

# Data storytelling

COMMUNICATING DATA INSIGHTS

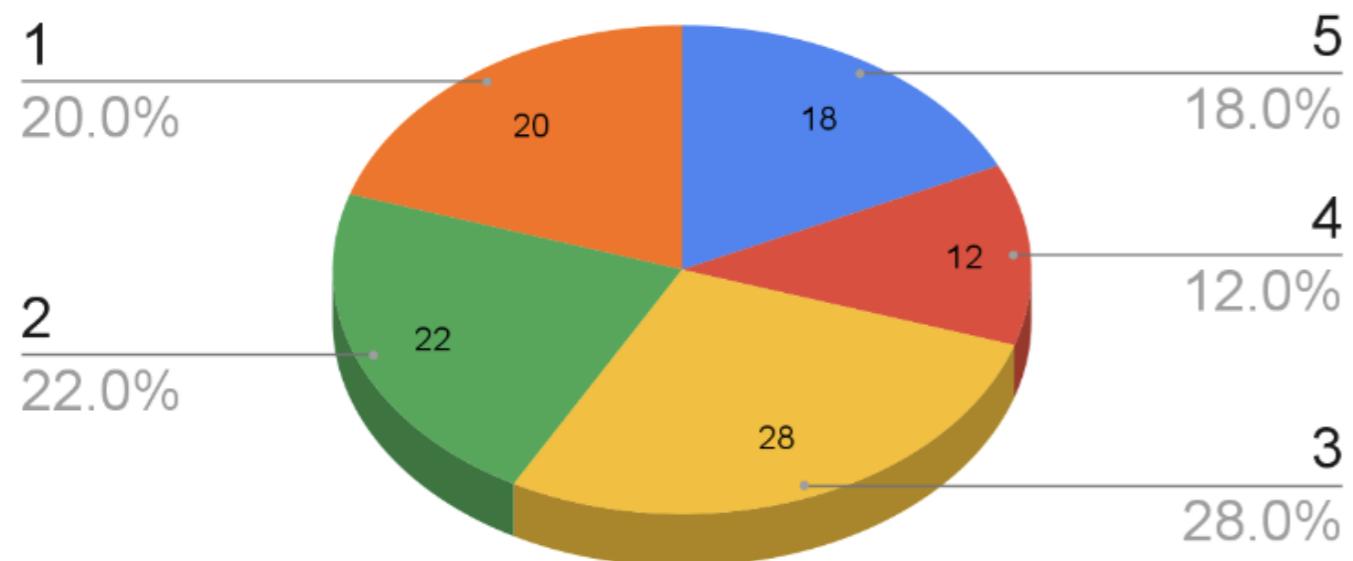


**Joe Franklin**

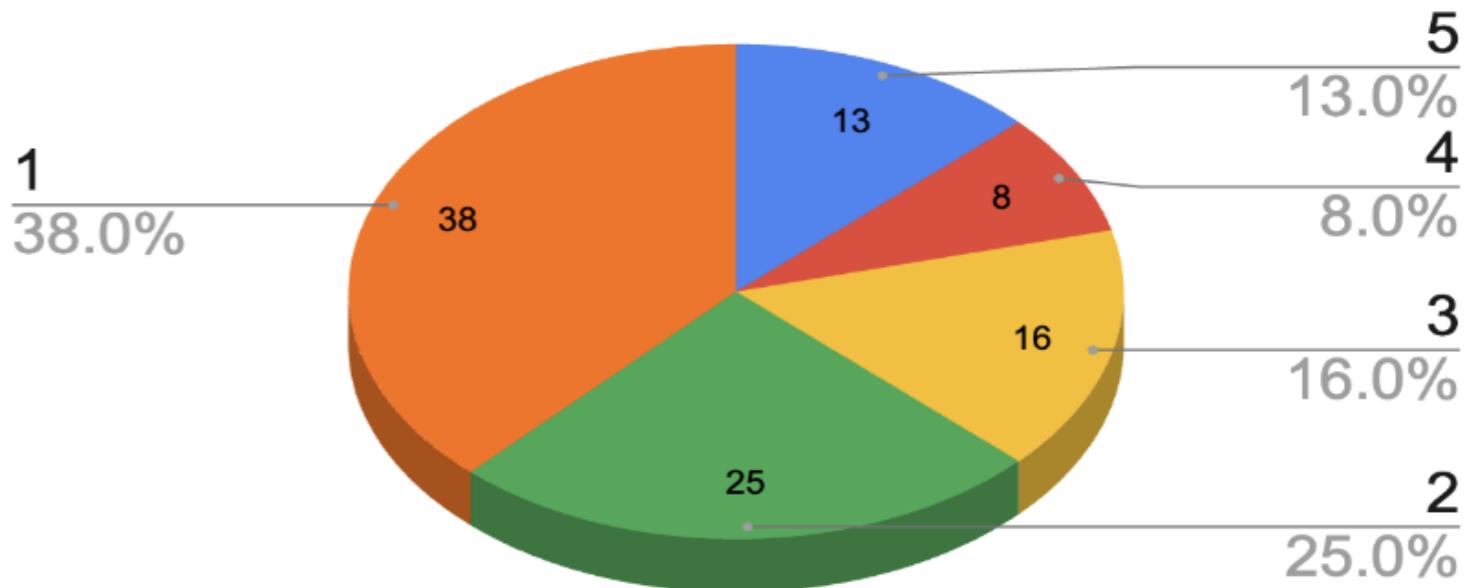
Senior Curriculum Manager, DataCamp

# A picture tells a thousand words?

Patient pre-treatment pain index

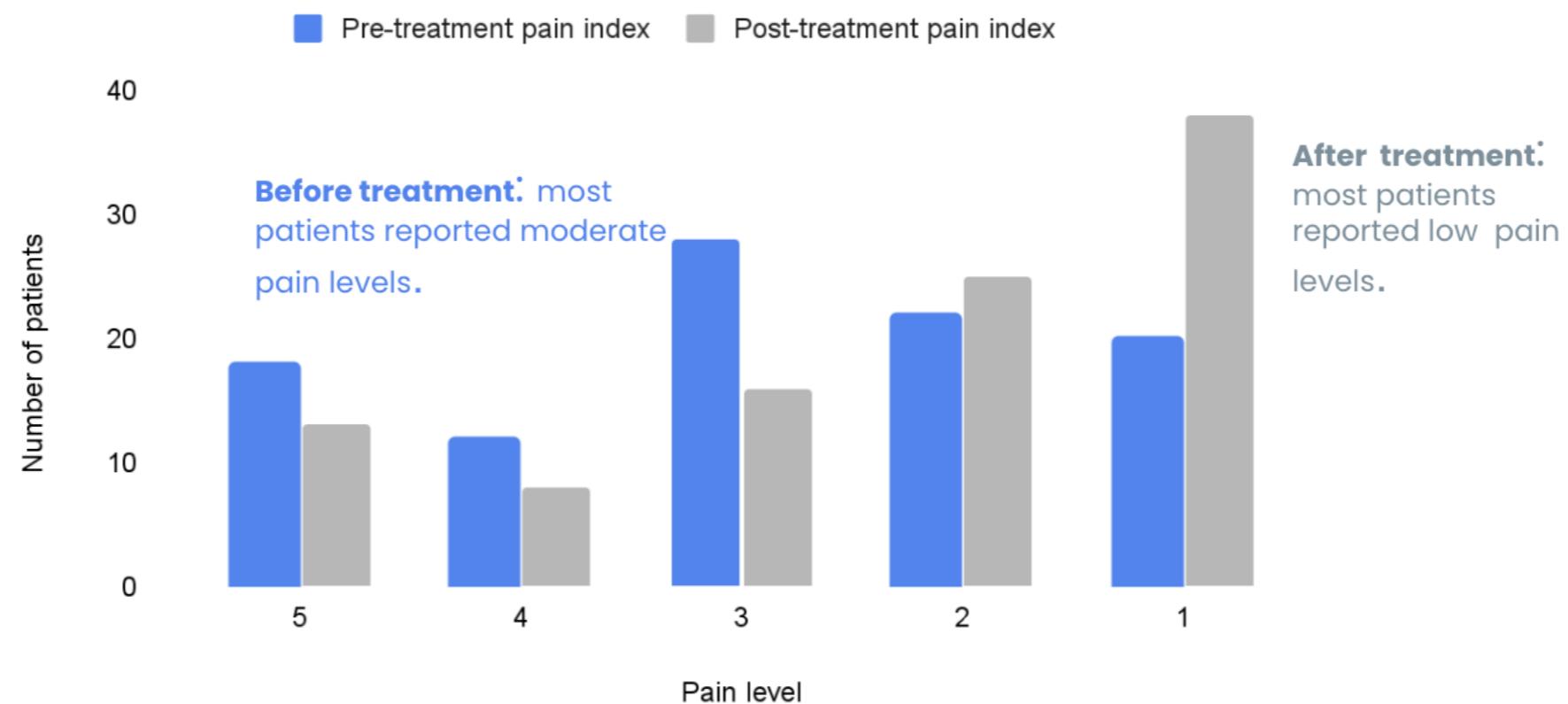


Patient post-treatment pain index



# A story tells a single insight

Pain reduction treatment is a success.

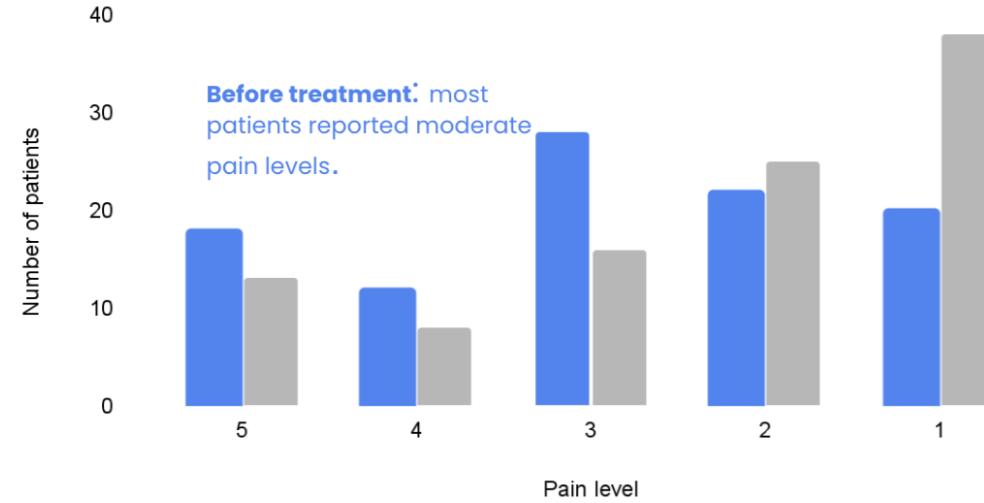


Chronic pain patients received an experimental treatment regimen resulting in a large improvement in reported pain levels. This treatment should become the new standard for pain management among chronic patients.

# Spot the difference

Pain reduction treatment is a success.

Pre-treatment pain index Post-treatment pain index

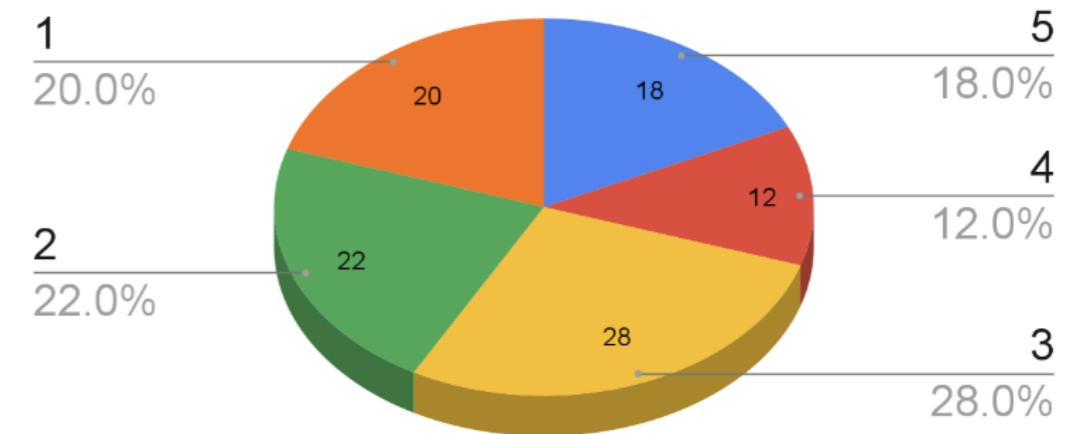


Before treatment: most patients reported moderate pain levels.

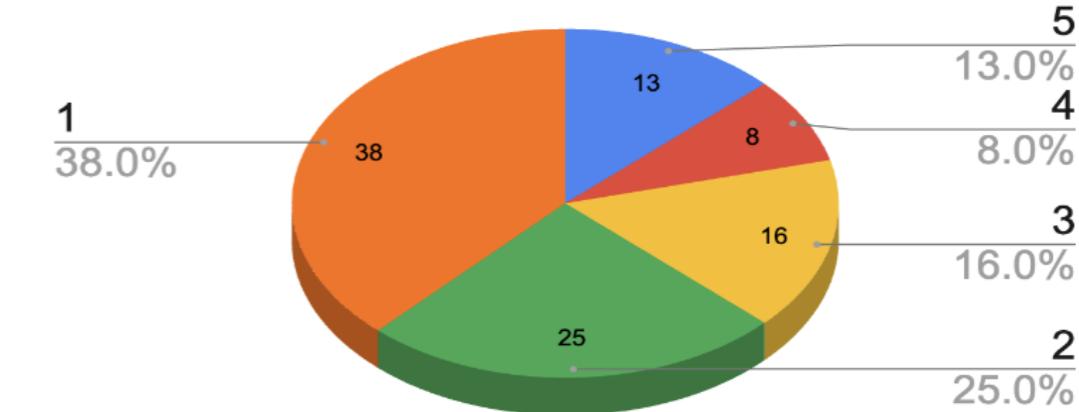
After treatment: most patients reported low pain levels.

Chronic pain patients received an experimental treatment regimen resulting in a large improvement in reported pain levels. This treatment should become the new standard for pain management among chronic patients.

Patient pre-treatment pain index



Patient post-treatment pain index



# Why?

## Data story distinctions

- Easier to understand
- Inspire action
- Retain information

Pair visualizations with written communication



# Engagement

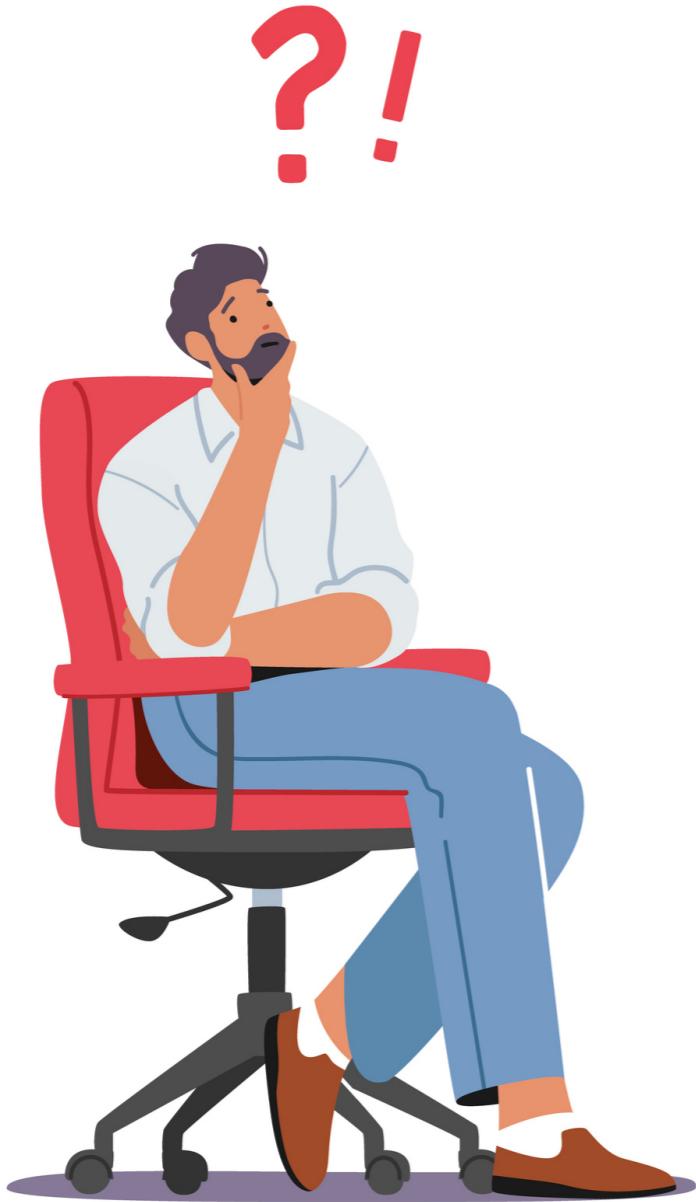
Stories increase engagement over raw data.



| Method     | Donation amount |
|------------|-----------------|
| Data only  | \$1.14          |
| Data story | \$2.38          |

<sup>1</sup> Small, D. A., Loewenstein, G., & Slovic, P. (2007). Sympathy and callousness: The impact of deliberative thought on donations to identifiable and statistical victims.

# Sticky situation



**Remembering individual numbers is hard**

**Retaining the impact of stories is much easier**

<sup>1</sup> Heath, C., & Heath, D. (2010). *Made to stick: Why some ideas survive and others die.*

# **Let's practice!**

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# Keys to a good story

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# Building a definition



Challenging definition without universal consensus.

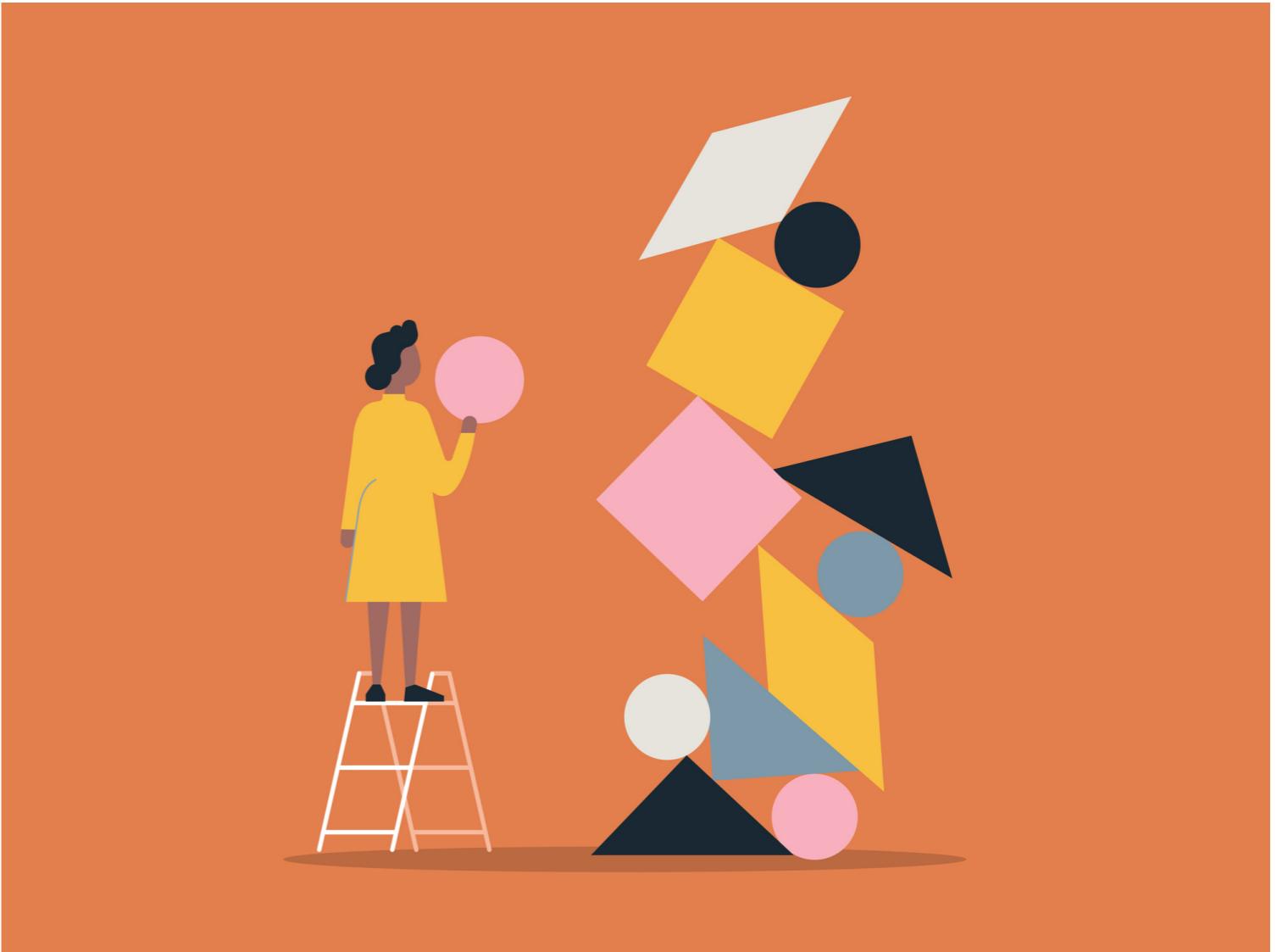
Data Storytelling - Method of communicating data insights tailored to a specific audience with an overarching narrative

# Parts of a story

**Visualization** - Share story familiar format.

**Context** - Shows story as part of larger effort.

**Narrative** - Gives the data a voice.



# Visualizations

Share information quickly that is easy to understand and action.

Focus on trends and patterns over specific details.

Visualizations are the core of a data story.



# Context is king

## Objectives:

- Show audience broader picture
- Focus on what is essential to understand
- Unifies data story with business objectives and outcomes



# Weaving a narrative

People need to connect with the message to make decisions.

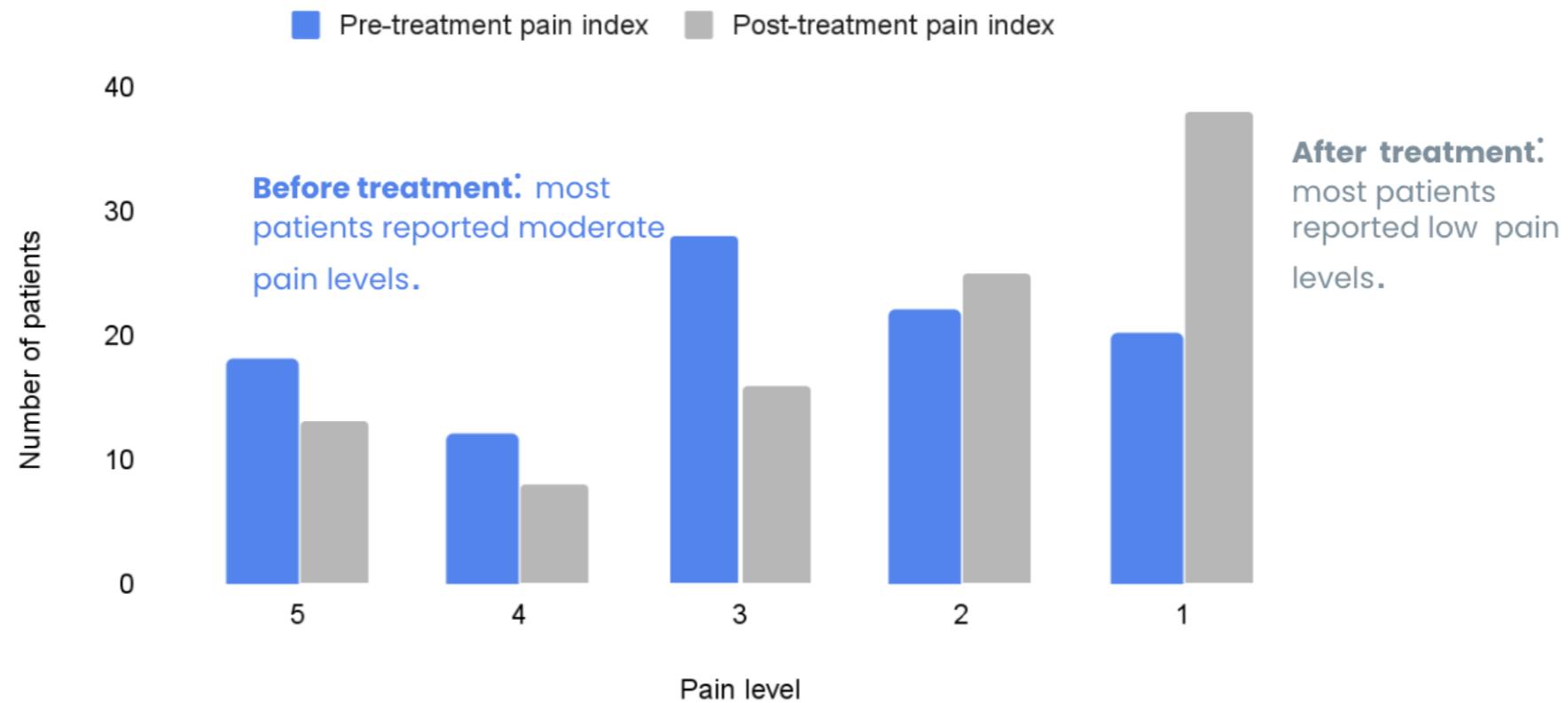
## Narrative objectives:

- Give data a clear and convincing voice
- Explain why insights are significant
- Clearly outline next steps and inspire action



# Bringing a story together

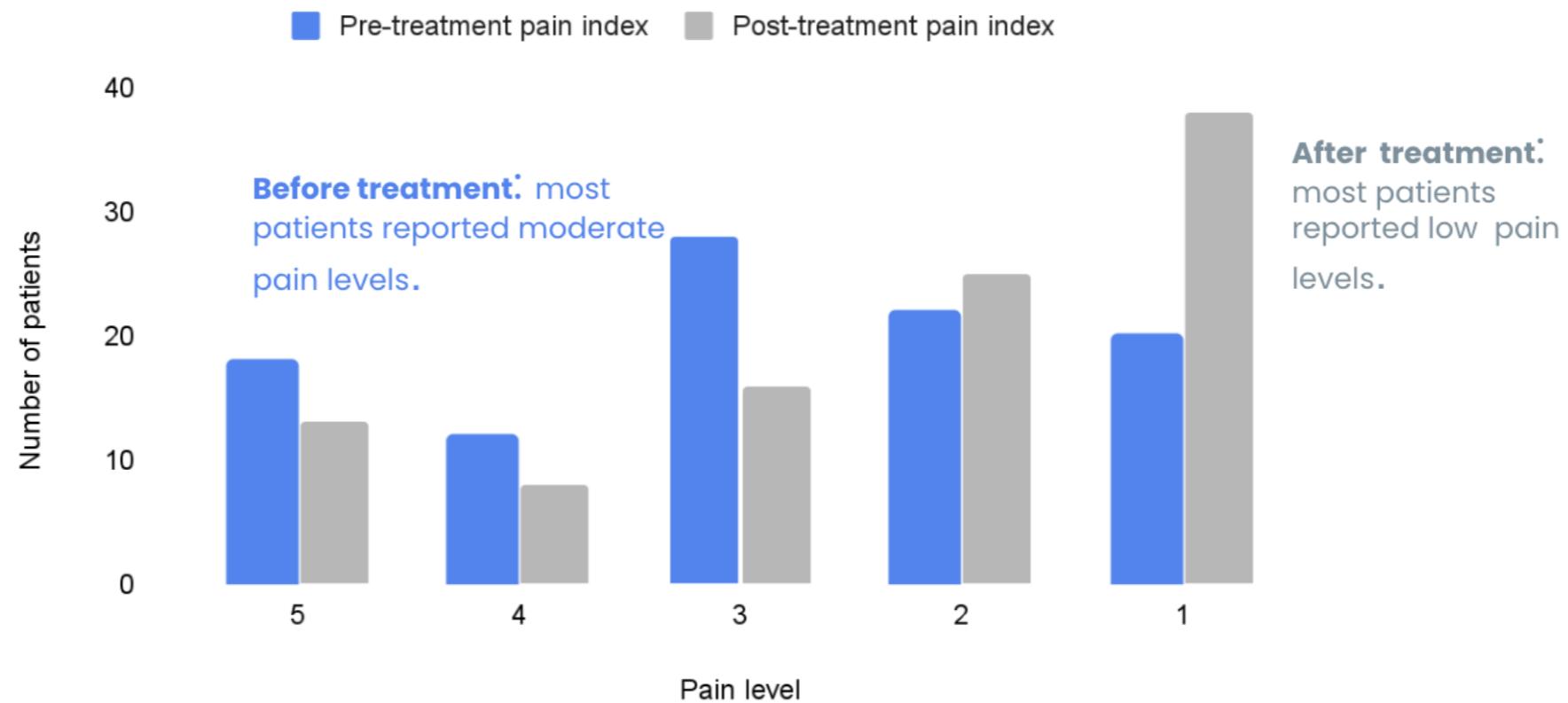
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# Bringing a story together

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# Storytelling in action

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# Starting line



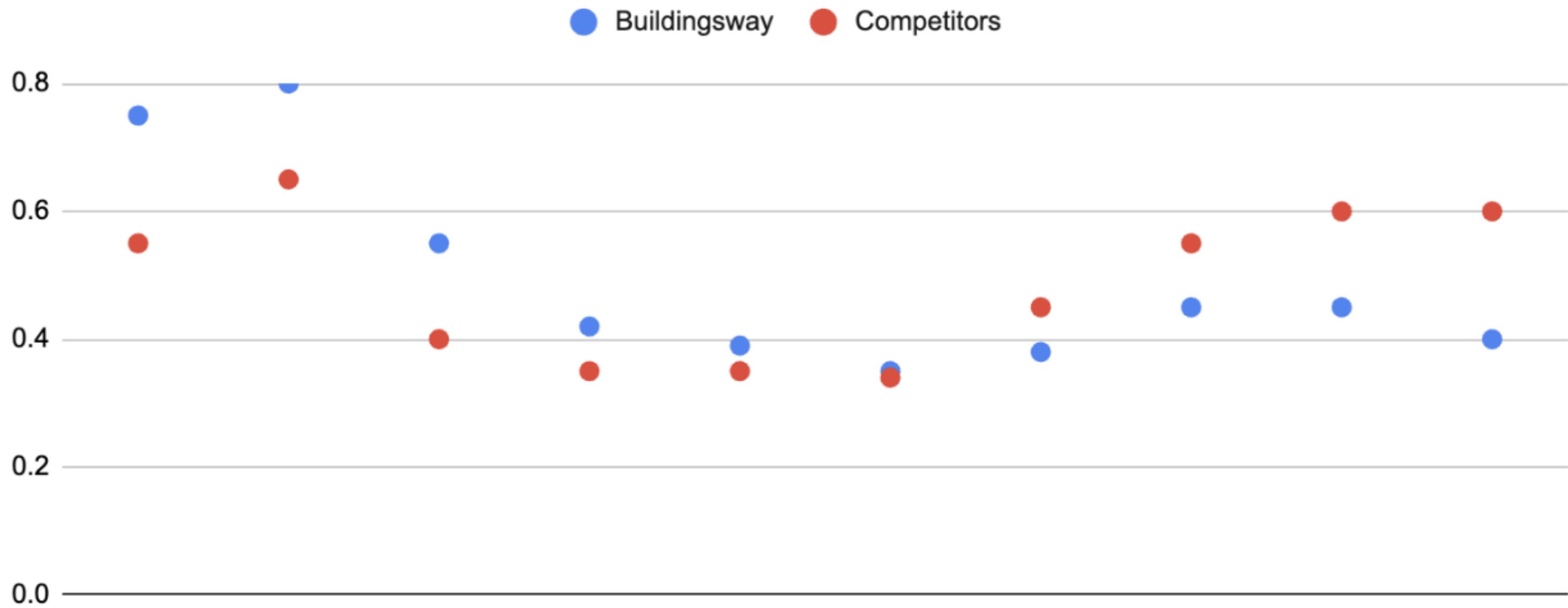
1. What are we trying to say
2. What visualization is best to share our message

# Buildingsway

| Category                         | Buildingsway | Competitors |
|----------------------------------|--------------|-------------|
| Exclusive Options                | 0.75         | 0.55        |
| Appealing Atmosphere             | 0.8          | 0.65        |
| Latest Treehouse Accessories     | 0.55         | 0.4         |
| Showroom is arranged nicely      | 0.42         | 0.35        |
| Wide Selection                   | 0.39         | 0.35        |
| Fast sales experience            | 0.35         | 0.34        |
| I can find what I'm shopping for | 0.38         | 0.45        |
| Knowledgeable Sales Staff        | 0.45         | 0.55        |
| Friendly Associates              | 0.45         | 0.6         |
| Quick Builder Feedback           | 0.4          | 0.6         |

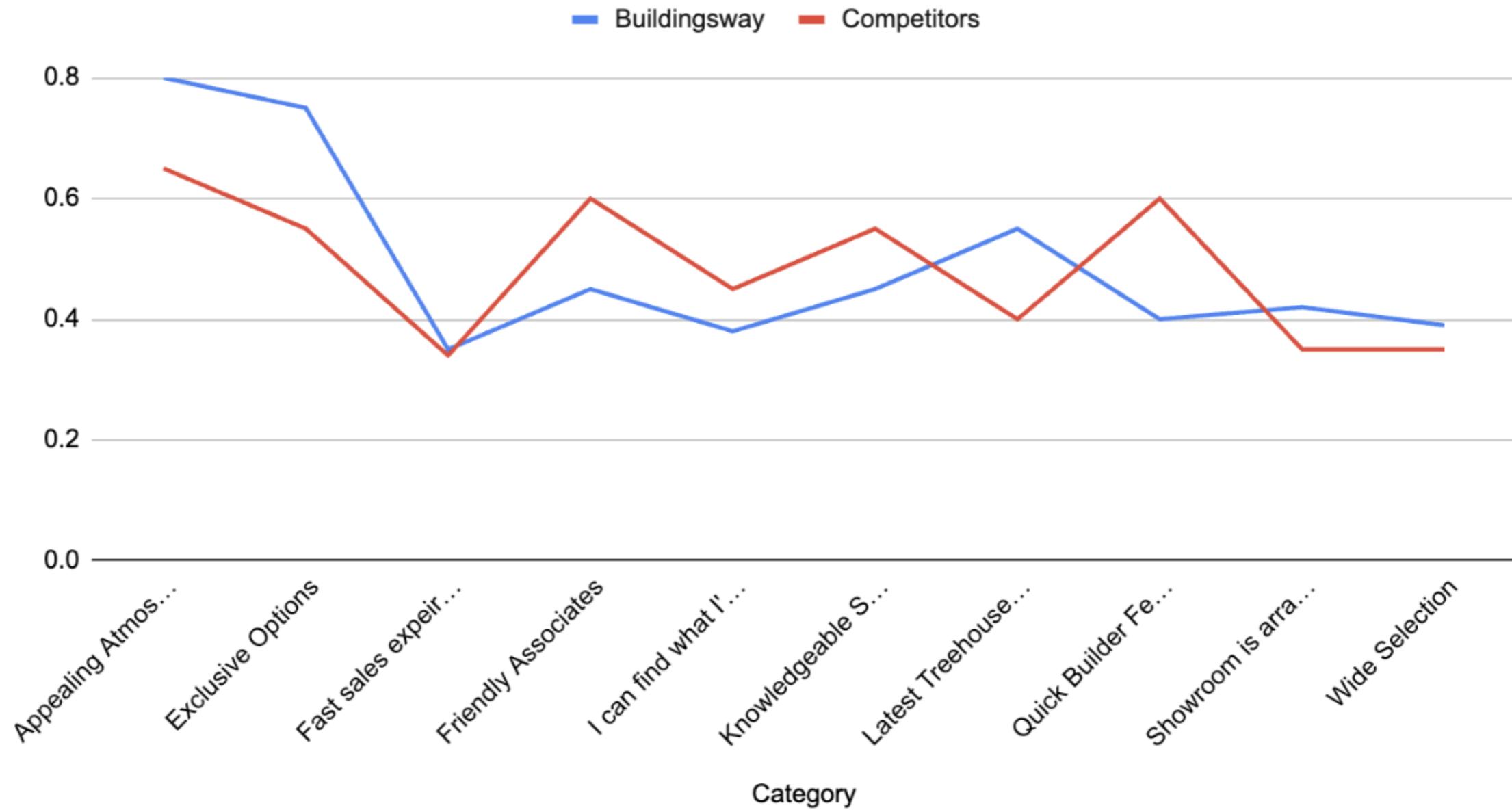
# Scatter dud

## Buildingsway and Competitors



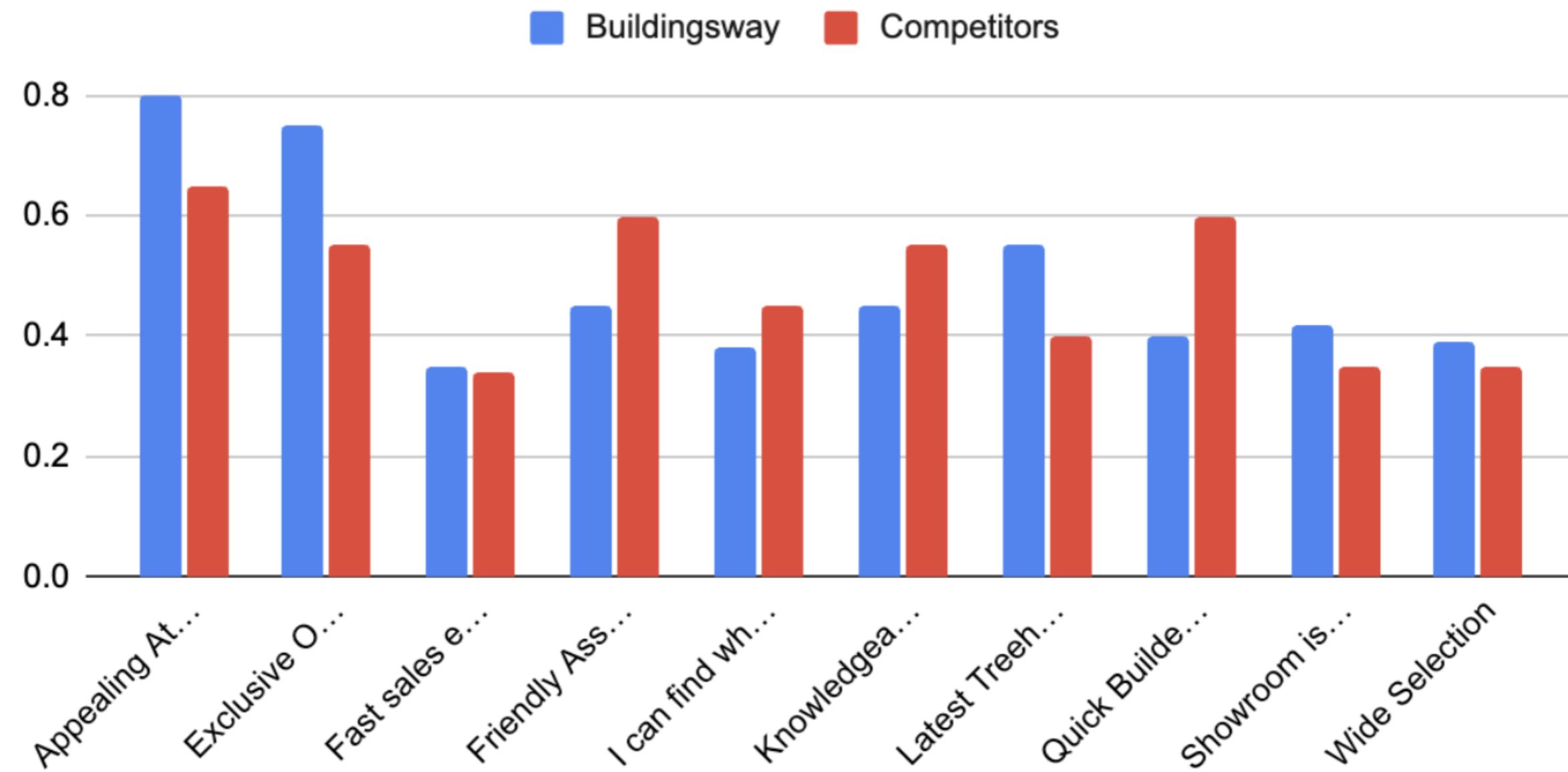
# Line them up

Buildingsway and Competitors



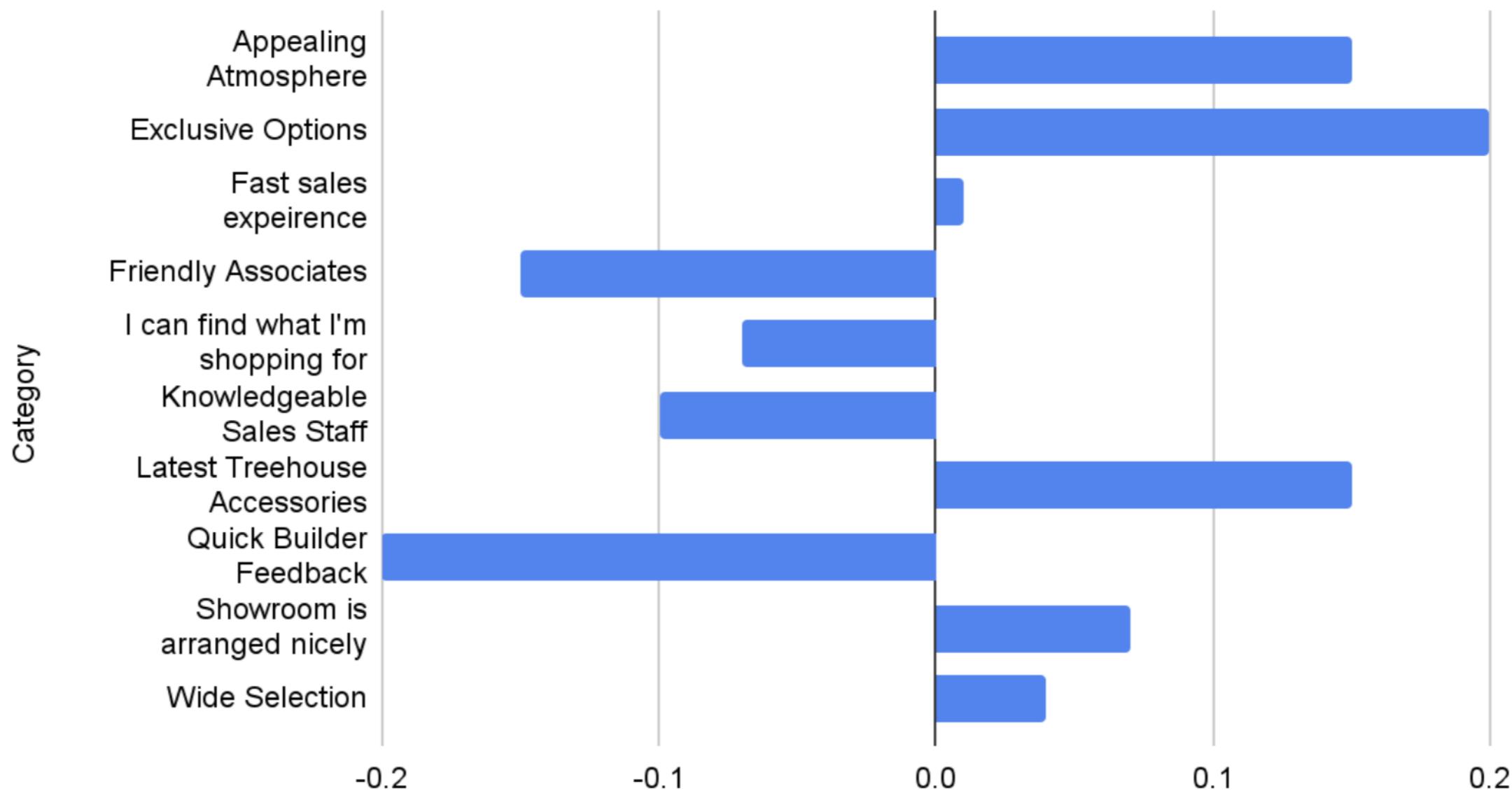
# Two graphs walk into a bar

## Buildingsway and Competitors



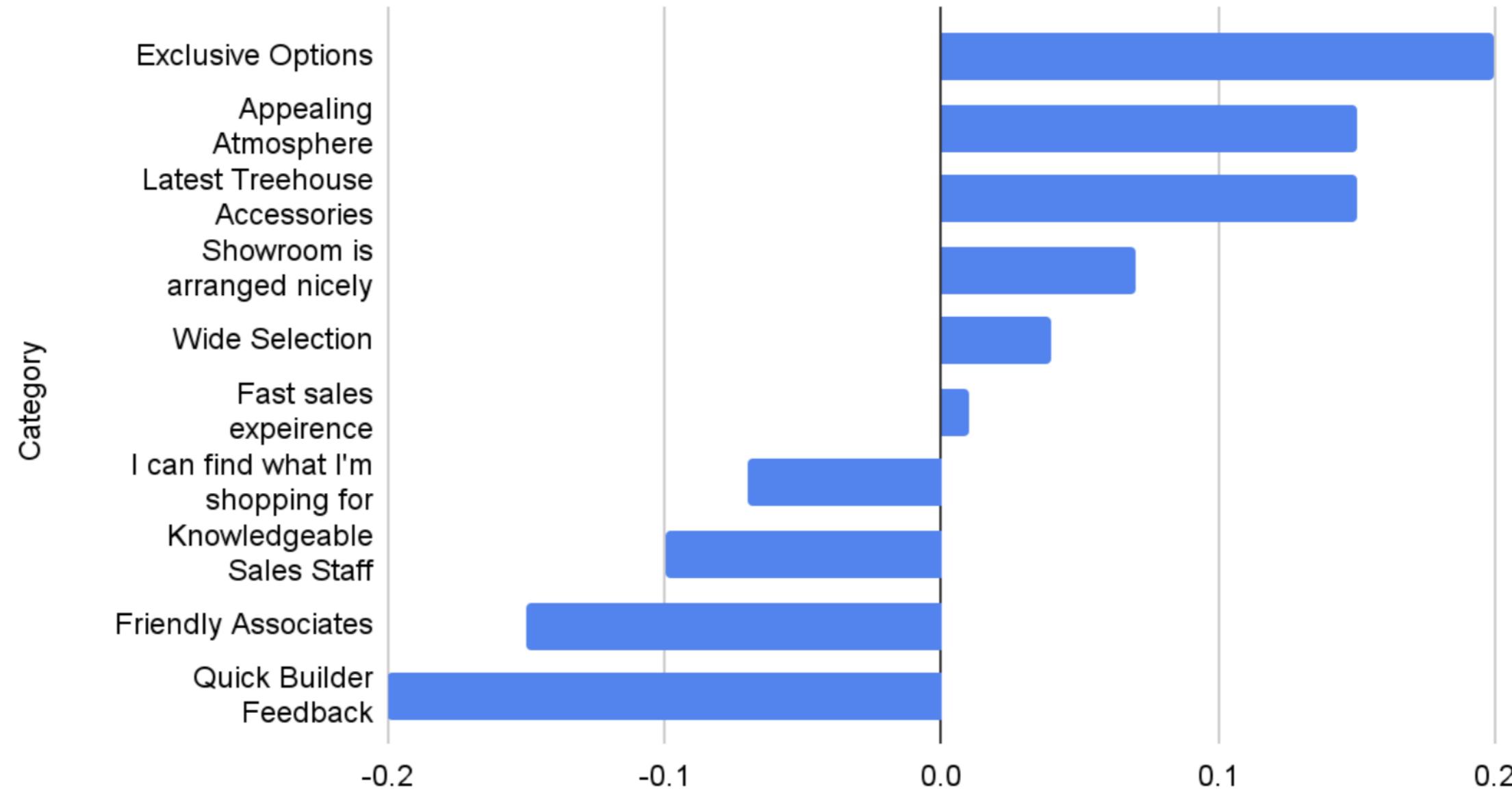
# What a difference

Buildingsway vs Competitors Difference



# Rough around the edges

Buildingsway vs Competitors Difference



# Leveling up



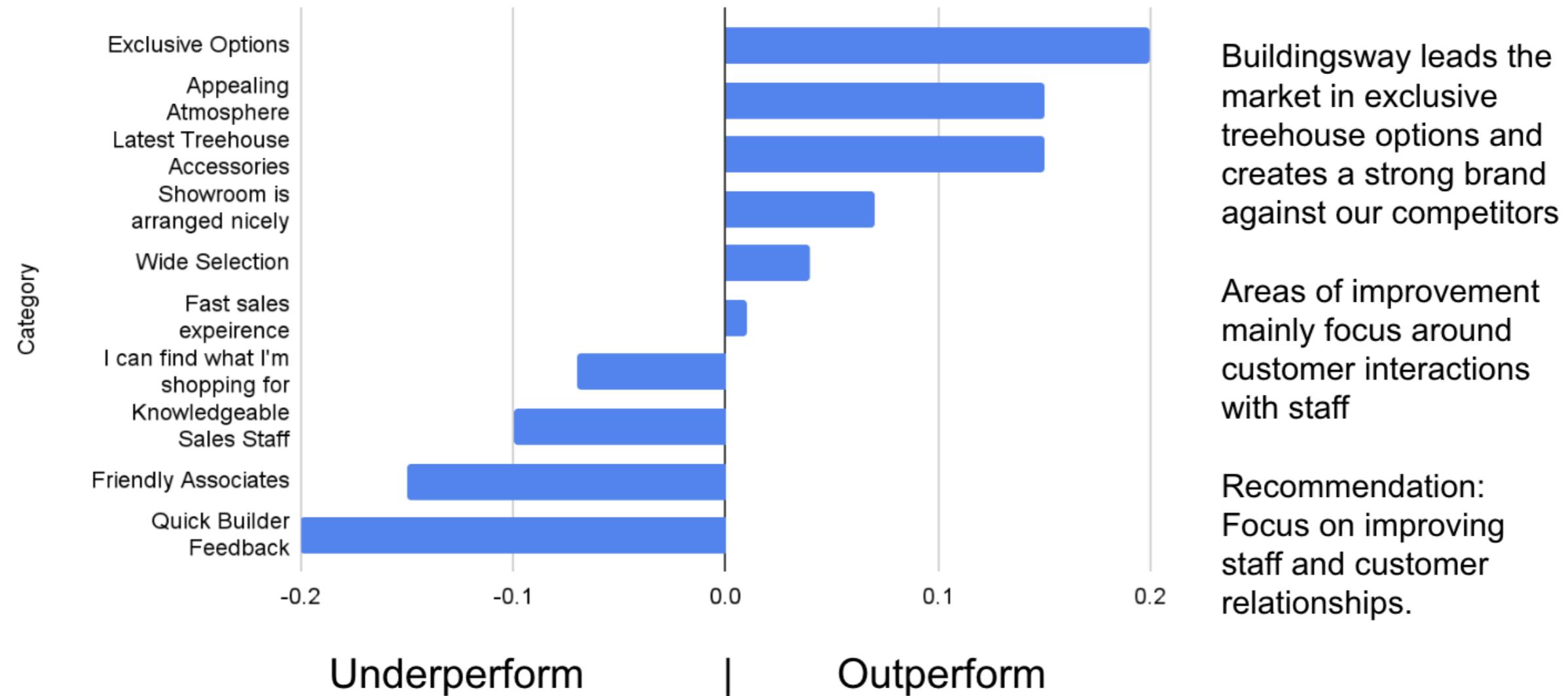
Strong interaction presentation

## Universal Principles

- Incorporate text
- Utilize color
- Simplify visual elements

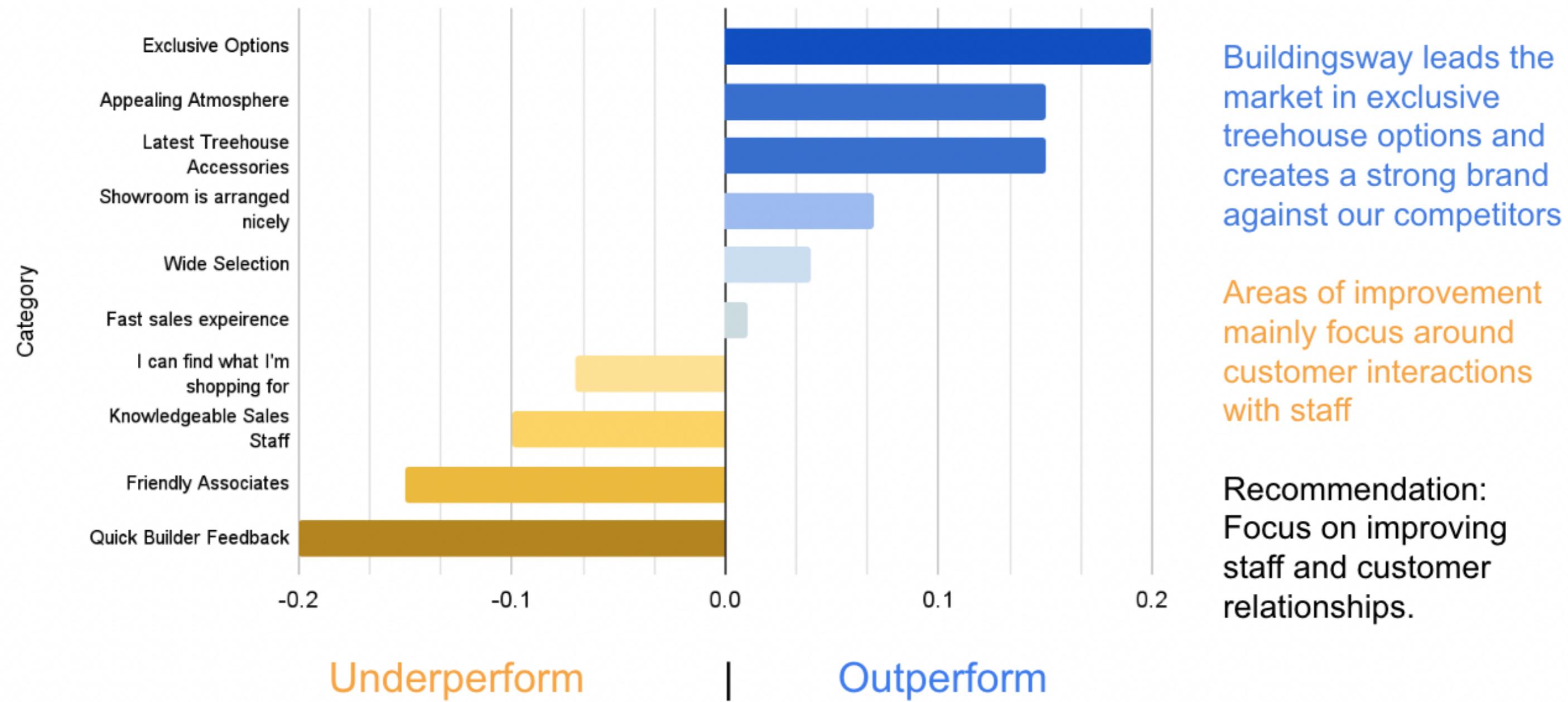
# Getting wordy

Buildingsway vs Competitors Difference



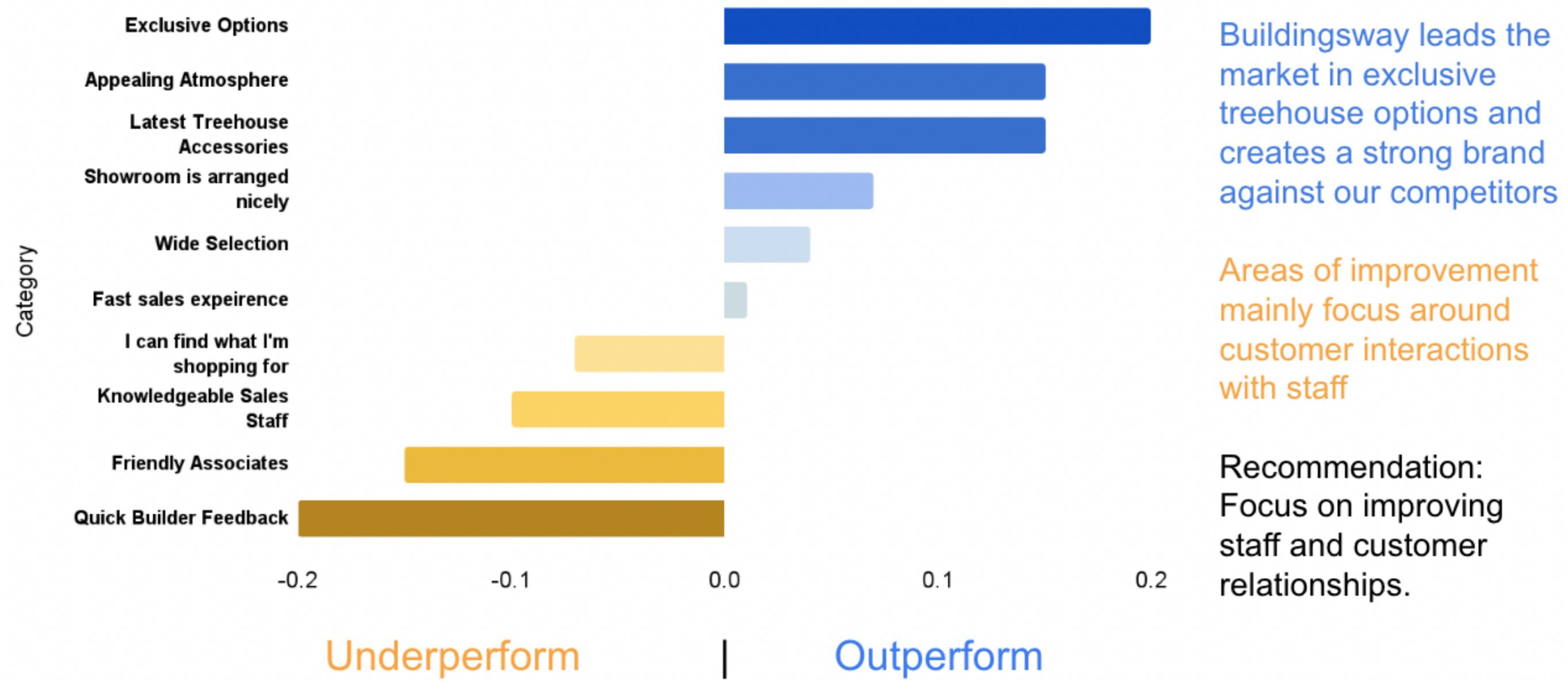
# Coloring between the lines

## Buildingsway vs Competitors Difference



# Simplifying the journey

## Buildingsway vs Competitors Difference



# **Let's practice!**

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# Data storytelling group framework

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# Teamwork makes the dream work



# Getting the band back together

## Major Roles

- Subject Matter Expert
- Analyst
- Visualizer
- Reviewer



# Subject matter expert (SME)



## Subject matter expert

Responsible for knowing the business problem completely

## Group objectives:

- Develop narrative, giving data story a voice
- Build context, relate data story to organizational efforts

# Art and science



## Visualizer

Blends art and science to create compelling visuals

### Group objectives:

- Craft stunning visualizations
- Ensure insights are properly showcased

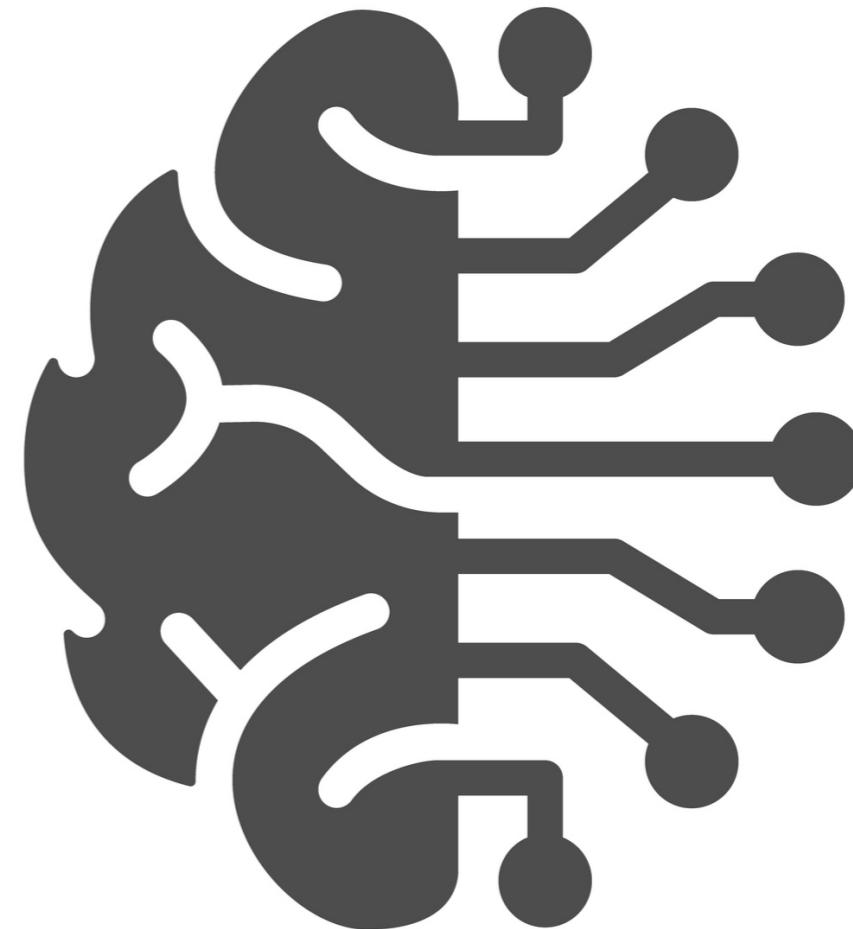
# Analyze this

## Analyst

Technical expert in charge of uncovering and supporting insights

### Group objectives:

- Support other roles
- Answer analytical questions
- Does not require business expertise



# Focus the story

## Reviewer

Evaluates the overall data story

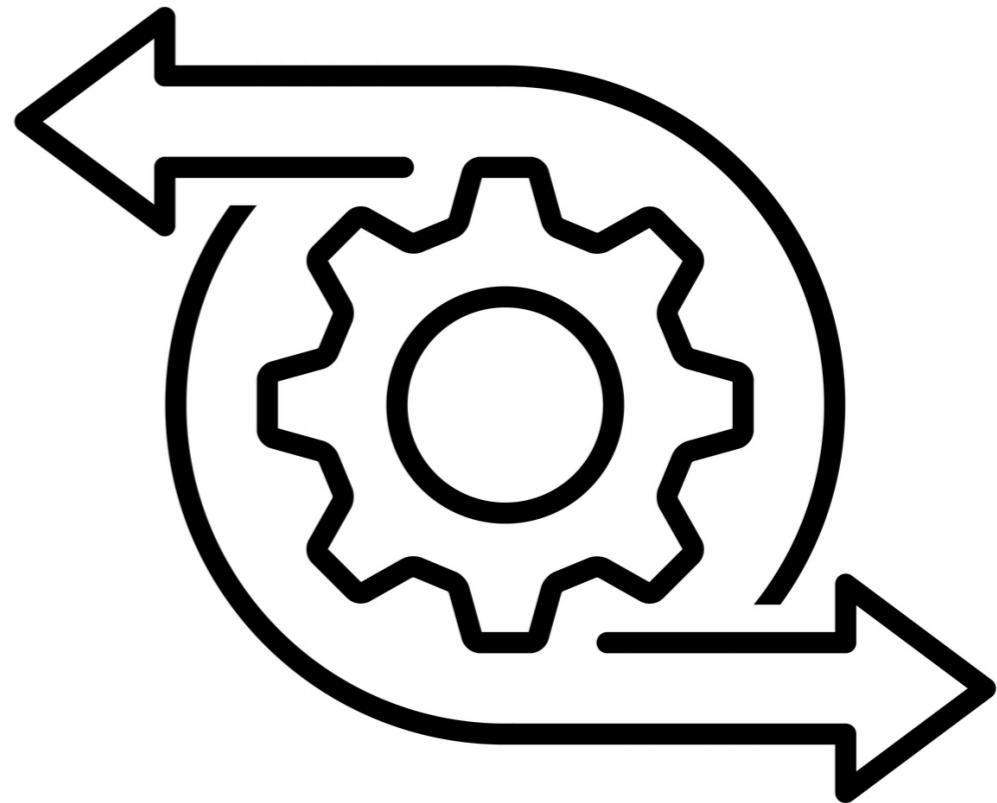
## Group objectives:

- Verifies assumptions
- Gives overall impression of data story
- Acts as a sample audience



# Remain flexible

- Within a group, someone can serve more than one role
- Start with any amount of members
- Rotate roles and learn collectively



# **Let's practice!**

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# Wrap-up

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# Recap

- You learned about:
  - How knowledge is shared
  - Created compelling visualizations
  - Unlocked the power of data stories

# Additional Resources

## Books

- Good Charts: The HBR Guide to Making Smarter, More Persuasive Data Visualizations
- Storytelling with Data: A Data Visualization Guide for Business Professionals
- The Big Book of Dashboards: Visualizing Your Data Using Real-World Business Scenarios

## DataCamp Courses

- Data communication concepts

# **Congratulations!**

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