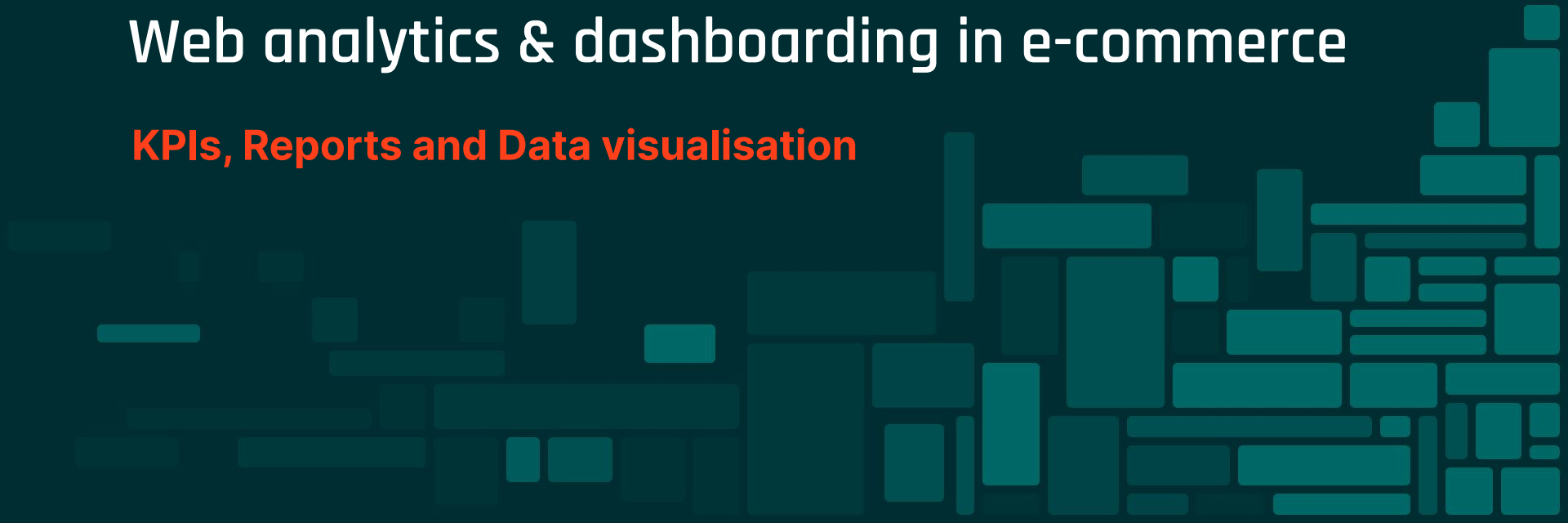
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comeos

Inspirational session

Web analytics & dashboarding in e-commerce

KPIs, Reports and Data visualisation



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Agenda

1. **KPIs** Web KPIs in an e-commerce setting
2. **Reports** & insights for margin, profit and ROI at product and product category level
3. **Visualization** of your data

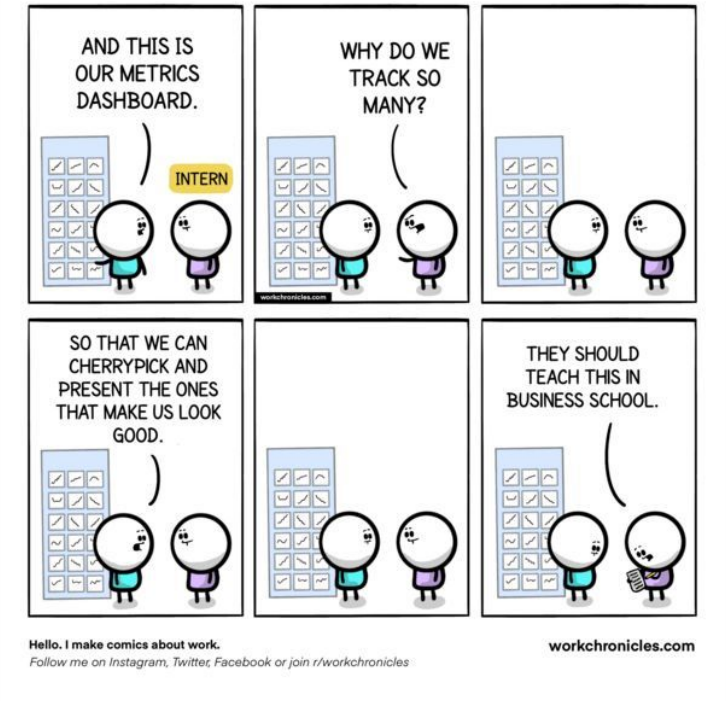


KPIs

Web KPIs in an e-commerce setting

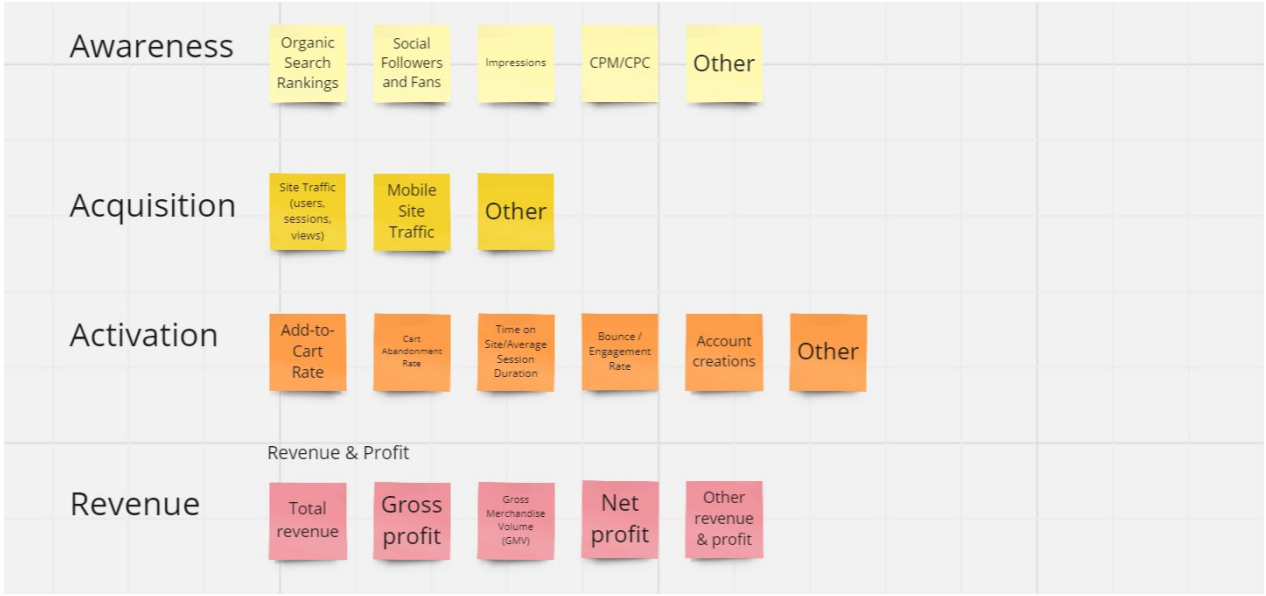
What is your north star metric?

Please, open up your e-com dashboard



On your general management overview, what metrics do you report?

Let's do an anonymous vote! https://bit.ly/comeos-kpi-voting



Traditional e-commerce KPIs

Netsuite (Oracle)

E-commerce Conversion Rate

E-commerce Conversion Rate Per Traffic Channel

Average Order Value (AOV)

Customer Lifetime Value (CLV)

Customer Retention Rate

Annual Repurchase Rate

Net Profit

Gross Profit

Add-to-Cart Rate

Cart Abandonment Rate

Orders Per Active Customers

Gross Merchandise Volume (GMV)

Return on Investment (ROI)

Influencer ROI

Return on Ad Spend (ROAS)

Return on Marketing Investment

Average Profit Per Customer

Revenue Per Site Visitor

Time on Site/Average Session Duration

Bounce Rate

Organic Search Rankings

Site Traffic

Mobile Site Traffic

Social Followers and Fans

Customer Satisfaction (CSAT) Score

Net Promoter Score (NPS)

Average Complaint Resolution Time

Cost Per Acquisition (CPA)

Customer Acquisition Cost (CAC)

Cost Per Conversion

https://www.netsuite.com/portal/resource/articles/ecommerce/ecommerce-kpis.shtml

Most leaders say they're customer-centric, but if everything they measure is company-centric, how could that be true?

Have a look at your reporting again, what Customer Performance Indicators do you/your company report?

Let's do an anonymous vote! https://bit.ly/comeos-cpi

Reports

Reports & insights for margin, profit and ROI at product and product category level

Agenda

1. What is revenue?
2. GA4 e-commerce metrics
3. Google Ads & Google Merchant Center

What is revenue?

What metric is hierarchically higher than Revenue?

?

Revenue

Actual Income

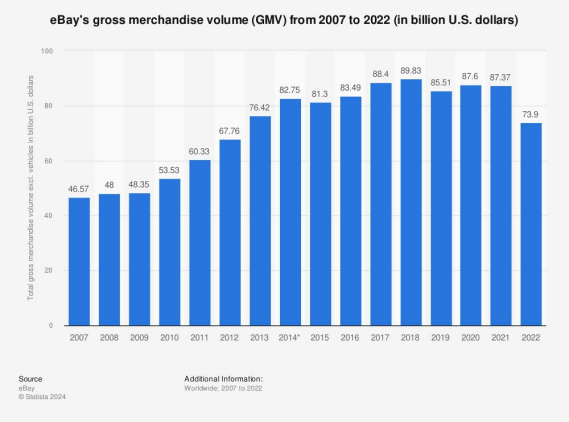
Profit

Subtracting all costs (including production, operating, and overhead expenses) from the revenue.

Gross Merchandise Value	Represents the total sales value of all goods sold on the platform
Revenue	Actual Income
Profit	Net earnings. Calculated by subtracting all costs, including production, operating, and overhead expenses, from the revenue.

Why GMV?

Gross Merchandise Value



Indicator of growth

- Can reflect an increasing customer base

Market Share Estimation

- Compare with industry data to estimate your market share
- Understand your position relative to competitors.

Let us break it down, what is revenue?

Sample Food Ordering Company X	
Orders (M)	100.0
Average Order Value (AOV)	$25.00
Gross Food Sales (GMV)	**$2,500**
Take Rate	15.0%
Revenue	**$375**
COGS	$113
Gross Profit	**$263**
% Margin	70.0%
Operating Costs:	
Operations and Support	$50
Sales and Marketing	$45
Technology	$30
General and Administrative	$25
Depreciation and Amortization	$20
Total Operating Costs	**$170**
Operating Profit	**$93**

Let us break it down, what is revenue?

Apple Inc.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)
(In millions, except number of shares which are reflected in thousands and per share amounts)

	December 29, 2018
Net sales:	
Products	$ 73,435
Services	10,875
Total net sales [1]	84,310
Cost of sales:	
Products	48,238
Services	4,041
Total cost of sales	52,279
Gross margin	32,031
Operating expenses:	
Research and development	3,902
Selling, general and administrative	4,783
Total operating expenses	8,685
Operating income	23,346
Other income/(expense), net	560
Income before provision for income taxes	23,906
Provision for income taxes	3,941
Net income	$ 19,965

Quarterly report Q4/2018, Apple Inc.

ants

Gross Merchandise Value

Represents the total sales value of all goods sold on the platform

- Take Rate & Cancellations
(fees online marketplaces, bancontact, VISA,cancelled orders...)

Gross revenue

Actual Income

- COGS
(or also called Cost of sales if you're not manufacturing)

Net revenue

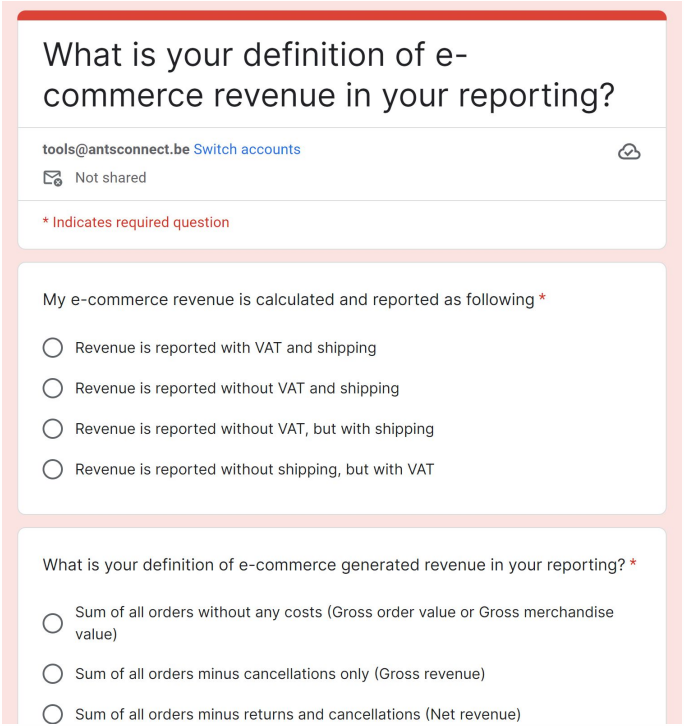
Actual income minus variable costs (costs that incr/decr with sales)

- Fixed costs
(direct & indirect costs (marketing, payroll, rent, taxes, interests, ...)

Net profit
(or net income)

How do you report on revenue? Fill in the 2-question quiz

https://bit.ly/comeos-whatisrevenue



What is your definition of e-commerce revenue in your reporting?

tools@antsconnect.be Switch accounts

Not shared

* Indicates required question

My e-commerce revenue is calculated and reported as following *

- Revenue is reported with VAT and shipping
- Revenue is reported without VAT and shipping
- Revenue is reported without VAT, but with shipping
- Revenue is reported without shipping, but with VAT

What is your definition of e-commerce generated revenue in your reporting? *

- Sum of all orders without any costs (Gross order value or Gross merchandise value)
- Sum of all orders minus cancellations only (Gross revenue)
- Sum of all orders minus returns and cancellations (Net revenue)

Results of the 2-question quiz

https://docs.google.com/forms/d/1uASizS5HNiiJgVGzTG4PXNYGEdzRRlZQAmvqT_UDfNc/viewanalytics

Google Analytics 4

Reporting on revenue ...

Metric	What is it?
E-commerce revenue	Total revenue from items only, **including** tax and shipping.
Item revenue	Total revenue from items only, **excluding** tax and shipping. Item revenue = Price x Quantity
Gross purchase revenue	The sum of revenue from purchases made on your website or app.
Purchase revenue	The sum of revenue from purchases made on your website or app **minus refunds** given.
Product revenue	The sum of all revenue streams (in-app, e-commerce, app subscriptions ...)

Google Merchant Center

Overview
Products
Performance
Marketing
Growth
Opportunities
Price competitiveness
Best sellers
Manage programs
Price insights
Automated discounts
Shopping experience scorecard

Overview | Products | Brands | Categories | Product types

Now you can access the best sellers and price competitiveness reports – You may use these reports only in accordance with the Market Insights policy. Learn more Dismiss

Price competitiveness

Find out how others are pricing the same products you sell and which would benefit from a price change. It only applies to products you currently have in Merchant Center with benchmark prices available.
Learn more about price competitiveness

Last 14 days
May 7 – 20, 2024

Prices are currently at benchmark for most of your products

Below benchmark price	At benchmark price	Above benchmark price
0.00%	91.13%	8.87%
+0% over 14 days	+19.78% over 14 days	-19.78% over 14 days

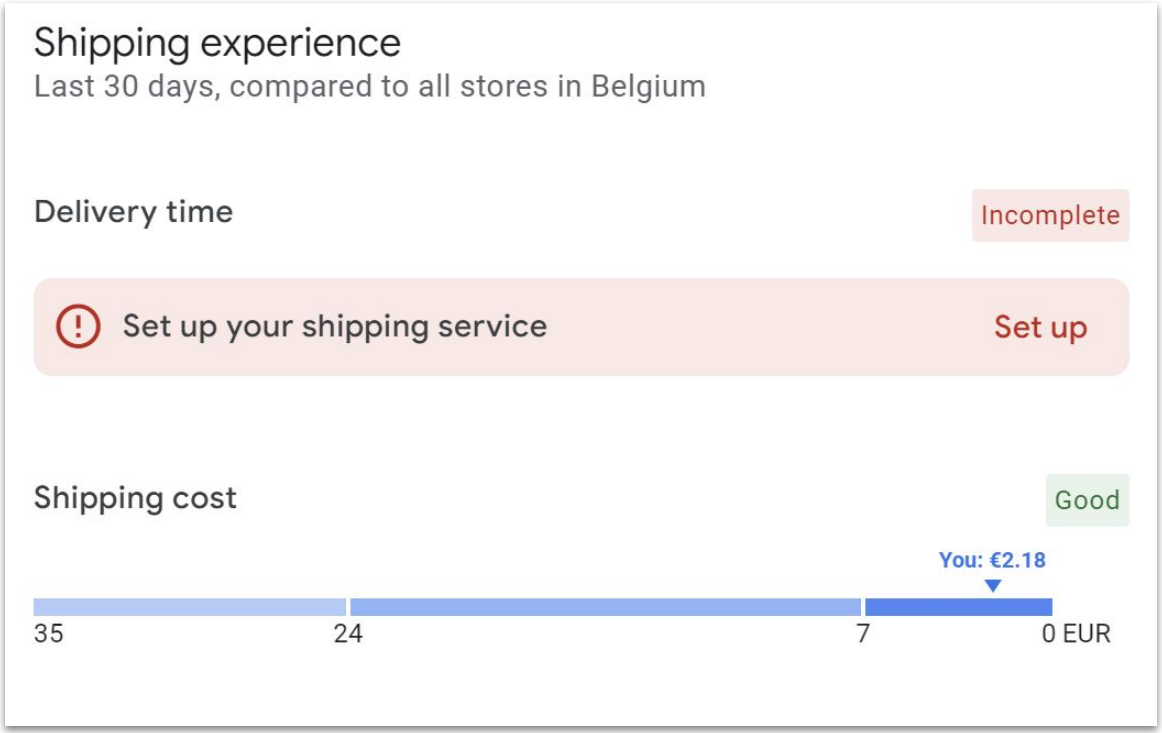
View price competitiveness history

Top 5 products based on clicks

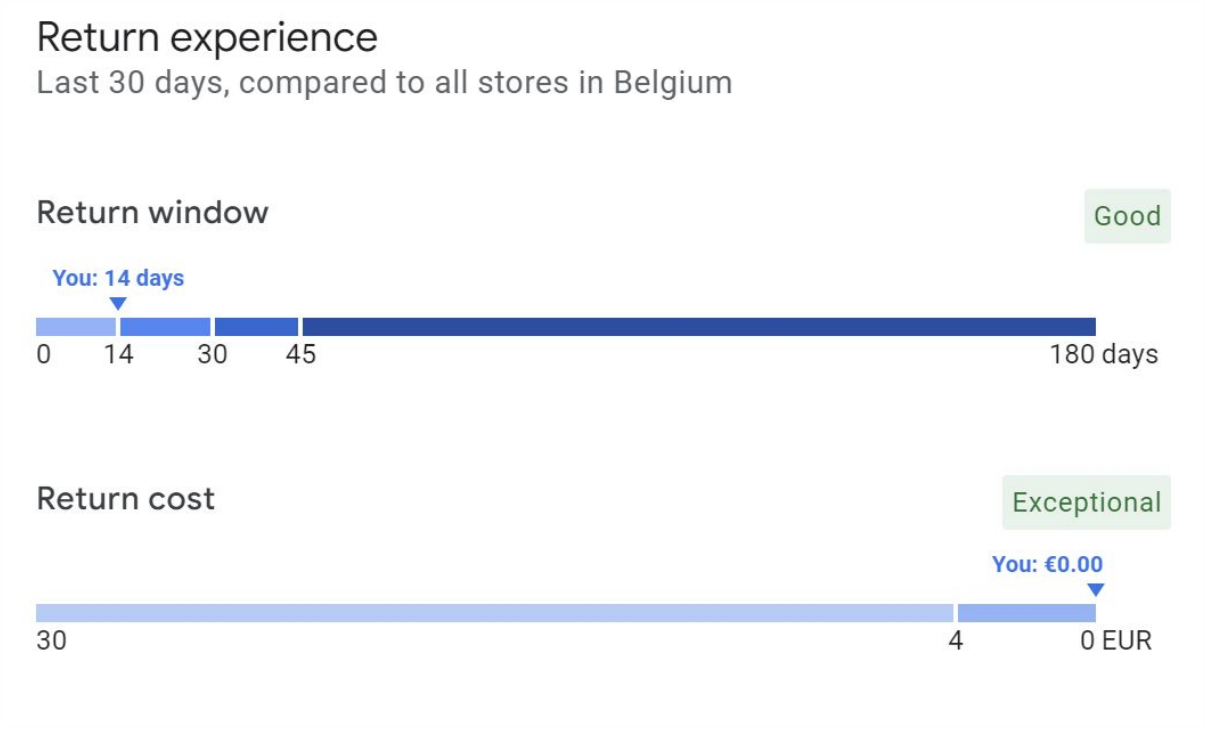
Title	Clicks	Your price / Current benchmark price	Price competitiveness
BY BAR - Lichtroze Sarah Chambray blouse	231	€129.95 €129.92	at benchmark

E-store insights

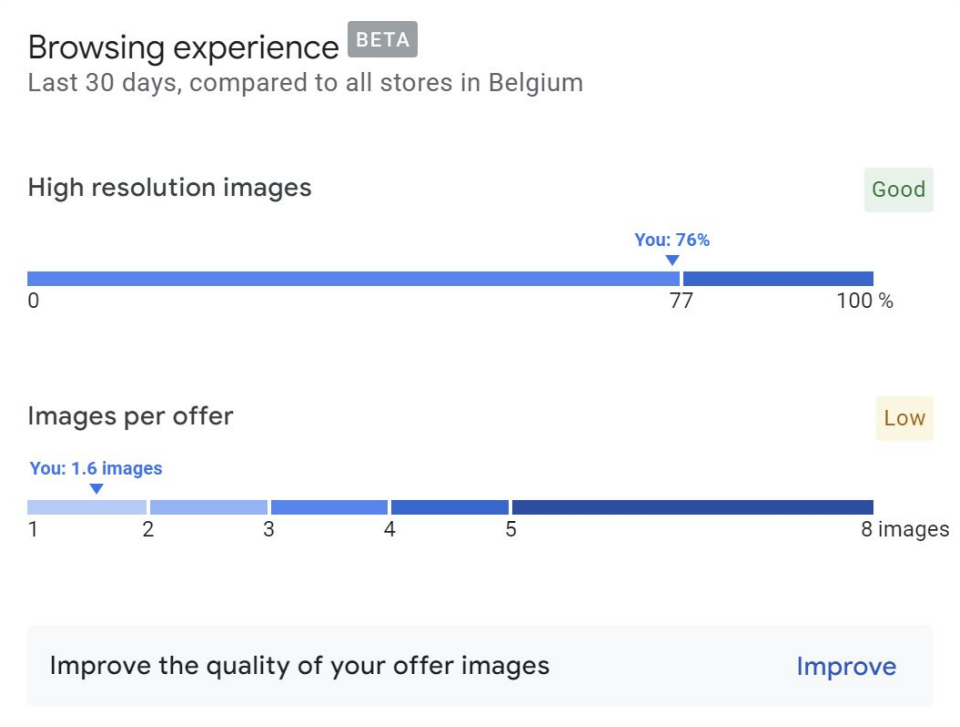
Shipping cost & delivery time



Return window & fee

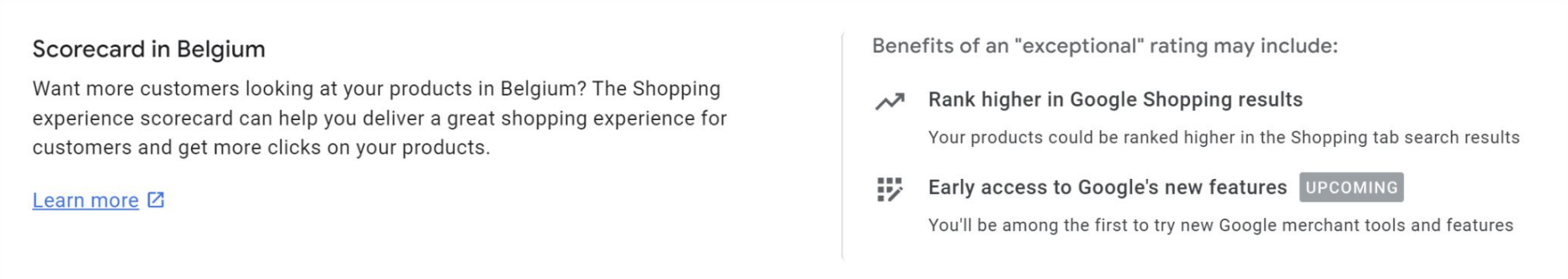


Browsing experience



Why bother?

https://support.google.com/merchants/answer/11192630

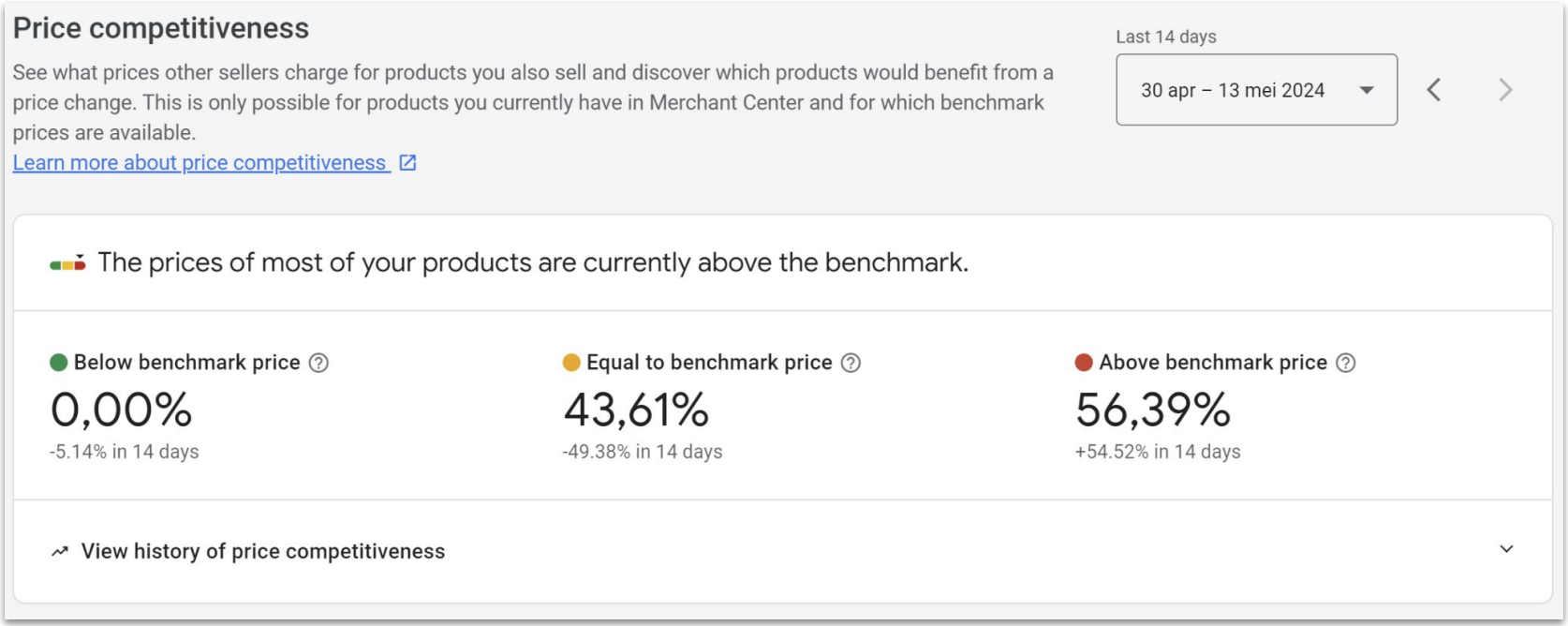


Price competitiveness

Price insights

Image	title	Categories	Brand	Price	Predicted impressions	Predicted clicks	Predicted conversions
	BY BAR - Light pink Sarah Chambray blouse ID: 201428775	Clothing and accessories	by bar	Suggested:**€ 124,75** Your price: € 129,95	+1,9%	+4,6%	+34,3%
	BY BAR - Light pink Bibi Short Logo sweater ID: 201428804	Clothing and accessories	by bar	Suggested:**€ 124,75** Your price: € 129,95	+2,5%	+10,6%	+36,2%
	Carhartt WIP - Black Kickflip Backpack ID: 200775897	Luggage and bags	carhartt wip	Suggested: **€ 84,67** Your price: € 89,95	+4,4%	+17,8%	+58,9%
	BY BAR - Ecru-Blauwe Neva Small Stripe T-shirt ID: 201428820	Clothing and accessories	by bar	Suggested: **€ 76,75** Your price: € 79,95	+3,8%	+11,4%	+44,6%
	BY BAR - Dark blue Stella blouse ID: 201428823	Clothing and accessories	by bar	Suggested:**€ 115,15** Your price: € 119,95	+2,6%	+7,1%	+35,2%
	BY BAR - Droogzand-bruine Bibi Kiss Me	Clothing and accessories	by bar	Suggested:**€ 124,75**	+3,7%	+10,0%	+19,3%

Price competitiveness



Price competitiveness by product

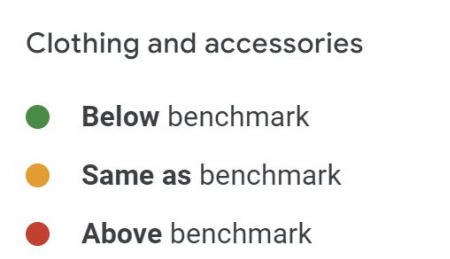
Top 5 products based on clicks

title	Click	Your price/current benchmark price	Price competitiveness
Dickies - Light blue Herndon jeans shorts/jort	68	€ 75,00 € 75,00	Same as benchmark
Dickies - Light blue Garyville jeans shorts	52	€ 69,95 € 68,55	2.04% above benchmark
FRNCH - Green Cadia jumpsuit	46	€ 145,00 € 144,44	Same as benchmark
MSCH COPENHAGEN - Light blue Shayla jumpsuit	33	€ 119,95 € 114,63	4.64% above benchmark
RainKiss - Black Classic Smile rain poncho	19	€ 79,95 € 79,34	Same as benchmark

Price competitiveness by category

Your most clicked categories

Categories	Land	Click	Price distribution	Products
Clothing and accessories	BE	76.104	11% 49% 40%	View products
Luggage and bags	BE	5.096	4% 40% 56%	View products



Price competitiveness by brand

Your brands with the most clicks

Brand	Land	Click	Price distribution	Products
carhartt wip	BE	20.575	11% 50% 39%	View products
by bar	BE	5.645	6% 89% 5%	View products
real	BE	3.621	2% 87% 12%	View products
levi's	BE	3.293	20% 19% 61%	View products
frnch	BE	3.175	7% 49% 45%	View products

Price competitiveness by producttype

Your product types with the most clicks

Producttype	Land	Click	Price distribution	Products
ladies	BE	47.983	12% 46% 42%	View products
Gentlemen	BE	33.417	9% 51% 41%	View products

Most popular products and brands in Belgium per category

Most popular **products** in Belgium in Clothing*

Available every week, per category and country

Popularity	Change from last week	Relative question	Image	title	Popular variants (GTIN)	Categories	Brand	Brand stock status	Stock status of product	Price range
1	0	Very high		Adidas Originals Campus 00s	04066748493555 04066748532124 04066748535811	Shoes	adidas	Not in inventory	Not in inventory	€ 110-126
2	↑ 1	High ↓ compared to last week		adidas Originals Samba OG	04059809047088 04059809047125 04059809047156	Shoes	adidas	Not in inventory	Not in inventory	€ 106-121
3	↓ 1	High ↓ compared to last week		children's New Balance Sneakers '530	00196432891948 00196432891924 00196432891955	Shoes	New Balance	Not in inventory	Not in inventory	€ 59-95
4	↑ 1	High		New Balance 530 Sneakers	00194182854817 00194182854831 00194182854824	Shoes	New Balance	Not in inventory	Not in inventory	€ 84-131
5	↑ 3	High		Apple Watch SE	00195949003530 00195949003202 00195949004636	Watches	Apple	Not in inventory	Not in inventory	€ 249-330
6	↑ 1	High		Nike Air Force Mens 1 '07	00194500874954 00194500874978	Shoes	Nike	Not in inventory	Not in inventory	€ 102-121

* based on data from Shopping ads and free listings

Most popular **brands** in Belgium in Clothing

Available every week, per category and country

Country: **Belgium**; Category: **Kleding en accessoires**

Popularity rank	Change from preceding week	Relative demand	Brand	Top products in your inventory	Top product opportunities
1	↑ 1	Very high	Nike	–	164 View products
2	↑ 1	Very high	adidas	–	98 View products
3	↓ 2	Very high	SHEIN	–	4 View products
4	↑ 1	High	New Balance	–	46 View products
5	↓ 1	High	ONLY	–	10 View products
6	↑ 1	High	Bonprix	–	9 View products
7	↓ 1	High	H&M	–	–
8	↑ 2	Medium	SKECHERS	–	24 View products
9	↑ 2	Medium	C&A	–	9 View products
10	↑ 2	Medium	JACK & JONES	–	20 View products

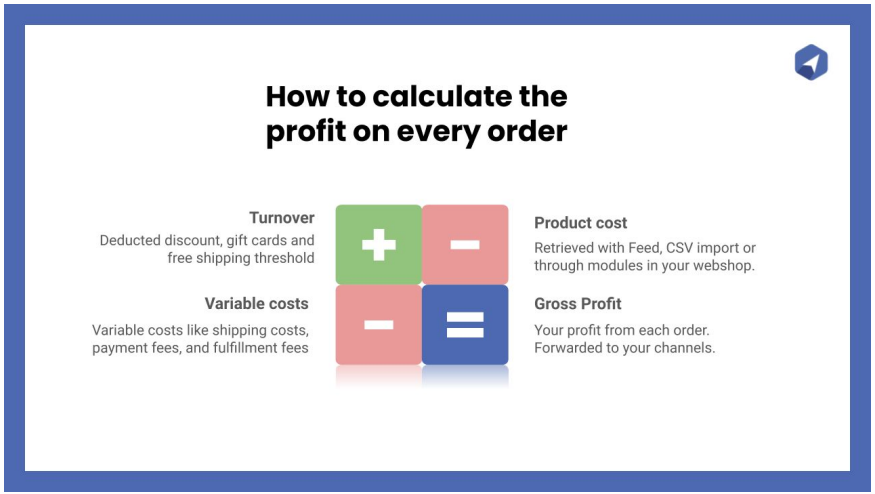
Google Ads

Profit reporting in Google Ads

Advanced reporting based on conversions with basket data. (Set-up guide)

Orders	Avg. basket size	Avg. order value	Cost of goods sold	Gross profit	Revenue
16.41	1.08	$101.12	$350.17	$414.22	$1,659.05
16.41	1.08	$101.12	$350.17	$414.22	$1,659.05
6.89	1.13	$91.37	$54.51	$25.44	$629.43
3.77	1.00	$86.13	$77.70	$111.96	$324.41

Unlock POAS in Google Ads

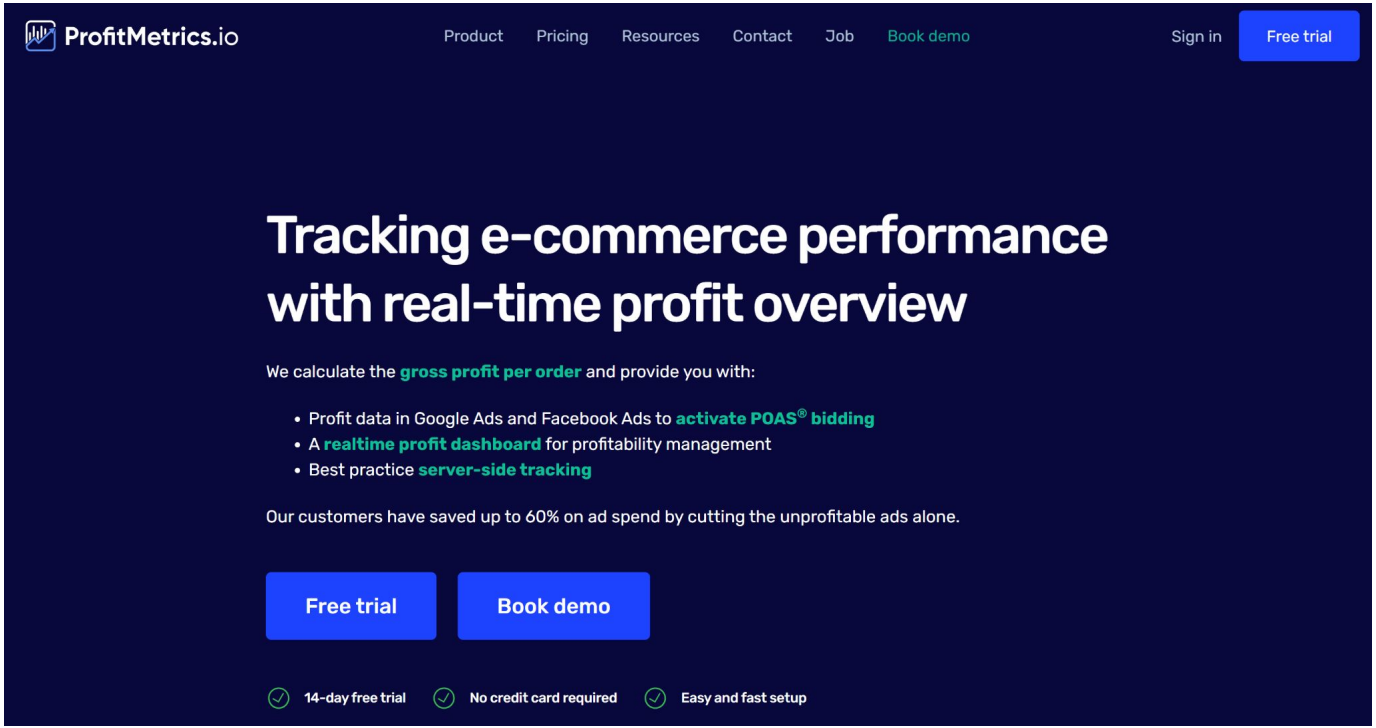


1. See **gross profit data** in Google Ads.
2. **Stop unprofitable ads** and scale hidden winners.
3. Increase **Profit on Ad Spend** and know exactly how much profit you make.
4. Deliver **better input** to let Google improve campaign performance (profit).

Unlock POAS in Google Ads

Campaign	Cost	Conversions	Conversion value	Gross profit	↓ ROAS	POAS
[redacted]	€3,821.34	46.68	€28,538.93	€8,311.51	746.83%	217.50%
[redacted]	€2,917.20	36.62	€21,271.48	€4,696.53	729.17%	160.99%
[redacted]	€5,440.21	67.91	€39,313.11	€10,073.35	722.64%	185.16%
[redacted]	€752.19	9.06	€5,247.49	€1,142.82	697.63%	151.93%
[redacted]	€1,411.23	8.55	€7,323.63	€1,673.21	518.95%	118.56%
[redacted]	€10,591.36	96.59	€53,191.34	€12,217.52	502.21%	115.35%
[redacted]	€1,250.84	5.31	€5,902.21	€1,925.89	471.86%	153.97%
[redacted]	€7,440.50	37.75	€24,695.39	€7,111.18	331.91%	95.57%

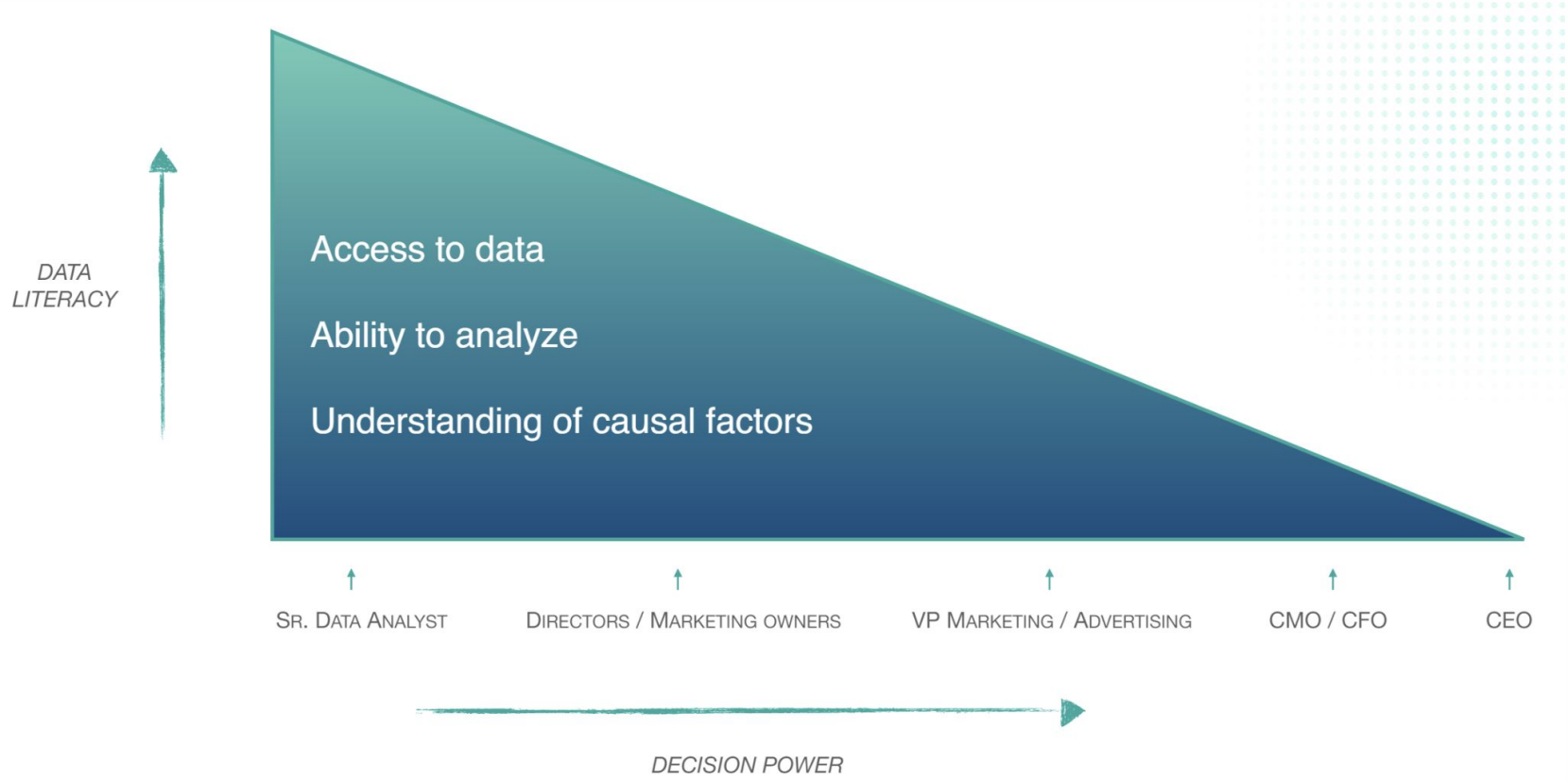
Use this tool to unlock POAS



Visualisation

Easier than you think

Your boss may be smart but x's probably not a statistician



BetMGM @BetMGM

Mike Glennon has 1 win since 2014

Glennon's earned over $5.3 mil per win in the NFL (6-24)

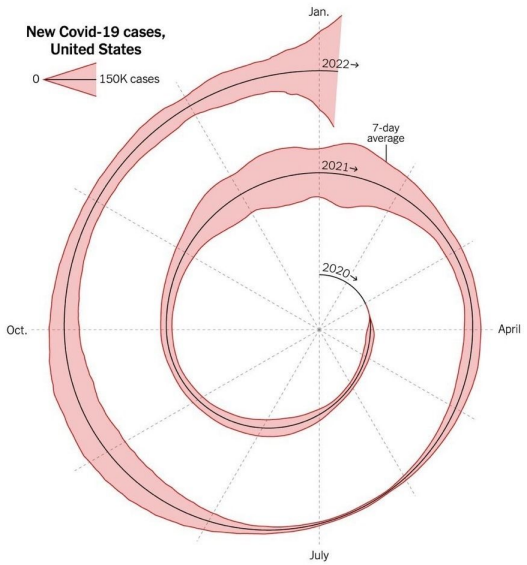


503 2,770 12.6K

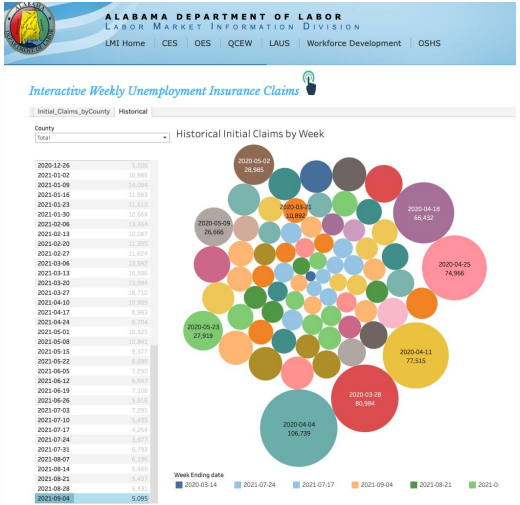
Promoted

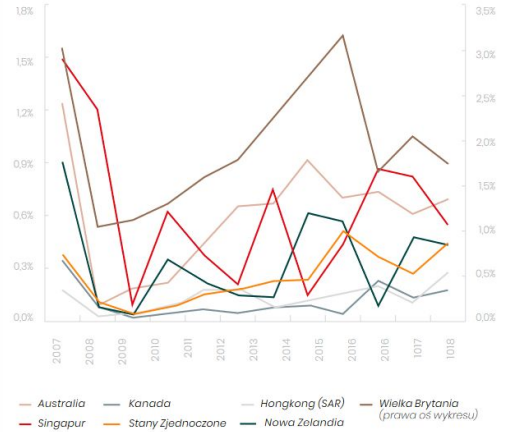
The New York Times

Jan. 6, 2022



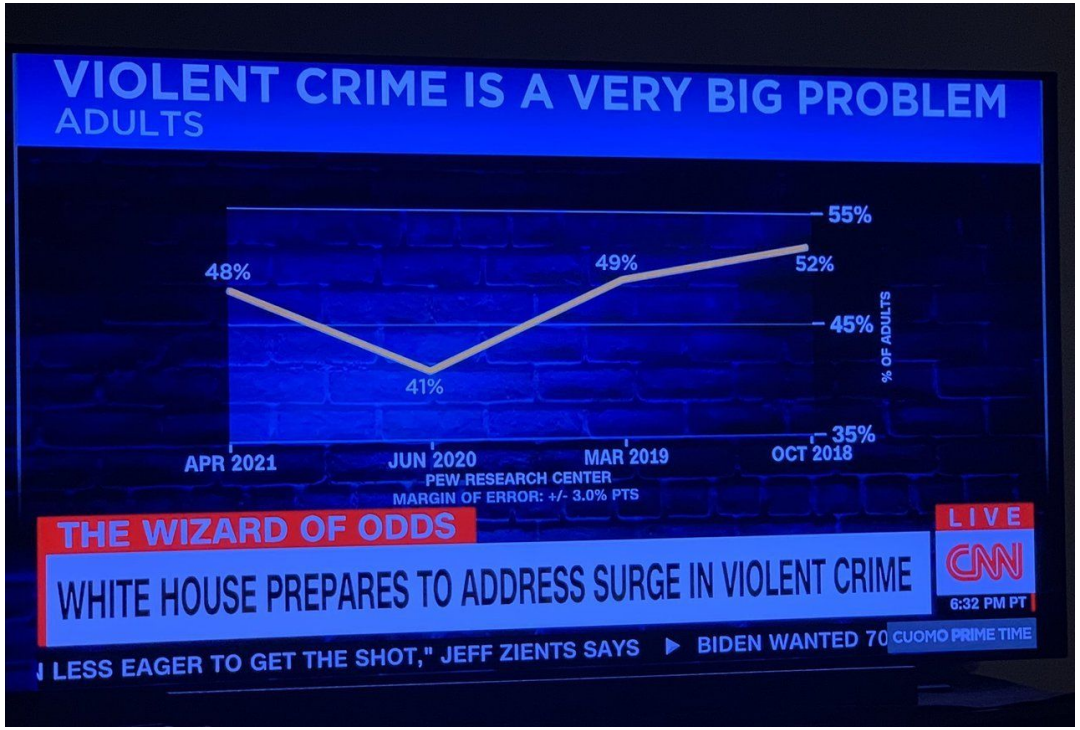
Source: https://viz.wtf/





Can you see it?

“Surge in violent crime”



ants

Common mistakes

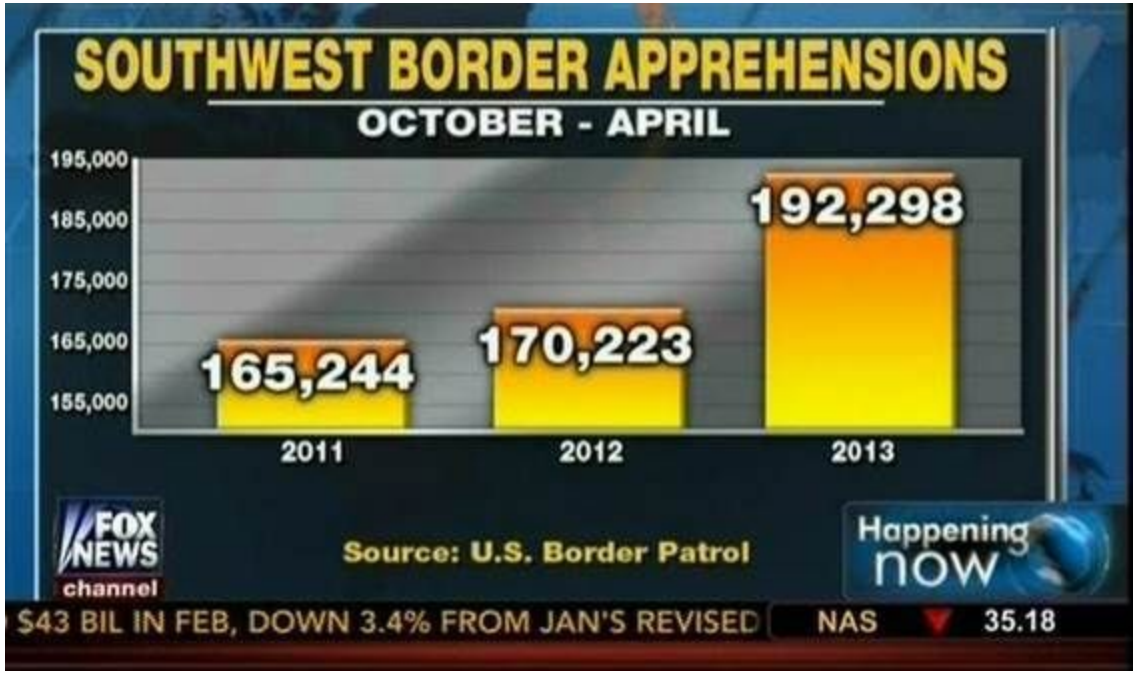
Learn by doing



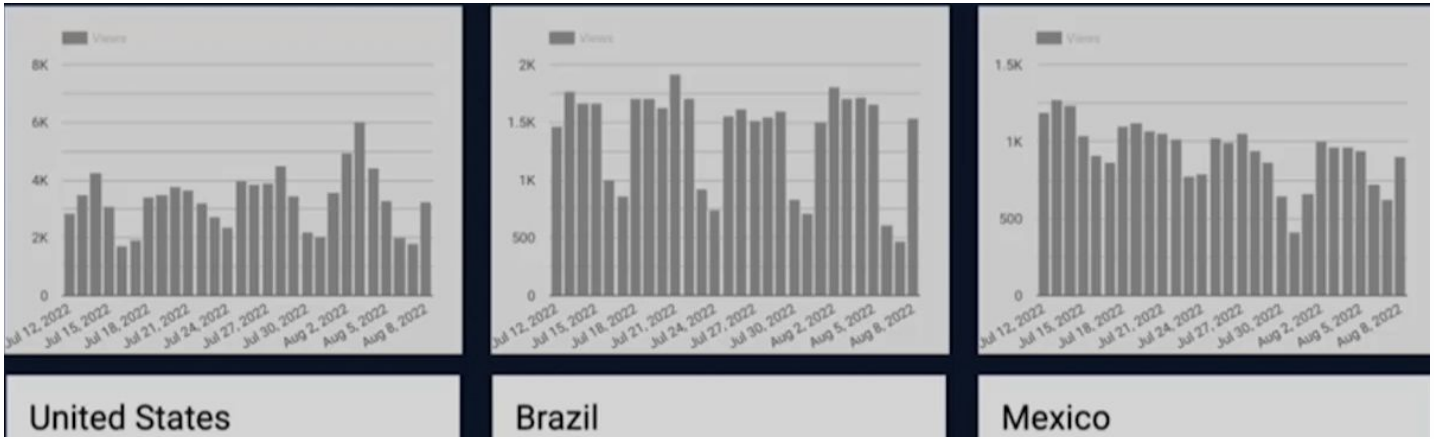

Let's start with my favorite

Cutting the Y-axis

What's the problem with this one?



Way to go Brazil!



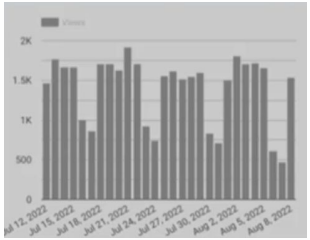
Oh wait...


Views
8K
6K
4K
2K
0
Jul 12, 2022
Jul 15, 2022
Jul 18, 2022
Jul 21, 2022
Jul 24, 2022
Jul 27, 2022
Jul 30, 2022
Aug 2, 2022
Aug 5, 2022
Aug 8, 2022
Views
2K
1.5K
1K
500
0
Jul 12, 2022
Jul 15, 2022
Jul 18, 2022
Jul 21, 2022
Jul 24, 2022
Jul 27, 2022
Jul 30, 2022
Aug 2, 2022
Aug 5, 2022
Aug 8, 2022
Views
1.5K
1K
500
0
Jul 12, 2022
Jul 15, 2022
Jul 18, 2022
Jul 21, 2022
Jul 24, 2022
Jul 27, 2022
Jul 30, 2022
Aug 2, 2022
Aug 5, 2022
Aug 8, 2022
United States
6K
4K
2K
0
93K
Brazil
6K
4K
2K
0
39K
Mexico
6K
4K
2K
0
26K

Cut the Y-axis for line charts, don't for bar charts

By design

1. Bar graph emphasizes the absolute **magnitude of values** associated with each category. Consensus:
   a. Y-axis should **start at 0**

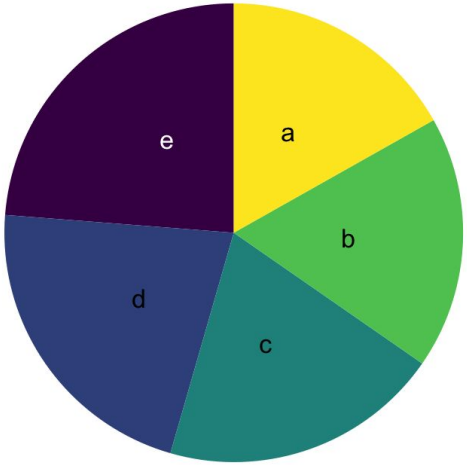


2. Line graph emphasizes the **change** in the dependent variable (usually the y value) as the independent variable (usually the x value) changes. No consensus, but
   a. Y-axis **don't have to start at 0.**

Pie charts

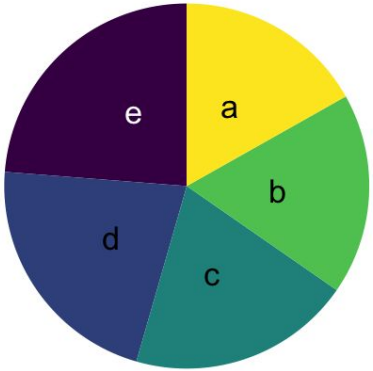
Pie chart

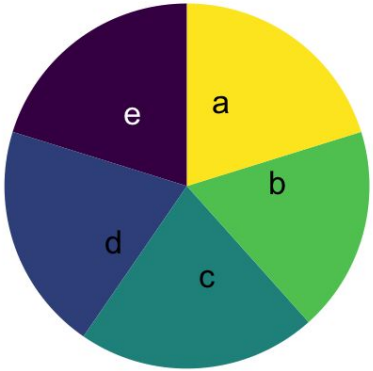
We suck at reading angles. Which group is the biggest?

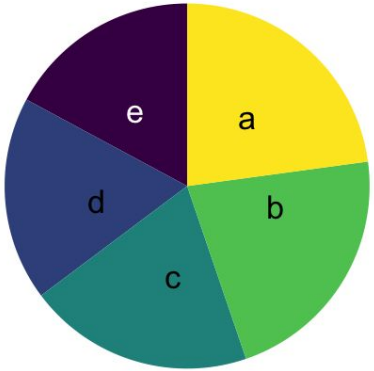


Not convinced, try this one?

Per chart, which group is the biggest? Typically seen for traffic channel share

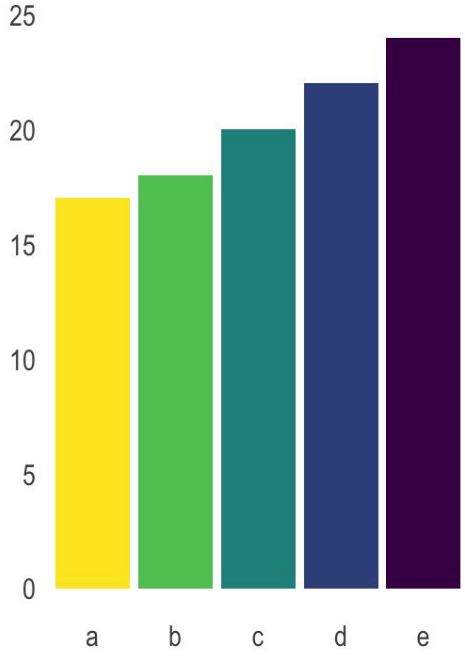


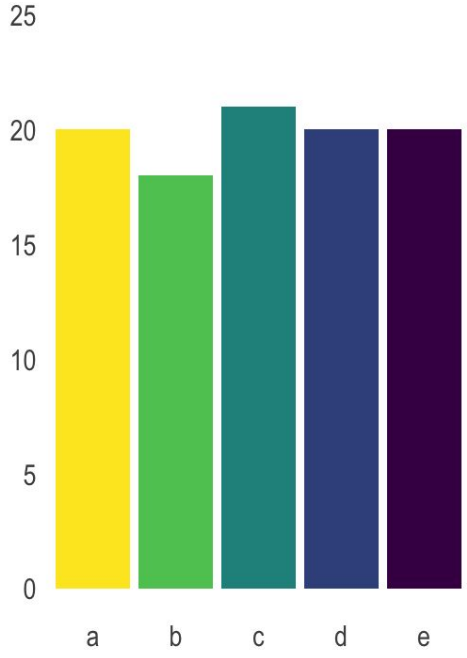


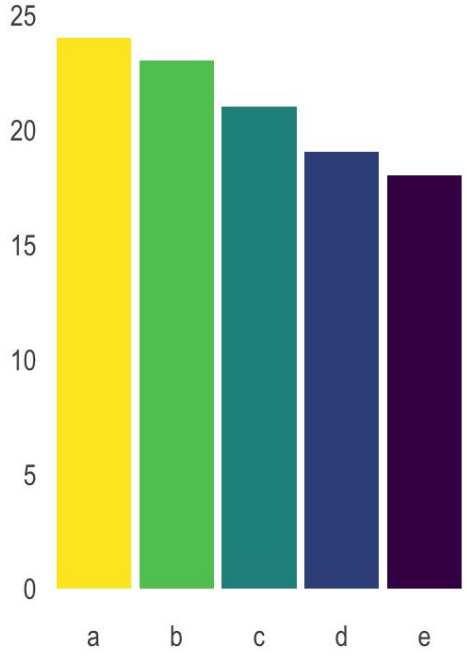


Solution: use bar charts

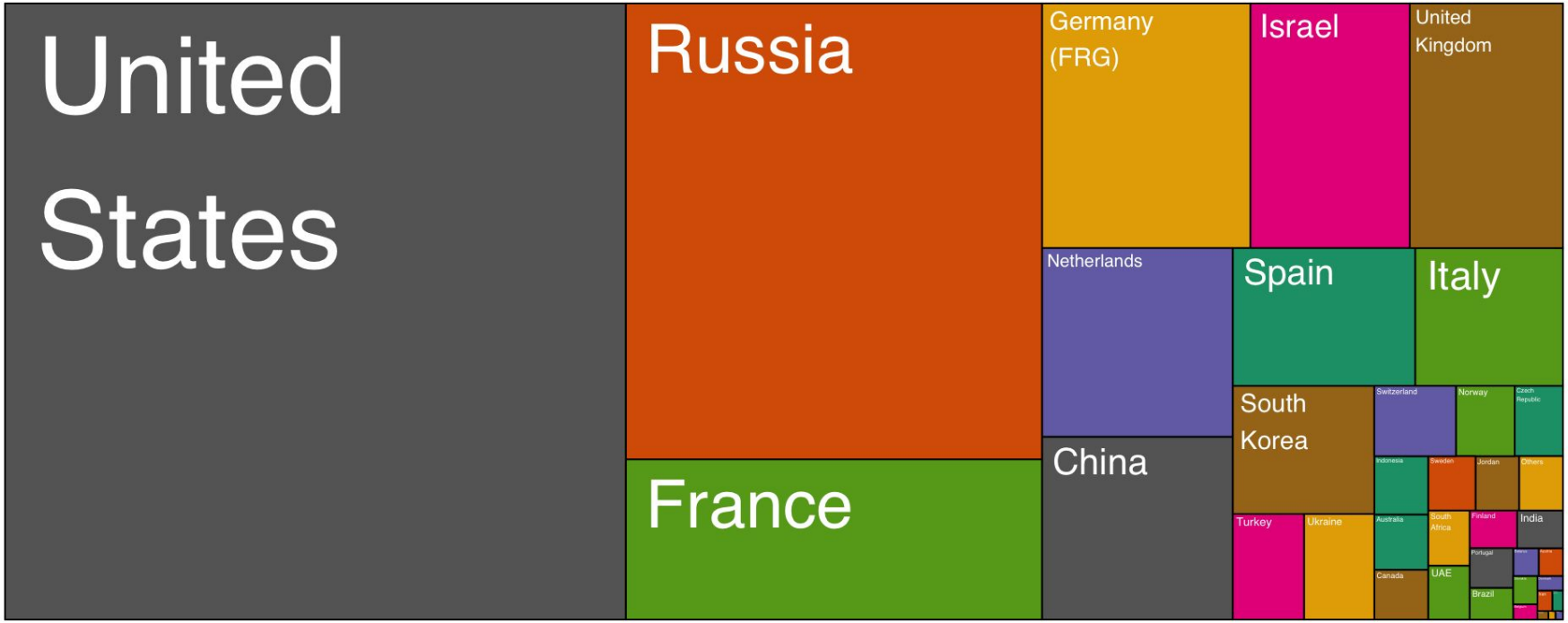
Per chart, which group is the biggest?





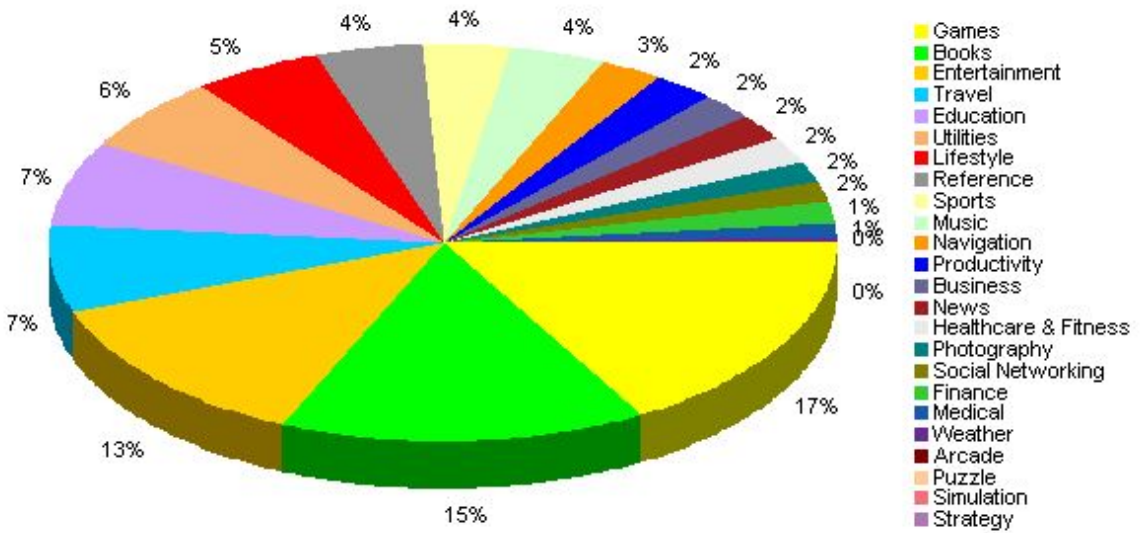


Solution: use treemaps



How to make pie charts even worse

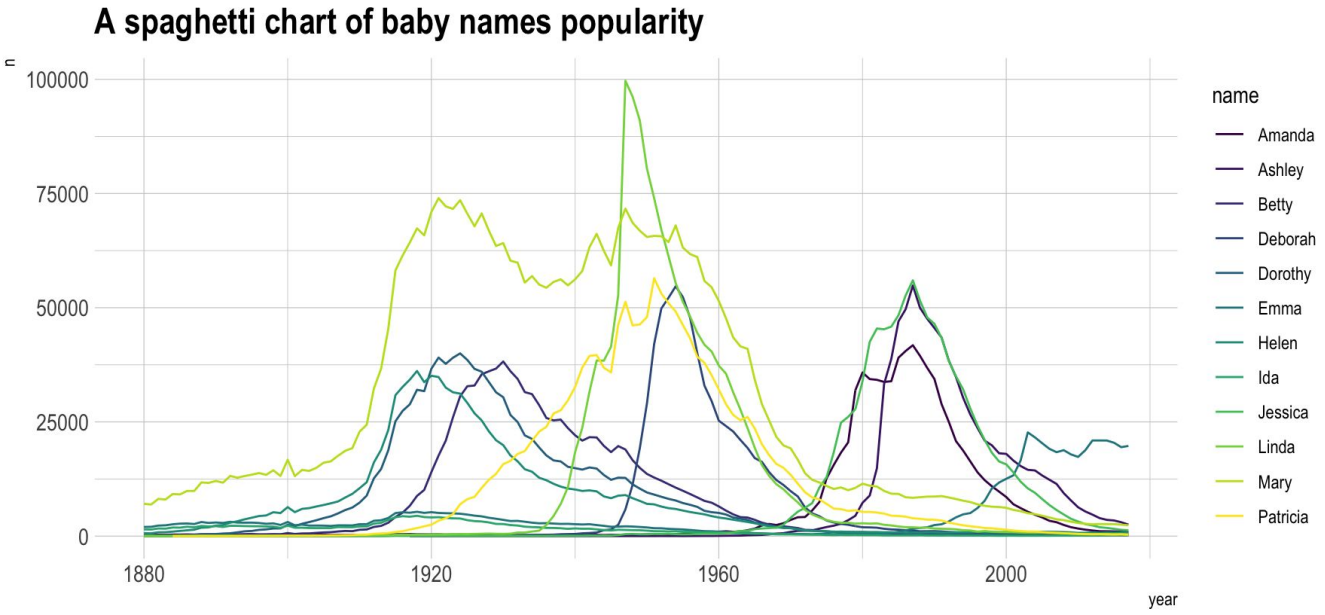
- 3D
- legend aside (instead of in the pie)
- percentages that do not sum to 100
- too many items
- exploded pie charts




Spaghetti!

Spaghetti chart

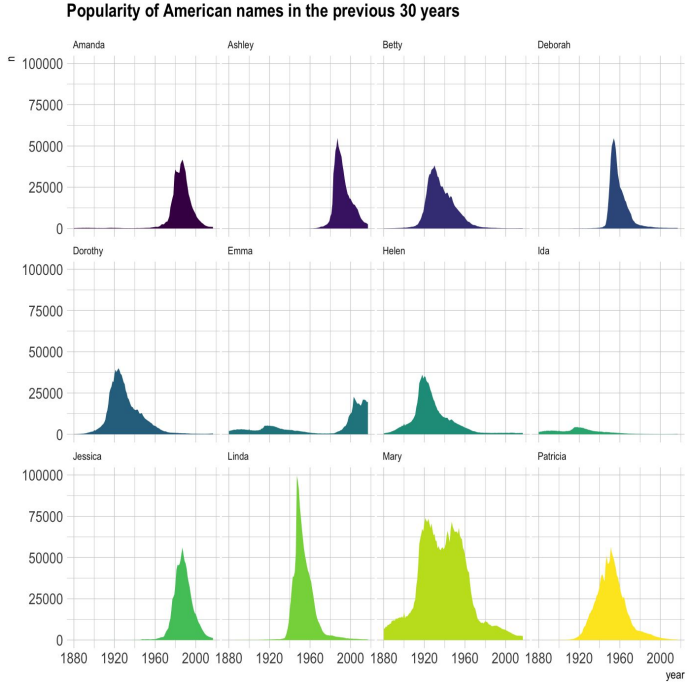
What's the problem with this one? Which name is the least popular?



Solution: area charts

Area charts can be used to give a more general overview of the dataset

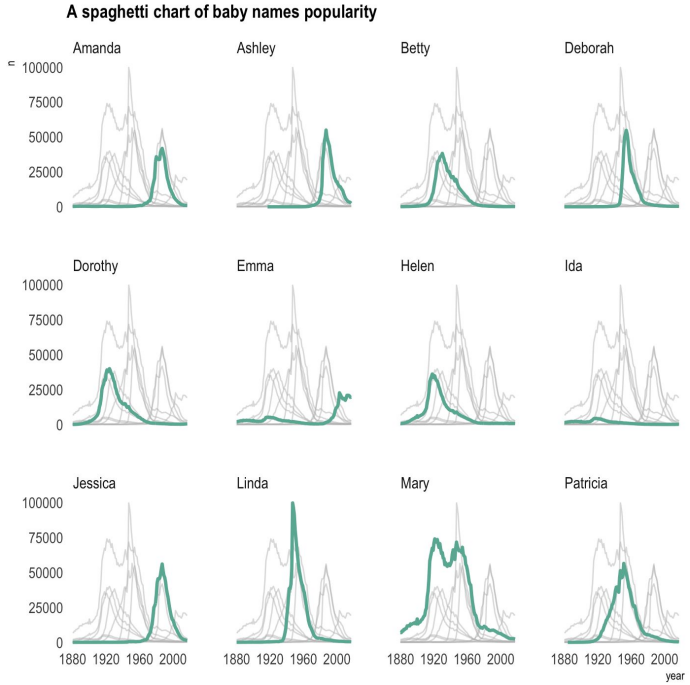
1. Mary is a very popular American name
2. Ida was never popular

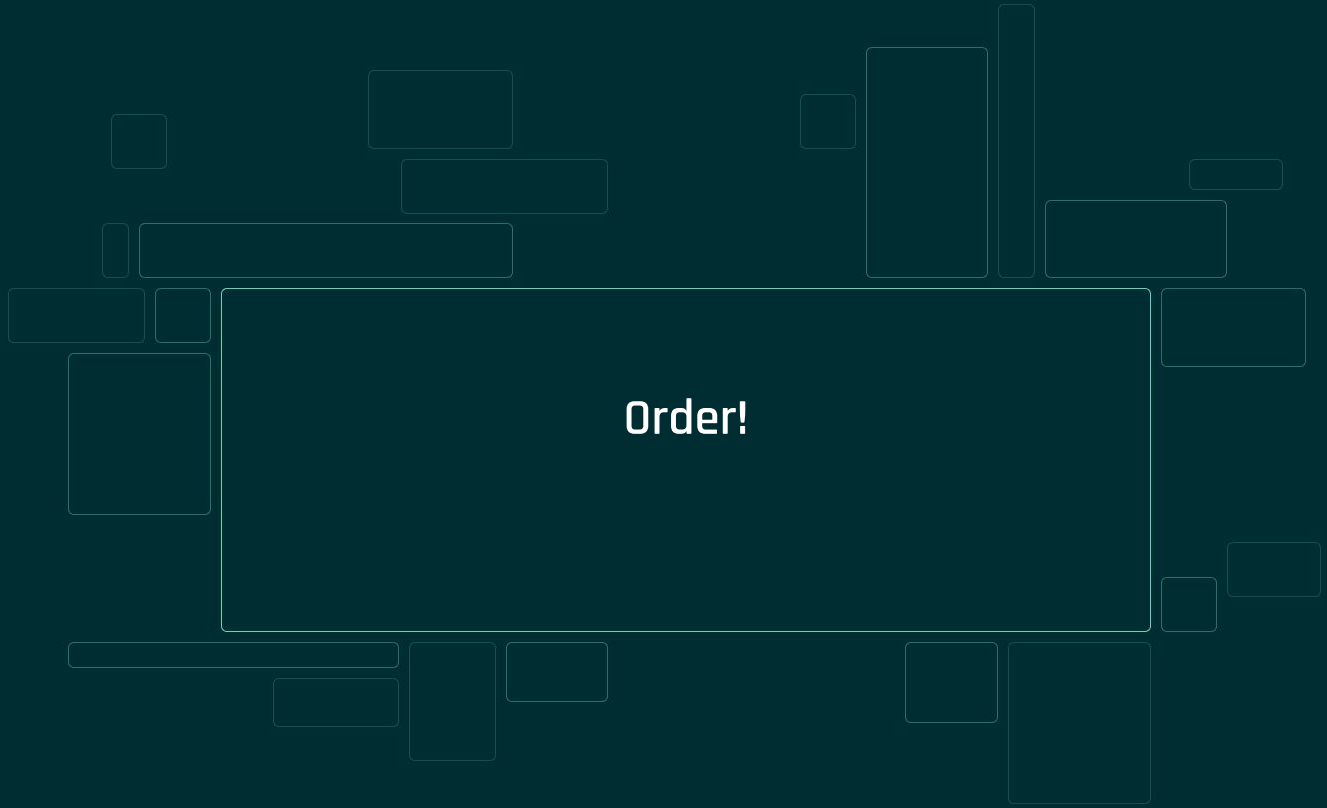


Solution

Area charts can be used to give a more general overview of the dataset

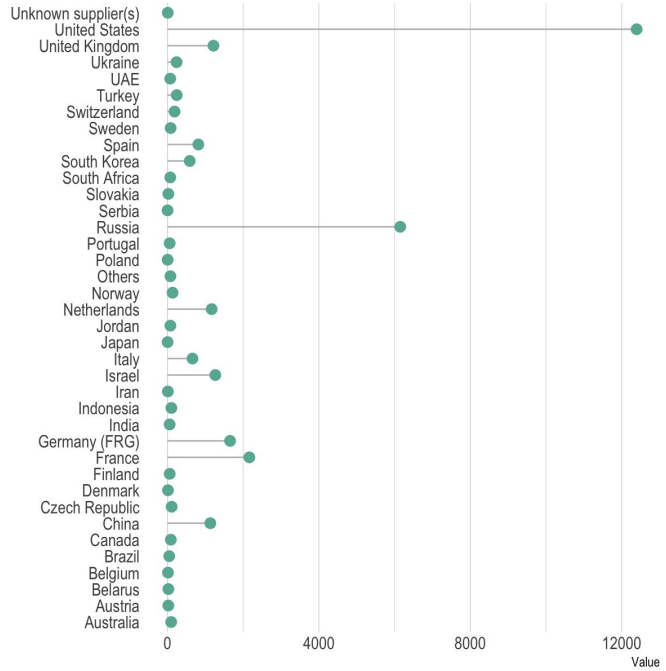
1. Mary is a very popular American name
2. Ida was never popular




Order!

Unordered charts

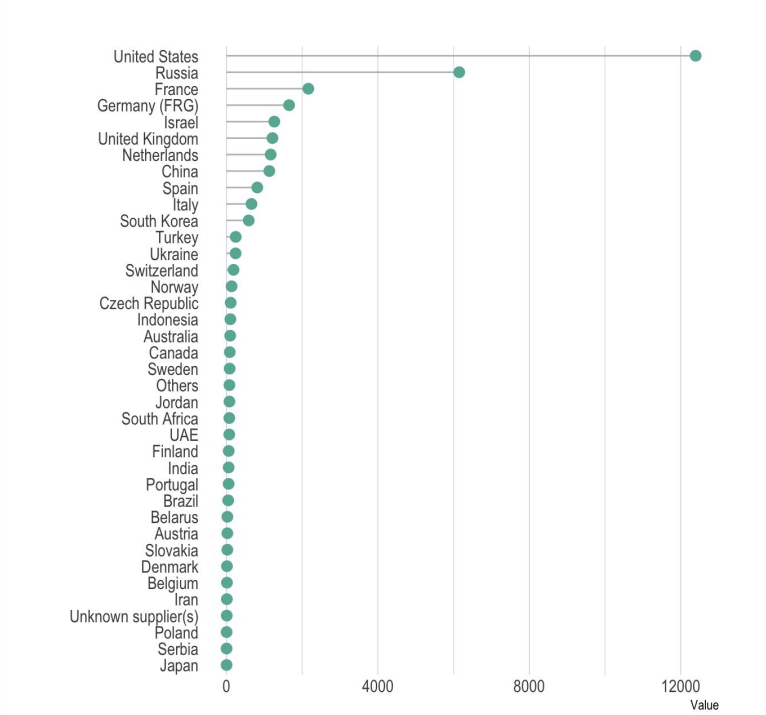
What's the third most popular exporter?

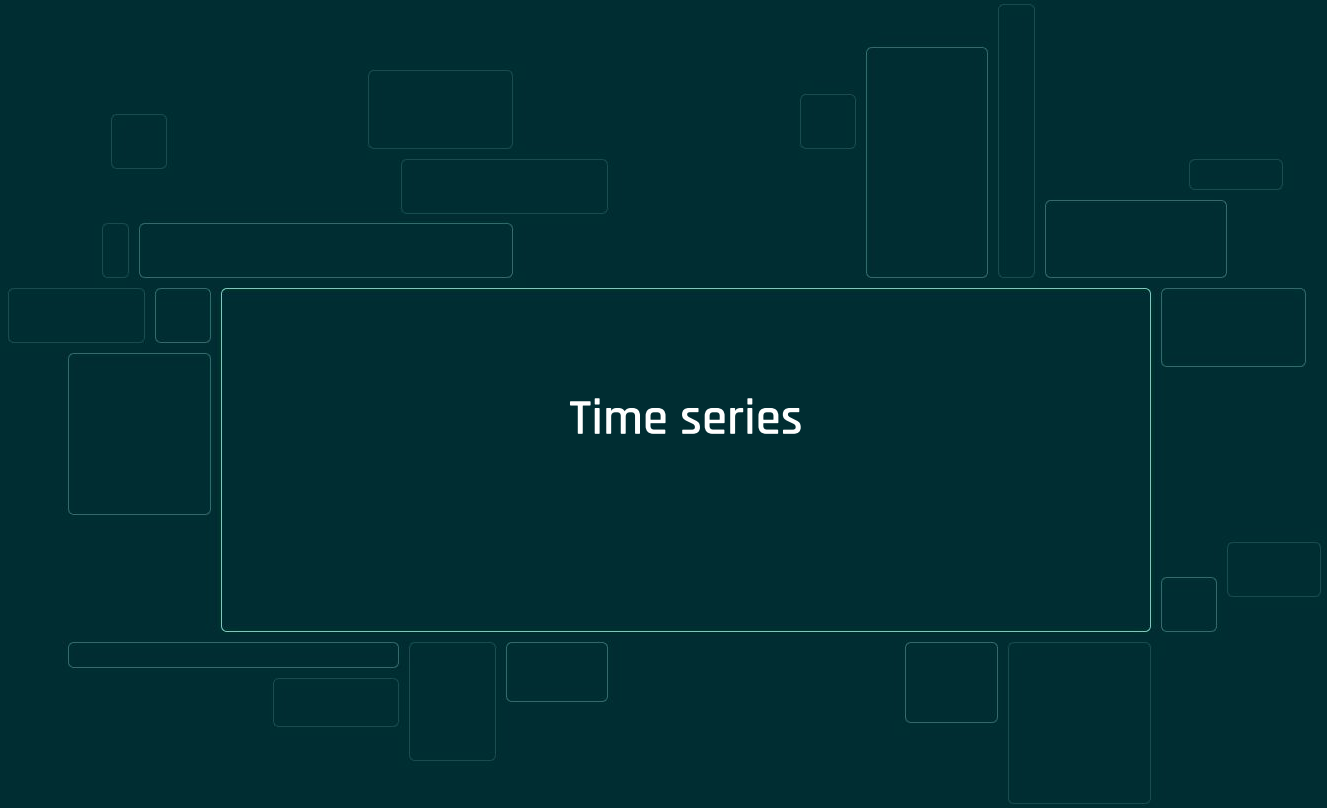


Graph: # of weapons sold by country

Solution: order by values

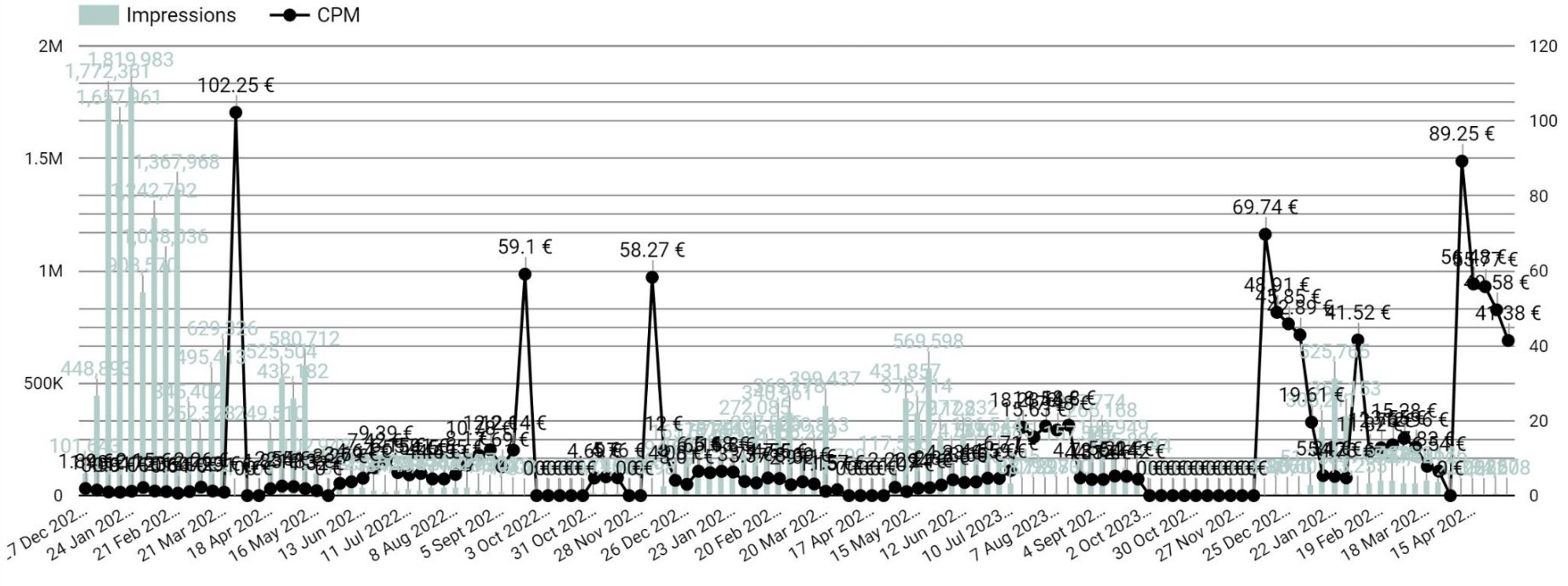
1. We see that France is the third most popular weapons exporter




Time series

Time aggregation

What's the problem with this one?



Principles

5 basic components of data visualization

1. **Shapes**: Length, Position, Surface, Angles
2. **Patterns**: Distribution, Repetition, Proportion, Outliers
3. **Scales**: maintain same scale across diagrams
4. **Colors**: Negative / Positive, Attract attention, Color scales
5. **Interaction**: filtering to show underlying data (hierarchy)

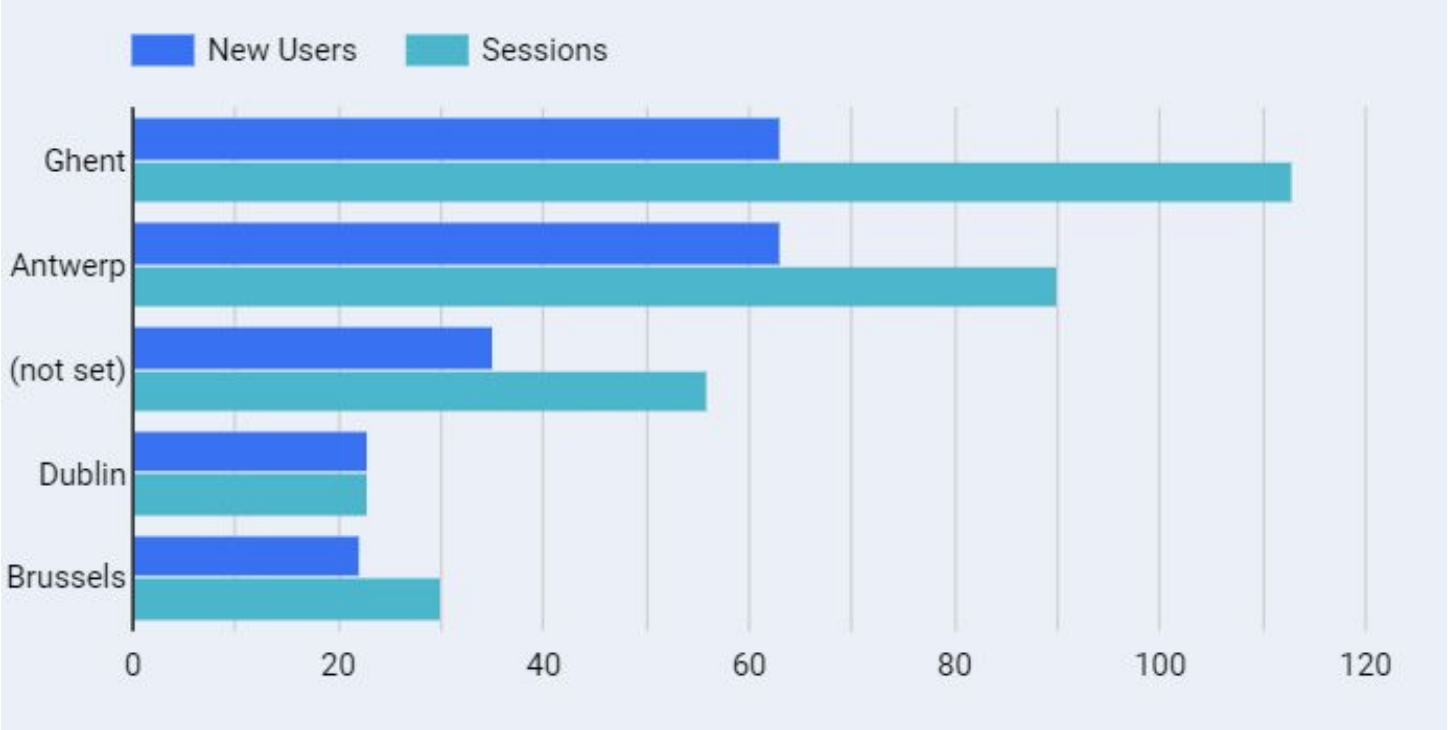
A) Shapes

How do we evaluate data?

We evaluate data based on

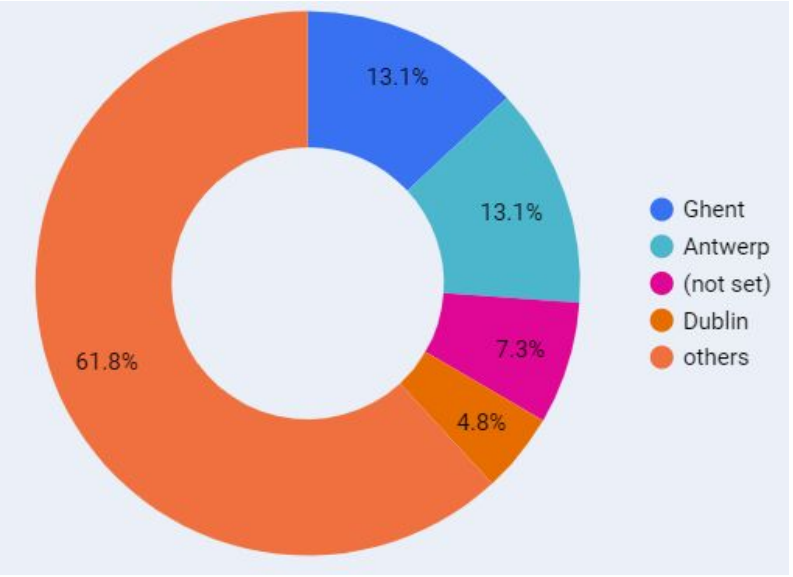
1. Length
2. Position
3. Area
4. Angles

Length = quick visual representation



Angles

1. All angles (except 90°) are **harder to interpret** than lengths = Donut charts
2. But no other chart here showed that over 60% of our visitors are from other cities
3. As mentioned before, try to **avoid** donuts as much as possible

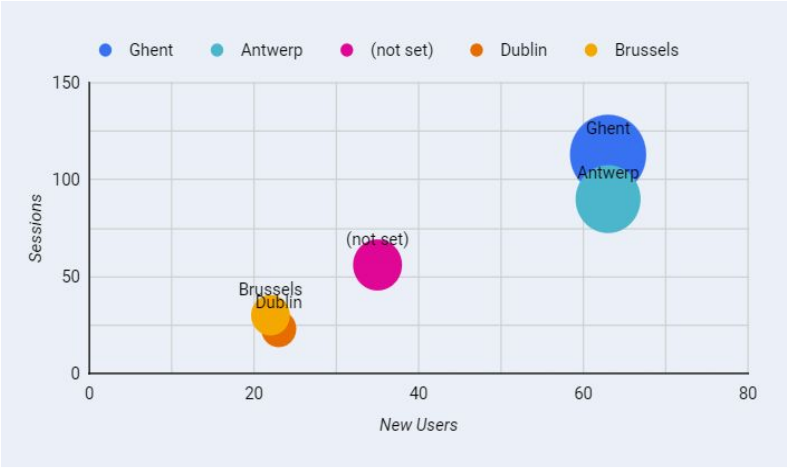


Position & area

Position & area = Scatter plot.

We immediately see that Ghent & Antwerp are the largest. We use the position & area to display the data

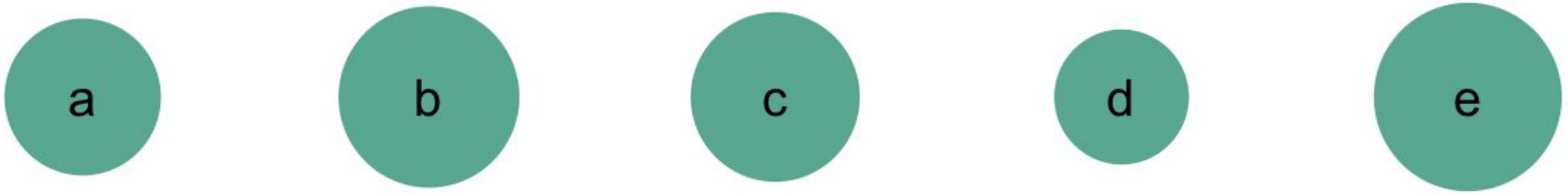
But which one is larger?



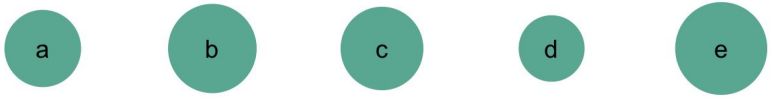
Surfaces (area)

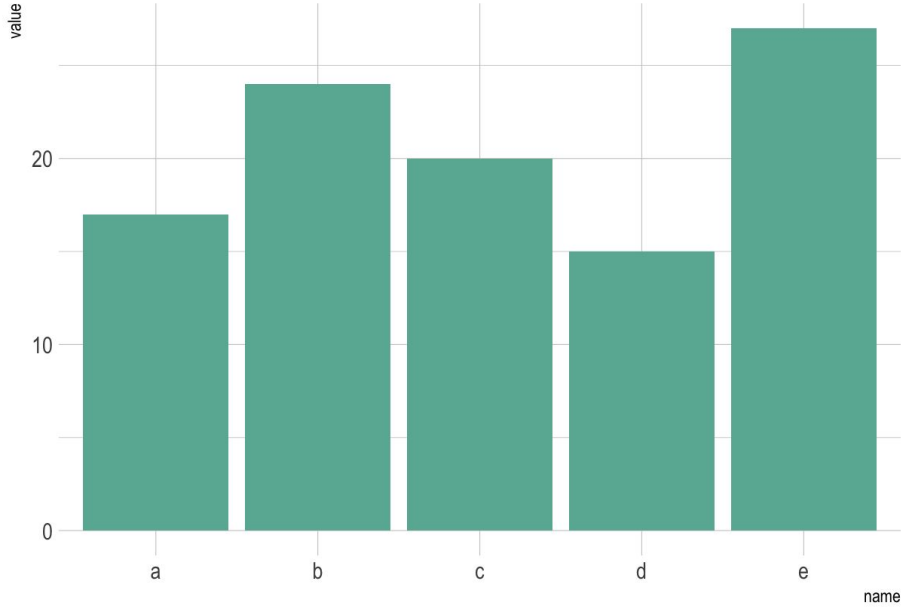
Try to rank from low to high value

- We can’t easily translate areas to numeric values.



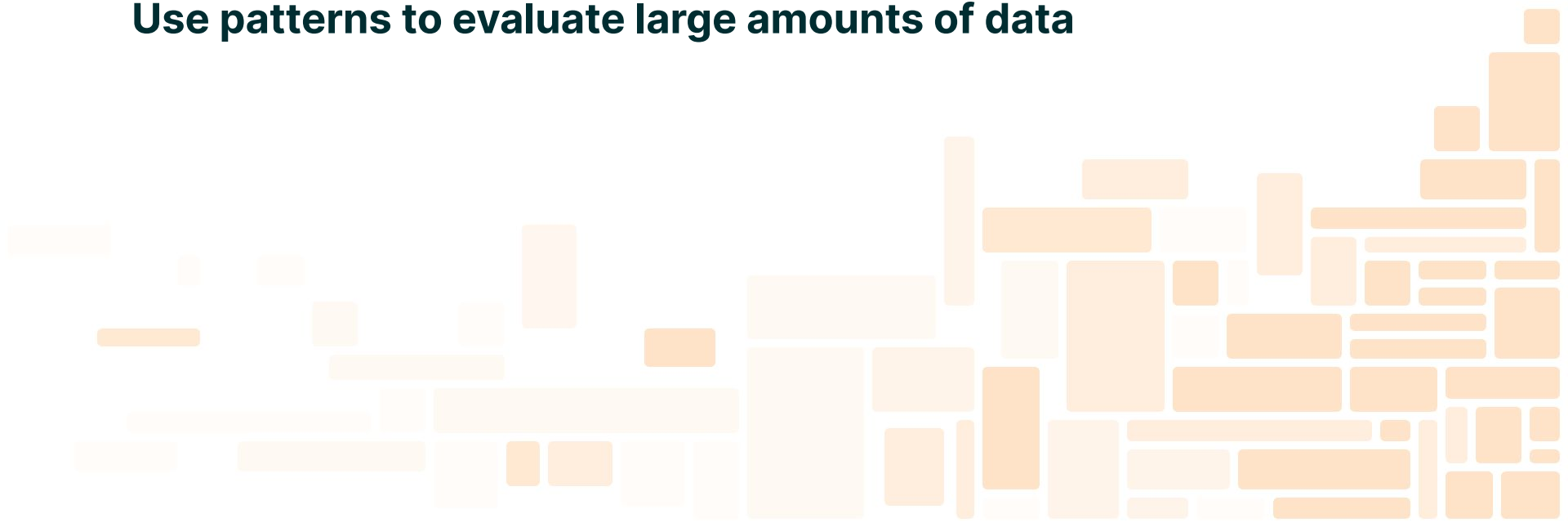
Better = bar charts





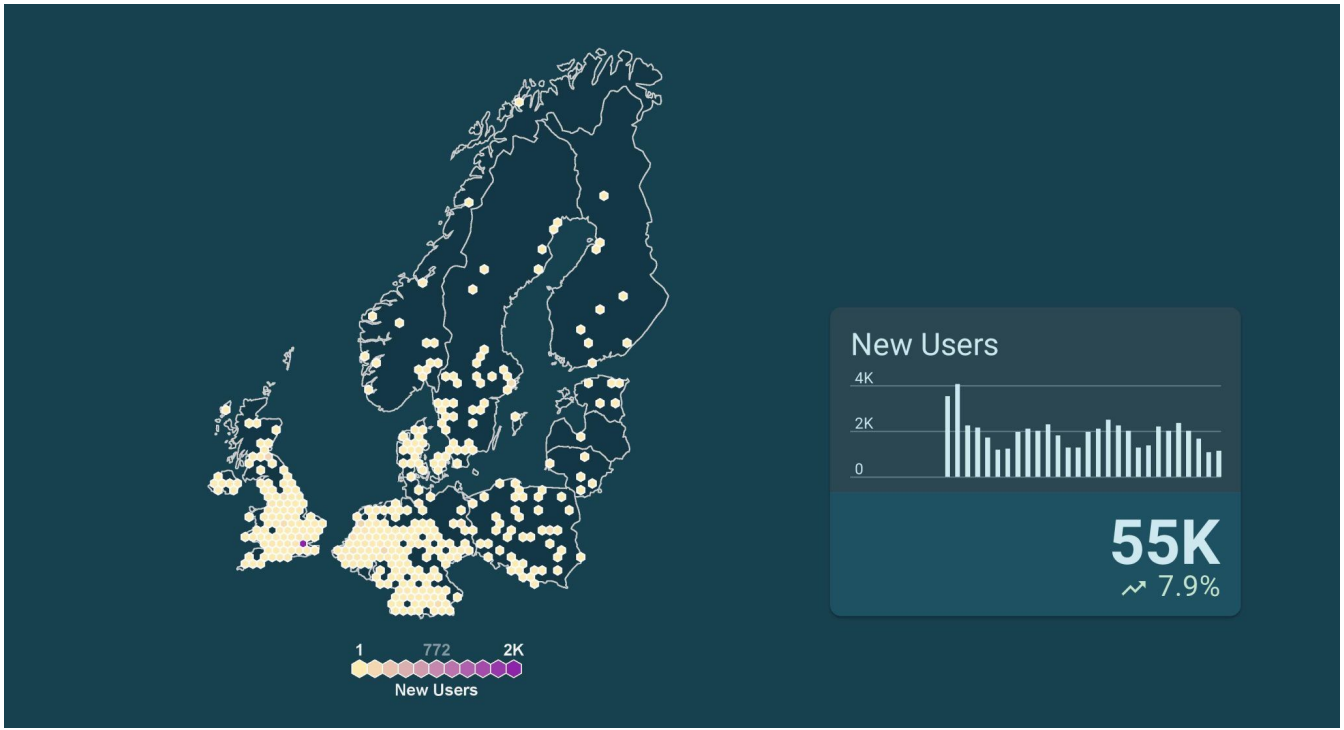
B) Patterns

Use patterns to evaluate large amounts of data

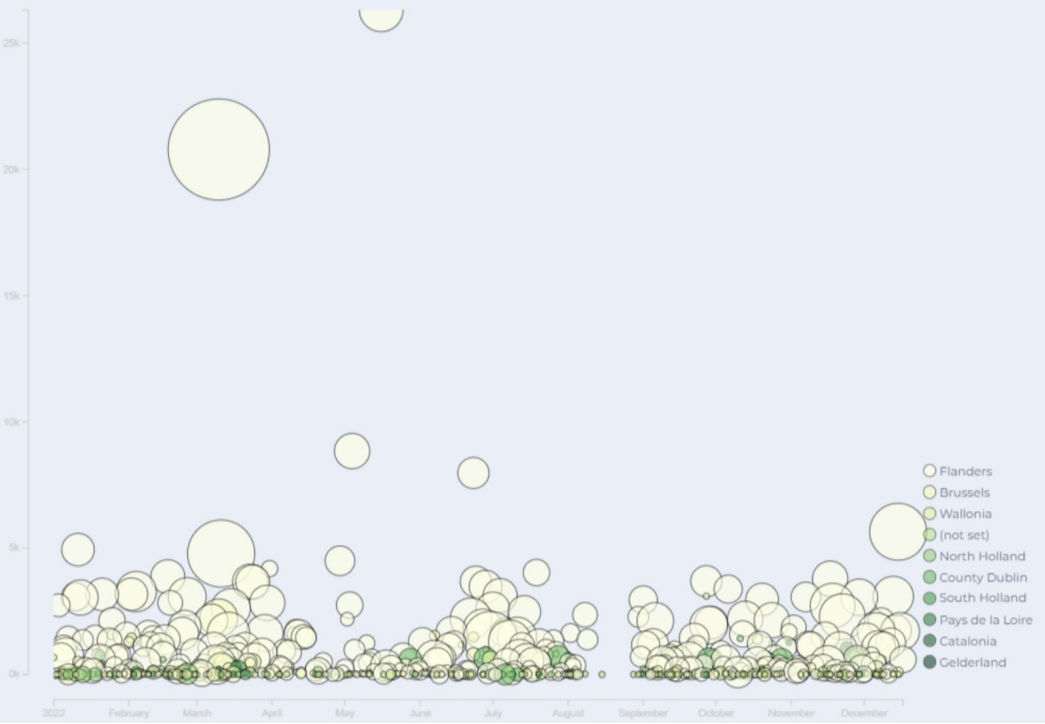


Distribution

(Btw these are free community templates by SuperMetrics in Looker Studio)



Outliers


25k
20k
15k
10k
5k
0k
2022
February
March
April
May
June
July
August
September
October
November
December
Flanders
Brussels
Wallonia
(not set)
North Holland
County Dublin
South Holland
Pays de la Loire
Catalonia
Gelderland

C) Scales

Way to go Brazil!

Oh wait.



D) Colours

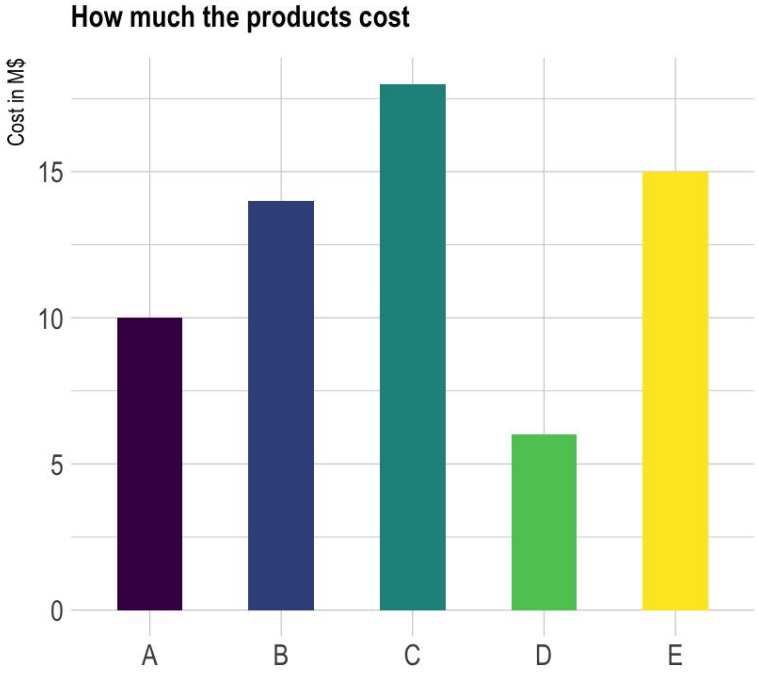
Use colours to guide the eye

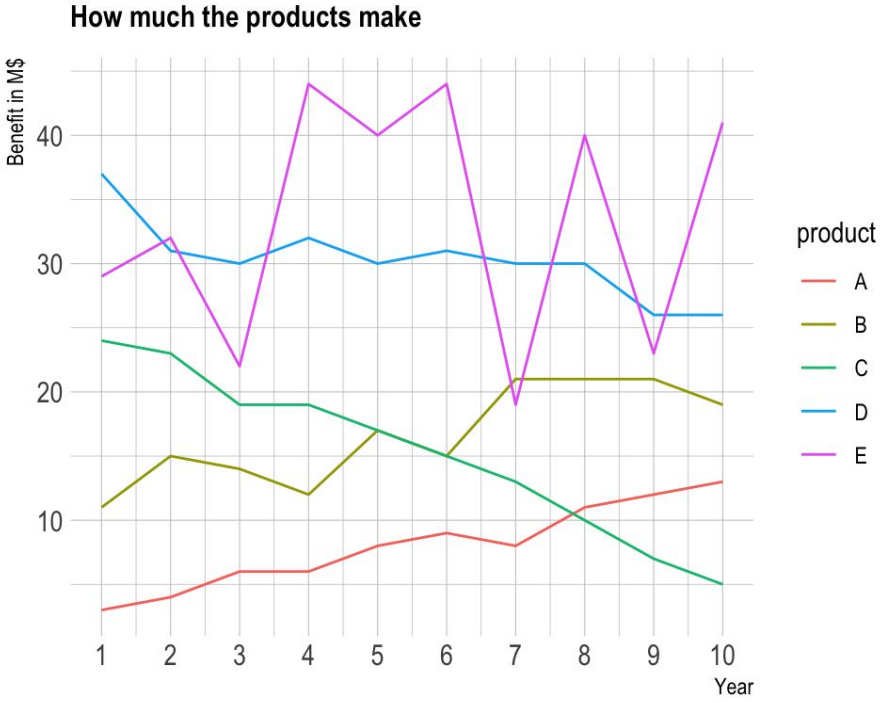
This way we can evaluate more data, use

1. Negative / Positive
2. Attract attention
3. Color scales

Colours = be consistent

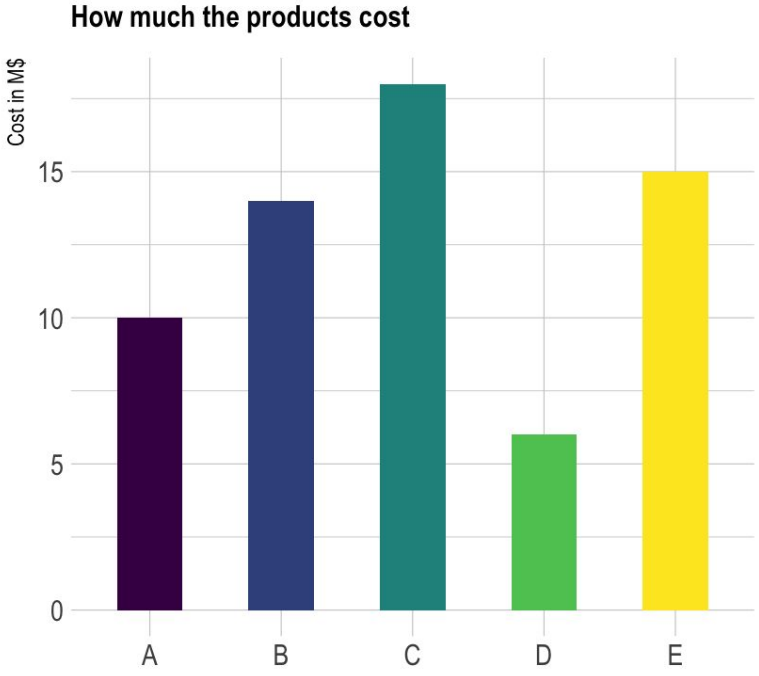
It's very hard to make the link between the two charts

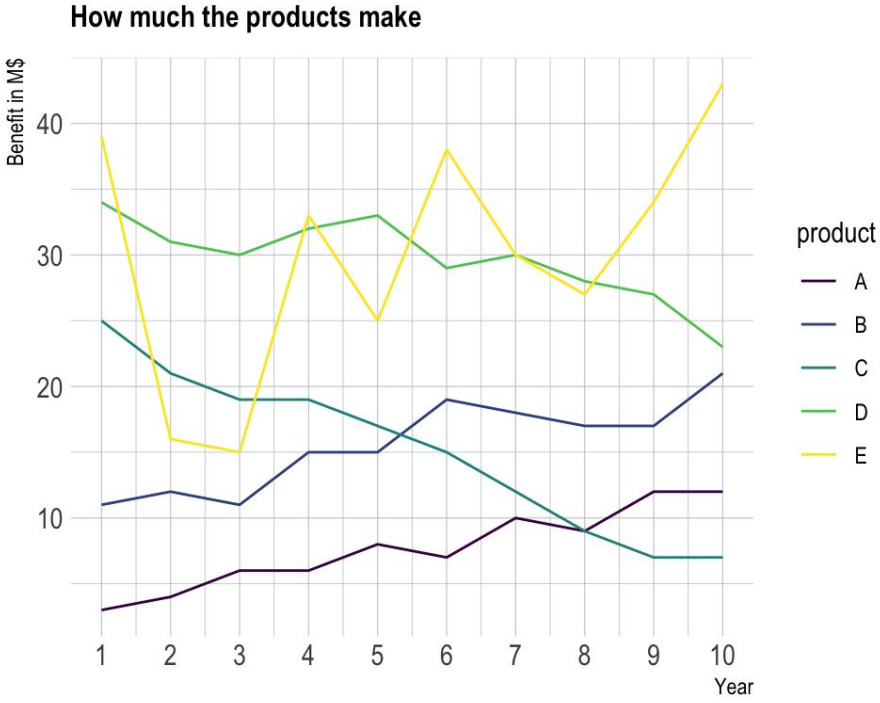




Better

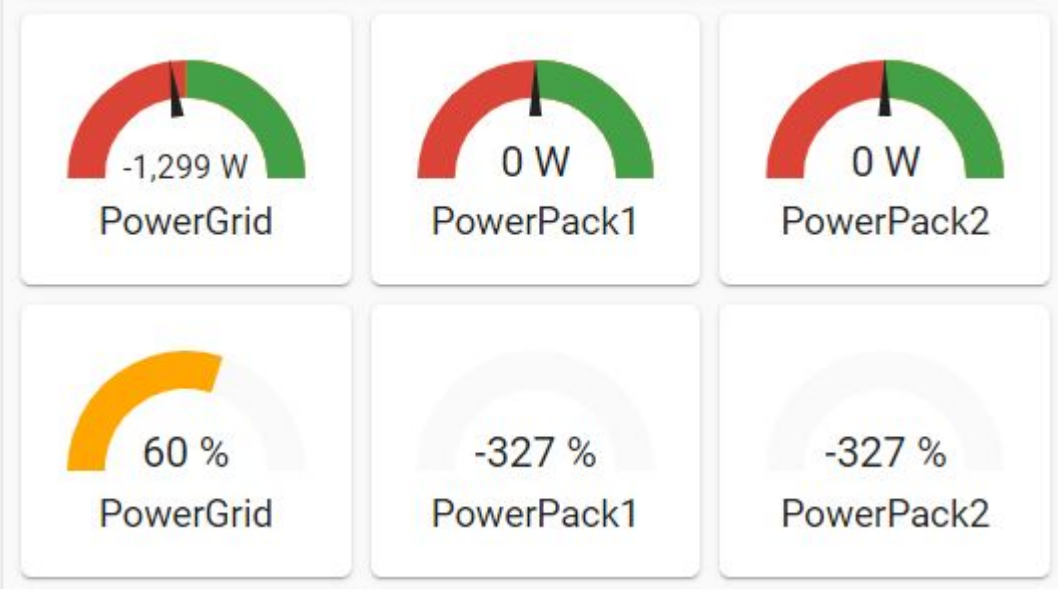
It's very hard to make the link between the two charts





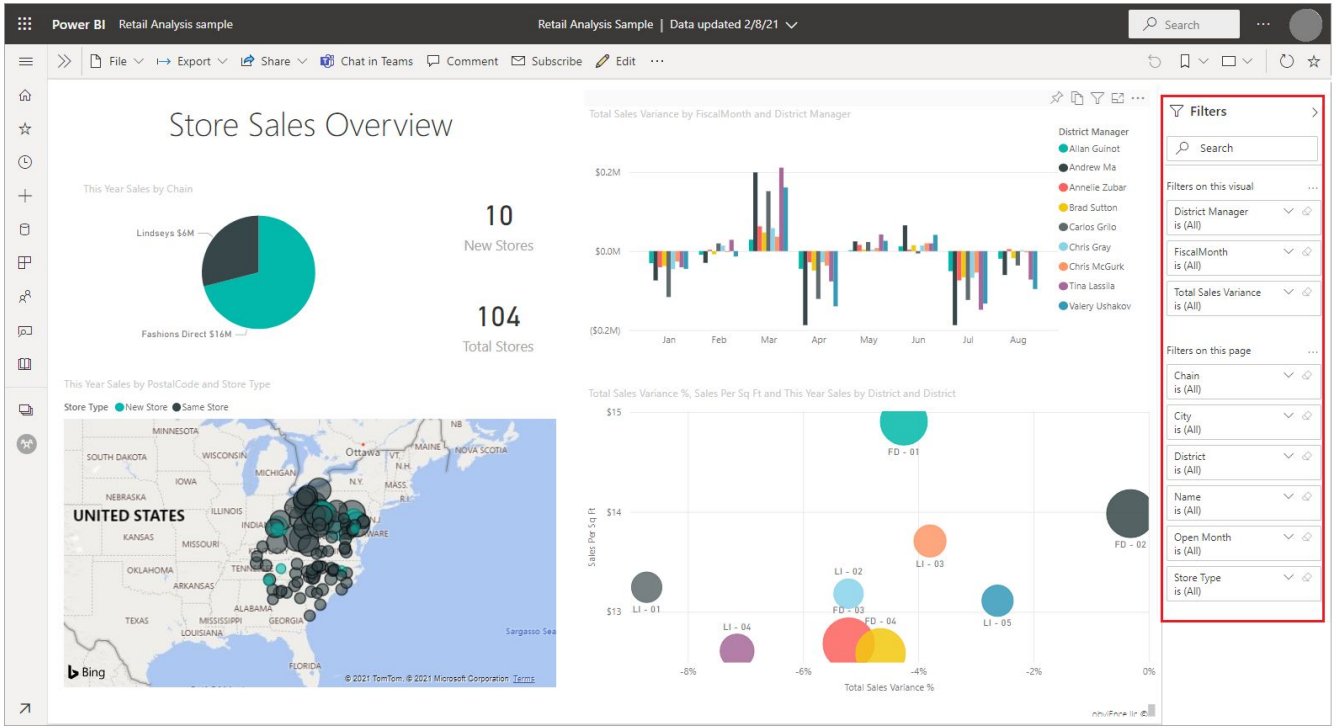
Use universal coloring schemes

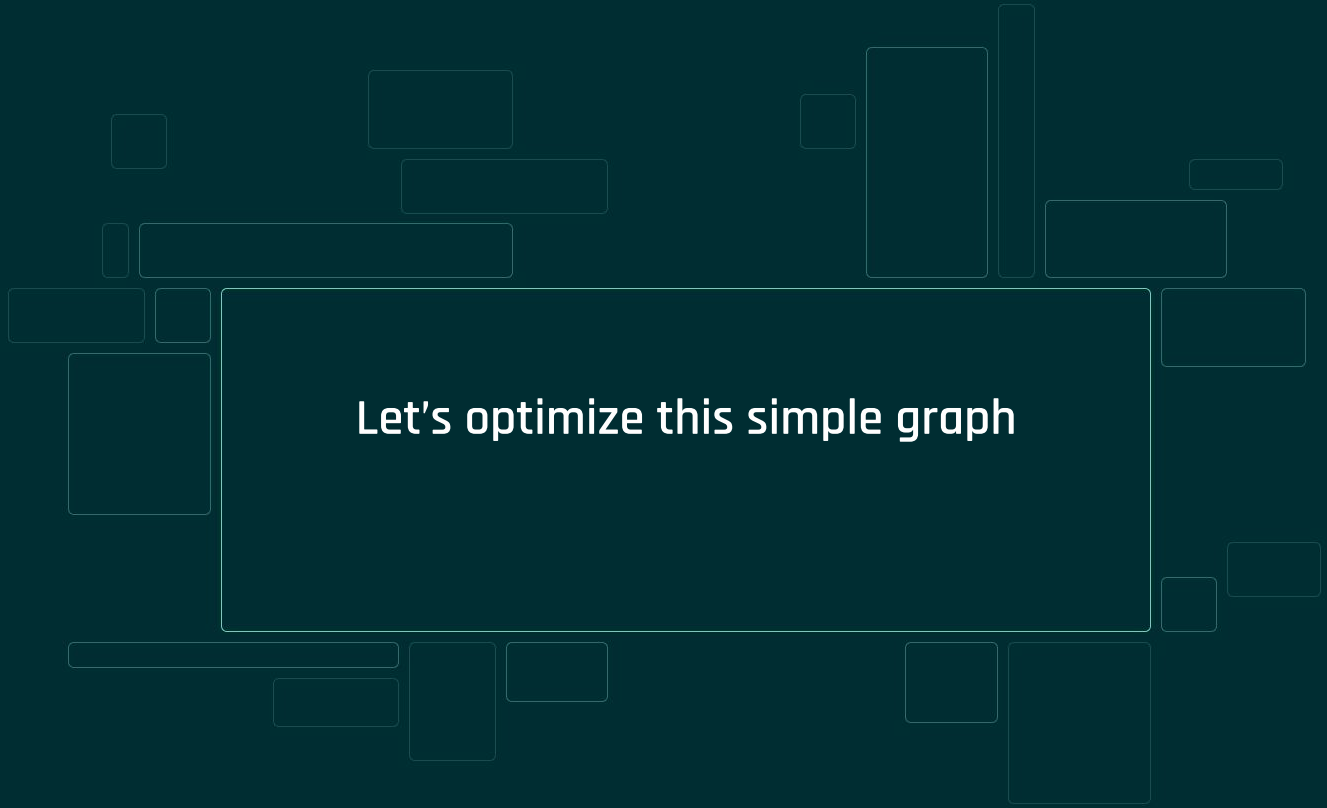
Red, Green, Orange



E) Interactie

Apply filters




Let's optimize this simple graph

What could be improved on this graph?



Remove vertical gridlines



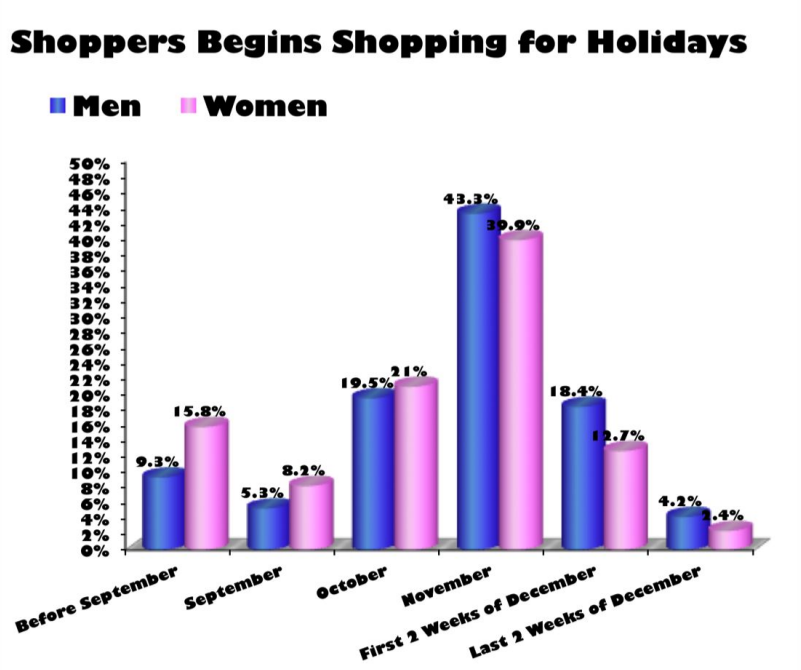
Remove vertical gridlines



Remove horizontal gridlines



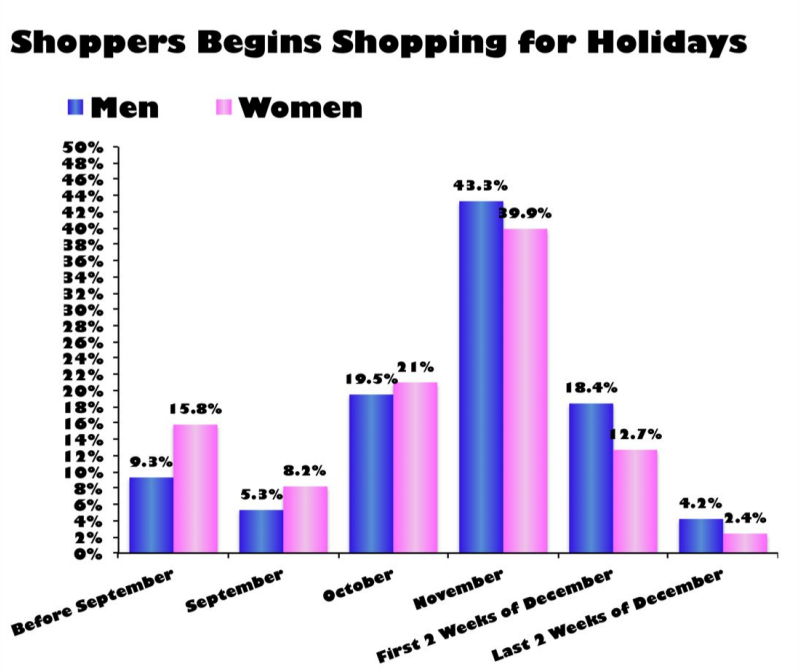
Remove horizontal gridlines



Never use 3D



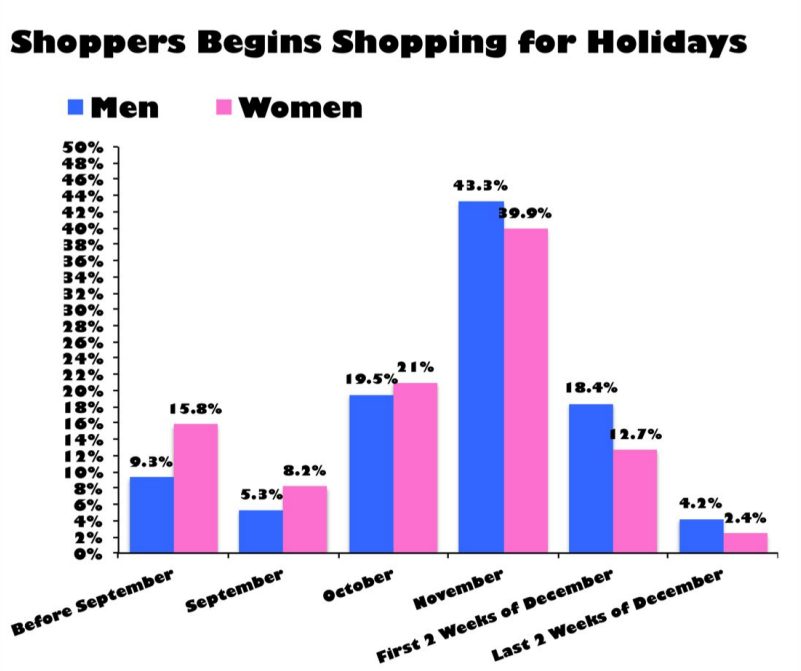
Never use 3D!



Remove color effect on bars



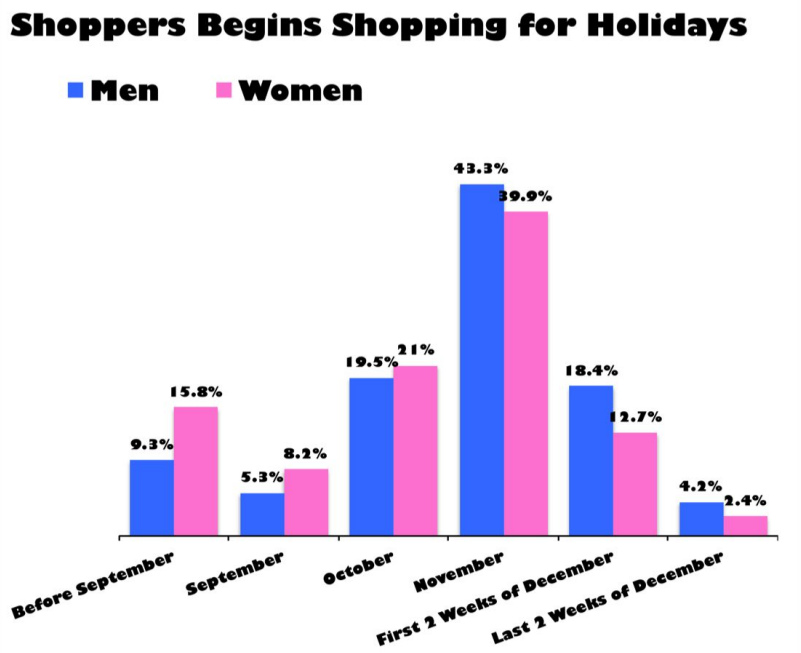
Remove color effect (bevel)



Remove Y-axis as data is on the bars already



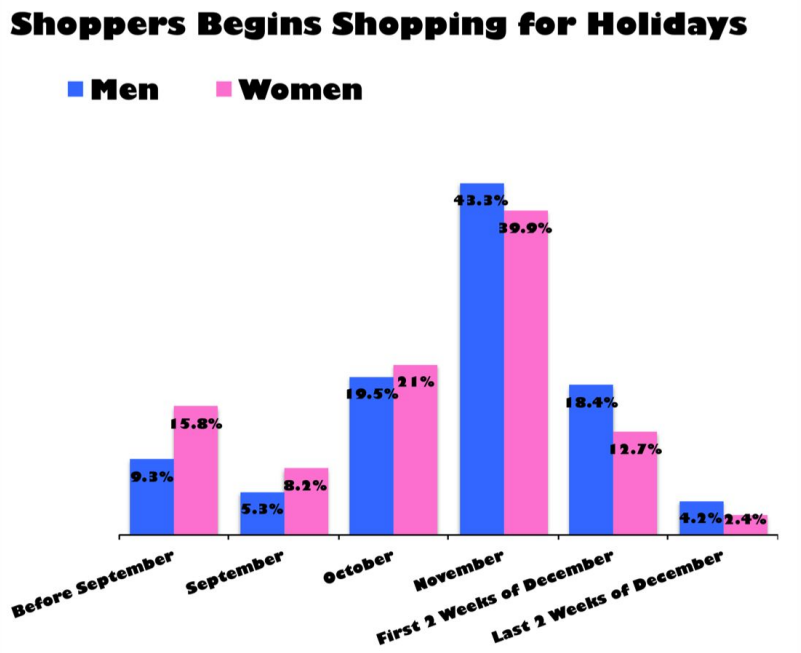
Omit y-axis since points are labeled directly



Put data-labels at the end of the bar



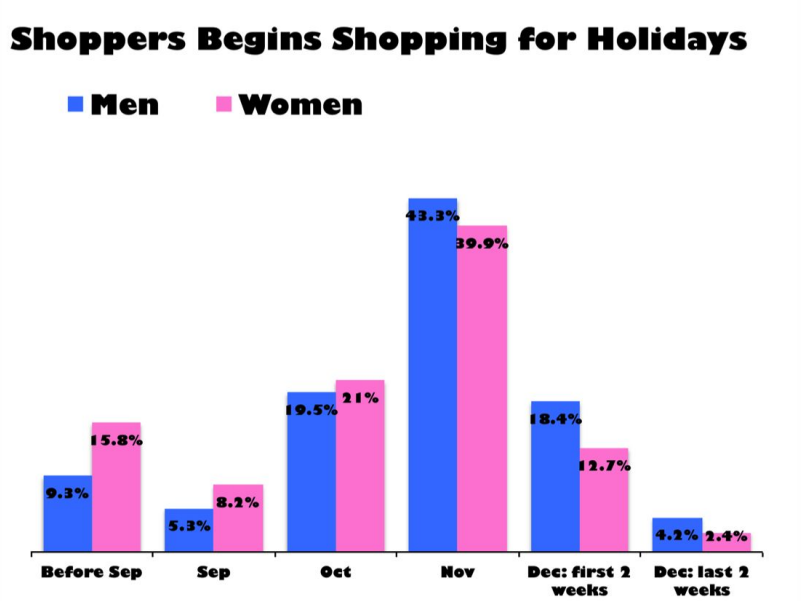
Pull data labels into the ends of the bars



Make X-axis text horizontal



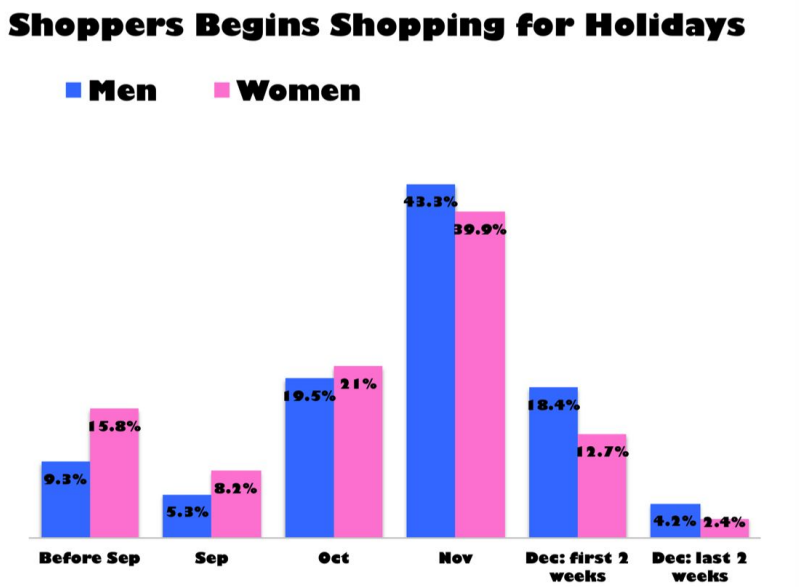
Make x-axis text horizontal



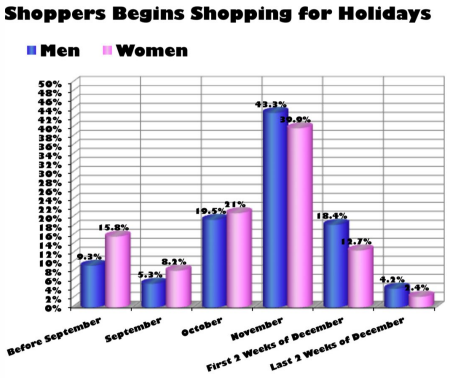
Remove X-axis “ticks”

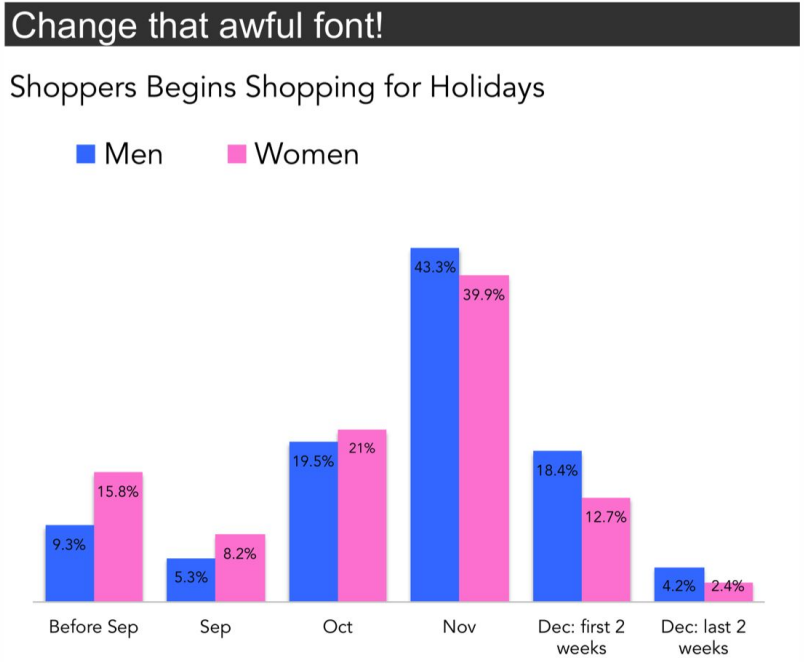


Push x-axis to background, remove tick marks



Font change! ^____^

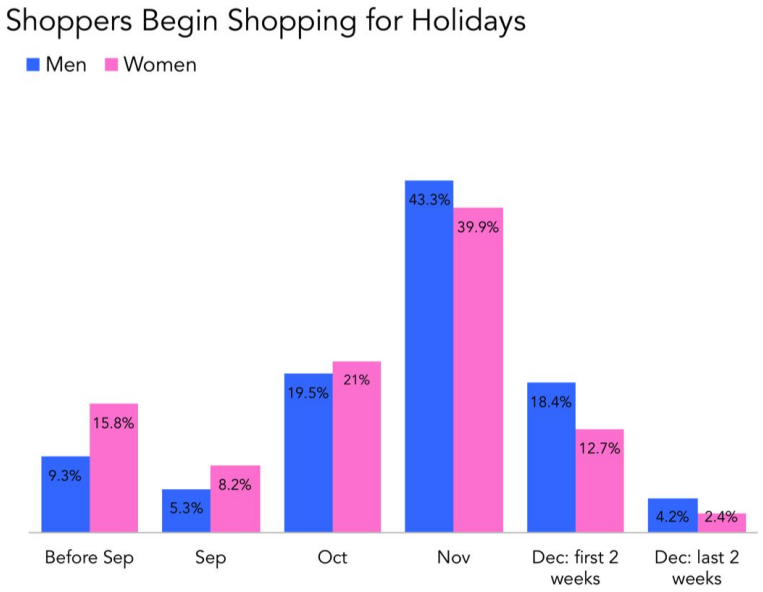

Shoppers Begins Shopping for Holidays
Men
Women
9.3%
15.8%
5.3%
8.2%
19.5%
21%
43.3%
39.9%
18.4%
12.7%
4.2%
2.4%
Before September
September
October
November
First 2 Weeks of December
Last 2 Weeks of December


Change that awful font!
Shoppers Begins Shopping for Holidays
Men
Women
9.3%
15.8%
5.3%
8.2%
19.5%
21%
43.3%
39.9%
18.4%
12.7%
4.2%
2.4%
Before Sep
Sep
Oct
Nov
Dec: first 2 weeks
Dec: last 2 weeks

Decrease legend size



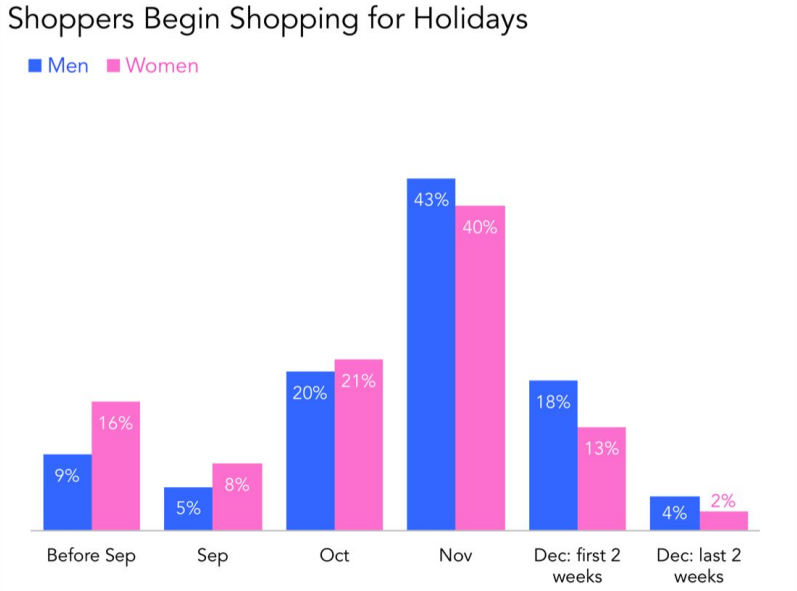
Decrease legend size, position at top left



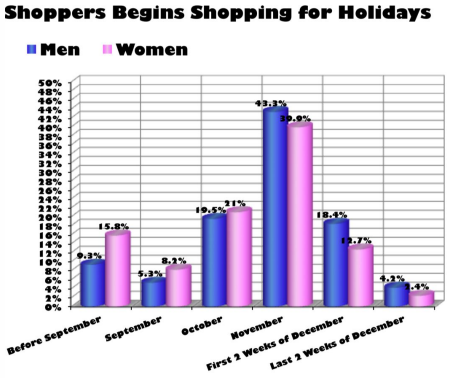
Round data

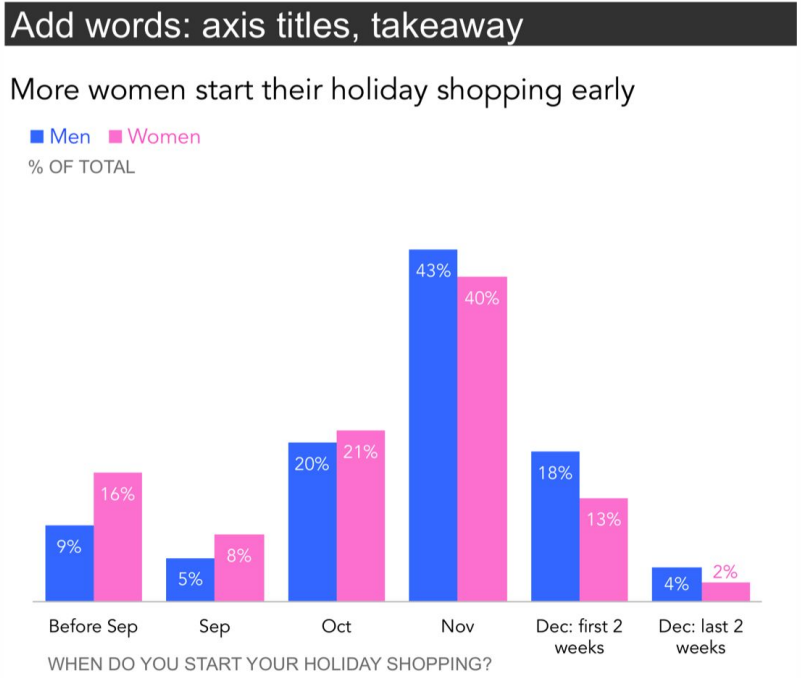


Data labels: round to whole #s, make white

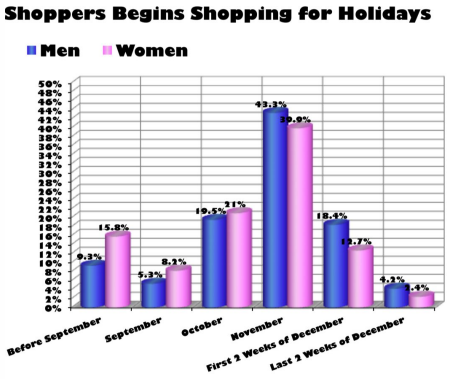


Add title & conclusions

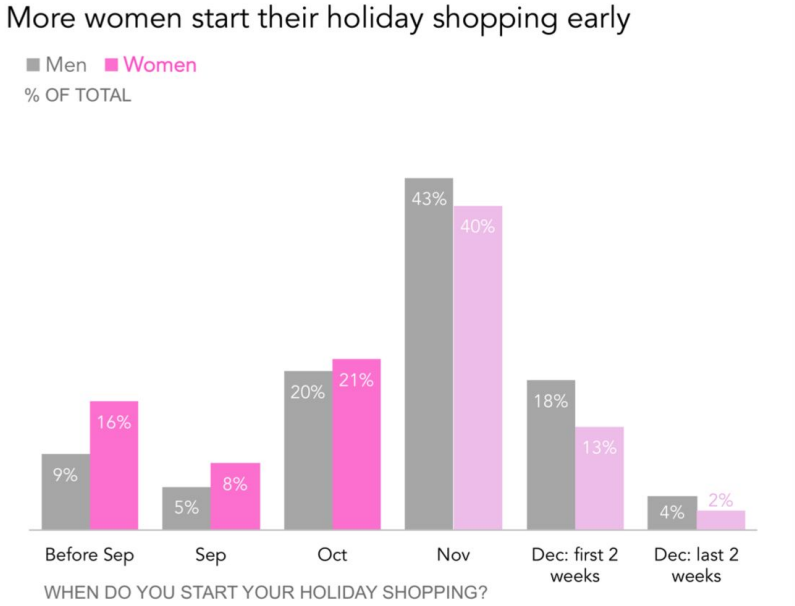




Emphasize the take-away



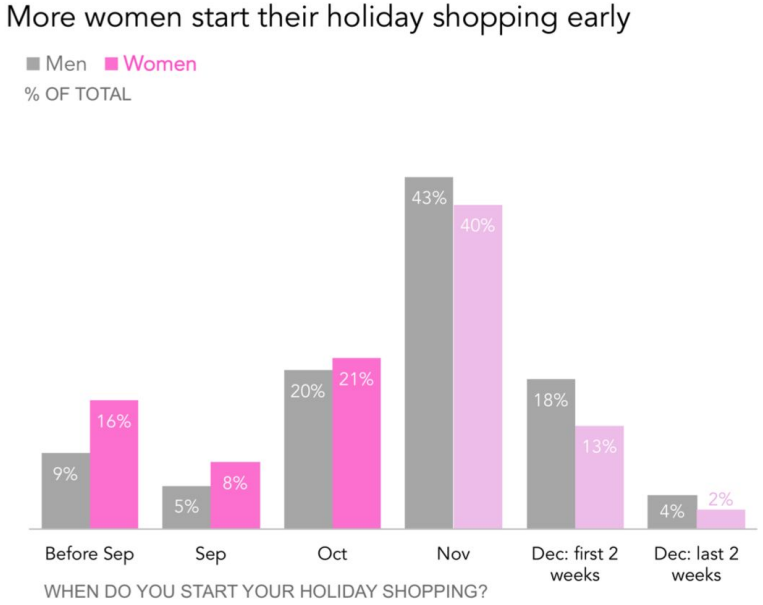
Color: tie takeaway to where to look in data



Still not perfect, but still. Here are the takeaways



Color: tie takeaway to where to look in data



Start to finish



Main take-aways

Consider removing these components when making a chart:

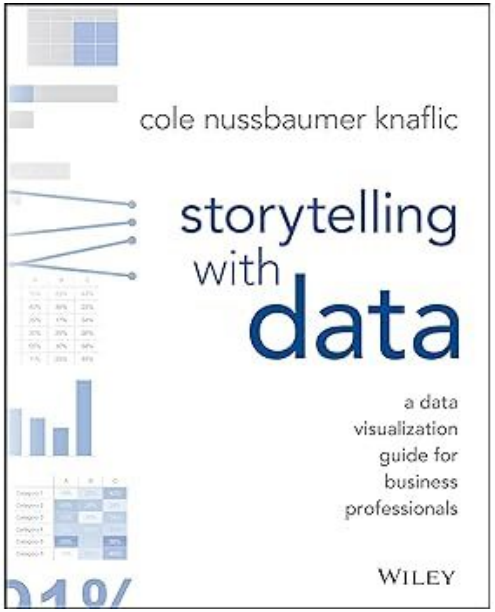
1. **Grid lines** (if not necessary, when data points are close to the axis)
2. **Axis** (when you have data labels)
3. **Decimals** (only when decimals are really important)
4. **3D** (always remove)
5. **Color effects for decoration** (always remove)
6. **Play with font and text size** (some text is more important than others)

Source: https://www.data-to-viz.com/caveat/declutter.html

Inspiration

Cole Nussbaumer Knaflic

www.storytellingwithdata.com





The McCandless Method

Art and Science of Data Presentation

1. **Simplicity**: Use simple shapes, colours, and typography
2. **Clarity**: easy to understand and interpret.
3. **Emphasis**: Use colours, typography, and other design elements to draw attention
4. **Hierarchy**: Use different design elements to create a hierarchy of information
5. **Storytelling**: Use data to tell a story and make it more relatable and memorable.

Source: https://akshaysbabu.medium.com/what-i-understood-from-reading-david-mccandless-the-art-science-of-data-presentation-7982d4d74cef

Other websites

- https://www.data-to-viz.com/
- https://www.storytellingwithdata.com/
- https://informationisbeautiful.net/



Thanks!

Find out more:

ants.agency

linkedin.com/company/ants-agency

facebook.com/Ants.agency