

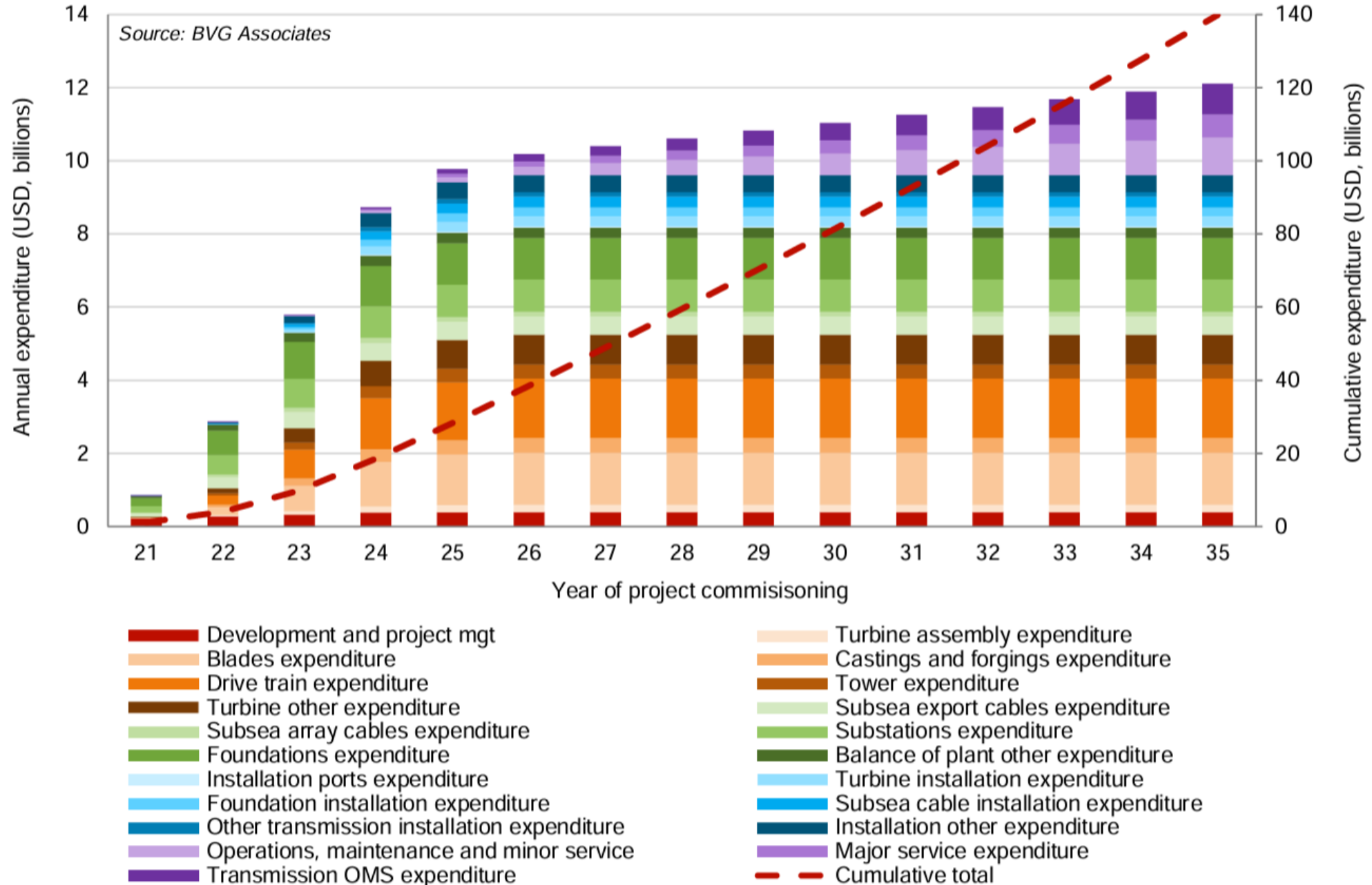
PLAN 590

January 24, 2025

# Communicating with data

Week 2

## 2.2 Forecast of expenditure



# Schedule

## Day 1: January 17

- Setting goals for your data visualizations
- Defining your audience
- Visual Processing & Cognitive Load
- How to choose the right visualization for your data (chart bootcamp)

## Day 3: January 31

- Plain language: What it is, why it's important, and how to use it
- Writing about numbers
- What makes a compelling data story
- Mapping your data characters

## Day 2: January 24

- XRAY discussion
- Data Visualization Research: What Works
- Enough color theory to get by
- Better legends in your data visualization
- Titles, annotations, and other texts
- “Fix my chart” exercise

## Day 4: February 7

- Accessibility in data visualization
- Equity in data visualization
- Data visualization in the workplace
- Workshop time for memos

# Final Memo

Choose an analytical topic and write a memo for a data stakeholder (e.g., a colleague, client, or elected official). Your memo should include:

1. **The question or problem** you are addressing.
2. **Your data sources** and the approach you used to analyze the data.
3. **Your findings** and any potential limitations.

**Due Date:** February 21

**Word Limit:** No more than 2,500 words.

Use as many charts or visuals as needed, but only include those essential to telling your data story.

# Discussion: XRAY Practice

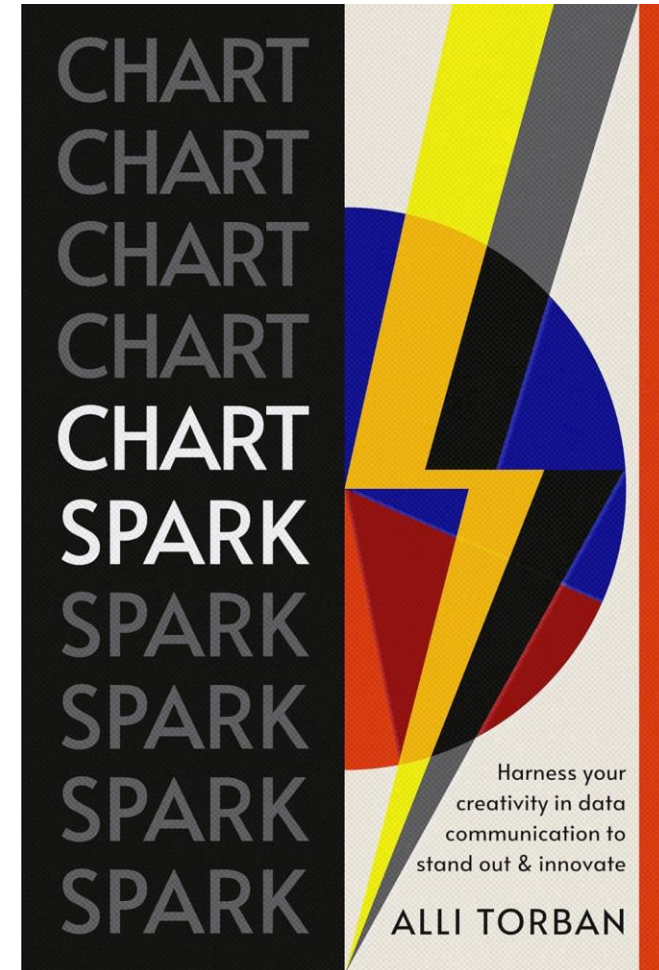
## XRAY Exercise

**X** for Excites: What excites you?

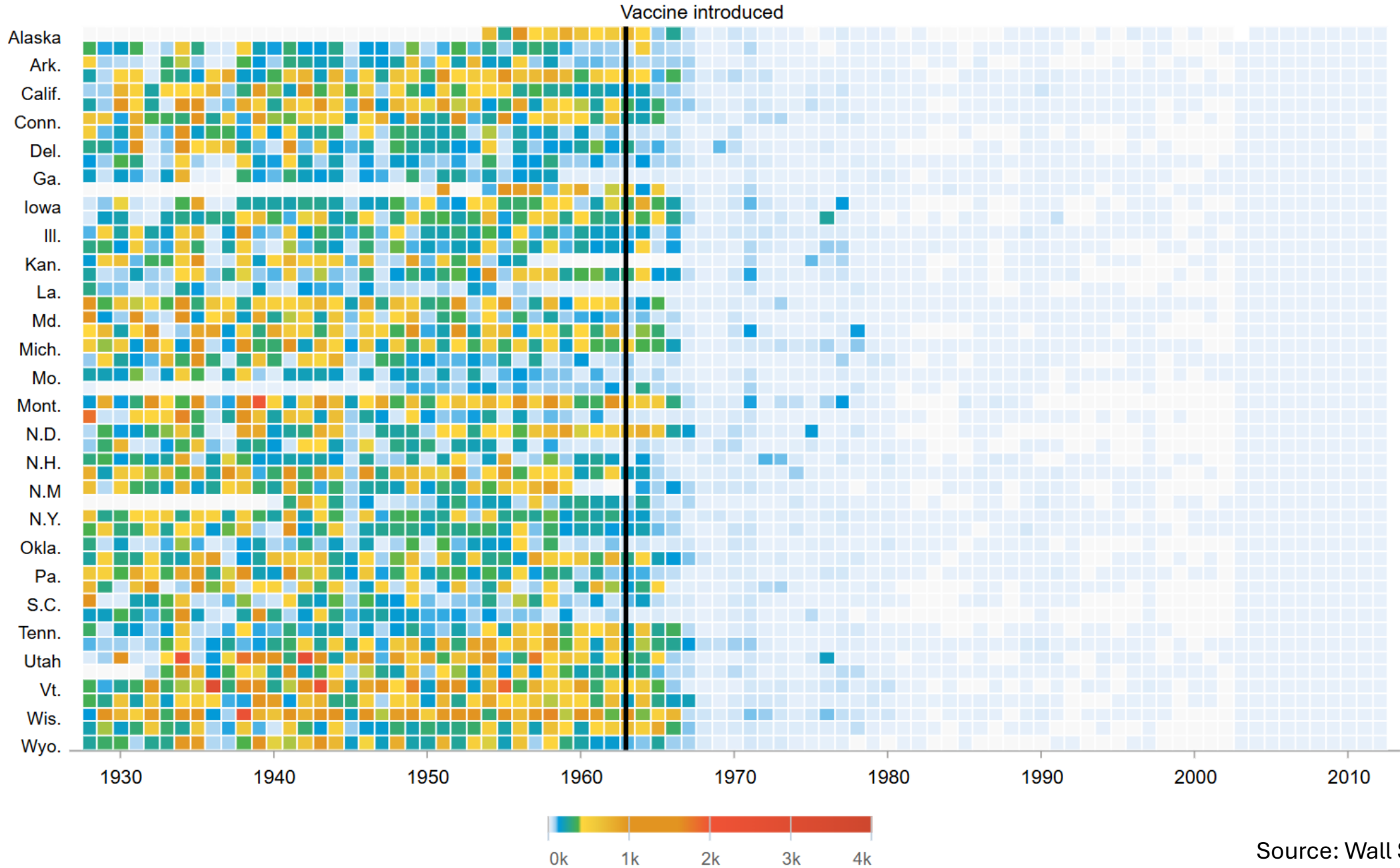
**R** for Rules: What rules does it follow?

**A** for Anarchy: How is it breaking the rules?

**Y** for You: How can you use it in the future?



# Measles



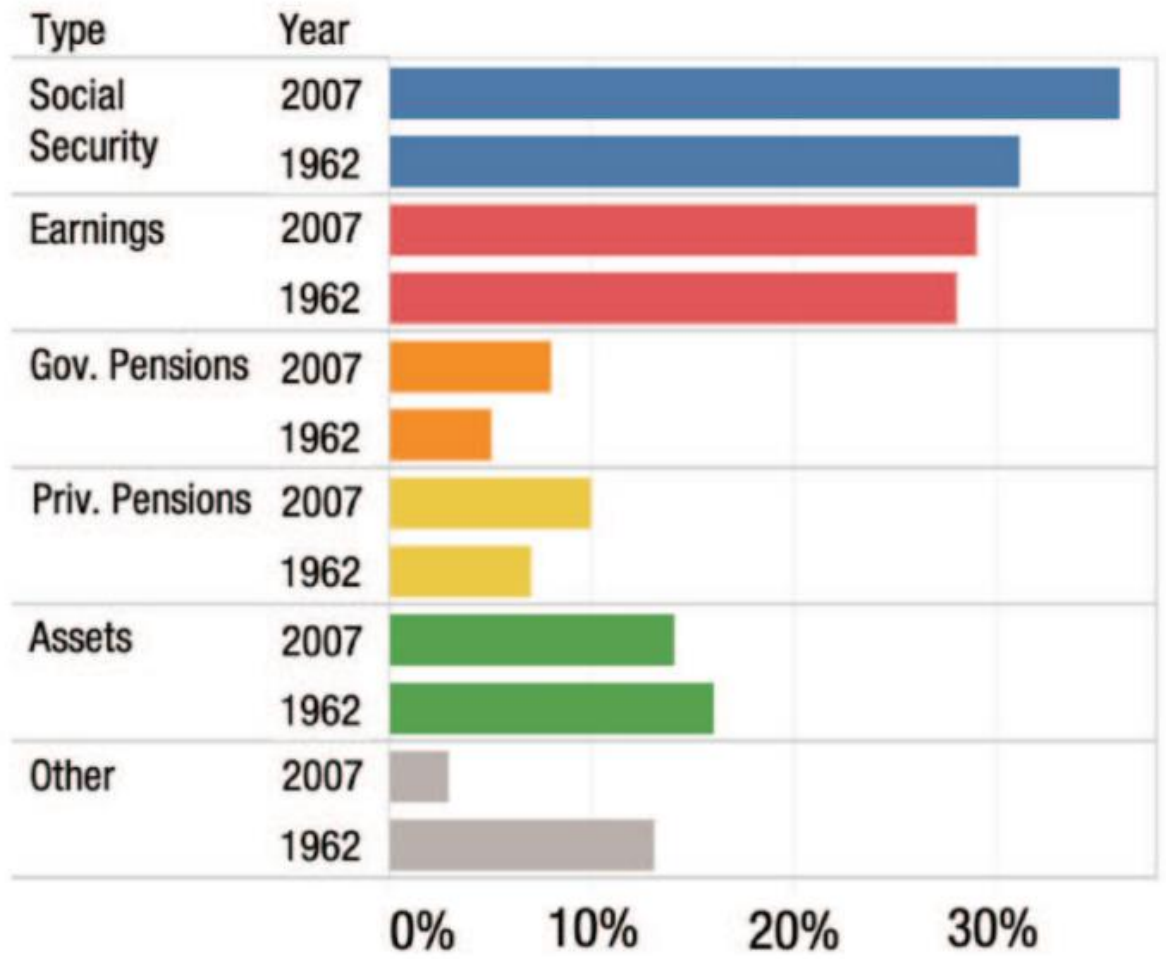
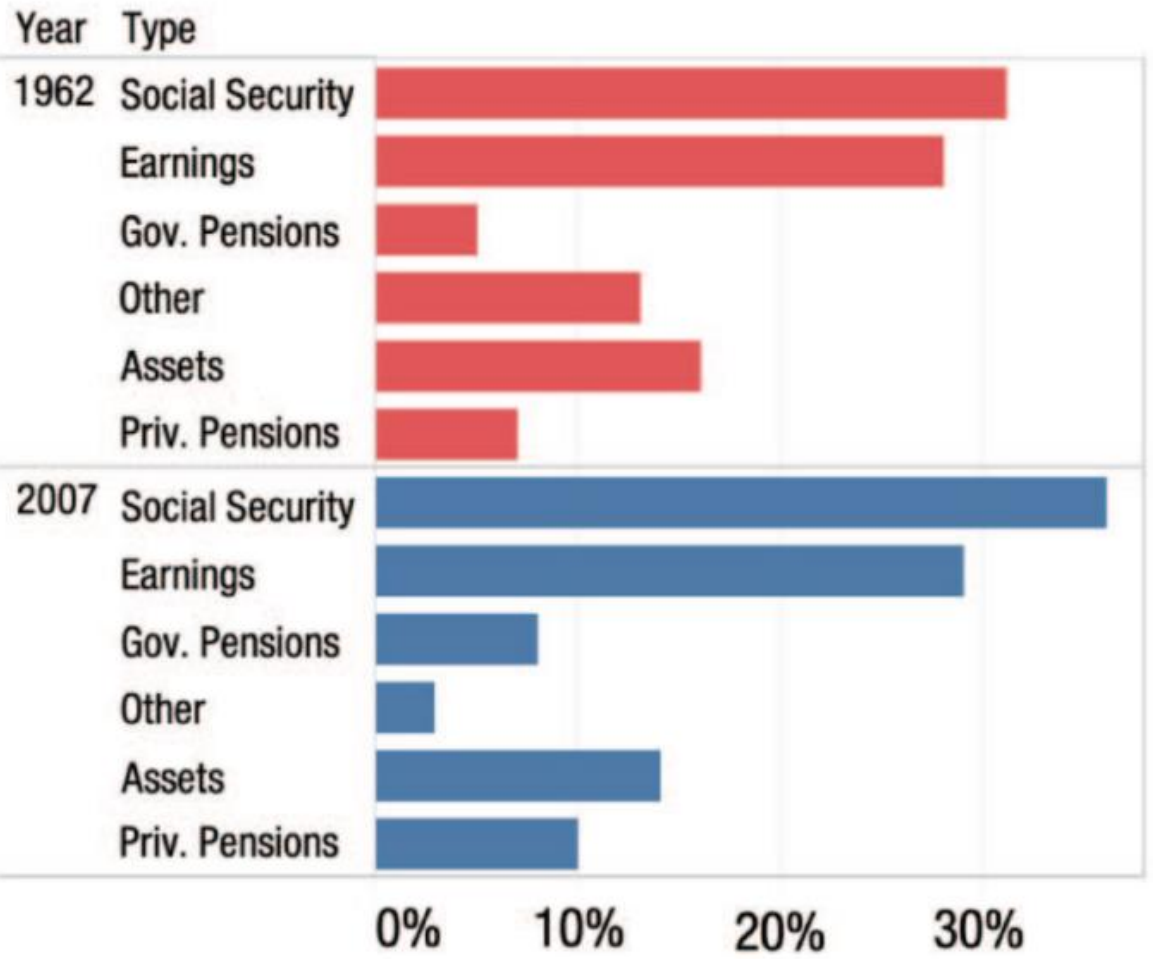
Psychological Science in the Public Interest  
Volume 22, Issue 3, December 2021, Pages 110-161  
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<https://doi.org/10.1177/15291006211051956>



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## **The Science of Visual Data Communication: What Works**

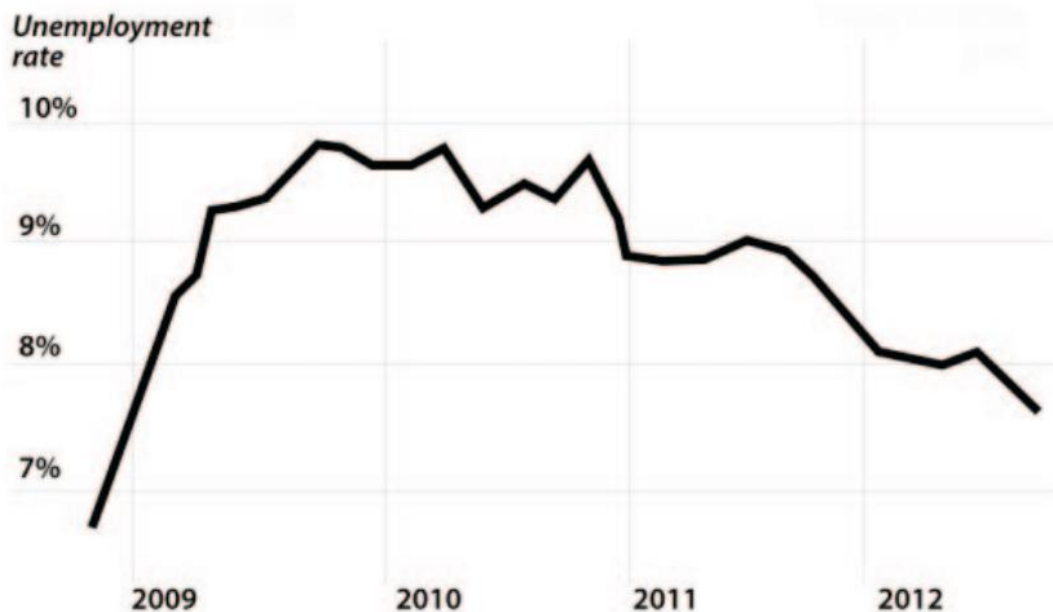
**Steven L. Franconeri<sup>1</sup>, Lace M. Padilla<sup>2</sup>, Priti Shah<sup>3</sup>, Jeffrey M. Zacks<sup>4</sup>, and Jessica Hullman<sup>5</sup>**





## Unemployment is higher than stated goals

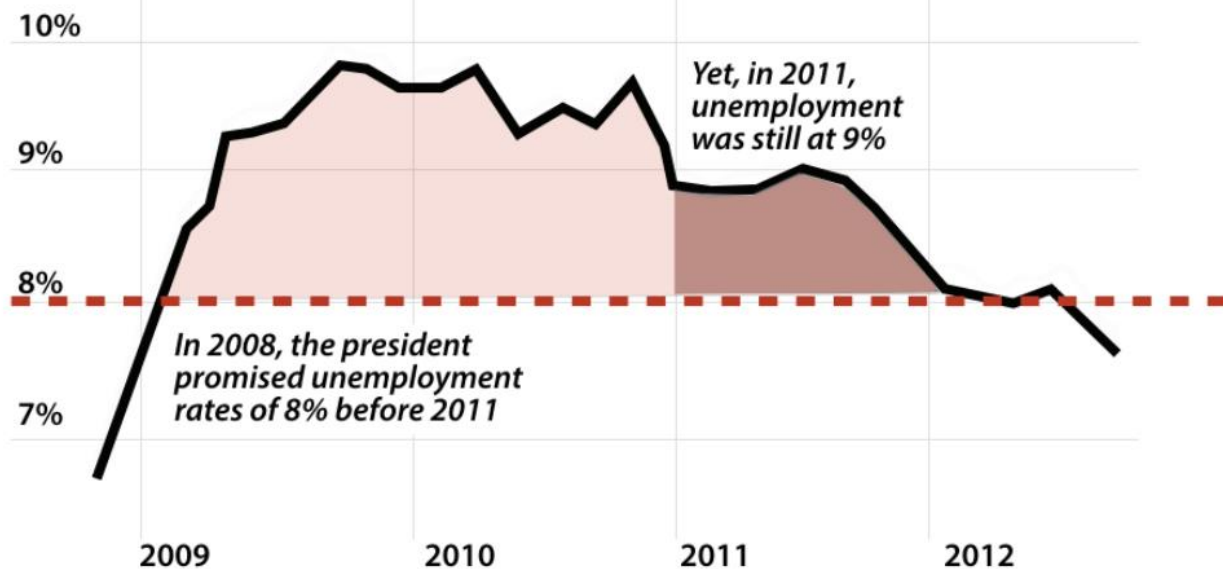
*In 2008, the president promised unemployment rates under 8% before 2011.  
Yet, in 2011, unemployment was still at 9%*



Inspired by:  
<http://www.nytimes.com/interactive/2012/10/05/business/economy/one-report-diverging-perspectives.html>

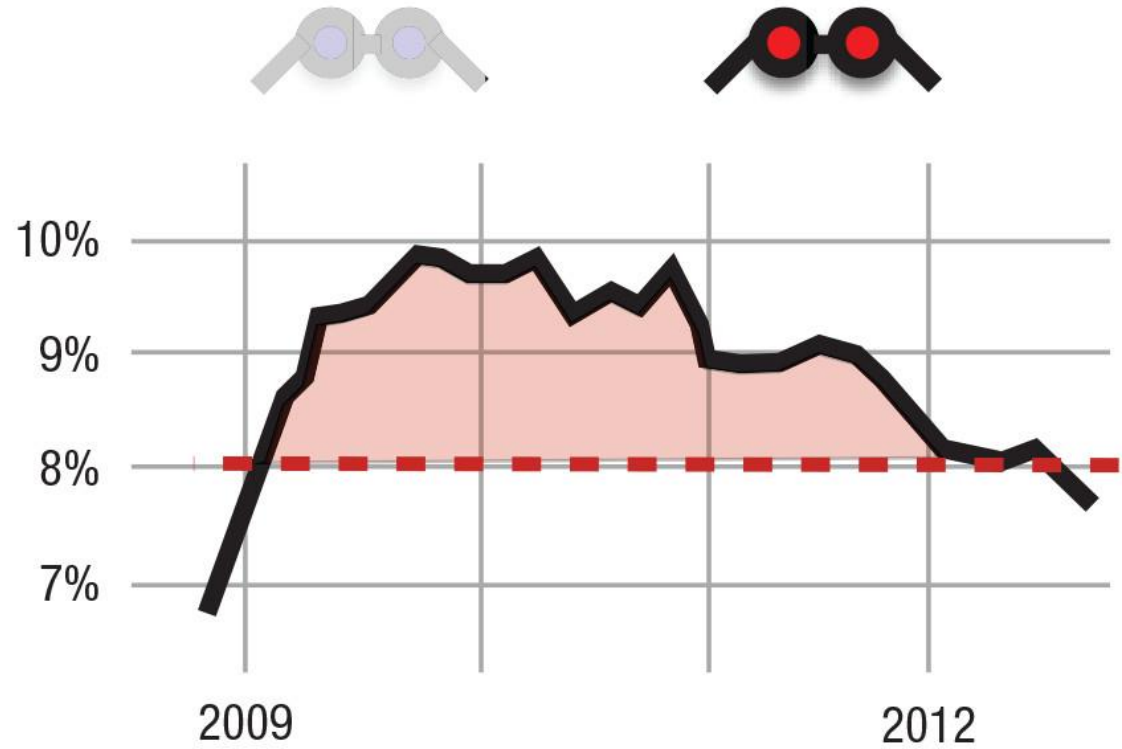
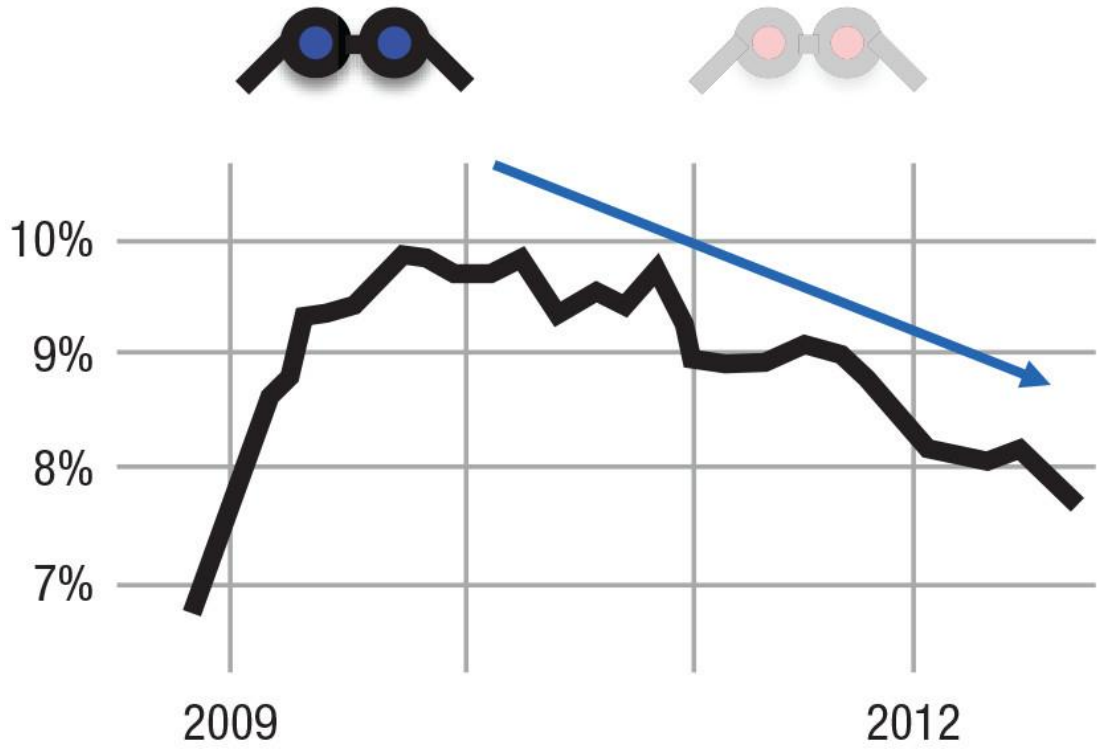
## Unemployment is higher than stated goals

*Unemployment rate*

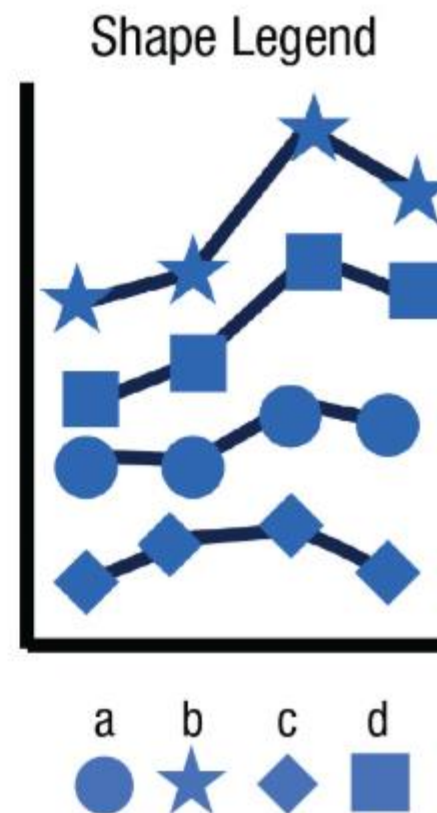
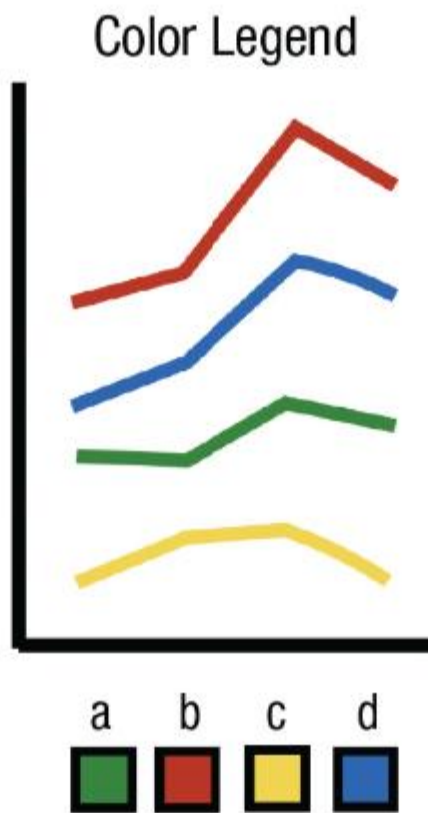
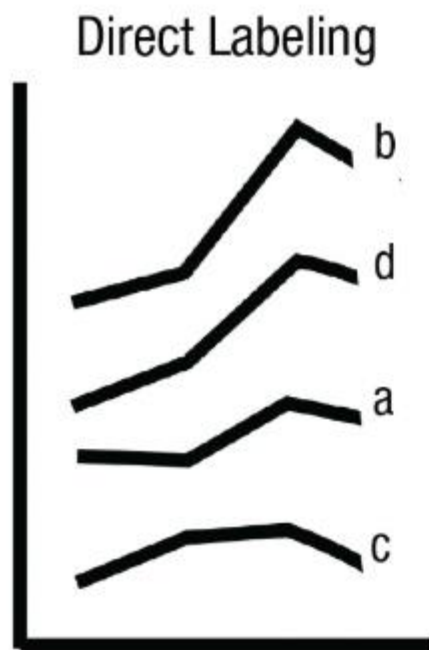


Inspired by:  
<http://www.nytimes.com/interactive/2012/10/05/business/economy/one-report-diverging-perspectives.html>

# Guide viewer toward the most important comparisons

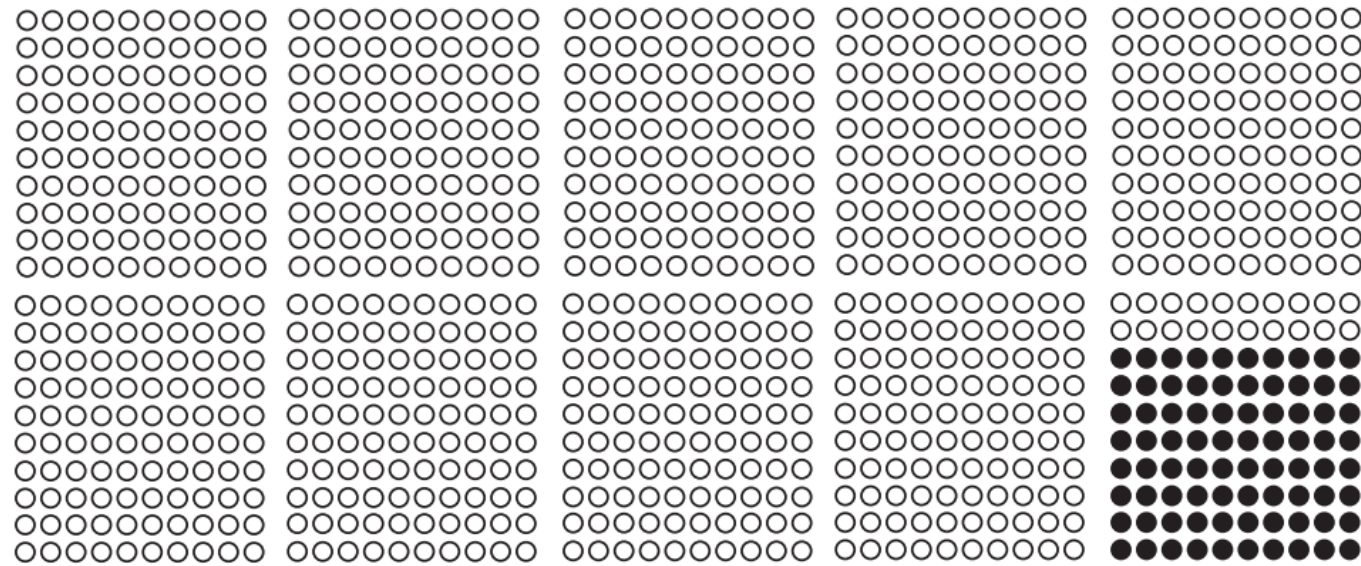


Source: Franconeri et al 2021

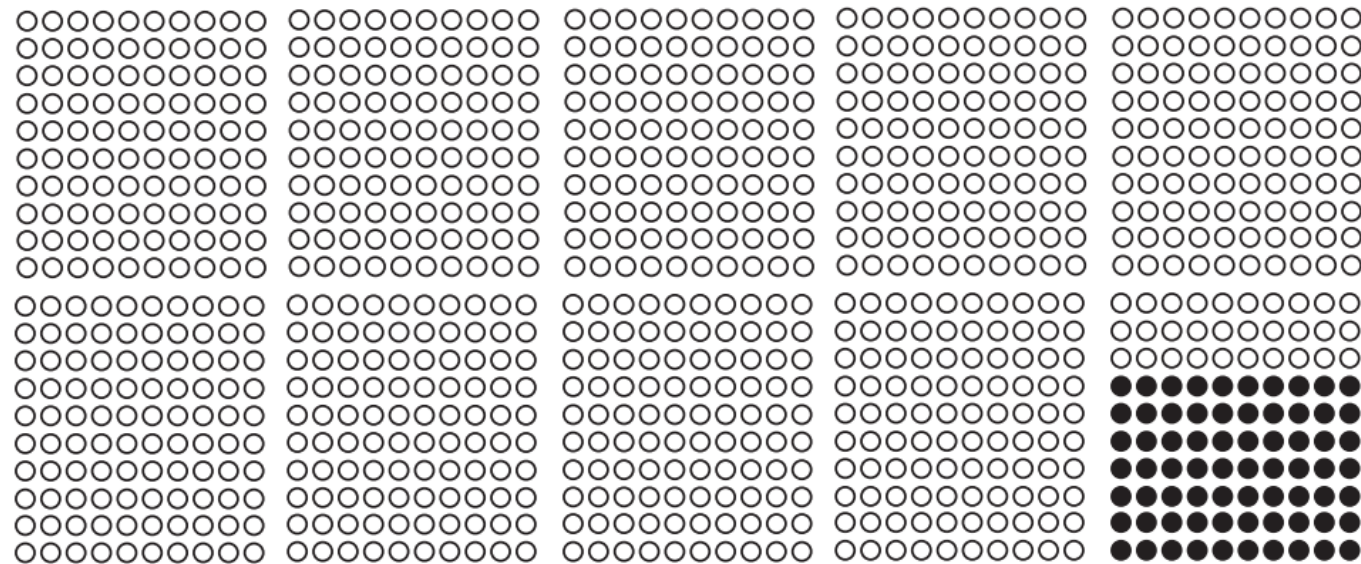


**For people with symptoms of arterial disease, aspirin can reduce the risk of having a stroke or heart attack by 13%.**

**Without aspirin**



**With aspirin**



# How to focus attention

# How to **focus attention**

Size

1. Order

**Bold**

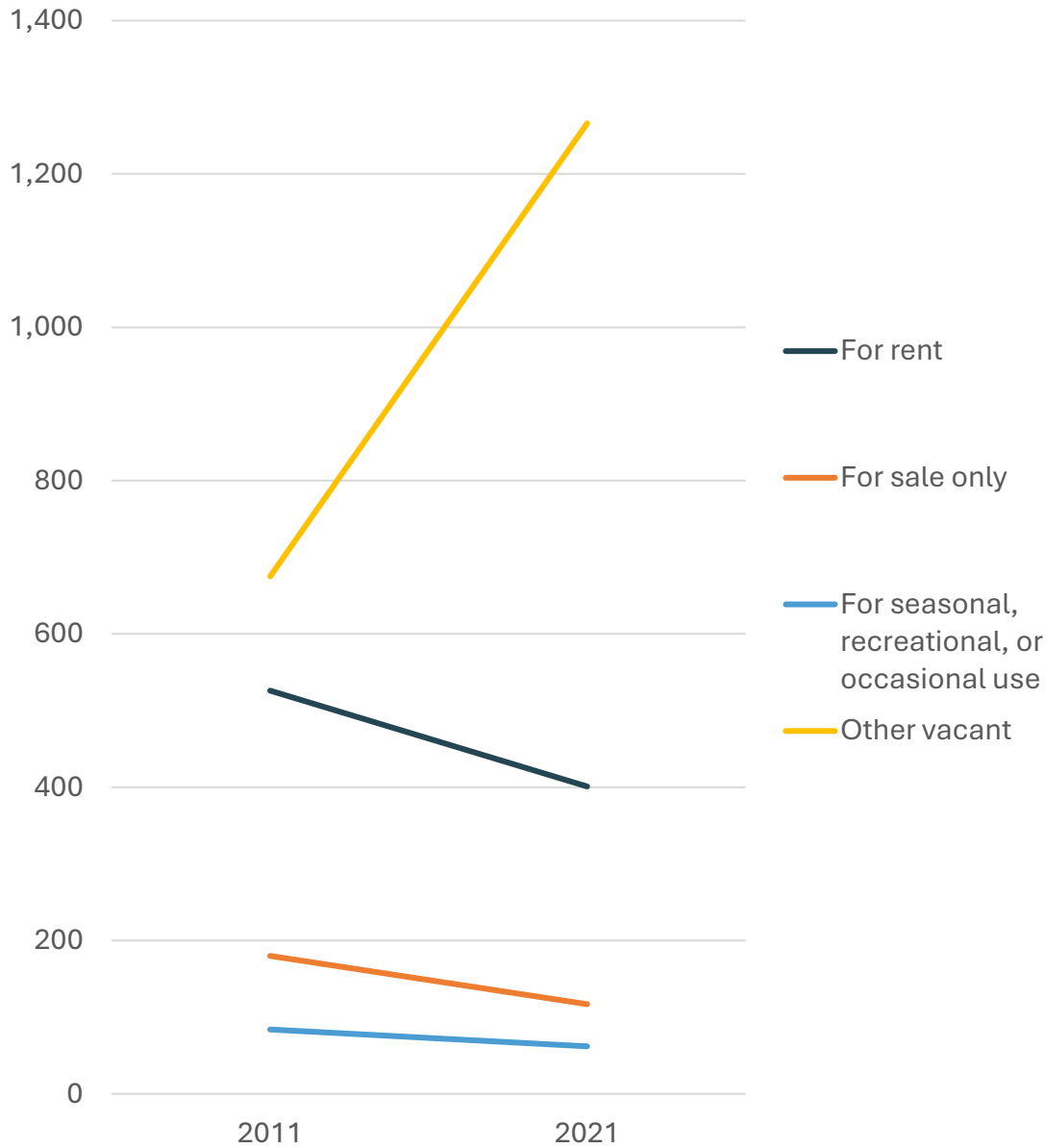
*Italics*

Underline

Color

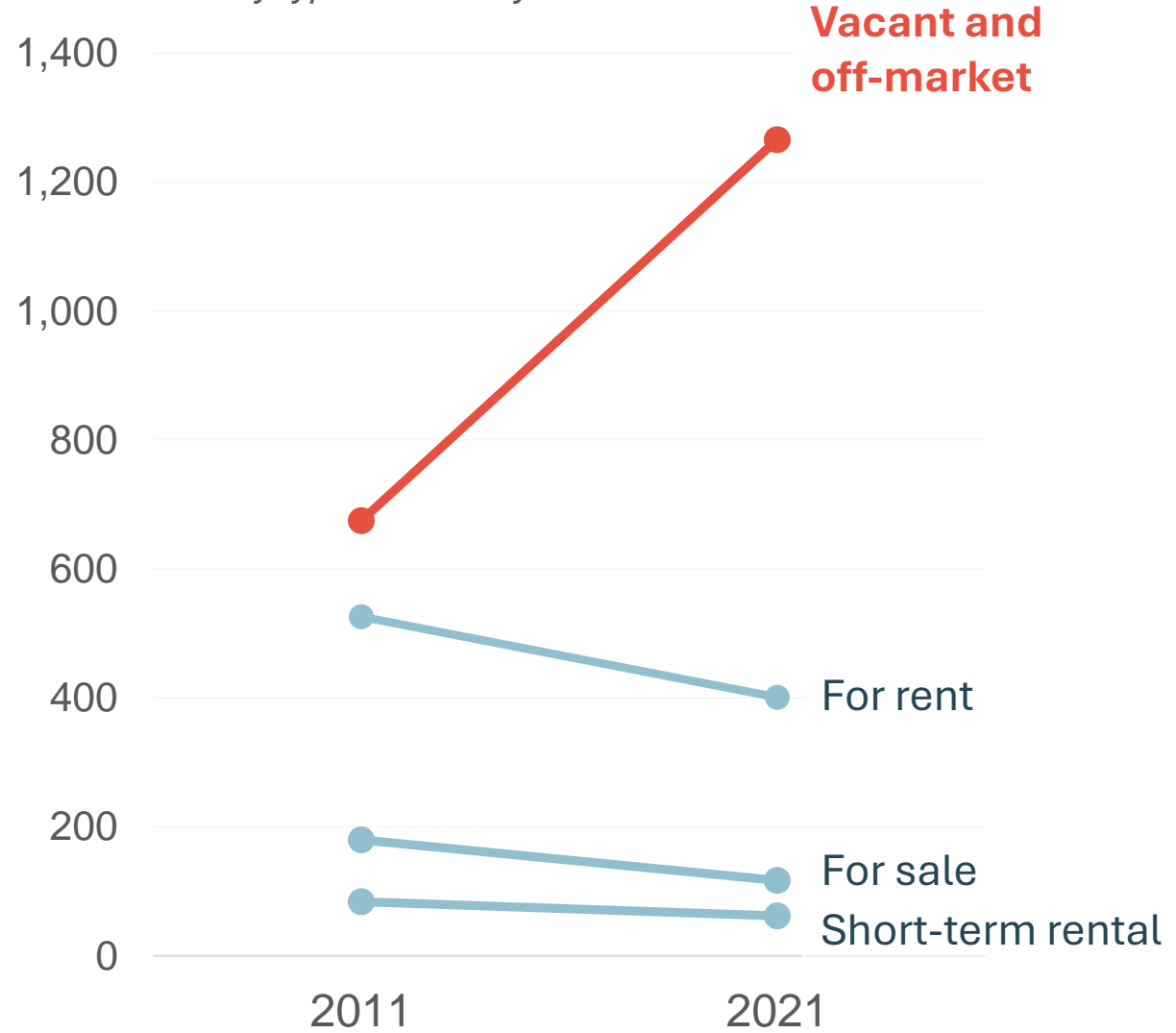
Highlight

Vacant units by type of vacancy



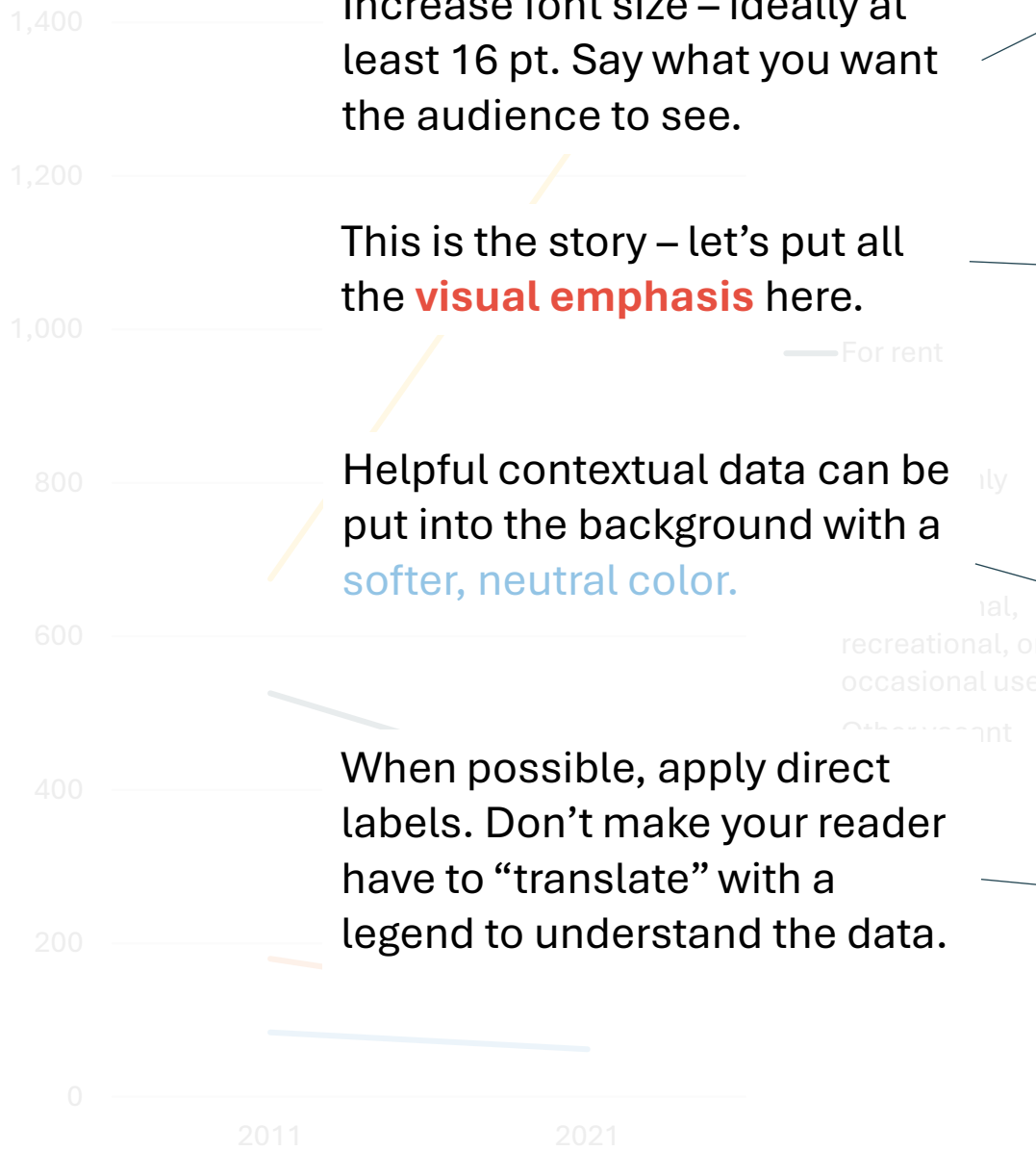
**Off-market housing units have doubled since 2011**

Vacant units by type of vacancy



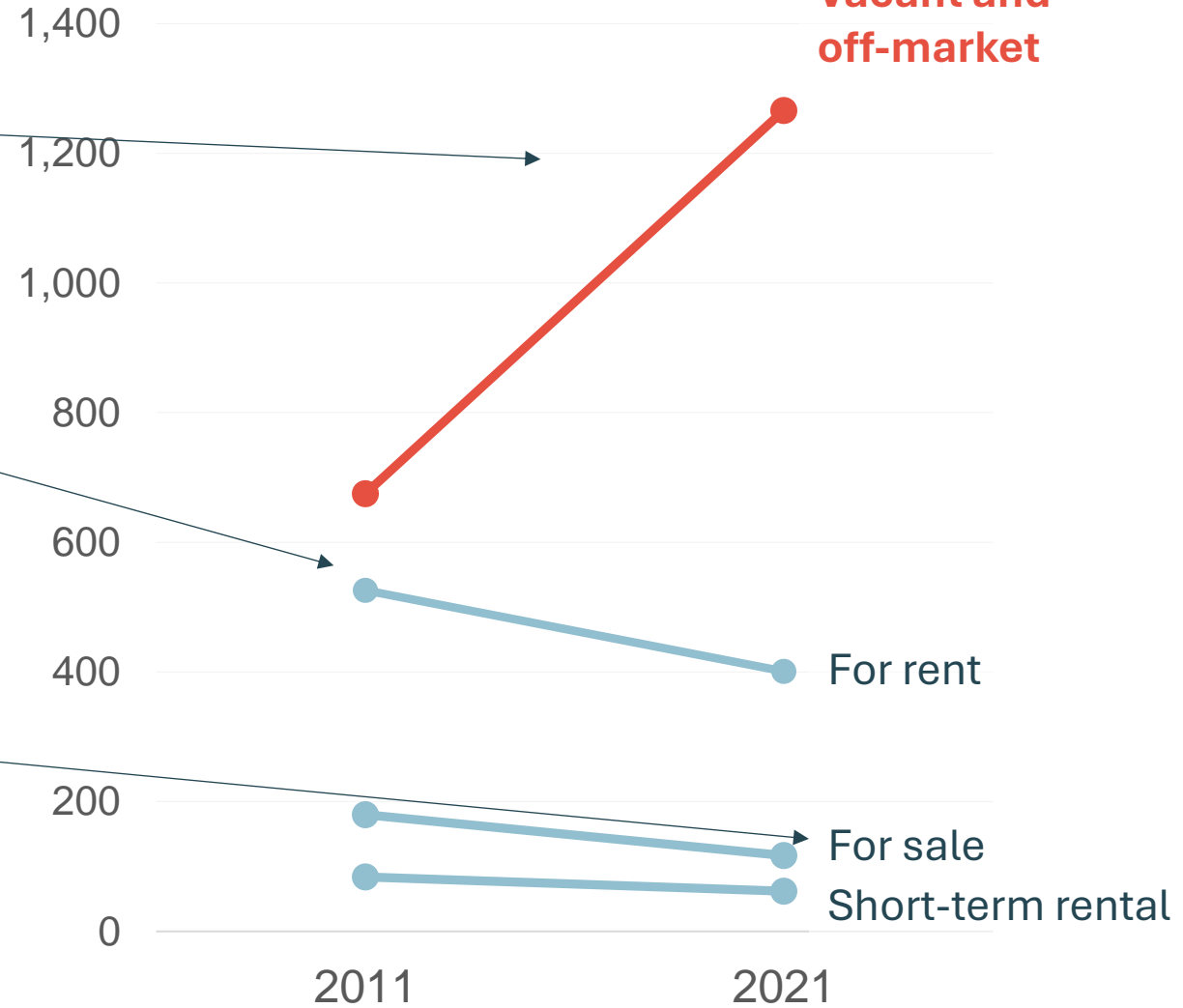
Source: ACS 2011, 2021 (5-year estimates)

Vacant units by type of vacancy



### Off-market housing units have doubled since 2011

Vacant units by type of vacancy

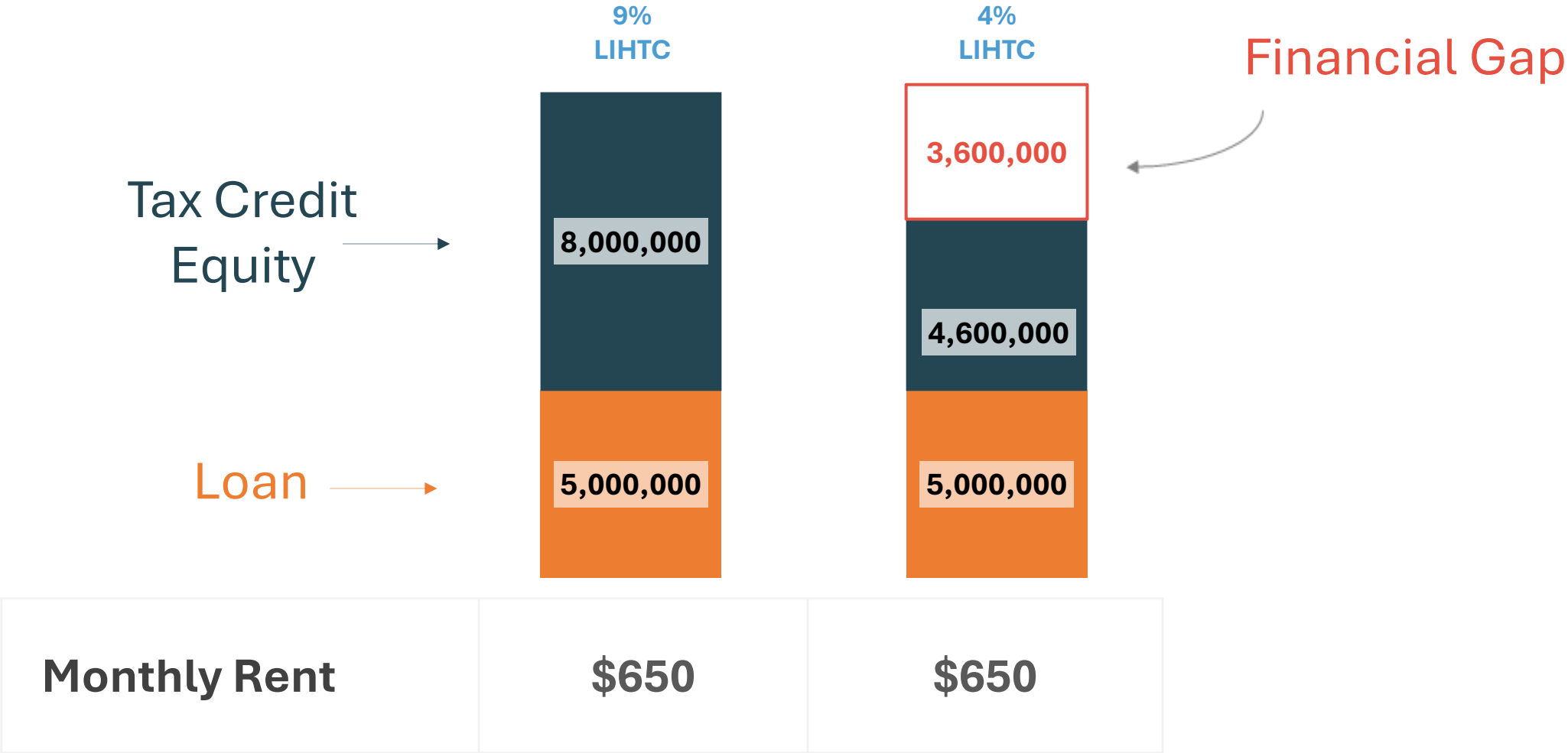


Source: ACS 2011, 2021 (5-year estimates)

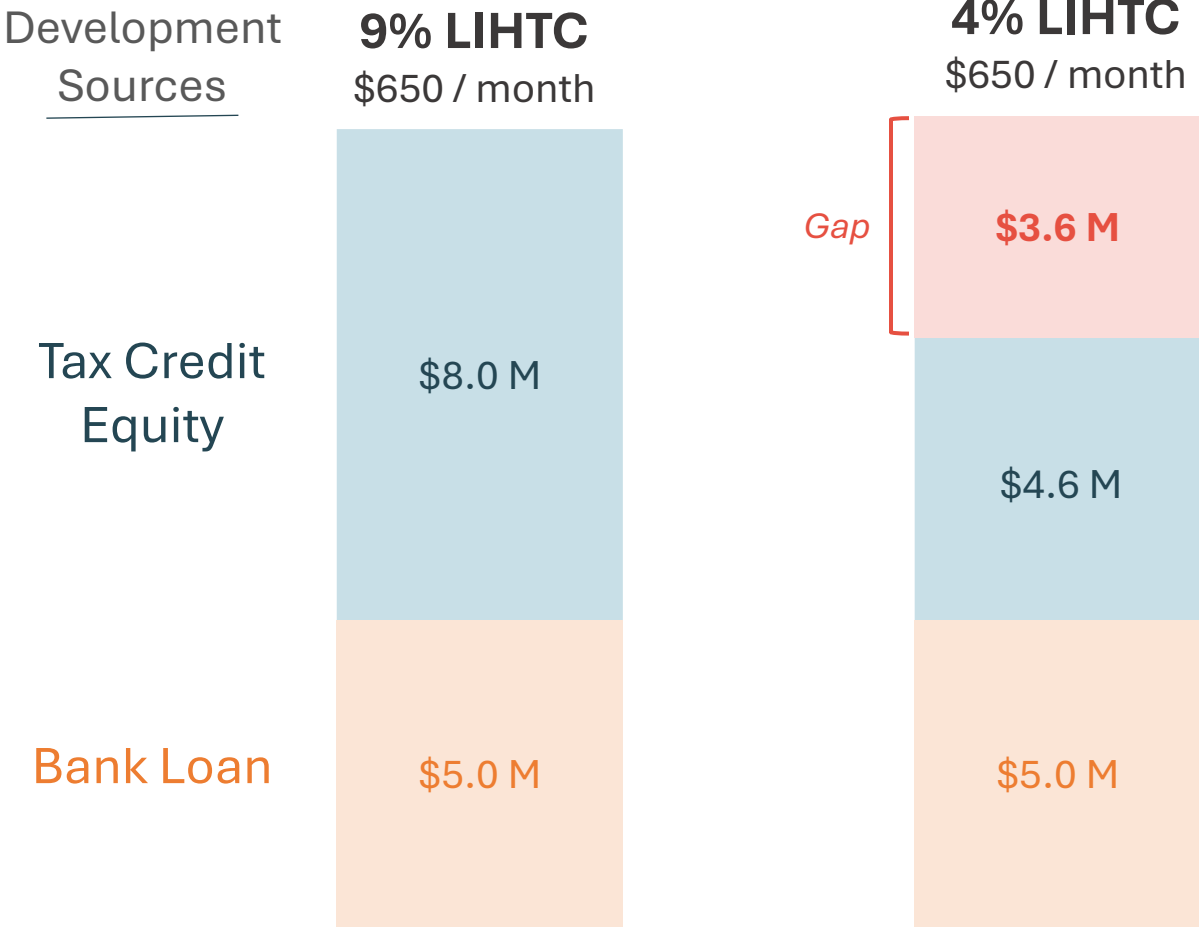


Use color to guide attention,  
but **don't overdo it.**

# 4% LIHTC or deeper affordability requires various sources



# 4% LIHTC requires gap funding from various sources



**Size** and **ordering** determines how your audience consumes information.

And you will read this last

**You will read  
this first**

**And then you will read this**

Then this one

# Renovated units in downtown Salisbury command a 30%+ rent premium over garden-style units



**The Grand on Julian – 240 units**  
9000 Grandeur Dr. | Built 2008  
One-BR: \$1,302/mo. (\$1.45 PSF)



**Salisbury Village at Castlewood – 192 units**  
200 Castlewood Dr. | Built 2006  
One-BR: \$1,316/mo. (\$1.55 PSF)



**132 Flats – 4 units**  
132 E Innes St (Downtown) | Built 2019  
One-BR: \$1,570/ mo. (\$1.87 PSF)

# Renovated units in **downtown Salisbury** command a 30%+ rent premium over garden-style units

The Grand on Julian | 9000 Grandeur Dr



**\$1,320** /month

240 units

Built in 2008

Salisbury Village at Castlewood | 200 Castlewood Dr



**\$1,310** /month

192 units

Built in 2006

Downtown Salisbury | 132 Innes St

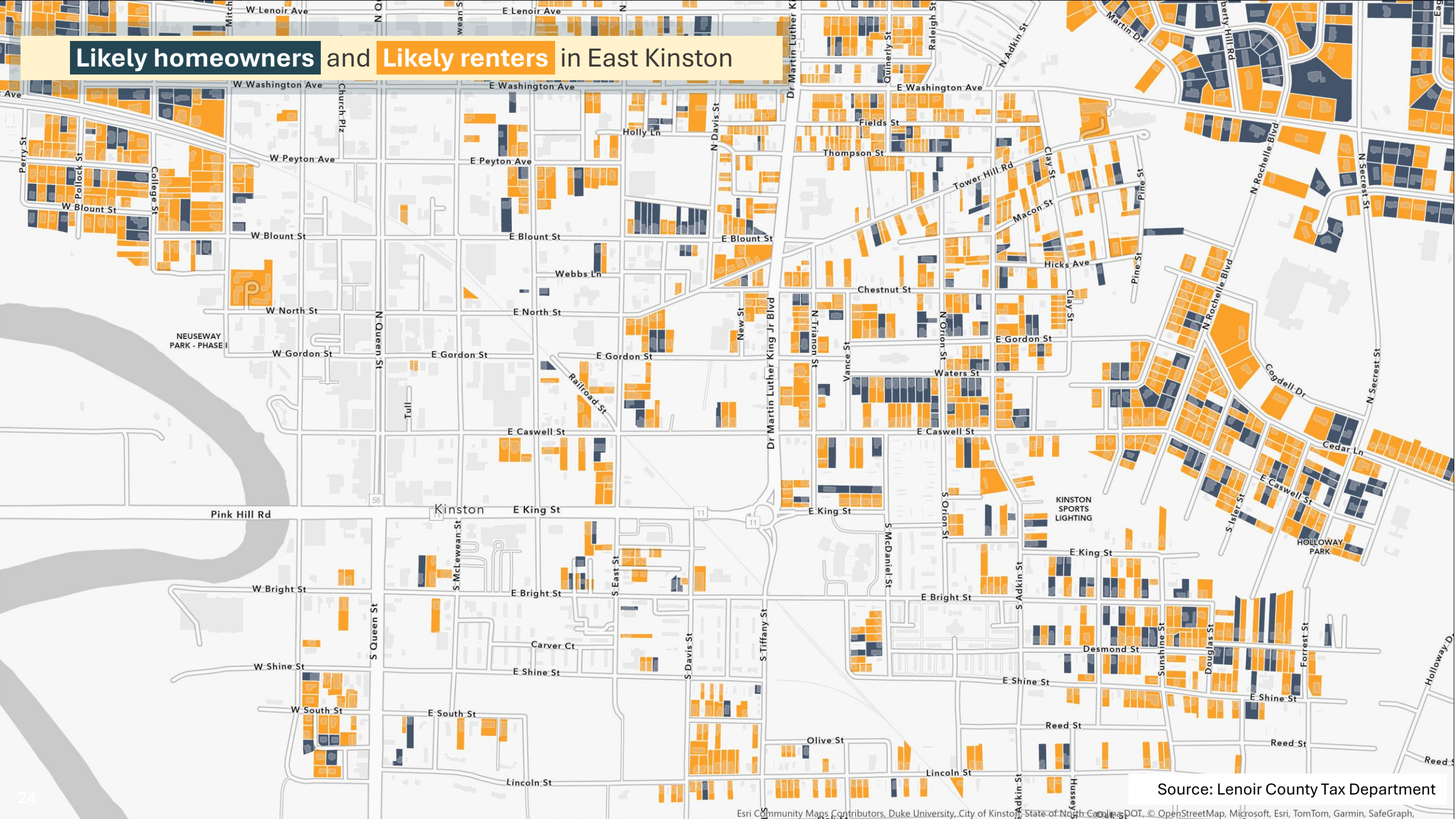


**\$1,570** /month

4 units

Built in 2019

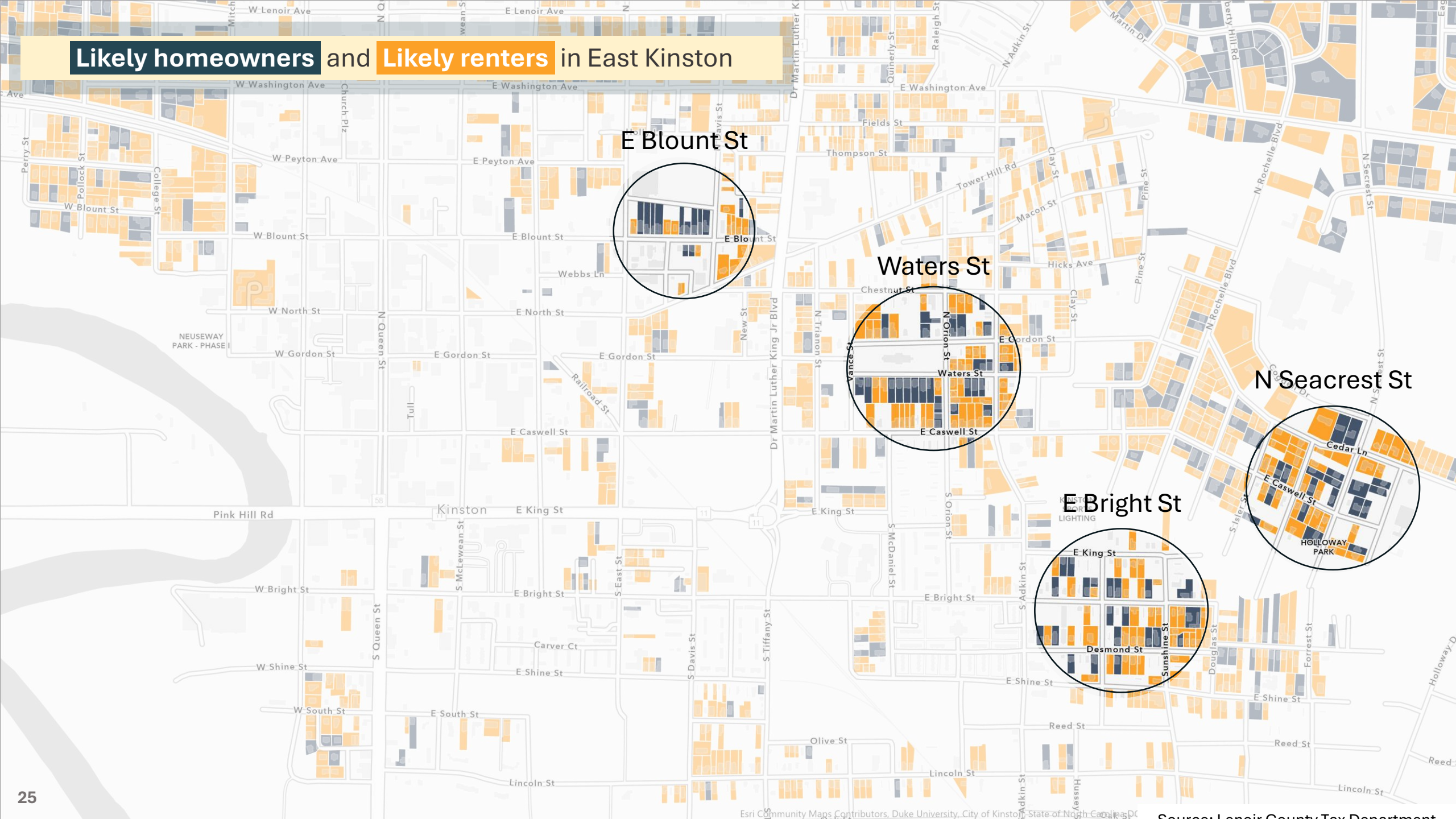
# Likely homeowners and Likely renters in East Kinston



Source: Lenoir County Tax Department

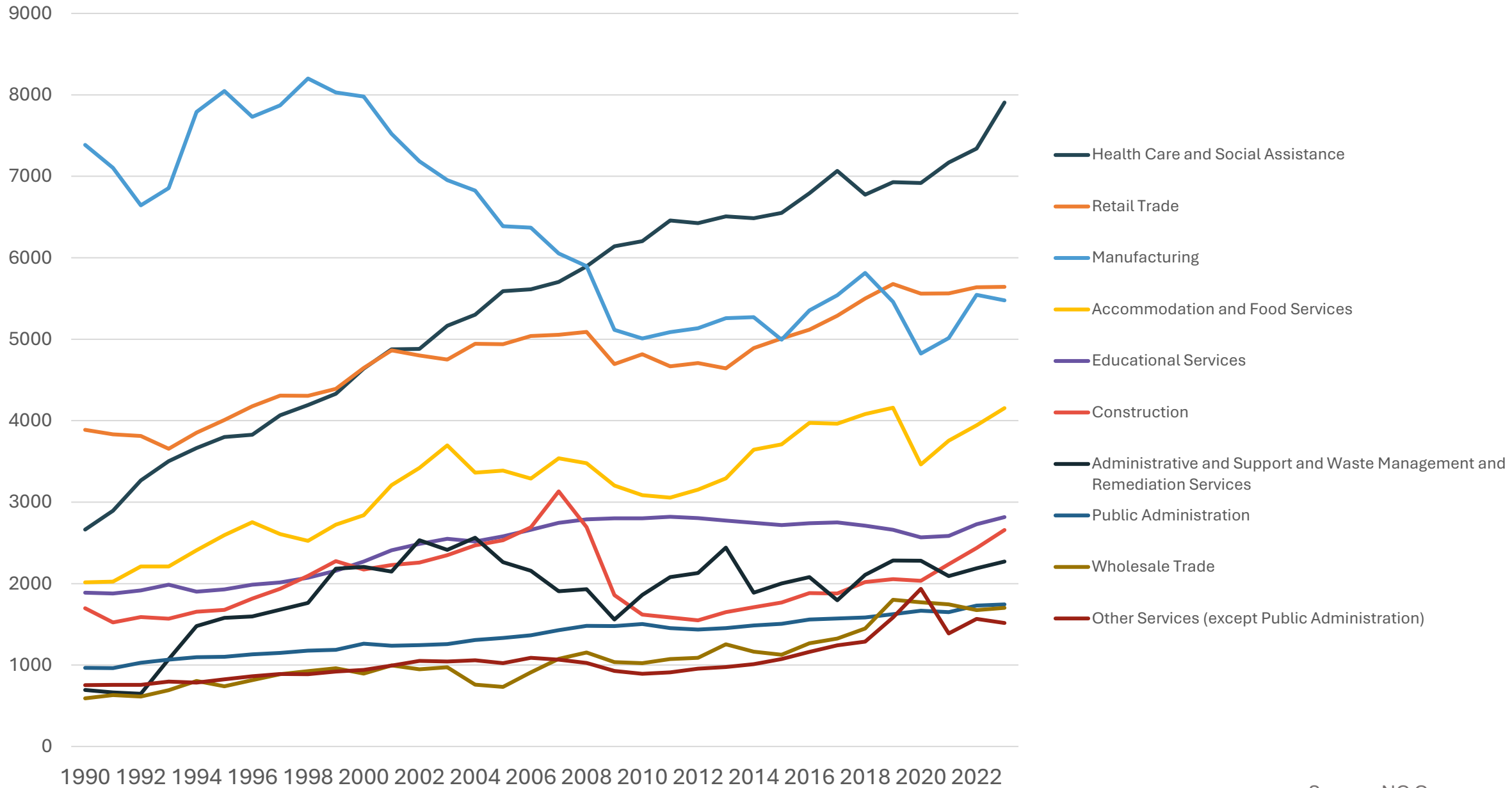


# Likely homeowners and Likely renters in East Kinston



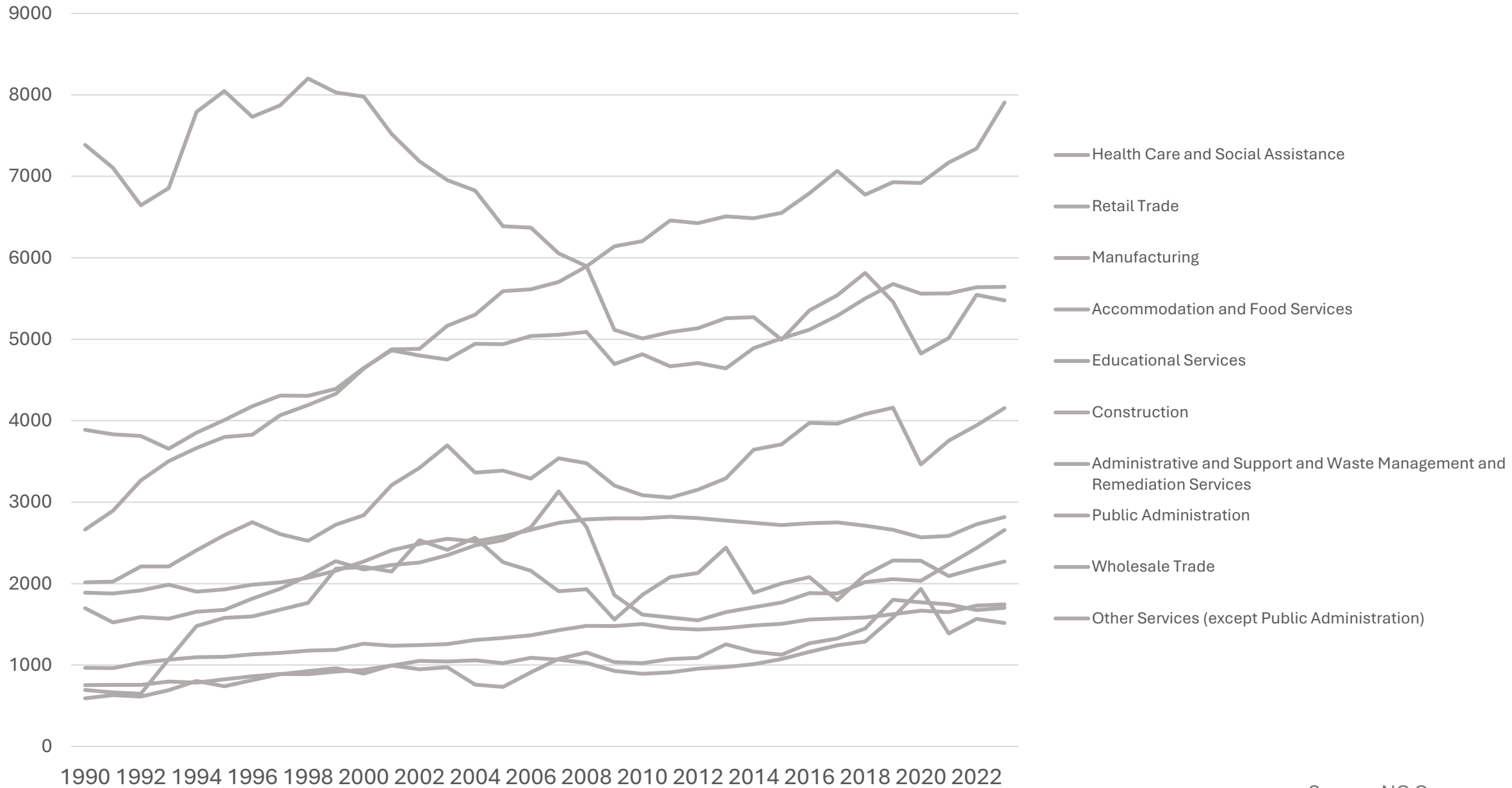
When you're unsure about  
what to emphasize,  
start with **gray**.

# Number of jobs by industry in Henderson County, NC



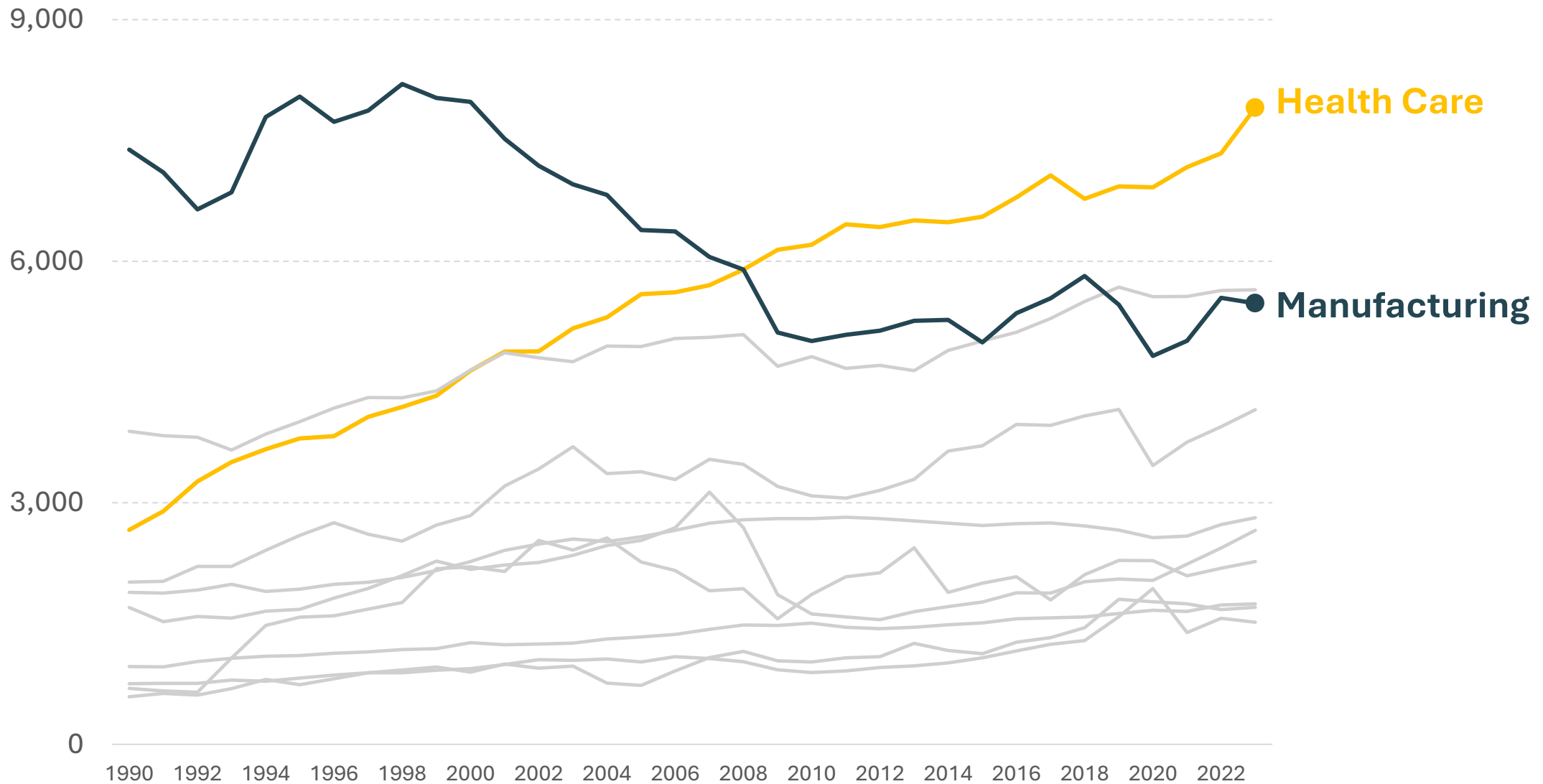
Source: NC Commerce

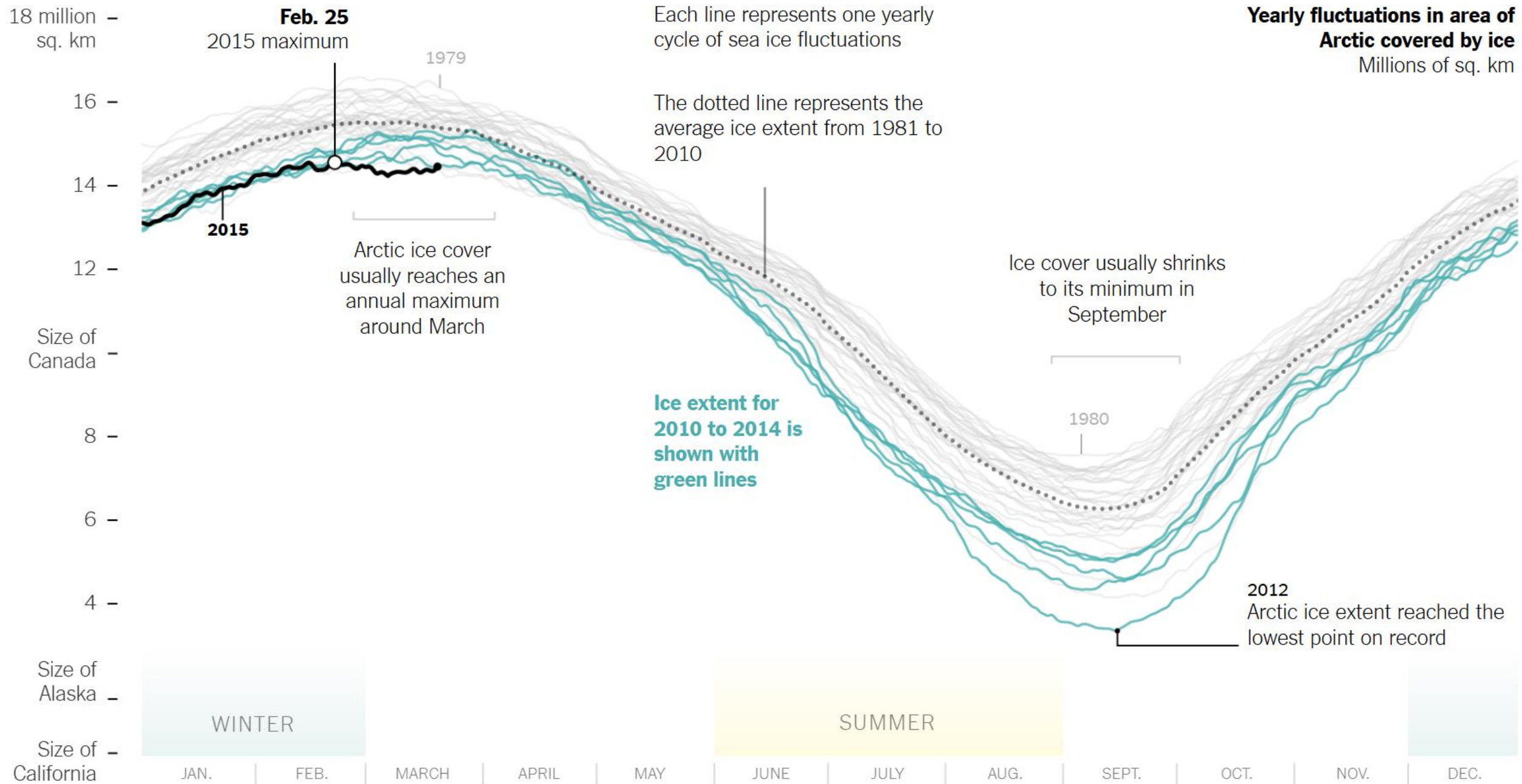
# Number of jobs by industry in Henderson County, NC



Source: NC Commerce

In 2008, **Health Care** surpassed **Manufacturing** to become the largest industry in Henderson County

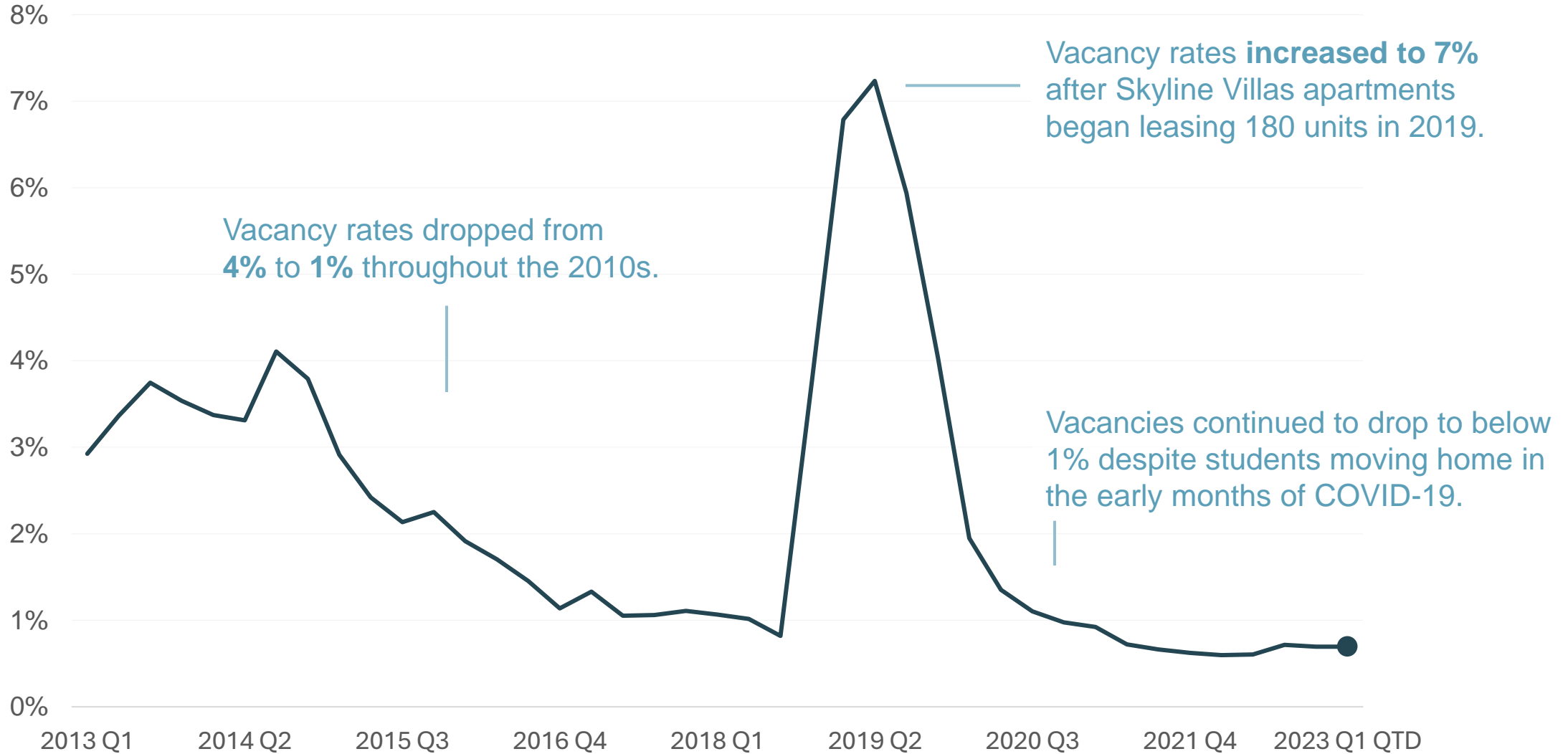




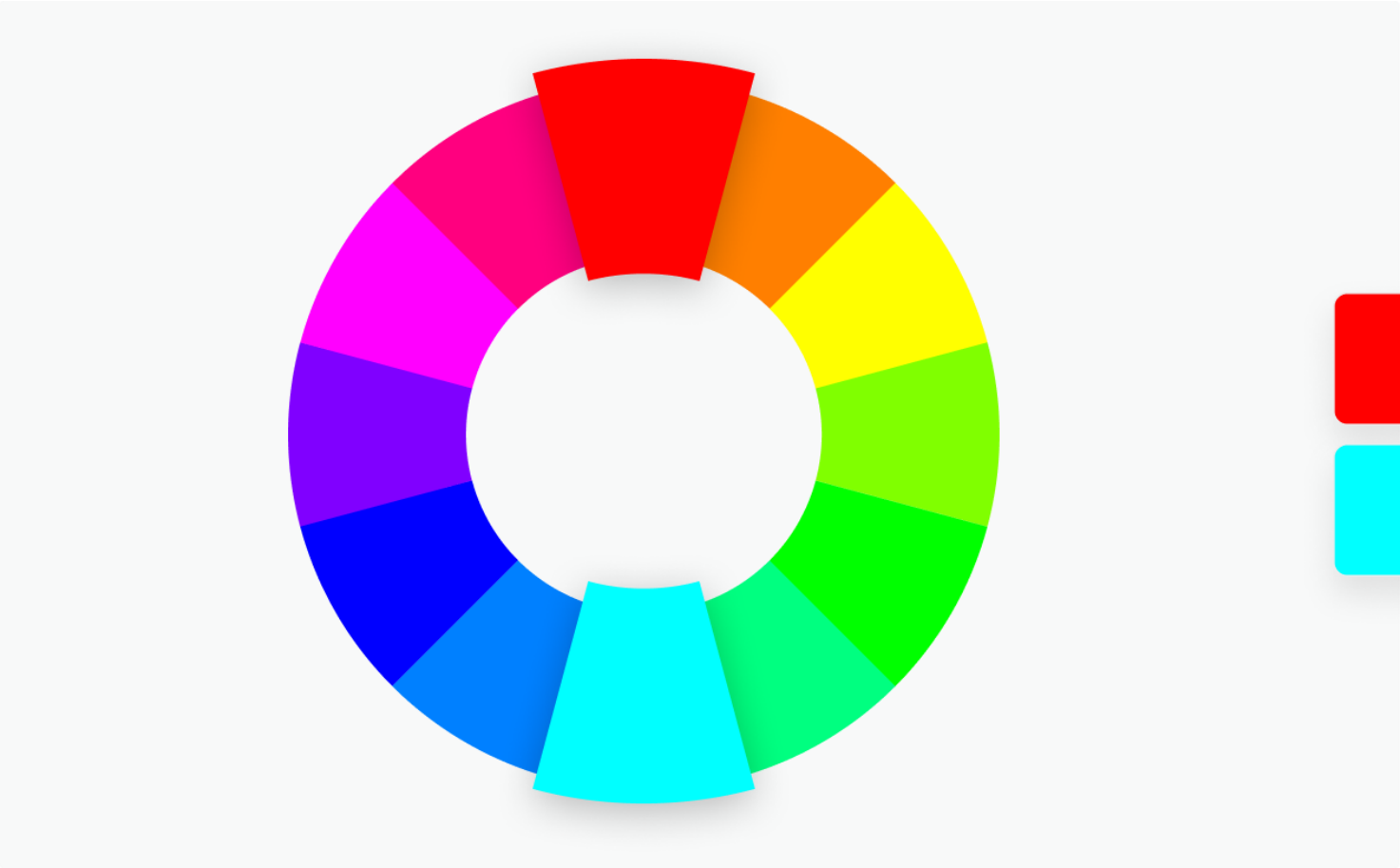
Source: The New York Times

# Rental vacancy in Boone remains below 1% in 2023

Estimated vacancy rate among multifamily units

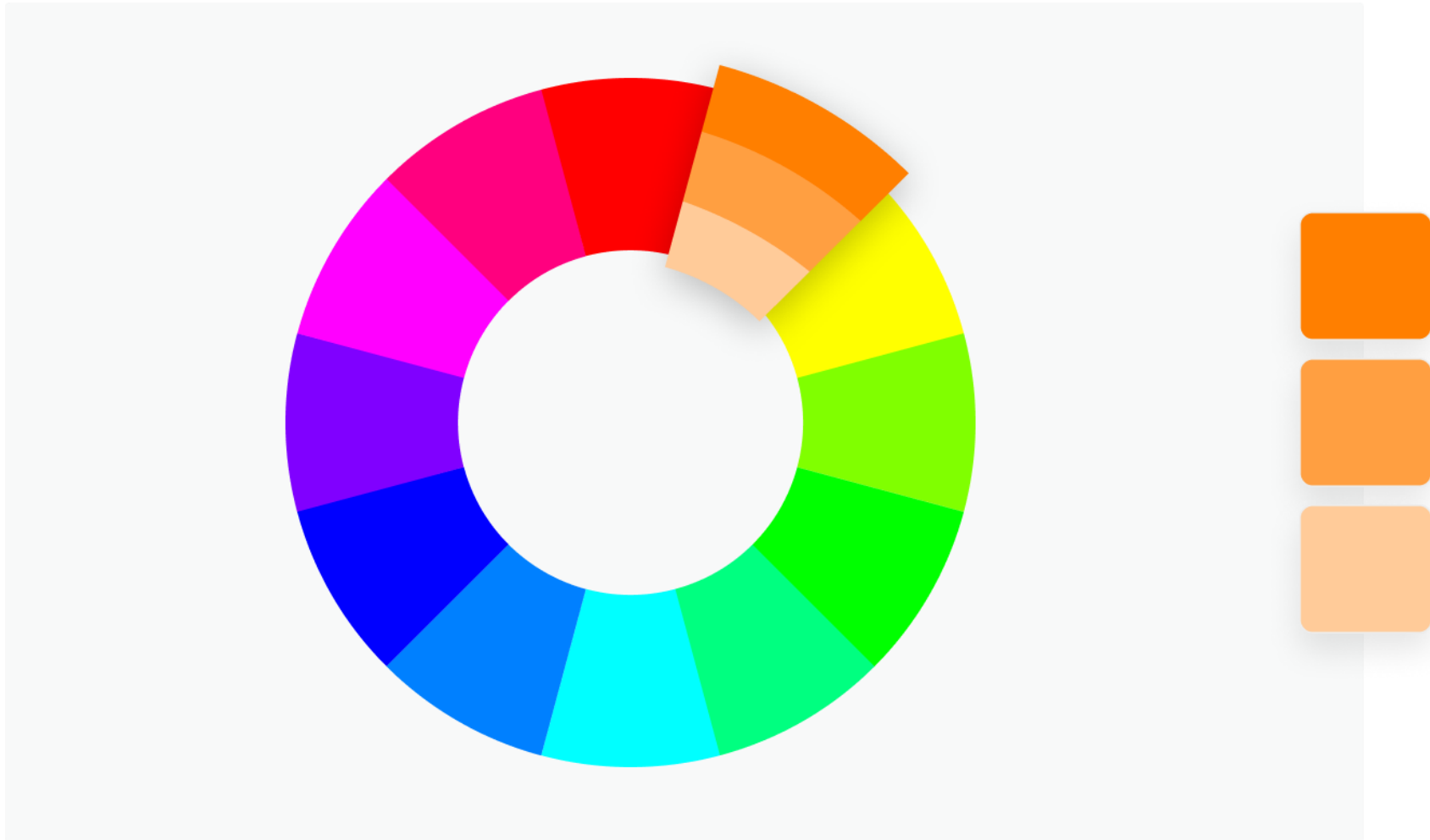


# Complementary High contrast & high impact





# Monochromatic



In Hendersonville, the lowest income neighborhoods have the greatest exposure to **flood hazards**

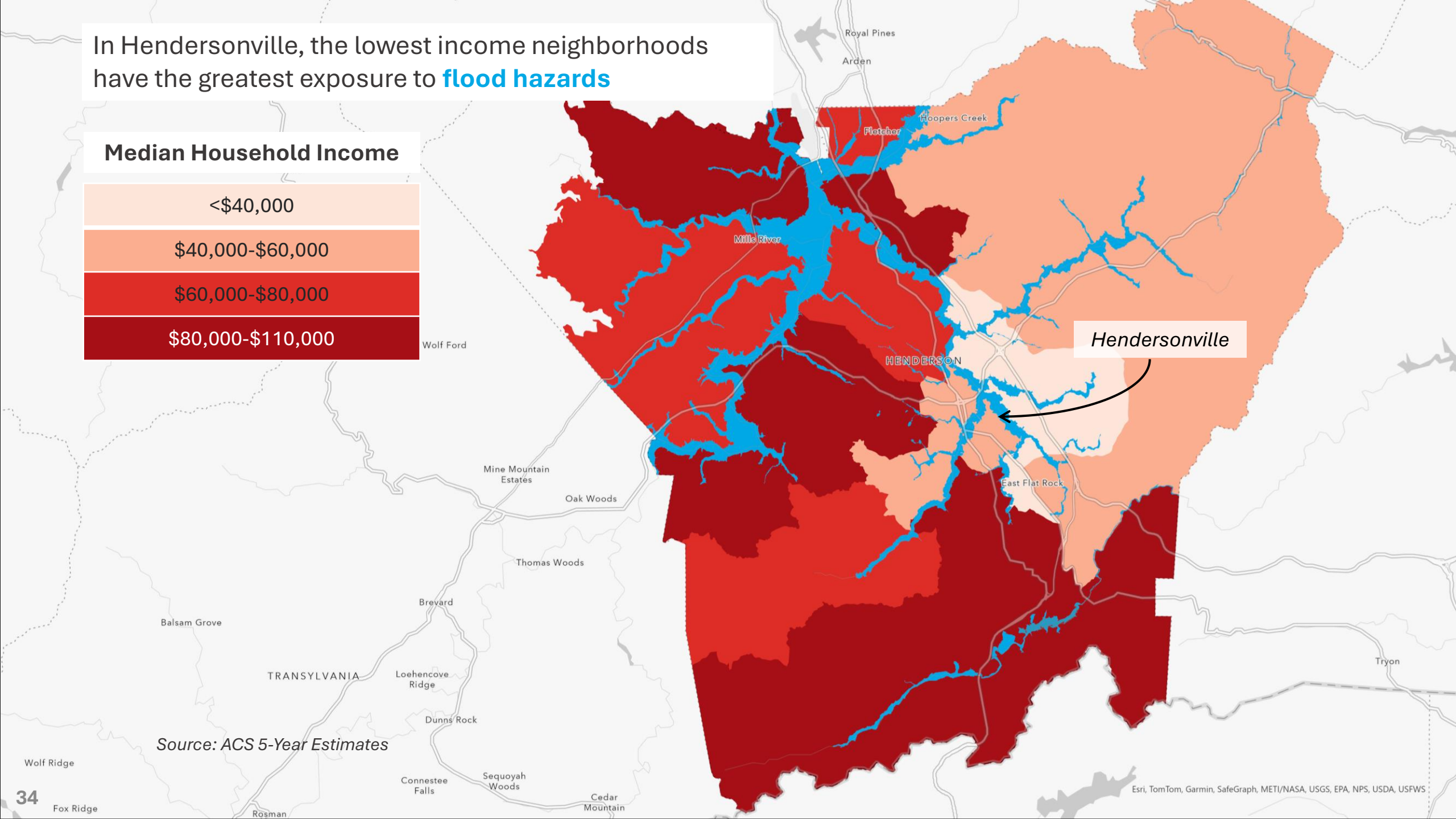
**Median Household Income**

<\$40,000

\$40,000-\$60,000

\$60,000-\$80,000

\$80,000-\$110,000



Source: ACS 5-Year Estimates

# Tip: Borrow from the greats



# How to find & create good color palettes



Lisa Charlotte Muth

**[bit.ly/3WVwpv9](https://bit.ly/3WVwpv9)**  
Datawrapper