

PRC 2025

The Inspiring Magic of Data Visualization



Slide Template Created By 24Slides

Courtney Kearney, CPSM

Founder & Owner



*Where are my
Lego nerds?*



**Raise your hand
if you love Lego**

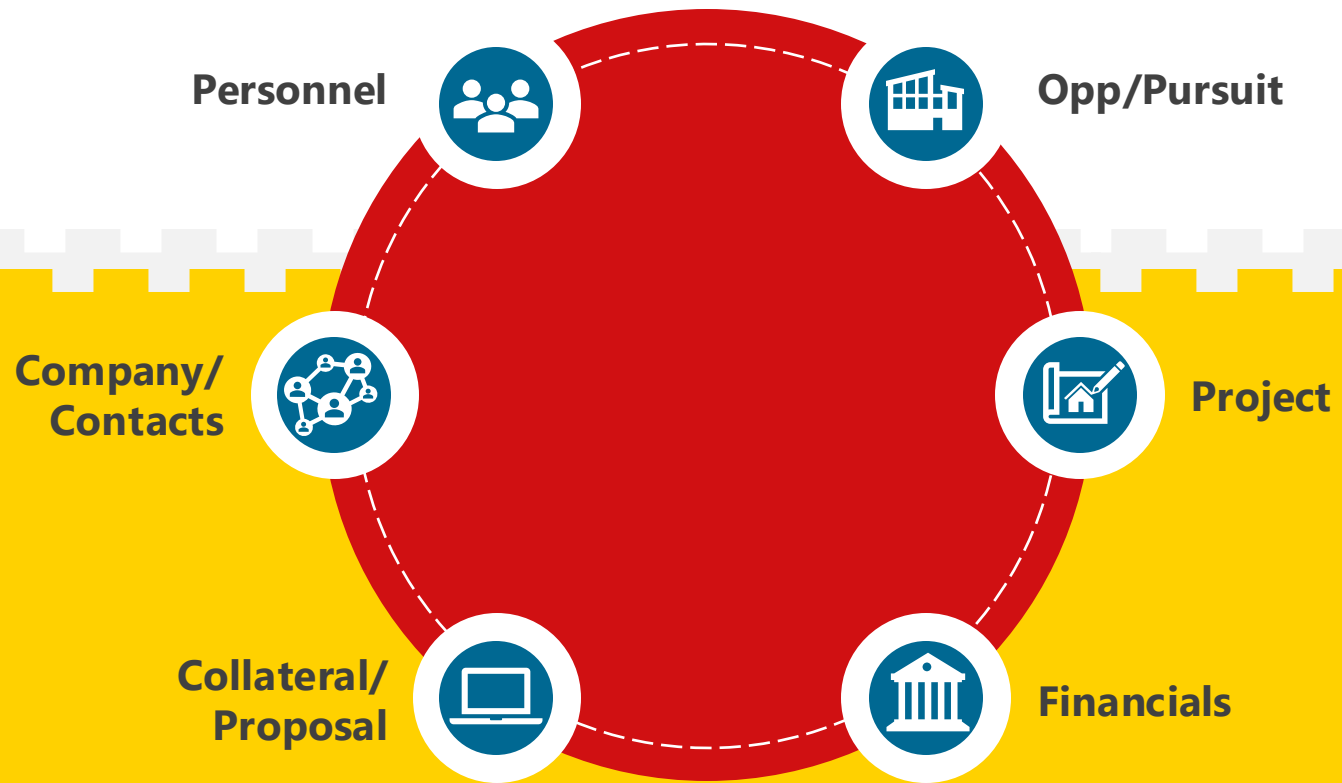


**Who thinks
Lego is like data?**

Magical Journey

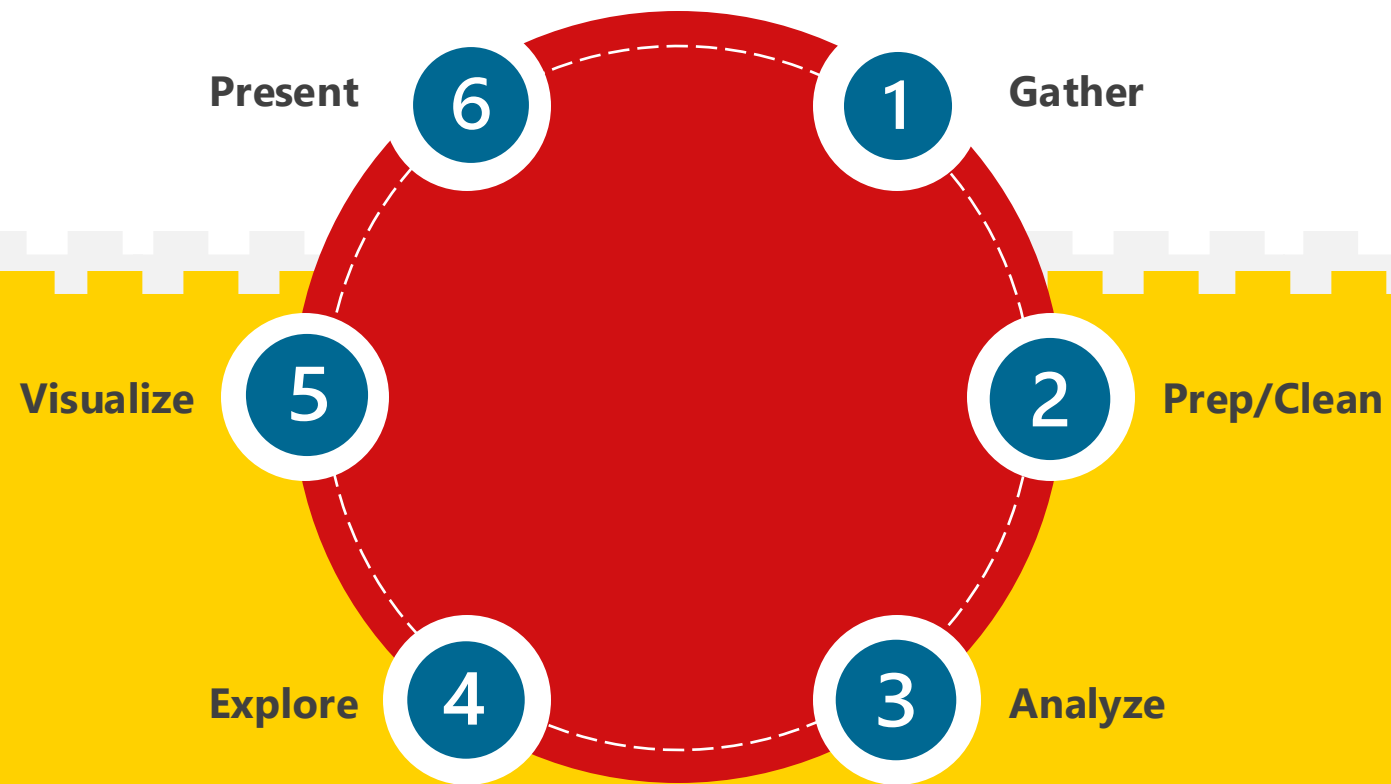
Lego Bricks = Raw Data






Common AEC
Data Sets

Data Steps



- 
1. Gather
 2. Prep/Clean

Big Data

- It's not about collecting the most data
- It's about making sense of it
- Connecting the dots across multiple sources

Processing Data

- Removing duplicates
- Handling missing values
- Standardizing formats



3. Analyze
4. Explore

Identify

- Trends and patterns
- Outliers or erroneous data
- Main takeaway

GenAI Tools

- Generate executive summaries with key takeaways
- Gain deeper insights
- Alternative perspectives

5. Visualize
6. Present



Selection Matters

- Choose the right visual to make your insights digestible
- Avoid clutter – keep simple and focused

Deliver the Findings

- Presentation shapes perception
- Delivery method impact the final product



Raw Pursuit Data

	A	C	D	E	F	G	H
1	Opportunity Num	Stage	Firm Estimated Fe	Days in Stag	Firm Org Division	Prospect Type	Firm Org Office
2	22-0002	01-Prospecting	\$123,987	535	Healthcare	New Client	Dallas
3	21-0002	01-Prospecting	\$123,456	1102	Aviation	Repeat Client	Austin
4	23-0003	01-Prospecting	\$234,876	326	Healthcare	New Client	Dallas
5	23-0001	01-Prospecting	\$345,765	380	Healthcare	New Client	Dallas
6	21-0026	01-Prospecting	\$555,500	914	Aviation	Repeat Client	Mexico City
7	21-0044	01-Prospecting	\$246,802	654	Healthcare	Repeat Client	Dallas
8	21-0029	01-Prospecting	\$192,837	654	Landscape	New Client	Dallas
9	21-0010	01-Prospecting	\$908,756	985	Landscape	Repeat Client	Austin
10	21-0009	01-Prospecting	\$890,567	985	Aviation	New Client	Austin
11	21-0028	01-Prospecting	\$765,345	914	Healthcare	Repeat Client	Dallas
12	21-0012	01-Prospecting	\$136,332	985	Municipal	New Client	Dallas
13	22-0012	01-Prospecting	\$135,801	405	Healthcare	New Client	Dallas
14	23-0008	02-Prospecting (Converted Lead)	\$247,221	254	Landscape	Repeat Client	Dallas
15	20-0005-001	02-Prospecting (Converted Lead)	\$2,643,880	277	Aviation	New Client	Boca Raton
16	21-0027	03-Received RFP/RFQ	\$5,000,123	914	Commercial	Repeat Client	Atlanta



How does
that translate to
Lego?



Steps

1. **Gather** – Box sets or loose bricks
2. **Prep** – Instruction book or imagination
3. **Analyze** – Pull the pieces
4. **Explore** – Sort
5. **Visualize** – Connect
6. **Present** – Challenge accepted



Identify



Data Outliers

- Data point(s) significantly different from the rest
Ex: All the \$ are in the millions but one is in the hundreds
- Typos
Ex: An @ instead of the letter a

	A	C	D	E	F	G	H
1	Opportunity Numb	Stage	Firm Estimated Fe	Days in Stag	Firm Org Division	Prospect Typ	Firm Org Office
2	22-0002	01-Prospecting	\$123,987	535	Healthcare	New Client	Dallas
3	21-0002	01-Prospecting	\$123,456	1102	Aviation	Repeat Client	Austin
4	23-0003	01-Prospecting	\$234,876	326	Healthcare	New Client	Dallas
5	23-0001	01-Prospecting	\$345,765	380	Healthcare	New Client	Dallas
6	21-0026	01-Prospecting	\$555,500	914	Aviation	Repeat Client	Mexico City
7	21-0044	01-Prospecting	\$246,802	654	Healthcare	Repeat Client	Dallas
8	21-0029	01-Prospecting	\$192,837	654	Landscape	New Client	Dallas
9	21-0010	01-Prospecting	\$908,756	985	Landscape	Repeat Client	Austin
10	21-0009	01-Prospecting	\$890,567	985	Aviation	New Client	Austin
11	21-0028	01-Prospecting	\$765,345	914	Healthcare	Repeat Client	Dallas
12	21-0012	01-Prospecting	\$136,332	985	Municipal	New Client	Dallas
13	22-0012	01-Prospecting	\$135,801	405	Healthcare	New Client	Dallas
14	23-0008	02-Prospecting (Converte	\$247,221	254	Landscape	Repeat Client	Dallas
15	20-0005-001	02-Prospecting (Converte	\$2,643,880	277	Aviation	New Client	Boca Raton
16	21-0027	03-Received RFP/RFQ	\$5,000,123	914	Commercial	Repeat Client	Atlanta



Identify



Brick Outliers

- All the orange and green



Choices



Sorting Data

Which column of data will you sort by?

- Alphabetically by Company Name
- Decreasing by Dollar Value
- Increasing by Opp/Project Number

	A	C	D	E	F	G	H
1	Opportunity Numb	Stage	Firm Estimated Fe	Days in Stag	Firm Org Division	Prospect Typ	Firm Org Office
2	22-0002	01-Prospecting	\$123,987	535	Healthcare	New Client	Dallas
3	21-0002	01-Prospecting	\$123,456	1102	Aviation	Repeat Client	Austin
4	23-0003	01-Prospecting	\$234,876	326	Healthcare	New Client	Dallas
5	23-0001	01-Prospecting	\$345,765	380	Healthcare	New Client	Dallas
6	21-0026	01-Prospecting	\$555,500	914	Aviation	Repeat Client	Mexico City
7	21-0044	01-Prospecting	\$246,802	654	Healthcare	Repeat Client	Dallas
8	21-0029	01-Prospecting	\$192,837	654	Landscape	New Client	Dallas
9	21-0010	01-Prospecting	\$908,756	985	Landscape	Repeat Client	Austin
10	21-0009	01-Prospecting	\$890,567	985	Aviation	New Client	Austin
11	21-0028	01-Prospecting	\$765,345	914	Healthcare	Repeat Client	Dallas
12	21-0012	01-Prospecting	\$136,332	985	Municipal	New Client	Dallas
13	22-0012	01-Prospecting	\$135,801	405	Healthcare	New Client	Dallas
14	23-0008	02-Prospecting (Convert	\$247,221	254	Landscape	Repeat Client	Dallas
15	20-0005-001	02-Prospecting (Convert	\$2,643,880	277	Aviation	New Client	Boca Raton
16	21-0027	03-Received RFP/RFQ	\$5,000,123	914	Commercial	Repeat Client	Atlanta

Choices



Sorting Bricks

How will you sort the bricks?

- Color
- Size





Visualize

Visualizing Data

How will you show your data?

- Table
- Chart / Graph
- Diagram / Gauge
- Infographic / Flowchart
- Map (Heat, Area, etc.)

Visualize



Visualizing Bricks

How will you display the bricks?

- Highlighting height



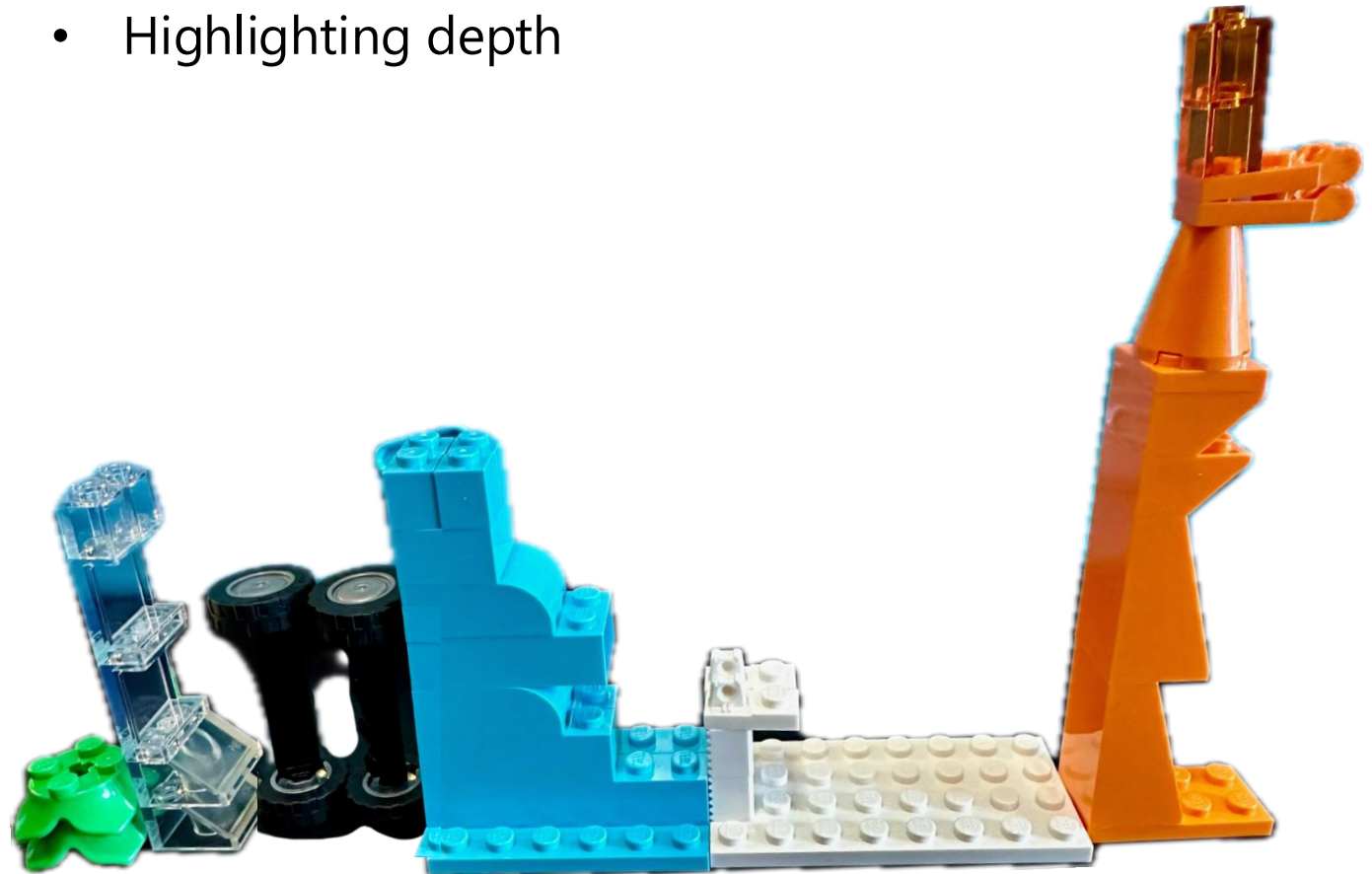
Visualize



Visualizing Bricks

How will you display the bricks?

- Highlighting depth



Present



Present

Something's missing!





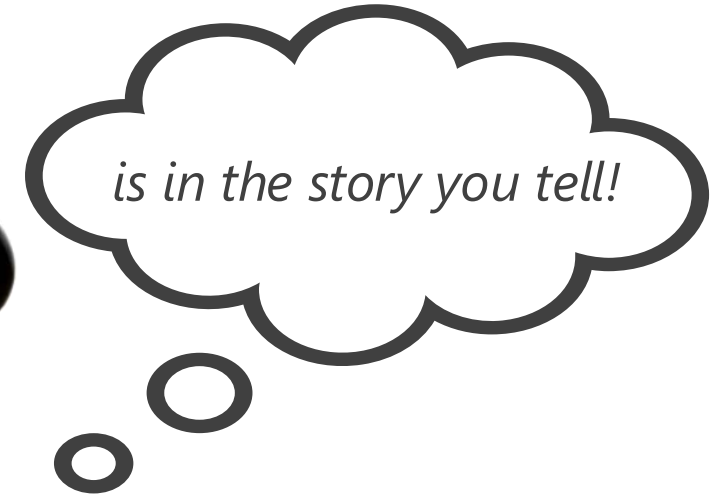
Remember our
brick outliers?



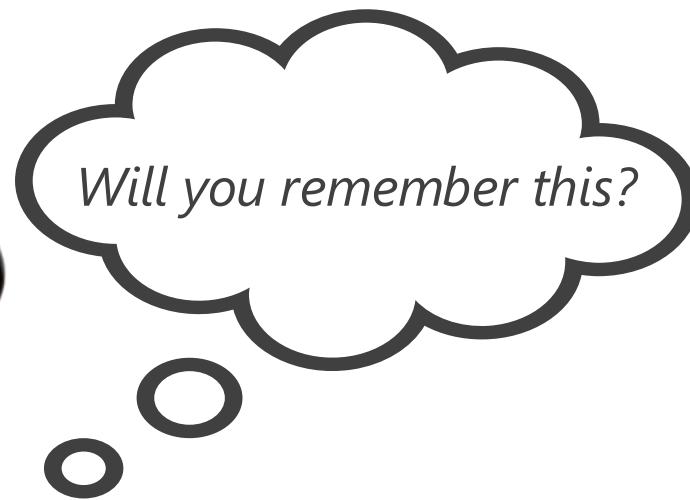
**It's important to
understand your data!**













Data Storytelling Requires Context



Data Storytelling Requires Context



Context



Purpose

What are you trying to accomplish by sharing the data?
What action do you want to drive with the story?



Audience

The 'who' determines your objective, tone and call to action.
What level of data literacy do they have?



Delivery

How will this be presented?
Slides, print, website, social media, etc.



Depth

How much detail is necessary?
Keep focused on why the data matters?



Using GenAI to find context



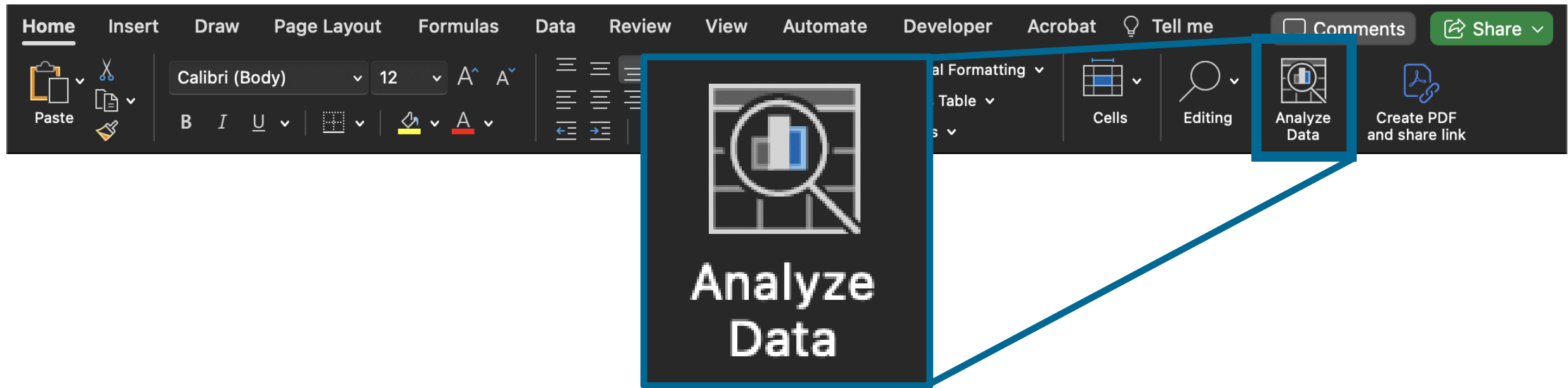
Using GenAI

Gather



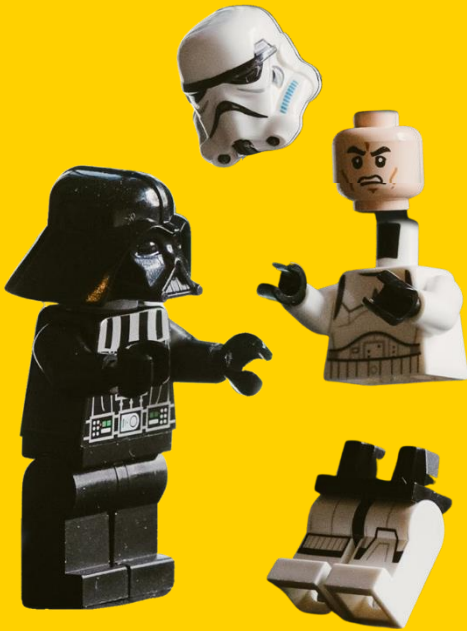
- Explain your business and ask what data you need to gather and track, what data you could be tracking.
- Explain the platforms and systems you're using, and it can help you pull the data step by step.
 - Ex: Pulling website, social media, and email campaign analytics
- Create prompt templates to process your gathered data.
- Use GenAI for data collection (e.g., automate scraping of RFPs, competitor analysis, market trends).

Built-In Tools



Using GenAI

Analyze



- Assist you in gathering insights by uploading your data and requesting a summary with key takeaways.
- Ask GenAI to help you better understand the purpose of your dataset and to better understand your intended audience.
- Help you tailor your data story to be impactful tying the insights to a clear call to action or recommendation.
- Makes insights accessible, use it to make them digestible.

Using GenAI

Visualize



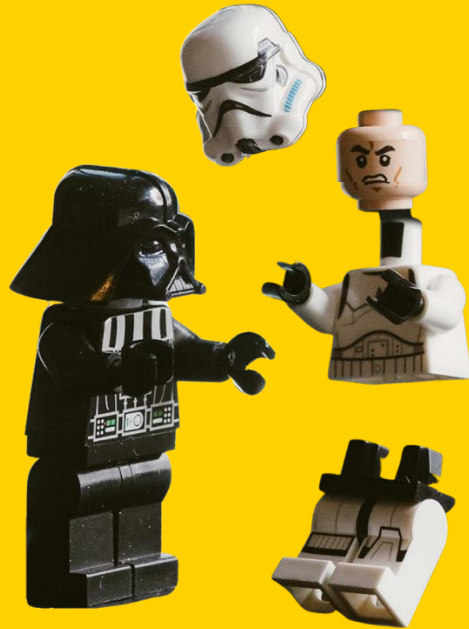
- Use GenAI to suggest the best visual to represent your data (bar chart, scatter plot, heatmap, etc.).
- Pick the GenAI tool based on your needs and expertise level (drag-and-drop vs. code-driven).
- Upload a data visualization, ask it to provide feedback on clarity, effectiveness, and suggest improvements.
- Website has a list of some data visualization tools.

Using GenAI

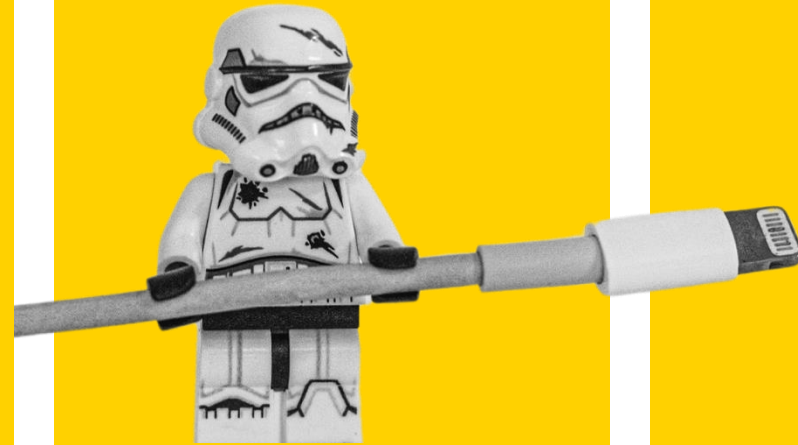
Gather



Analyze



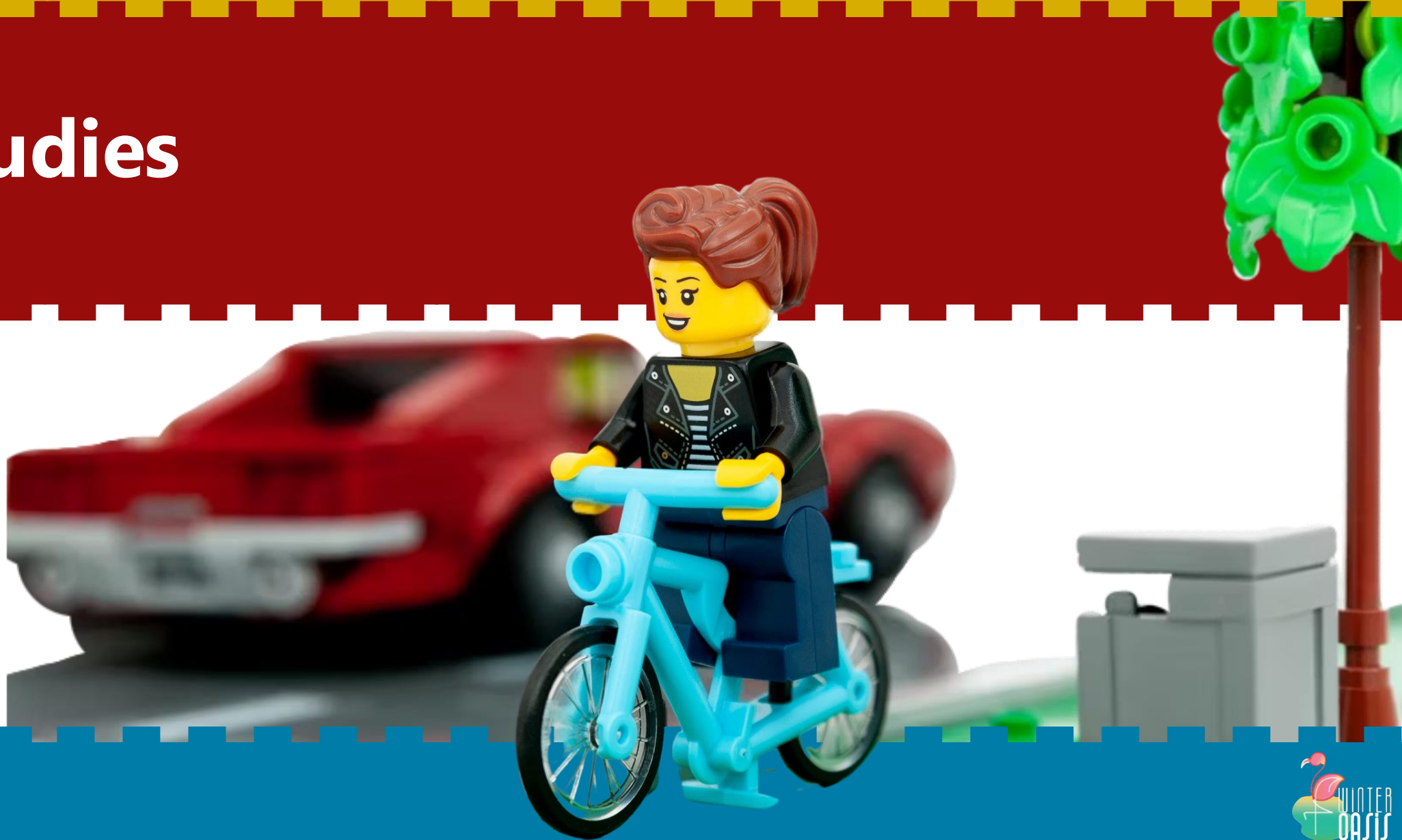
Visualize



Review



Case Studies

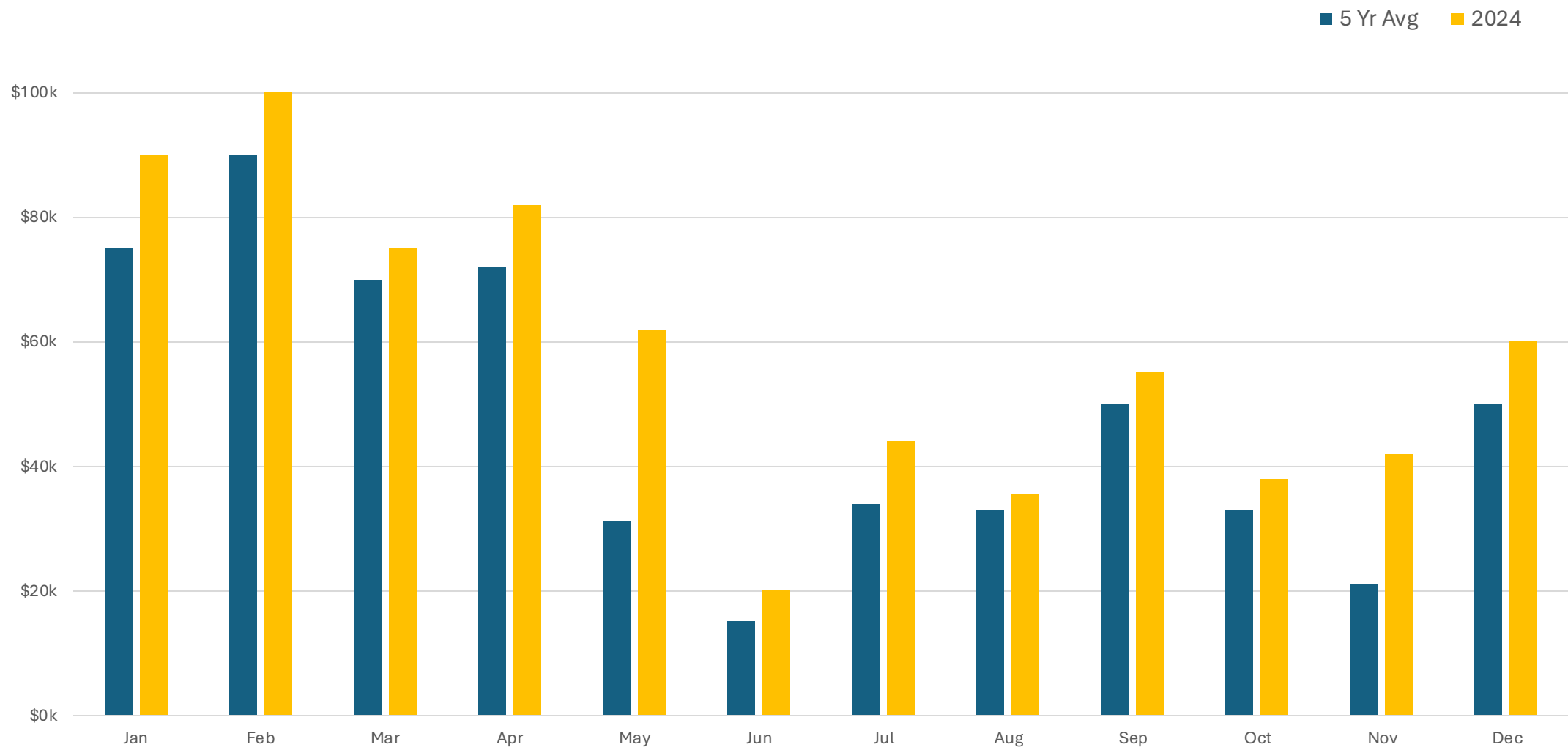


Monthly Sales

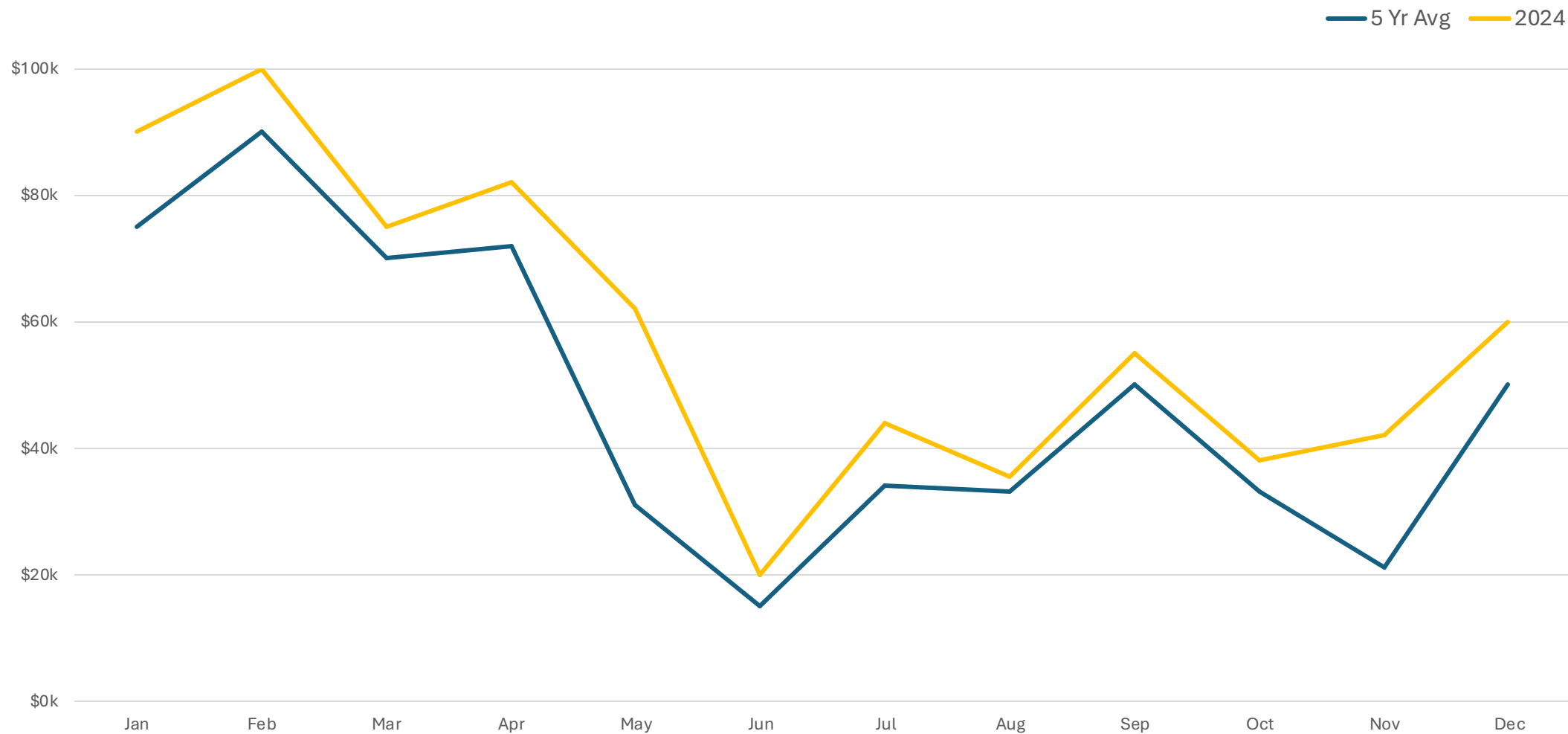
	5 Yr Avg	2024
Jan	\$ 75,000	\$ 90,000
Feb	\$ 90,000	\$ 100,000
Mar	\$ 70,000	\$ 75,000
Apr	\$ 72,000	\$ 82,000
May	\$ 31,000	\$ 62,000
Jun	\$ 15,000	\$ 20,000
Jul	\$ 34,000	\$ 44,000
Aug	\$ 33,000	\$ 35,500
Sep	\$ 50,000	\$ 55,000
Oct	\$ 33,000	\$ 38,000
Nov	\$ 21,000	\$ 42,000
Dec	\$ 50,000	\$ 60,000



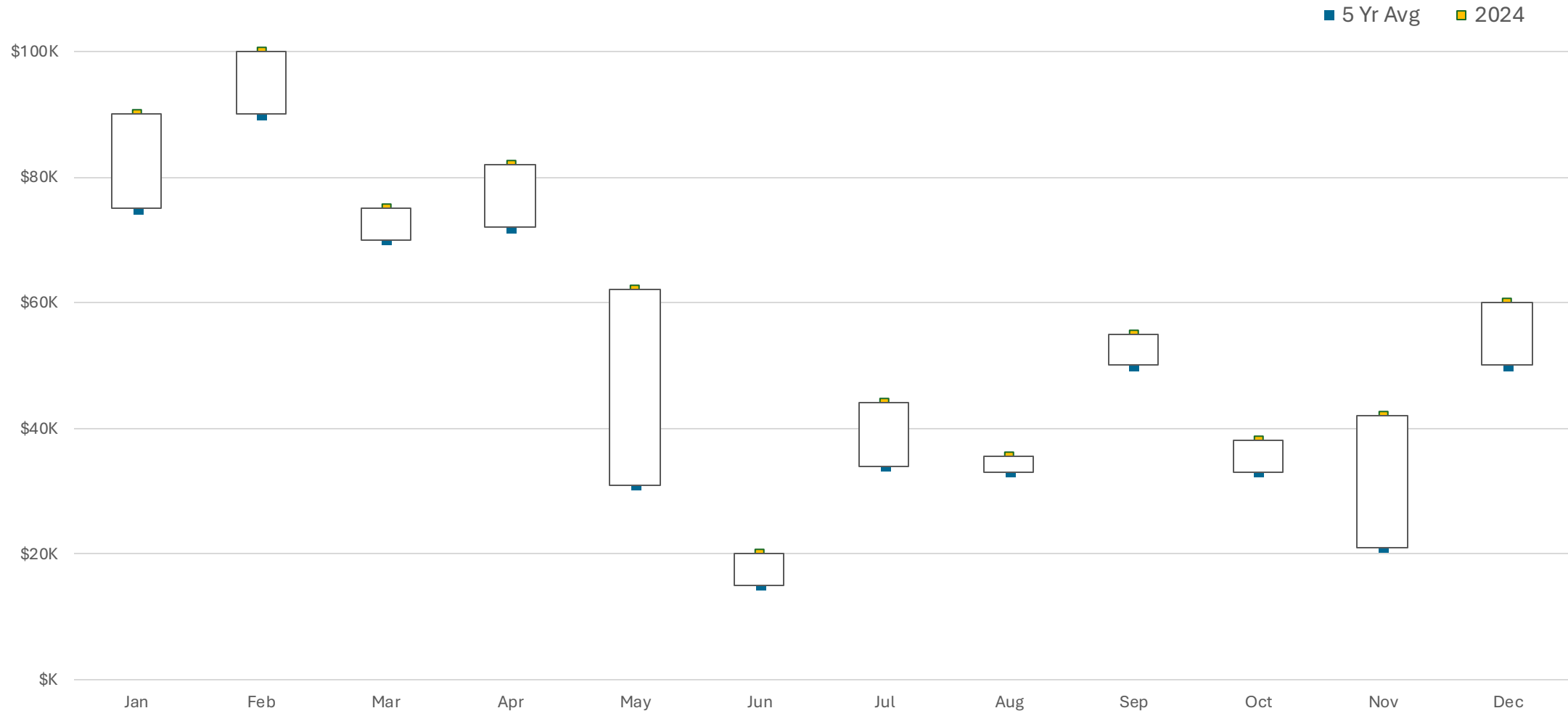
Monthly Sales – Explore



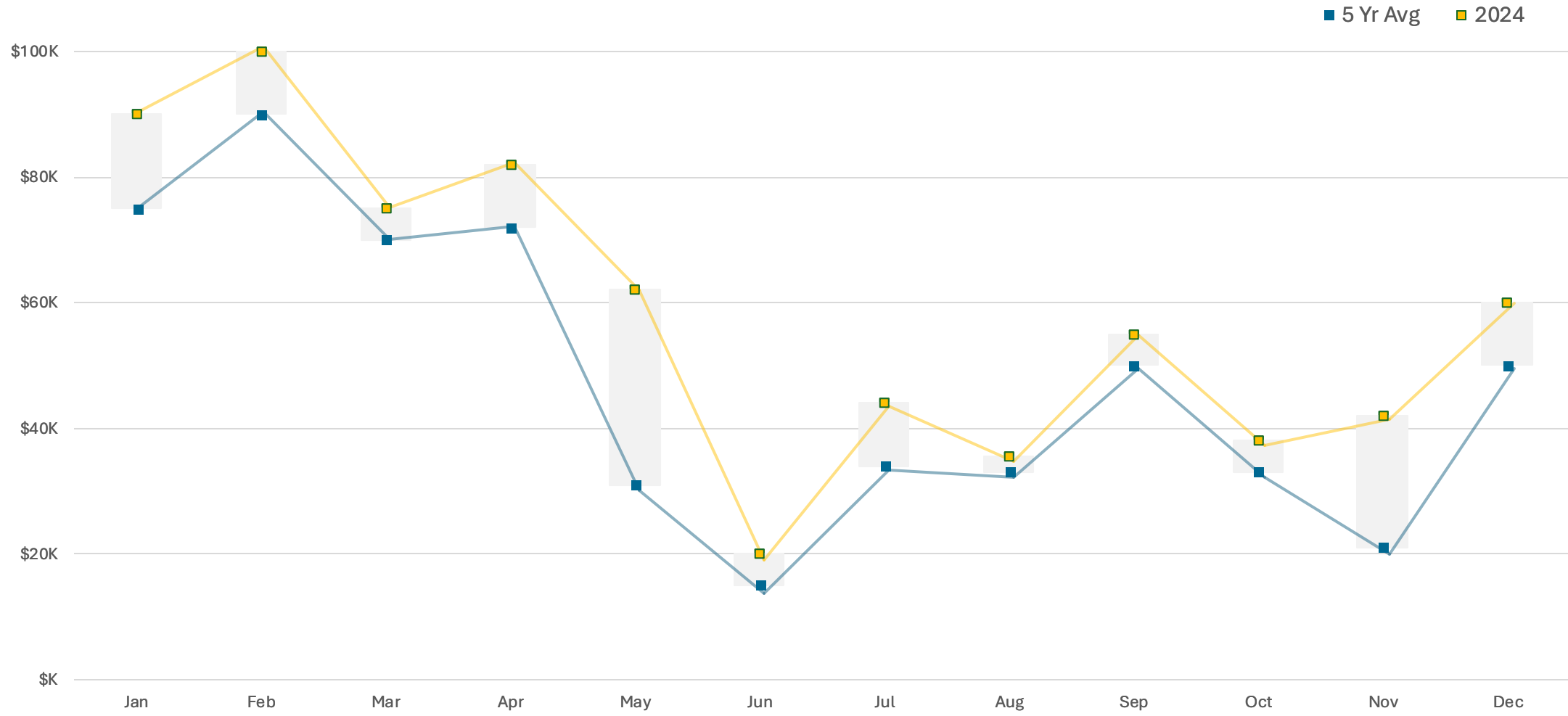
Monthly Sales – Explore



Monthly Sales – Explore



Monthly Sales – Explore

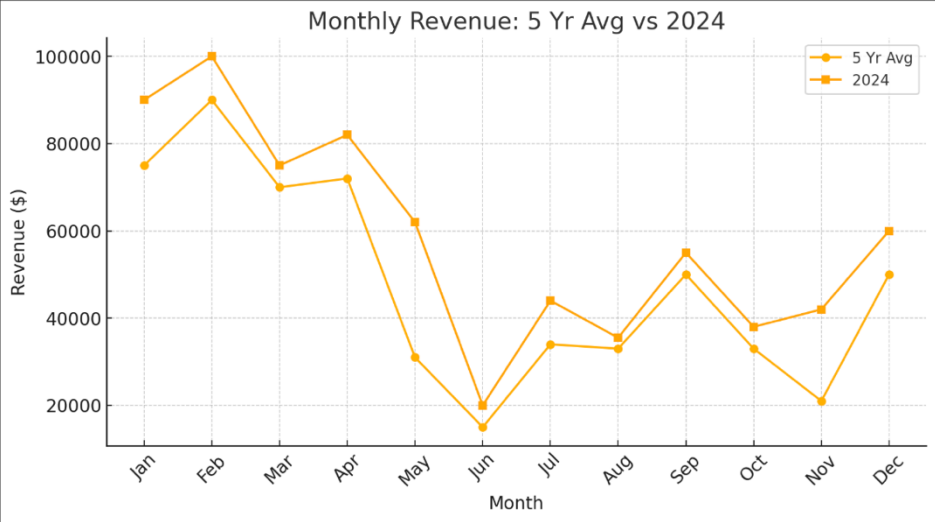
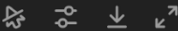


Monthly Sales – GenAI Insights

Here's my dataset. what insights do you see?



Monthly Revenue: 5 Yr Avg Vs 2024



Revenue Comparison



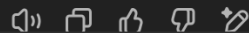
	Month	5 Yr Avg	2024	% Change
7	Jul	34000	44000	29.4117647355
8	Aug	33000	35500	7.575757576
9	Sep	50000	55000	10.0

Monthly Sales – GenAI Insights

Here are the key insights from your dataset:

1. **Overall Trend** – Revenue in 2024 is higher than the 5-year average across all months.
2. **Biggest Increase** – May had the largest increase, rising from \$31,000 to \$62,000 (100.00% increase).
3. **Smallest Increase** – August saw the smallest increase, going from \$33,000 to \$35,500 (7.58% increase).
4. **Seasonal Patterns** – Revenue still shows a dip in summer (June & July), but the 2024 figures are improved compared to historical averages.
5. **Strongest Months** – February and January had the highest revenues in 2024, both surpassing \$90,000.

Would you like further analysis, such as forecasting or deeper trend insights? 🚀 [-]



Ask anything



ChatGPT can make mistakes. Check important info.

Monthly Sales – GenAI Insights

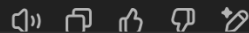
Here are the key insights from your dataset:

1. **Overall Trend** – Revenue in 2024 is higher than the 5-year average across all months.
2. **Biggest Increase** – May had the largest increase, rising from \$31,000 to \$62,000 (100.00% increase).
3. **Smallest Increase** – August saw the smallest increase, going from \$33,000 to \$35,500

1. **Overall Trend** – Revenue in 2024 is higher than the 5-year average across all months.

surpassing \$90,000.

Would you like further analysis, such as forecasting or deeper trend insights? 🚀 [-]

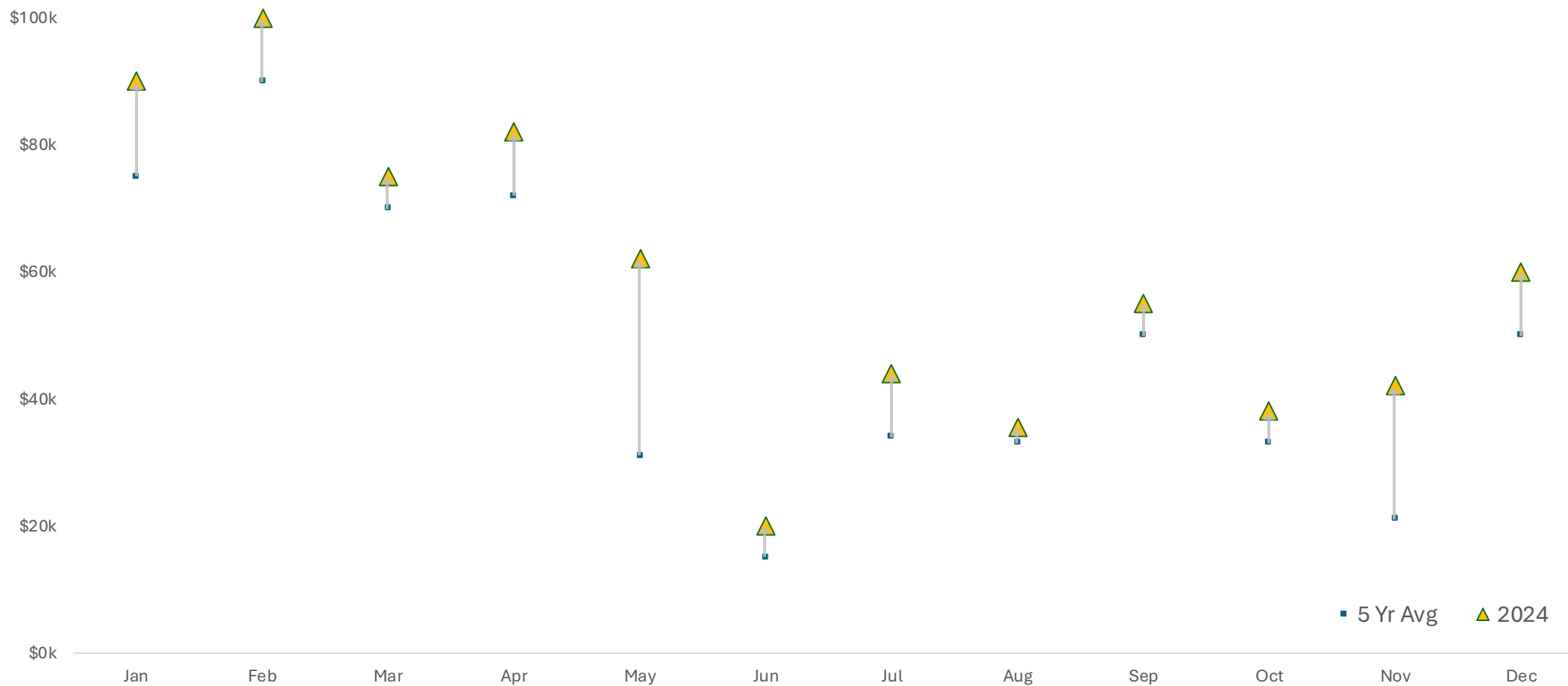


Ask anything



ChatGPT can make mistakes. Check important info.

2024 Revenue was Above Average All Year



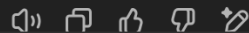
Monthly Sales – Which Story?

Here are the key insights from your dataset:

1. **Overall Trend** – Revenue in 2024 is higher than the 5-year average across all months.
2. **Biggest Increase** – May had the largest increase, rising from \$31,000 to \$62,000 (100.00% increase).
3. **Smallest Increase** – August saw the smallest increase, going from \$33,000 to \$35,500 (7.58% increase).

4. **Seasonal Patterns** – Revenue still shows a dip in summer (June & July), but the 2024 figures are improved compared to historical averages.

Would you like further analysis, such as forecasting or deeper trend insights? 🚀 [-]

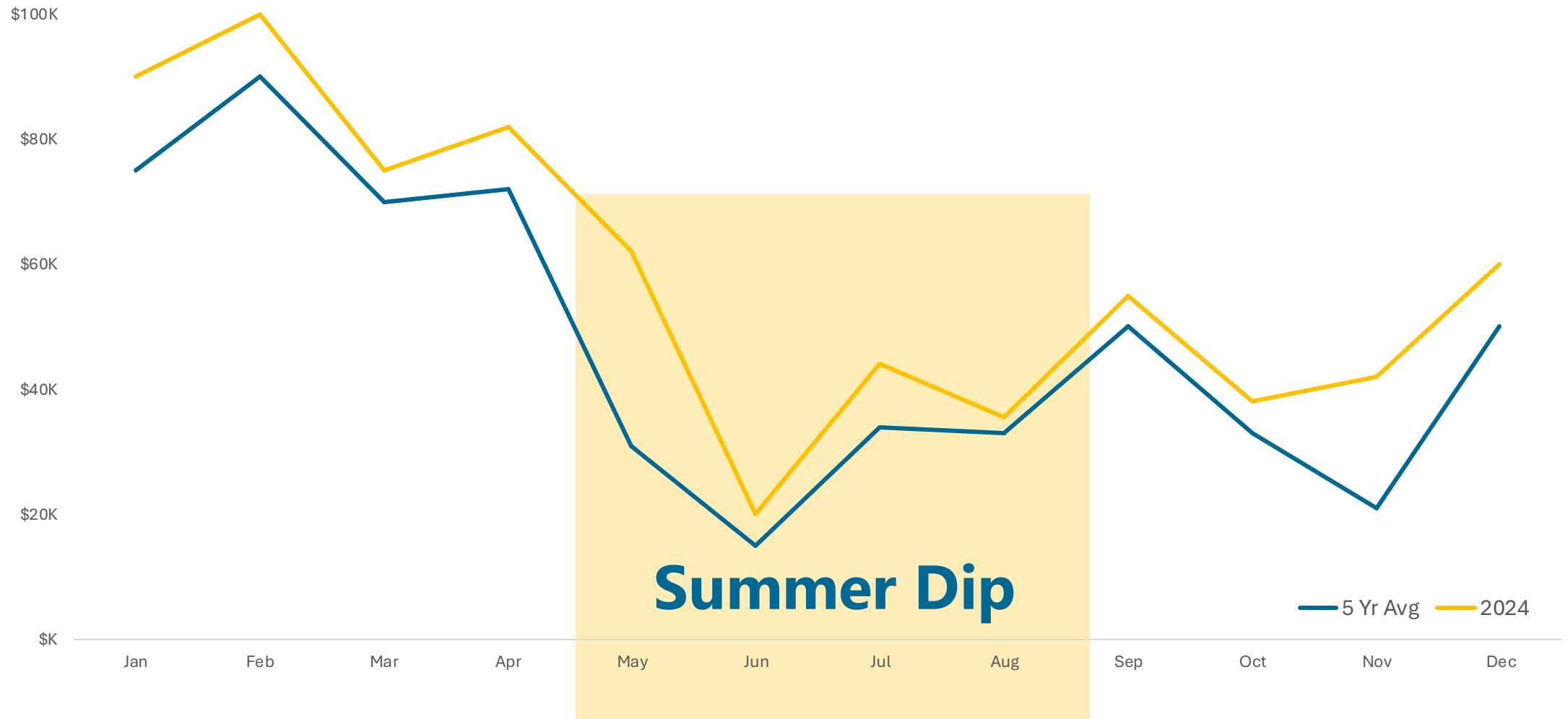


Ask anything



ChatGPT can make mistakes. Check important info.

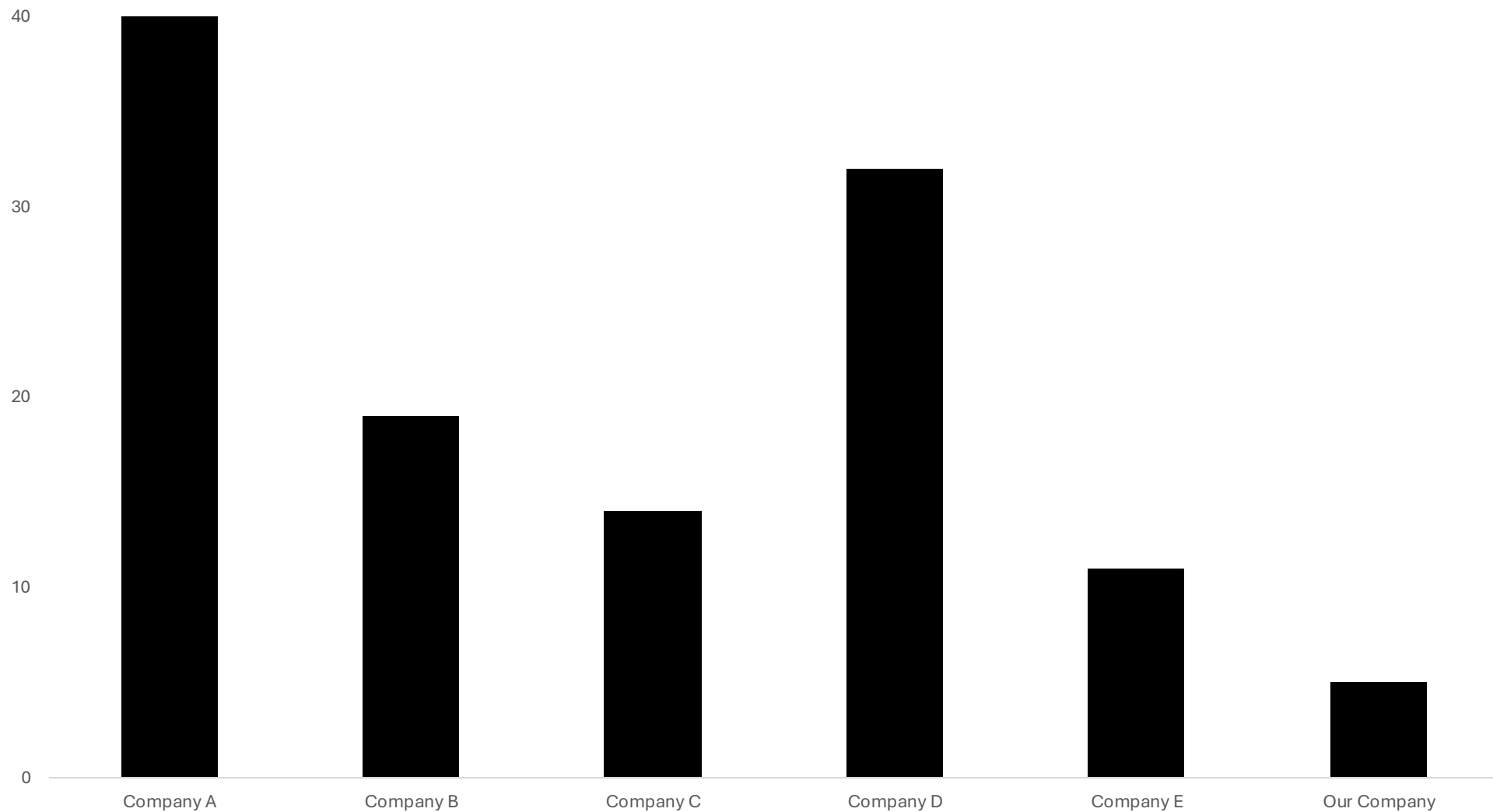
Seasonal Pattern Discovered!



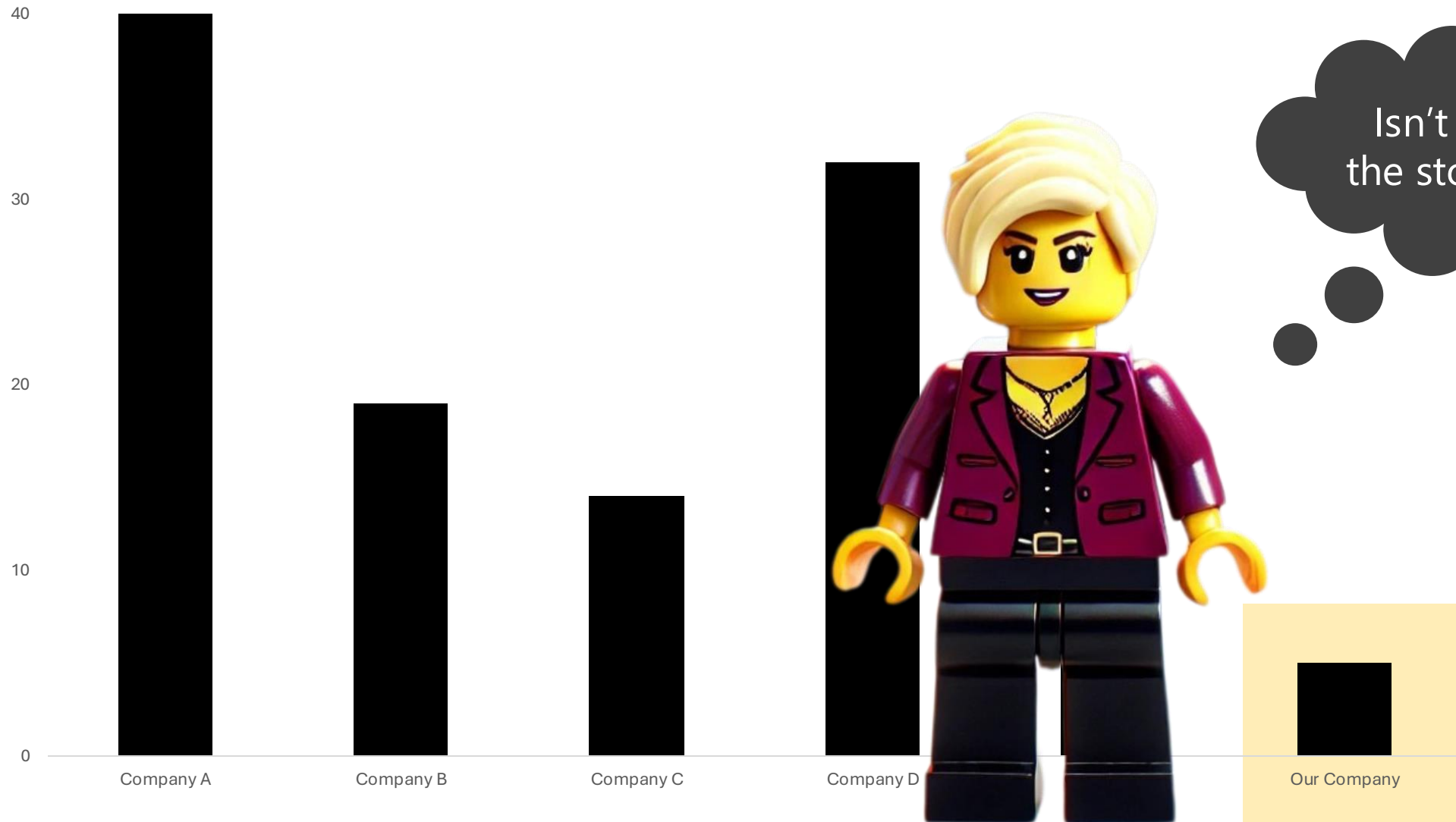


Let's see
another example

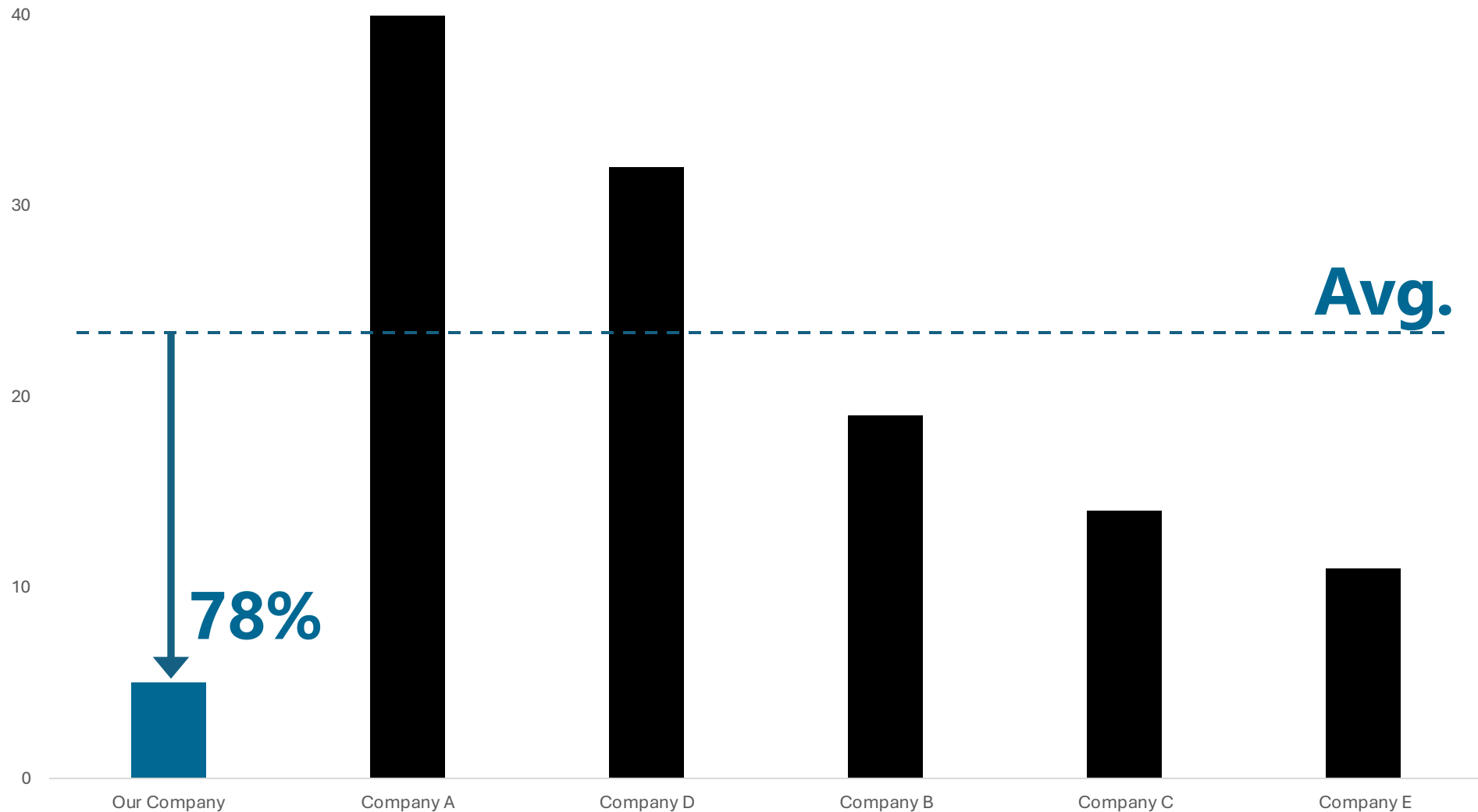
OSHA Violations



OSHA Violations



Our Company has the Fewest OSHA Violations!





Practice good
data storytelling

Resources



- Download the Big Idea worksheet
- Listen to the podcast
- Read the books
- Even to your kids!
- Practice statio – a meditative pause



The powerful
practice of pause

The powerful practice of pause



When to pause:

- Post assignment – ask those clarifying questions
- After every data step – gather, prep, analyze, explore, visualize

Types of pauses:

- Solo – eye test, breathwork, repetitive task, movement, outside
- Collaborative – colleague, FOM, chatbot of choice



Ready for one
last case study?

Client Survey Results

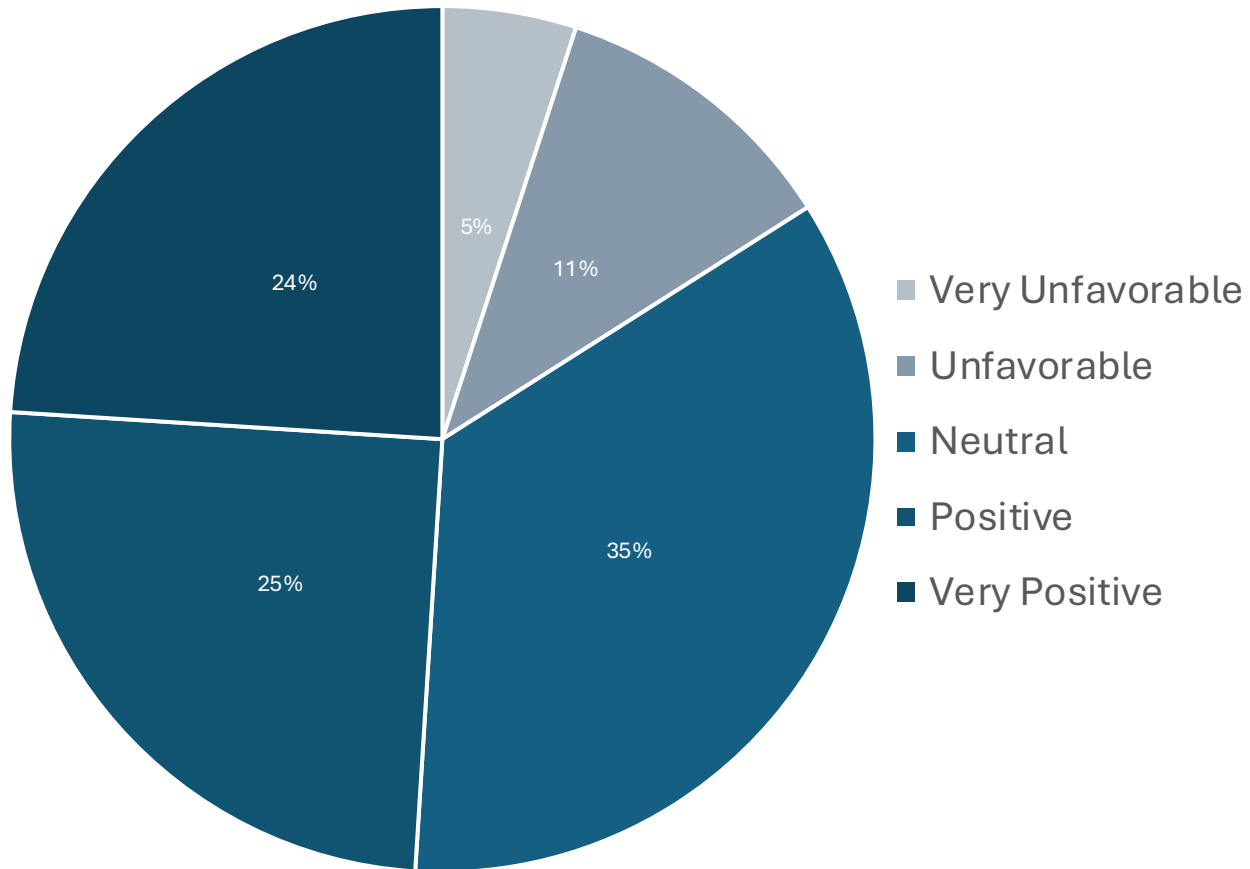
Context



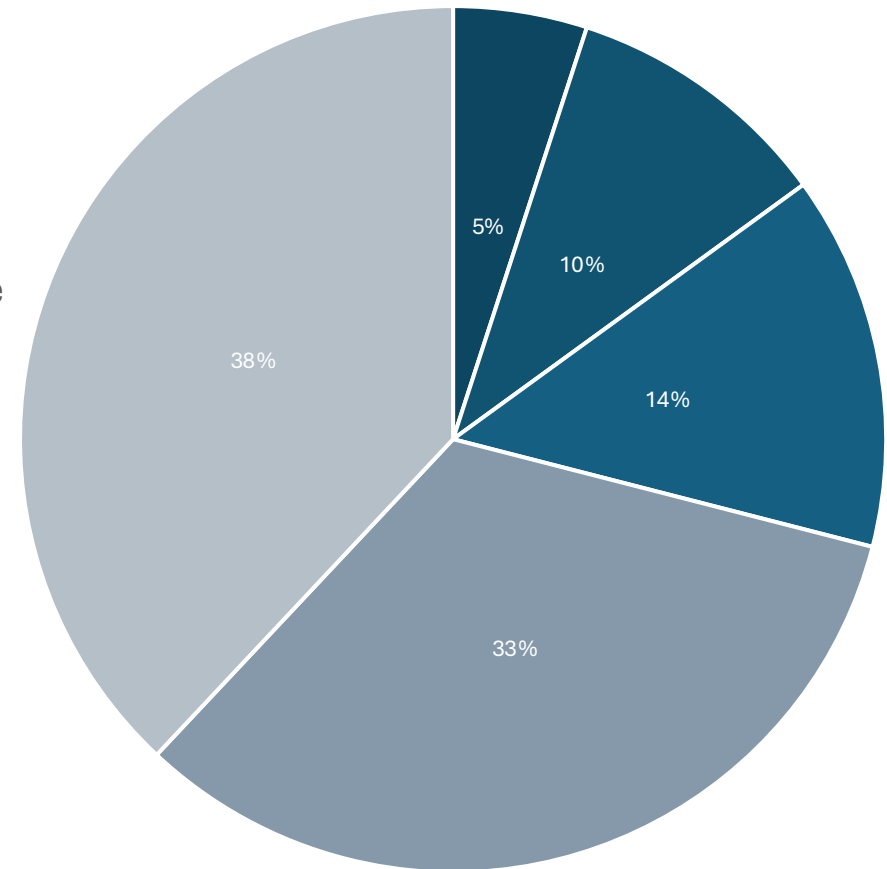
- Survey was sent to gauge the opinion of companies before and after working with us
- One question survey on a 5-point scale
- Two datasets
 - Pre = Results before becoming a client
 - Post = Results after finishing their first project with us

Client Survey Results

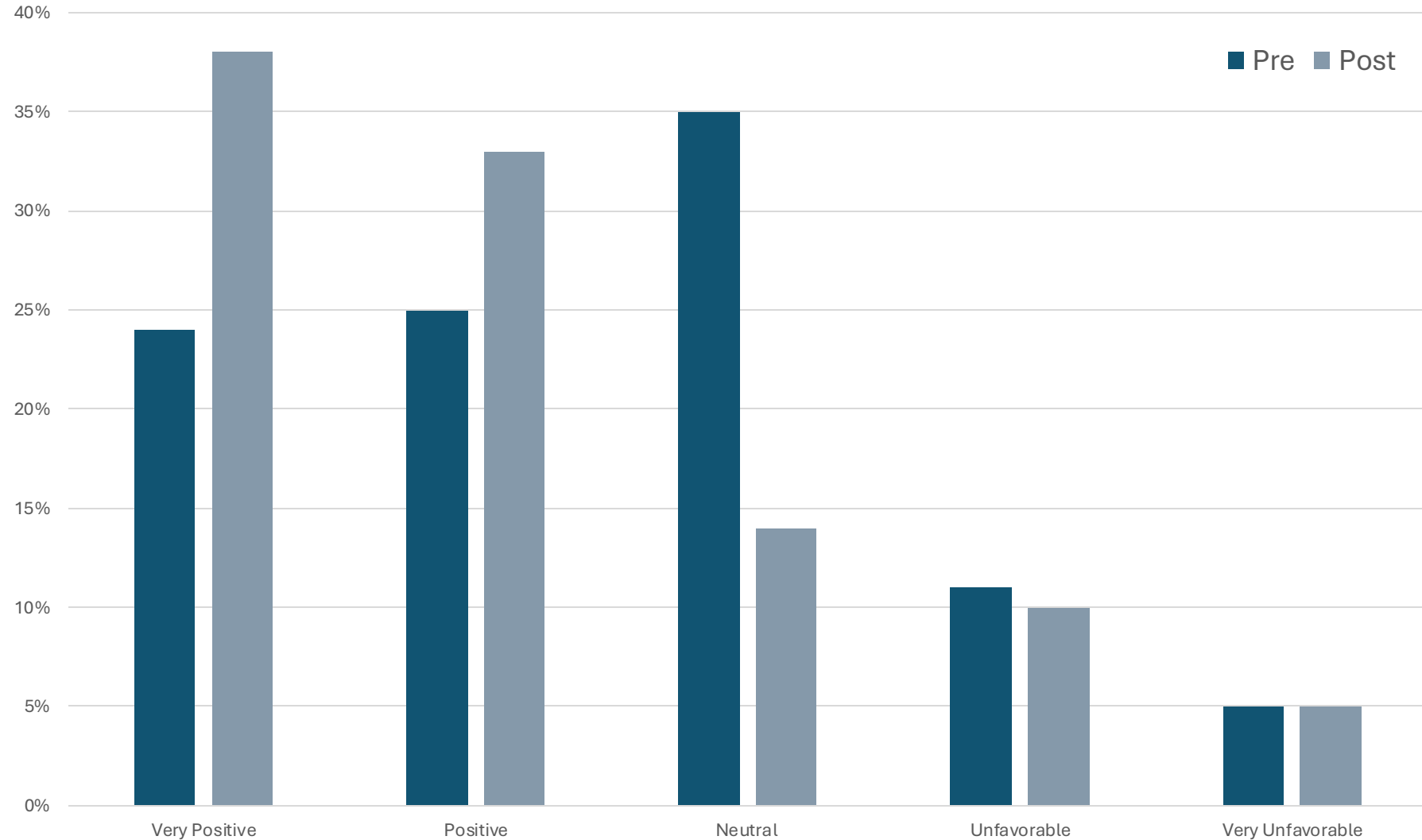
Pre-Project



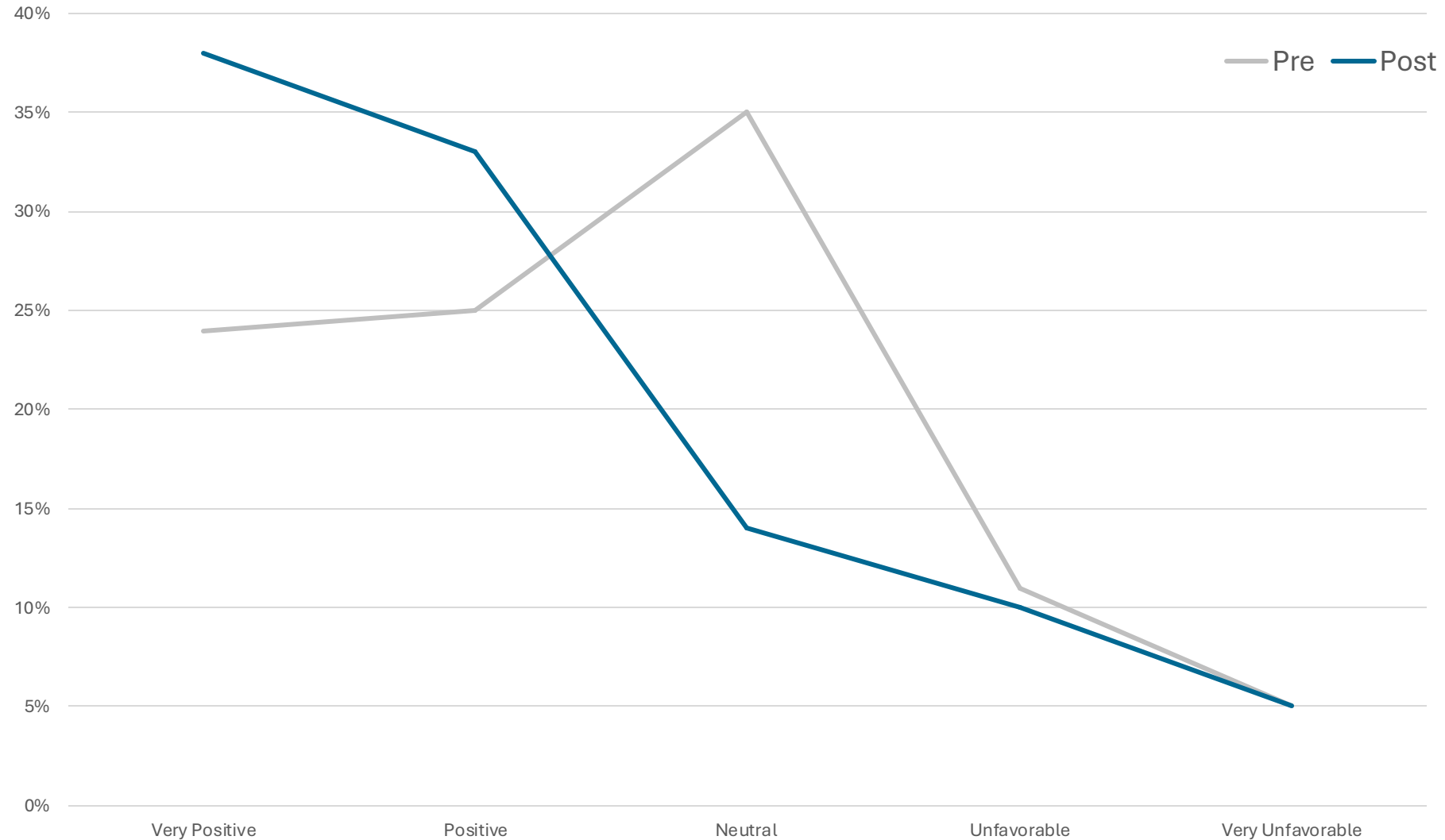
Post-Project



Client Survey Results



Client Survey Results



Client Survey Results

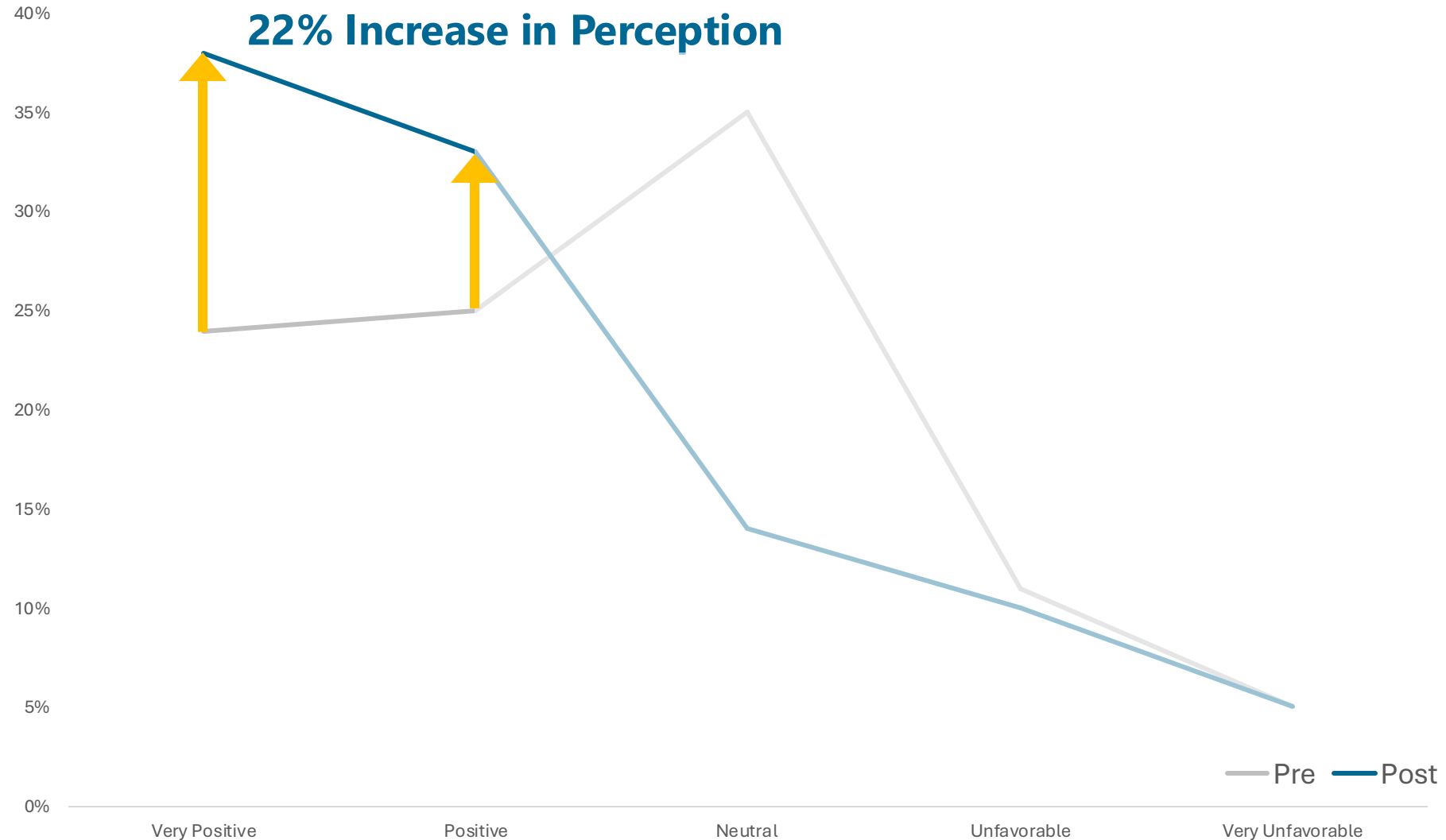
ChatGPT 4 ▾

Improved Positive Perception: There have been improvements in the 'Very Positive' perception of the company, increasing from 18% pre-project to 24% post-project. The 'Positive' category also saw an increase from 22% to 28%.

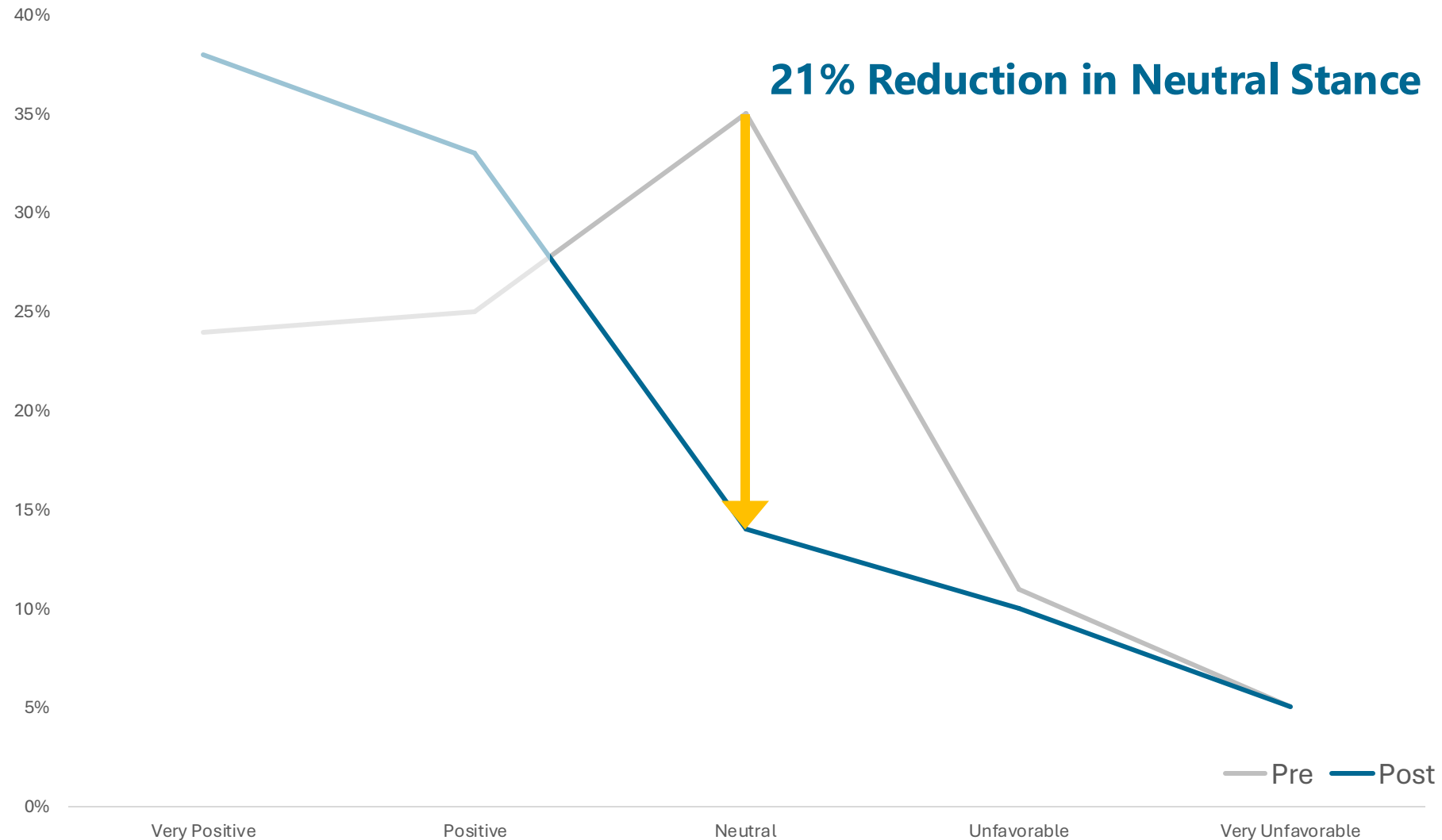
Reduction in Neutral Stance: The 'Neutral' perception of the company decreased from 28% pre-project to 14% post-project, indicating a shift in client sentiment towards more positive or negative views.

Stable Negative Perception: Both the 'Somewhat Negative' and 'Very Negative' categories remained relatively unchanged, indicating that the company's core issues remain unresolved for those who already had a negative view.

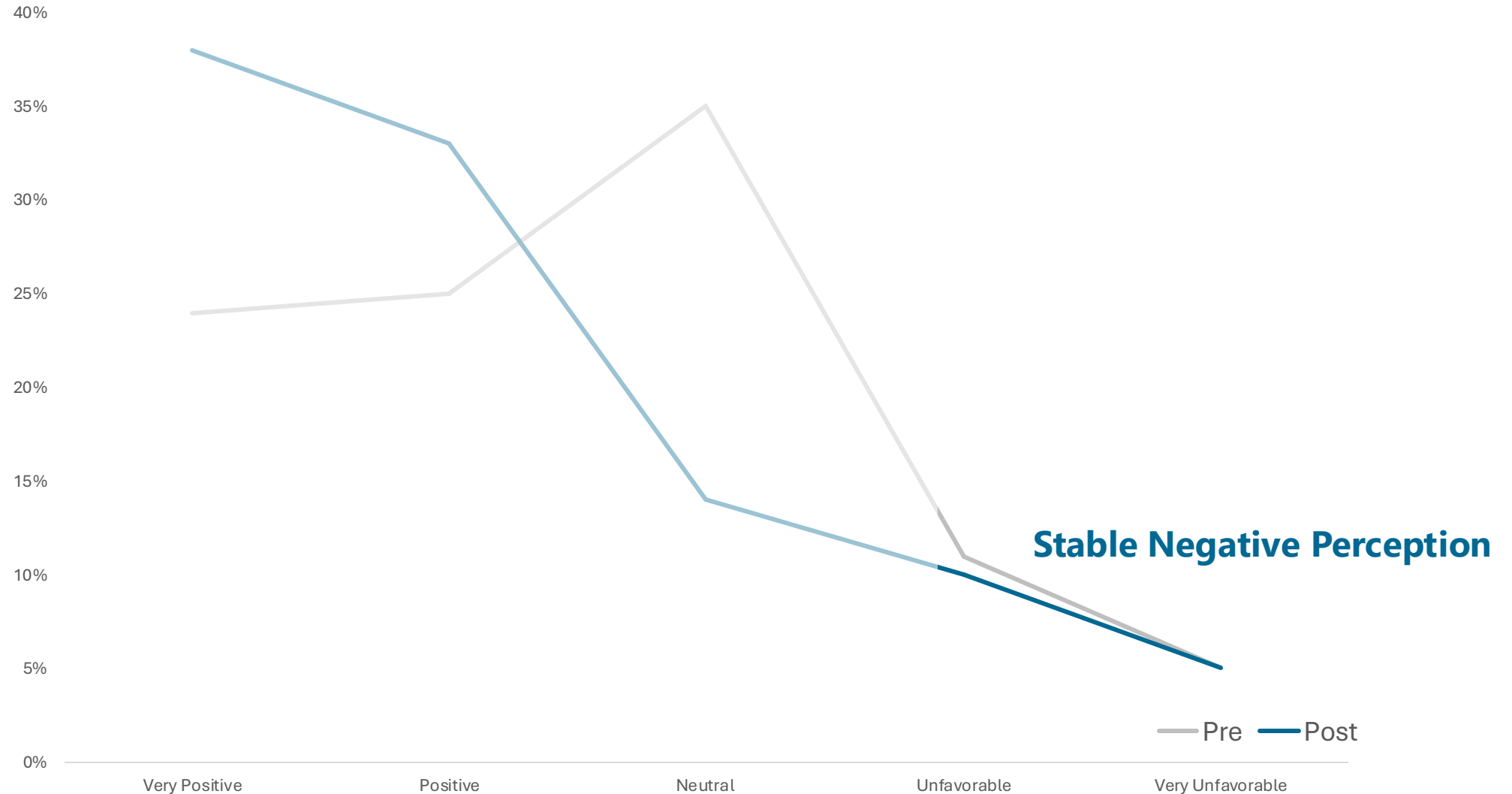
Client Survey Results – Presented



Client Survey Results – Presented

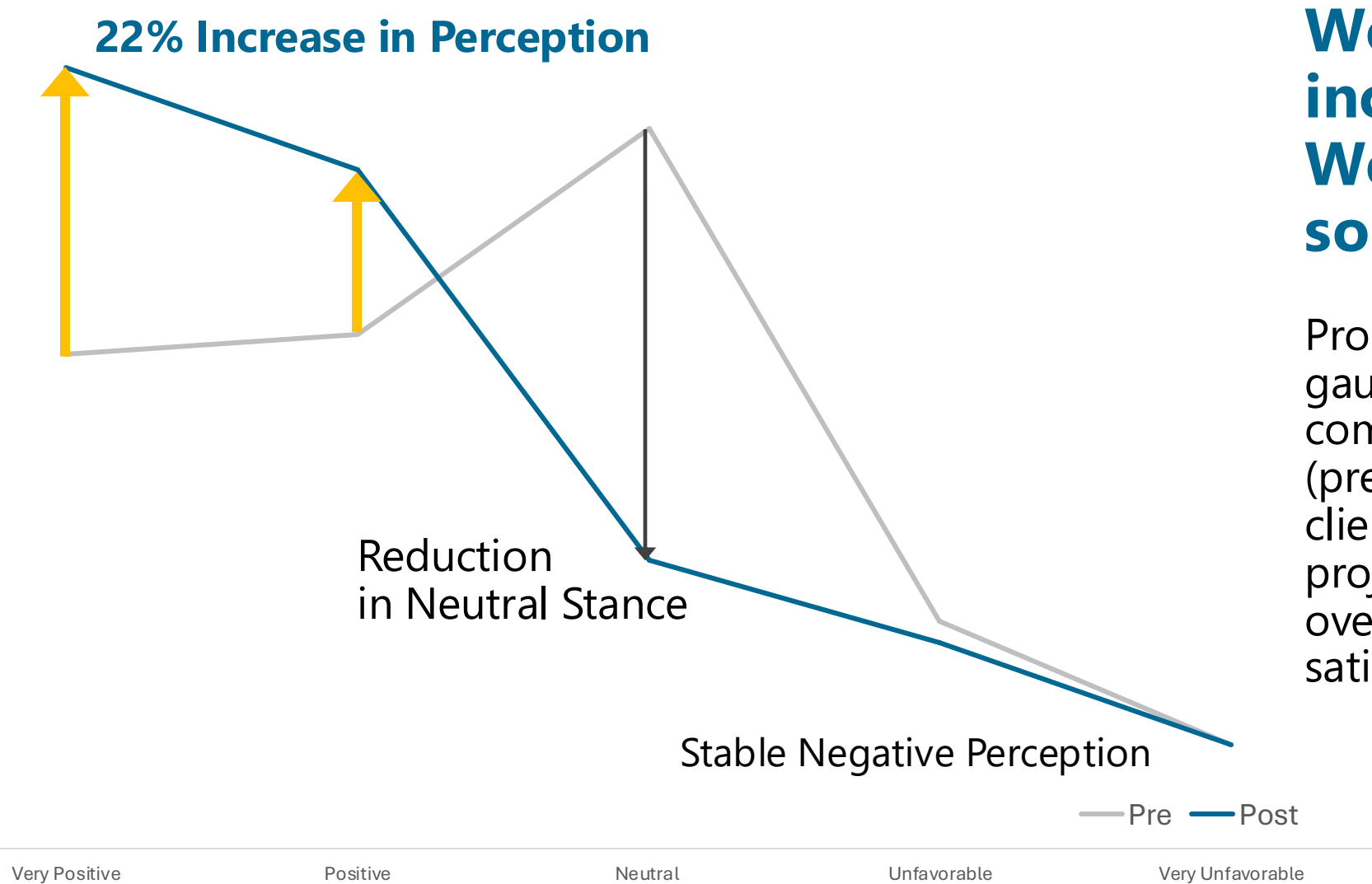


Client Survey Results – Presented




Client Survey Results – Printed





**Working with us
increases perception –
We’re doing
something right!**

Prospects were given a survey to gauge their opinion of our company before working with us (pre) and again after becoming clients and finishing their first project (post). The results show an overall shift towards client satisfaction and favorability.



The magic is in
the story you tell!

Review

- **Data Without Context is Just Numbers**
Like Lego bricks, data needs structure to be meaningful.
- **Good Visualization Connects the Dots**
It's not about collecting more data, but about making sense of what you have.
- **How You Present Data Shapes Perception**
Different visuals can change how a story is interpreted.
- **GenAI is a Powerful Assistant in Your Data Journey**
Utilize all the tools available to you.
- **Drive Action Through Storytelling**
The best data stories engage, inform, and impact your audience inspiring action.



My Challenge to You

Before you create your next data visualization,

Pause

To let the inspiring magic happen!

Thank you

