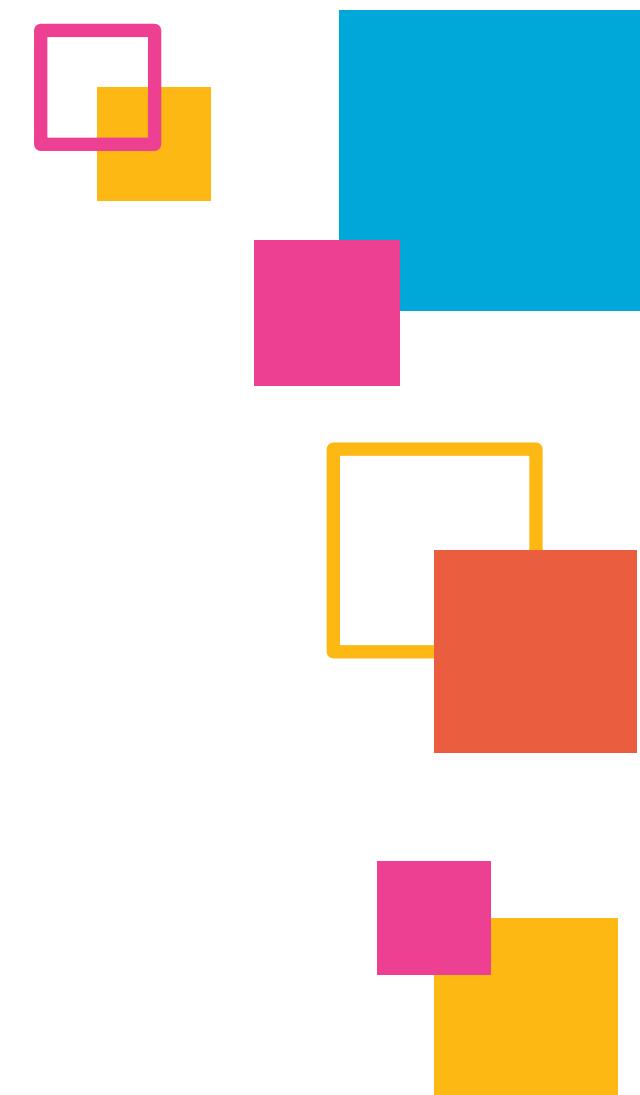


join

Hands-on Lab: Building Better Dashboards



Jesse Sherb
Sales Engineer



looker.com/hol

Select the **Building Better Dashboards** lab in the drop-down



Jesse Sherb

Sales Engineer

Agenda

Introduction

Visualizing data in Looker

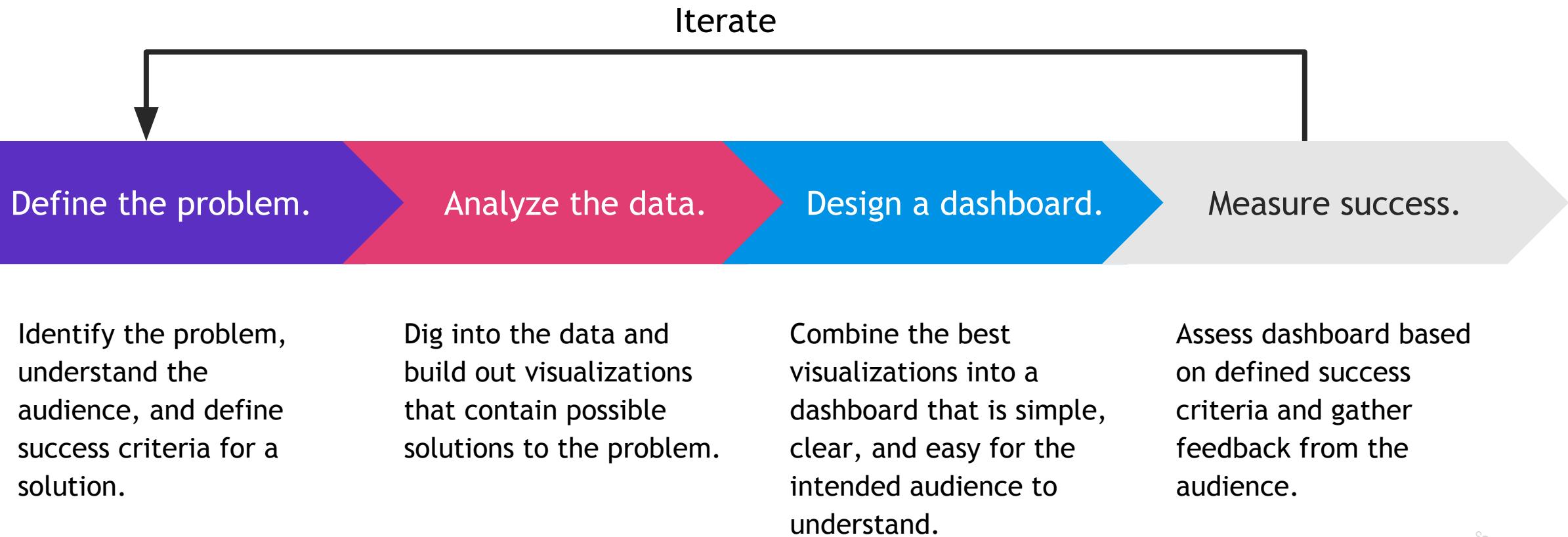
Dashboard design principle 1: Clarity

Dashboard design principle 2: Simplicity

Dashboard design principle 3: Flow

Dashboard Workshop

Dashboard development process



Why are dashboards so important?

Provide a gateway into the data

- The starting point for data analysis for most people
- Data literacy is a skill many of us are still building
- Provide guided pathways through the data

Promote analytical decision-making

- Gather relevant data into a single place
- Make it easier for others to use data to make decisions
- Enable action to be taken based on the data provided

Understanding your audience

Questions to ask

- Who is the target audience?
- What do they want to get out of this dashboard?
- What actions will they take based on this data?

**Dashboard
Requirements
Gathering
Worksheet**

Visualizing data in Looker

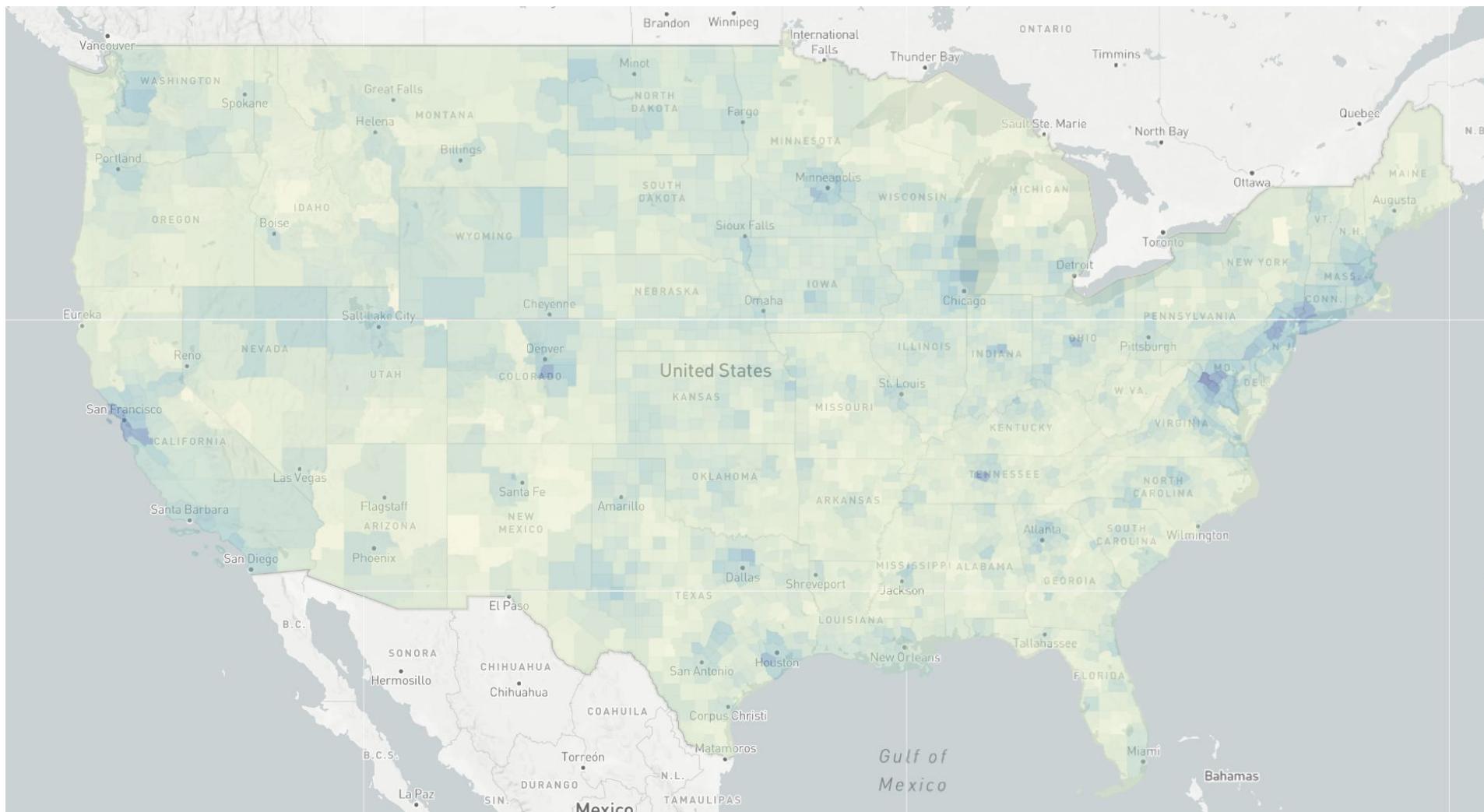
The background features a purple gradient with a central white circle. From the center, numerous thin, light-gray radial lines extend outwards. Interspersed among these lines are several small, dark-gray geometric shapes: two vertical clusters of short horizontal dashes in the upper left and lower left, a horizontal bar with a dotted pattern in the upper right, and a horizontal bar with a solid black pattern in the lower center.

Why you visualize data

Average household income in the US

	Geography County FIPS Code	Geography County Name ^	Fast Facts Average Income per Household
1	45001	Abbeville County, South Carolina ...	\$24,374
2	22001	Acadia Parish, Louisiana ...	\$37,951
3	51001	Accomack County, Virginia ...	\$26,335
4	16001	Ada County, Idaho ...	\$57,093
5	19001	Adair County, Iowa ...	\$39,779
6	21001	Adair County, Kentucky ...	\$26,707
7	29001	Adair County, Missouri ...	\$31,461
8	40001	Adair County, Oklahoma ...	\$28,672
9	08001	Adams County, Colorado ...	\$58,037
10	16003	Adams County, Idaho ...	\$18,882
11	17001	Adams County, Illinois ...	\$39,955
12	18001	Adams County, Indiana ...	\$42,897
13	19003	Adams County, Iowa ...	\$39,432
14	28001	Adams County, Mississippi ...	\$25,426
15	31001	Adams County, Nebraska ...	\$49,845
16	38001	Adams County, North Dakota ...	\$43,032
17	39001	Adams County, Ohio ...	\$27,635
18	42001	Adams County, Pennsylvania ...	\$52,068
19	53001	Adams County, Washington ...	\$42,687
20	55001	Adams County, Wisconsin ...	\$14,630
21	50001	Addison County, Vermont ...	\$47,188
22	72001	Adjuntas Municipio, Puerto Rico ...	\$11,416
23	72003	Aguada Municipio, Puerto Rico ...	\$10,362
24	72005	Aguadilla Municipio, Puerto Rico ...	\$13,205
25	72007	Aguas Buenas Municipio, Puerto Rico ...	\$12,610
26	72009	Aibonito Municipio, Puerto Rico ...	\$11,939
27	45003	Aiken County, South Carolina ...	\$39,973
28	27001	Aitkin County, Minnesota ...	\$15,795
29	12001	Alachua County, Florida ...	\$43,081
30	37001	Alamance County, North Carolina ...	\$40,094

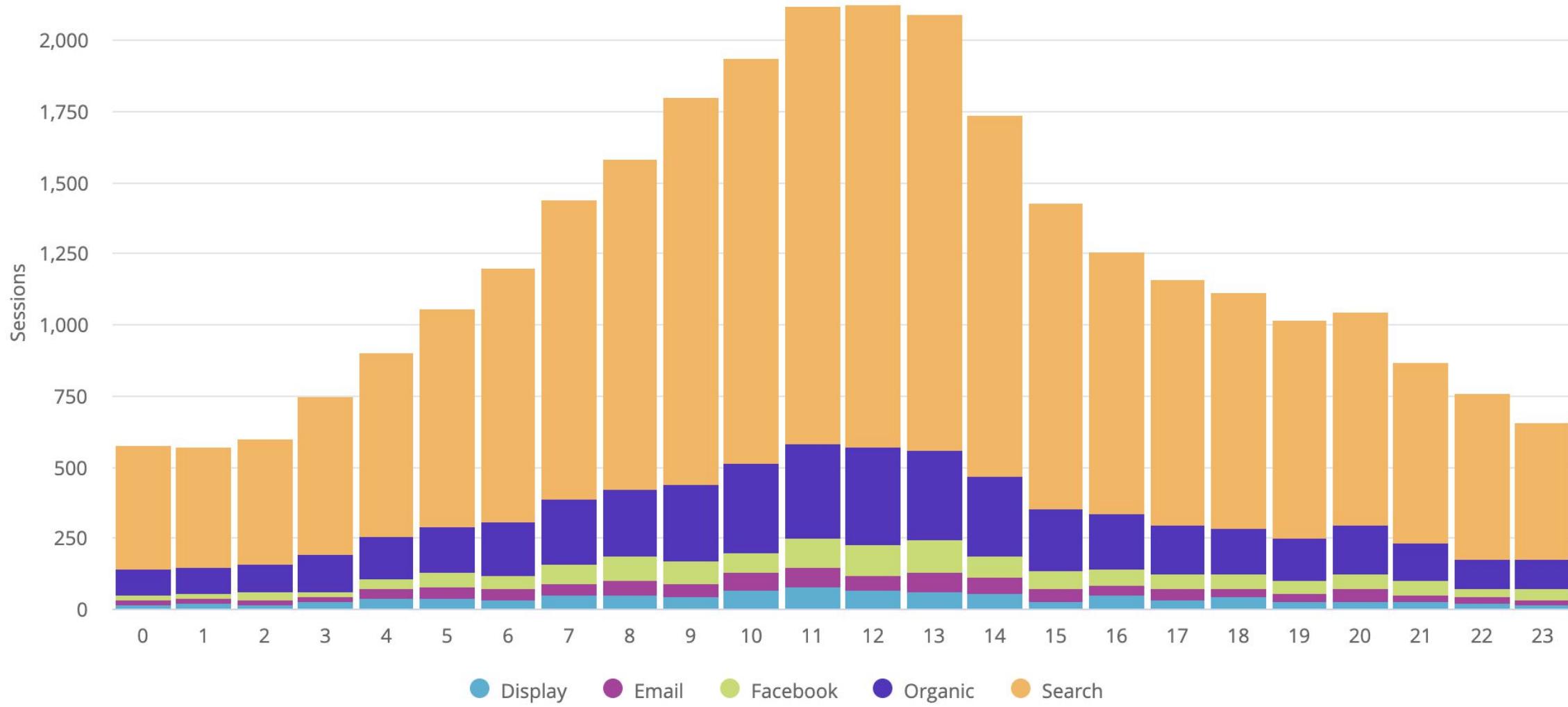
Average household income in the US



Web traffic by hour and source

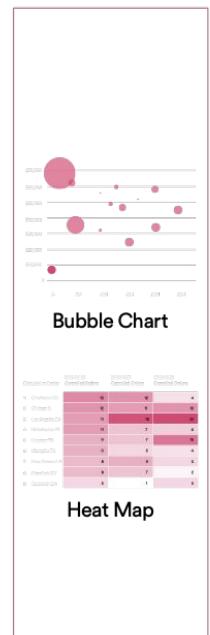
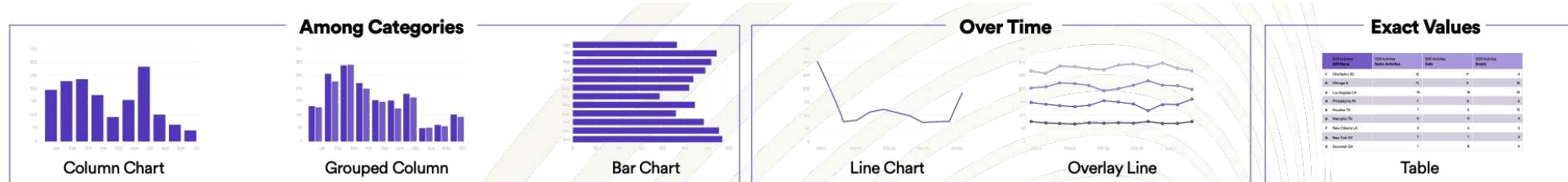
Traffic Source >	Display	Email	Facebook	Organic	Search
Event Hour of Day ^	Sessions	Sessions	Sessions	Sessions	Sessions
1	0	17	19	16	439
2	1	24	15	21	423
3	2	18	19	26	440
4	3	27	19	17	551
5	4	42	30	38	650
6	5	41	39	54	762
7	6	33	44	43	894
8	7	52	39	71	1,052
9	8	52	50	85	1,161
10	9	46	48	78	1,361
11	10	69	61	68	1,424
12	11	82	64	106	1,538
13	12	66	55	110	1,559
14	13	64	70	113	1,534
15	14	56	56	76	1,270
16	15	31	42	63	1,074
17	16	53	30	58	923
18	17	35	39	53	865
19	18	46	29	50	825
20	19	29	31	44	768

Web traffic by hour and source



How you visualize data

Visualizing data: choosing a good chart



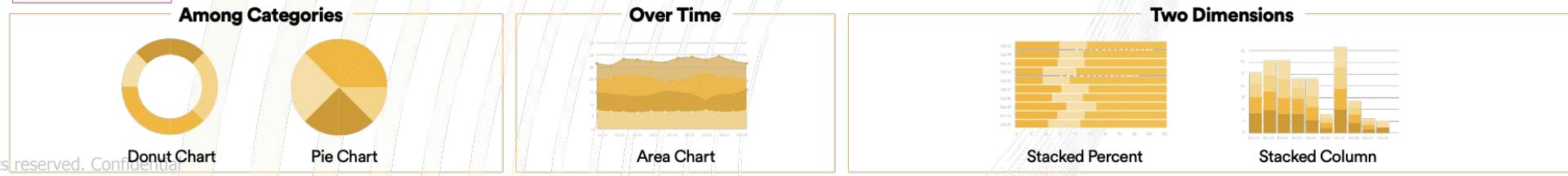
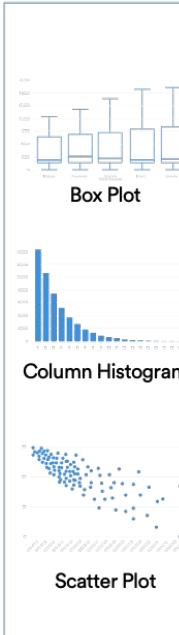
How Values Relate to Each Other

How the Values Compare to Each Other

looker

What
are you
trying to
show?

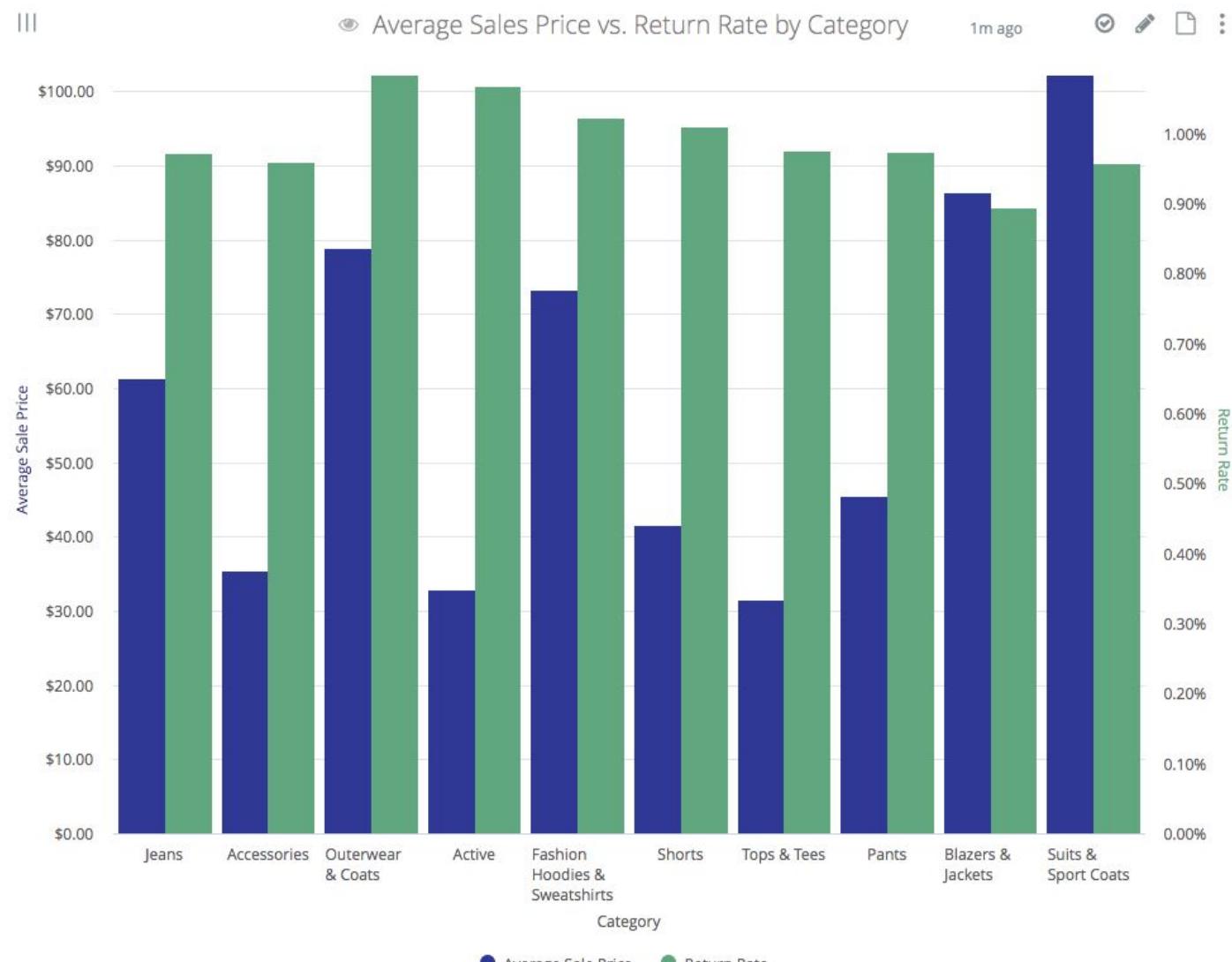
How the Data is Distributed



Visualizing data: choosing a good chart



Visualizing data: choosing a good chart

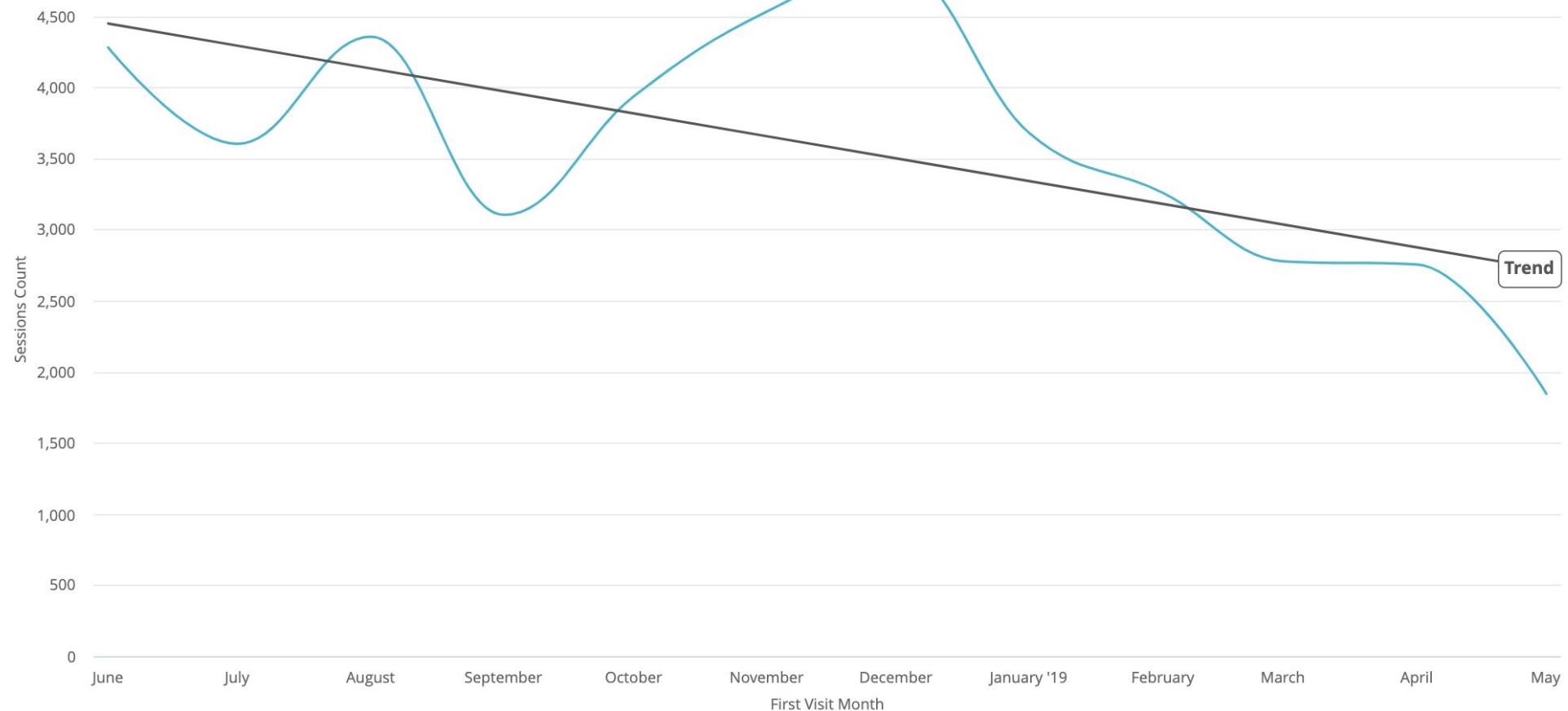


What data you visualize

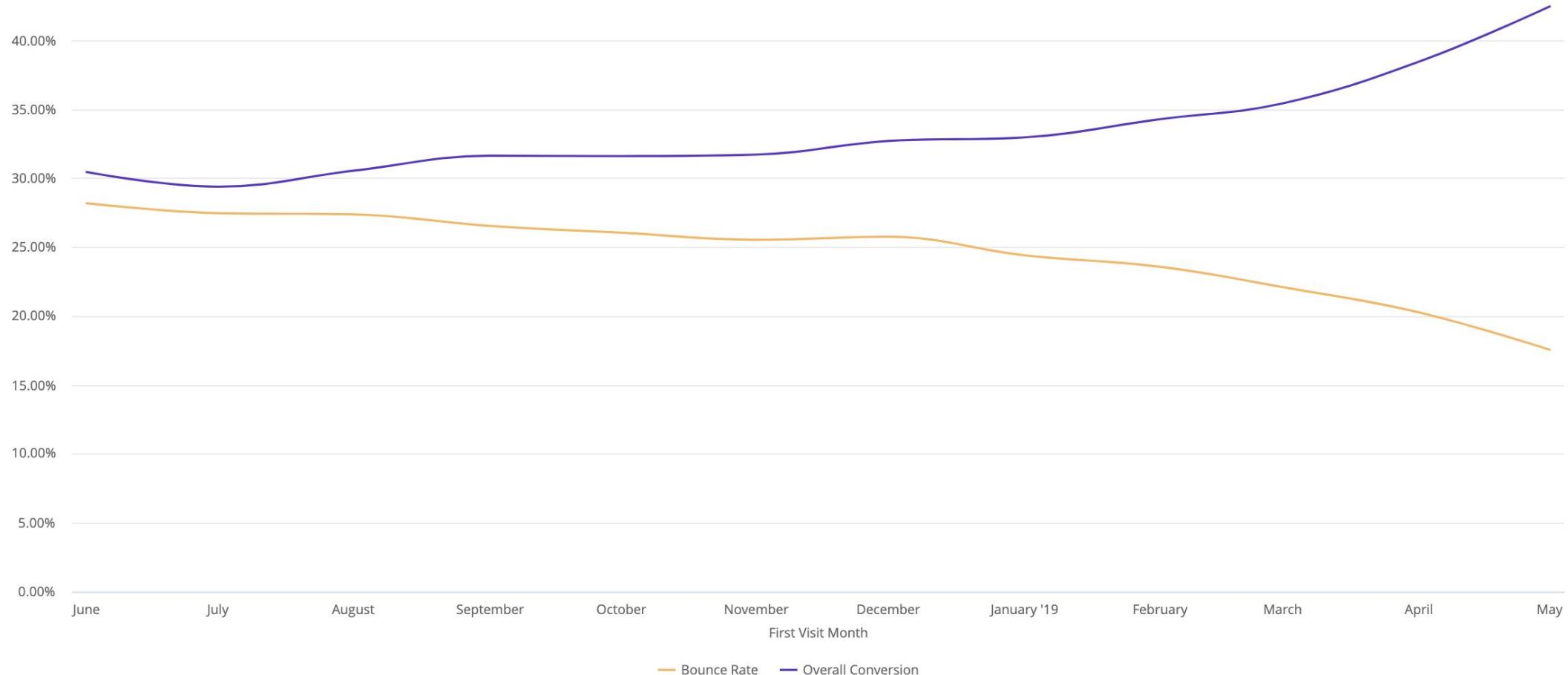
Focus on metrics that matter

- Many popular metrics (like Total Revenue or Daily Active Users) don't help much in making good decisions
- Primarily used to compare organizations, not run them
- Can be dangerous to over-focus on metrics like these (we call them vanity metrics)
- Better to highlight differences or changes in the data

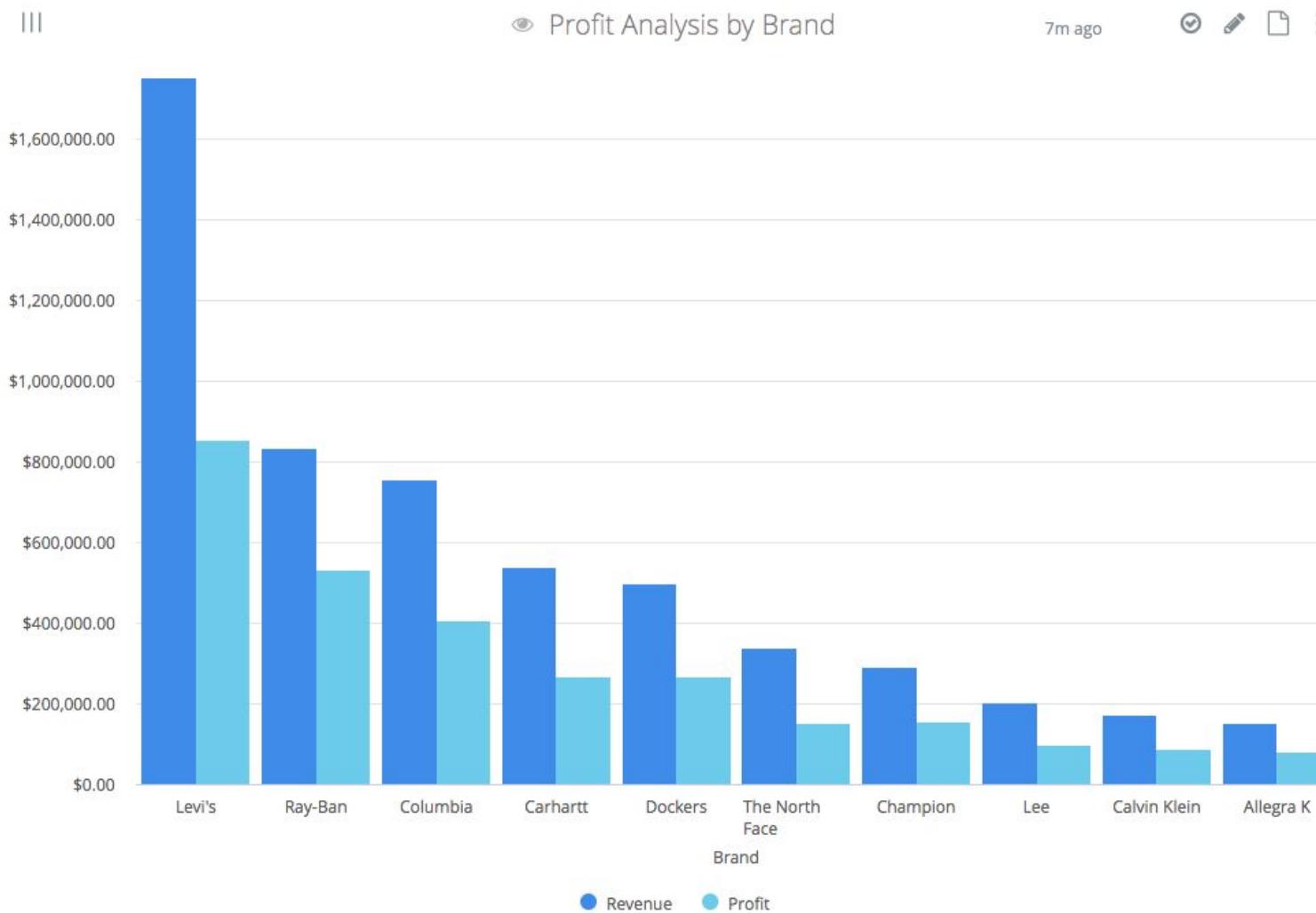
How well is our website attracting business?



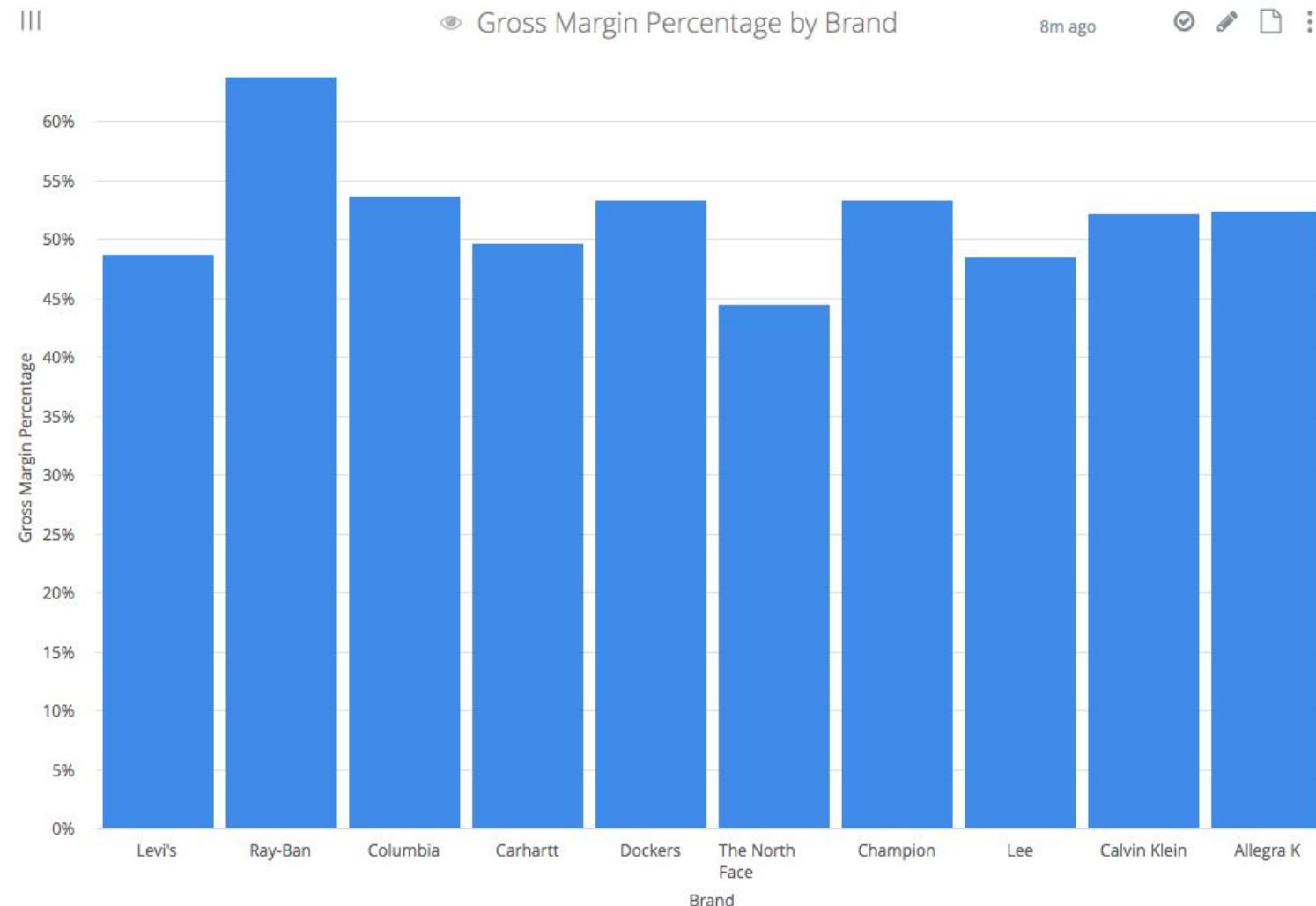
How well is our website attracting business?



Visualizing data: choosing a good chart



Visualizing data: choosing a good chart



Dashboard design principle 1: Clarity

Dashboard design principles

Clarity



Simplicity



Flow



Dashboard design principles

Clarity



Simplicity



Provide context in visualizations

358

Signups this month

Provide context in visualizations

358

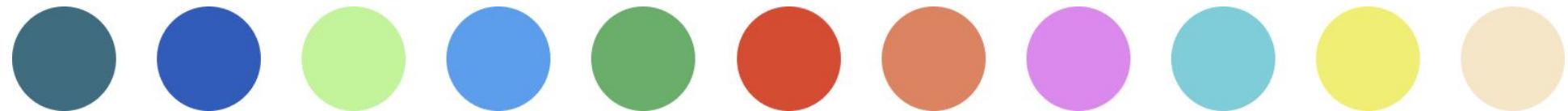
Signups this month

▲ 25% vs this time last month

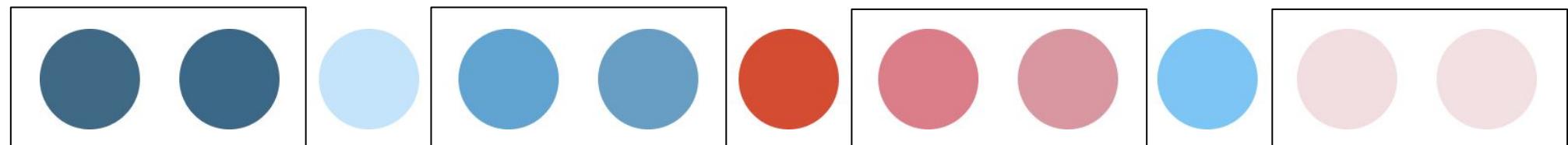
Provide context in visualizations

- Color can be a great way of adding context and visual cues into your visualizations
- Pro tip: pair color with text or symbols to ensure visuals are accessible to those with colorblindness

No color blindness



Blue yellow color blindness

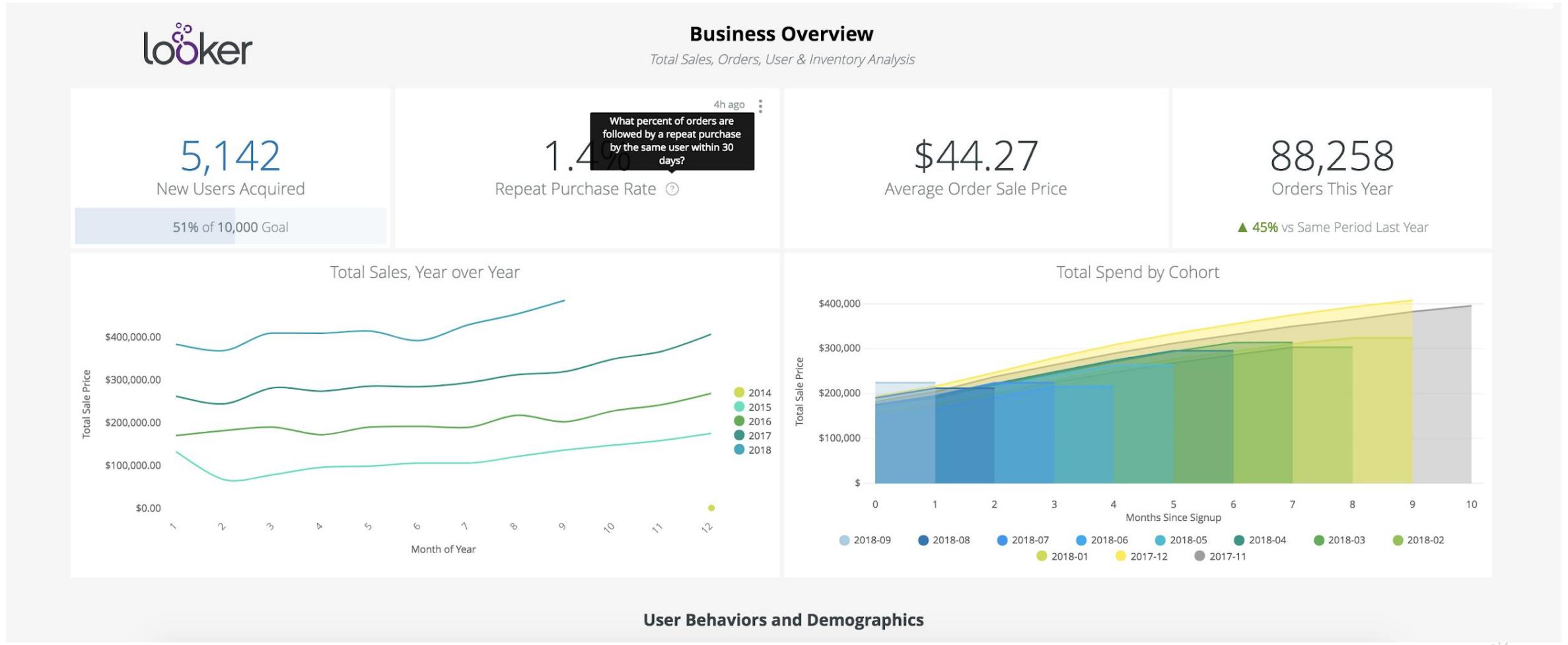


Red green color blindness



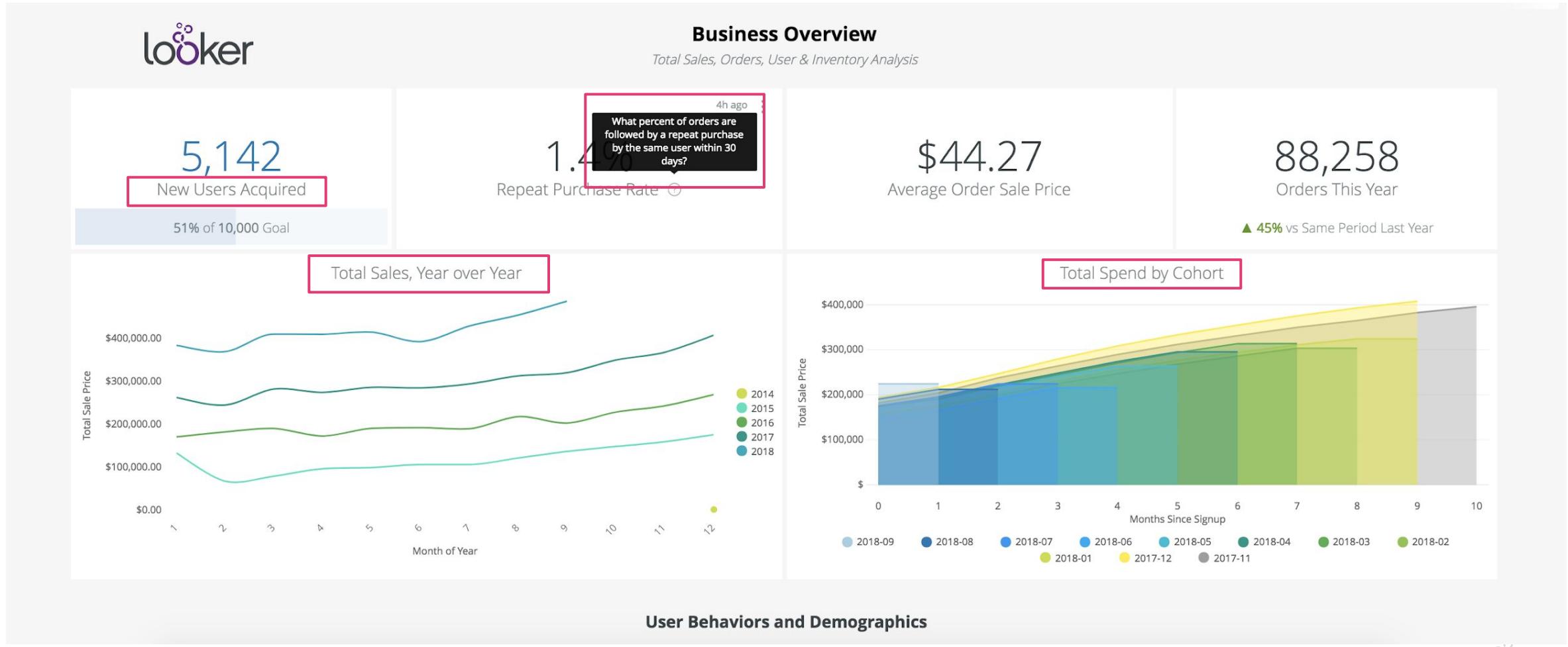
Provide context in dashboards

Use titles, labels, and notes to convey what users are looking at.



Provide context in dashboards

Use titles, labels, and notes to convey what users are looking at.



Provide context in dashboards

Notes add information to an individual look or tile.

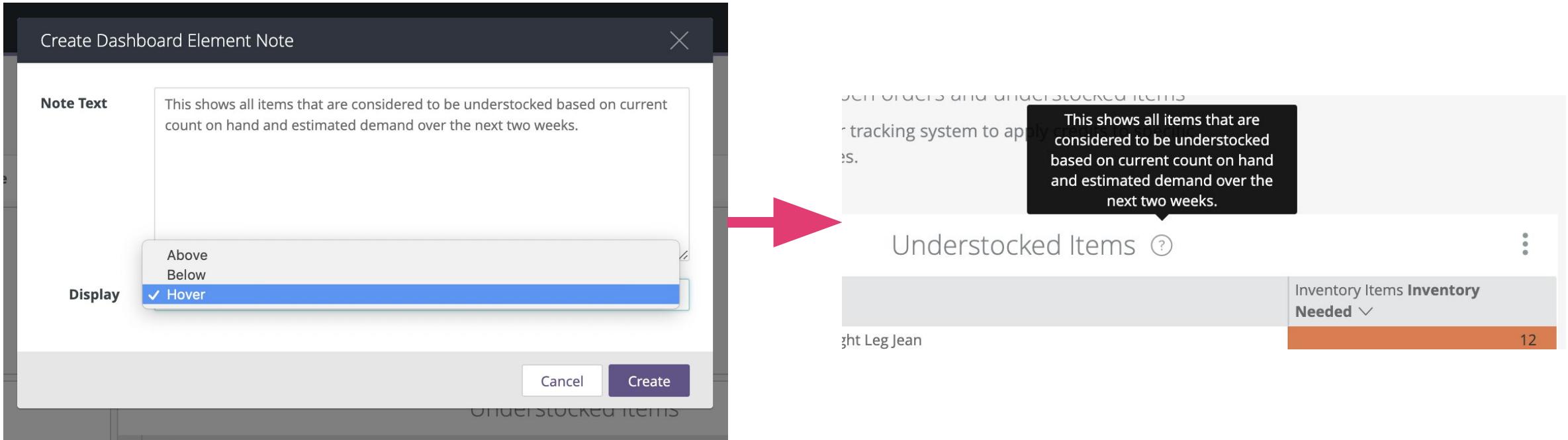
- Hover over a look or tile when in edit mode in a dashboard to see the **Add Note** option appear
- Use notes for:
 - Defining what a metric means
 - Explaining how to read or interpret a chart
 - Providing instructions for what to do based on the data seen

A screenshot of a Looker dashboard interface. At the top, there is a header with the text "accounts due to late deliveries." Below this, a tile titled "Understocked Items" is displayed. The tile contains a list of products with their names and inventory status. The "Add Note" button is located in the top right corner of the tile's header area. A red arrow points from the text "Use notes for:" in the list above to the "Add Note" button on the dashboard. The dashboard includes a sidebar with navigation icons and a bottom navigation bar.

Products	Item Name	Inventory Items	Inventory Needed
1	Lee Jeans Women's Misses Relaxed Fit Straight Leg Jean		12
2	Levi's 505 Misses Mid Rise Classic Straight Leg Jean		12
3	Allegra K Woman Long Sleeve Lapel Collar Crop Jacket Coat Black M		11

Provide context in dashboards

Notes add information to an individual look or tile.



- Notes can be displayed above or below a look or tile, or only when an individual hovers over the information icon by the look or tile title
- Pro tip: Use the **Above** or **Below** options for dashboards that are scheduled or downloaded frequently

Dashboard design principle 2: Simplicity

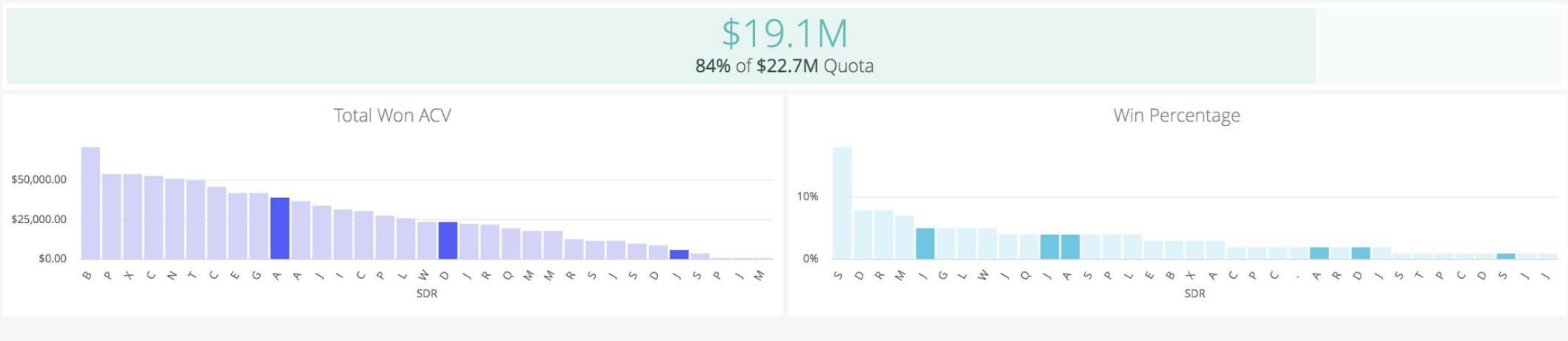
Dashboard design principles



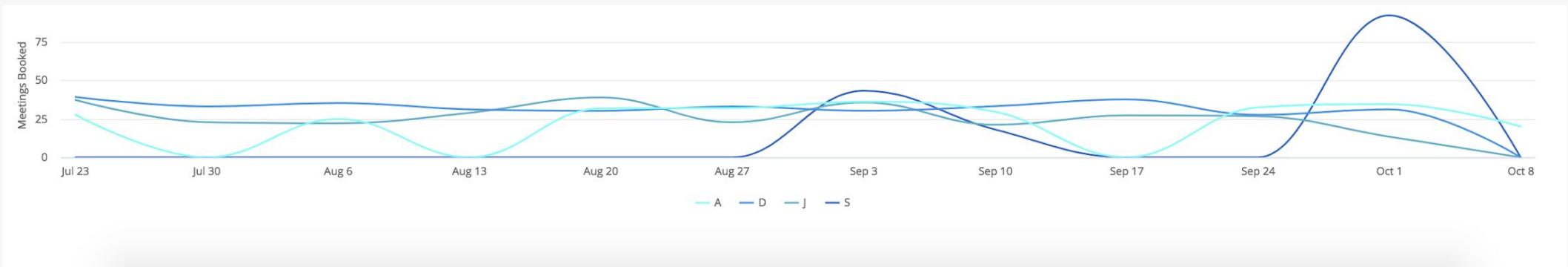
Keep it simple

Include only what is needed to tell the story.

How is my team performing?



Trending Meeting Bookings



Keep it simple

Most common pitfalls

- Adding more detail than you need to
 - Using excessively long titles (that often get cut off)
 - Leaving too many decimal places on numbers
- Trying to include too much information within a single Look or tile (think about the metrics that matter most)
- Using different kinds of visualizations unnecessarily just to add variety (variety is good, but not at the expense of having easy-to-interpret data)

Keep it simple

Consider using drills and links to provide more details.

Details Explore from Here | Download Results | X

(6) OPPORTUNITY Opportunity Acv < 1000000 Opportunity Closed Quarter "this quarter" Opportunity Is Won (Yes / No) is Yes Sales Representative Name is "Classie Hersha" Sales Representative Quota is 1045774

Account Name	Opportunity Type	Opportunity Closed Date	Opportunity Total Acv
1 Idea-Evolver ...	Addon/Upsell	2018-10-04	\$211.30K
2 Tap11 ...	New Business	2018-10-03	\$49.86K
3 ClanDescuento ...	Existing Business	2018-10-02	\$25.00K
4 ClanDescuento ...	Addon/Upsell	2018-10-01	\$211.30K
5 Triana Labs ...	New Business	2018-10-01	\$49.86K

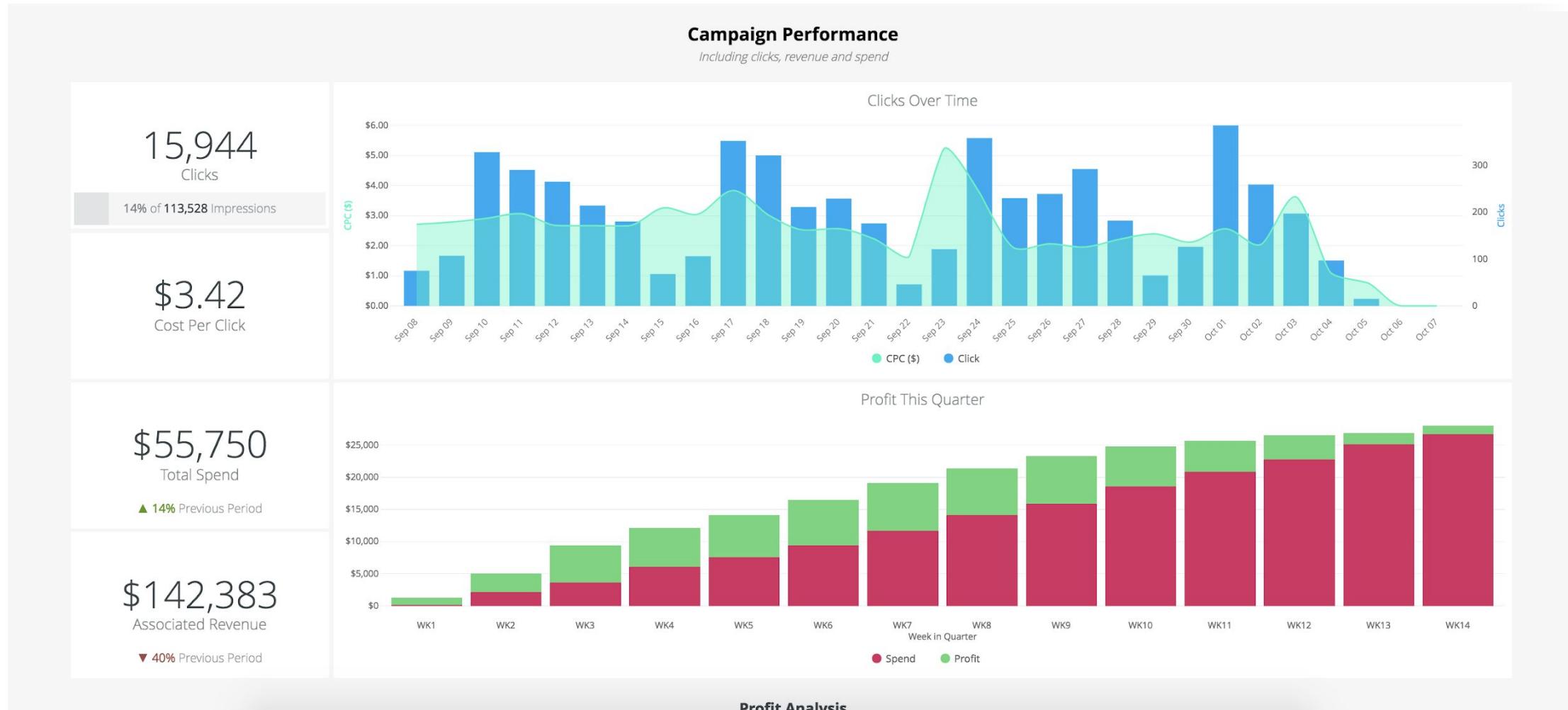
Dashboard design principle 3: Flow

Dashboard design principles



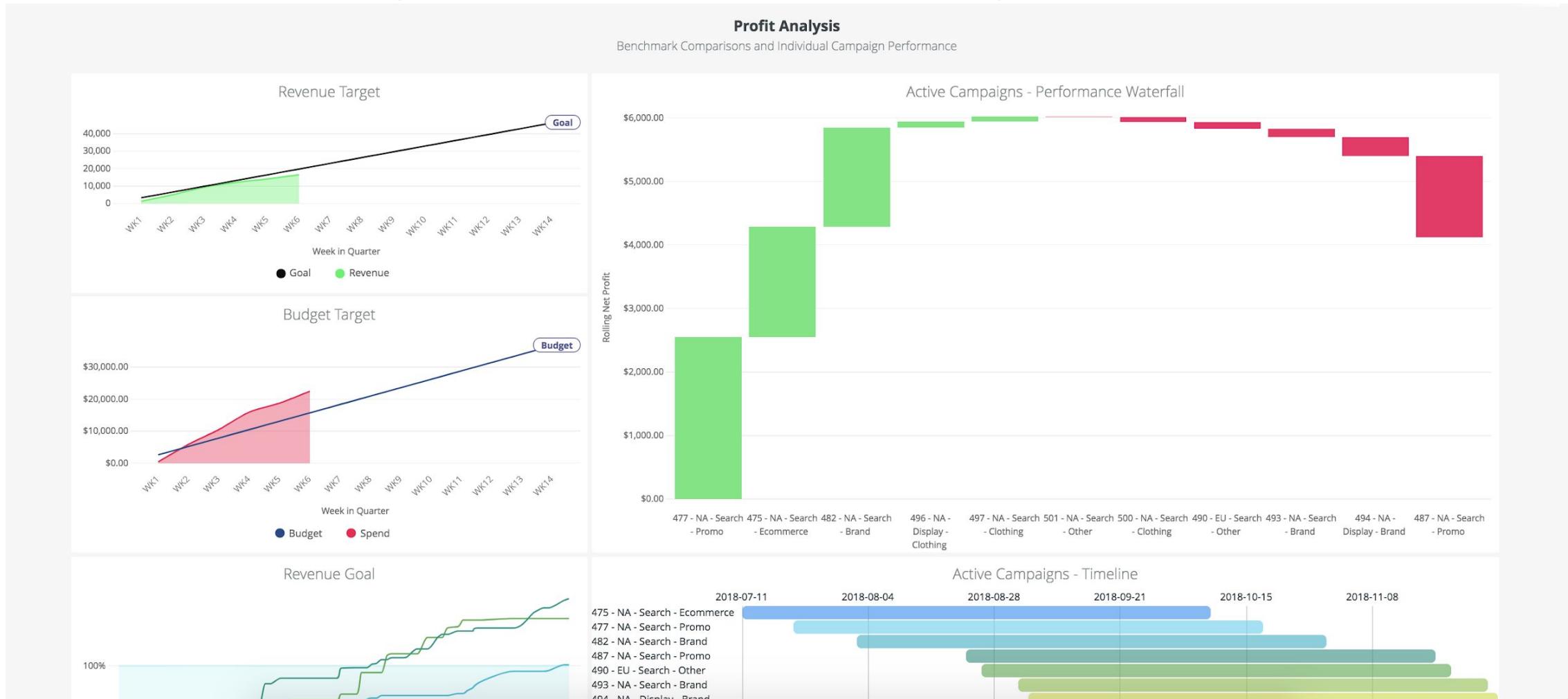
Make it easy to follow

Help guide users' eyes to the points they should focus on.



Make it easy to follow

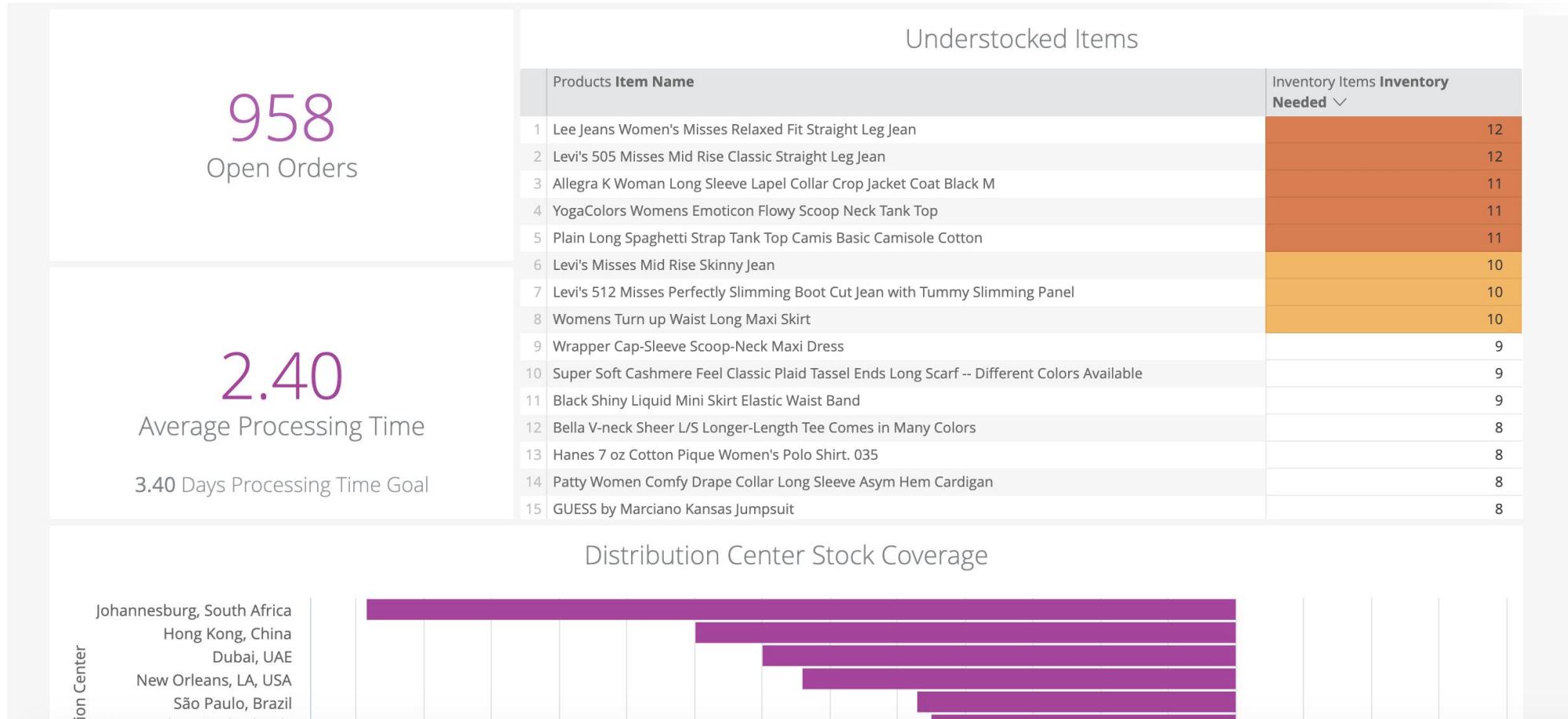
Use titles and margins. Colors can help keep things cohesive.



Make it easy to follow

Use margins and headers to guide viewers.

▶ FILTERS Distribution Center is any value Date of Sale is in the past 7 complete days Shipping State is any value Shipping City is any value



Make it easy to follow

Use margins and headers to guide viewers.

The screenshot shows the Looker interface with a 'Text' tile being edited. At the top, there are navigation tabs: '+ New Tile', 'Looks', 'Text' (which is selected and highlighted in grey), and 'Filters'. Below the tabs, there are four filter dropdowns: 'FILTERS', 'Distribution Center is any value', 'Date of Sale is in the past 7 complete days', 'Shipping State is any value', and 'Shipping City is any value'. The main area displays a 'Text' tile with the following configuration:

- Title:** Current Snapshot
- Subtitle:** Information on open orders and understocked items
- Body:** (Rich Text Editor) contains the text: "Click [here](http://www.all_our_orders.com) to access the order tracking system to apply credits to specific accounts due to late deliveries."

At the bottom of the tile editor are 'Cancel' and 'Save' buttons.

- Use text tiles to create dashboard headers or section headers
- Text in these tiles can be formatted using Markdown - here's a [quick cheat sheet](#) with some basic syntax

Make it easy to follow

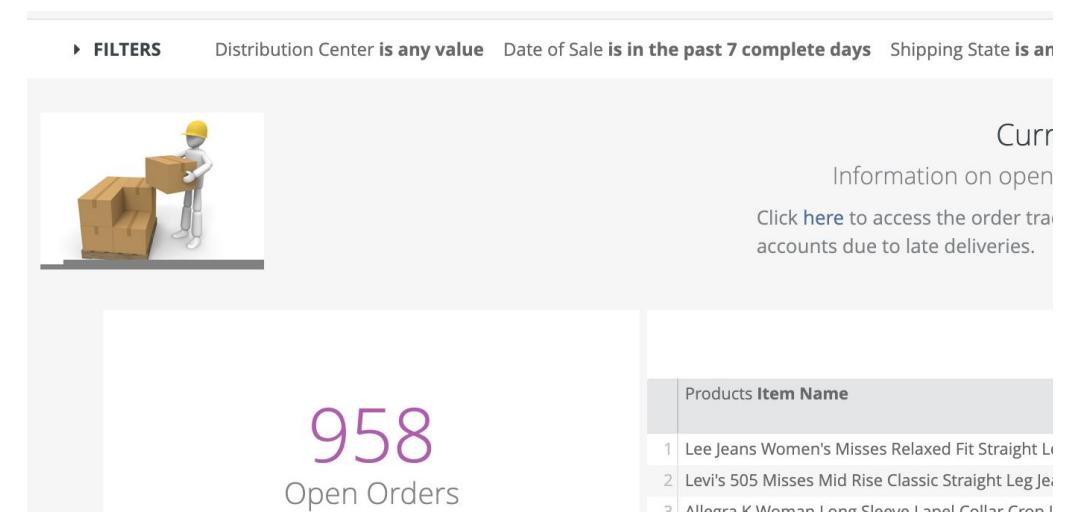
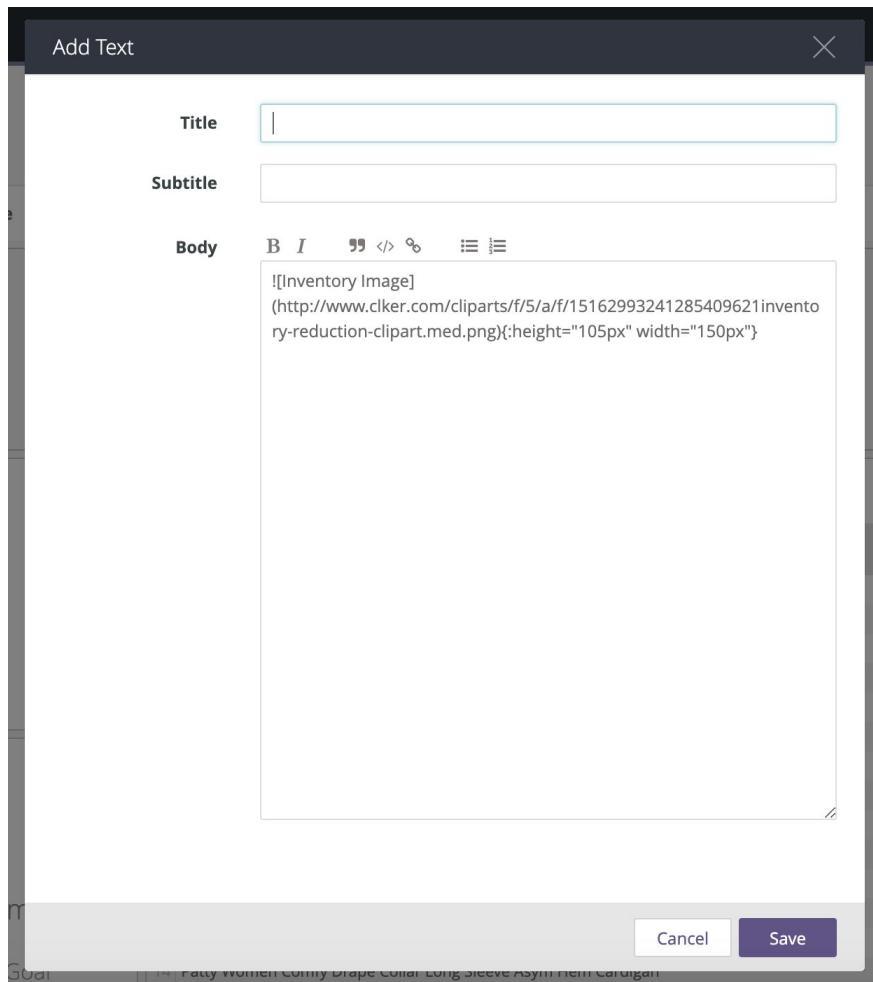
Use margins and headers to guide viewers.

The screenshot shows a Looker dashboard interface. At the top, there are navigation links: '+ New Tile', 'Looks', 'Text', 'Filters', and 'Settings'. Below these are filter options: 'FILTERS' (selected), 'Distribution Center is any value', 'Date of Sale is in the past 7 complete days', 'Shipping State is any value', and 'Shipping City is any value'. The main content area has a title 'Current Snapshot' and a subtitle 'Information on open orders and understocked items'. It includes a call-to-action: 'Click [here](#) to access the order tracking system to apply credits to specific accounts due to late deliveries.' On the left, a large box displays '958 Open Orders'. On the right, a table titled 'Understocked Items' lists products and their inventory status. The table has three columns: 'Products Item Name' (list of items), 'Inventory Items Inventory Needed' (color-coded by value: 12, 11, 10), and a header row for 'Inventory Items Inventory Needed'. The items listed are: 1 Lee Jeans Women's Misses Relaxed Fit Straight Leg Jean, 2 Levi's 505 Misses Mid Rise Classic Straight Leg Jean, 3 Allegra K Woman Long Sleeve Lapel Collar Crop Jacket Coat Black M, 4 YogaColors Womens Emoticon Flowy Scoop Neck Tank Top, 5 Plain Long Spaghetti Strap Tank Top Camis Basic Camisole Cotton, 6 Levi's Misses Mid Rise Skinny Jean, and 7 Levi's 512 Misses Perfectly Slimming Boot Cut Jean with Tummy Slimming Panel.

Products Item Name	Inventory Items Inventory Needed
1 Lee Jeans Women's Misses Relaxed Fit Straight Leg Jean	12
2 Levi's 505 Misses Mid Rise Classic Straight Leg Jean	12
3 Allegra K Woman Long Sleeve Lapel Collar Crop Jacket Coat Black M	11
4 YogaColors Womens Emoticon Flowy Scoop Neck Tank Top	11
5 Plain Long Spaghetti Strap Tank Top Camis Basic Camisole Cotton	11
6 Levi's Misses Mid Rise Skinny Jean	10
7 Levi's 512 Misses Perfectly Slimming Boot Cut Jean with Tummy Slimming Panel	10

Make it easy to follow

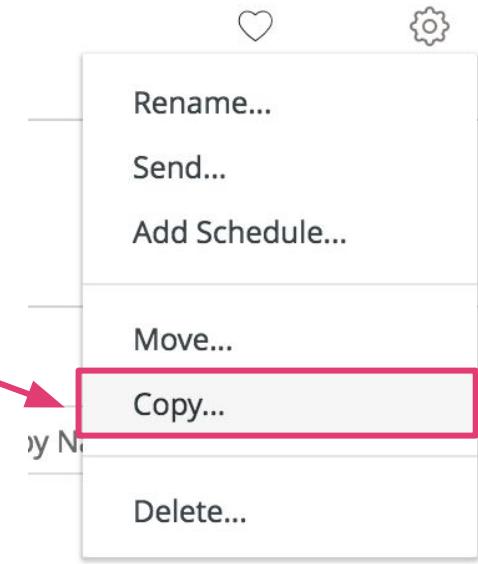
Have fun with images and links.



Dashboard workshop

Dashboarding workshop

1. Go to [JOIN 2019 - Bike Share Analysis](#)
2. Copy the dashboard
3. Save the copy to your personal space
4. Open the copy (it says “Copy” after the title!)
5. Revise this dashboard to make it more impactful!



Dashboarding workshop

Even good dashboards often have a few things here or there that could be improved!

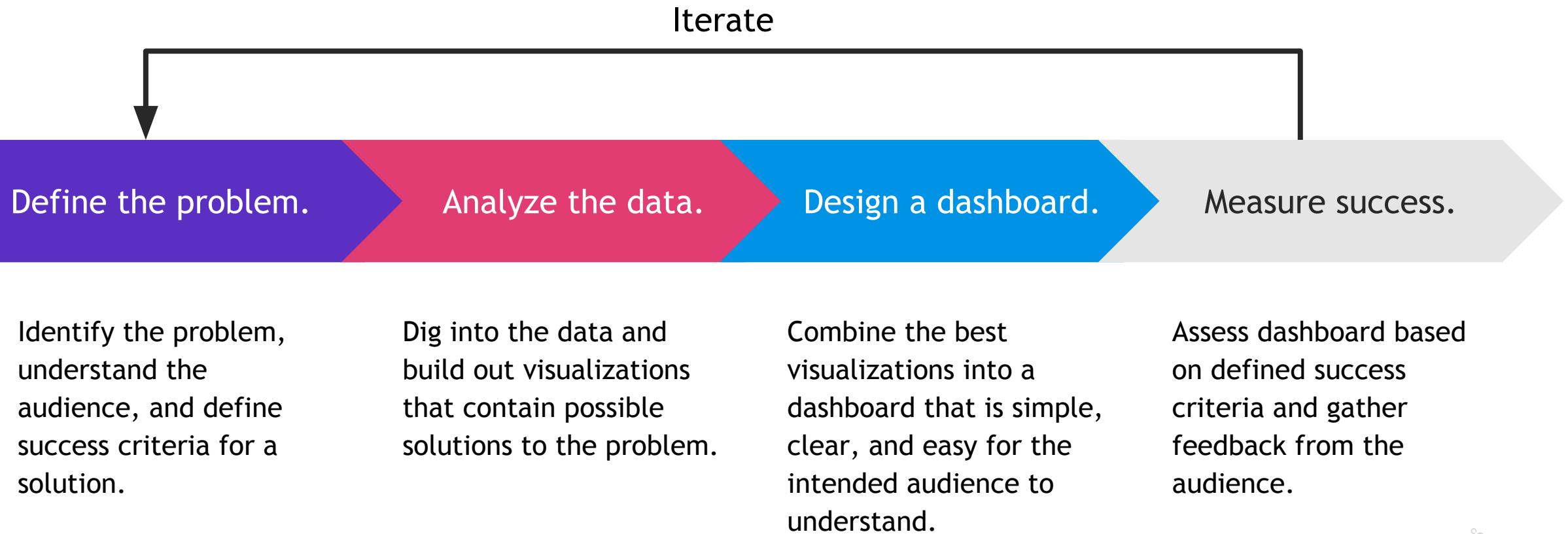
Your goal: Review the [JOIN 2019 - Bike Share Analysis](#) dashboard with a critical eye, and make adjustments that you think will make the dashboard more impactful.

- Could it be clearer in places?
- Can it be simplified in any way?
- Does it tell a story in the way that it's organized?

Dashboarding workshop

- **Add a header** or set of section headers to the dashboard.
- Identify at least one visualization that is using an **incorrect chart type** and fix it.
- **Rearrange the tiles** of the dashboard to improve the flow.
- **Delete at least two things** from the dashboard that are unnecessary.
- Identify at least one place in which **color is used in a confusing way** and address the issue.
- **Add notes** to at least two different tiles.
- Bonus: **Add an image or logo** into the dashboard.

Key takeaways



Questions?



The background features a vibrant purple hue with a subtle radial texture. Centered on this texture is the Looker logo, rendered in white. The logo consists of the word "looker" in a lowercase, sans-serif font. Above the letter "o", there is a small icon composed of three circles connected by lines, forming a triangular shape. The letters "l", "o", and "o" are slightly taller than the "k", "e", and "r". Below the word "looker" is a horizontal bar composed of several small, dark grey rectangles.

looker



Thank you

Rate this session in
the JOIN mobile app