



Northwestern  
University

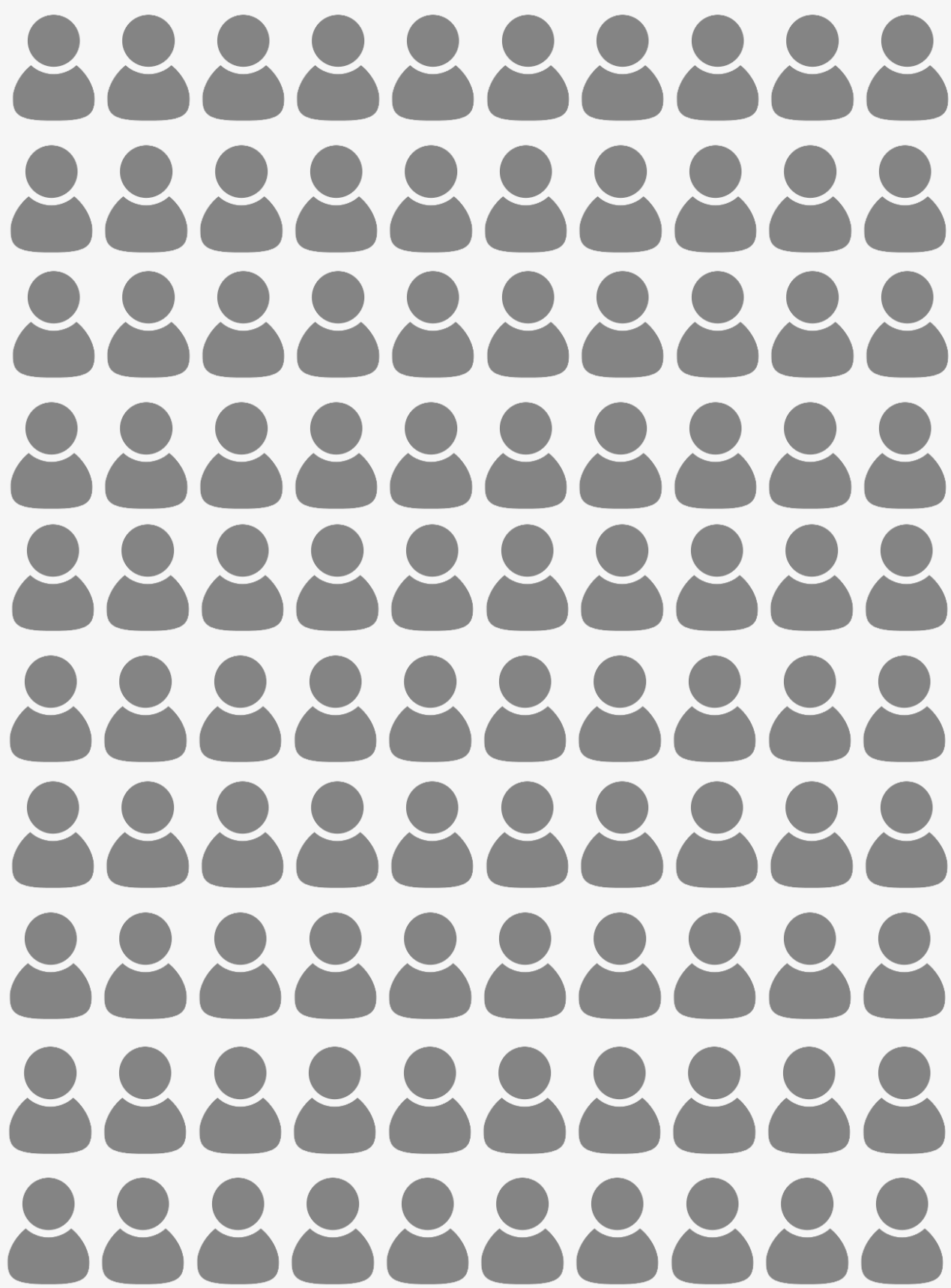
# Best Practices – Part 2

## Week 3

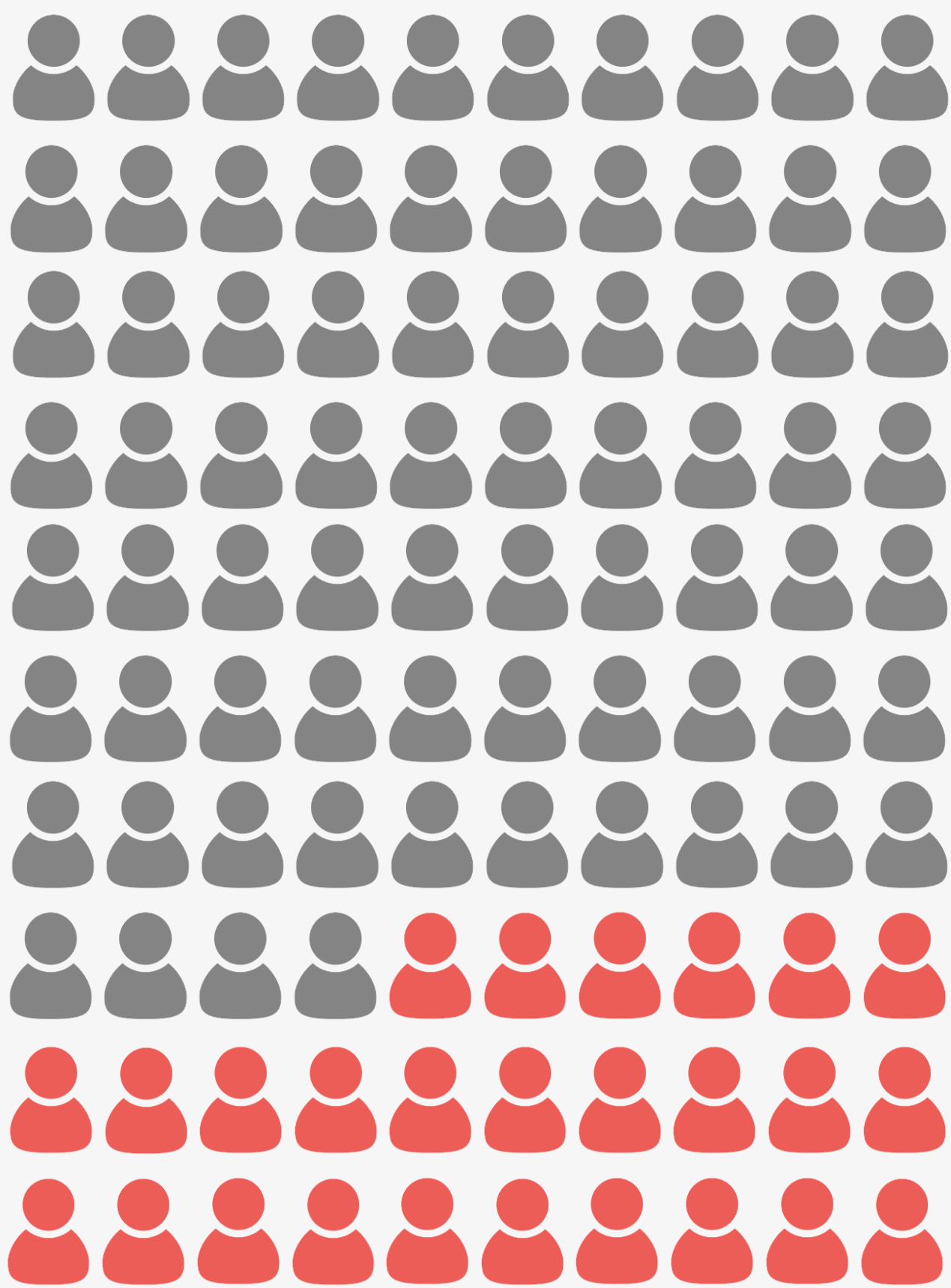


Why does  
accessibility matter?



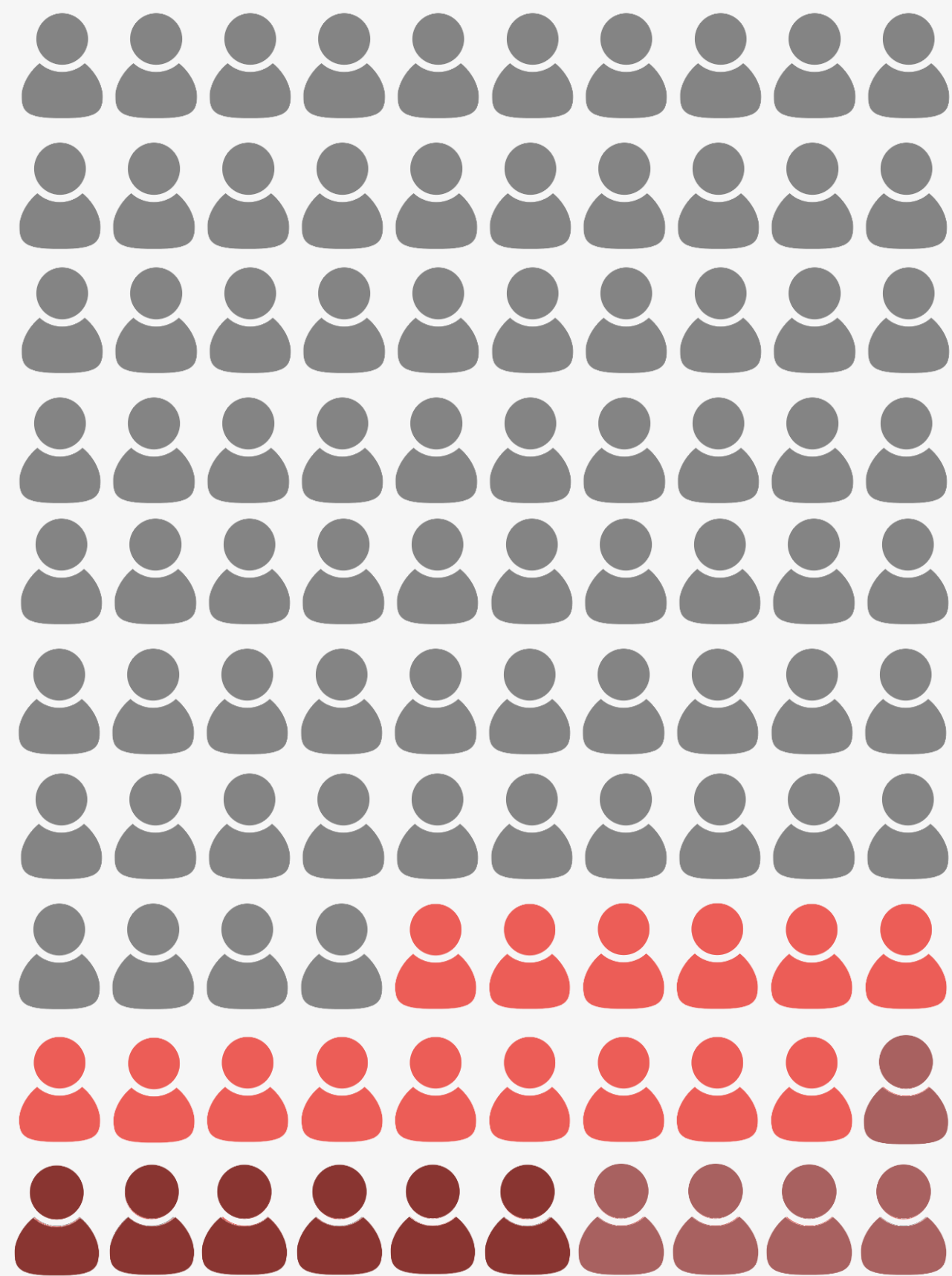


100 people



26

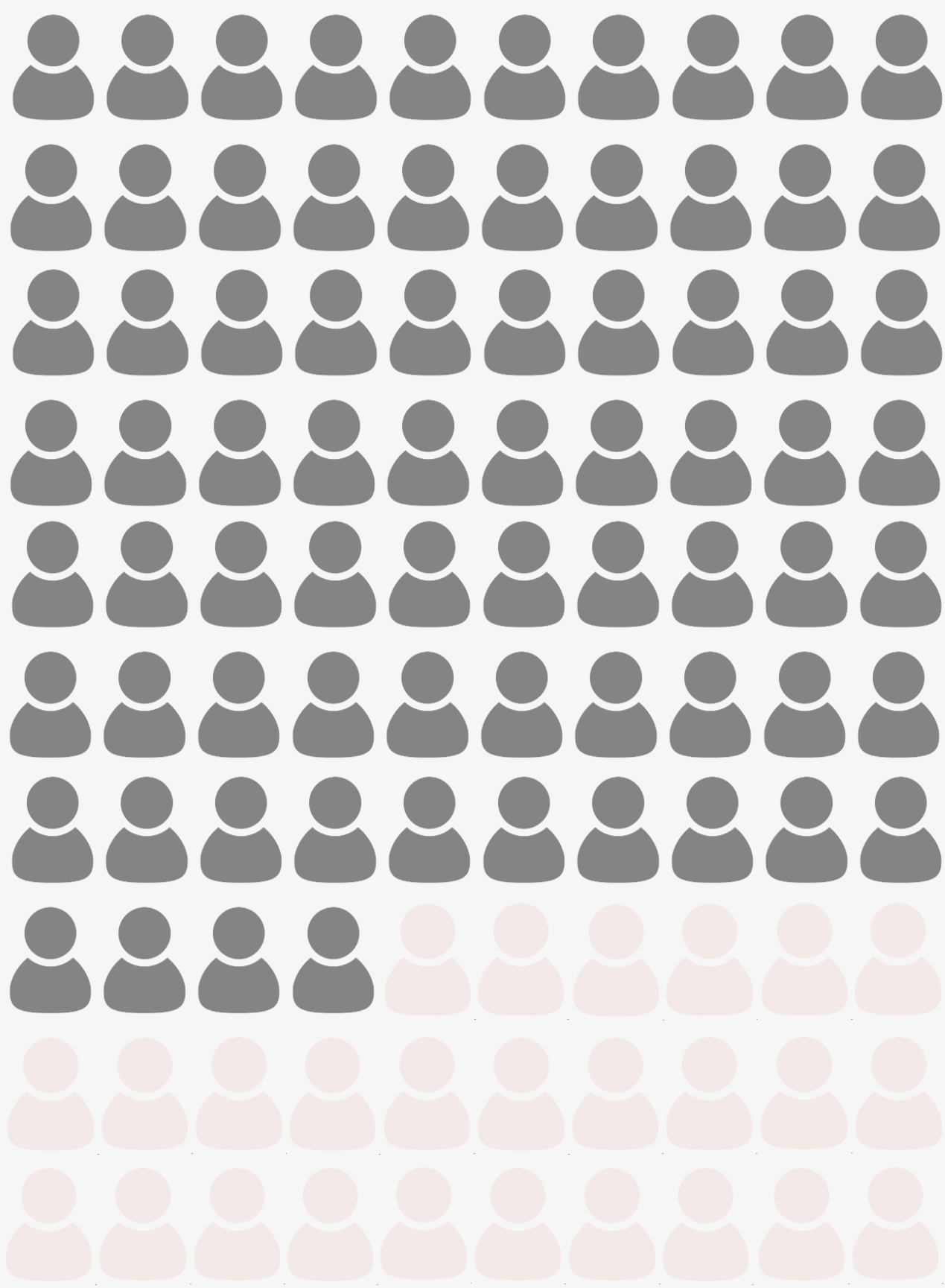
have a disability



15 have mobility/cognition problems

6 have vision problems

5 have hearing problems



~~26~~ people



1 in 12 men



1 in 200 women

**...are color blind!**



# Common mistakes

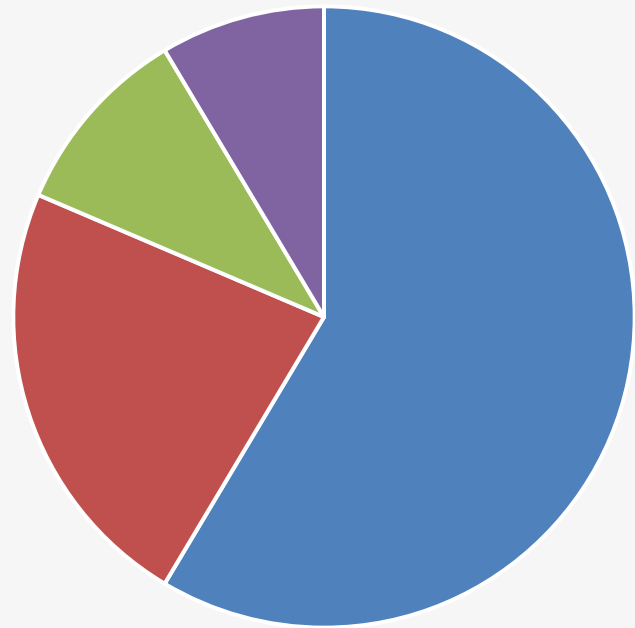




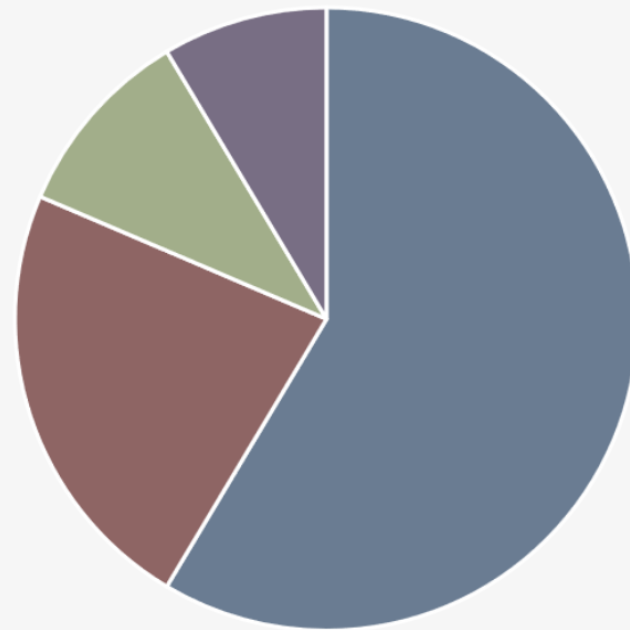
# #1. CONSIDER COLOR BLINDNESS



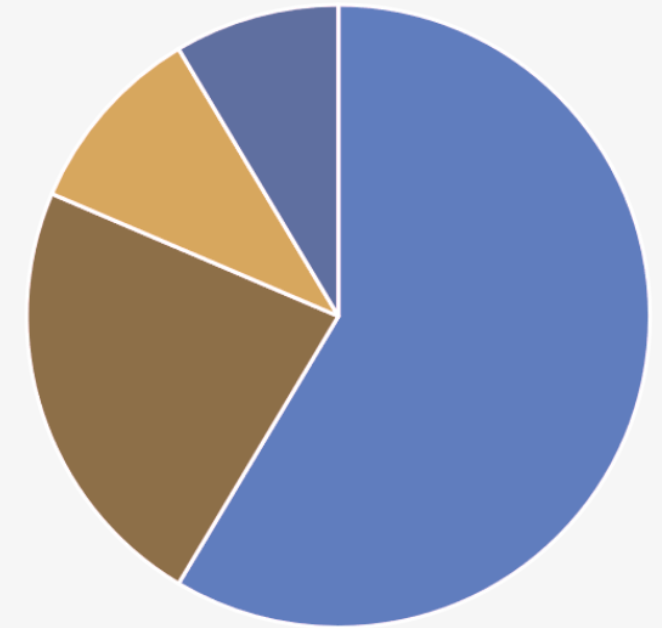
*Normal vision*



*Blue cone monochromacy*



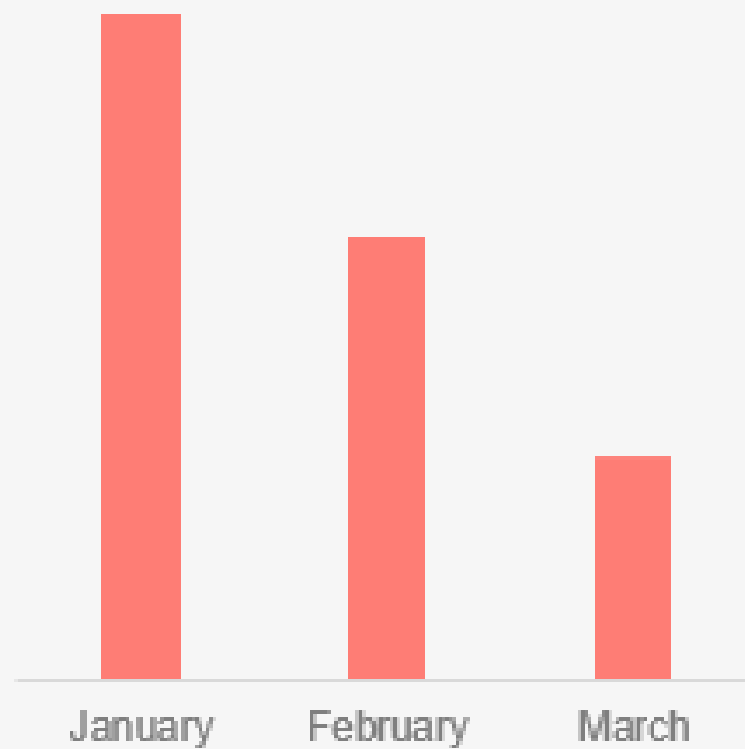
*Green-blind/deuteranopia*



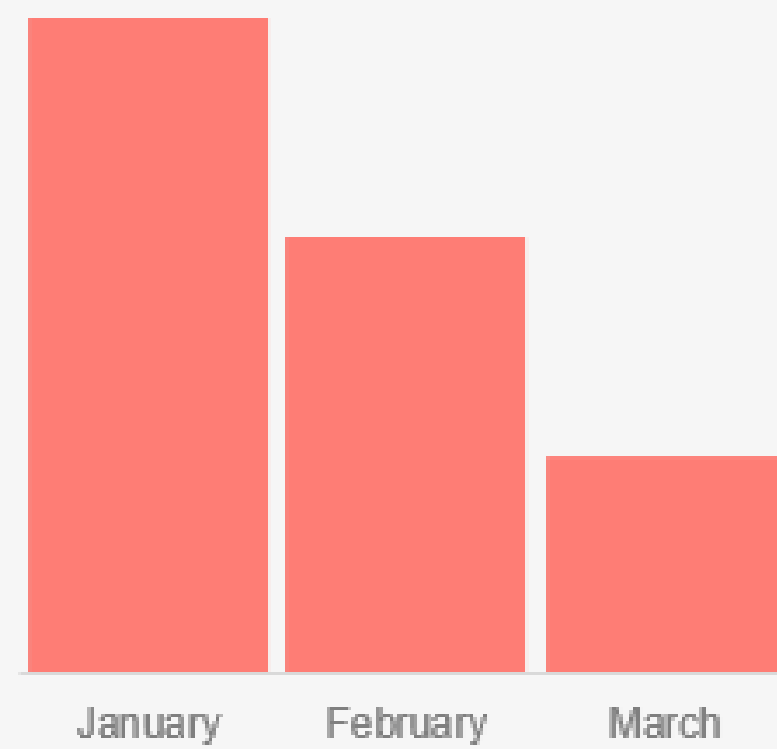
# #2. USE WHITE SPACE WISELY



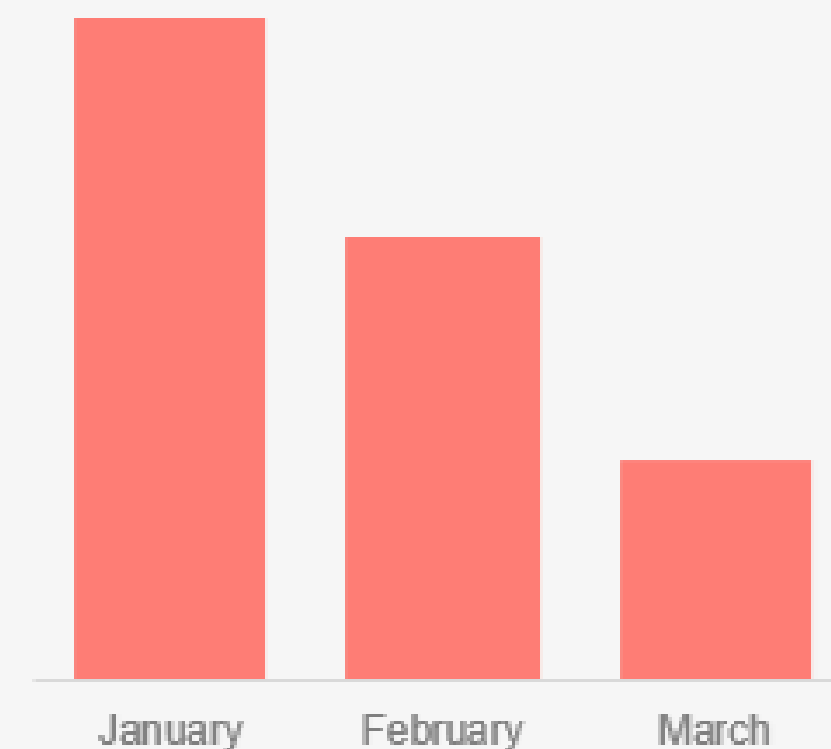
Version 1 👎



Version 2 👎




Version 3 👍





# EDUCATION IS KEY TO A FLOURISHING SOCIETY



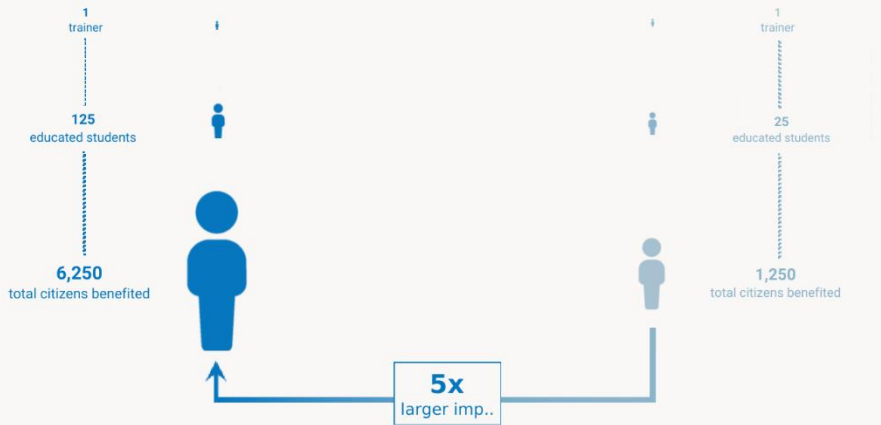
 **THE POWER OF ONE:** Through the “train-the-trainer” model that AWB uses, each project builds local capacity and expertise, creating sustainable programs that are multiplied and persist long after the volunteers return home.

**Impact of 1 AWB “Train the Trainer” model**

1 trainer works with 5 local faculty.  
Each local faculty teaches 25 students.  
Each student then impacts on avg. 50 citizens.

**Impact of 1 Regular Visiting Instructor**

1 trainer teaches 25 students.  
Each student then impacts on avg. 50 citizens.



 **DIVERSITY OF IMPACT:** In 2018 and 2019, AWB worked on **32 projects** across **16 countries**. Each project and each country has its own unique story.

Hover over each country to [learn more](#).



**-> DONATE!** Help us educate, inspire..

There are many things developing nations need to foster sustainable health and prosperity; **education** is often the forgotten ingredient. **Academics Without Borders (AWB)** works to change that by helping developing nation universities build the programs, capacity and plans they need to educate the next generation of professionals and leaders.

Data: Academics Without Borders, 2018-2019  
Photo: Unsplash  
Icons: The Noun Project  
Design: Rebecca Pop

Source: *personal visualization*



BRAND

# Electricity has a limit

Use of high voltage bulbs require more electricity. Let us join together to save power so that our children wont live in dark.

Join the initiative



BRAND

# Electricity has a limit

Use of high voltage bulbs require more electricity. Let us join together to save power so that our children wont live in dark.

Join the initiative

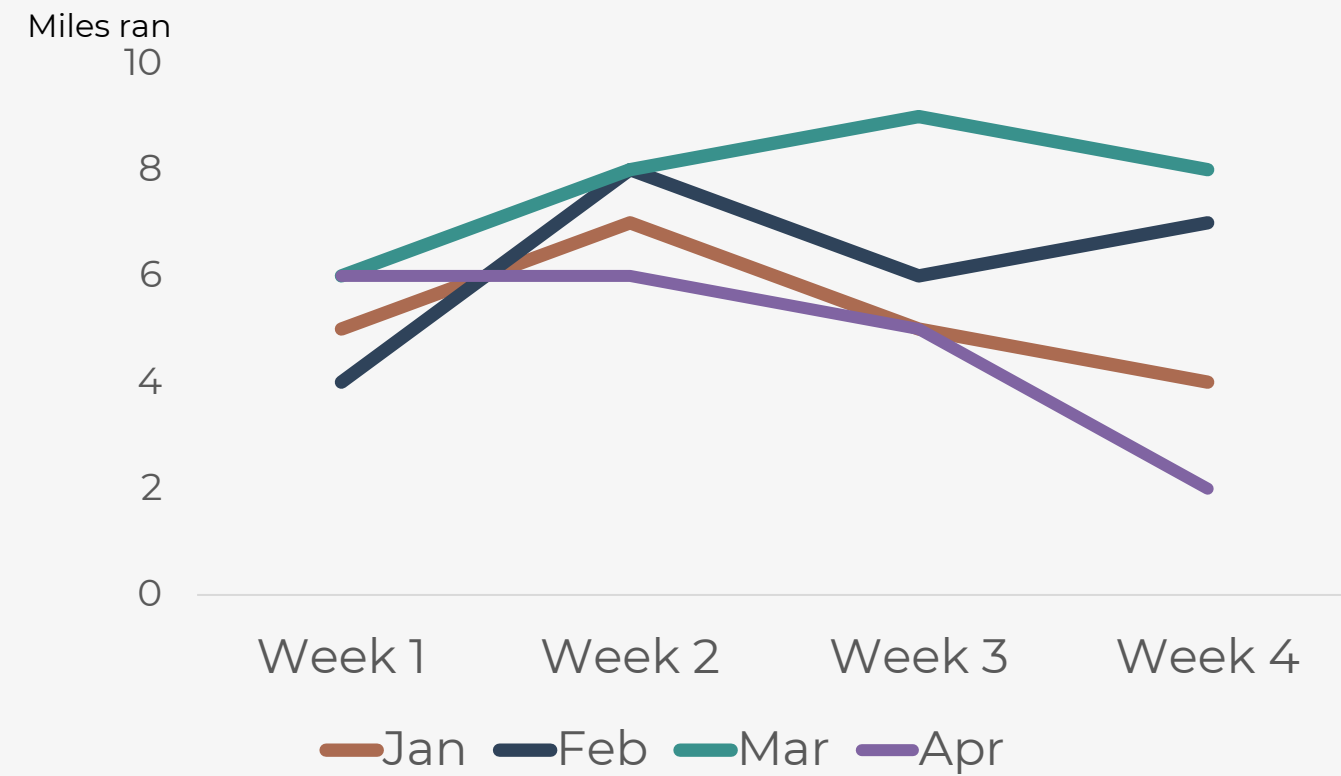


# #3. LABEL DATA DIRECTLY



Default Excel legend 🙄

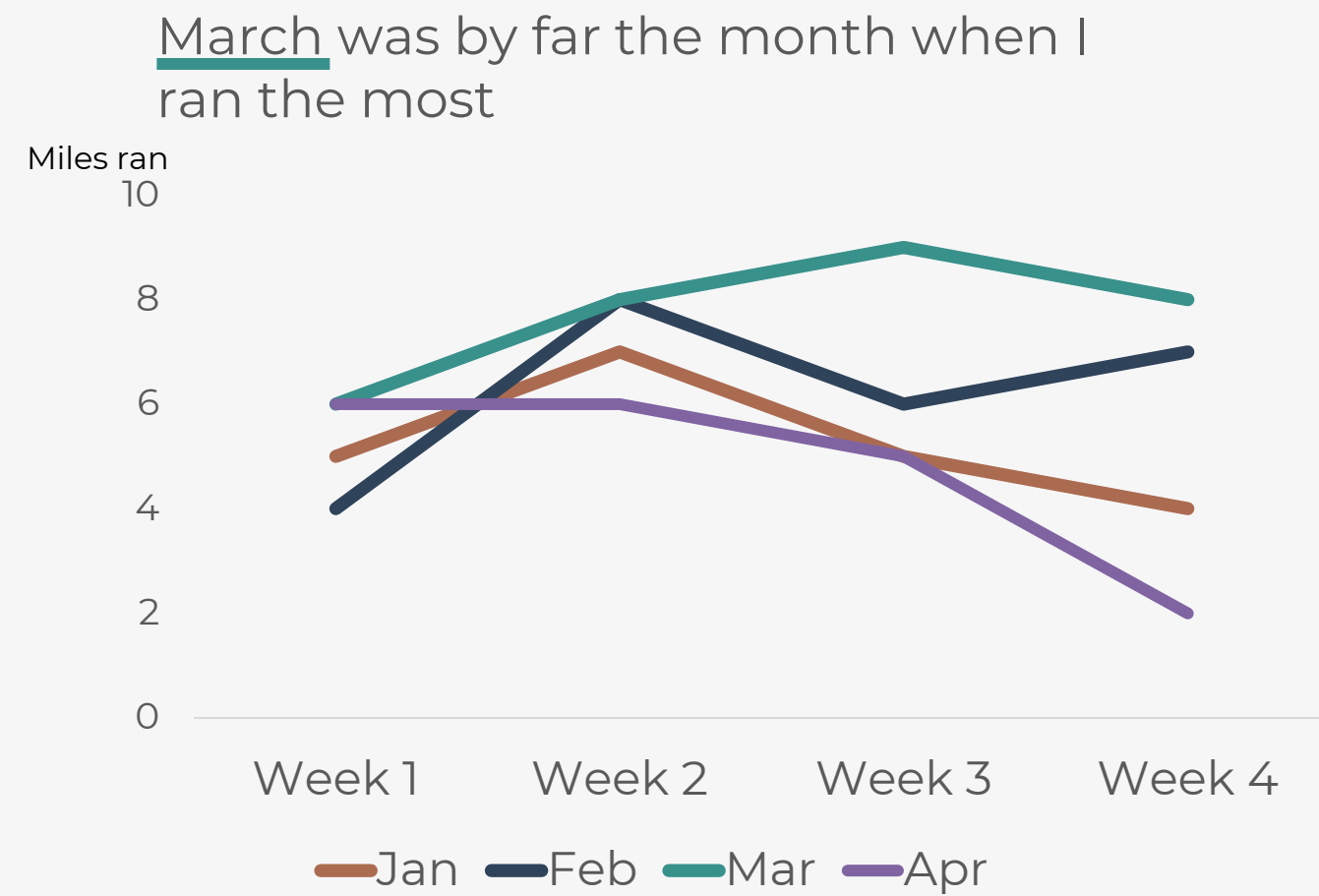
March was by far the month when I ran the most



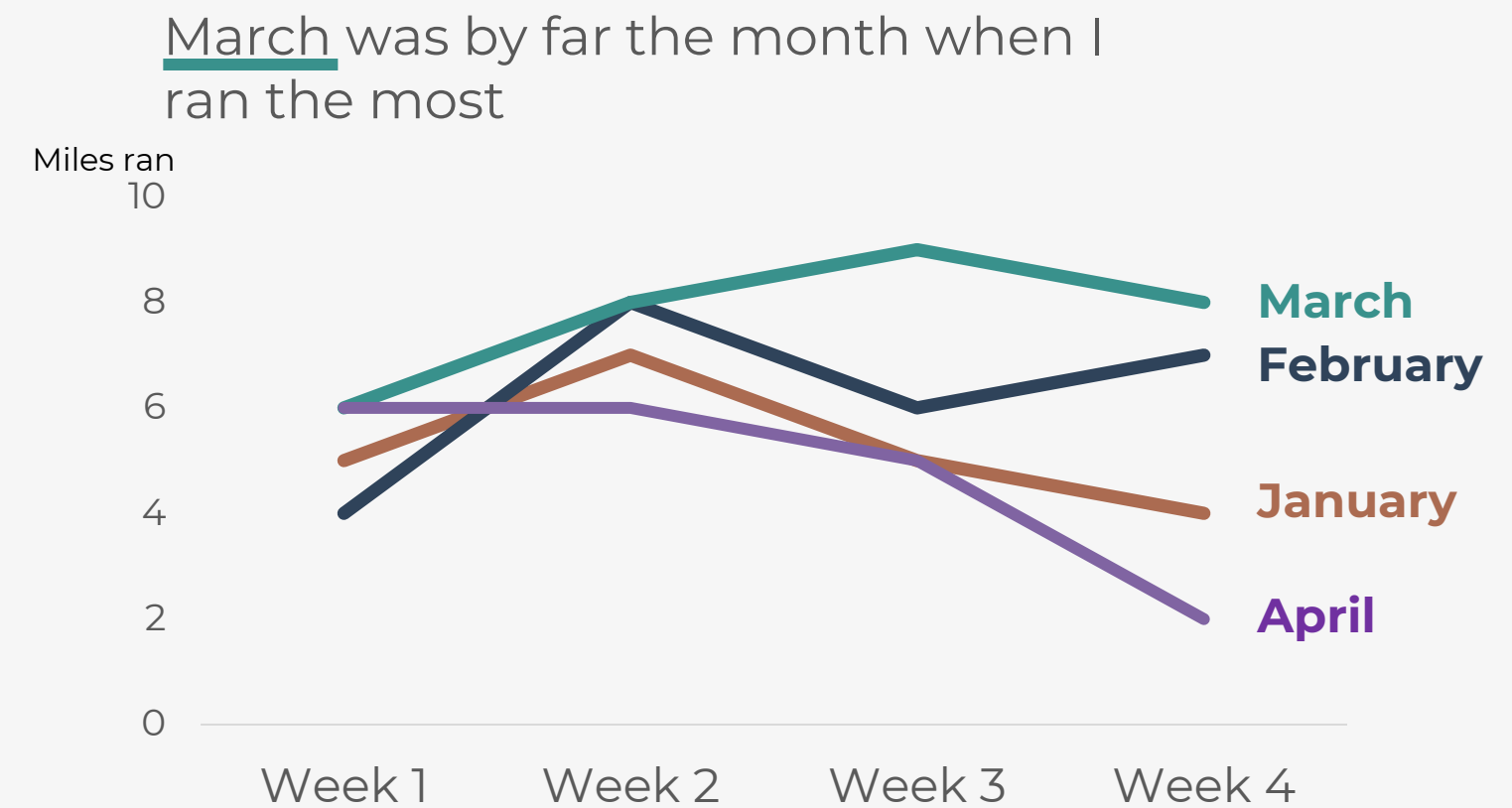
# #3. LABEL DATA DIRECTLY



Default Excel legend 🙄



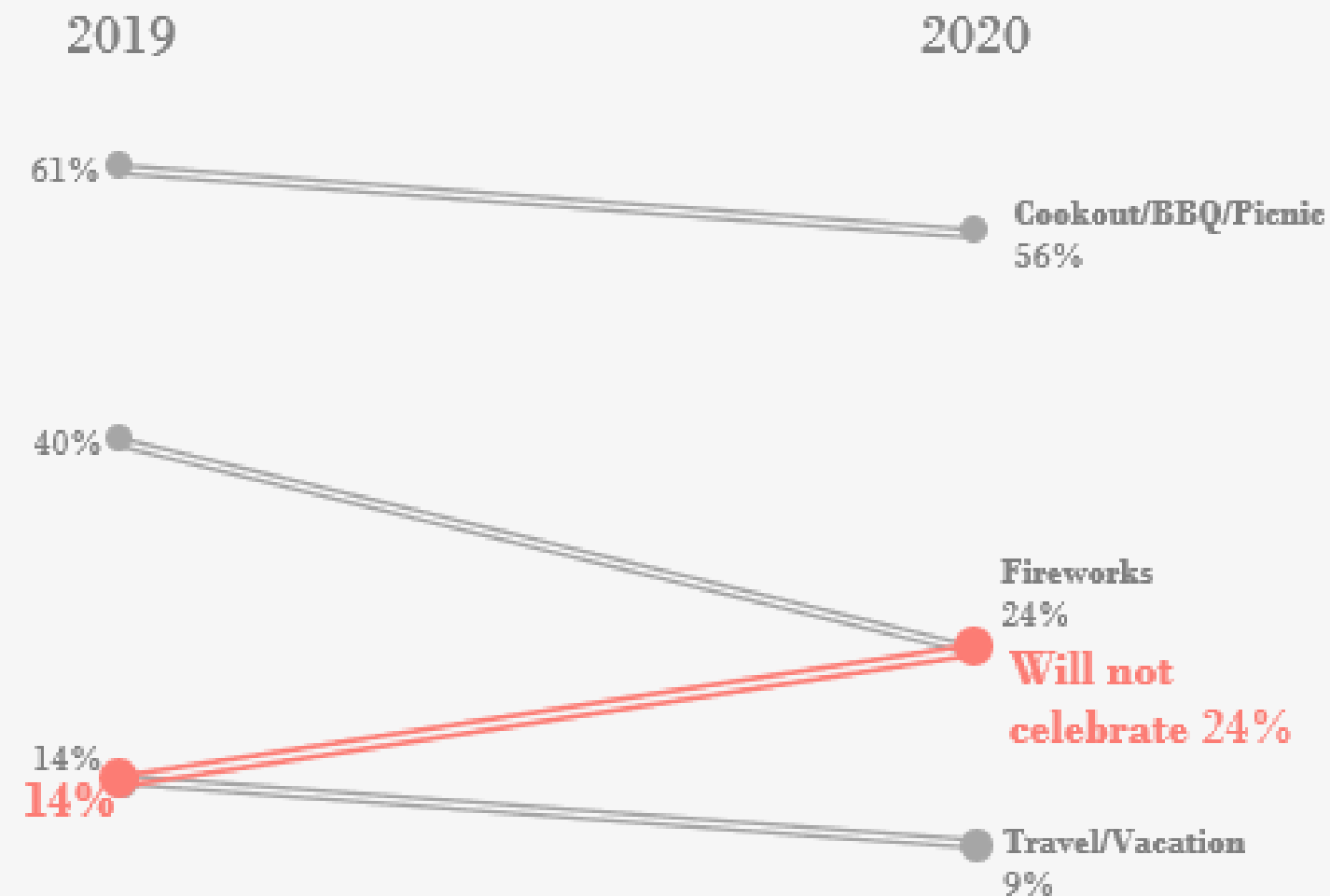
Data labeled directly 👍



# #4. USE ALT TEXT



In 2020, 1 in 4 Americans will not celebrate Independence Day



Source: NRF and Prosper Insights & Analytics Survey

## Alt Text

How would you describe this object and its context to someone who is blind?

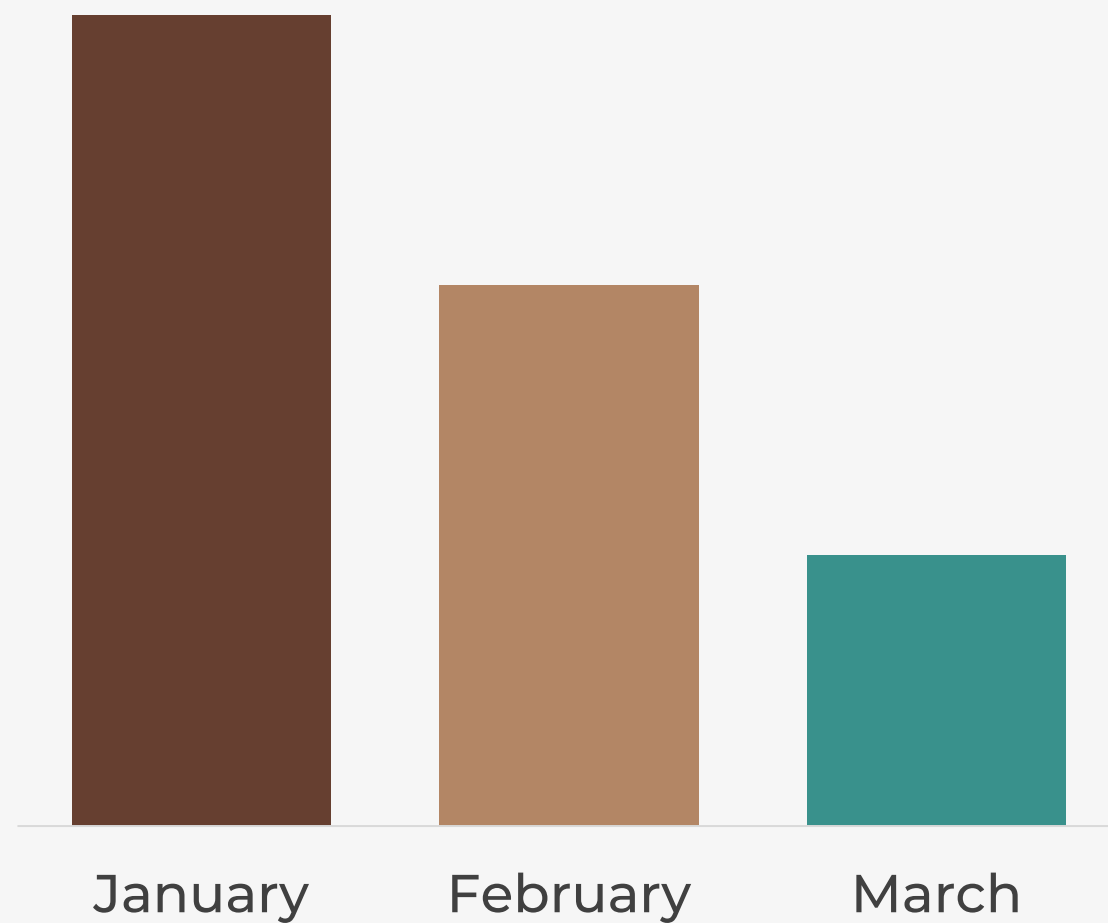
*(1-2 sentences recommended)*

The chart shows how Americans plan to celebrate Independence Day in 2019 versus 2020. 1 in 4 Americans don't plan to celebrate Independence Day in 2020, compared to only 14% in 2019.

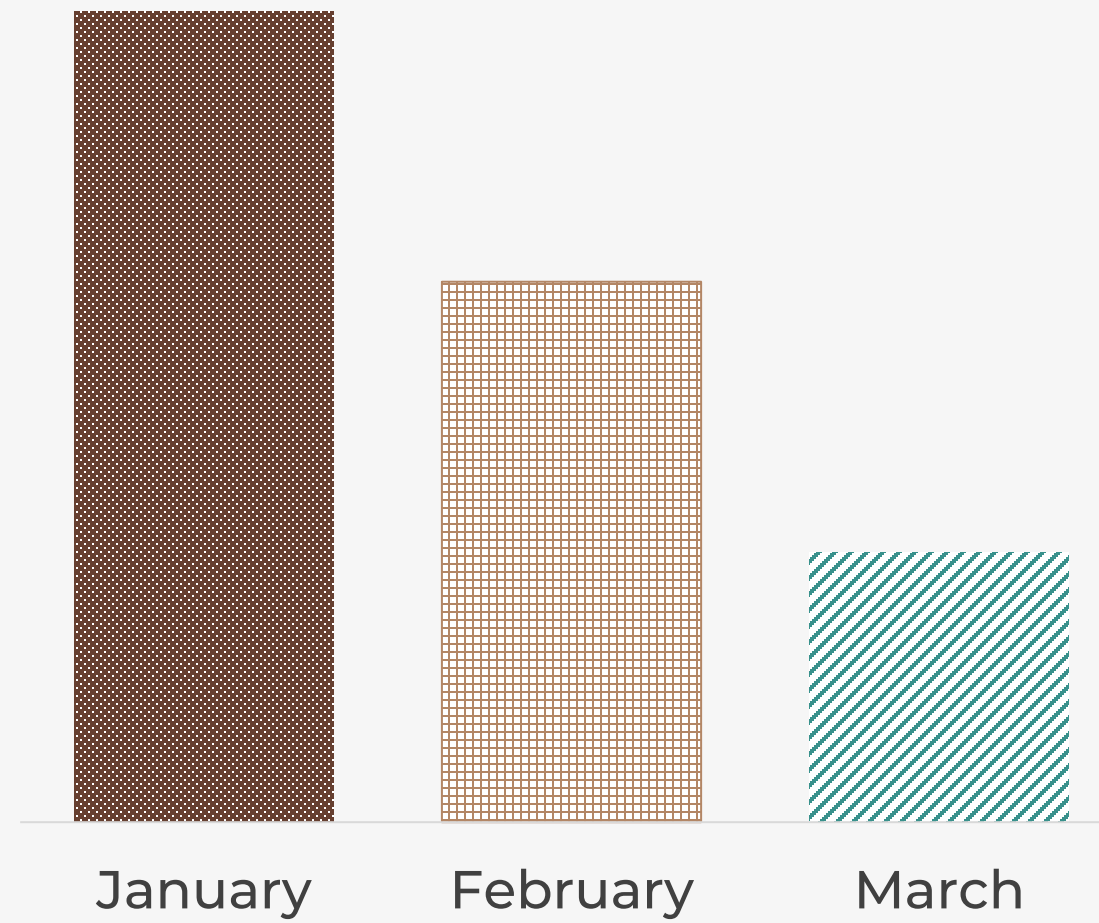
# #5. USE COLOR + PATTERNS



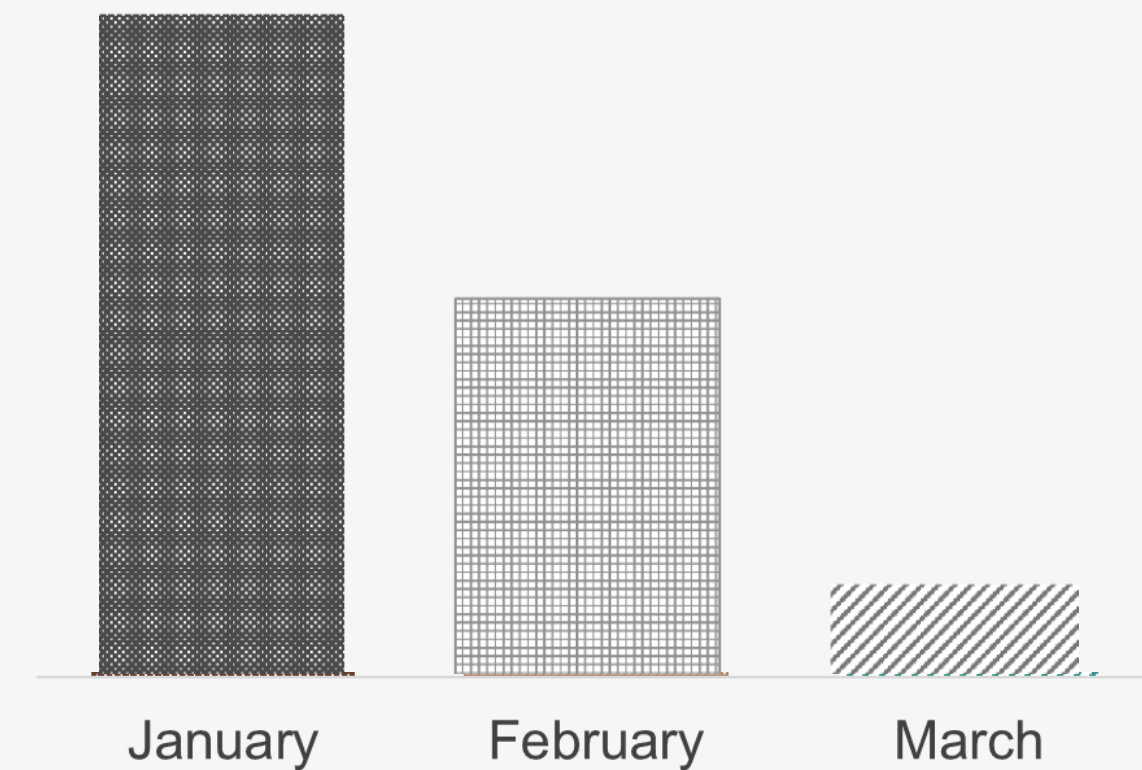
*Color only*



*Pattern + color*



*Monochromacy*





# A FEW OTHER TIPS



Use  
**icons**

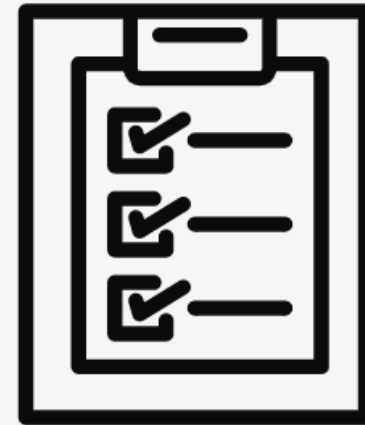


Use **accessible**  
**typography** (font size  
and **font type**)



Use **enough**  
**contrast** between  
background and  
text/charts

Tools that  
you can use



# TOOLS



[How to add ALT Text](#)



[Color-blindness simulator](#)



[Pick sequential, diverging, qualitative colors](#)



[Data color picker](#)



[Colors](#)



[Add patterns in Excel](#)



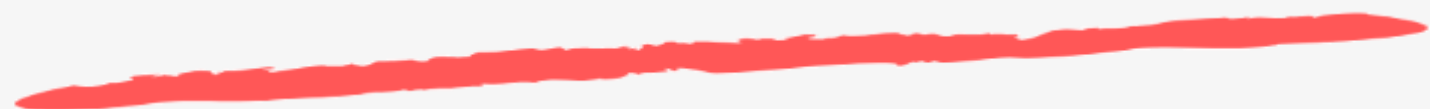
[Add patterns in Tableau](#)



[Icons](#)



# *Color in Data Visualization*





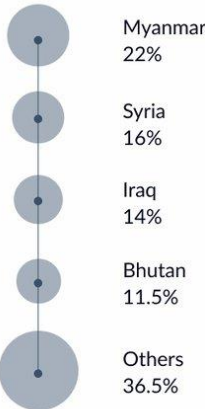
# RESETTLED

The journey of refugees who found a new home thanks to the UNHCR Resettlement Program.

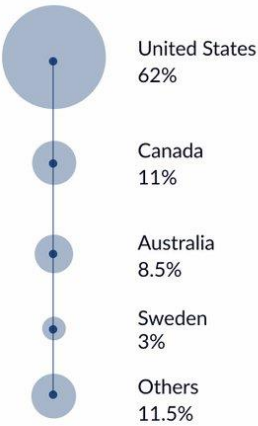
“I have travelled twice before in my life, but the last two times we travelled we were escaping. This time I am going to live a new life.” Nine-year-old Mahmoud fled the conflict in Syria to Egypt. Traumatized by the ordeal, he was later resettled with his family to Sweden.

Mahmoud is determined to make the most of his new life. So are many other refugees who benefited from the UNHCR Resettlement Program. This visualisation illustrates the journey of 968,425 humans who found a new home in the past 7.5 years.

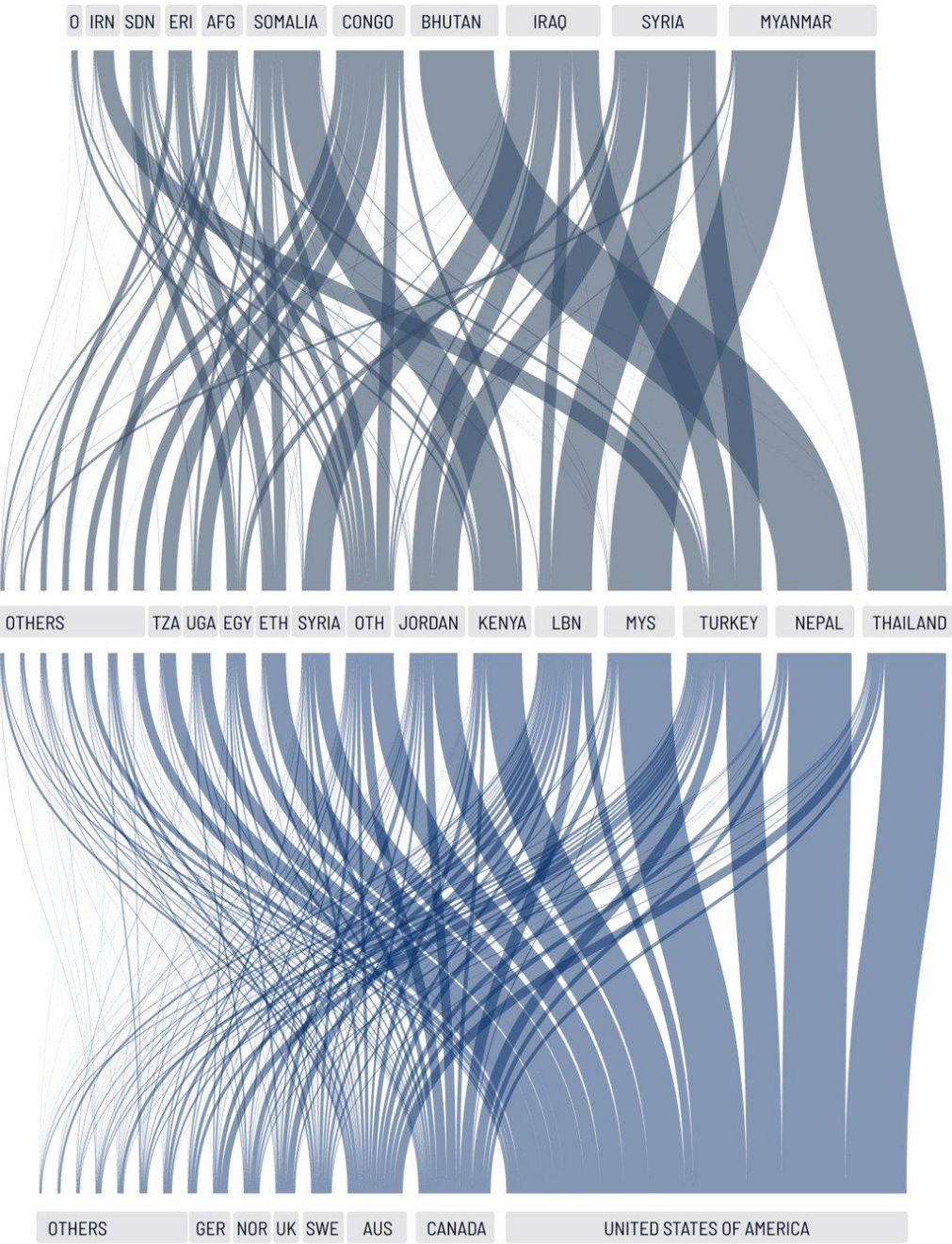
## COUNTRY OF ORIGIN



## COUNTRY OF ASYLUM



## COUNTRY OF RESETTLEMENT



There were 20.4 million refugees of concern to UNHCR around the world at the end of 2018, but less than one per cent of refugees are resettled each year.

This visualisation covers individuals who departed from asylum to resettlement countries between January 2003 and April 2020.

Data source: UNHCR

Designed by Evelina Judeikyte for #vizforsocialgood



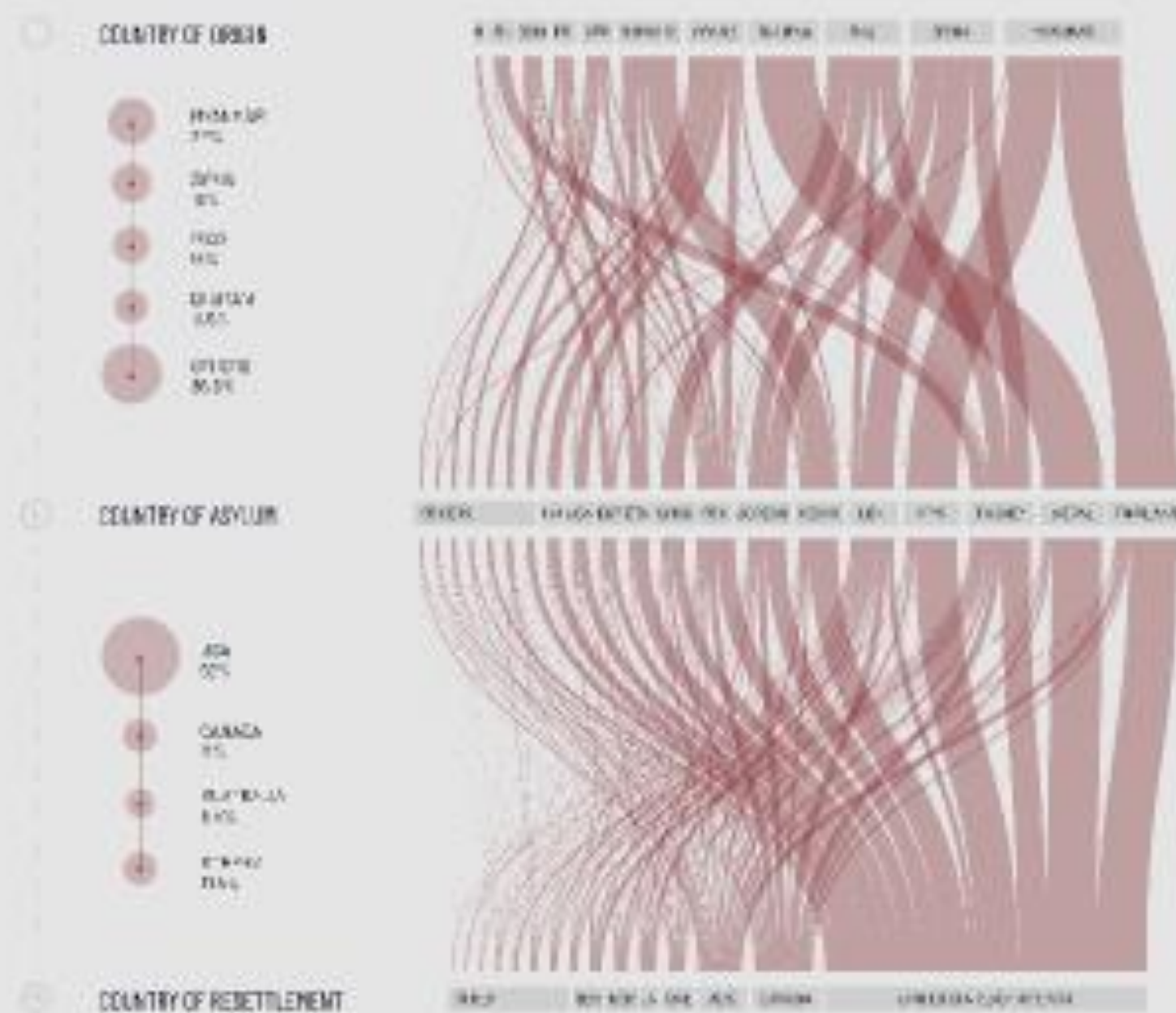




## RESETTLED

**1. What is the main idea of the passage?** The passage discusses the importance of maintaining accurate records in a business setting, specifically focusing on the role of a bookkeeper. It highlights how proper record-keeping can help a business owner understand their financial health and make informed decisions.

development. The WHO has been successful in spreading the idea of family planning, but has been less successful in spreading the idea of family planning as a means of reducing fertility. The WHO has been successful in spreading the idea of family planning as a means of reducing fertility, but has been less successful in spreading the idea of family planning as a means of reducing fertility.

[illegible]



# RESETTLED

Mapping the pathways of refugees resettled across the U.S. through resettlement agencies.

Resettlement is an important part of the refugee process, providing a safe haven for those fleeing persecution, conflict, or natural disasters. The U.S. resettles refugees through a network of resettlement agencies, which are authorized by the U.S. Department of Homeland Security to provide a range of services, including housing, employment, and language training.

Resettlement is a complex process, involving a range of factors, including the country of origin, the country of asylum, and the country of resettlement. The process is also influenced by the availability of resettlement slots, which are allocated by the U.S. Department of Homeland Security.

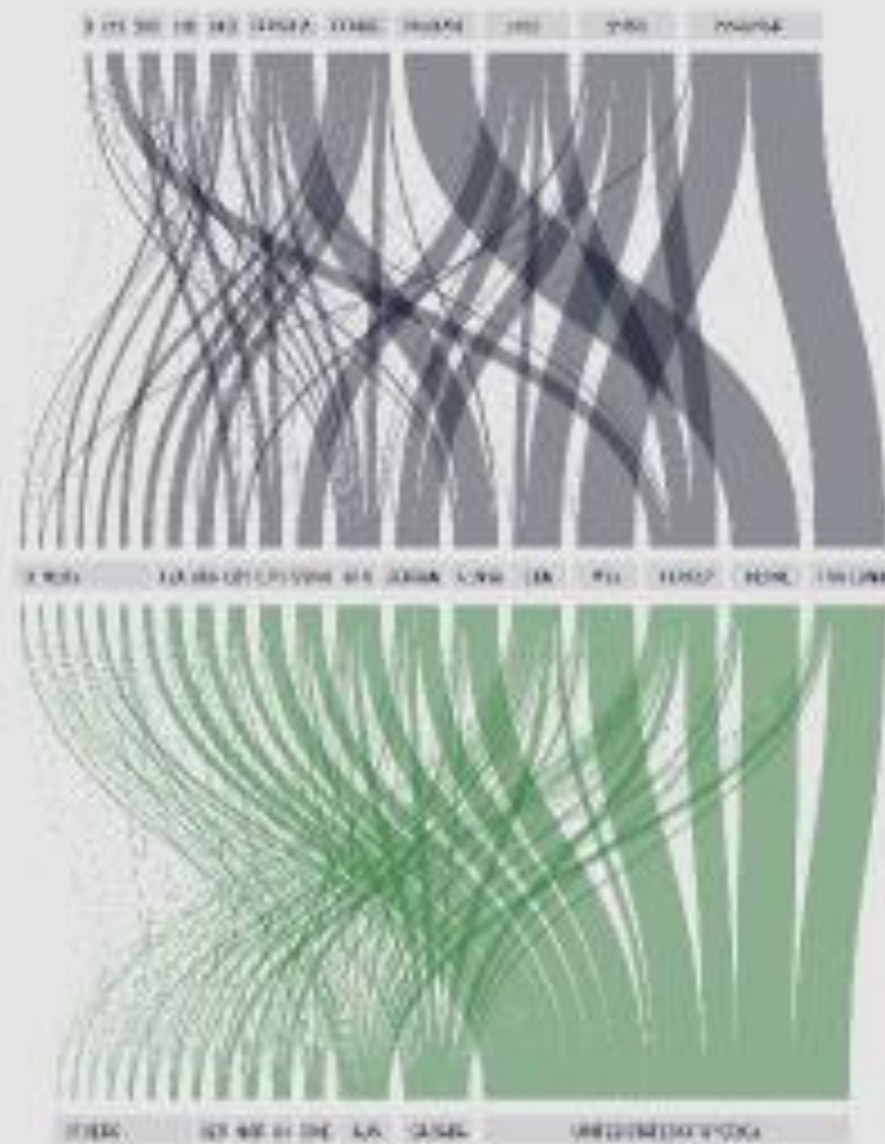
## COUNTRY OF ORIGIN



## COUNTRY OF ASYLUM



## COUNTRY OF RESETTLEMENT







# RESETTLED

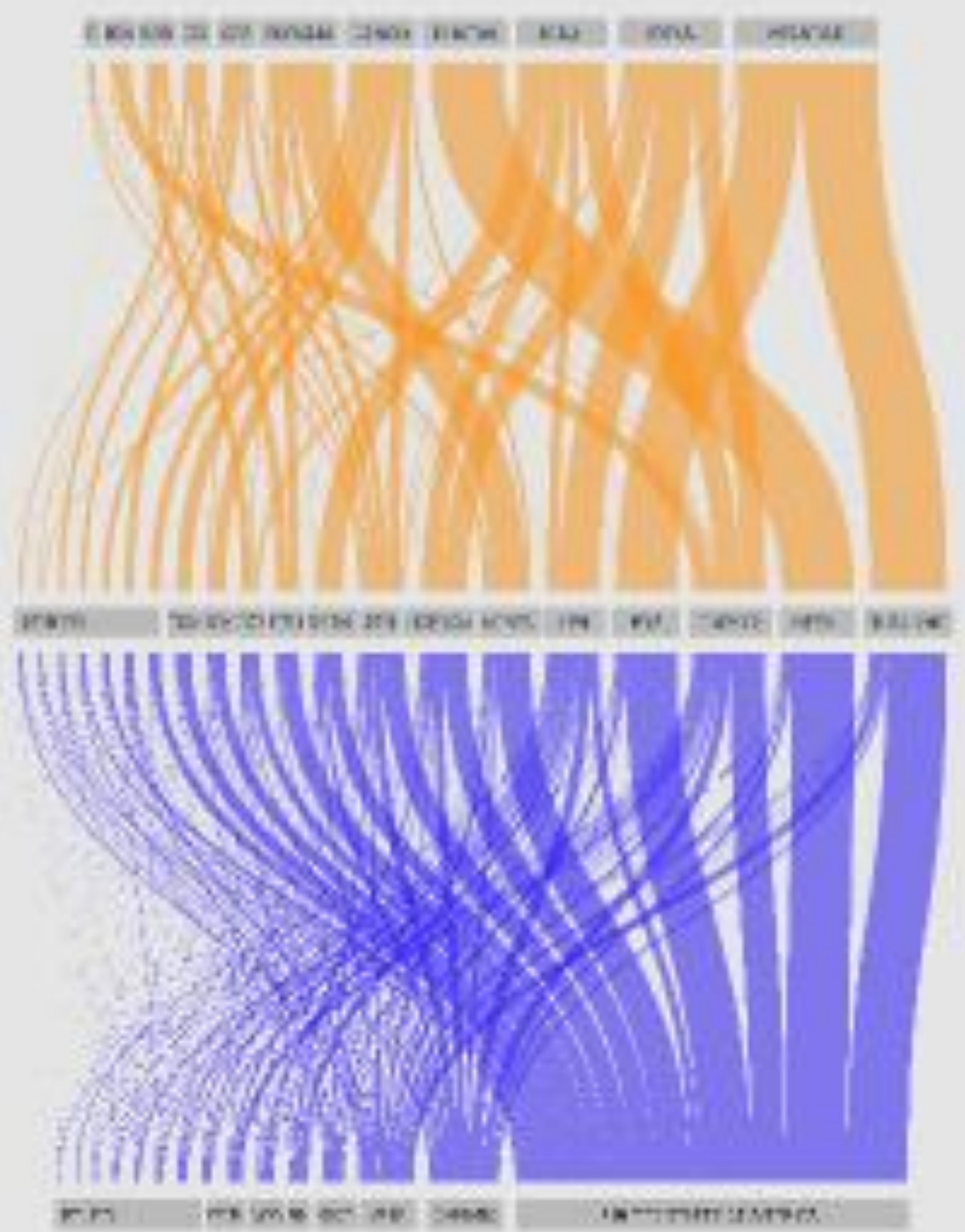
For Marka Samuelsen, a young woman who arrived in the United States in 1952 and stayed in the country until 1964, this visual story tells her story. It is a story of hope, of struggle, of love, and of the power of the human spirit.

Population 1: The population of the United States in 1952 was 150 million. The population of the United States in 1964 was 170 million. The population of the United States in 1976 was 190 million. The population of the United States in 1988 was 210 million. The population of the United States in 2000 was 230 million. The population of the United States in 2012 was 250 million. The population of the United States in 2024 was 270 million.

Population 2: The population of the United States in 1952 was 150 million. The population of the United States in 1964 was 170 million. The population of the United States in 1976 was 190 million. The population of the United States in 1988 was 210 million. The population of the United States in 2000 was 230 million. The population of the United States in 2012 was 250 million. The population of the United States in 2024 was 270 million.

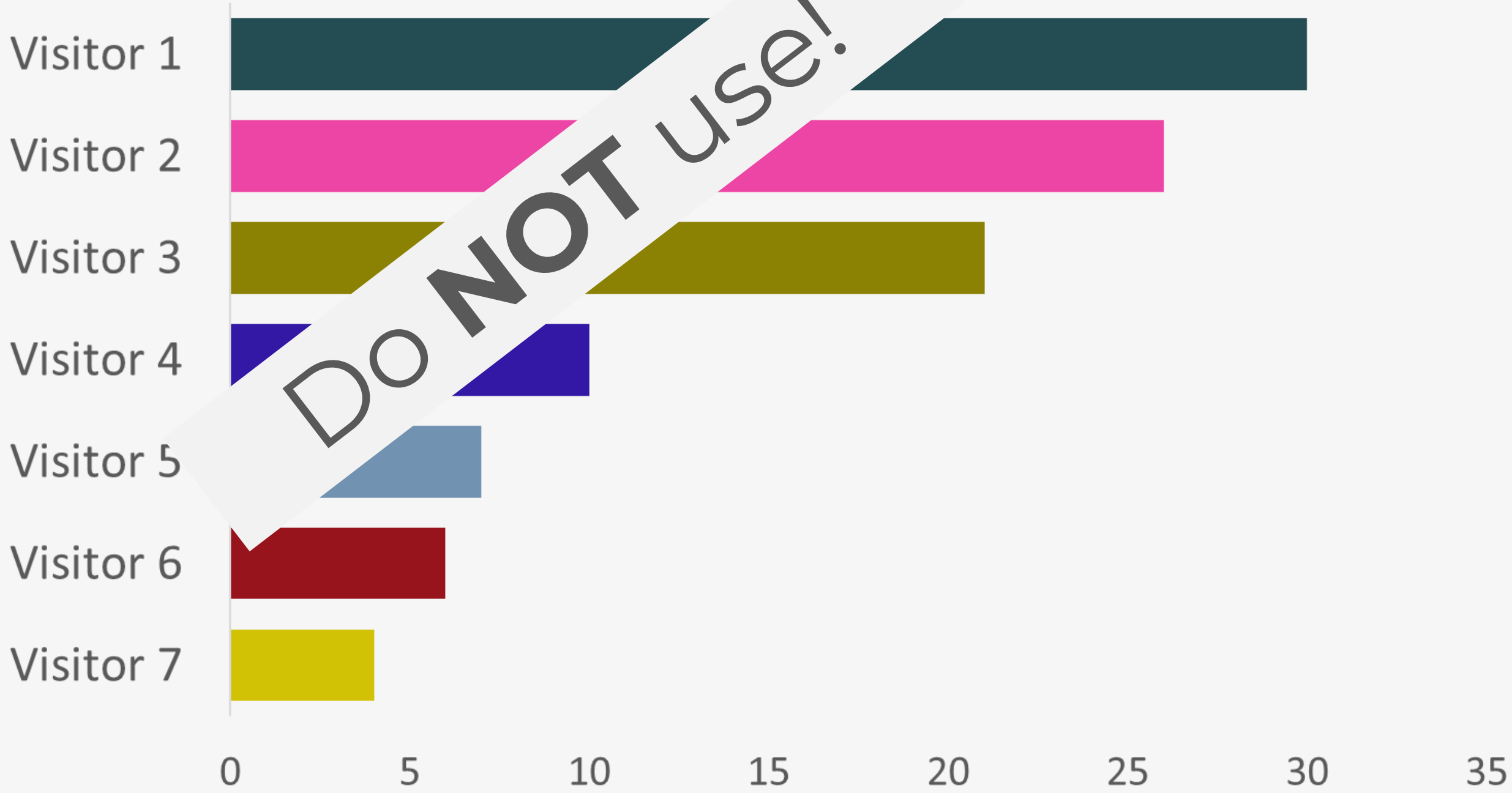


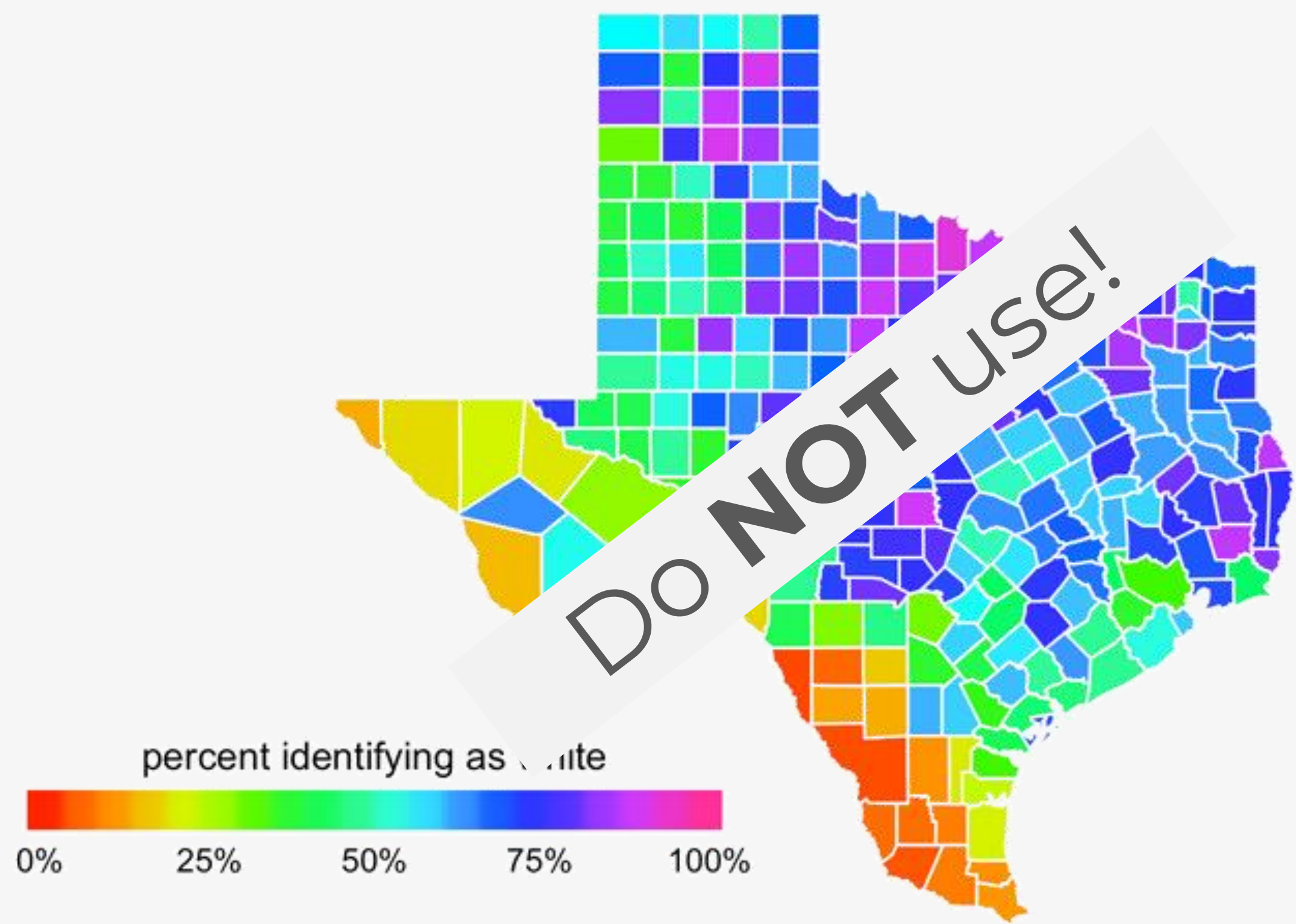
COUNTRY OF RESETTLEMENT





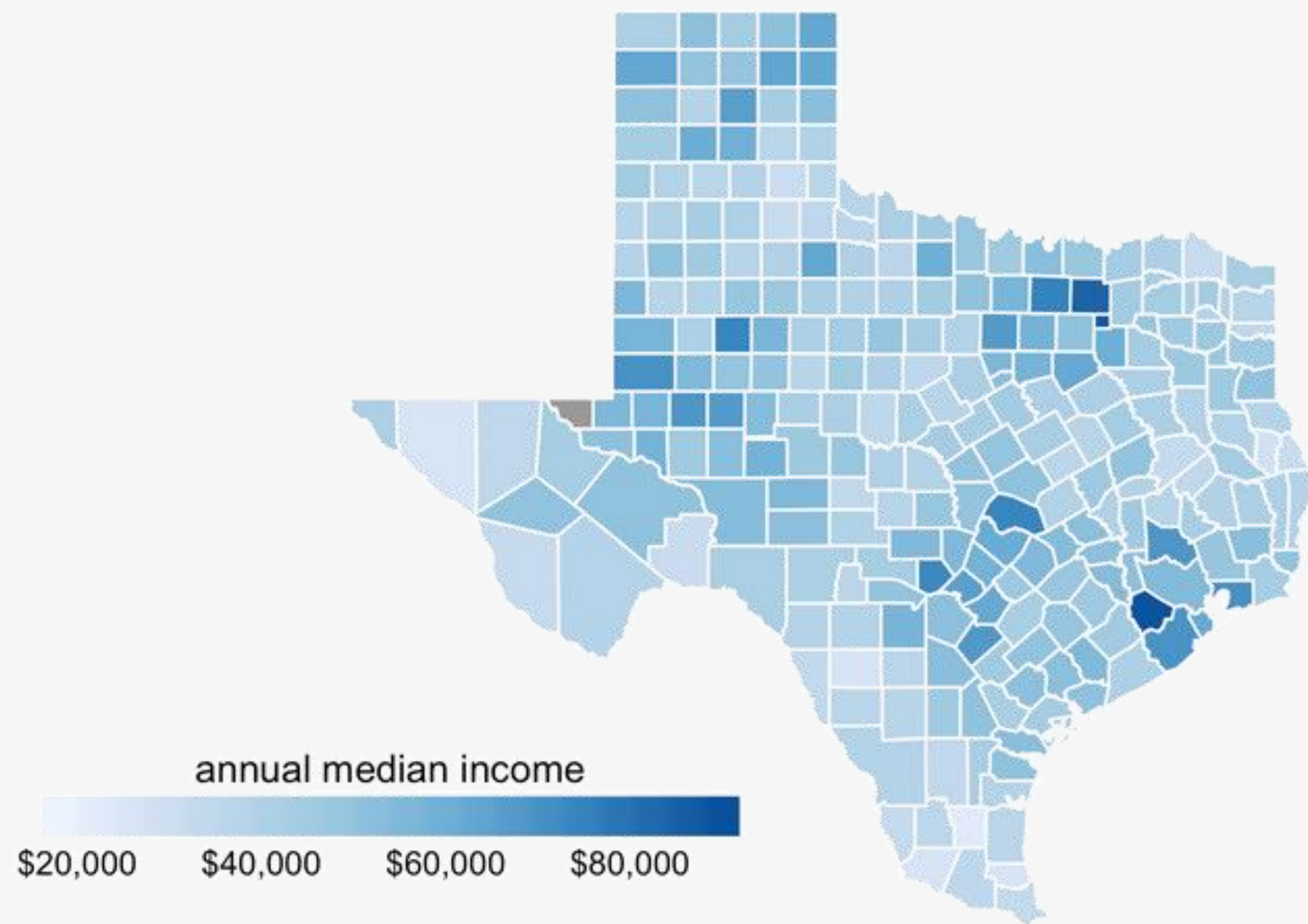
Number of Websites Visits





Source: <http://serialmentor.com/dataviz/color-basics.html>



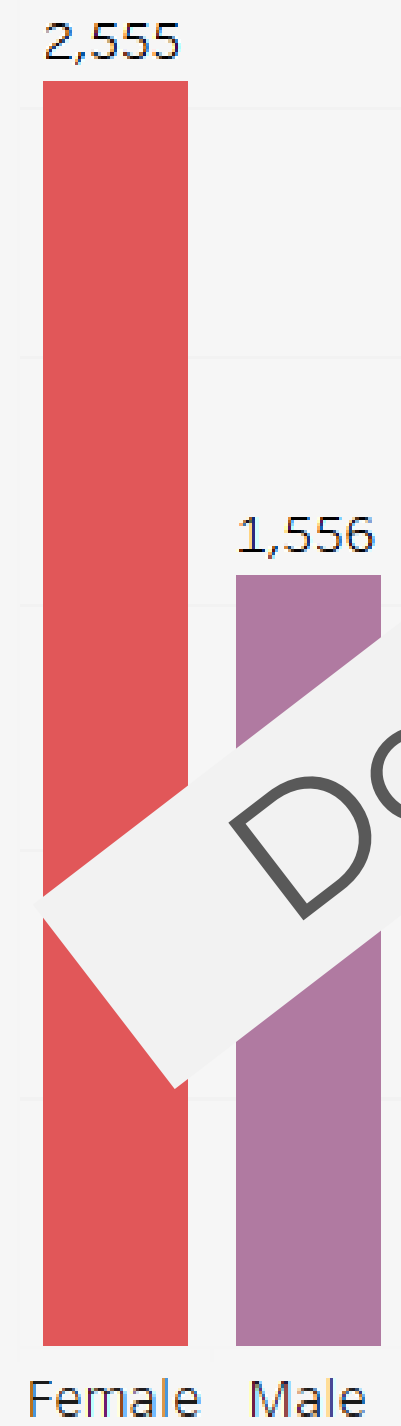


Source: : <http://serialmentor.com/dataviz/color-basics.html>

1. *Use color sparingly*



Females are more active than men on Twitter.



Do NOT use!

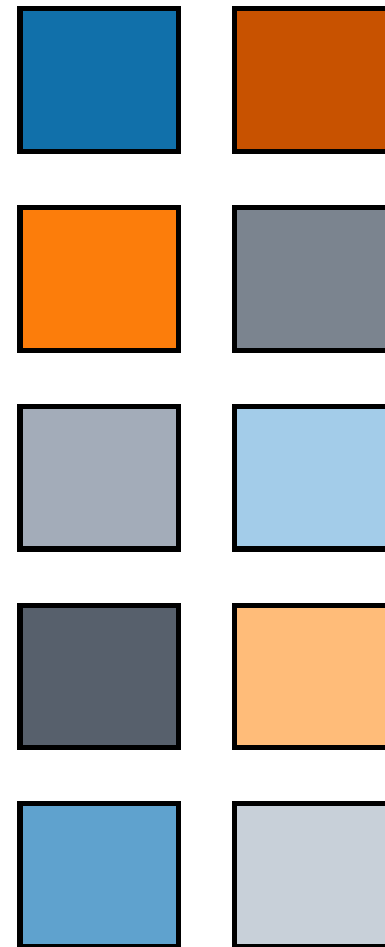
1. Use color sparingly
2. Use color consistently



Select Color Palette:



Color Blind





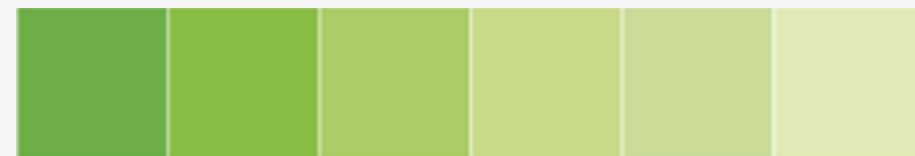
1. Use color sparingly
2. Use color consistently
3. Consider color-blindness



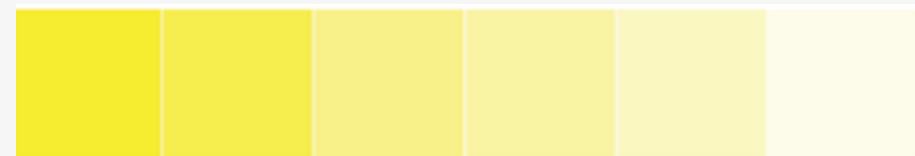
Security, integrity, peace



Fresh, positive



Energy, caution



Romance, beauty, love



1. Use color sparingly
2. Use color consistently
3. Consider color-blindness
4. Know the meaning of colors



Source : <https://www.marion.com/how-choosing-branding-color-schemes-palettes/>

1. Use color sparingly
2. Use color consistently
3. Consider color-blindness
4. Know the meaning of colors
5. Consider brand-specific colors

# TOOLS

Palettable  
Colormind  
ColorSpace





# EXERCISE



**Take a look at the two dashboards presented on the next slides.**

**Evaluate the color use based on the lessons learned today.**

**How would you rate each dashboard on a scale of 1 to 10 (10 being outstanding color use)?**





WHO TOOK THE MOST STEPS IN LAS VEGAS DURING #DATA22? I THOUGHT I WALKED A LOT BUT IT WAS NOTHING COMPARED TO SOME OF THE OTHERS WHO SUBMITTED THEIR STEP COUNT. WELL DONE ALL!

FROM THE TOP TEN WALKERS THE WINNER IS....

Paul Chapman	74,172
John Bowles	71,788
Doc Kevin Lee Elder	65,673
Adam Mico	64,098
Jacqui	61,823
Ben C	60,815
Noam Sadan	60,054
35	58,309
Bechor Barouch	57,721
Sarah	57,358

WEDNESDAY WAS THE DAY WITH THE MOST STEPS BUT TUESDAY WAS CLOSE BEHIND

Wednesday 861,083

Tuesday 854,199

Thursday 722,119

3,769,357  
TOTAL STEPS TRACKED

HOLY STEPS  
CHAPMAN!

HOW DID WE COMPARE?

PICK A CHALLENGER!  
Michelle Frayman

1.5X

Paul Chapman had 1.5X more steps on Tuesday - Thursday than Michelle Frayman with a step count of

48,279

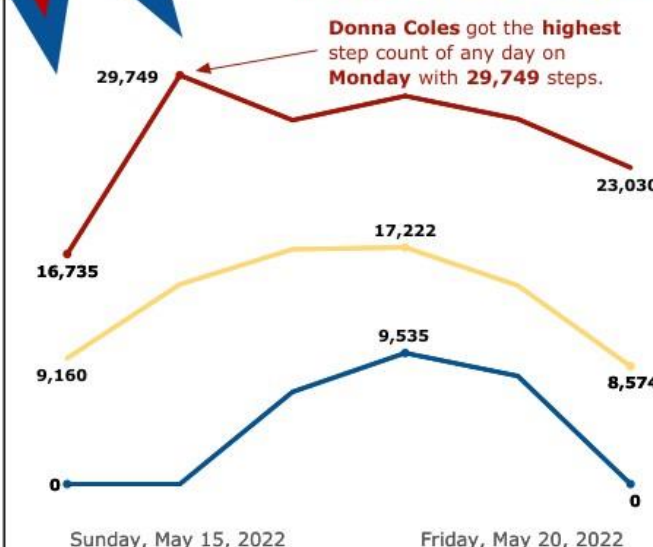
Tuesday 15,391 24,283

Wednesday 20,688 25,586

Thursday 12,200 24,303

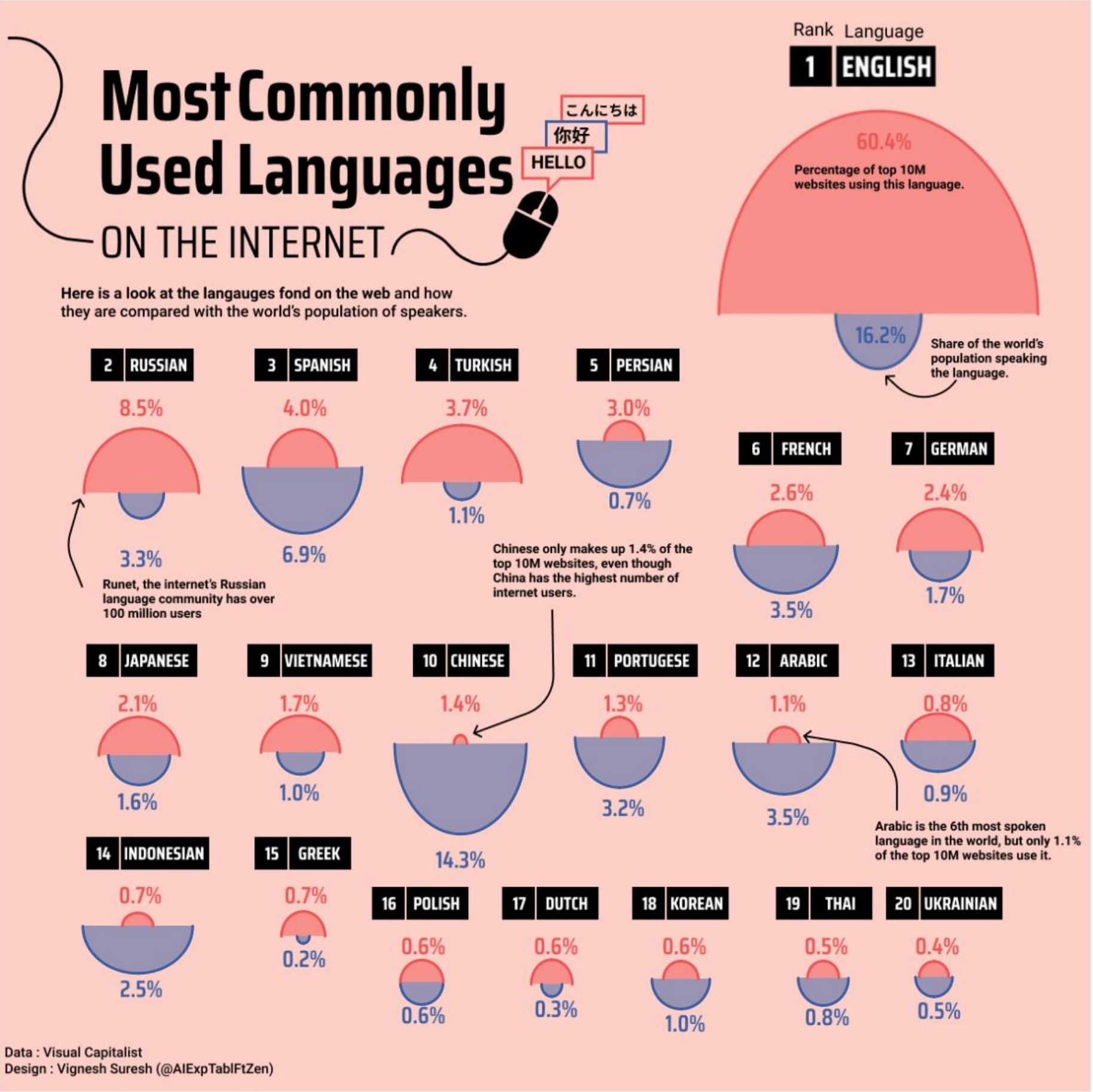
HOW DID OUR STEP COUNT  
LOOK OVER TIME?

MAXIMUM | AVERAGE | MINIMUM



DATASOURCE: #data22 attendees self-reported & collected by Brittany Rosenau | DESIGNED BY: Michelle Frayman @maf2k

Source: <https://public.tableau.com/app/profile/michelle.frayman/viz/Data22StepCount/HolyStepsChapman>



Source:

<https://public.tableau.com/app/profile/vignesh.suresh1214/viz/MostCommonlyUsedLanguagesontheInternet/>  
[MostCommonlyUsedLangugesontheInternet](#)