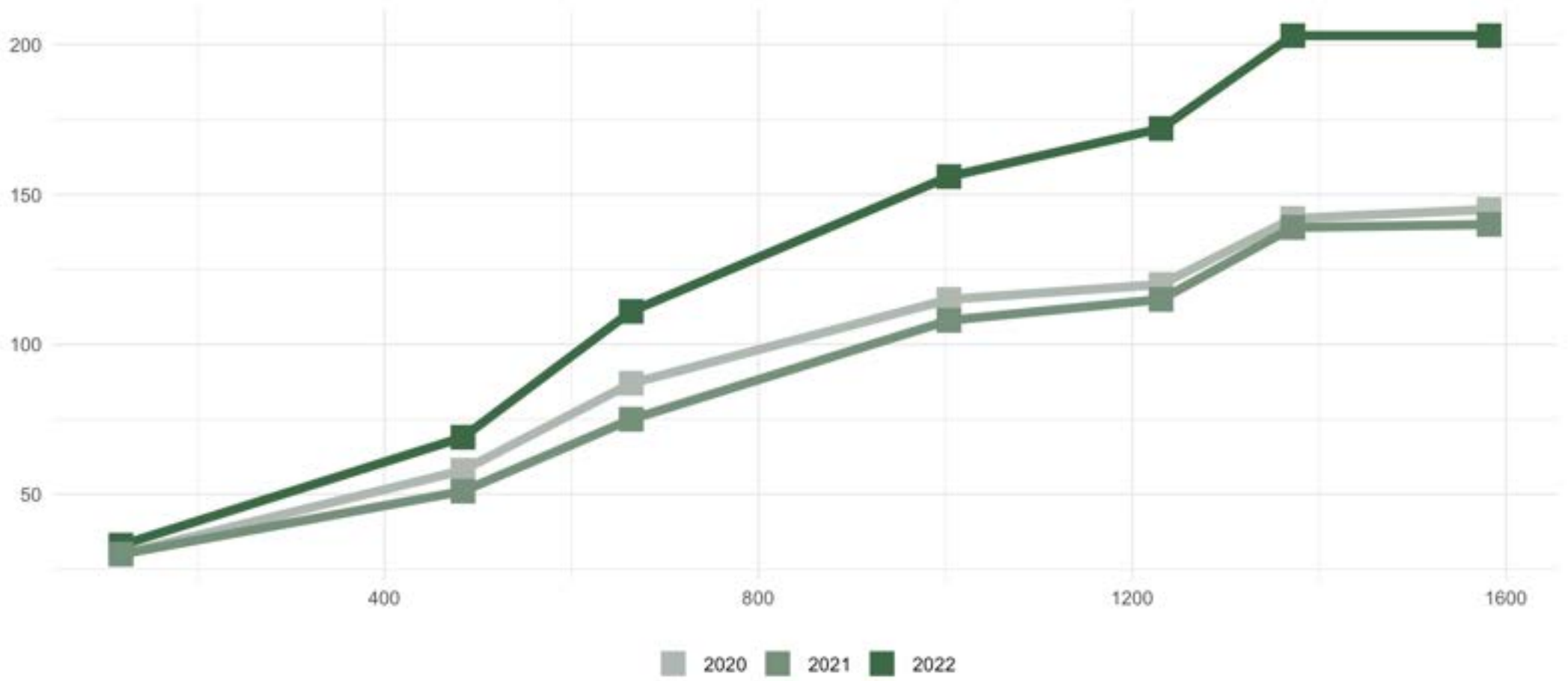


Which colour concepts do you need?

- Shades or different hues?
- Write down the colour names (e.g. “pink”)



Let's make them a bit more "House of PMO"

cararthompson.shinyapps.io/monochromeR

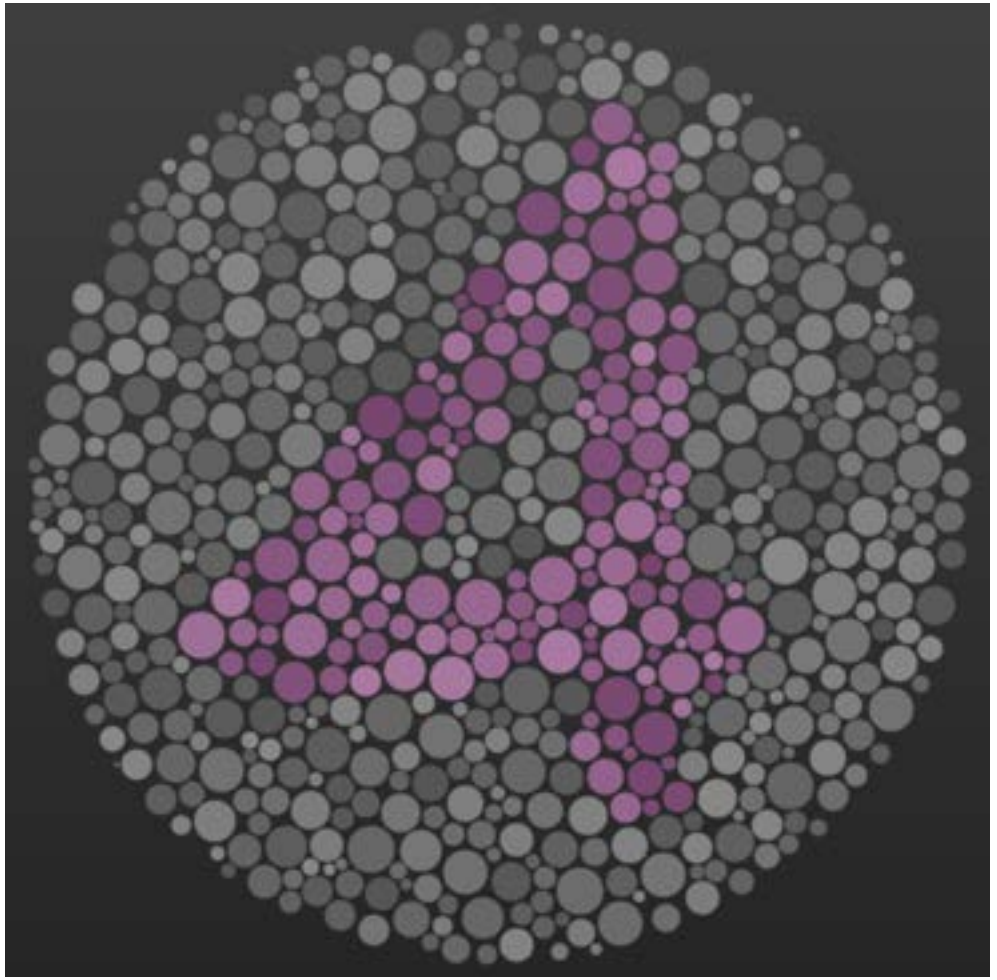
👉 Blend in a bit of the brand colour (e.g. #e77005)





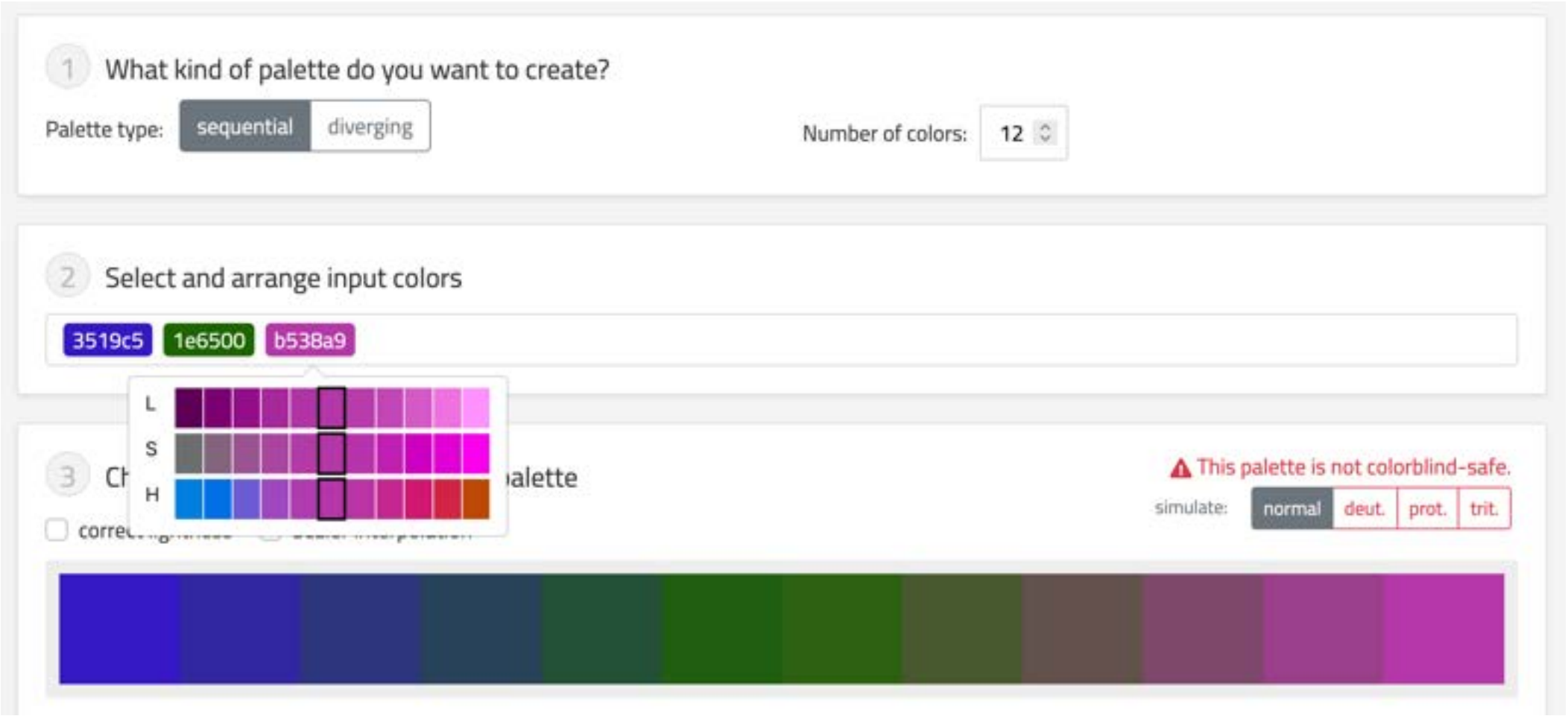
Checking for accessibility

- Colour perception differences
  - Green / Red / Blue / Combinations
- Neurodivergent audiences - 10-15% of global population
  - Avoid colour overwhelm
- Low contrast
  - Add an outline!



Checking for accessibility

- vis4.net/palettes



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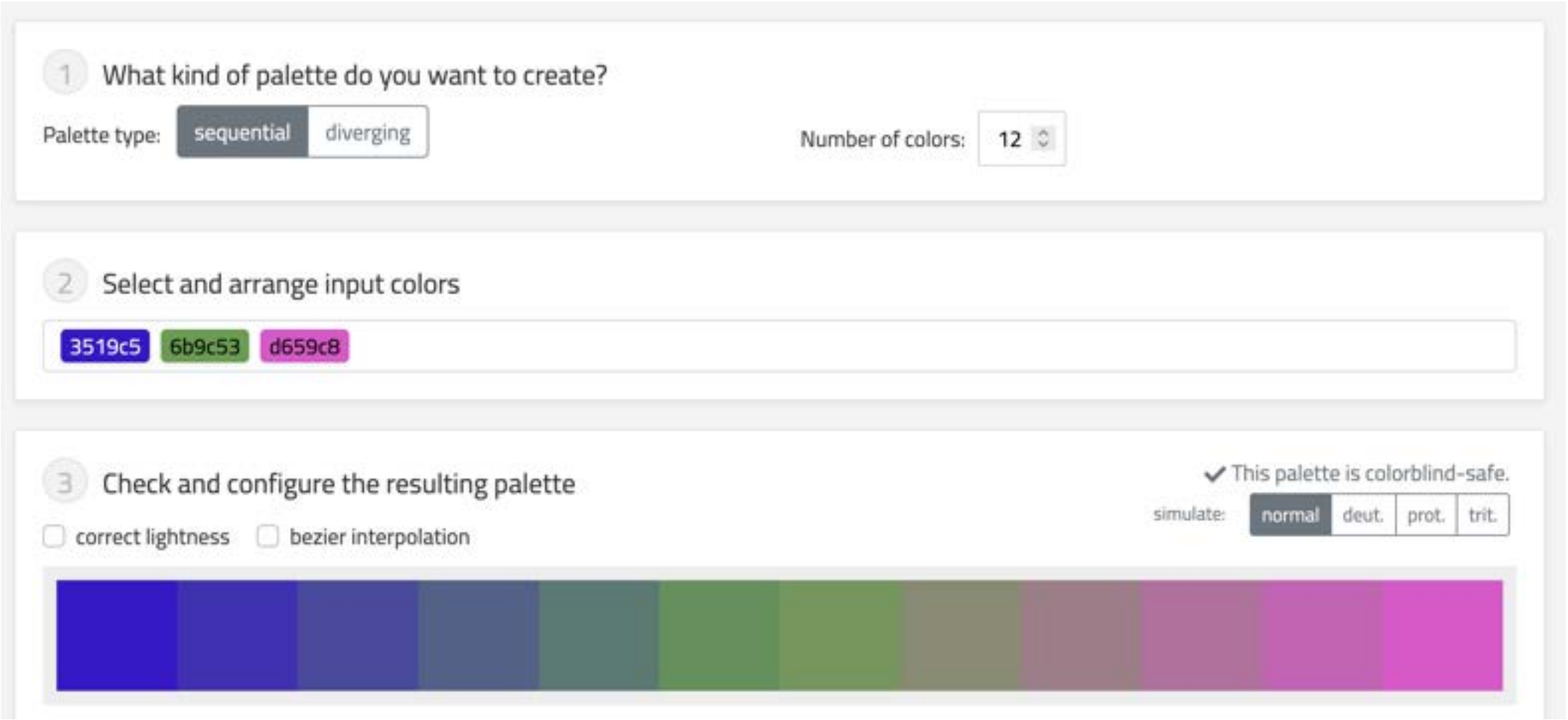


Tweak your colours

- Make them look more “PMO” #E77005
- Check for accessibility and tweak as needed





- Write down the hex codes



Step 4: Does it work?



Draw a graph!

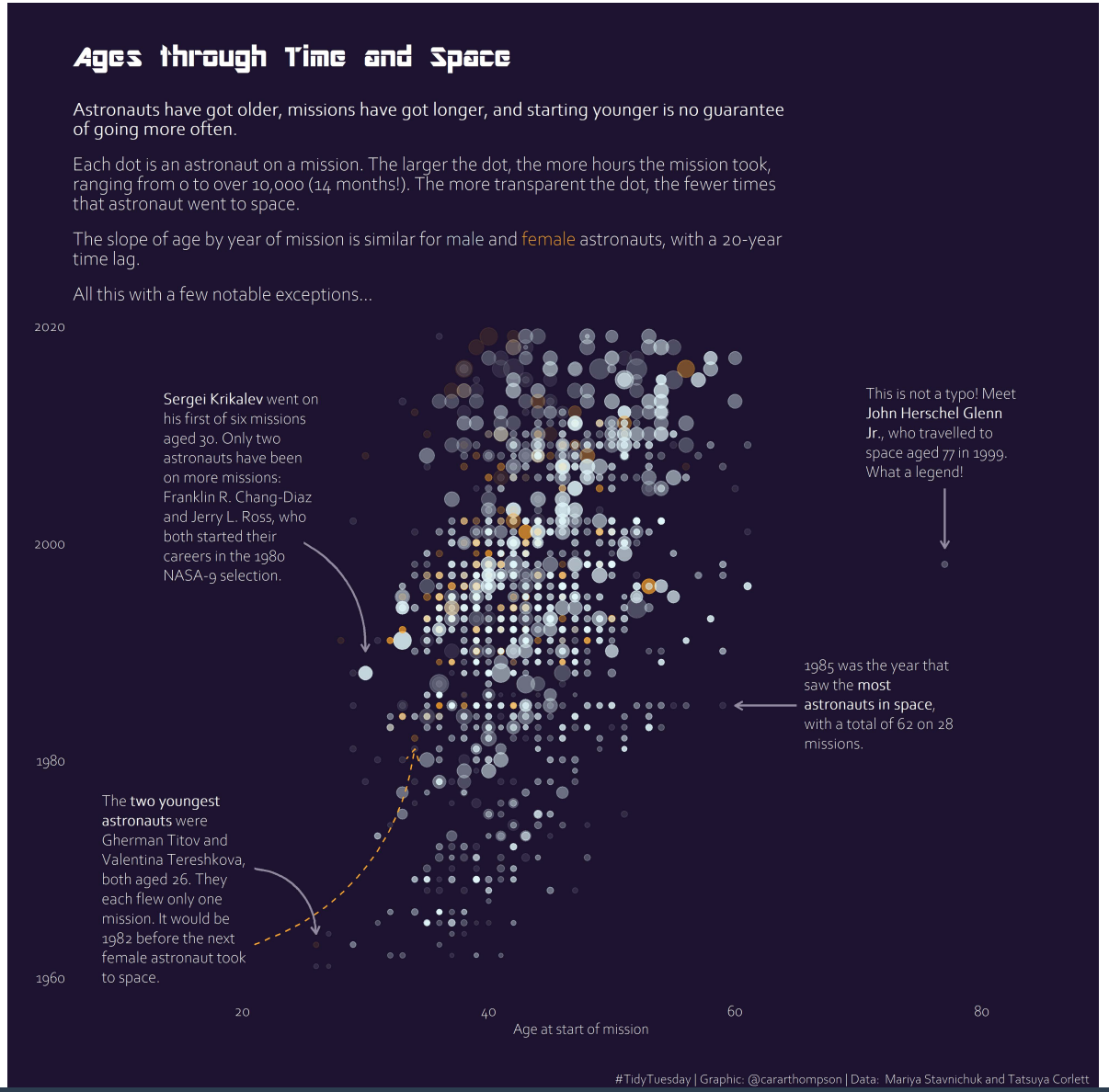
- Keep it simple!
- Use colour if you have it



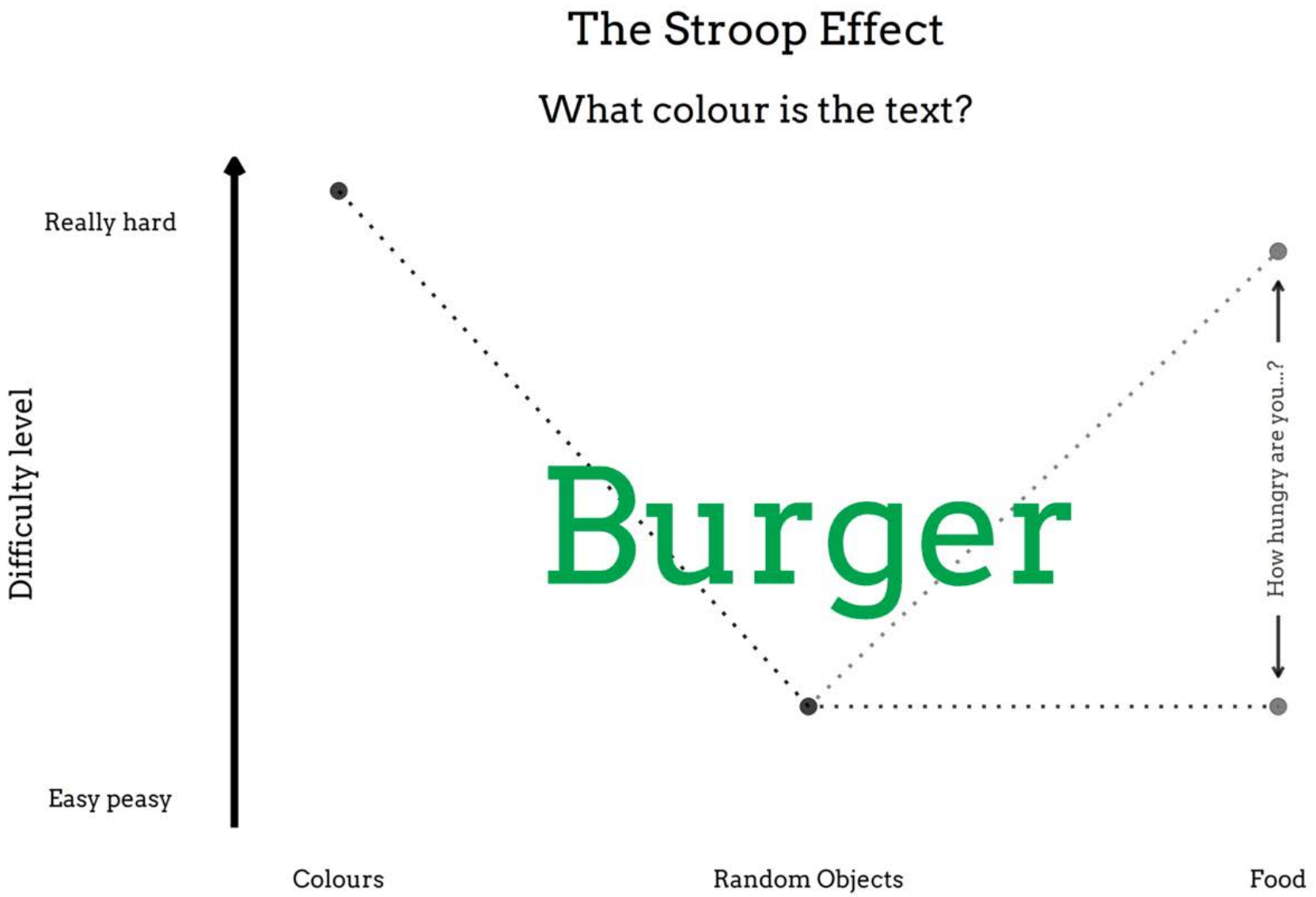
Step 5: Adding in some annotations



Context and interpretation

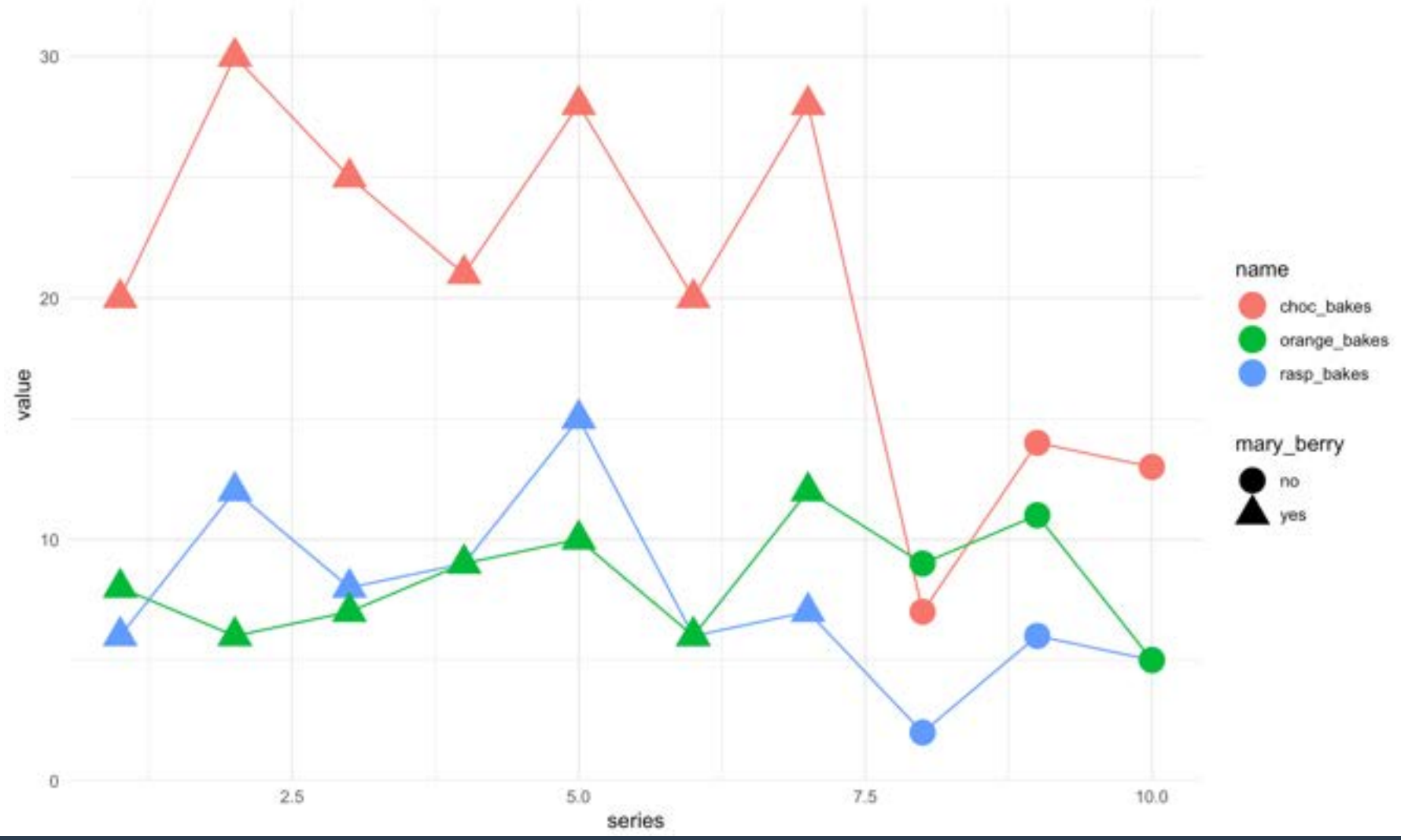


A word of warning



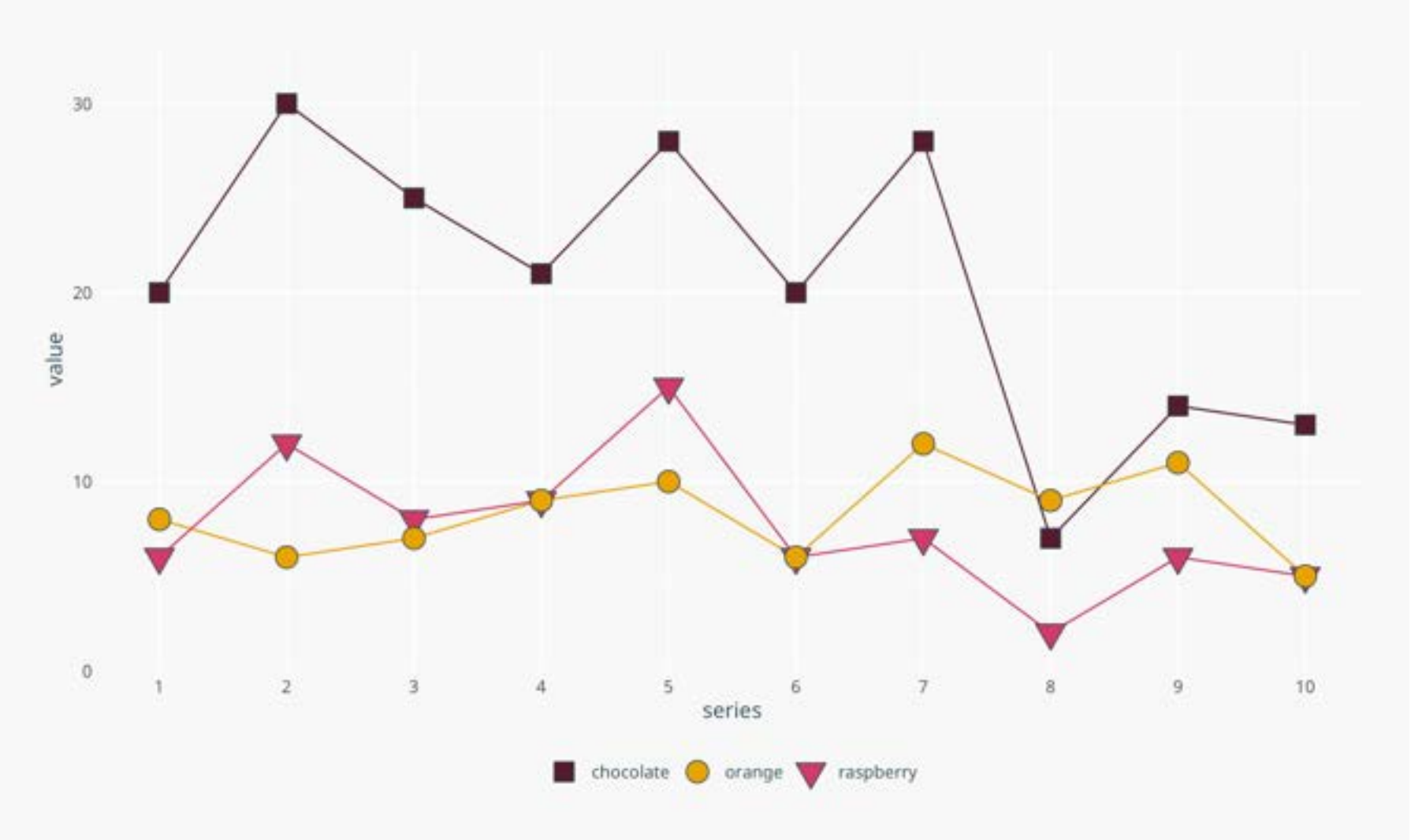
Use colours to show rather than tell

Starting point



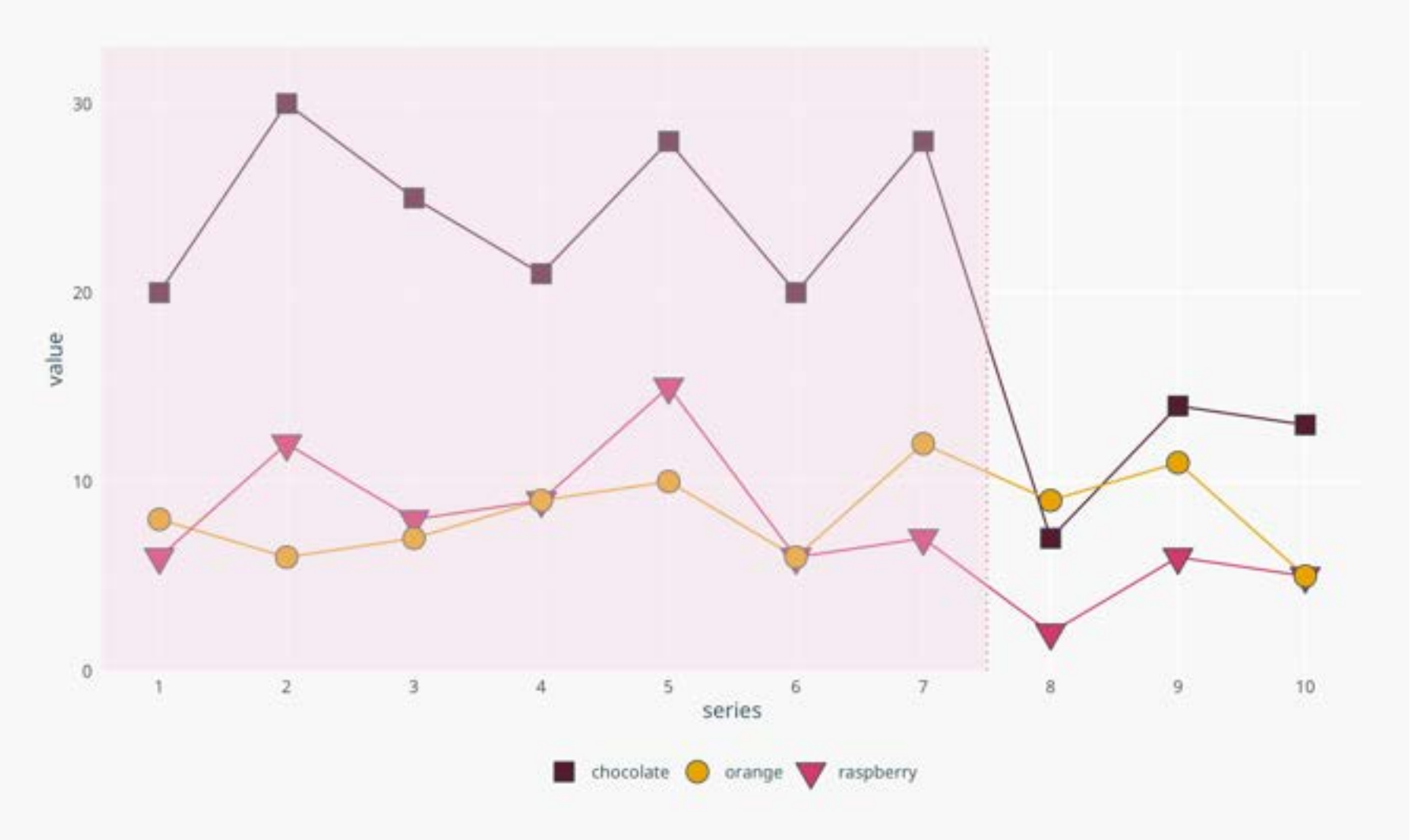
Use colours to show rather than tell

Easier colours



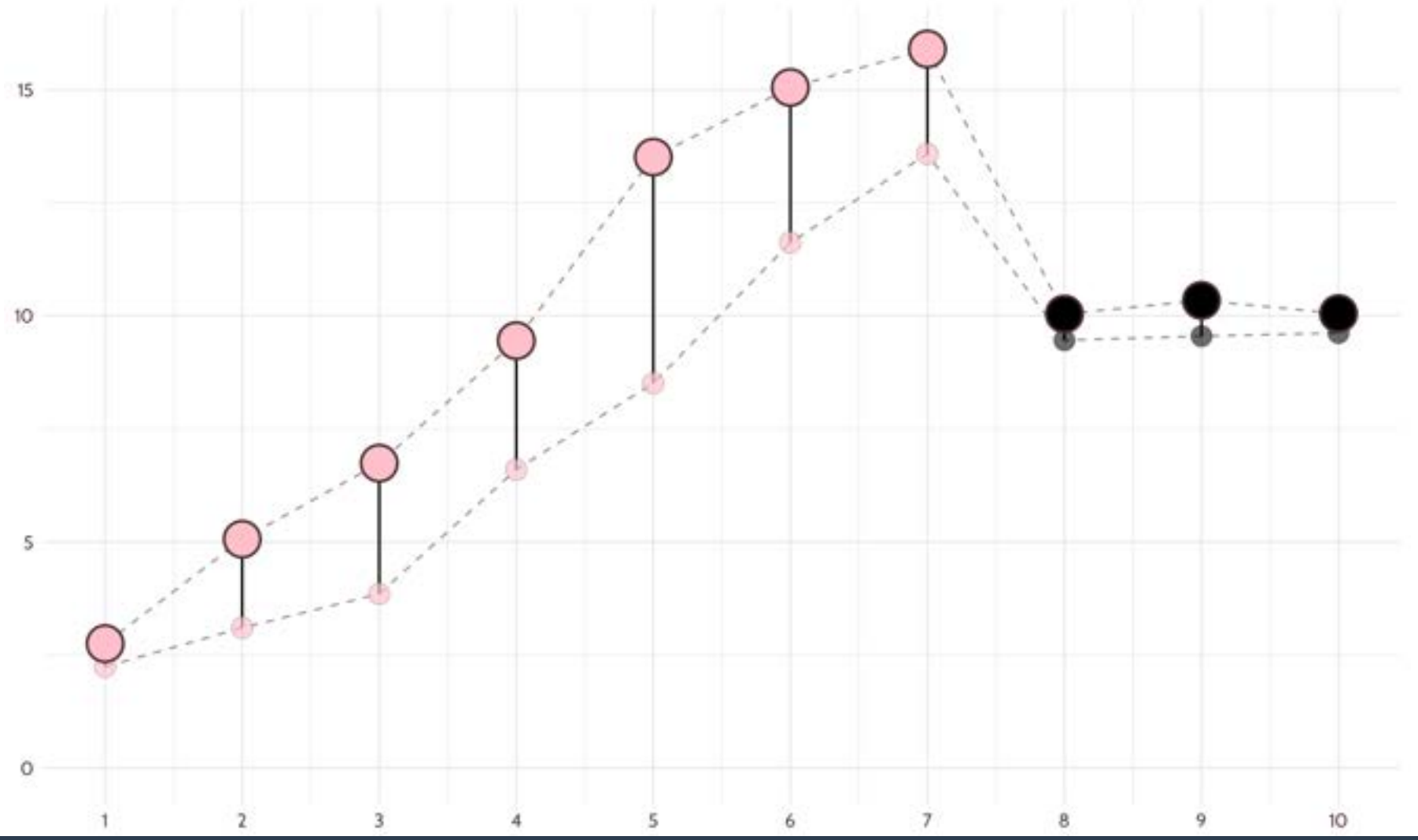
Use colours to show rather than tell

Coloured background to indicate a change along the timeline?



Use colour to show rather than tell

Coloured band to indicate “zone of good enough”?



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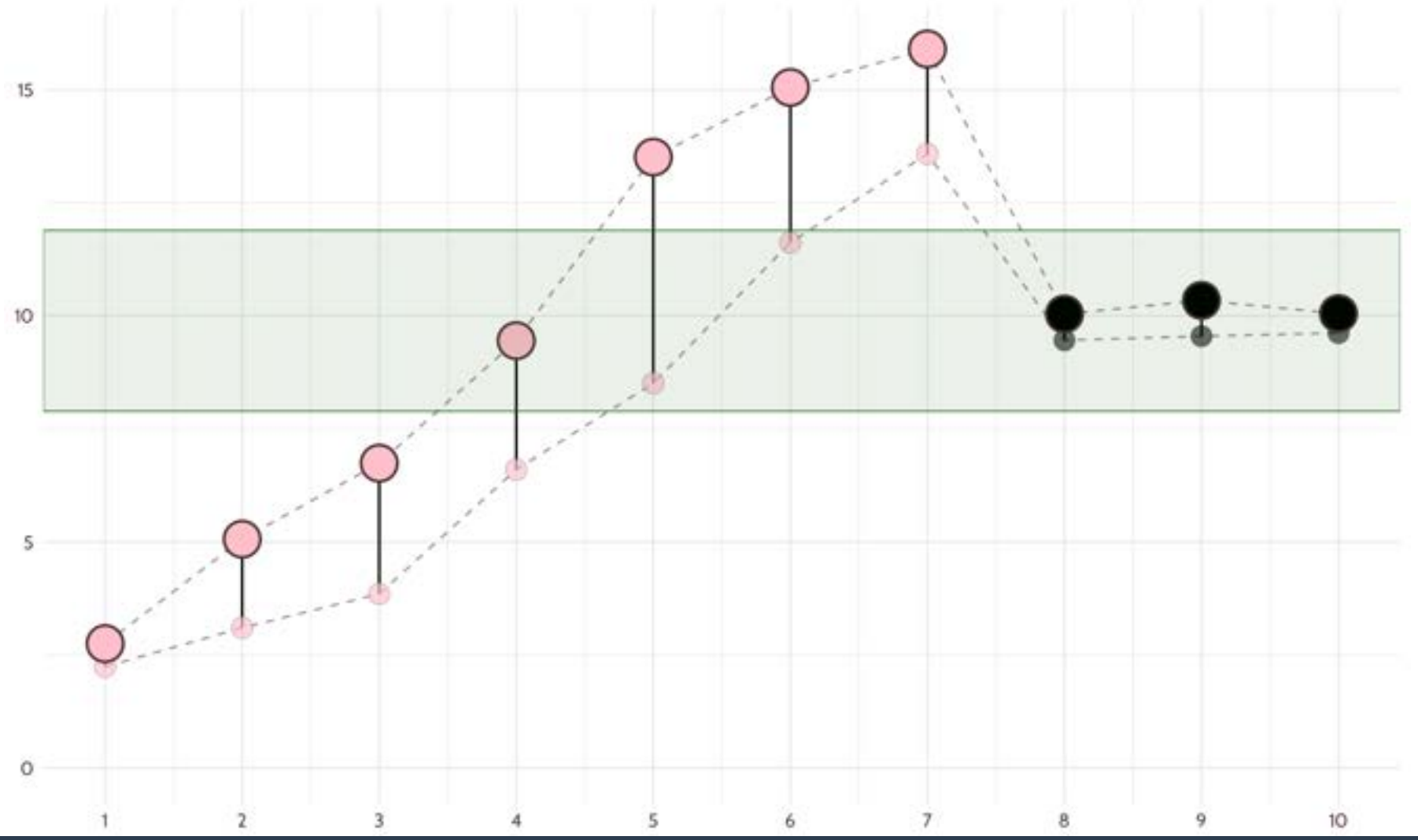


Add in any relevant annotations

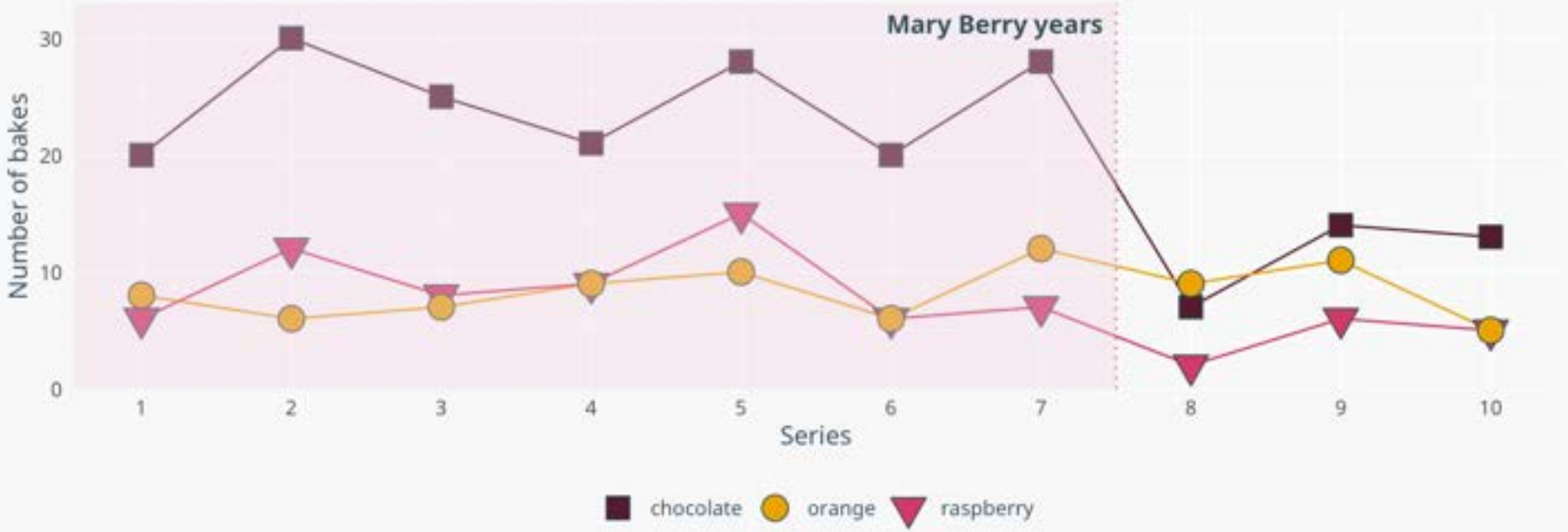
- In-graph: What do you want to highlight?
- Title: what is the main story?
- Subtitle: what action should the user take?



Add in any relevant annotations

Chocolate has remained the most commonly used ingredient, despite being overtaken by Orange in series 8

The number of bakes using chocolate was far higher in the Mary Berry years. We can expect about twice as many chocolate bakes if she returns as judge.



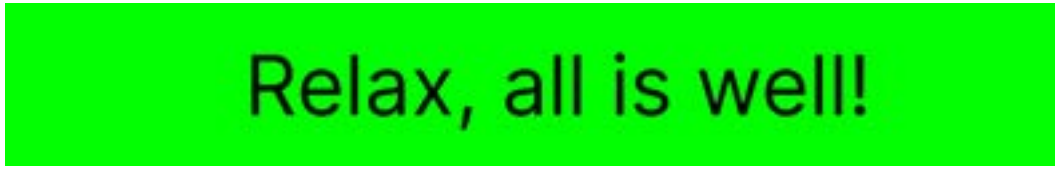
Some bonus icing

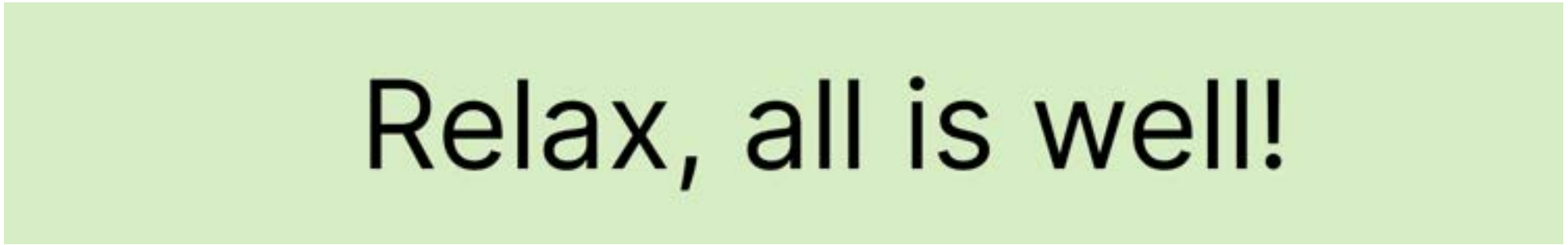


All is well...?



All is well...?





All is well...?

Relax, all is well!

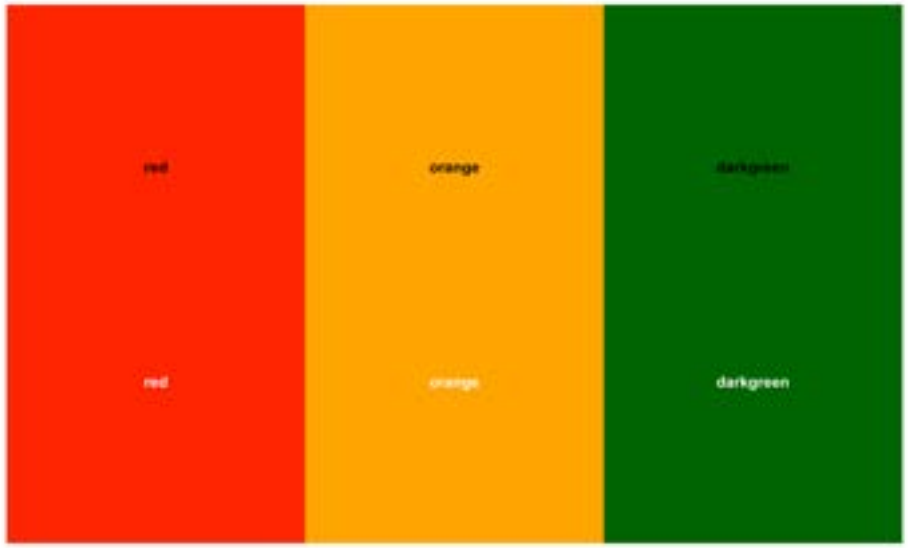
Relax, all is well!

Relax, all is well!



Making Red, Amber, Green work for you

1 - Which should stand out most?





Making Red, Amber, Green work for you

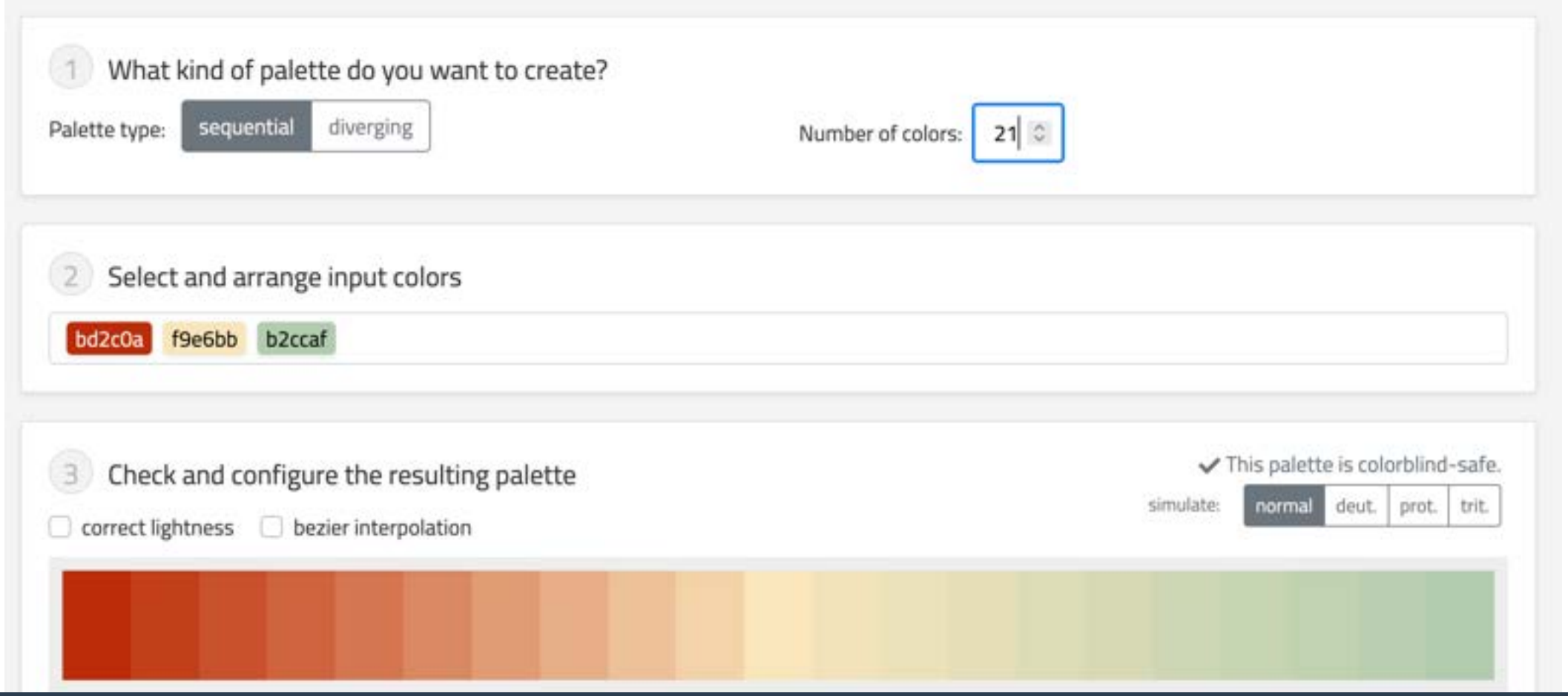
2 - Make it on brand





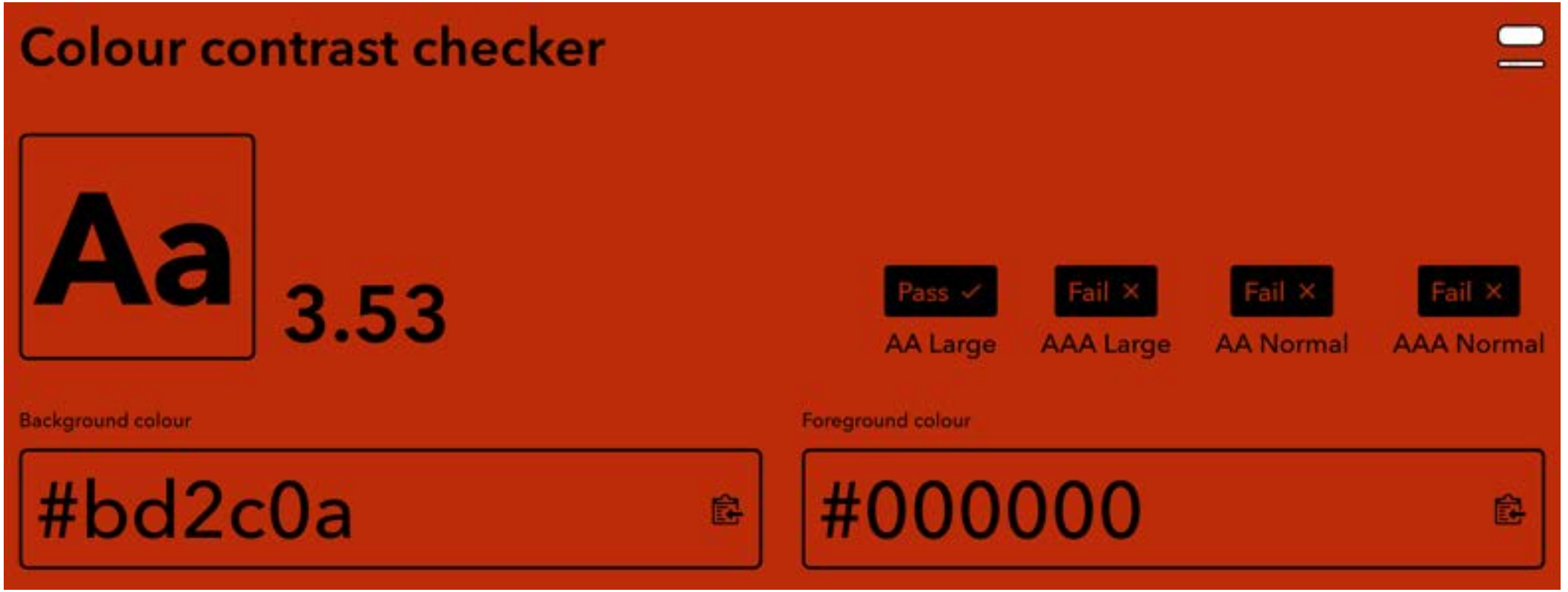
Making Red, Amber, Green work for you

3 - Check for accessibility



Making Red, Amber, Green work for you

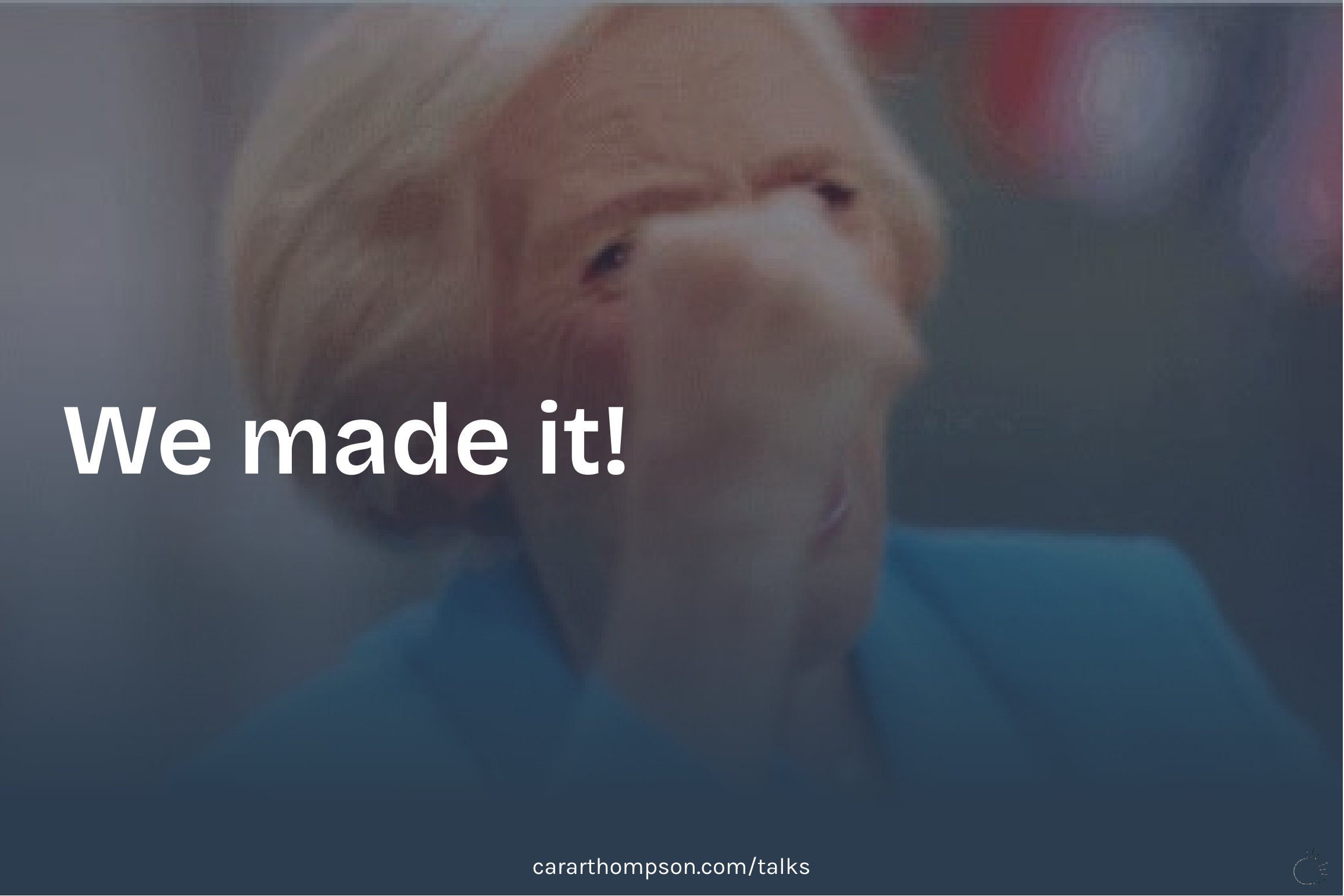
4 - Check your colour contrasts



Making Red, Amber, Green work for you

- What is most important?
- Blend in the brand colour
- Check accessibility
- What will you do for text colour?




We made it!

Over to you

Resources 👉 cararthompson.com/talks

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Cara R Thompson

Building Stories with Data LTD