

Express yourself

sm^{ps}
Southern
Regional Conference

CODE OF CONDUCT REMINDER

We are committed to fostering a safe, welcoming, and inclusive environment for all participants.

If you experience or witness behavior that violates our Code of Conduct, please report it:

- Scan the QR code to view our Code of Conduct and access the reporting link.
- Speak with a Planning Committee member or HQ member for immediate assistance. Look for their committee badge.



BREAKOUT SESSIONS BROUGHT TO YOU BY



Rogers-O'Brien
CONSTRUCTION



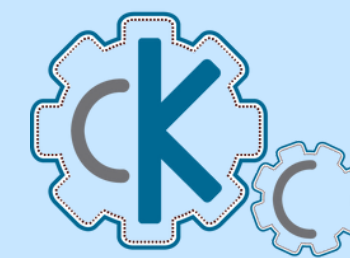
WE VALUE YOUR FEEDBACK!

Please complete the survey for this session.

- Access the survey through the specific session on the Guidebook app.

Your insights help us improve future events.

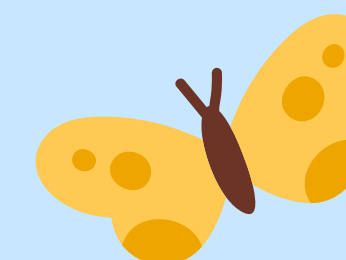
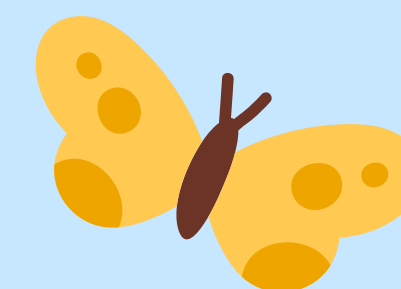


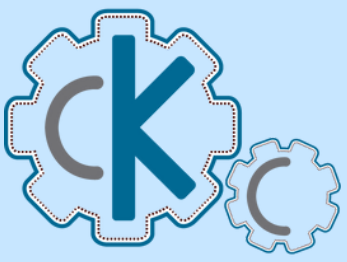


Be Empowered to

Tell the Stories

Waiting in Your Data



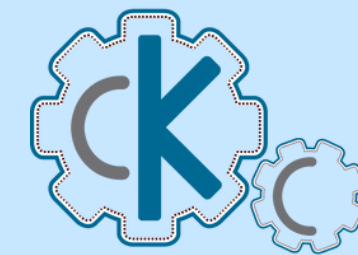


Once Upon a Time

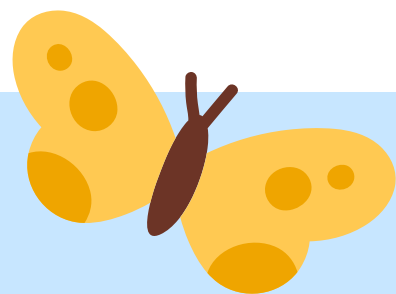
Courtney Vance
Senior Project Manager

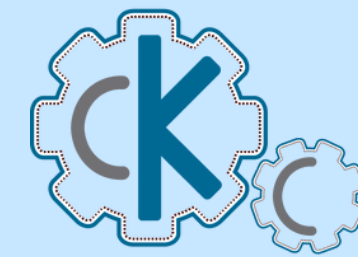
- 17 years in the AEC Industry
- Marketer turned Approachable Data Fairy
- Queen of Excel and Automation



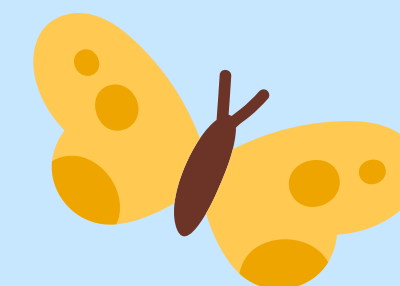
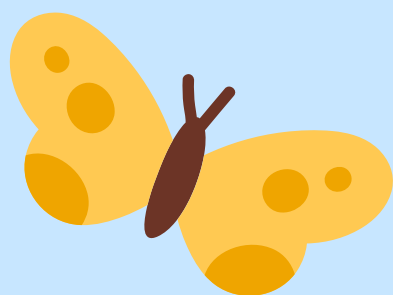


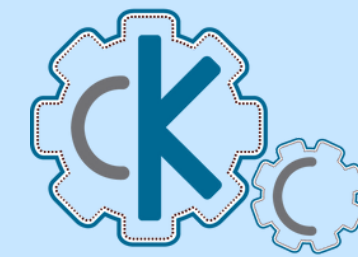
What Makes a Data Story?



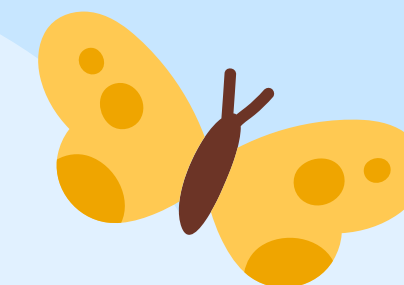


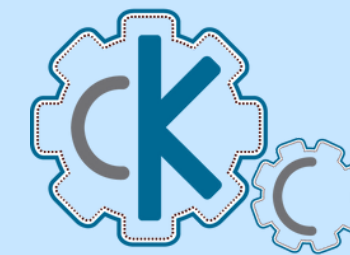
A data story presents
data as **actionable** and
useful information.



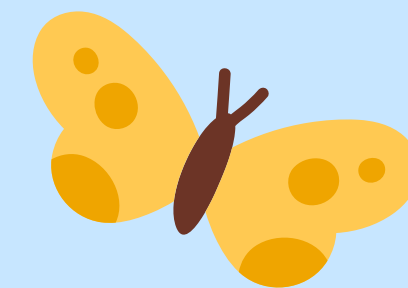
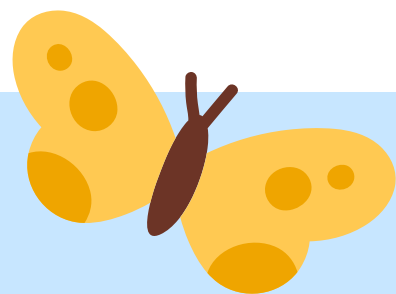


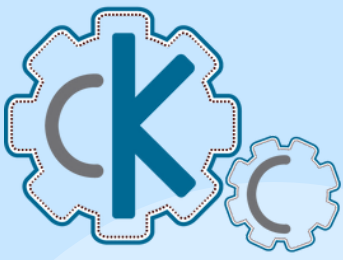
Data Story Composition





What Does a Data Story Look Like?





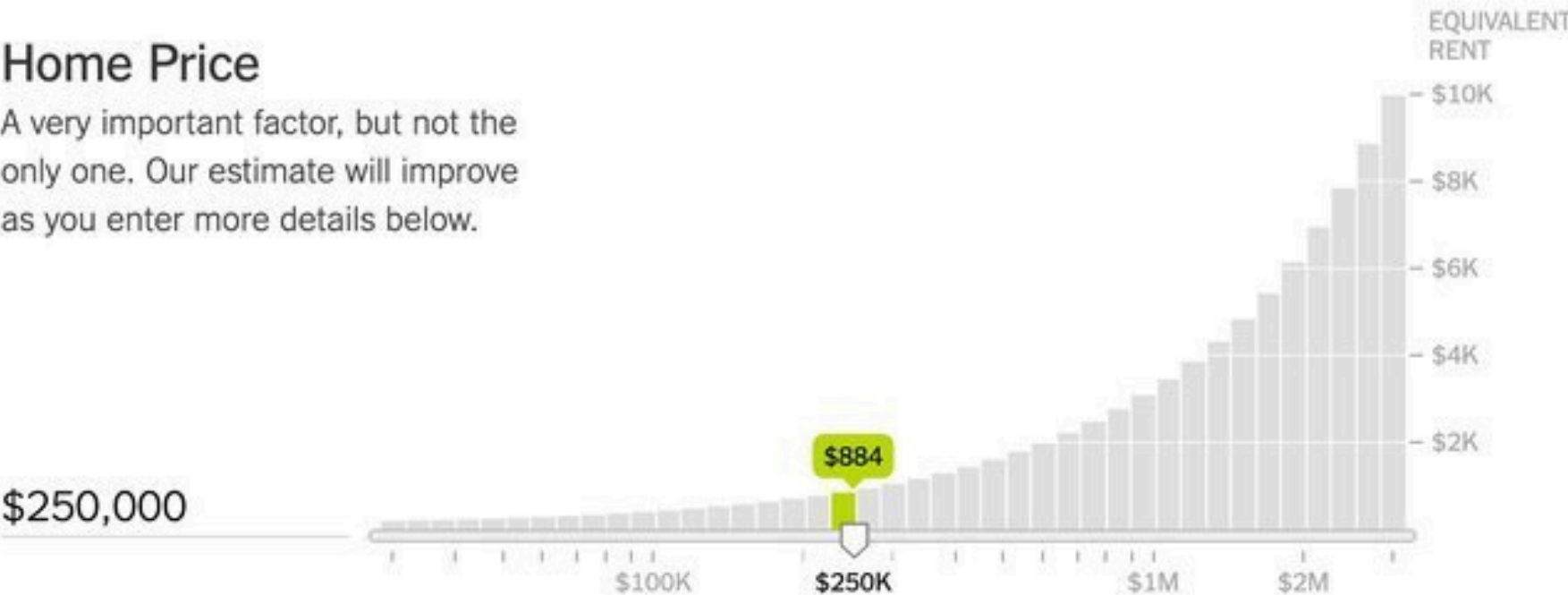
Is It Better to Rent or Buy?

By MIKE BOSTOCK, SHAN CARTER and ARCHIE TSE

The choice between buying a home and renting one is among the biggest financial decisions that many adults make. But the costs of buying are more varied and complicated than for renting, making it hard to tell which is a better deal. To help you answer this question, our calculator takes the most important costs associated with buying a house and computes the equivalent monthly rent. [RELATED ARTICLE](#)

Home Price

A very important factor, but not the only one. Our estimate will improve as you enter more details below.



If you can rent a similar home for less than ...

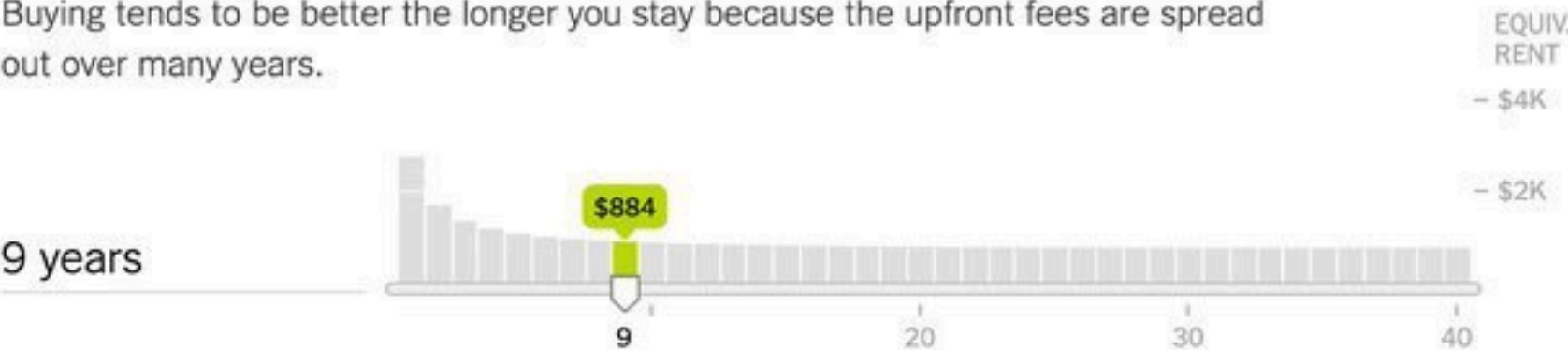
\$884 PER MONTH

... then renting is better.

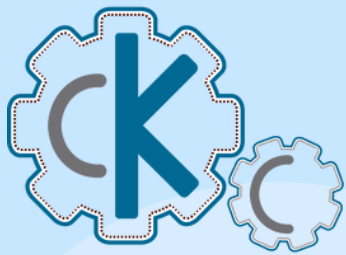
Costs after 9 years	Rent	Buy
Initial costs	\$884	\$60,000
Recurring costs	\$106,941	\$163,398
Opportunity costs	\$15,396	\$44,587
Net proceeds	-\$884	-\$145,649
Total	\$122,337	\$122,337

How Long Do You Plan to Stay?

Buying tends to be better the longer you stay because the upfront fees are spread out over many years.



How to Read the Charts Charts that are relatively flat indicate factors that are not particularly important to the outcome. Conversely, the factors that have steep slopes have a large impact.



Carbon Dioxide

LATEST MEASUREMENT: November 2024

424 ppm

Download Data

Key Takeaway:

Carbon dioxide in the atmosphere warms the planet, causing climate change. Human activities have raised the atmosphere’s carbon dioxide content by 50% in less than 200 years.

Carbon dioxide (CO₂) is an important heat-trapping gas, also known as a greenhouse gas, that comes from the extraction and burning of fossil fuels (such as coal, oil, and natural gas), from wildfires, and natural processes like volcanic eruptions. The first graph shows atmospheric CO₂ levels measured by NOAA at Mauna Loa Observatory, Hawaii, since 1958. The second graph shows CO₂ levels during Earth’s last three glacial cycles, as captured by air bubbles trapped in ice sheets and glaciers.

Since the onset of industrial times in the 18th century, human activities have raised atmospheric CO₂ by 50% – meaning the amount of CO₂ is now 150% of its value in 1750. This human-induced rise is greater than the natural increase observed at the end of the last ice age 20,000 years ago.

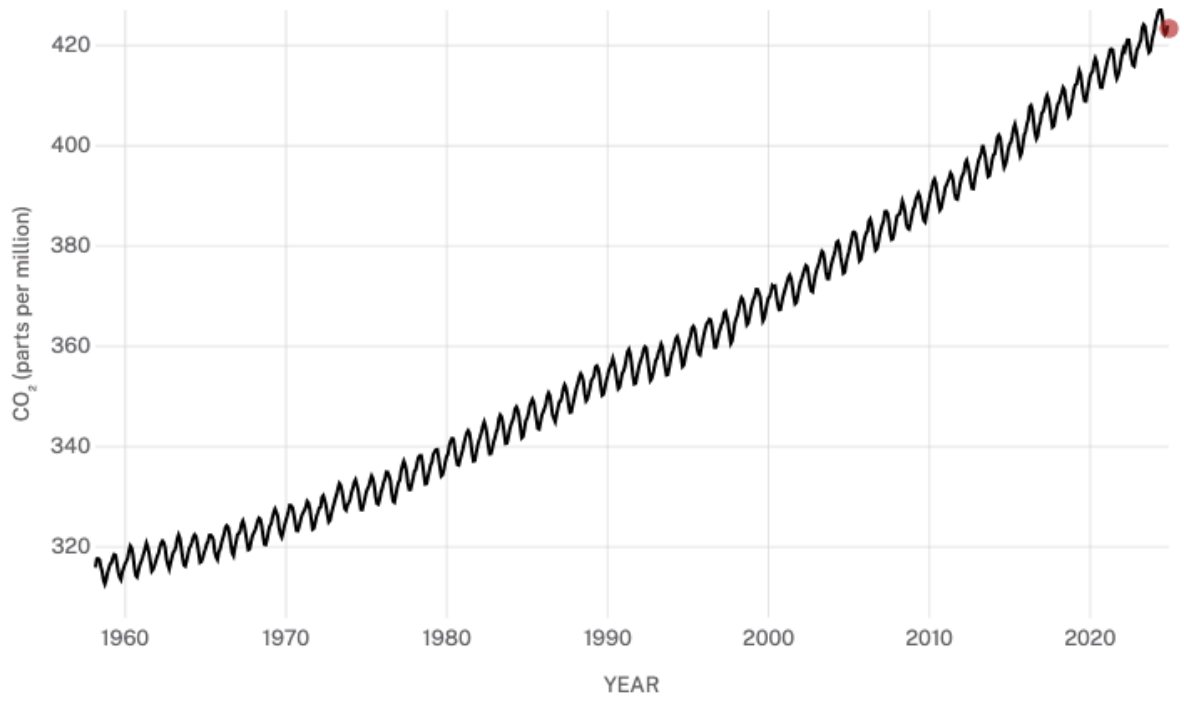
The animated map shows how the historical changes in global carbon dioxide over time. Note the colors change as the amount of CO₂ rises from 365 parts per million (ppm) in 2002 to over 420 ppm currently. It’s important to understand that “parts per million” refers to the number of carbon dioxide molecules per million molecules of dry air. These measurements are from the mid-troposphere, the layer of Earth’s atmosphere that is 8 to 12 kilometers (about 5 to 7 miles) above the ground. This data provides insights into the significant rise in atmospheric CO₂ concentrations, highlighting the impact of human activities on Earth’s climate.

CO₂ Through the Seasons

A closer look at the carbon dioxide measurements at Mauna Loa shows a series of wiggles in the data. Although total CO₂ is increasing each year, there is also a short-term cycle visible within the larger trend.

DIRECT MEASUREMENTS: 1958-PRESENT

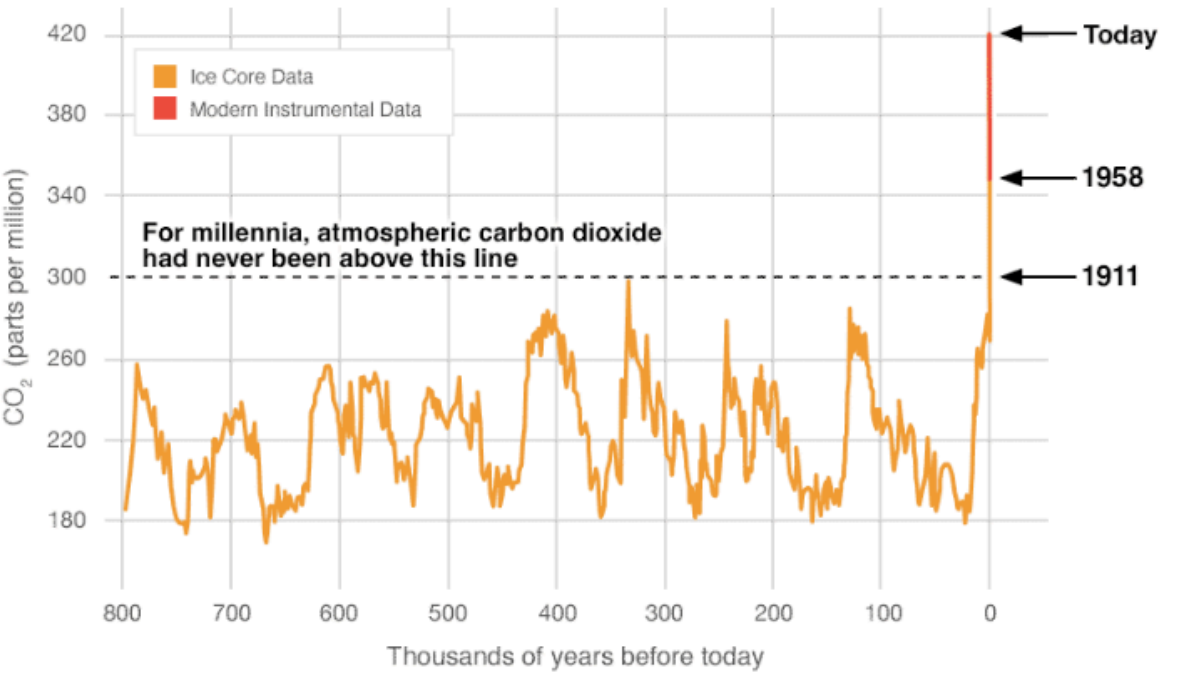
Data source: NOAA, measured at the Mauna Loa Observatory



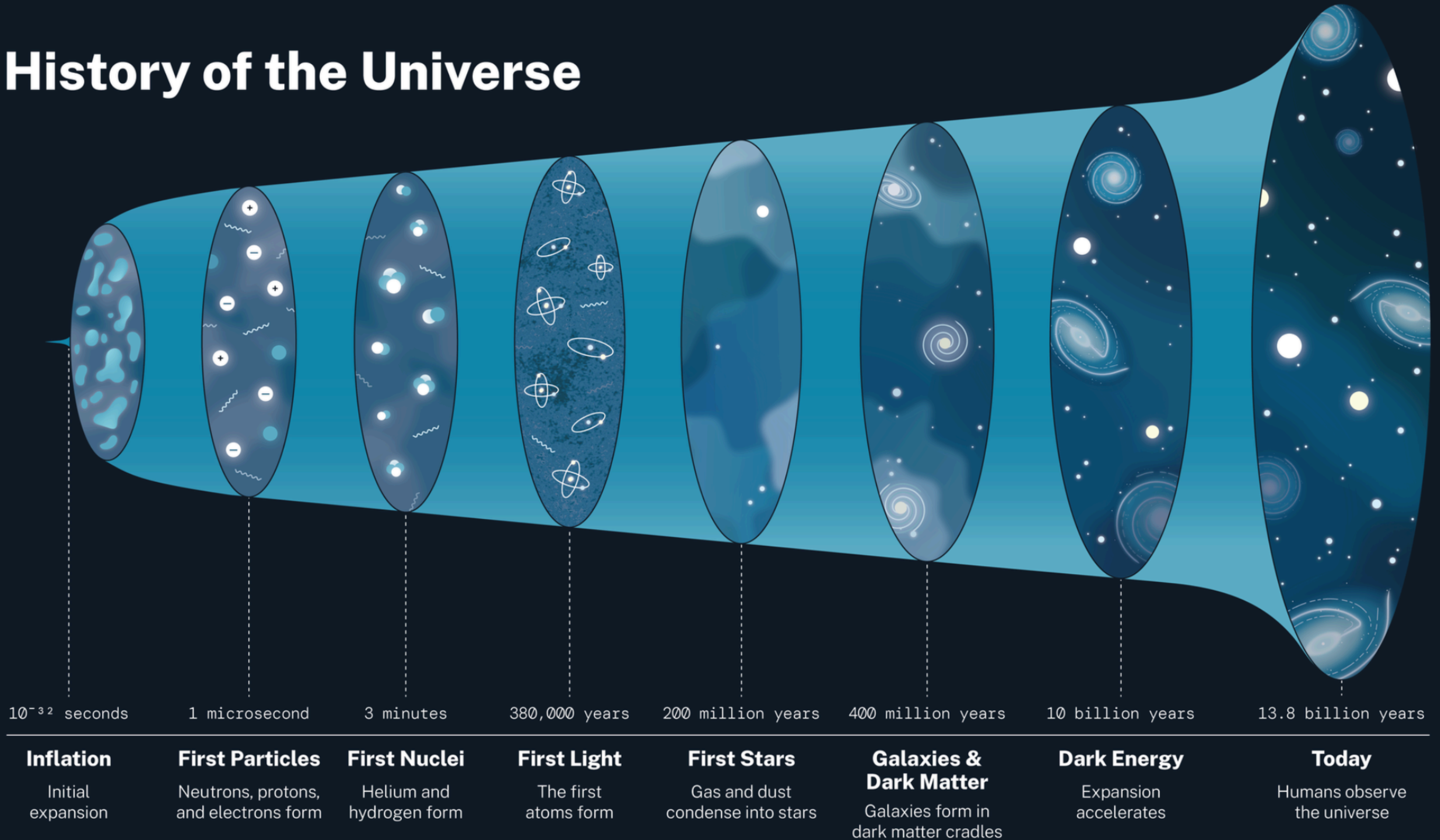
Click+drag to zoom Reset Get Data: [HTTPS](https://data.noaa.gov/) | Snapshot: [PNG](#)

PROXY (INDIRECT) MEASUREMENTS

Data source: Reconstruction from ice cores.
Credit: NOAA



History of the Universe

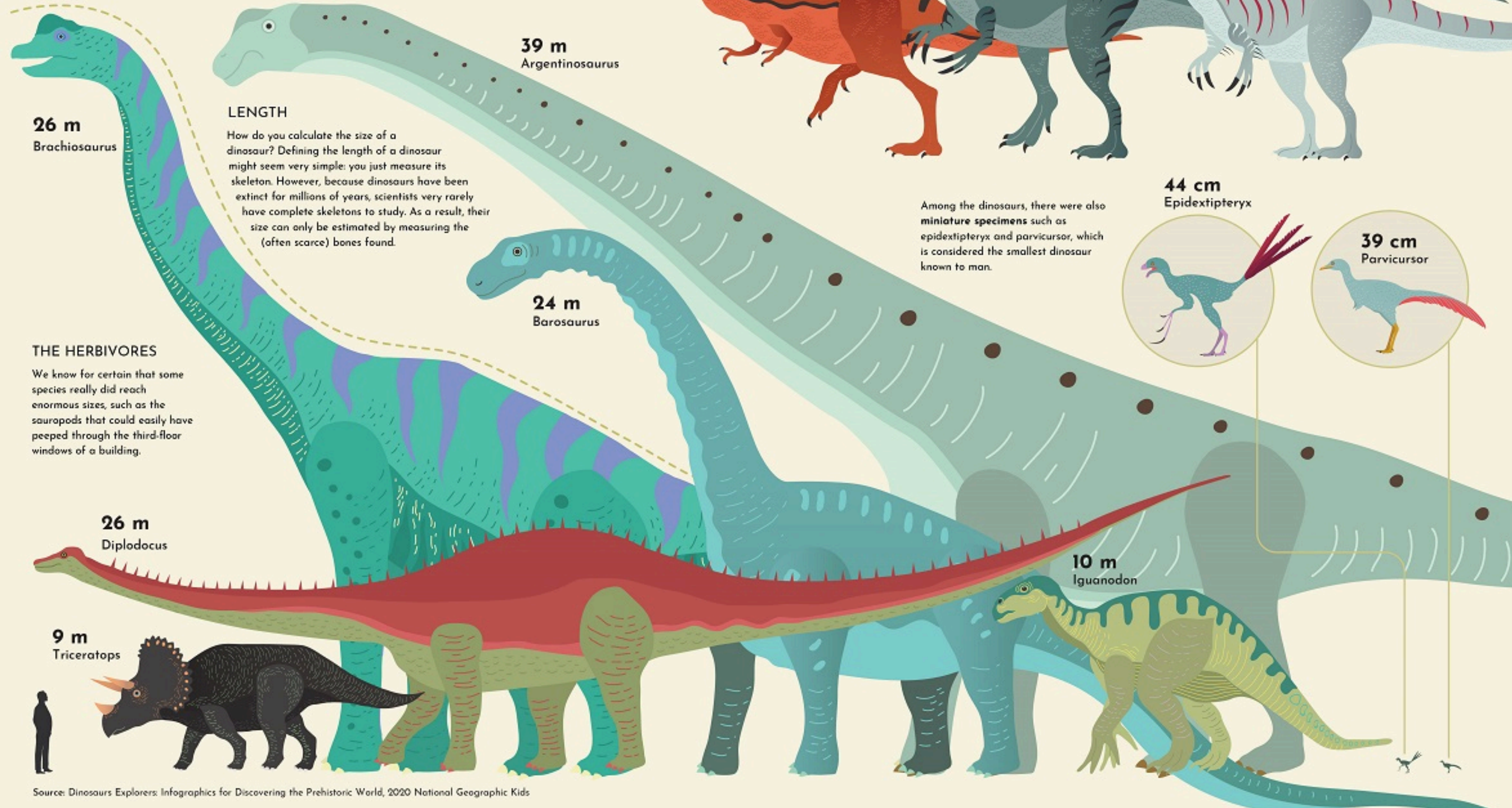


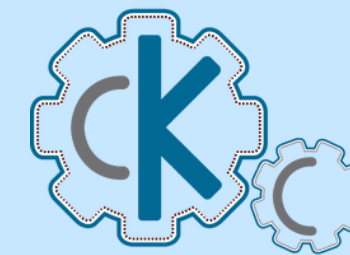
FROM BIG TO SMALL DINOSAURS OF ALL SIZES

The word 'dinosaur' almost certainly brings to mind terrifying reptiles with gigantic bodies and a heaviness that made the earth tremble with every step. In reality, colossal dinosaurs have certainly lived on our planet in the past, but many of them also came close in size to the most familiar animals of today.

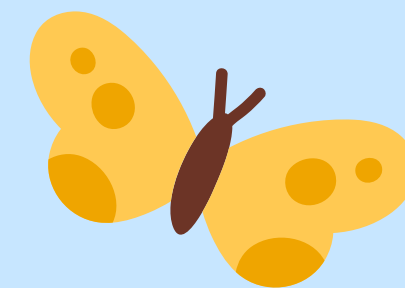
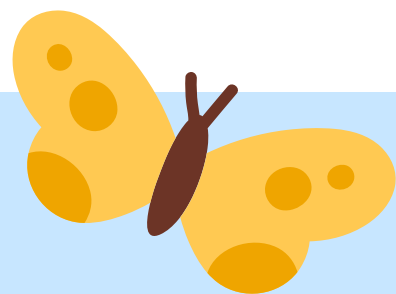
Which one was the biggest?
And which one was the smallest?
Figuring out the numbers
is not so simple...

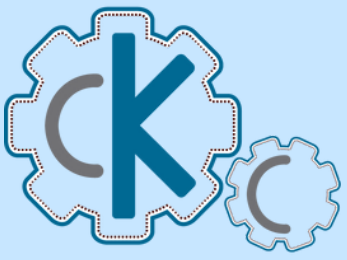
THE CARNIVORES
The existence of huge prey
meant that even the largest
predators could be fed.





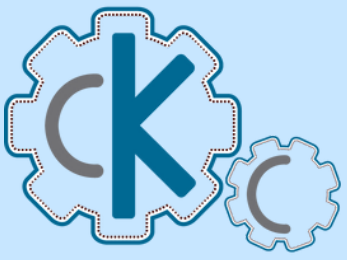
From Data to Discovery
Your Adventure Starts Here





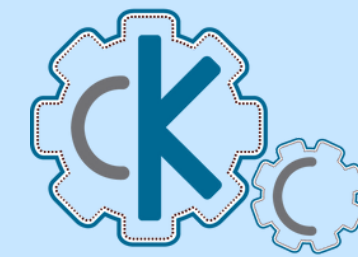
Review with Curiosity

Opportunity Number	Opportunity Name	Contract Type	Effort (%)	Profitability (%)	Profitability (\$)
OPP-4026	Tech Campus Expansion	Too Big	81	5	\$ 48,453
OPP-8865	Historic District Revitalization	Too Big	56	9	\$ 49,149
OPP-4089	Bridge Maintenance Project	Just Right	65	30	\$ 79,892
OPP-1273	University Hall Renovation	Too Big	51	6	\$ 46,154
OPP-6069	Energy Plant Expansion	Too Big	85	15	\$ 25,782
OPP-3688	Historic District Revitalization	Just Right	58	40	\$ 67,225
OPP-2357	Airport Terminal Update	Just Right	82	35	\$ 55,782
OPP-4504	Healthcare Facility Buildout	Too Big	55	19	\$ 20,936
OPP-2975	Bridge Maintenance Project	Too Small	35	1	\$ 14,604
OPP-8803	Historic District Revitalization	Just Right	95	46	\$ 53,321
OPP-9288	Bridge Maintenance Project	Too Big	74	19	\$ 22,446
OPP-9803	Healthcare Facility Buildout	Just Right	93	47	\$ 59,355
OPP-9776	Bridge Maintenance Project	Too Small	10	3	\$ 16,074
OPP-6559	Suburban Housing Plan	Just Right	79	39	\$ 80,192
OPP-5058	Public Dining Room Expansion	Too Big	88	22	\$ 28,812



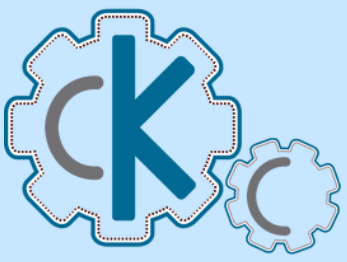
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OPP-6559	Suburban Housing Plan	Just Right	79	39	\$ 80,192
OPP-5058	Public Dining Room Expansion	Too Big	88	22	\$ 28,812



**What if I'm stuck or draw the
wrong conclusions?**





Find Inspiration with Excel



Home

Insert

Draw

Page Layout

Formulas

Data

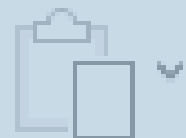
Review

View

Automate

Account

Comments



Paste



Font



Alignment



Number



Conditional Formatting



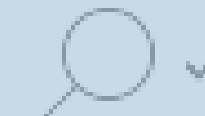
Format as Table



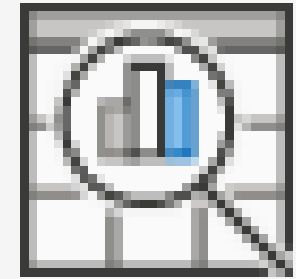
Cell Styles



Cells



Editing



Analyze
Data



Copilot

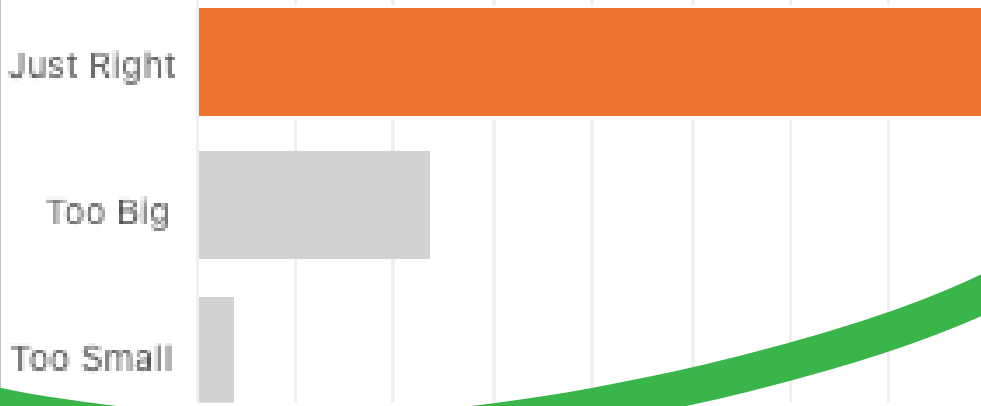


	A	B	C	D	E	F
1	Opportunity	Opportunity Name	Contract Type	Pursuit (%)	Profitability	Profitability (\$)
2	OPP-4026	Tech Campus Expansion	Too Big	81	5	48453
3	OPP-8865	Historic District Revitalization	Too Big	56	9	49149
4	OPP-4089	Bridge Maintenance Project	Just Right	65	30	79092
5	OPP-1273	University Hall Renovation	Too Big	51	6	46154
6	OPP-6069	Energy Plant Expansion	Too Big	85	15	25782
7	OPP-3688	Historic District Revitalization	Just Right	58	40	67225
8	OPP-2357	Airport Terminal Update	Just Right	82	35	55782
9	OPP-4504	Healthcare Facility Buildout	Too Big	55	19	20936
10	OPP-2975	Bridge Maintenance Project	Too Small	35	1	14604
11	OPP-8803	Historic District Revitalization	Just Right	95	46	53321
12	OPP-9288	Bridge Maintenance Project	Too Big	74	19	22446
13	OPP-9803	Healthcare Facility Buildout	Just Right	93	47	59355
14	OPP-9776	Bridge Maintenance Project	Too Small	10	3	16074
15	OPP-6559	Suburban Housing Plan	Just Right	79	39	80192
16	OPP-5674	Retail Plaza Development	Too Big	84	20	34219
17	OPP-5098	University Hall Renovation	Just Right	50	41	53327
18	OPP-8891	University Hall Renovation	Too Big	37	6	42949
19	OPP-1228	Energy Plant Expansion	Too Big	60	13	42203
20	OPP-3210	Transit System Overhaul	Too Big	48	10	42098
21	OPP-5638	University Hall Renovation	Too Big	87	8	21719
22						
23						
24						
25						
26						
27						
28						

Analyze Data

'Contract Type': **Just Right** has noticeably higher 'Profitability (%)'.

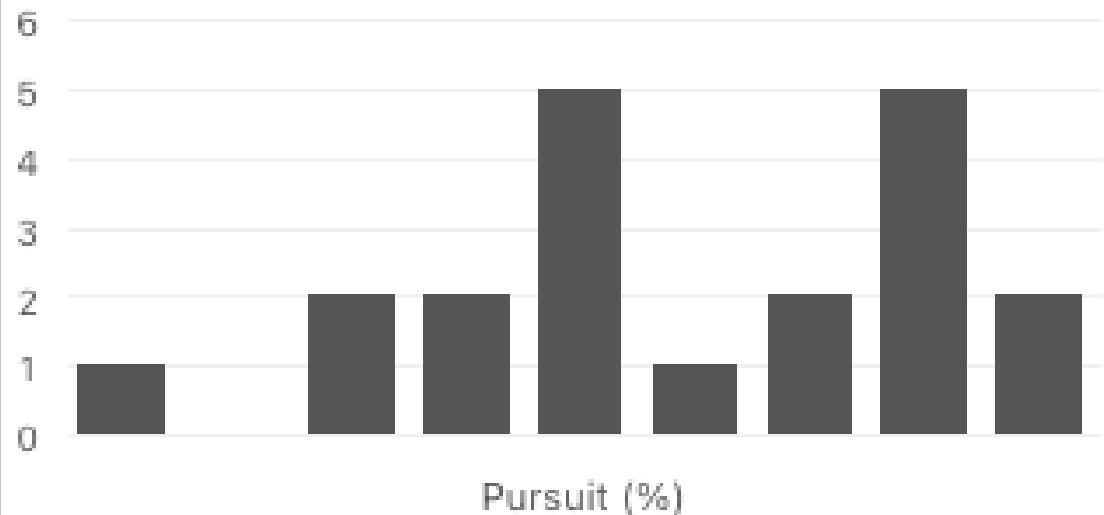
Average of Profitability (%)



[+ Insert PivotChart](#)

Is this helpful?

Frequency of 'Pursuit (%)'



[+ Insert Chart](#)

Is this helpful?



Find Inspiration with AI

What can I help with?



Detailed_Goldilocks_Data.xlsx
Spreadsheet



I have this dataset. I need to make an easy-to-understand graphic visualization of the data that...

compares the relationship of the contract type to profitability and the pursuit %. The pursuit % is the level of effort it takes to create a proposal. A bar chart is the easiest for me and my team to understand. A double axis is acceptable. Also overlaying a line is acceptable. Please make a graphic visualization of the data and explain your reasoning for any insights.



Create image



Analyze data



Code

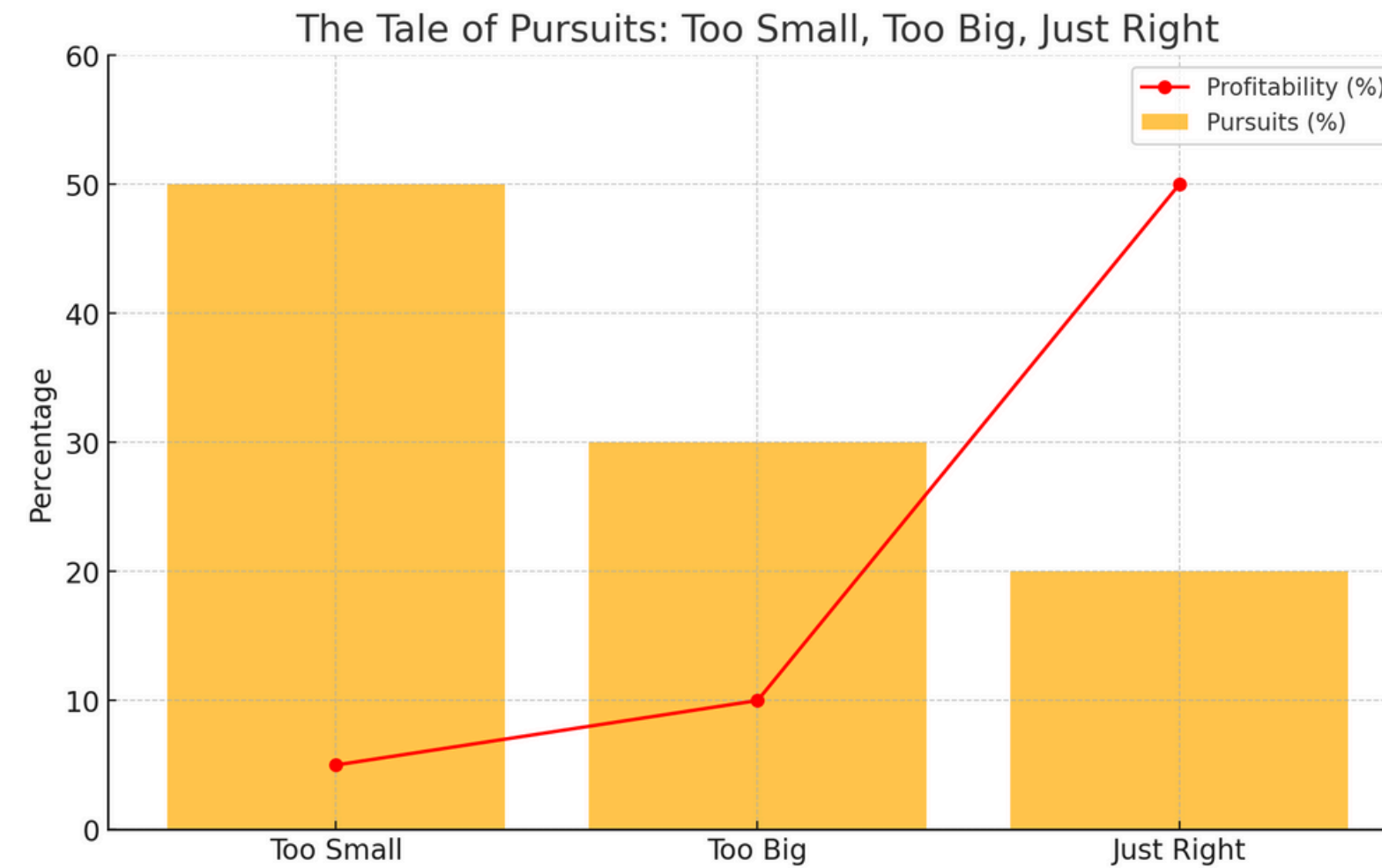
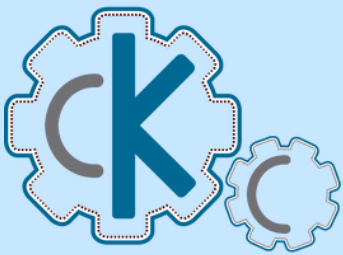


Summarize text



Help me write

More



The chart visualizes the relationship between contract types, the effort required to pursue opportunities (Pursuit %), and the profitability of those opportunities (Profitability %).

Insights:

1. Pursuit Effort:

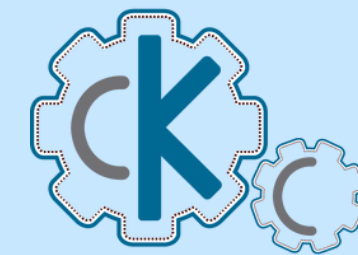
- Some contract types may require significantly higher effort (Pursuit %) to prepare proposals, which might indicate inefficiency or complexity in those contract types.

2. Profitability:

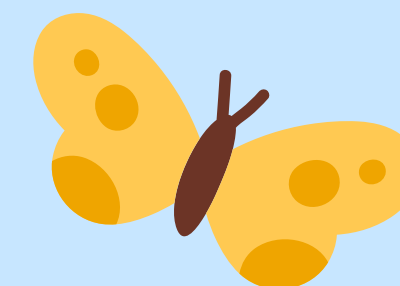
- Certain contract types show higher profitability (%), suggesting they may be more financially rewarding despite the pursuit effort.

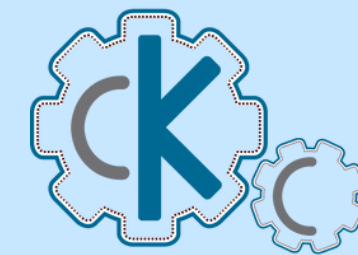
3. Key Observations:

- Look for contract types where a high Pursuit % does not correspond to a proportionally high Profitability %. These may indicate opportunities to optimize effort or reconsider

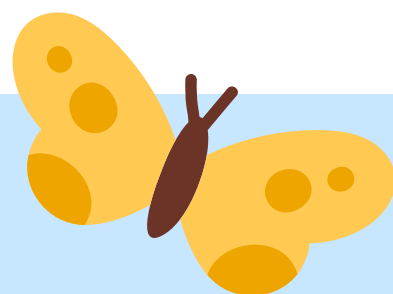


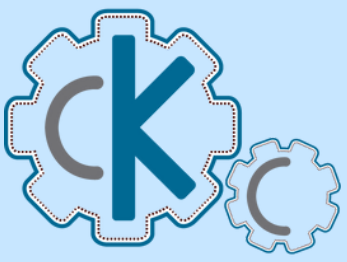
It's always a good idea
to have a friend help
you proofread with a
fresh set of eyes.





choosing the *Correct* Visuals for the *Job*





Common Chart Types


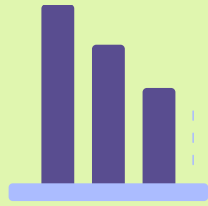
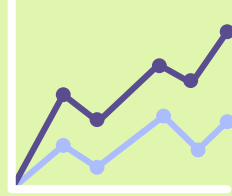
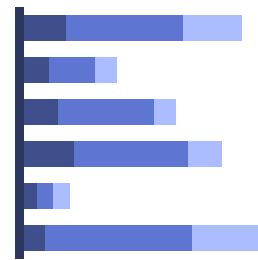

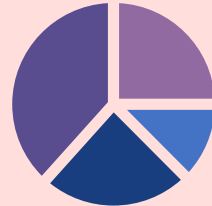
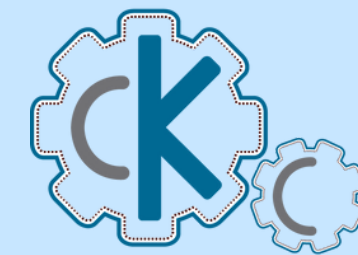
Chart Type		Audience Comprehension
Horizontal Bar		High
Vertical Bar		High
Line		High

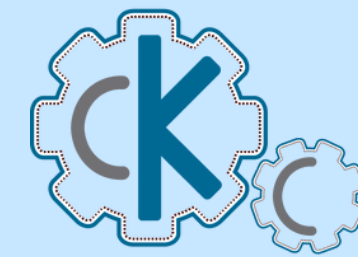
Chart Type		Audience Comprehension
Stacked Bar/Column		Medium
Funnel Chart		Medium
Pie Donut		Low



Horizontal Bar Charts

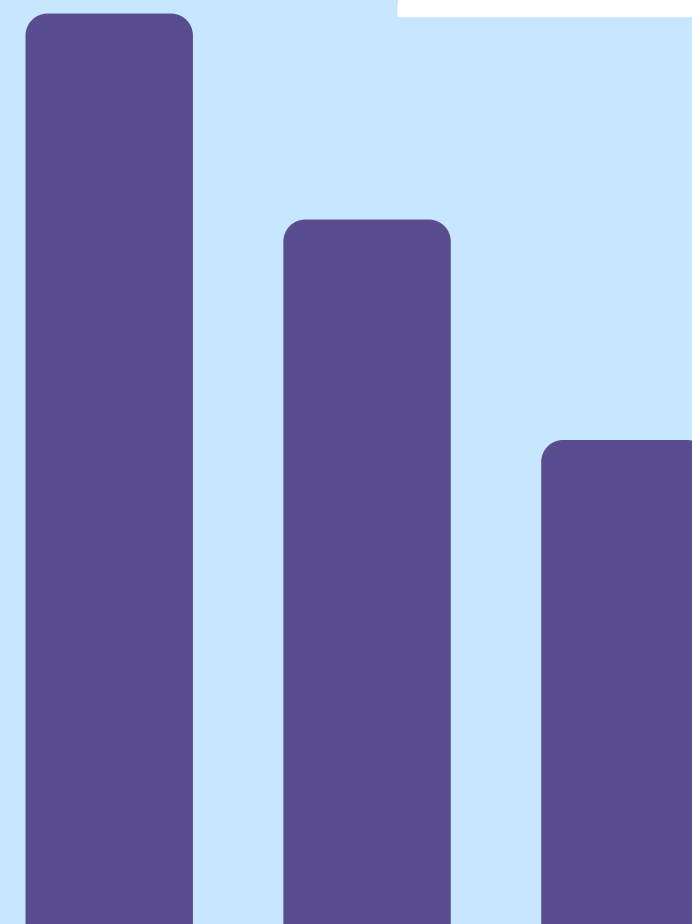
- Comparing **categories**
- Single or multi-series
- Supports **longer** category labels
- Typically less than 15 categories

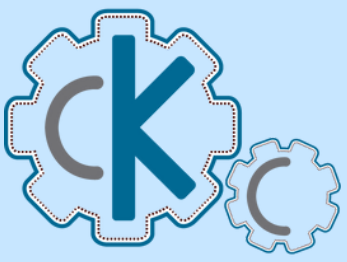




Vertical Bar Charts

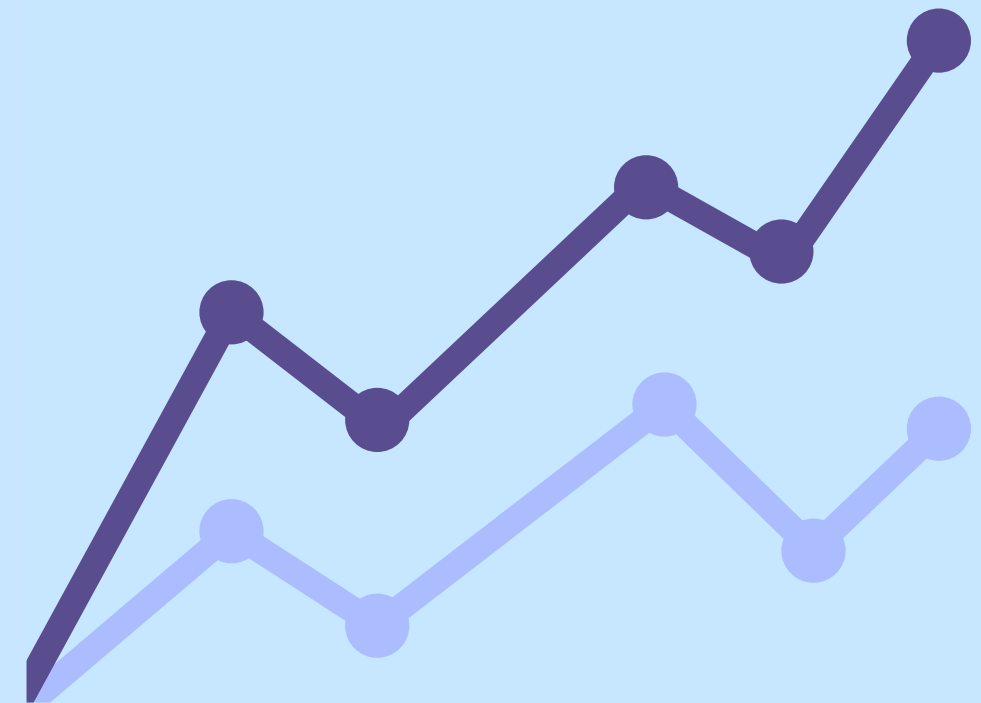
- Comparing **categories**
- Single or multi-series
- Shorter labels
- **Limited** display of data over time
(such as months, quarters, years, etc.)

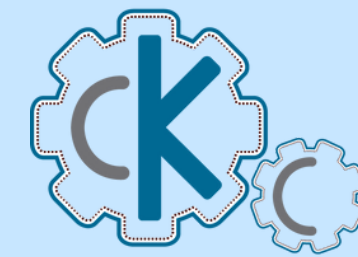




Line Charts

- **Show trends/changes over time**
(ex: sales over years/months, temperatures)
- **Continuous data in consistent intervals**
- **Highlighting patterns/relationships**

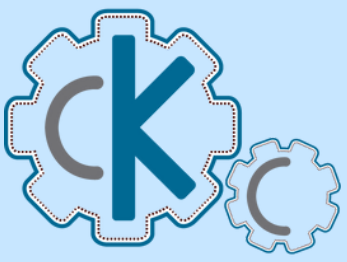




Stacked Bar Charts

- Compare **subcategories** and overall totals
- Emphasize **proportions of subcategories** within a category

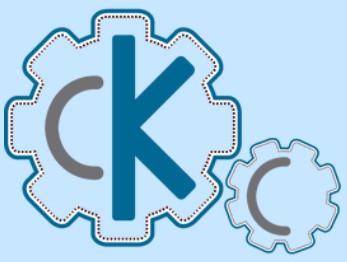




Funnel Charts

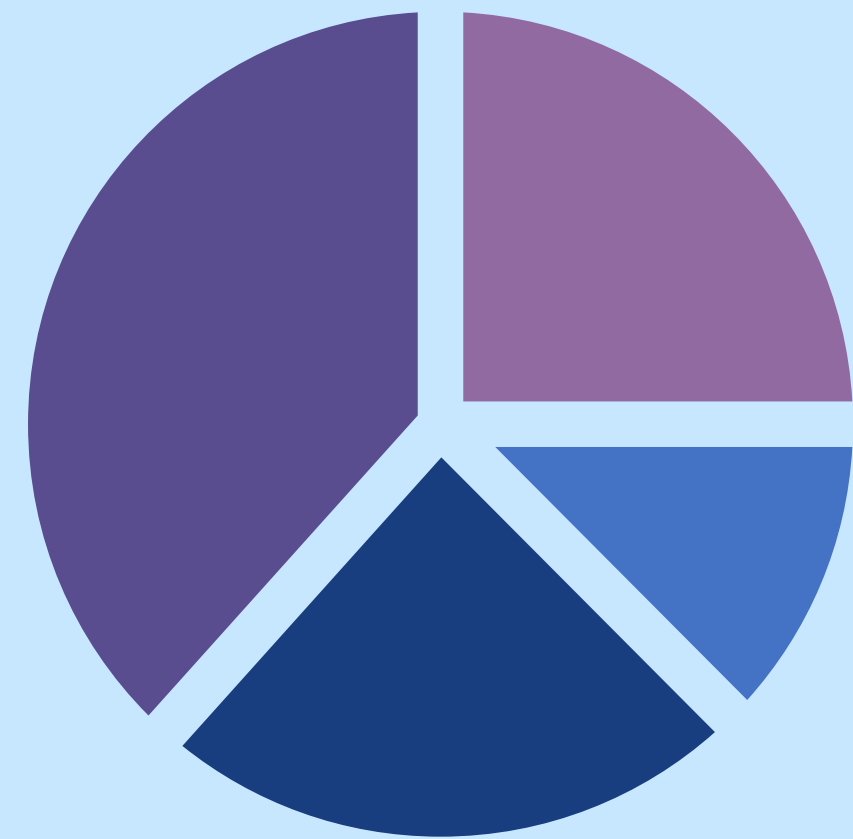
- To show **progression** of a process
(such as sales pipeline)
- When illustrating drop-offs
between stages of a process

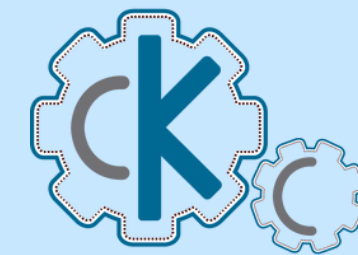




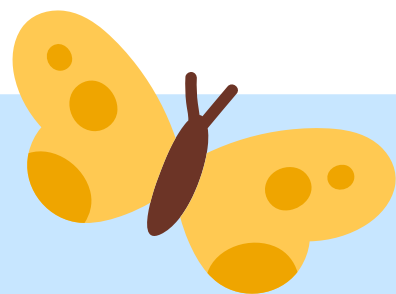
Pie/Donut Charts

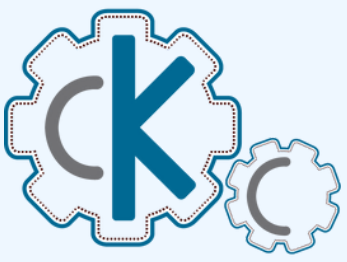
- To show **proportions** of a whole
(ex: market share, survey results)
- For datasets with few categories
(ideally fewer than 5)





Why Appropriate Visuals Matter

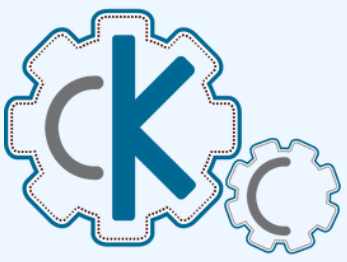




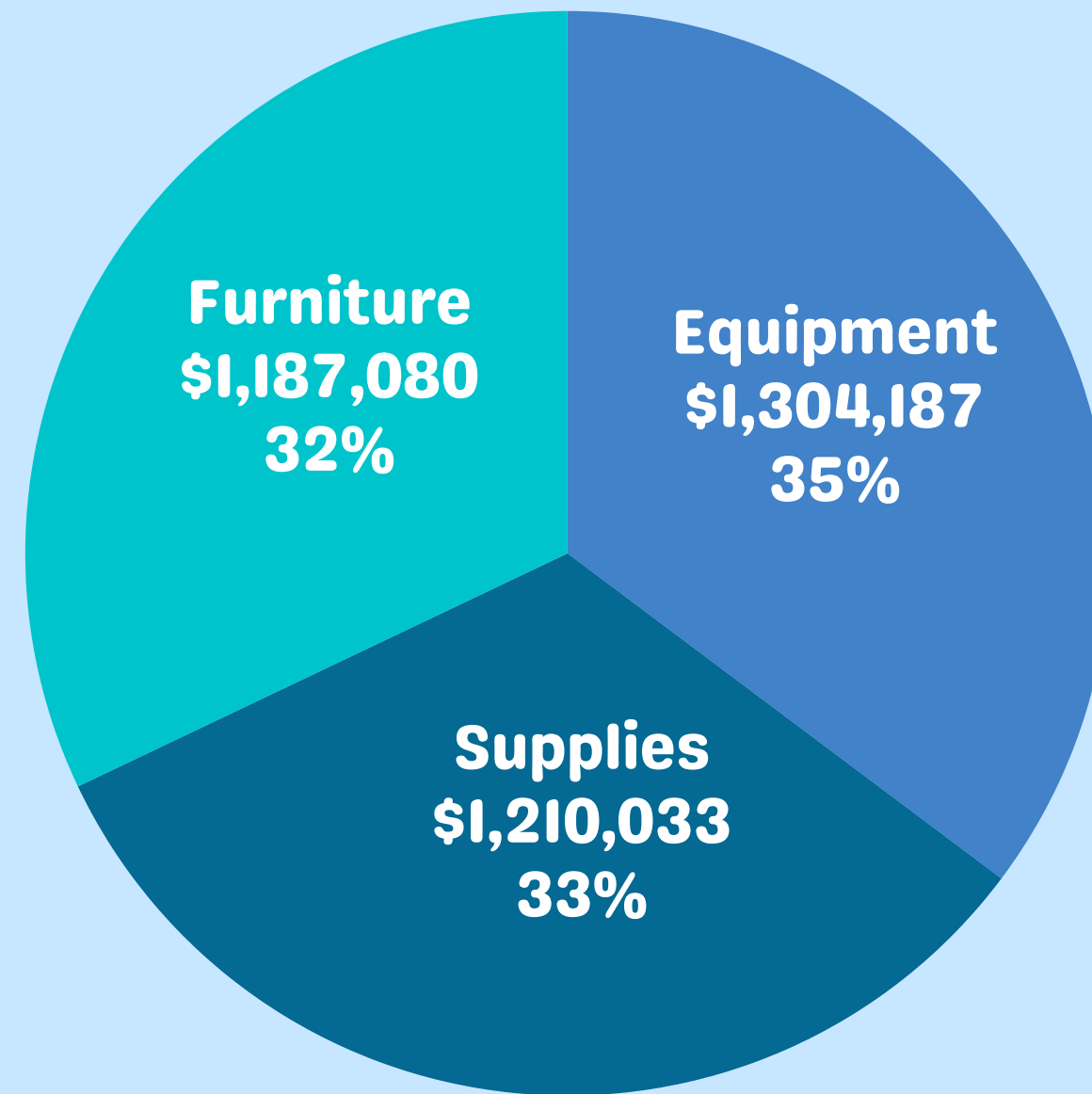
Evil Pie Chart Example



-  **Equipment**
-  **Supplies**
-  **Furniture**



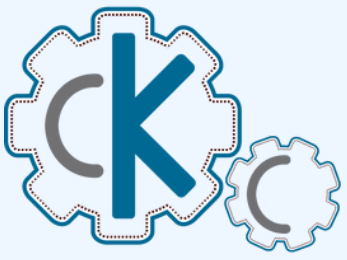
Slightly Better Pie Chart



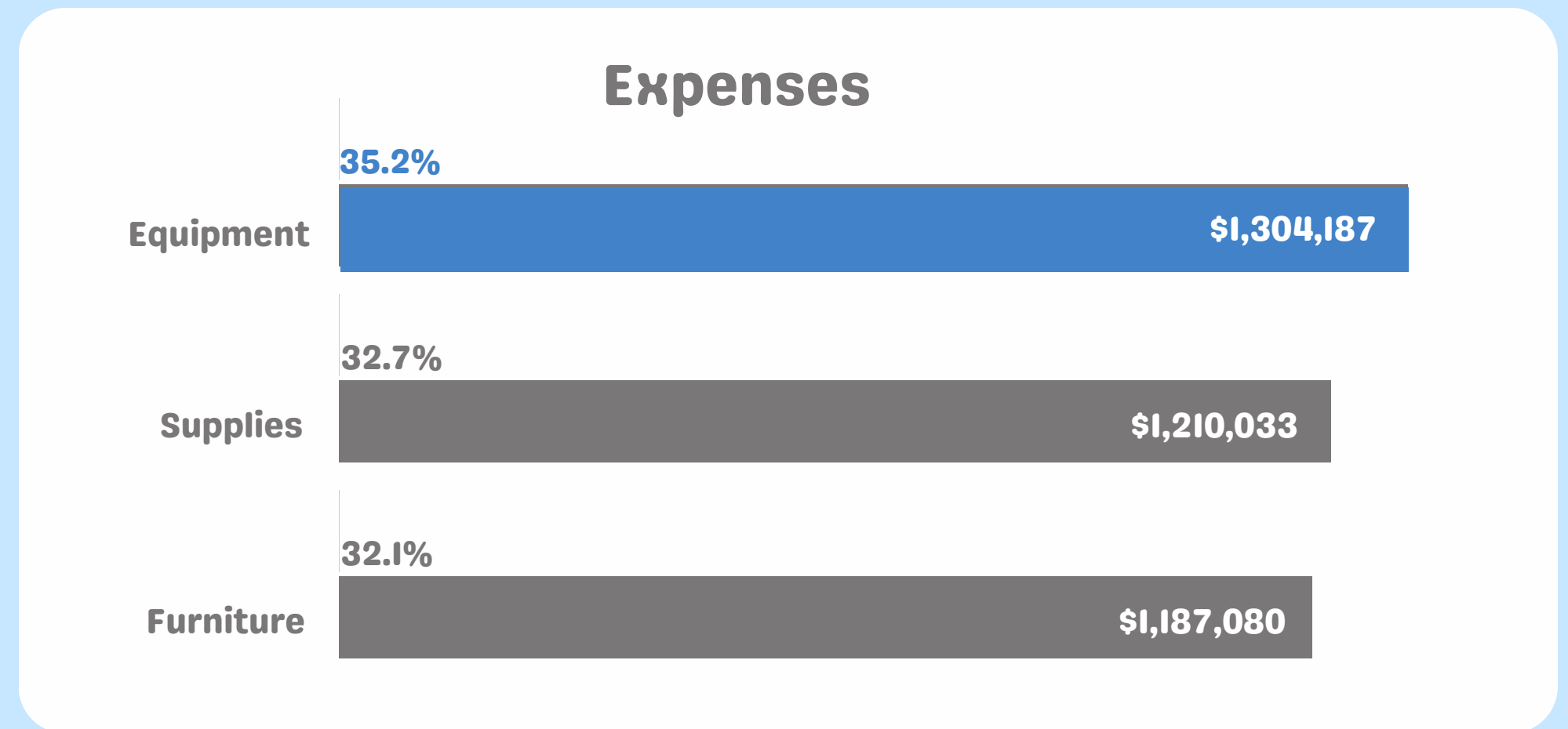
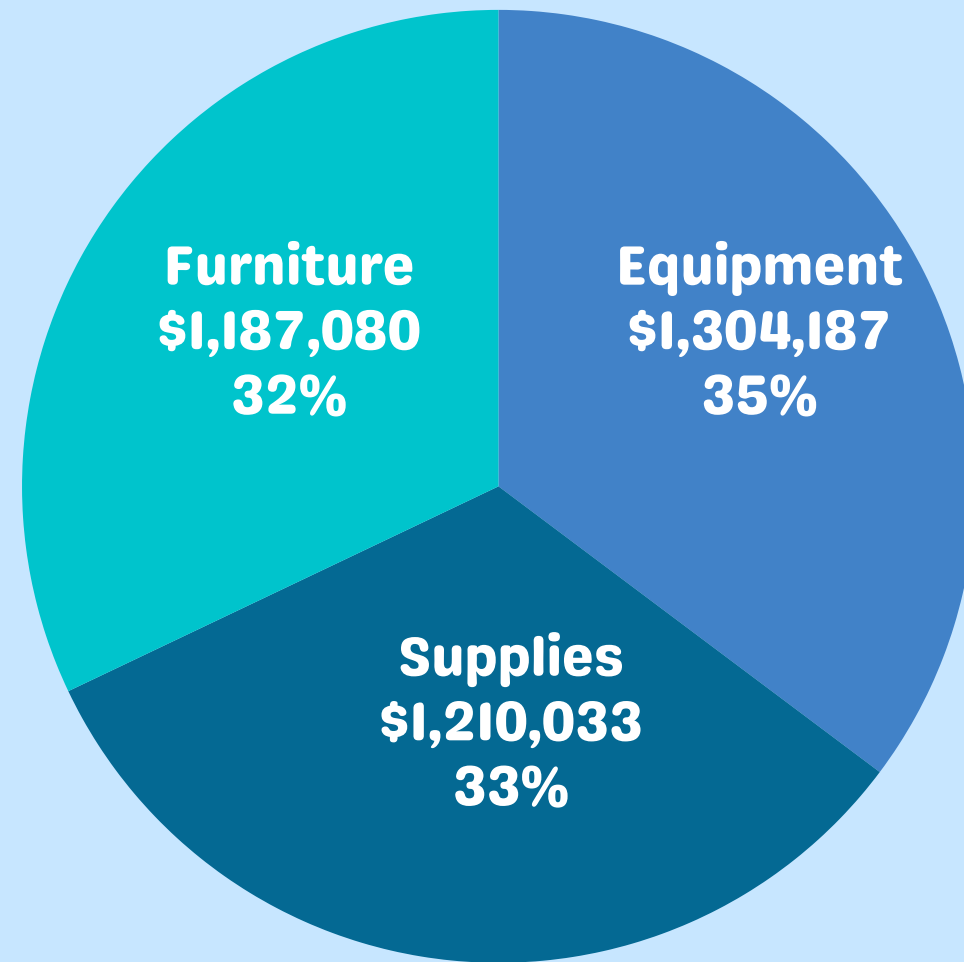


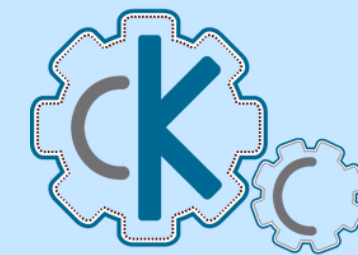
Horizontal Bar Chart



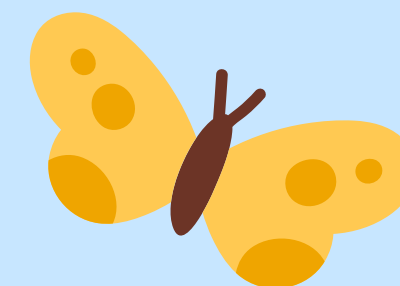
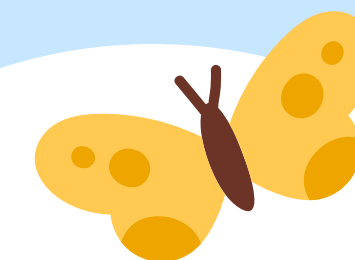
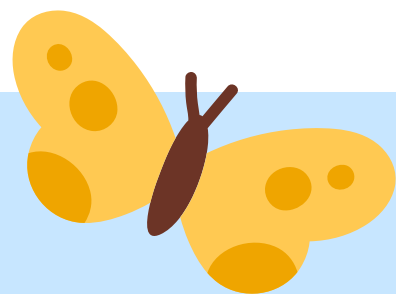


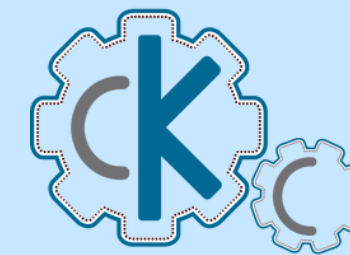
Before/After





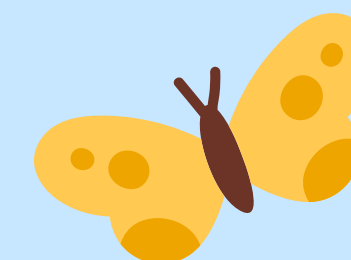
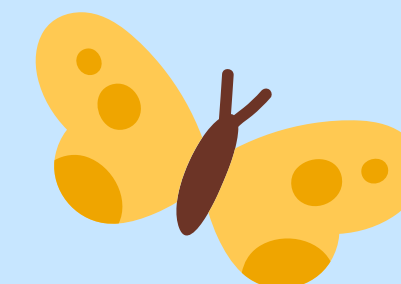
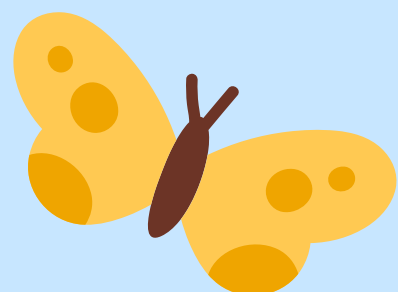
Crafting the Narrative





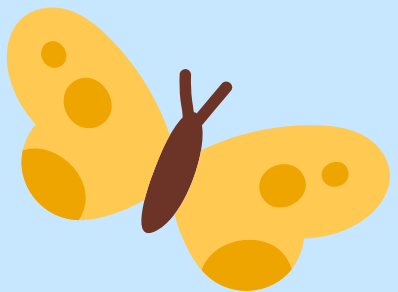
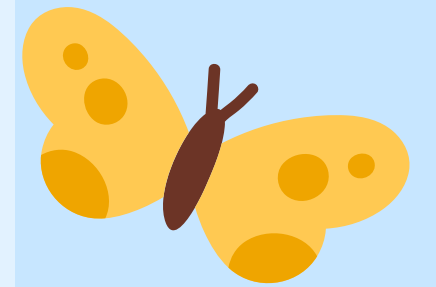
The Audience Determines

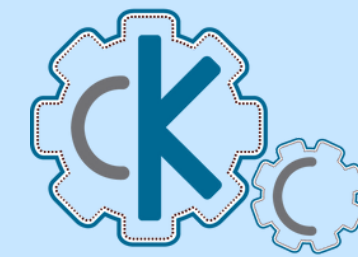
- Objective and tone
- What you teach them
- How you teach them
- The call to action



Data Storyline

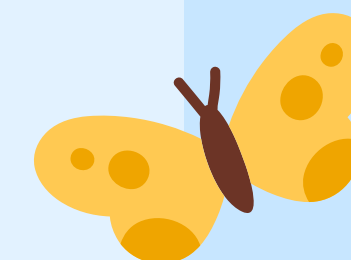
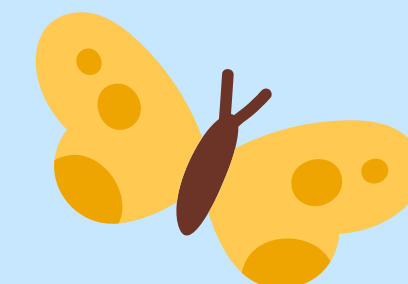
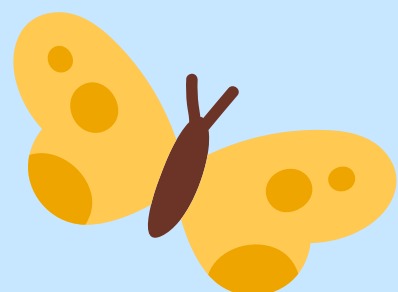
- To show what you currently do
- To explain what you should do
- To explain how you could get from 1 to 2

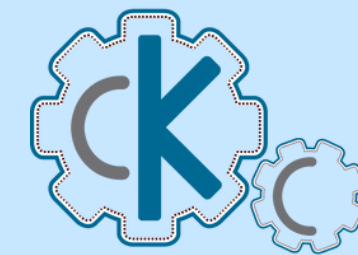




Refine the Narrative

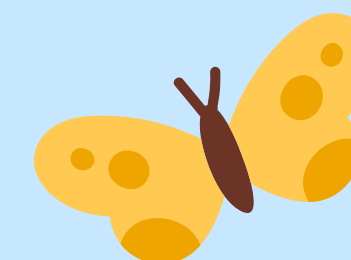
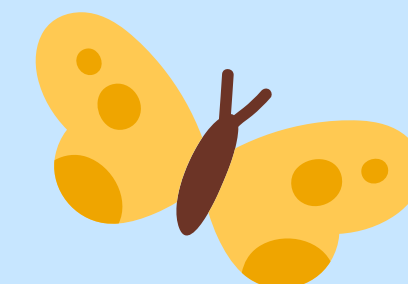
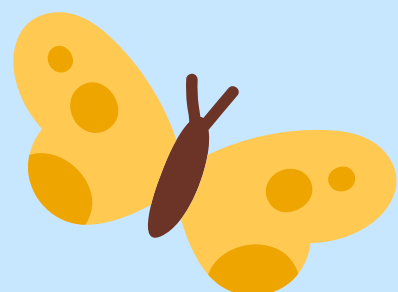
- What's the key takeaway?
- Is this easy to comprehend?
- Are words being used effectively?
- What can be eliminated?
- Should words be colorized?

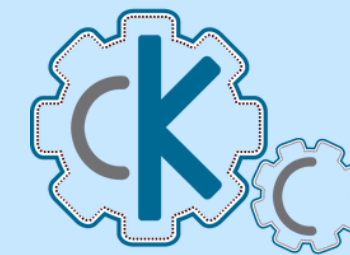




Story Enhancements

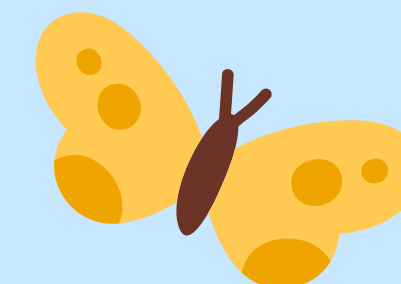
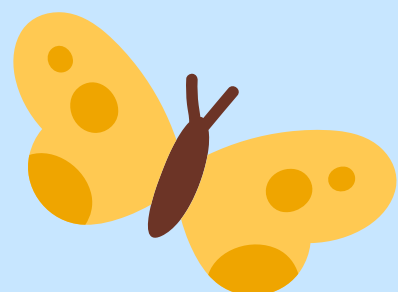
- Headers/Context
- Highlighting/Color Cues
- Clear Comparison





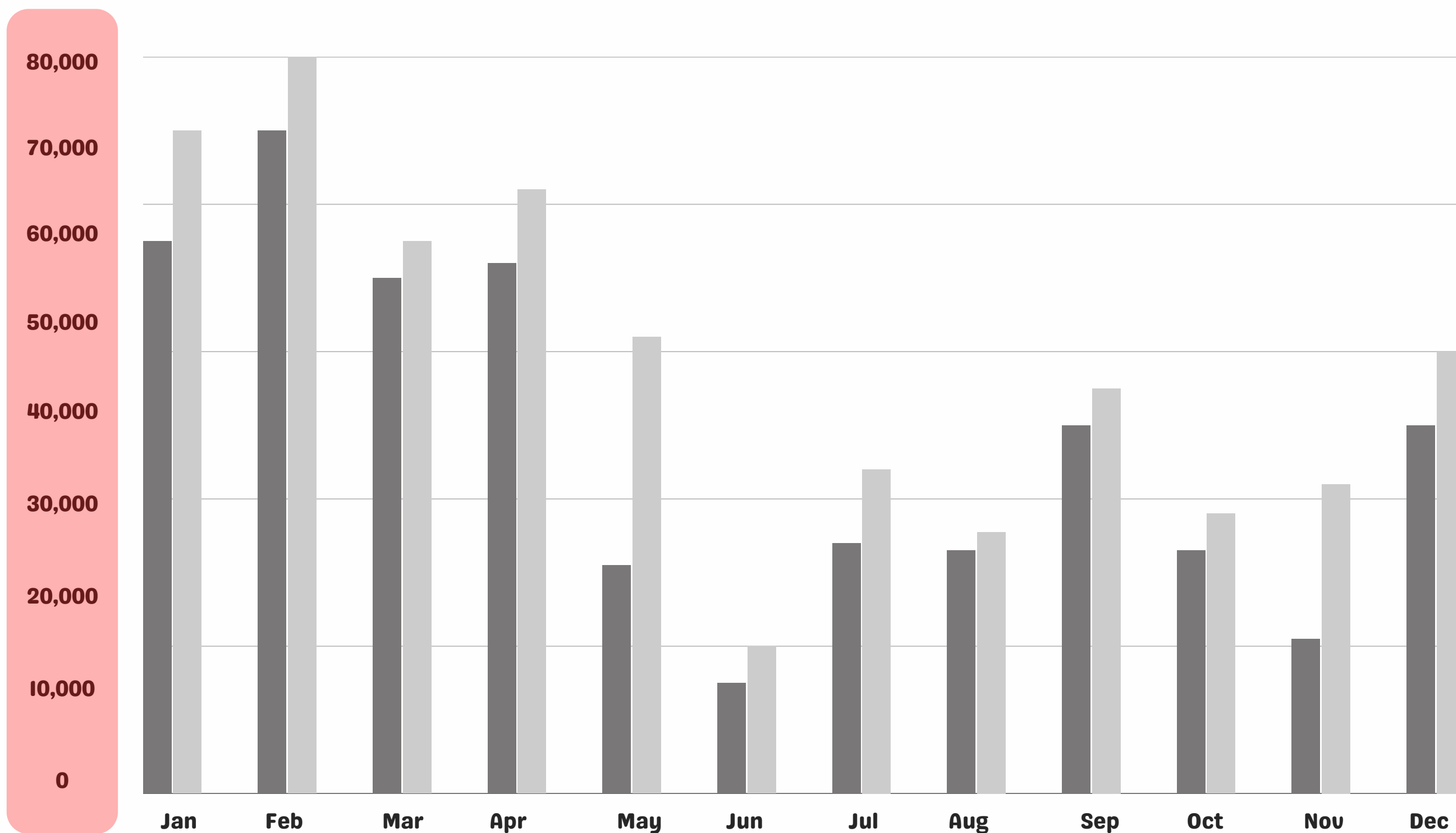
Labeling and Sorting

- Effective Labeling
- Graphic Elements
- Group/Sorting Values
- Use Symbols



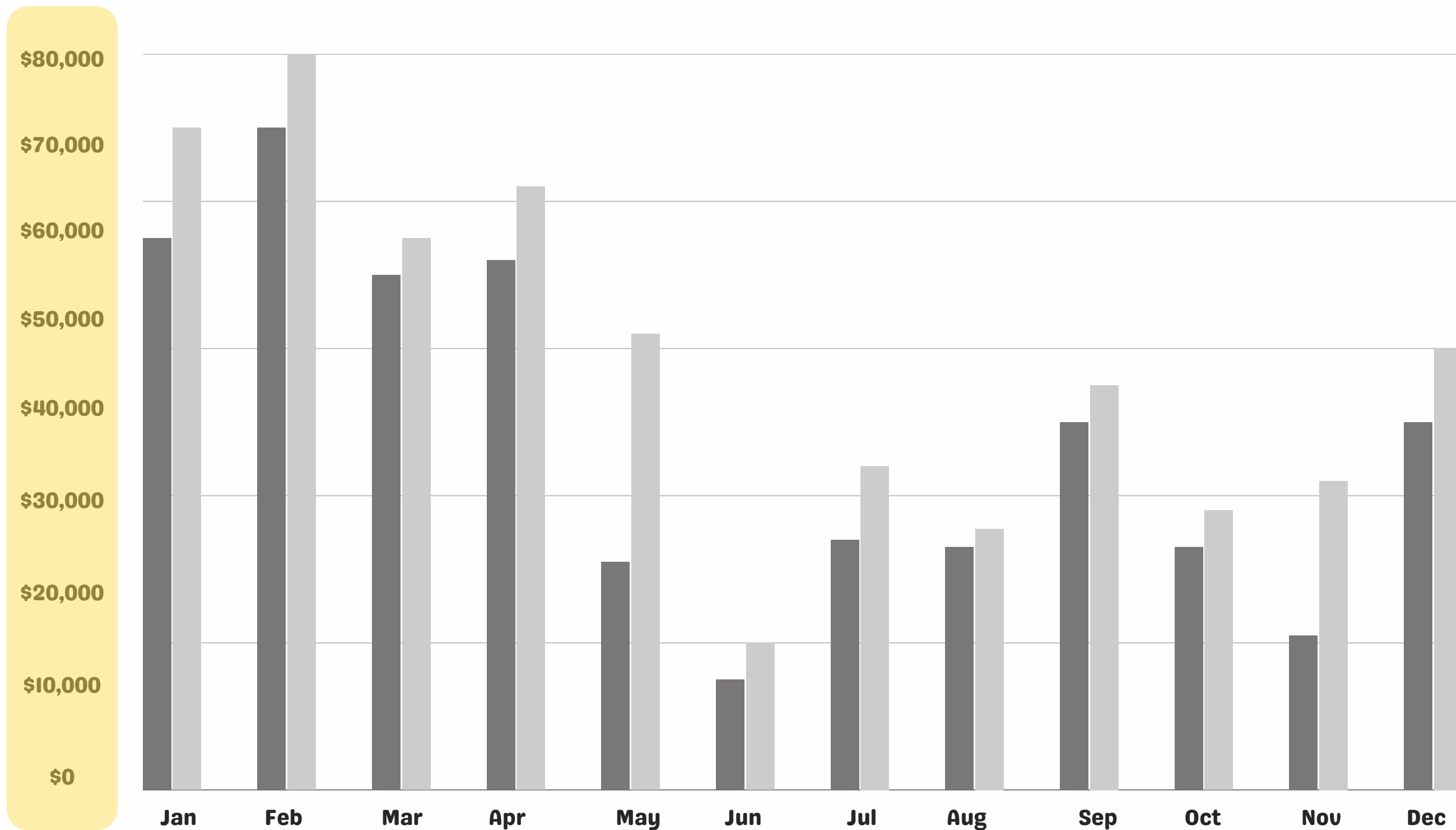


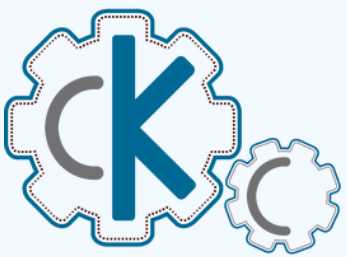
Poor Use of Symbols



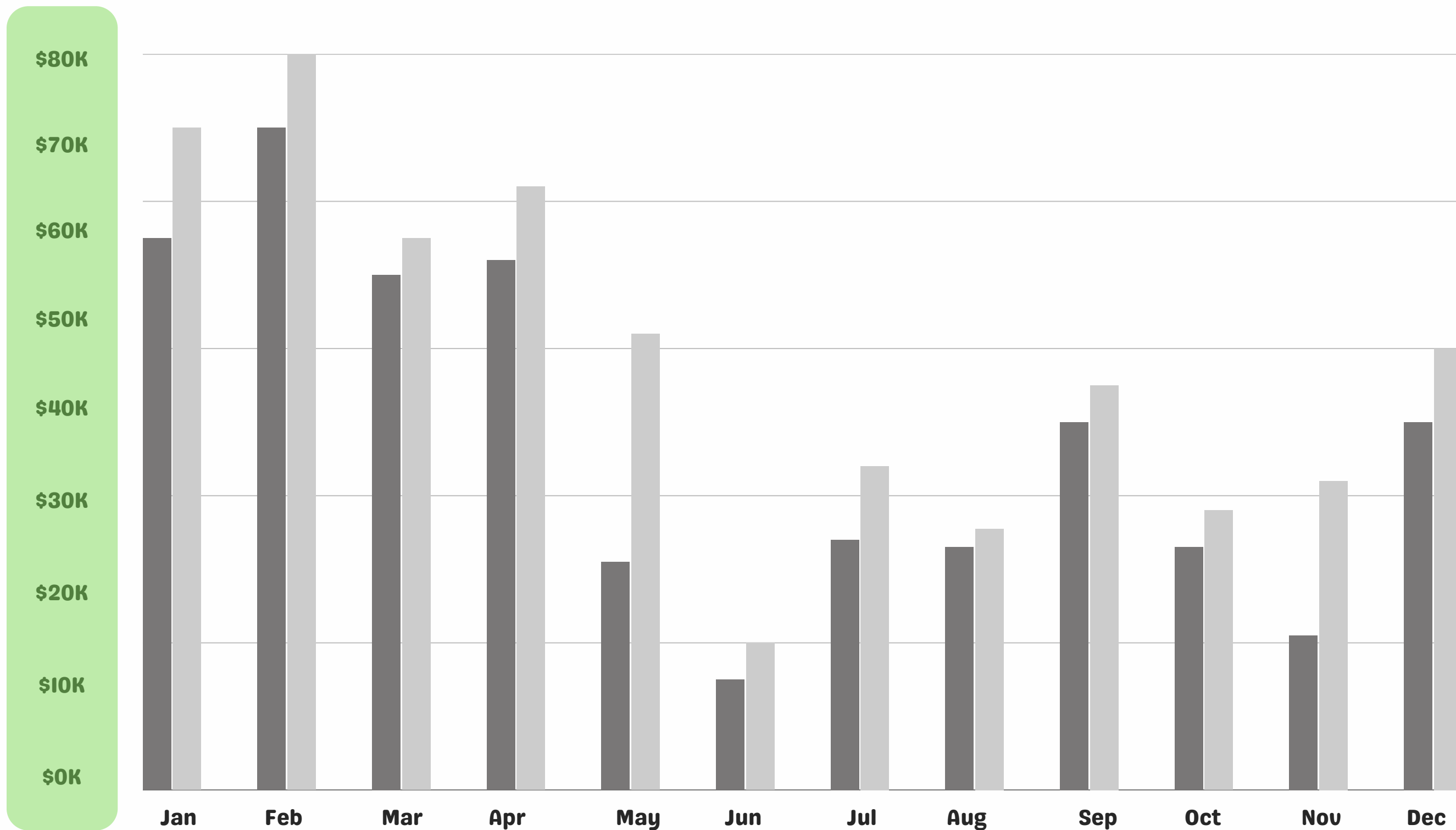


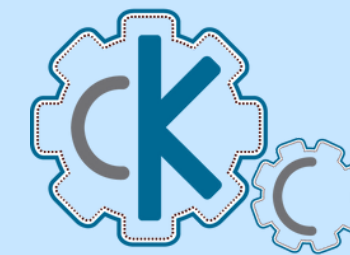
Better Use of Symbols





Best Use of Symbols

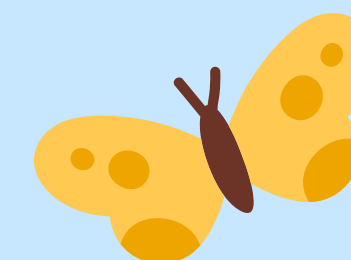
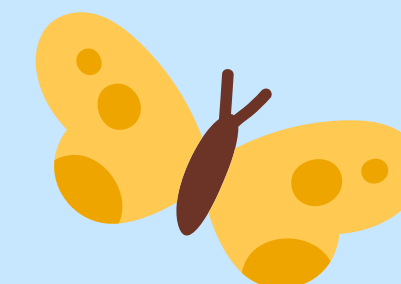
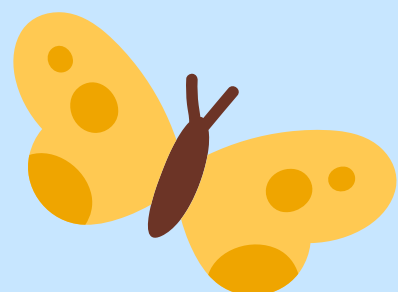


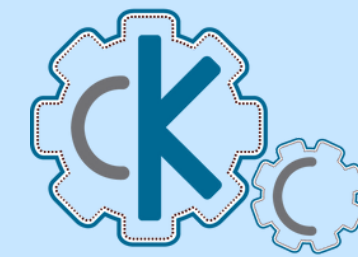


Declutter with Eye Test

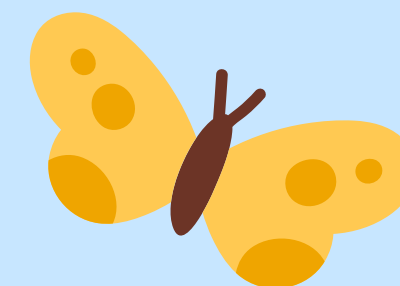
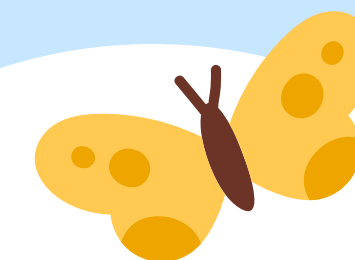
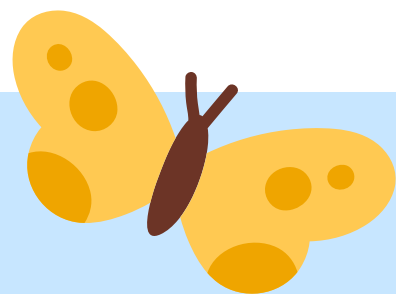
“Before you leave the house, look in the mirror and take one thing off.”

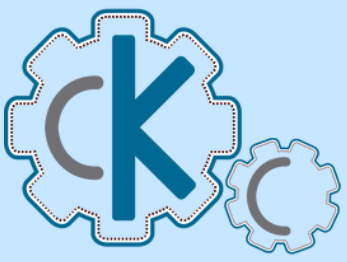
Coco Channel





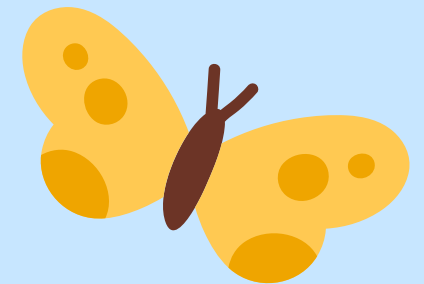
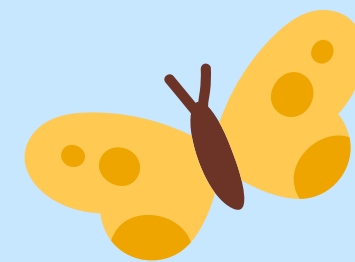
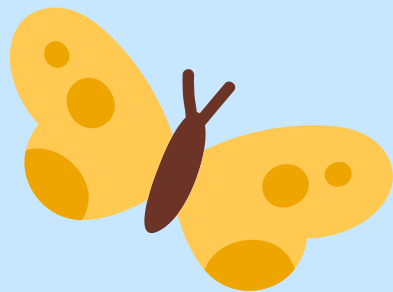
Walk Through *With Me*





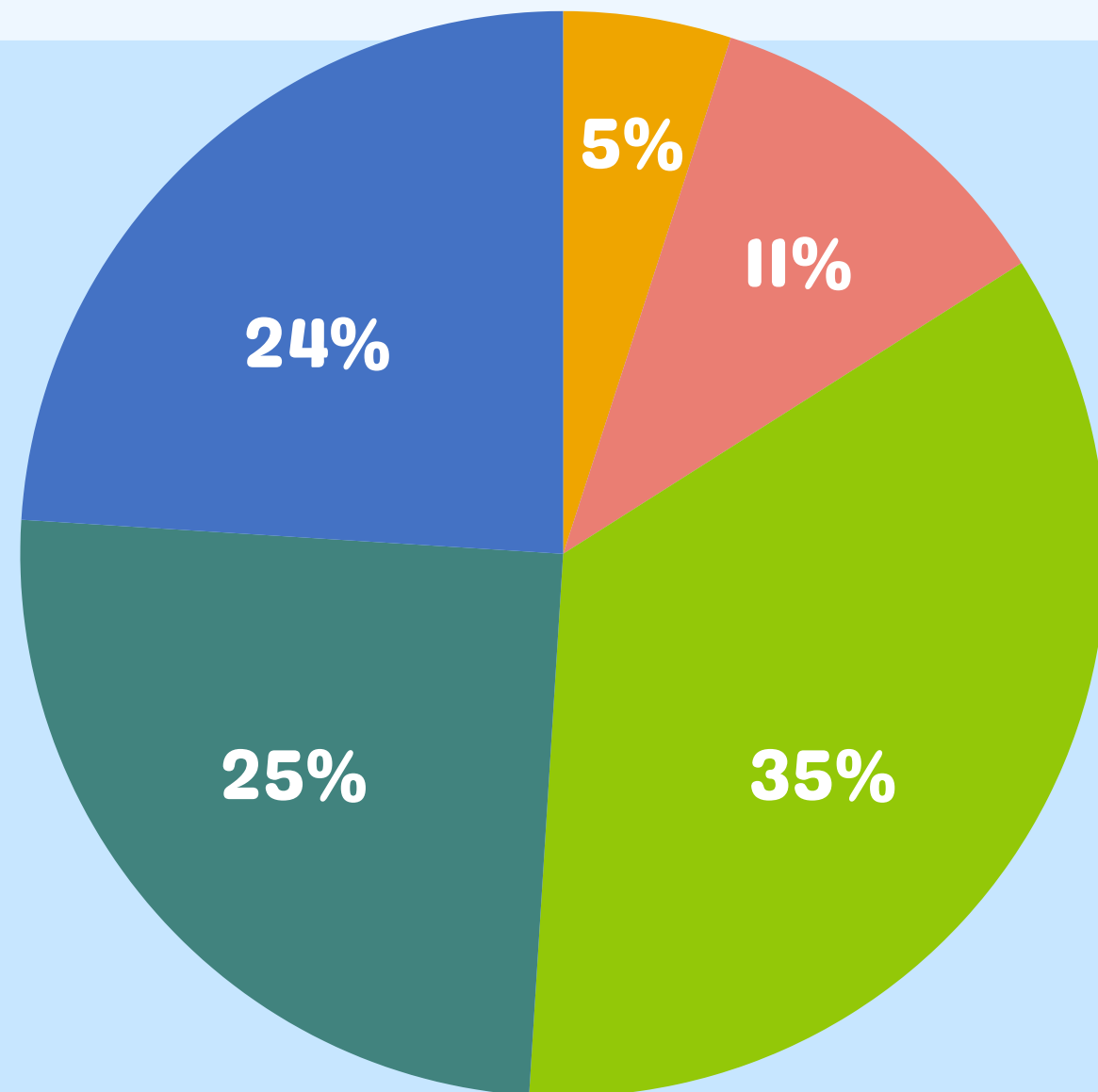
Key Elements

- Audience-Driven
- Clean/Appropriate Visuals
- Design Elements
- Context
- Call to Action

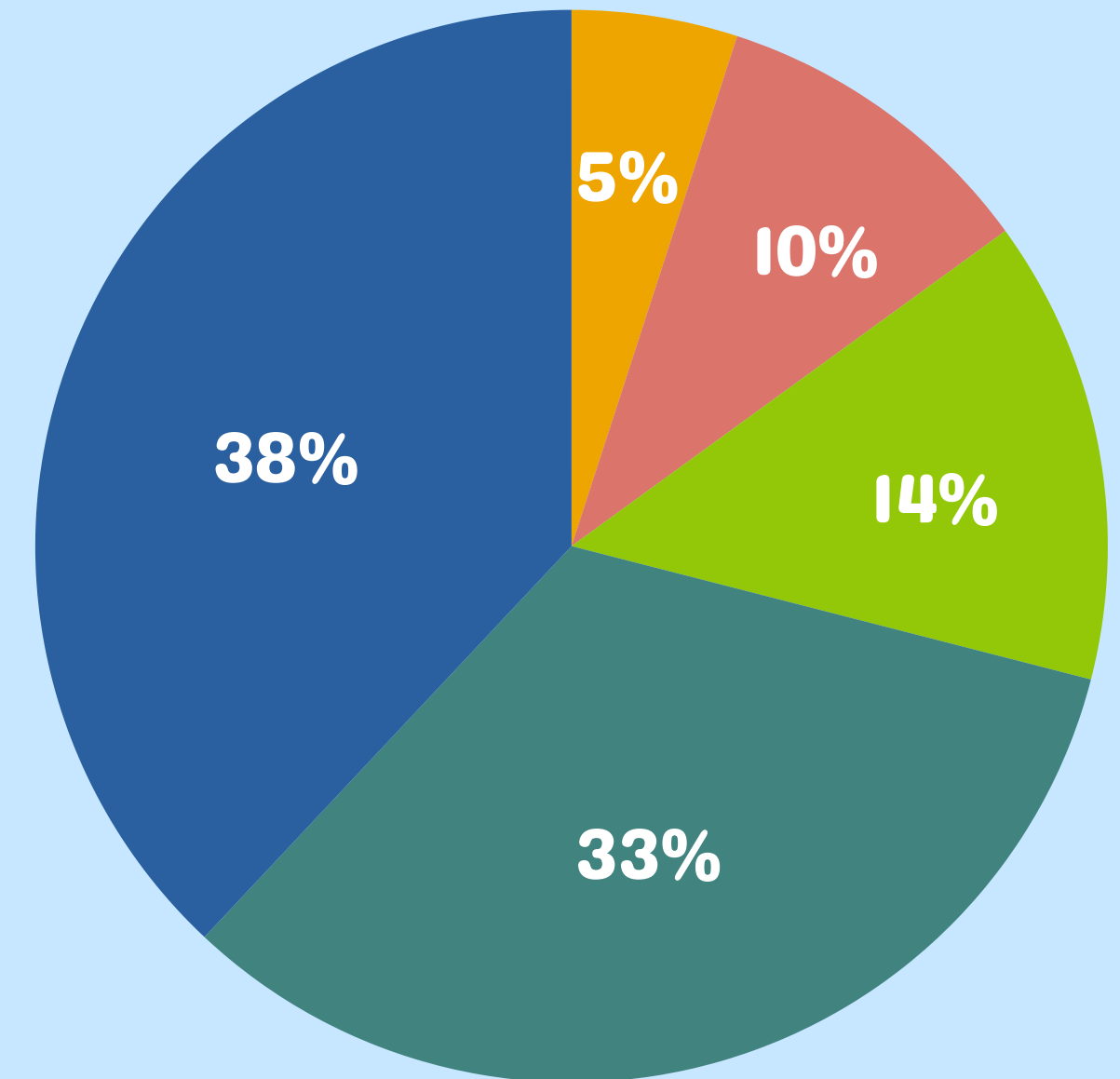


Poor Chart Type / Comparison

Pre-Project

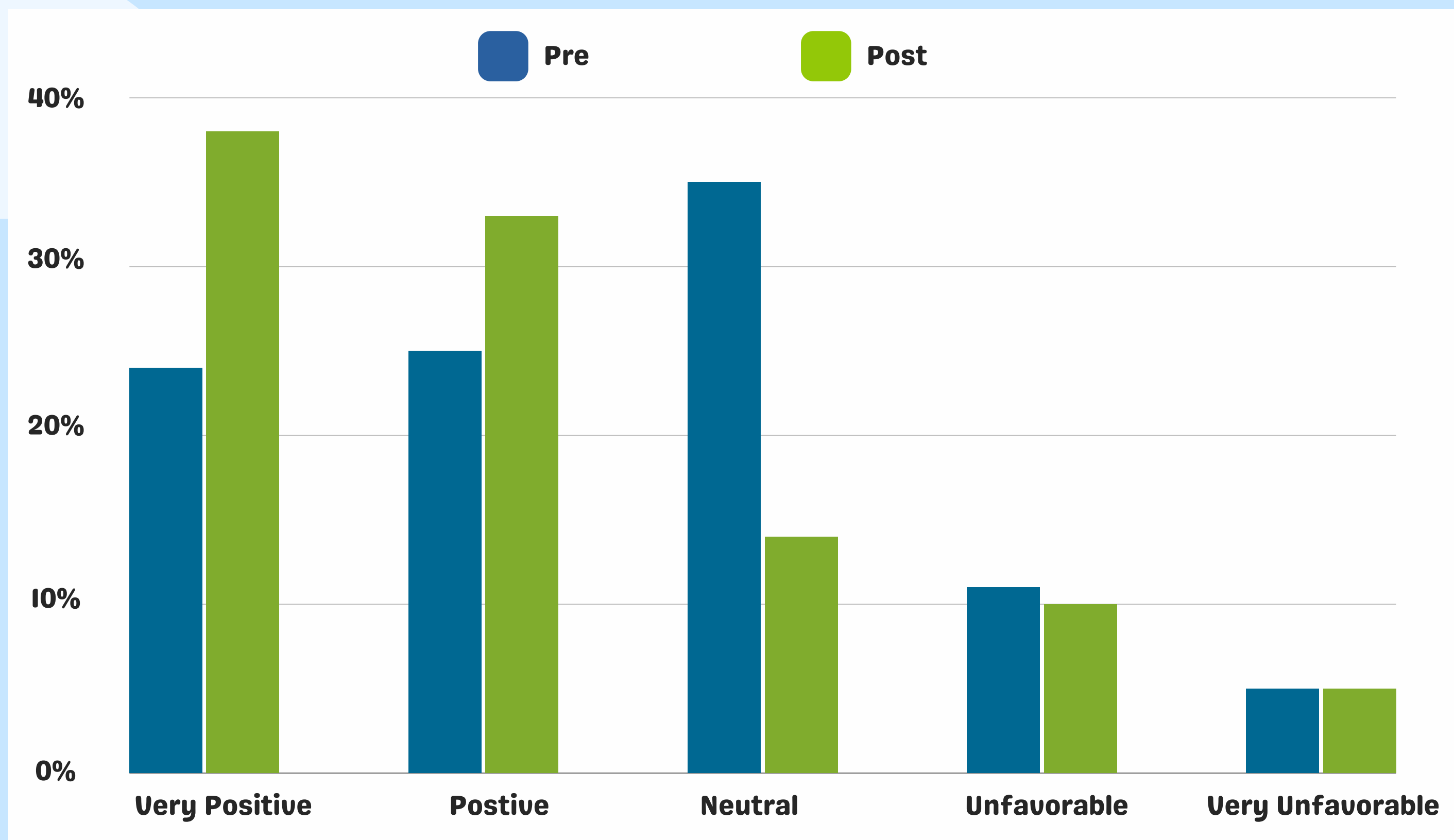


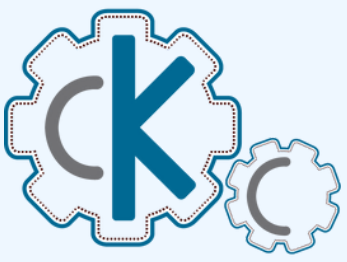
Post-Project



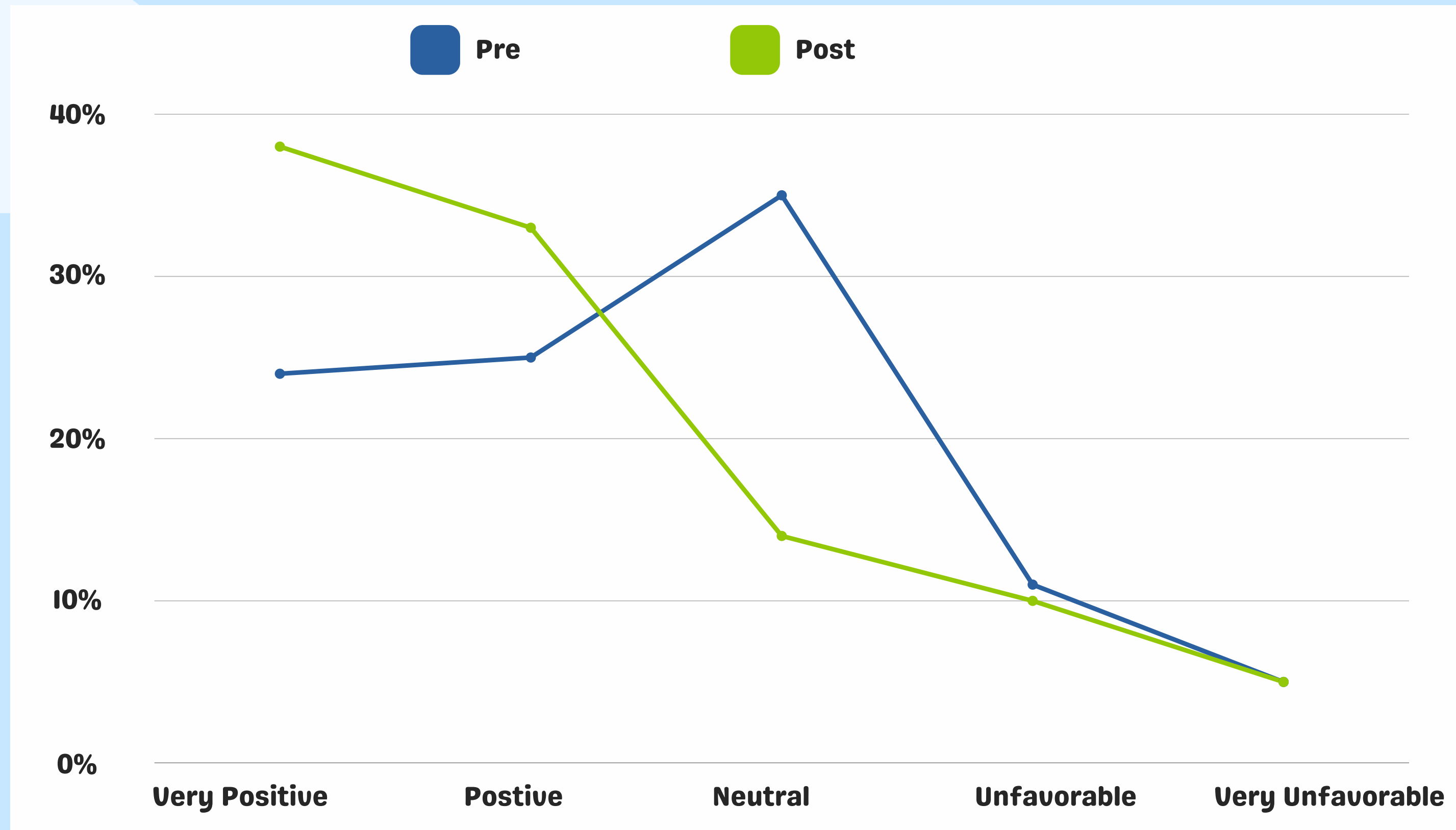


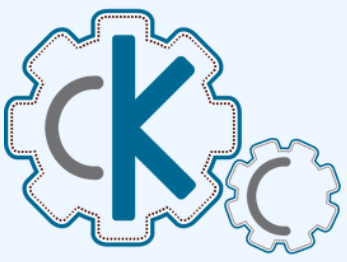
Better Chart Type / Comparison



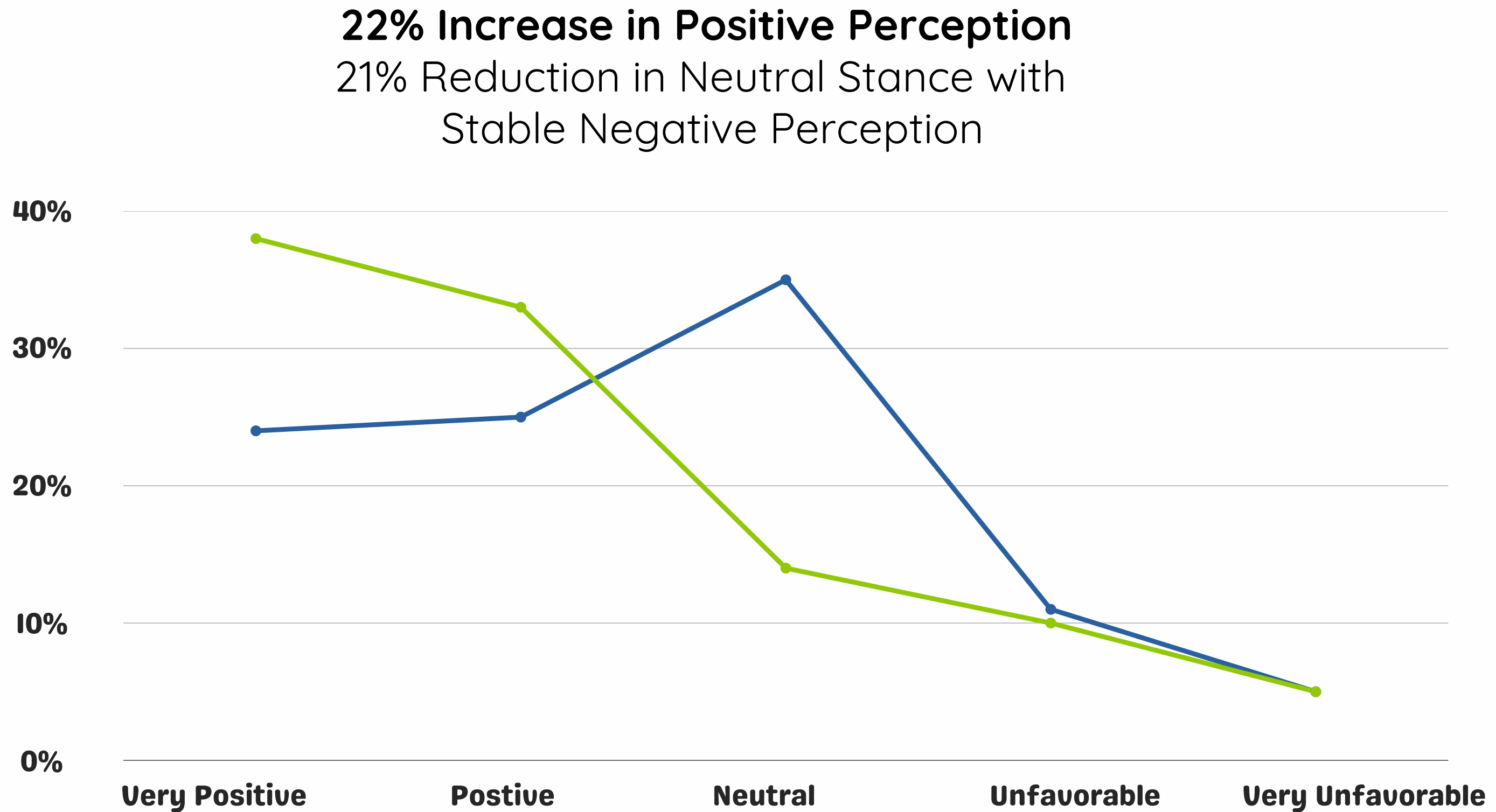


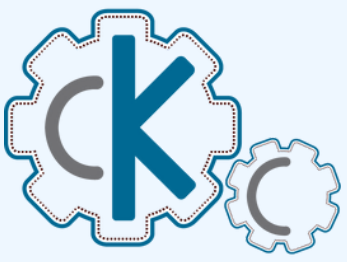
Best Chart Type for Comparison



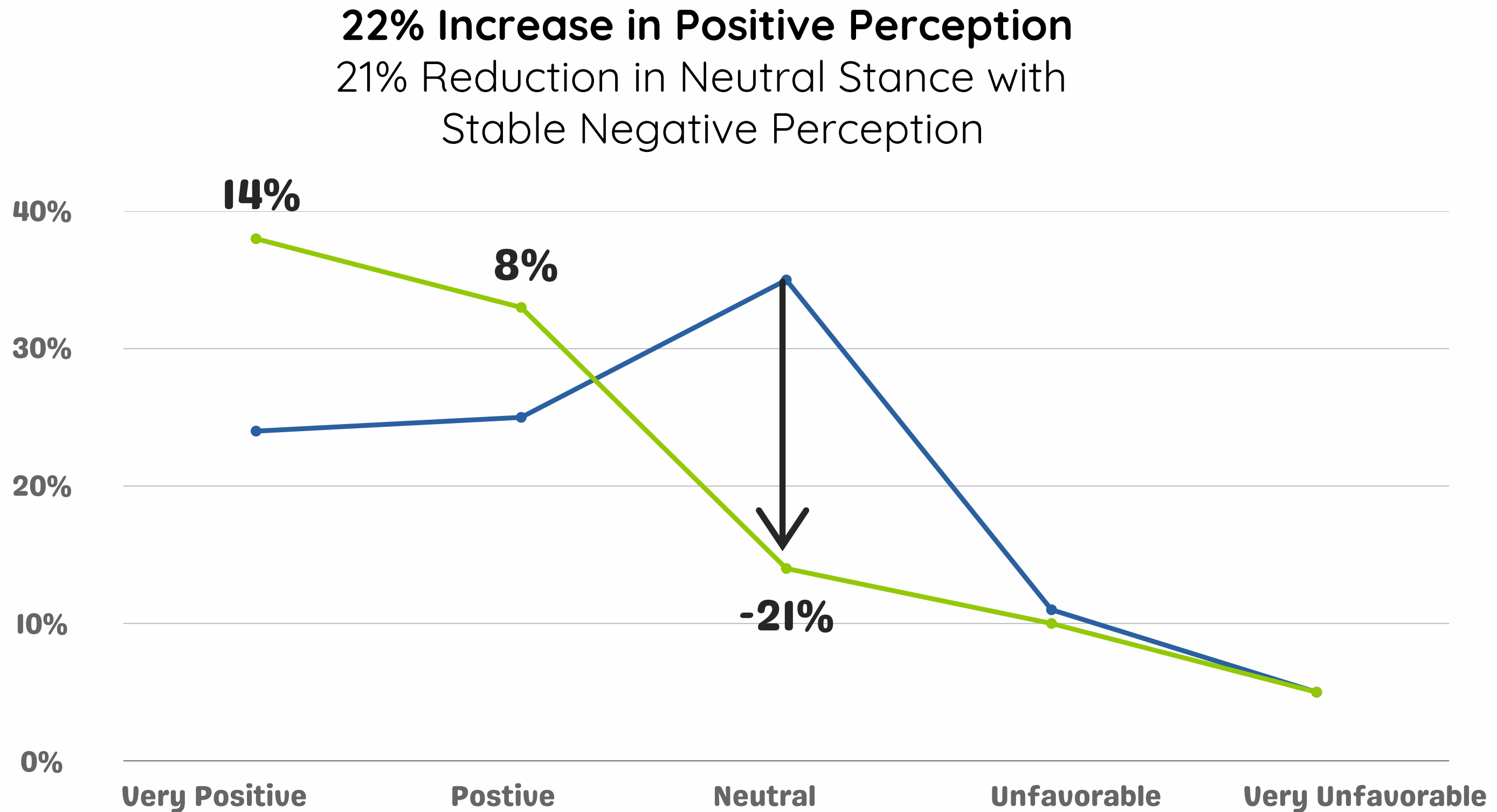


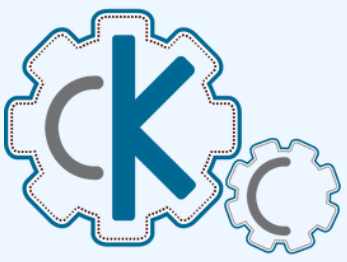
Add Context with Subheader





Add Visual Cues

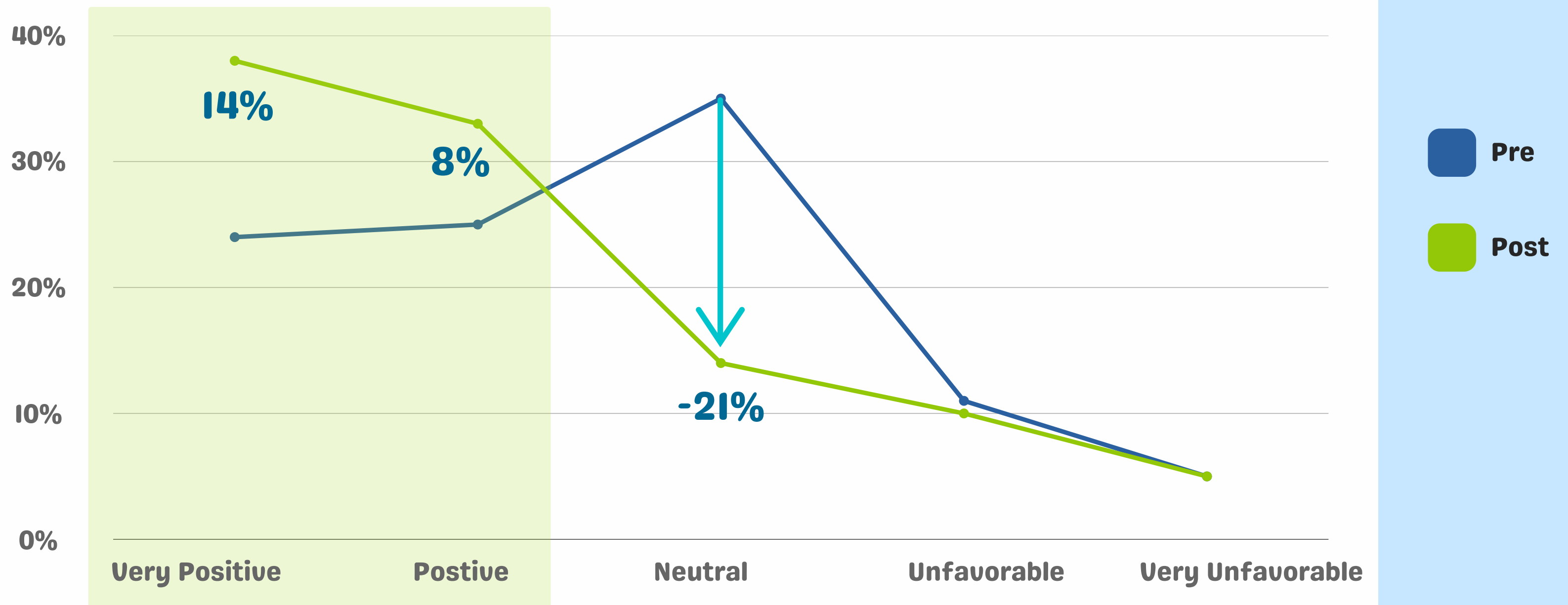




Add Color Cues

22% Increase in Positive Perception

21% Reduction in Neutral Stance with
Stable Negative Perception

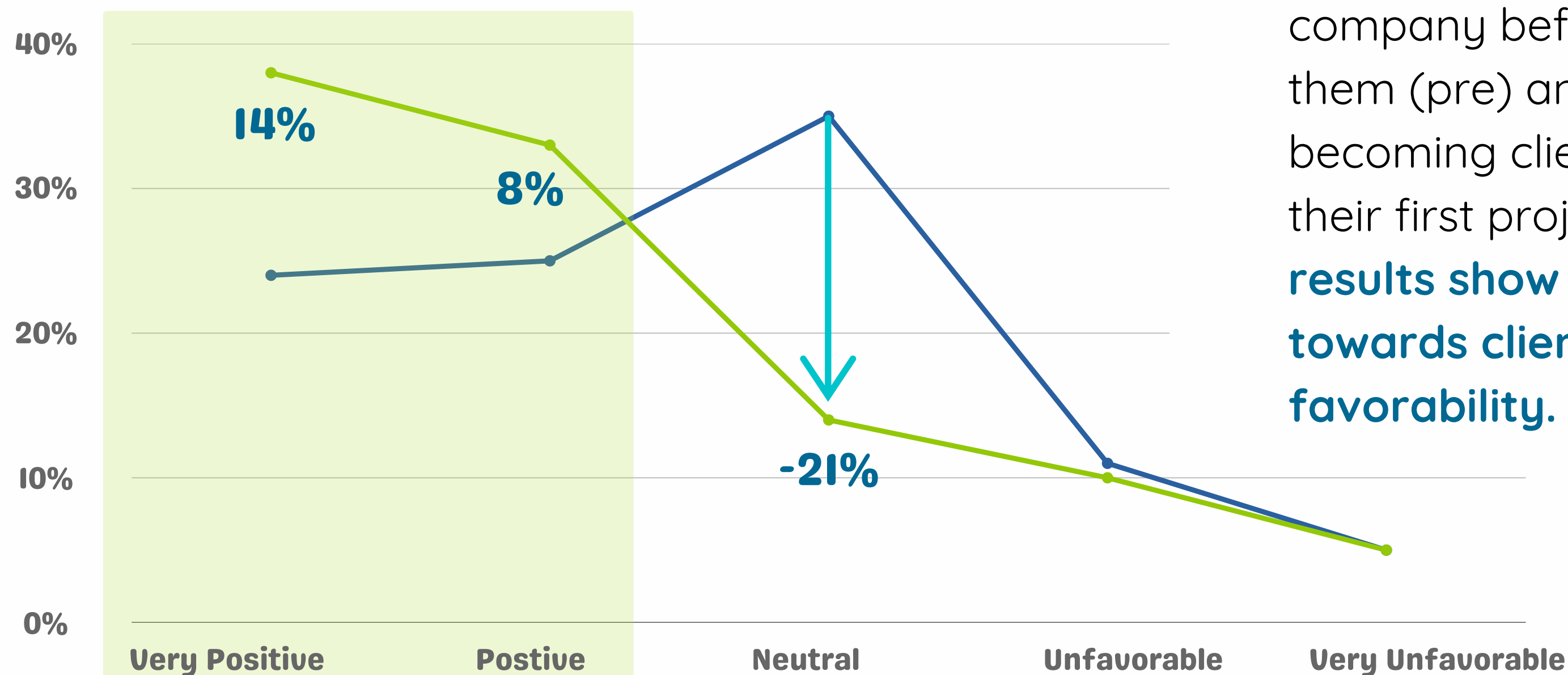




Tell the Data Story

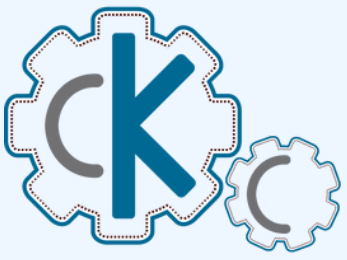
22% Increase in Positive Perception

21% Reduction in Neutral Stance with
Stable Negative Perception

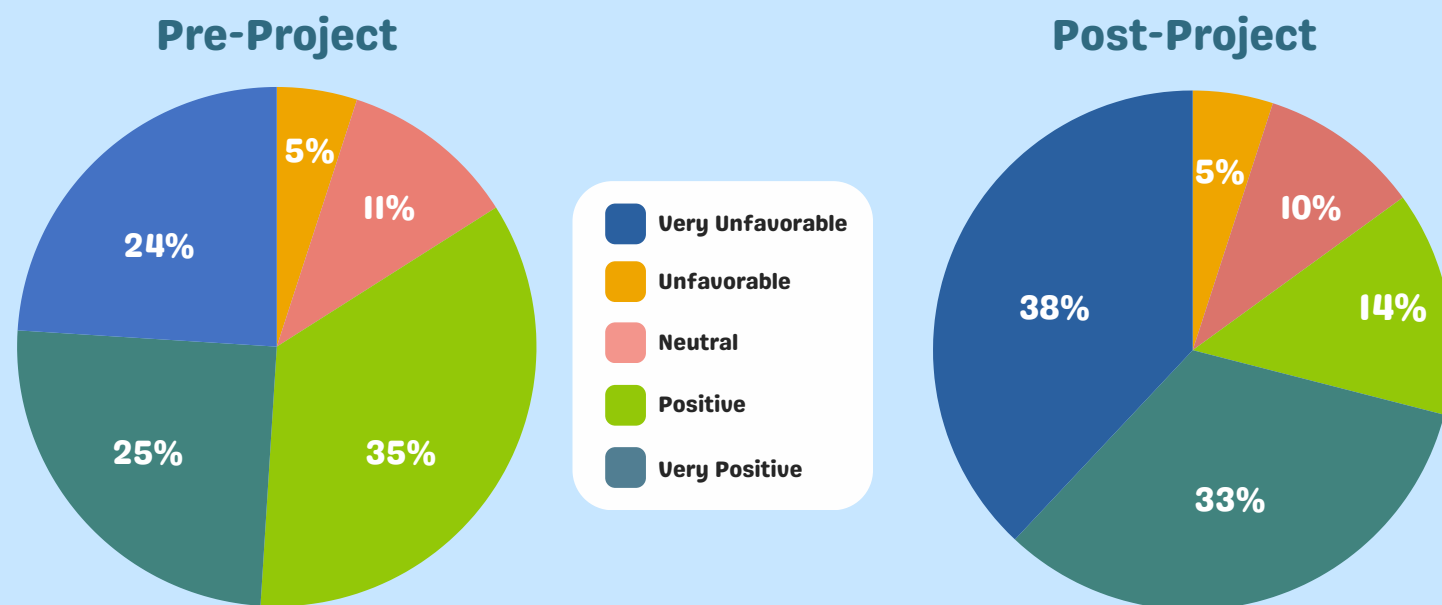


Prospects were given a survey to gauge their opinion of the company before working with them (pre) and asked again after becoming clients and finishing their first project (post). **The results show an overall shift towards client satisfaction and favorability.**

■ Pre ■ Post

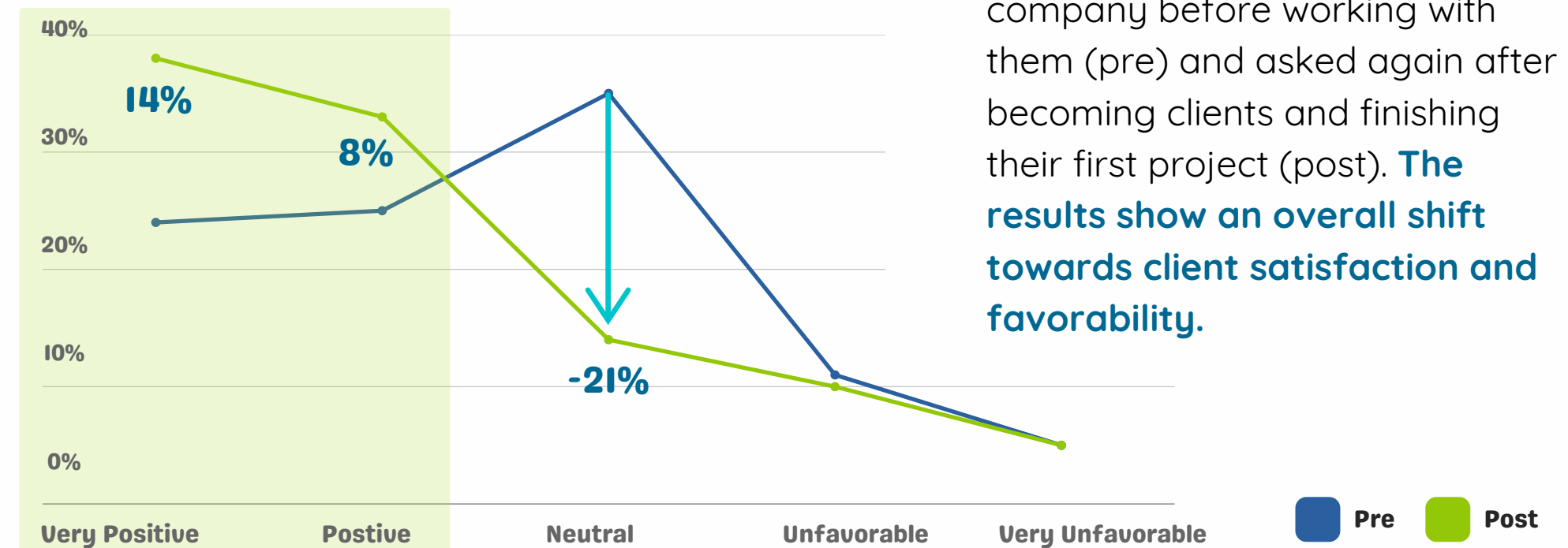


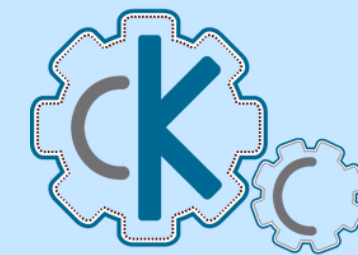
Before and After



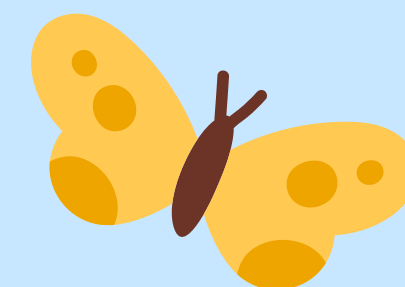
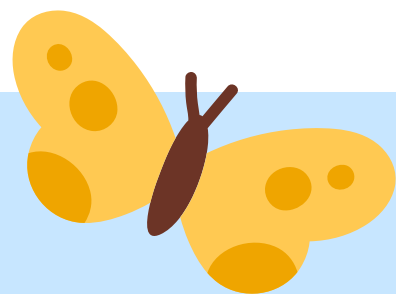
22% Increase in Positive Perception

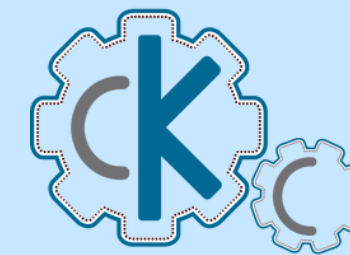
21% Reduction in Neutral Stance with Stable Negative Perception



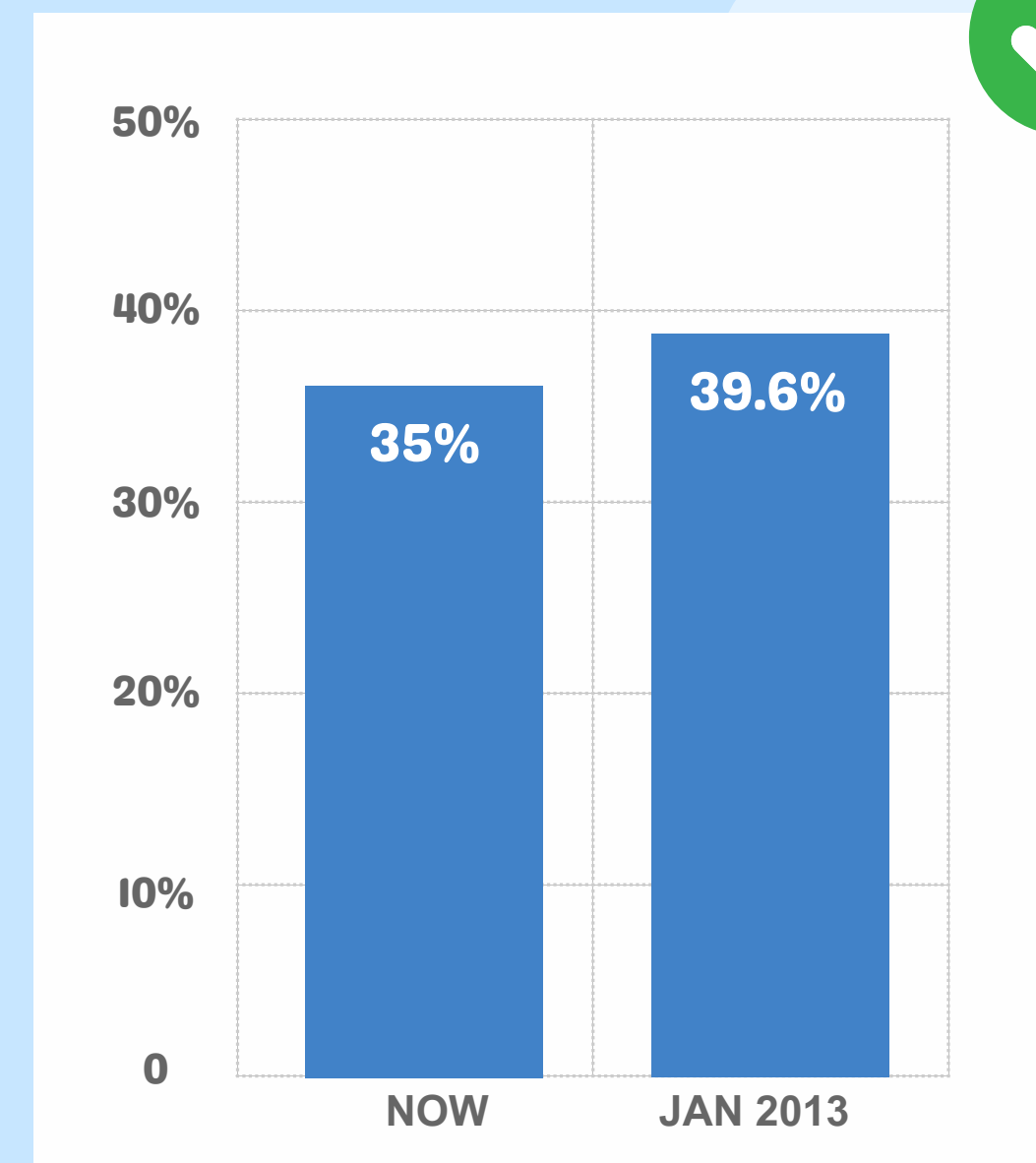
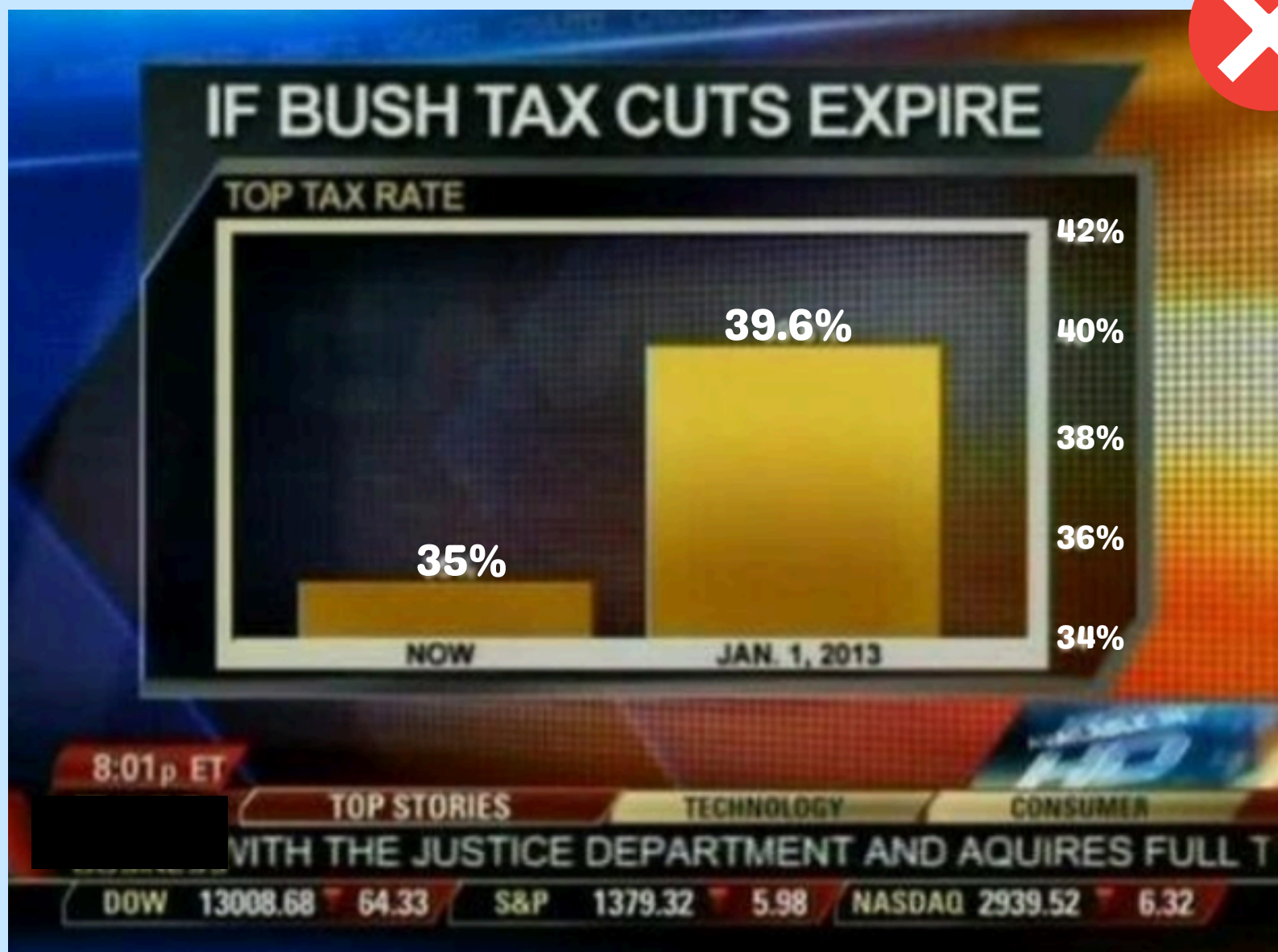


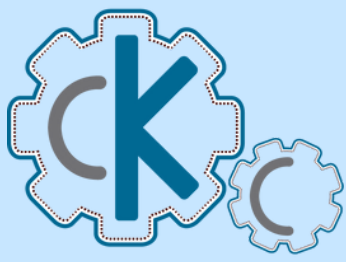
Just for Fun Bad Chart Choices





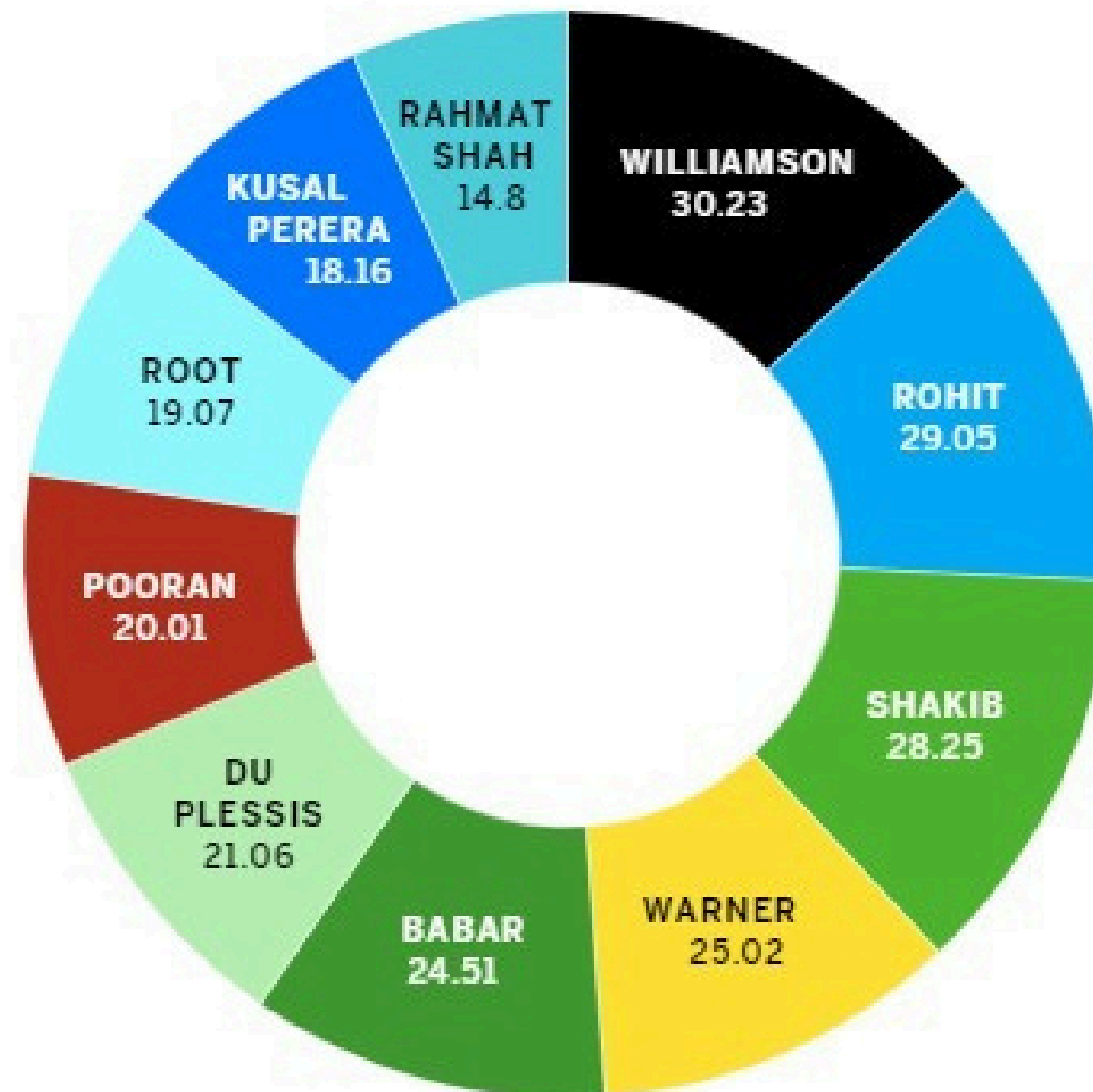
When Good Charts Go Bad

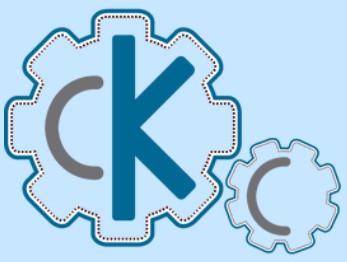




It Donut Add Up

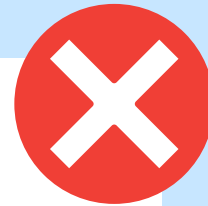
THE WORLD CUP'S BIG GUNS
% OF TEAM'S RUNS SCORED BY TOP SCORER



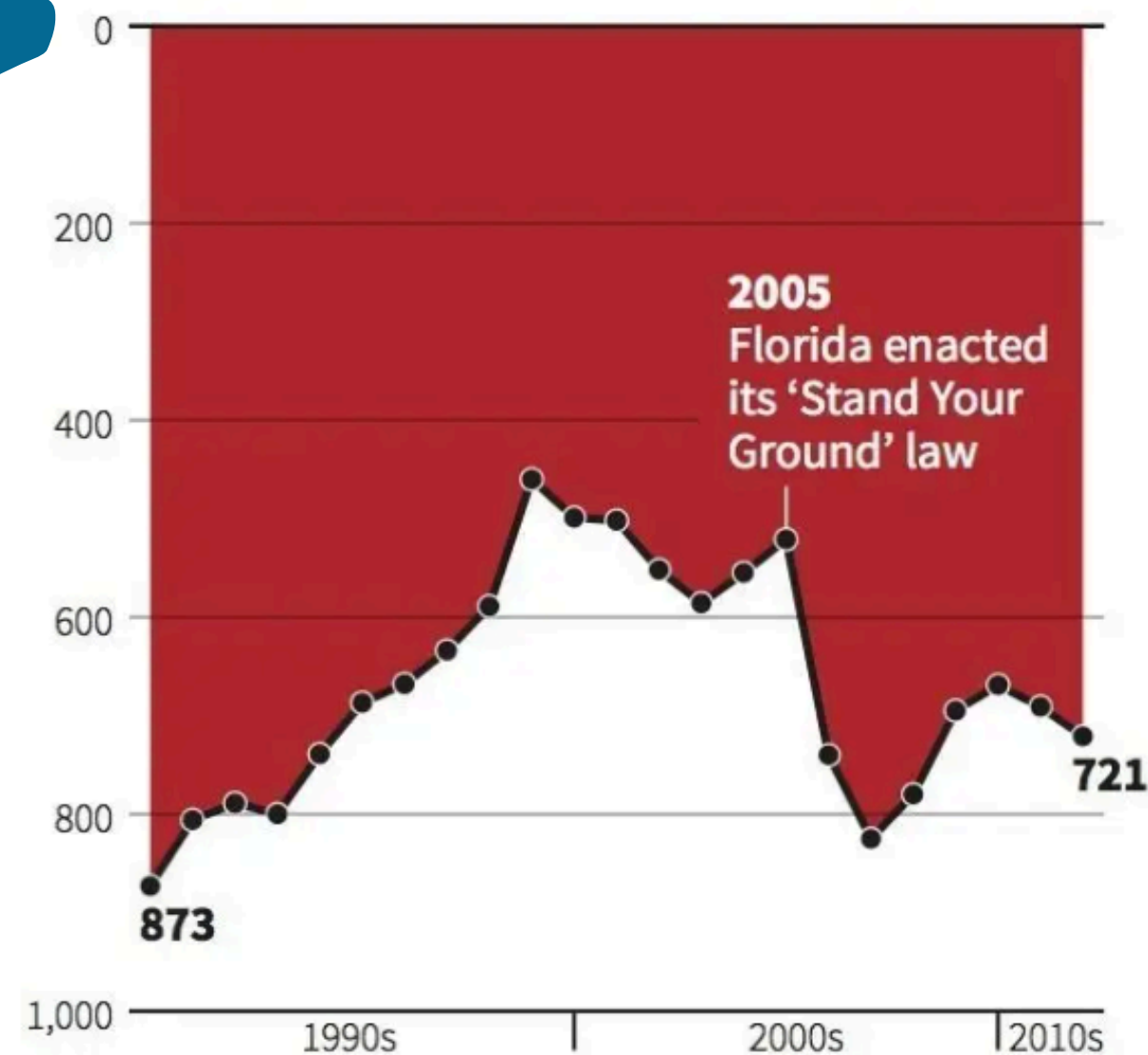


Inverted Axis, Y Tho?

Gun deaths in Florida



Number of murders committed using firearms



Source: Florida Department of Law Enforcement

C. Chan 16/02/2014

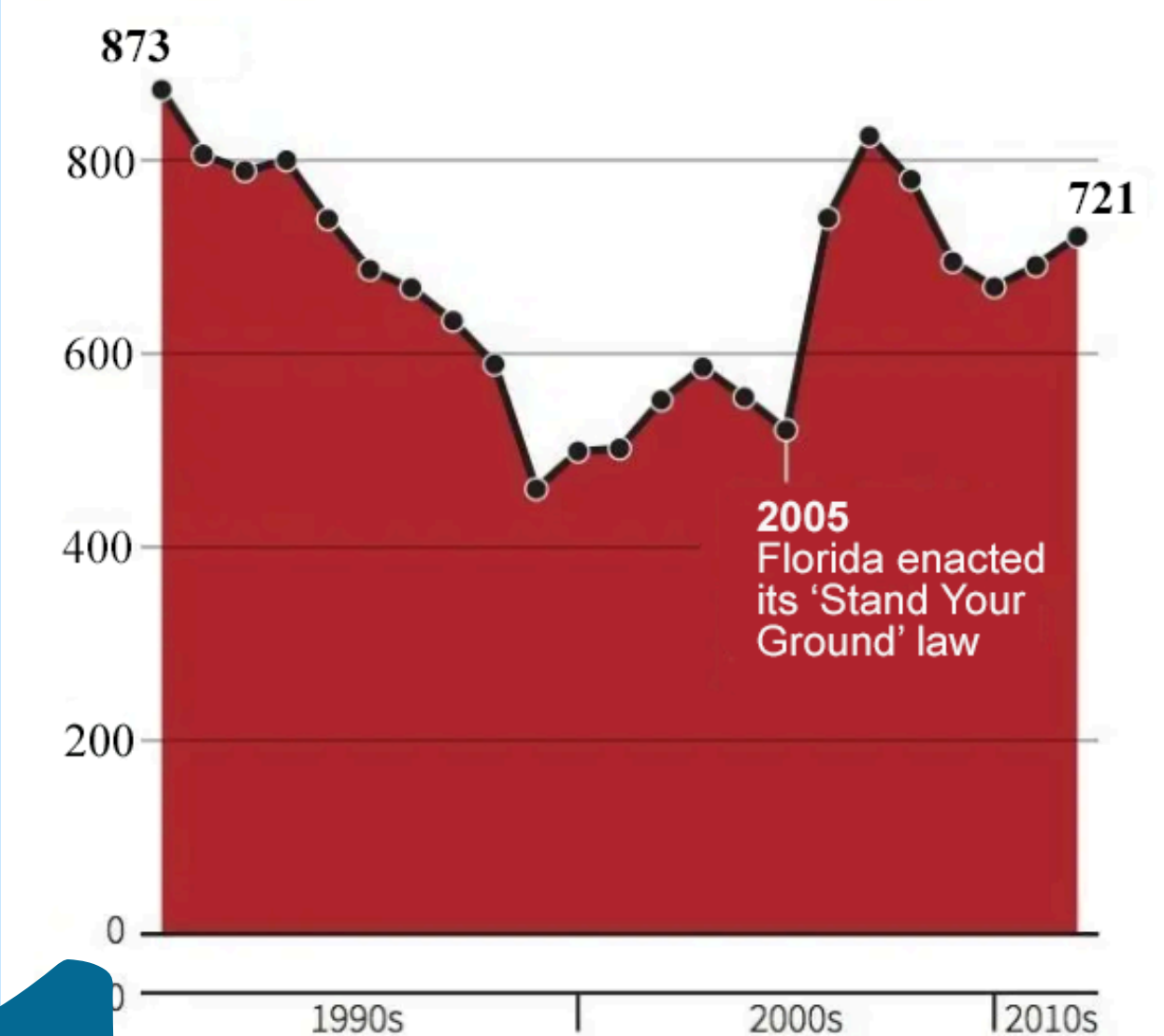
Reuters / Via reddit.com

REUTERS

Gun deaths in Florida



Number of murders committed using firearms



Source: Florida Department of Law Enforcement

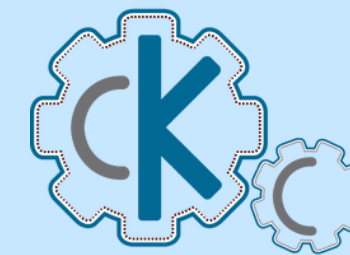
C. Chan 16/02/2014

Reuters / Via reddit.com

REUTERS

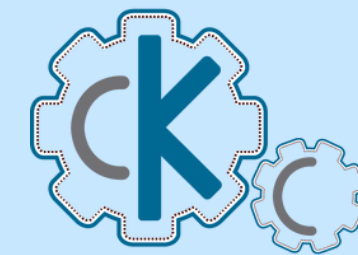
Seasons of Whoopsies



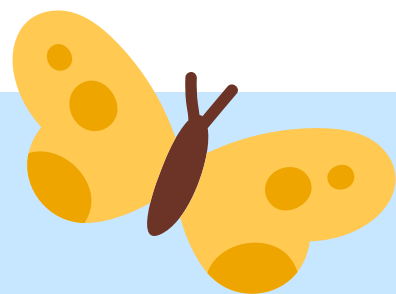


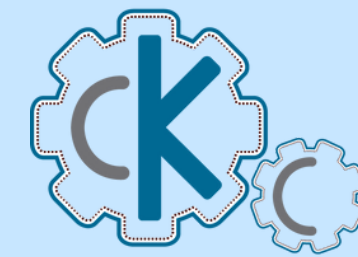
One Degree of Separation





**Are You Ready to Tell
the Stories in Your Data?**

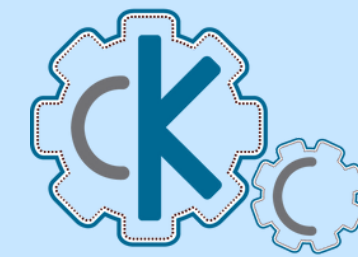




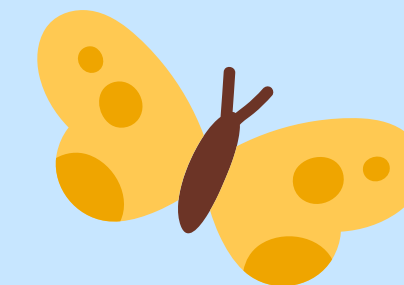
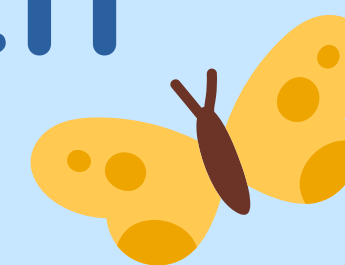
Data literacy will
be the most **critical**
skill for the
workforce in 2030.

~ Data Literacy Project

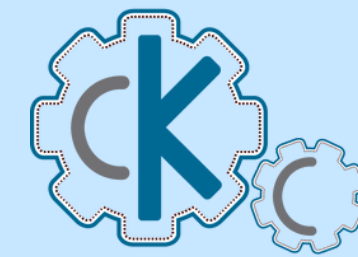




76% of decision-makers
are not confident in their
ability to read, work with
and analyze data.



~ Data Literacy Project



Questions?

