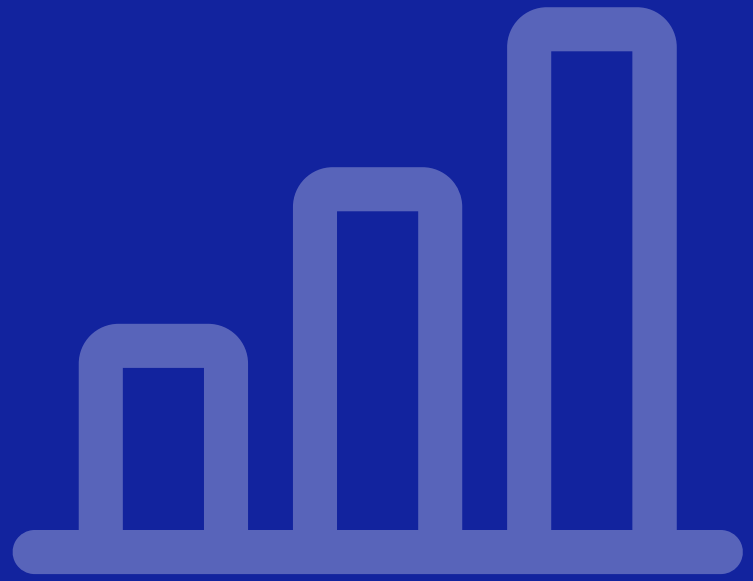
PBIG
POWER BI GEBRUIKERSGROEP

Visualizing Data for Non-Data Experts

Making Reports Accessible to All

Valerie Junk



A big thank you to our amazing partners

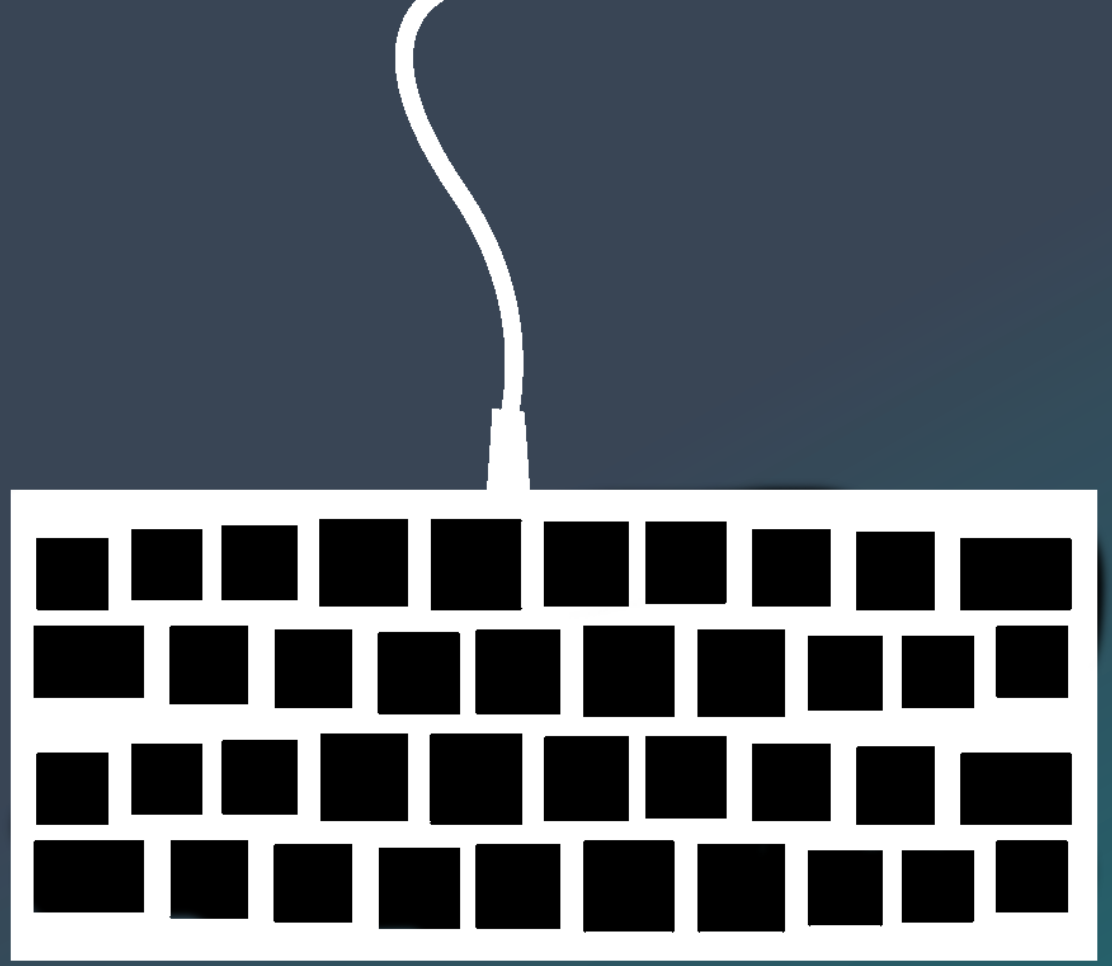
Thanks

Visualizing Data for Non-Data Experts

Making Reports Accessible to All

How it started

What I realized



Valerie Junk

PorcuBI

- Data Visualization & Storytelling
- Change Management
- Trainer

valeriejunk

porcubi

Microsoft® Most Valuable Professional

Power BI – Design & Accessibility

Intuitive Design

- End-user oriented
- Simple & informative

Accessibility

- Keyboard navigation & Tab order
- Screen reader & Alt text
- High Contrast, Focus Mode & Spotlight
- Color ratio & Themes

Intuitive Design...

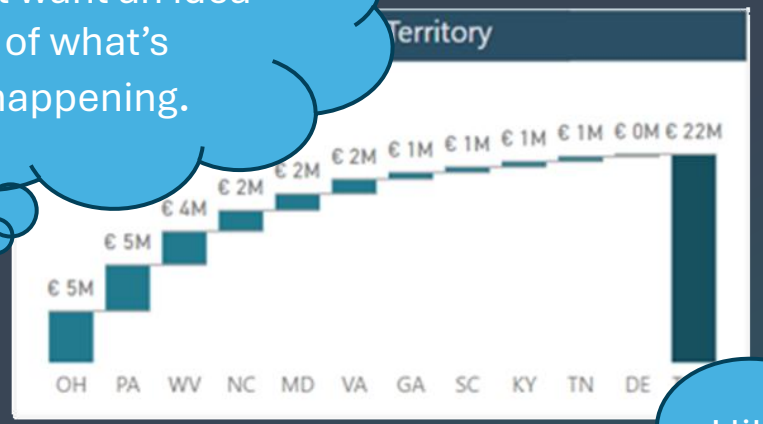
...the end user just doesn't get it

Design for the audience

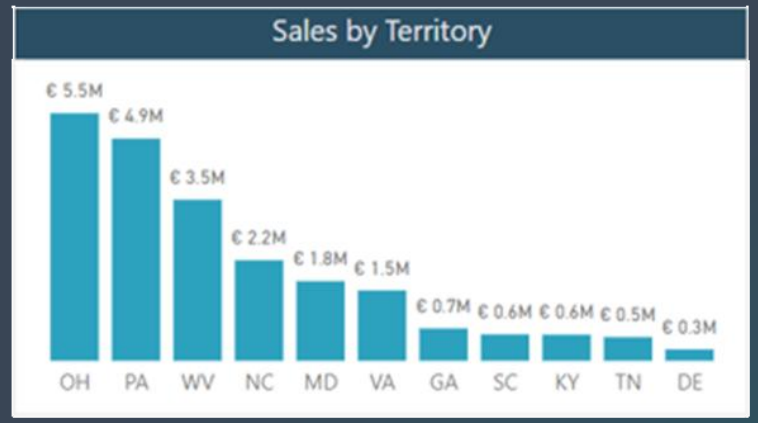
- Who is the audience?
- What is the experience level?
- What actions do they want to take and why?
- What's the process?
- How is the report used?

The perfect visual

I just want an idea of what's happening.



I like tables but my coworker prefers visuals.



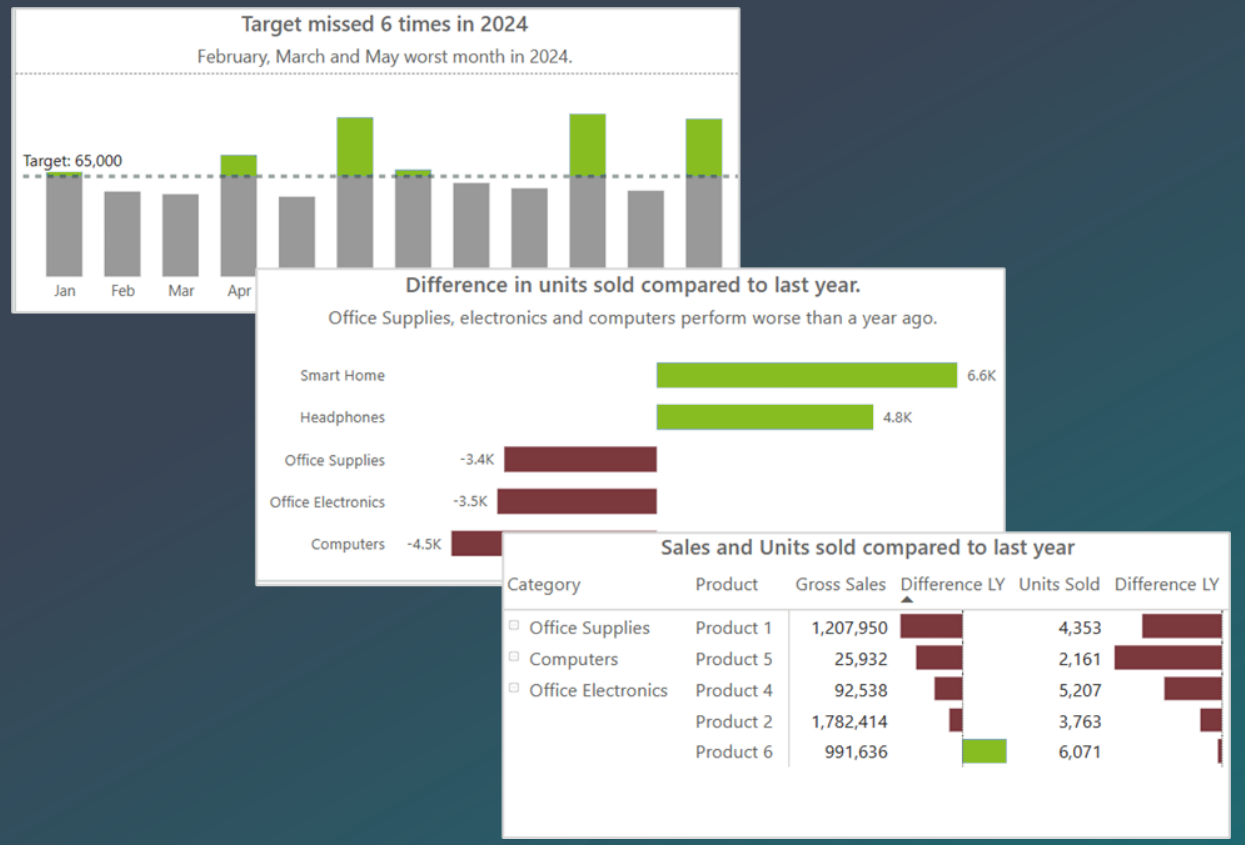
Territory	This Year Sales	bar
OH	€ 5,451,045	
PA	€ 4,891,246	
WV	€ 3,546,443	
NC	€ 2,214,548	
MD	€ 1,753,042	
VA	€ 1,549,656	
Total	**€ 22,051,952**	**€ 22,051,952**

Purpose leads design

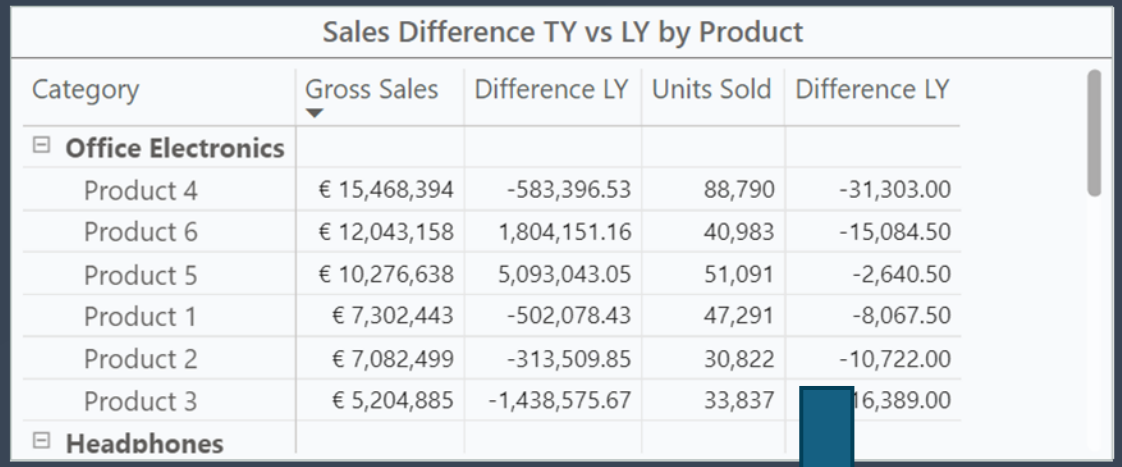
A visual without

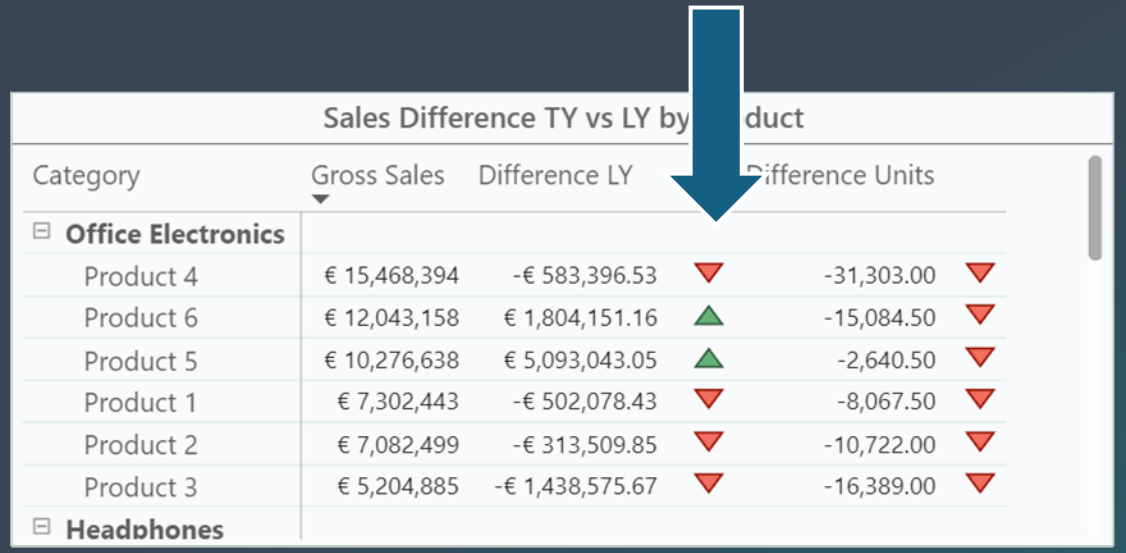
purpose does not add

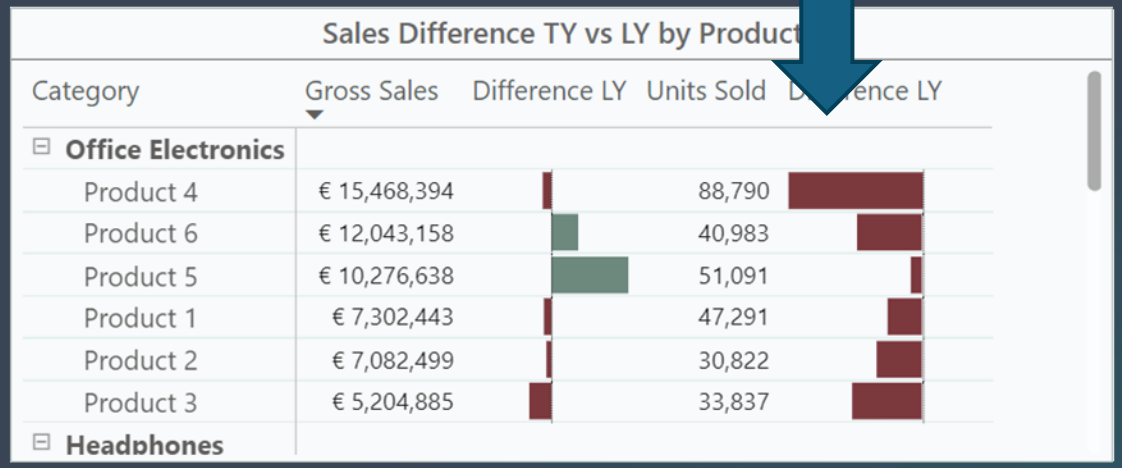
value to a report

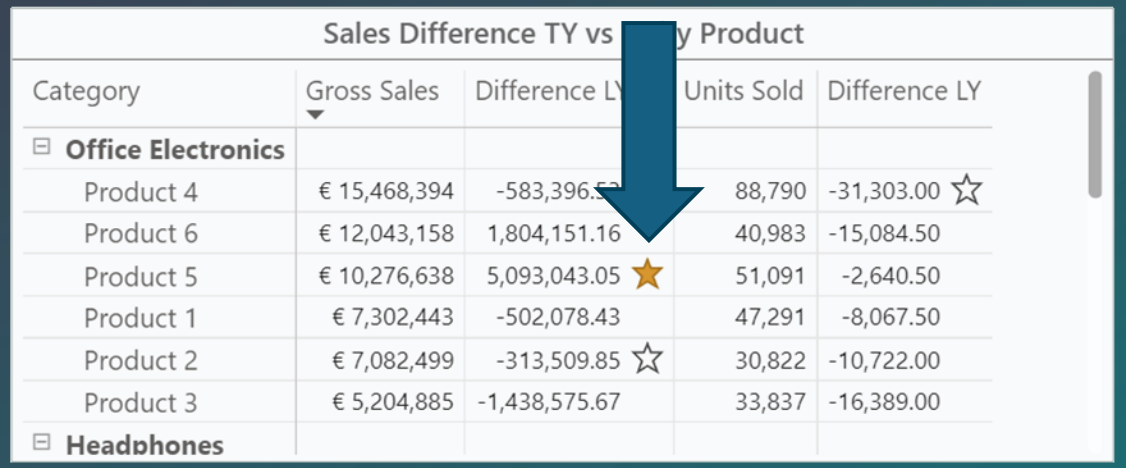


Simple & Informative







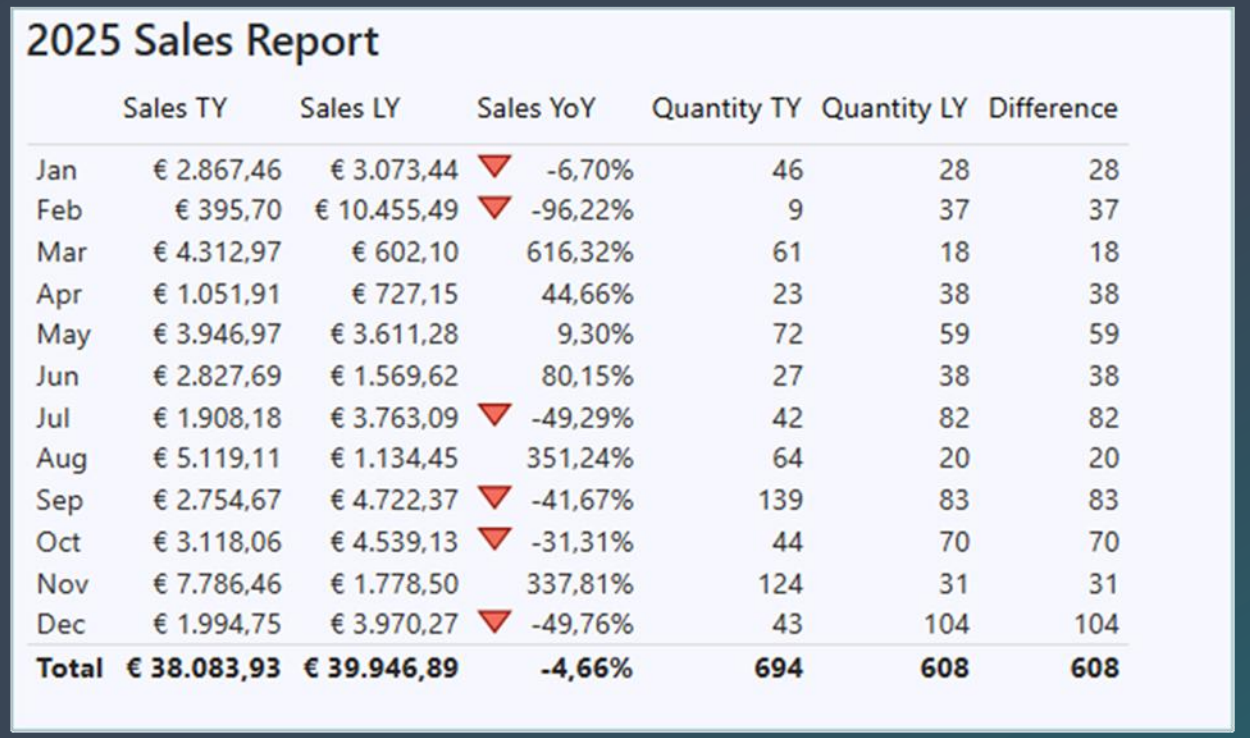


Smart Formatting

2025 Sales Report

	Sales TY	Sales LY	Sales YoY	Quantity TY	Quantity LY	Difference
Jan	€ 2.867,46	€ 3.073,44	-6,70%	46	28	28
Feb	€ 395,70	€ 10.455,49	-96,22%	9	37	37
Mar	€ 4.312,97	€ 602,10	616,32%	61	18	18
Apr	€ 1.051,91	€ 727,15	44,66%	23	38	38
May	€ 3.946,97	€ 3.611,28	9,30%	72	59	59
Jun	€ 2.827,69	€ 1.569,62	80,15%	27	38	38
Jul	€ 1.908,18	€ 3.763,09	-49,29%	42	82	82
Aug	€ 5.119,11	€ 1.134,45	351,24%	64	20	20
Sep	€ 2.754,67	€ 4.722,37	-41,67%	139	83	83
Oct	€ 3.118,06	€ 4.539,13	-31,31%	44	70	70
Nov	€ 7.786,46	€ 1.778,50	337,81%	124	31	31
Dec	€ 1.994,75	€ 3.970,27	-49,76%	43	104	104
Total	**€ 38.083,93**	**€ 39.946,89**	**-4,66%**	**694**	**608**	**608**

Smart Formatting



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Jun	€ 2,827.69	€ 1,569.62	80.15%	27	38	-11
Jul	€ 1,908.18	€ 3,763.09	-49.29%	42	82	-40
Aug	€ 5,119.11	€ 1,134.45	351.24%	64	20	44
Sep	€ 2,754.67	€ 4,722.37	-41.67%	139	83	56
Oct	€ 3,118.06	€ 4,539.13	-31.31%	44	70	-26
Nov	€ 7,786.46	€ 1,778.50	337.81%	124	31	93
Dec	€ 1,994.75	€ 3,970.27	-49.76%	43	104	-61

Smart Formatting

Conditional Formatting | No Formatting

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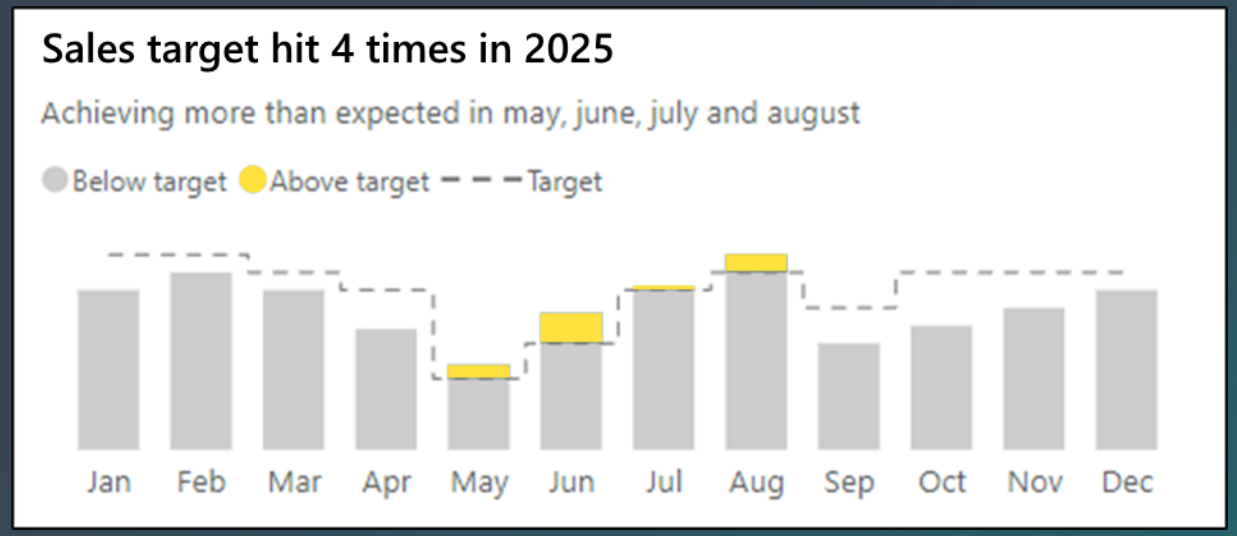
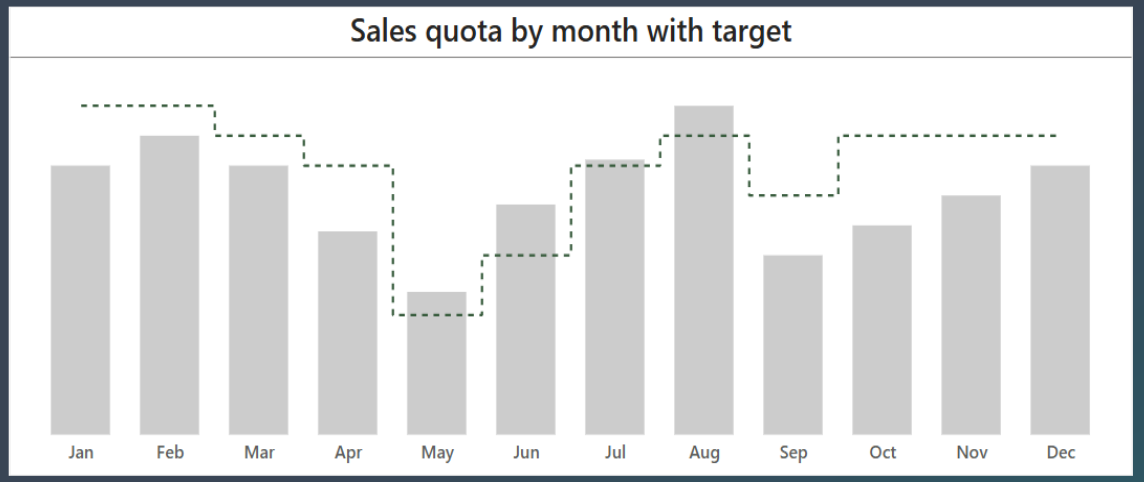
Meaningful (Sub)titles

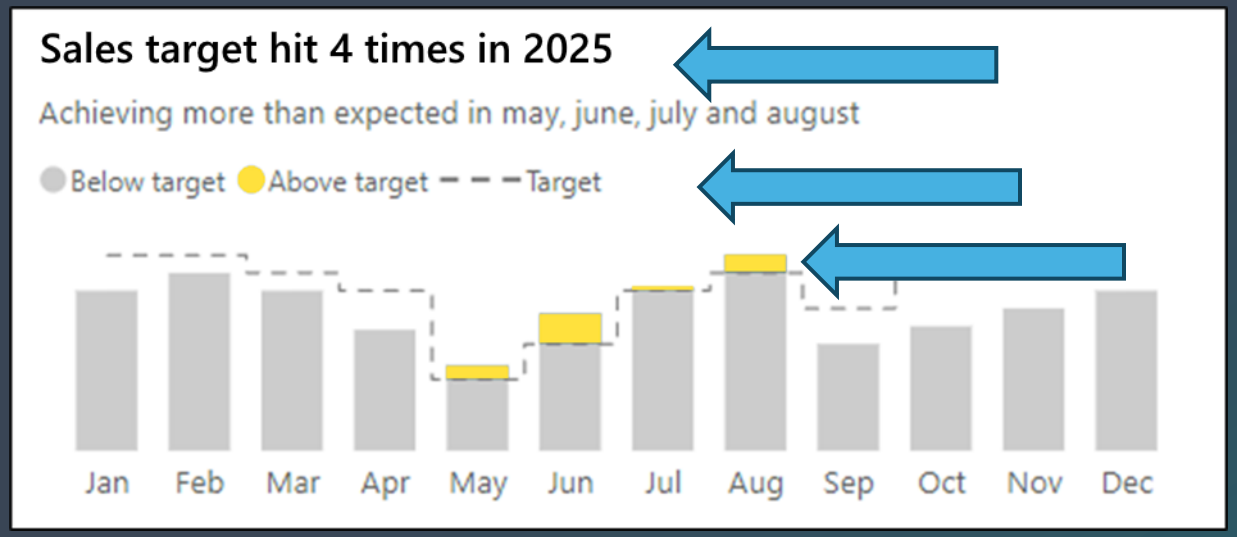
- Provide context
- Guide the end-user
- Audience does not need to analyze data



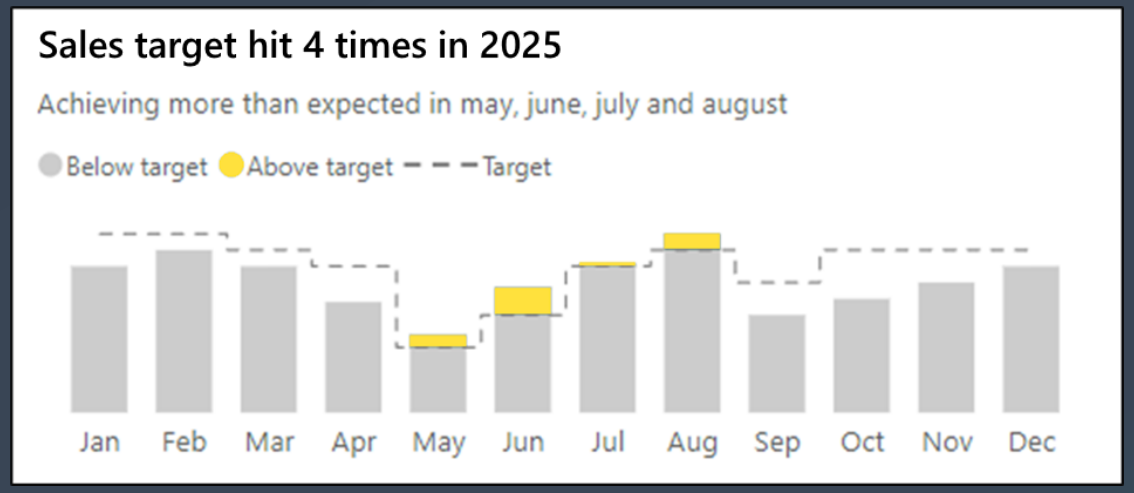
Adding Context

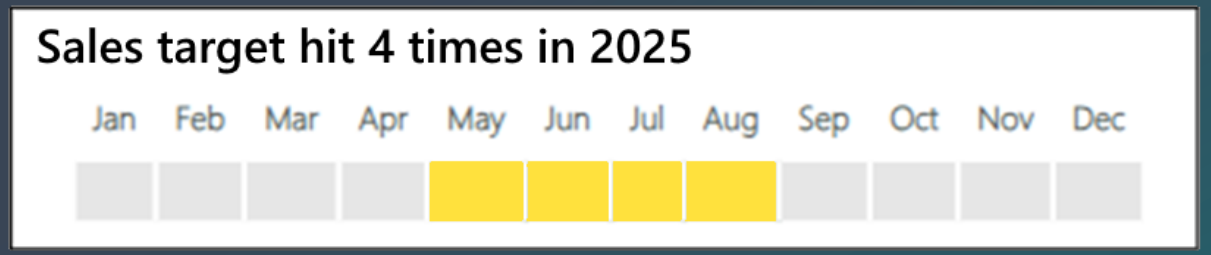


Adding Context



Simplify


Sales target hit 4 times in 2025
Achieving more than expected in may, june, july and august
Below target
Above target
Target
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec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Jan
Feb
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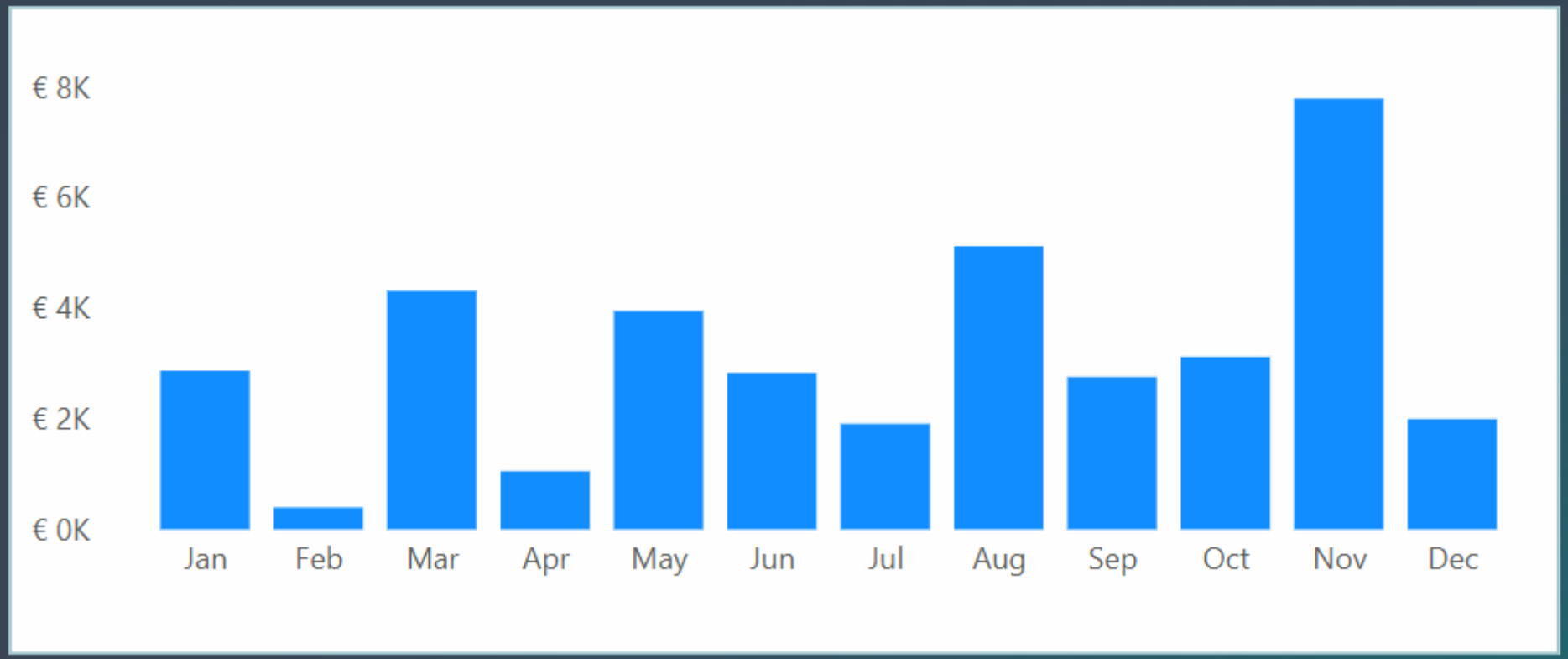
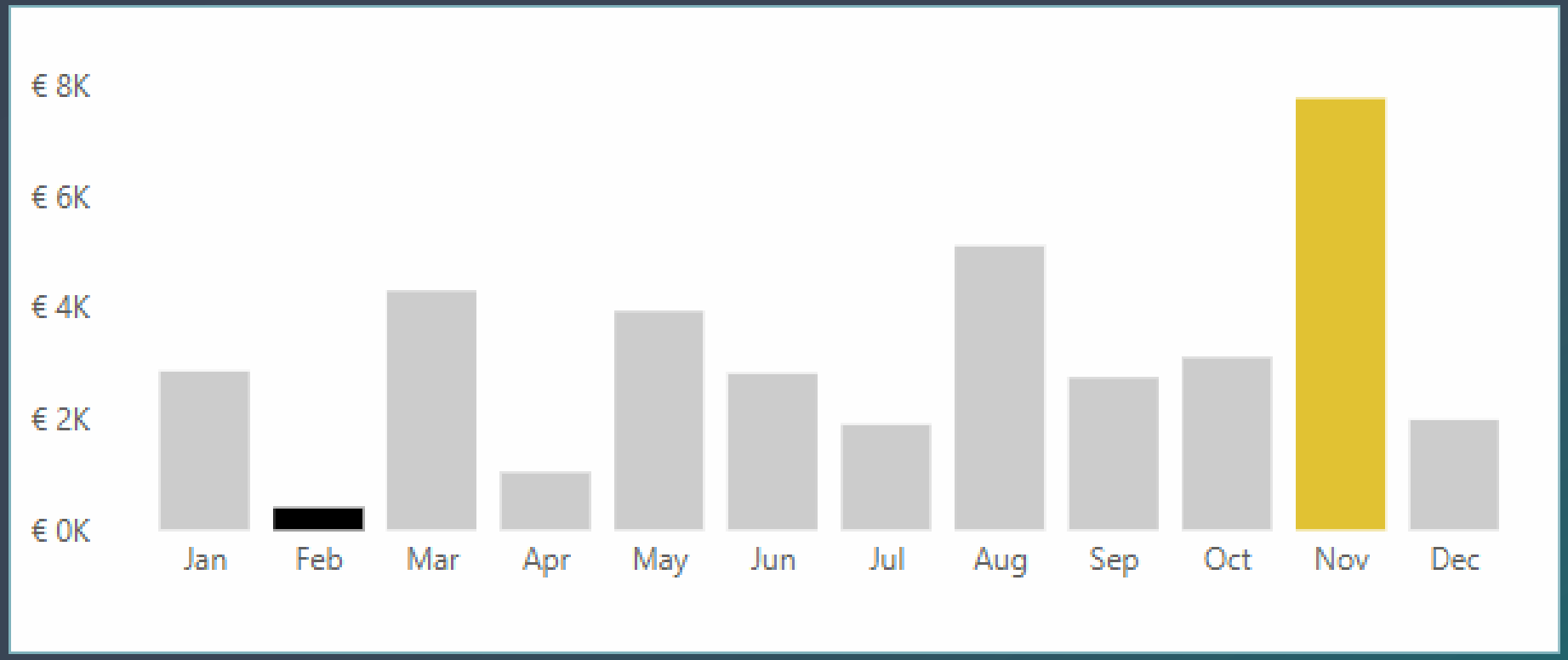
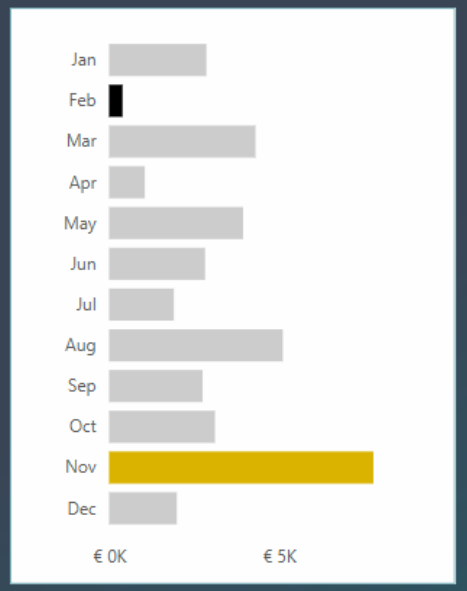
Highlight

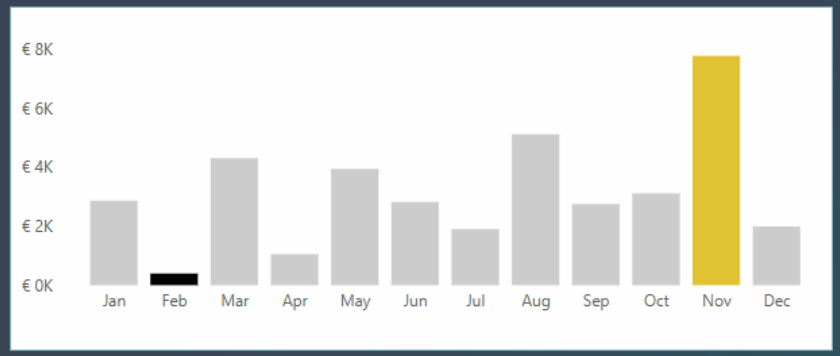


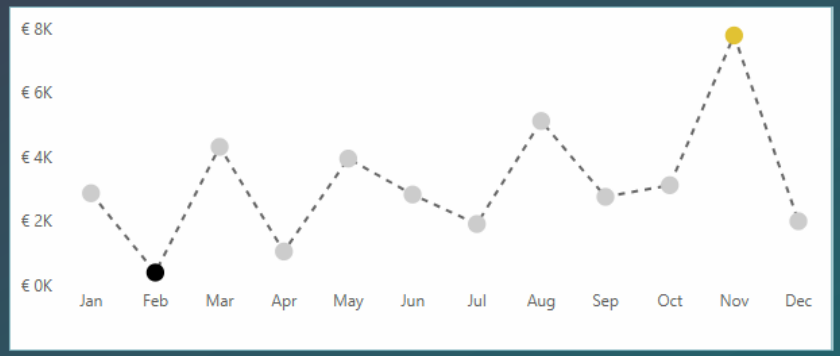
Highlight



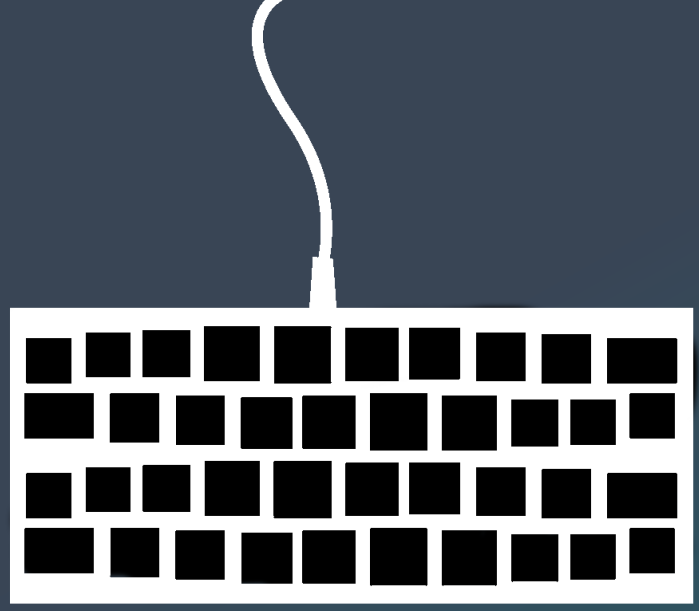
What’s important?





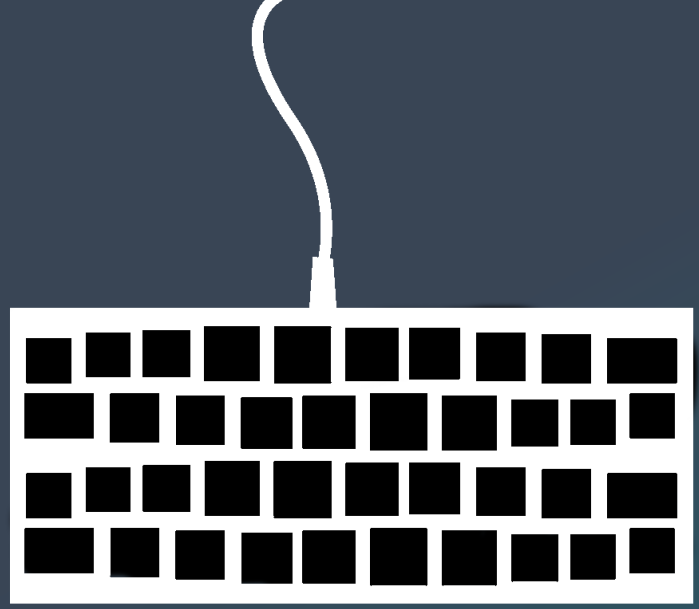


Power BI – Accessibility



Accessibility

- Keyboard navigation & Tab order
- Screen reader & Alt text
- High Contrast, Focus Mode & Spotlight
- Color ratio & Themes



Keyboard Navigation

Sales Overview 2024

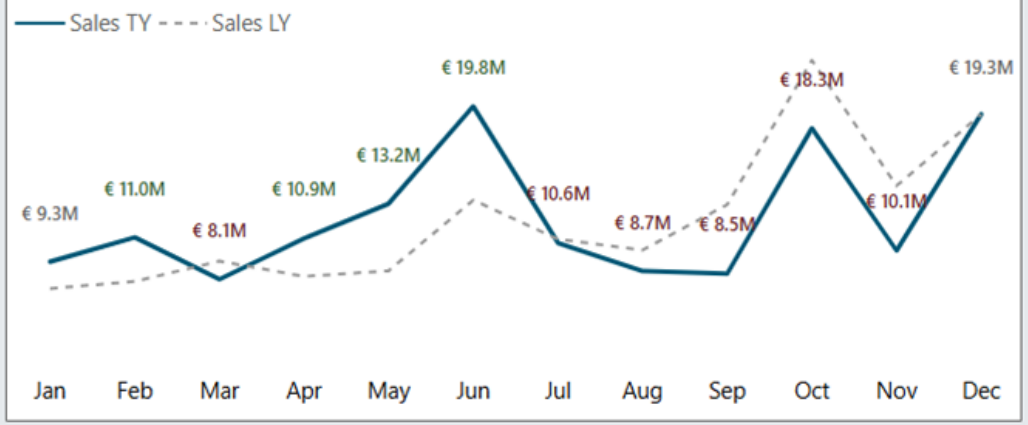
Quarter: Select all | Q-1 | Q-2 | Q-3 | Q-4

Country: All

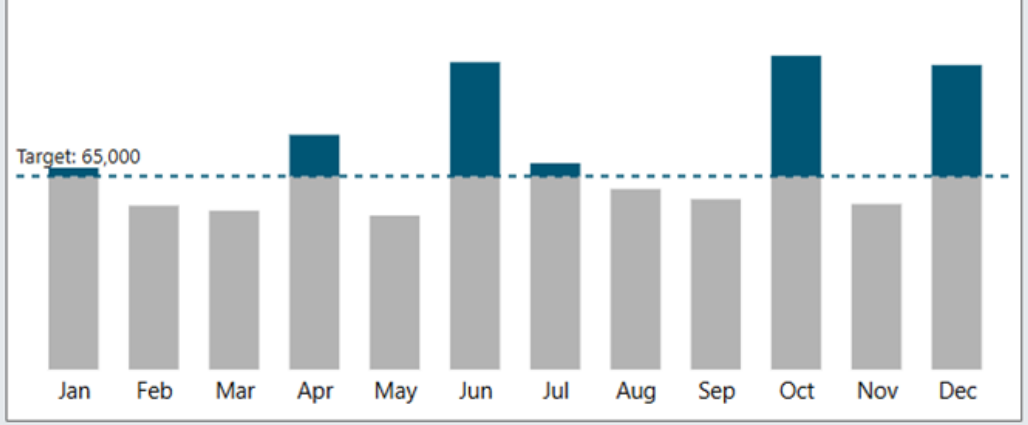
Category: All

Sales TY	Cost of Goods Sold	Gross Margin	Units Sold	Operating Expenses
€ 147.77M	€ 79.30M	€ 68.48M	861.13K	€ 51K
Last Year: € 146.07M (+1,70 M)	Last Year: € 101.83M	Last Year: € 44.24M	Last Year: 1.13M (-264,7K)	Last Year: € 68K

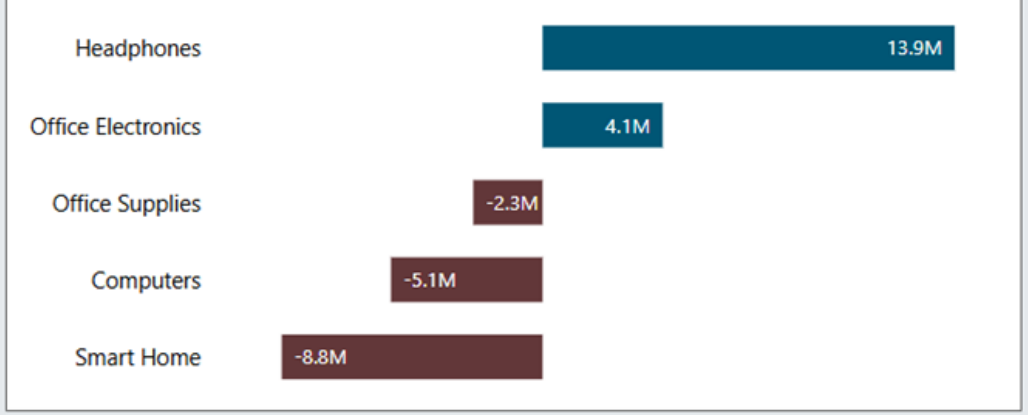
Sales TY vs LY



Units Sold vs. Target



Sales Difference by Category



Sales Difference by Categ

Category	Product	Gross Sales	Difference LY	Units Sold	Difference LY
Office Electronics	Product 4	€ 15,468,394		88,790	
	Product 6	€ 12,043,158		40,983	
	Product 5	€ 10,276,638		51,091	
	Product 1	€ 7,302,443		47,291	
	Product 2	€ 7,082,499		30,822	
	Product 3	€ 5,204,885		33,837	
Headphones	Product 4	€ 9,216,325		66,660	
	Product 1	€ 8,318,254		40,526	
	Product 6	€ 7,796,254		36,423	
	Product 2	€ 6,714,356		35,384	

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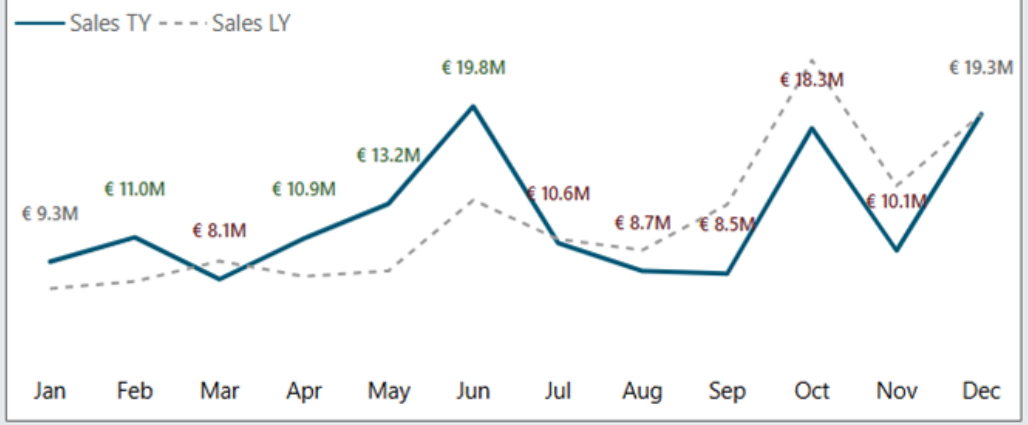

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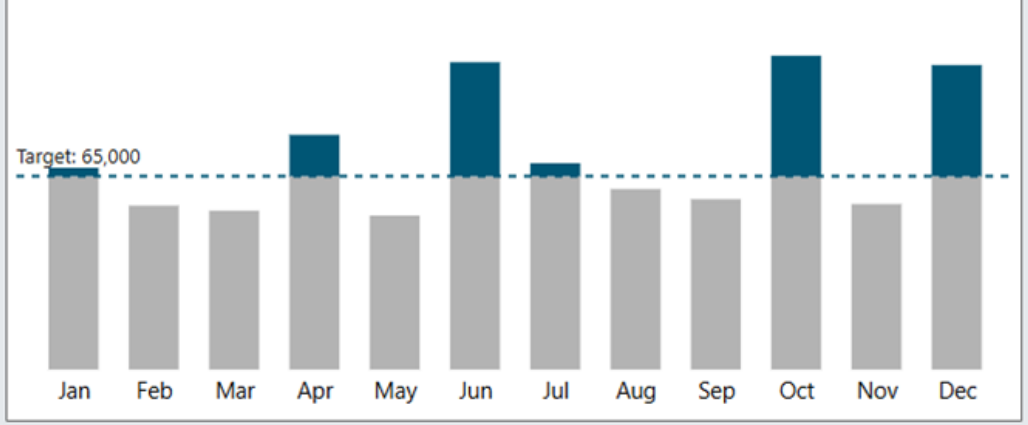

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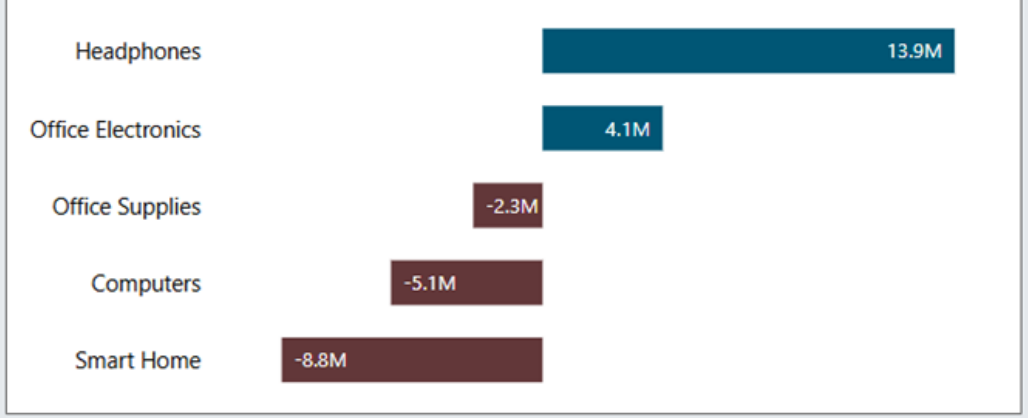

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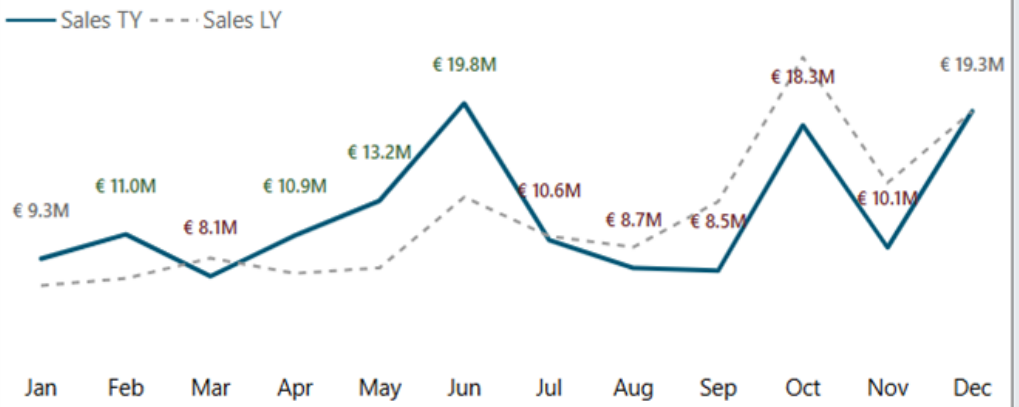

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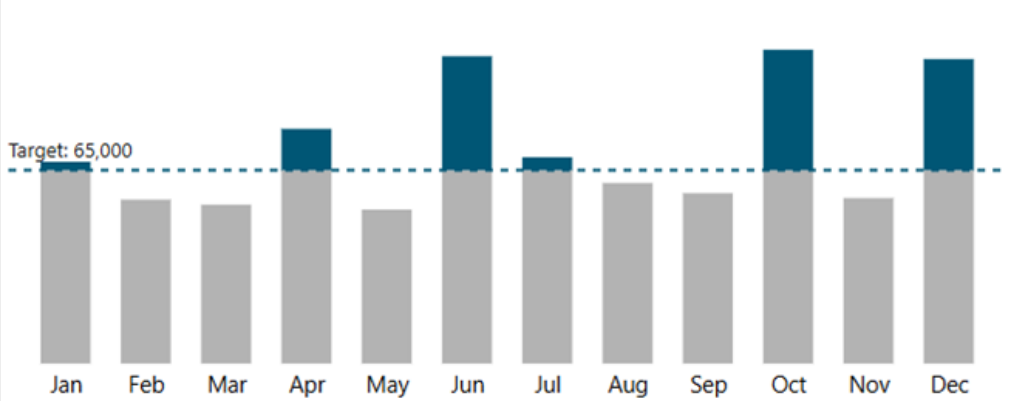

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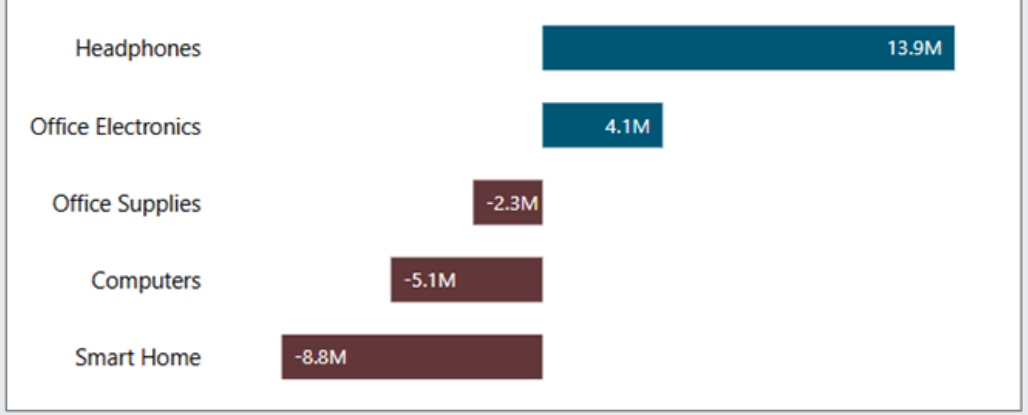

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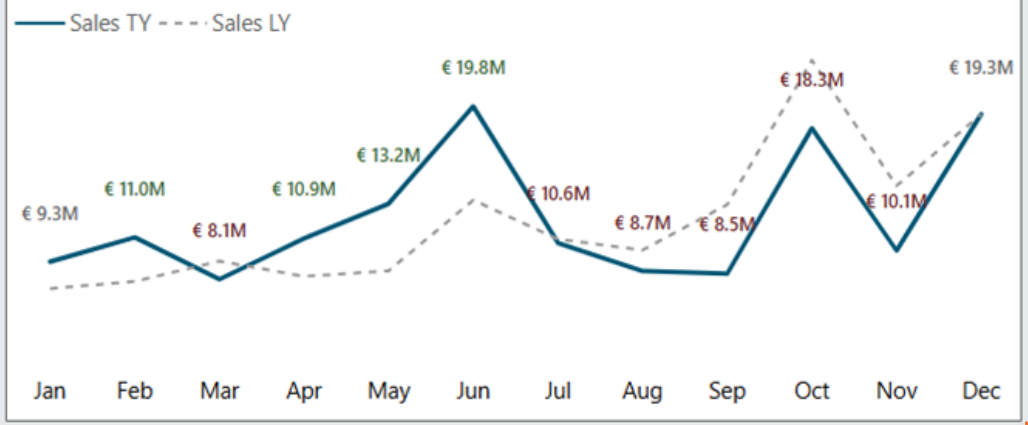
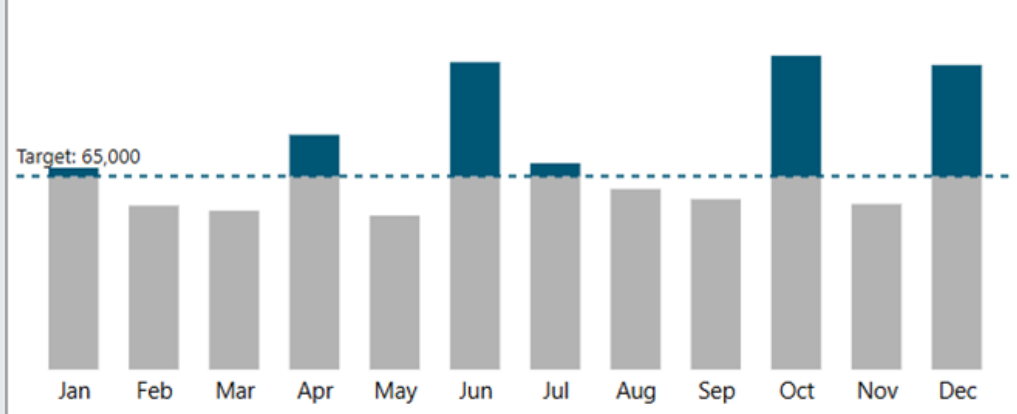
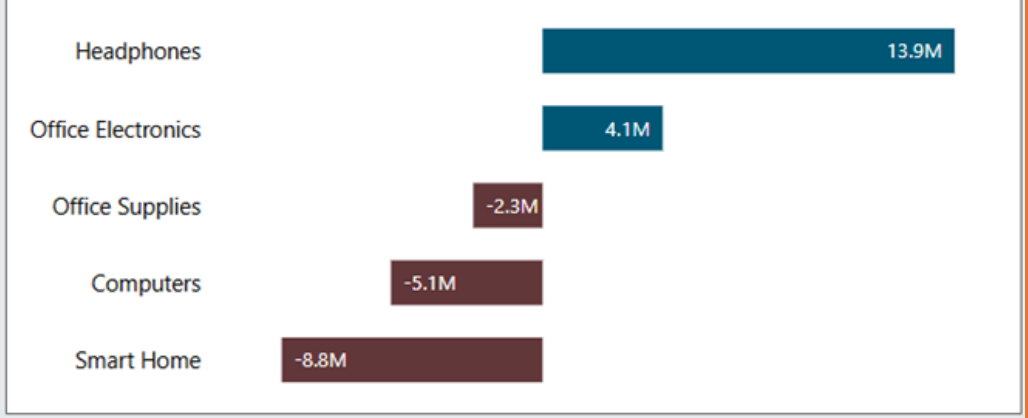


Units Sold vs. Target



Sales Difference by Category



Sales Difference by Categ...

Category	Product	Gross Sales	Difference LY	Units Sold	Difference LY
Office Electronics	Product 4	€ 15,468,394		88,790	
	Product 6	€ 12,043,158		40,983	
	Product 5	€ 10,276,638		51,091	
	Product 1	€ 7,302,443		47,291	
	Product 2	€ 7,082,499		30,822	
	Product 3	€ 5,204,885		33,837	
Headphones	Product 4	€ 9,216,325		66,660	
	Product 1	€ 8,318,254		40,526	
	Product 6	€ 7,796,254		36,423	
	Product 2	€ 6,714,356		35,384	

Sales Overview 2024

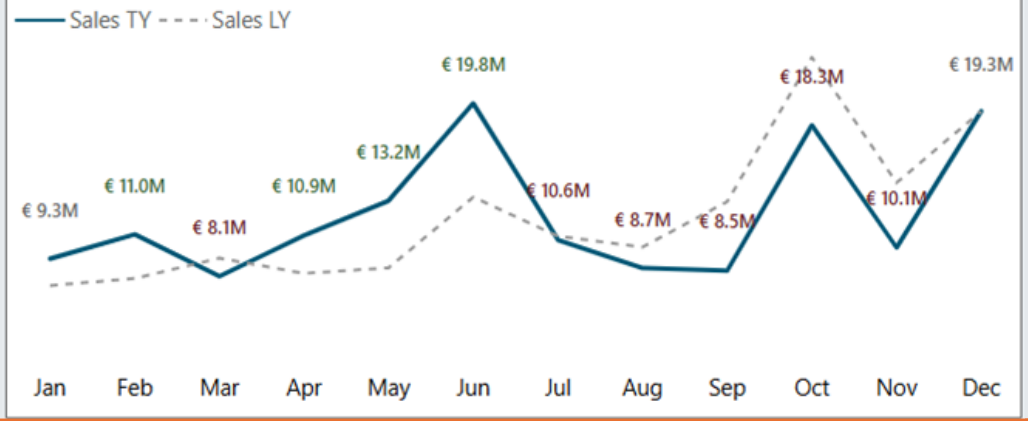
Quarter: Select all | Q-1 | Q-2 | Q-3 | Q-4

Country: All

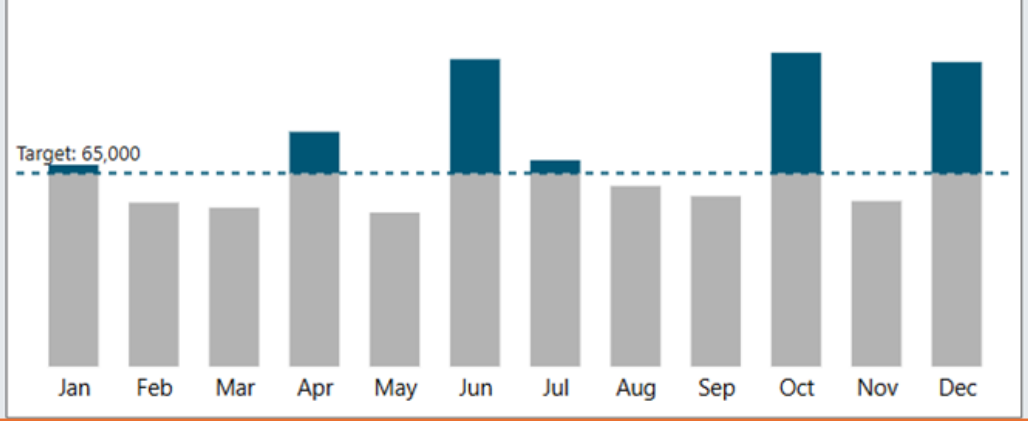
Category: All

Sales TY	Cost of Goods Sold	Gross Margin	Units Sold	Operating Expenses
€ 147.77M	€ 79.30M	€ 68.48M	861.13K	€ 51K
Last Year: € 146.07M (+1,70 M)	Last Year: € 101.83M	Last Year: € 44.24M	Last Year: 1.13M (-264,7K)	Last Year: € 68K

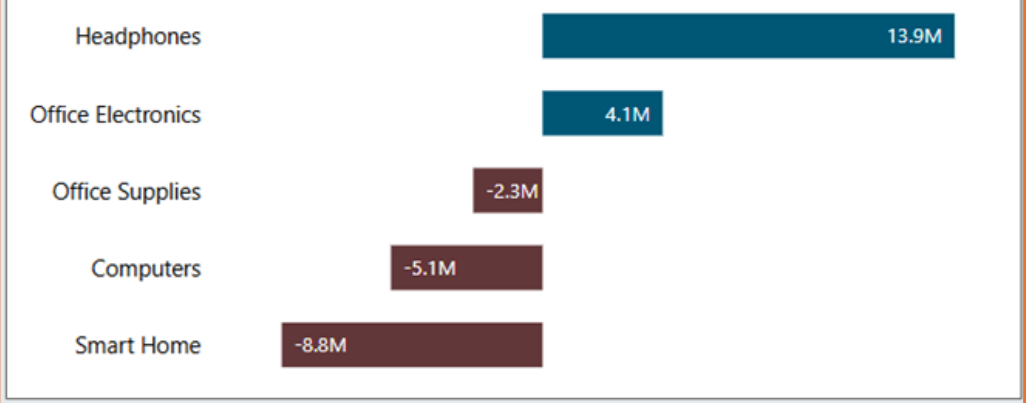
Sales TY vs LY



Units Sold vs. Target



Sales Difference by Category



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Sales Overview 2024

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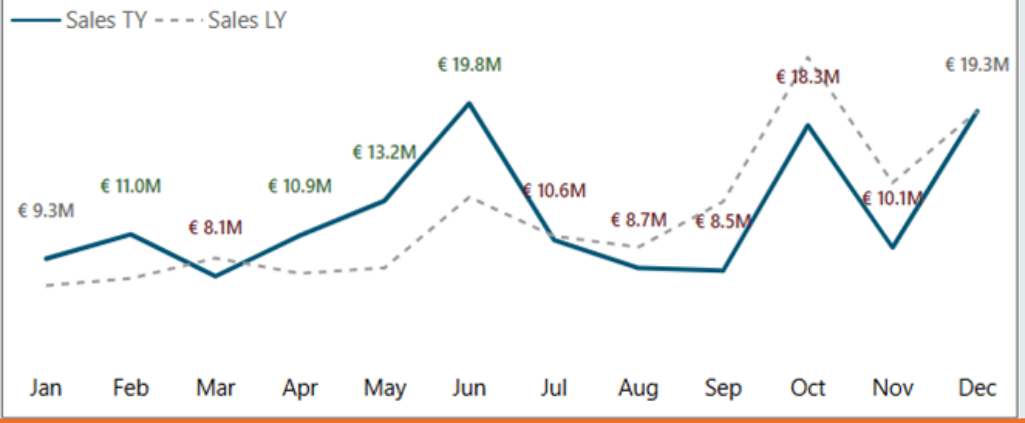
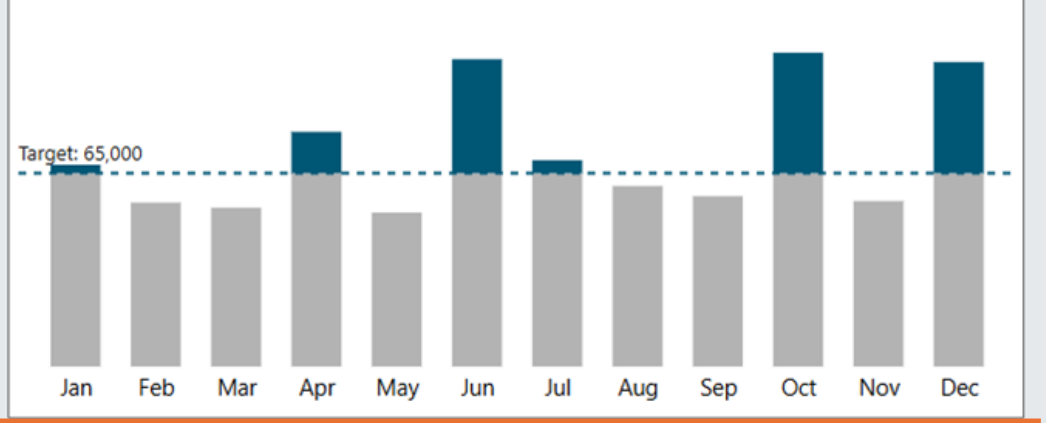
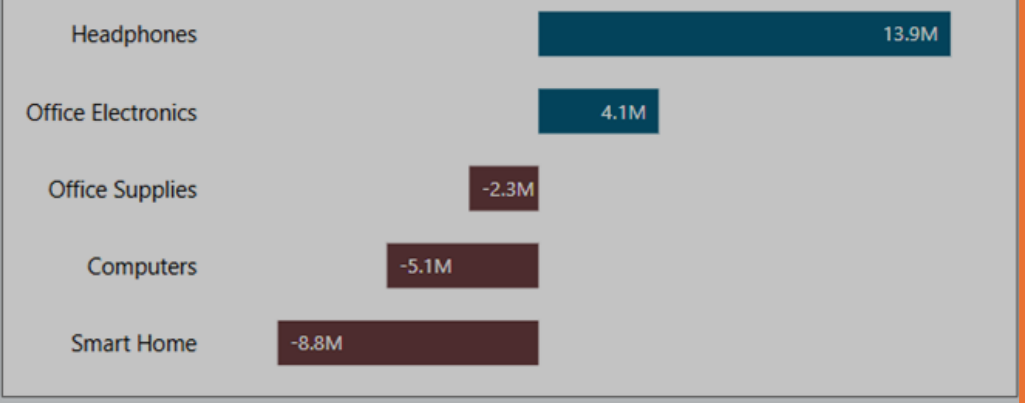
Sales TY vs LY



Units Sold vs. Target



Sales Difference by Category



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Sales Overview 2024

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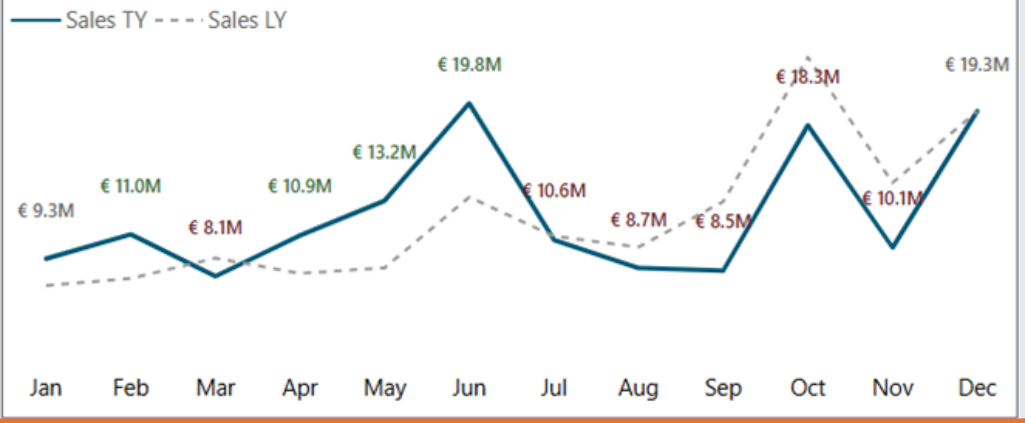
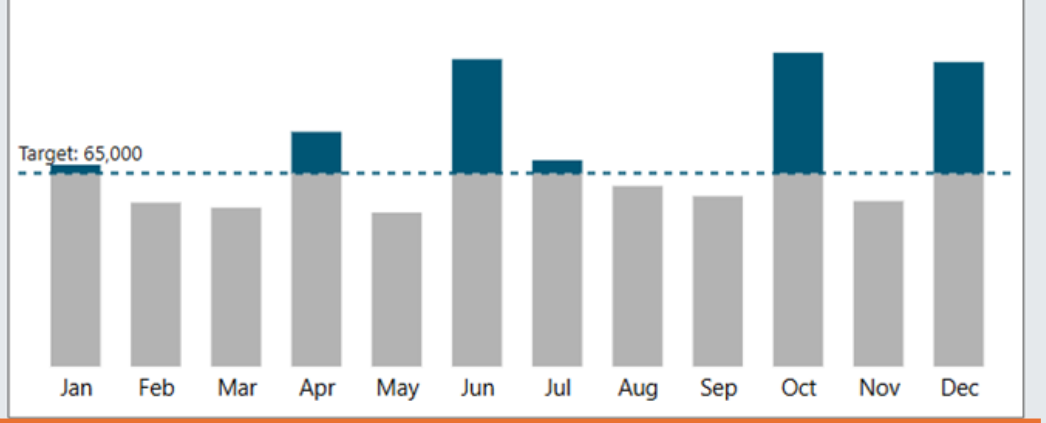
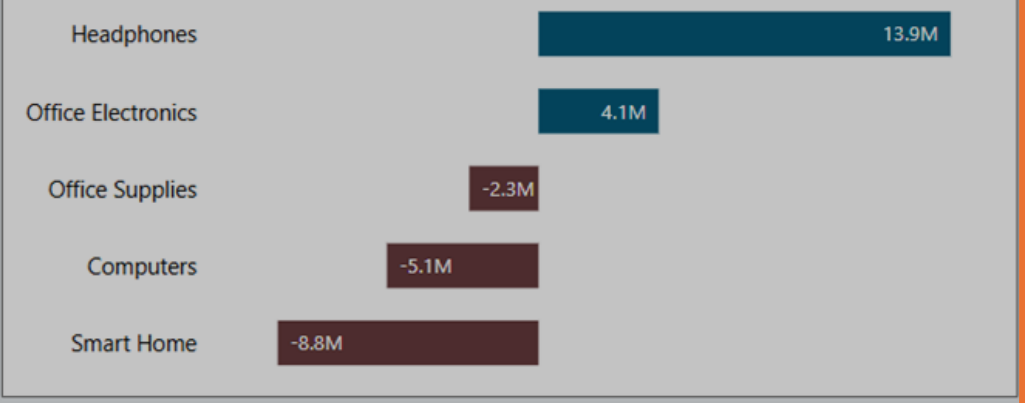
Sales TY vs LY



Units Sold vs. Target



Sales Difference by Category



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Sales Overview 2024

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Country: All

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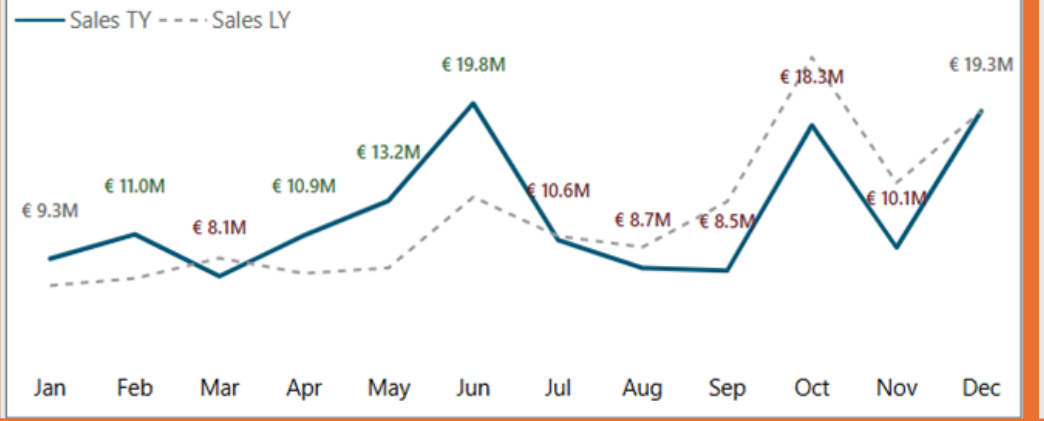
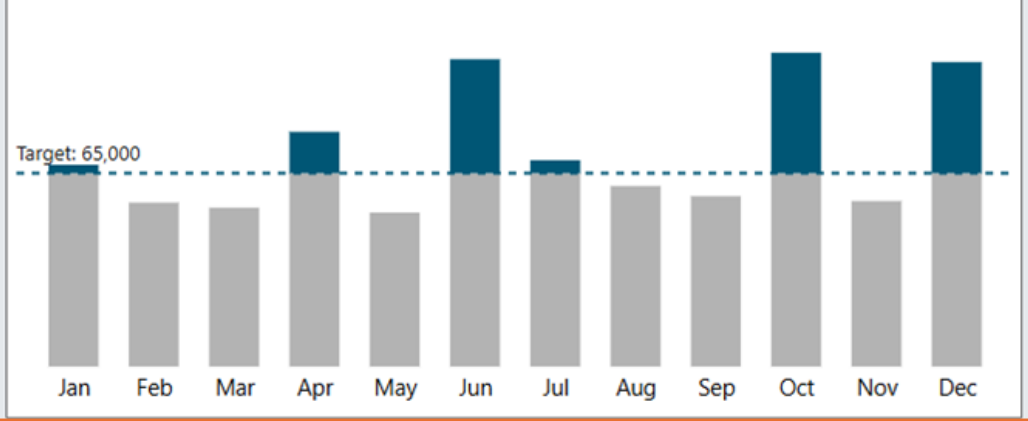
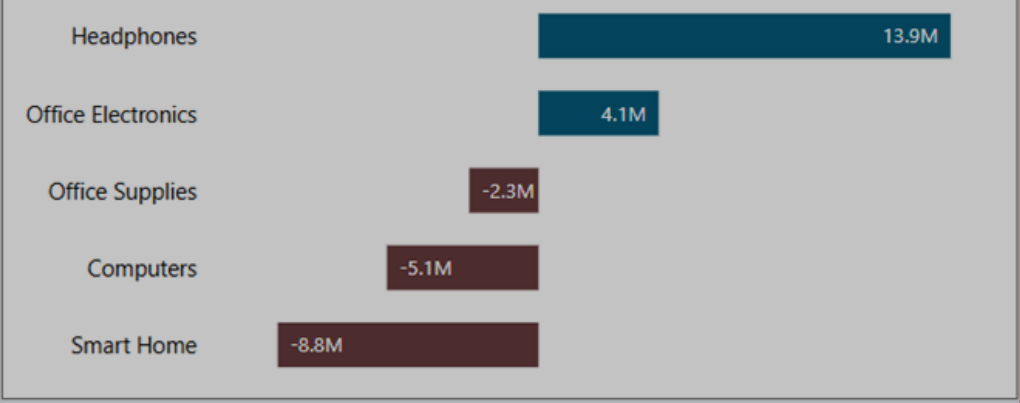
Sales TY vs LY



Units Sold vs. Target



Sales Difference by Category



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Sales Overview 2024

Quarter: Select all | Q-1 | Q-2 | Q-3 | Q-4

Country: All

Category: All

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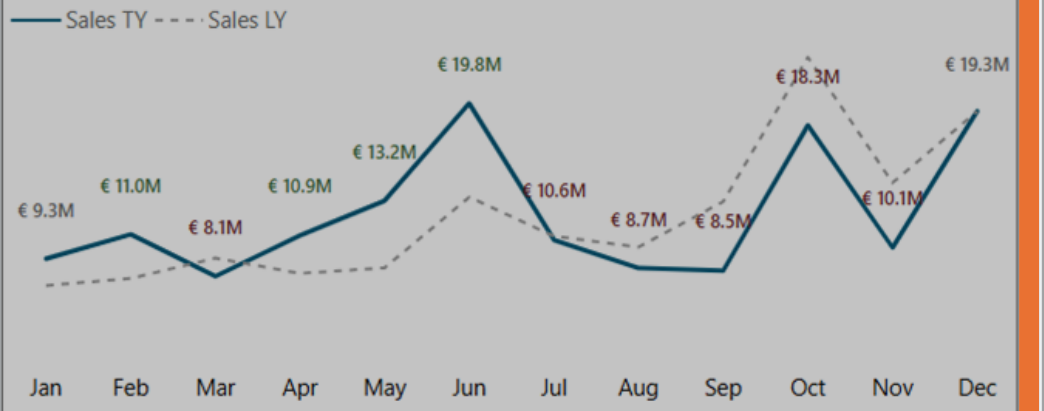
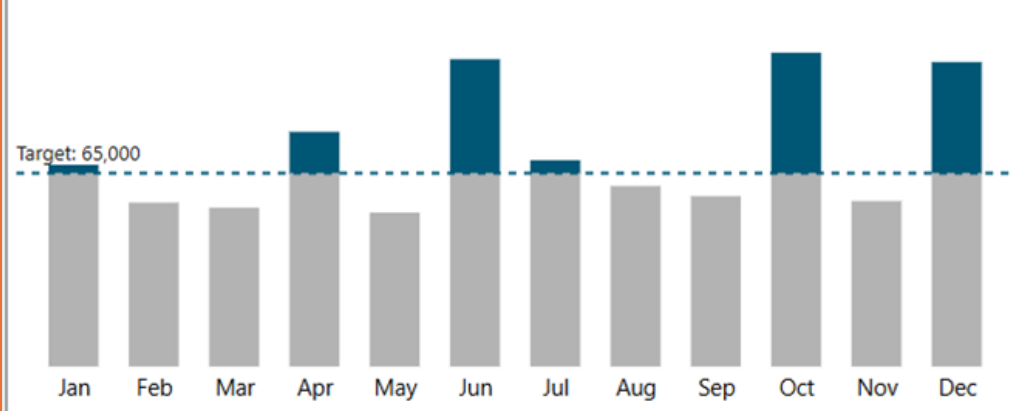
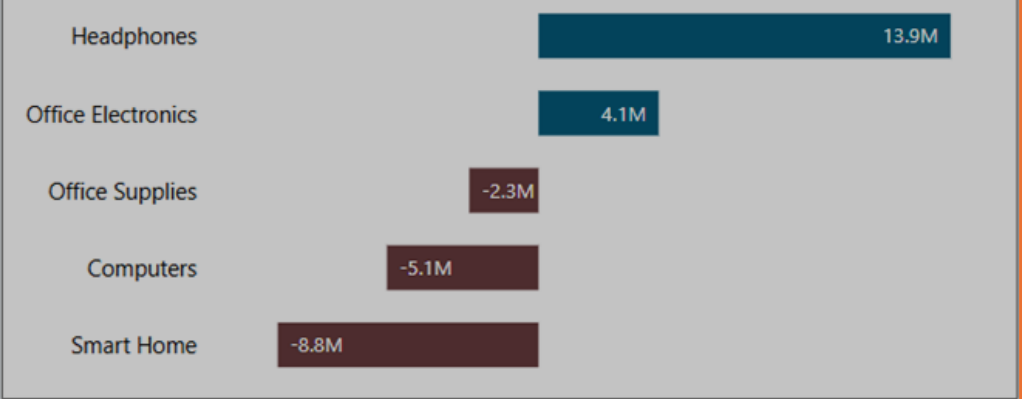
Sales TY vs LY



Units Sold vs. Target



Sales Difference by Category



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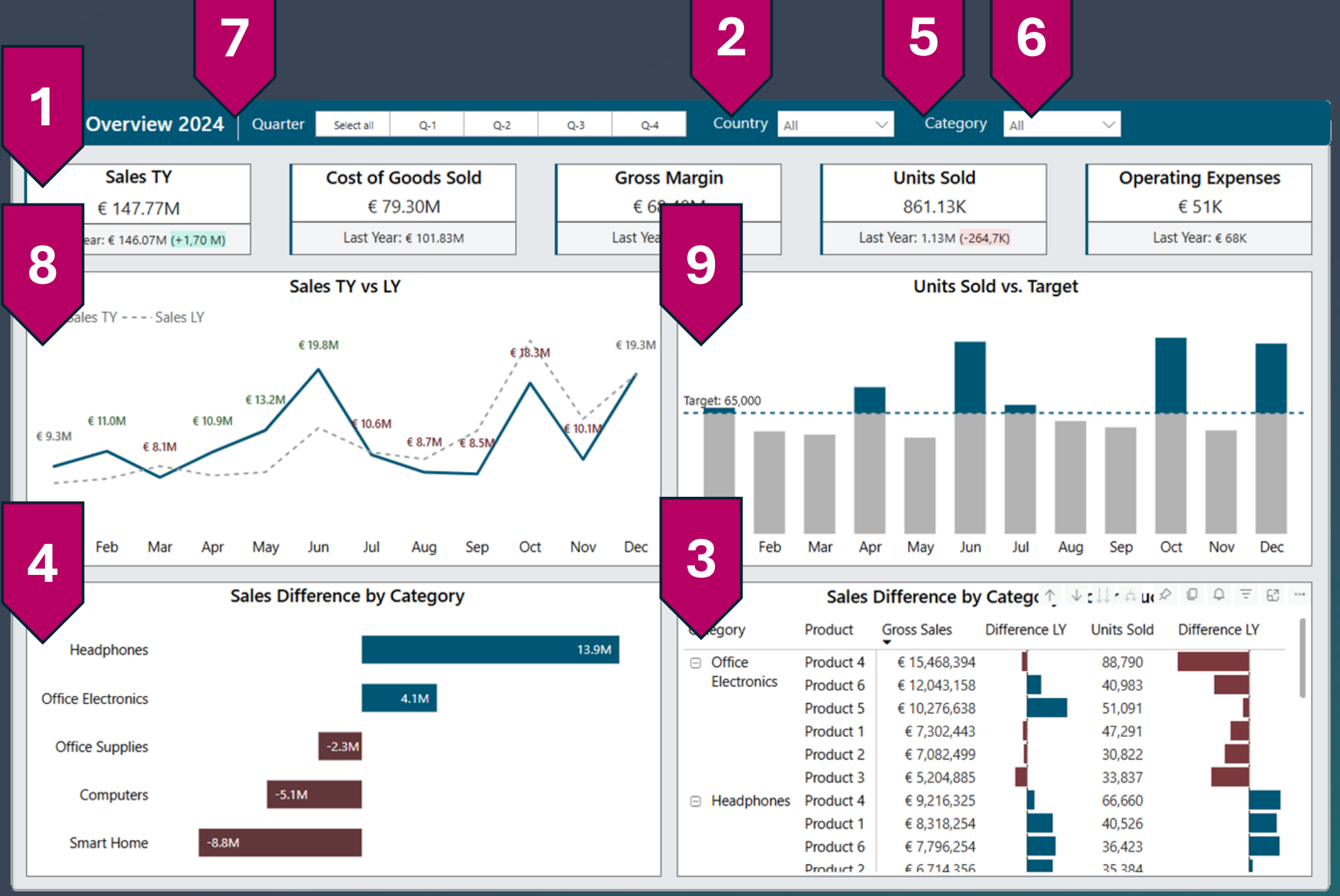
1
7
2
5
6
Overview 2024
Quarter
Select all
Q-1
Q-2
Q-3
Q-4
Country
All
Category
All
Sales TY
€ 147.77M
Last Year: € 146.07M (+1,70 M)
Cost of Goods Sold
€ 79.30M
Last Year: € 101.83M
Gross Margin
Last Year
Units Sold
861.13K
Last Year: 1.13M (-264,7K)
Operating Expenses
€ 51K
Last Year: € 68K
8
9
Sales TY vs LY
Sales TY
Sales LY
€ 9.3M
€ 11.0M
€ 8.1M
€ 10.9M
€ 13.2M
€ 19.8M
€ 10.6M
€ 8.7M
€ 8.5M
€ 18.3M
€ 10.1M
€ 19.3M
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Units Sold vs. Target
Target: 65,000
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
4
3
Sales Difference by Category
Headphones
13.9M
Office Electronics
4.1M
Office Supplies
-2.3M
Computers
-5.1M
Smart Home
-8.8M
Sales Difference by Categ
Product
Gross Sales
Difference LY
Units Sold
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Keyboard Navigation

All elements can be navigated using keyboard shortcuts

Shift + ? = Overview shortcuts

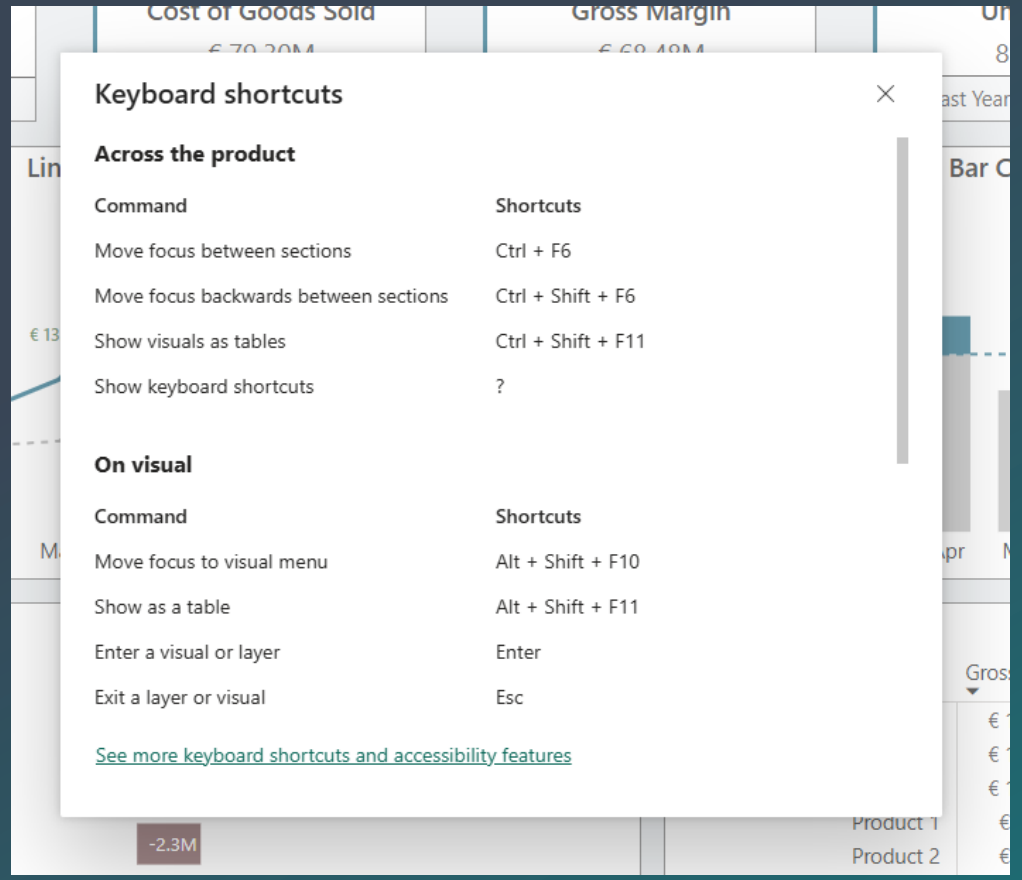
Ctrl + F6 = Move between sections

Enter = Enter/Exit a visual

Ctrl + Space = Multi-select data points

Ctrl Shift C = Unselect all filter selections.

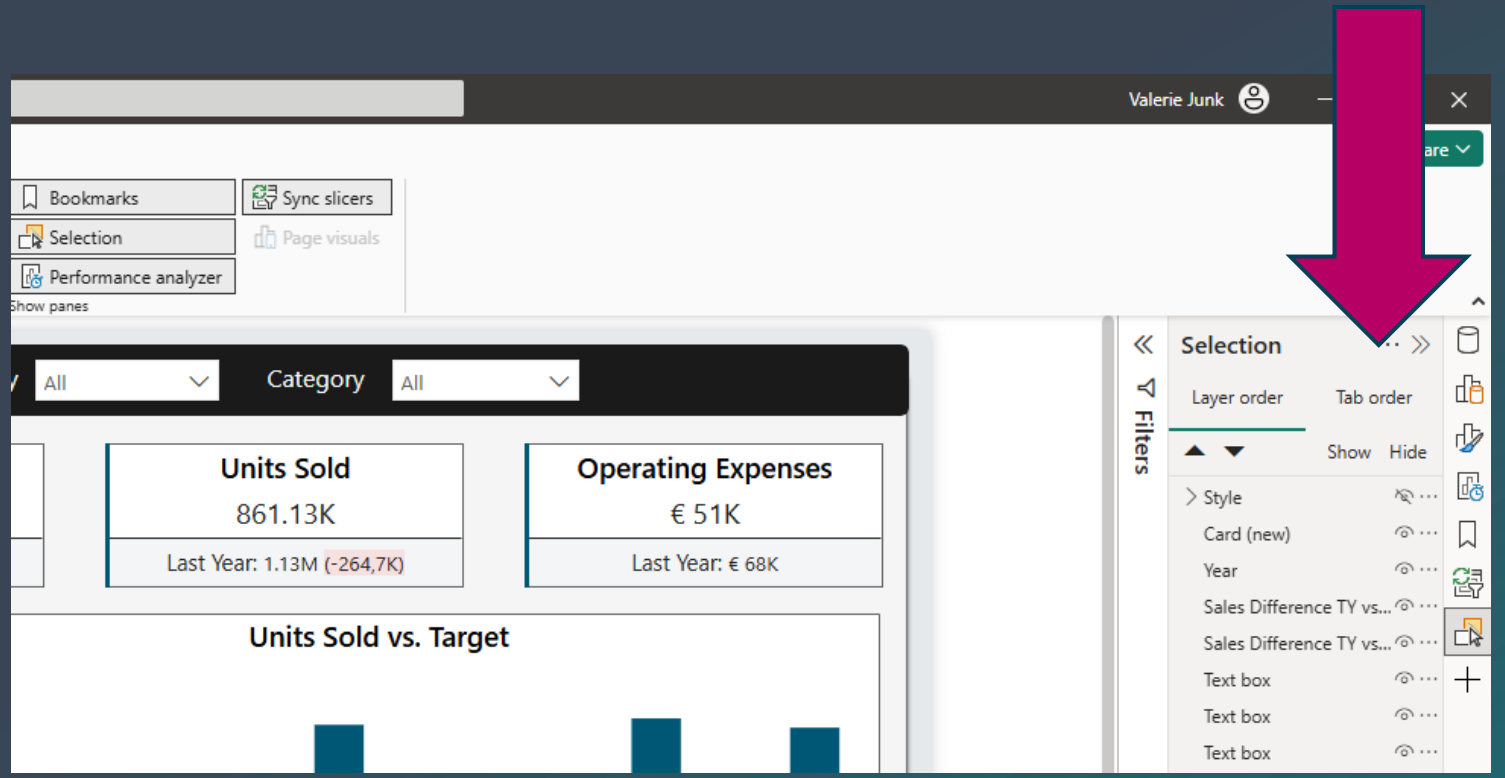
Ctrl + Shift + F11 = Show visuals as tables

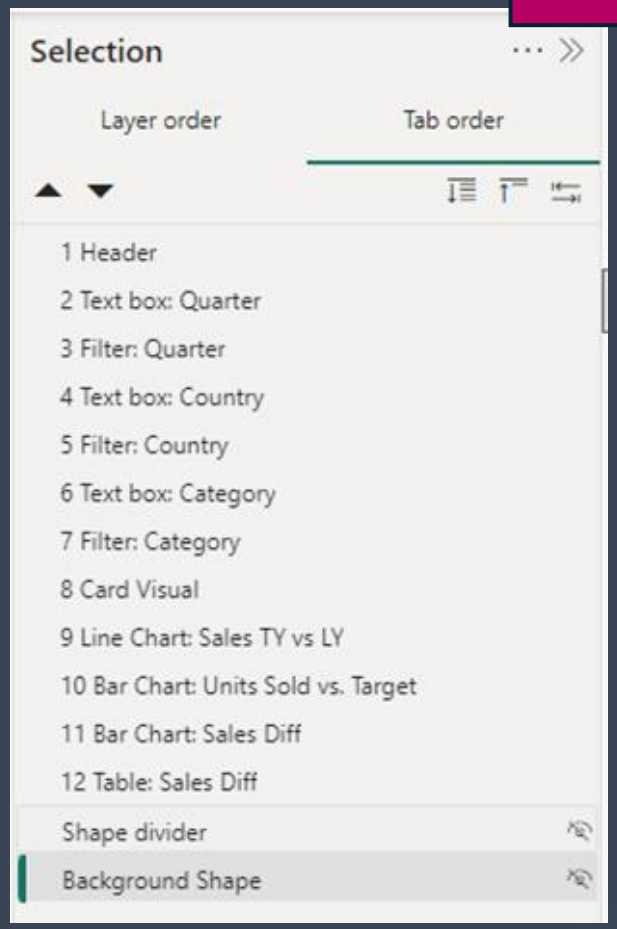


https://learn.microsoft.com/en-us/power-bi/create-reports/desktop-accessibility-keyboard-shortcuts

Tab Order

- View –> Selection –> Tab order
- Drag and Drop
- Hide elements





1 2 3 4 5 6 7

Sales Overview 2024 | Quarter: Select all | Q-1 | Q-2 | Q-3 | Q-4 | Country: All | Category: All

8

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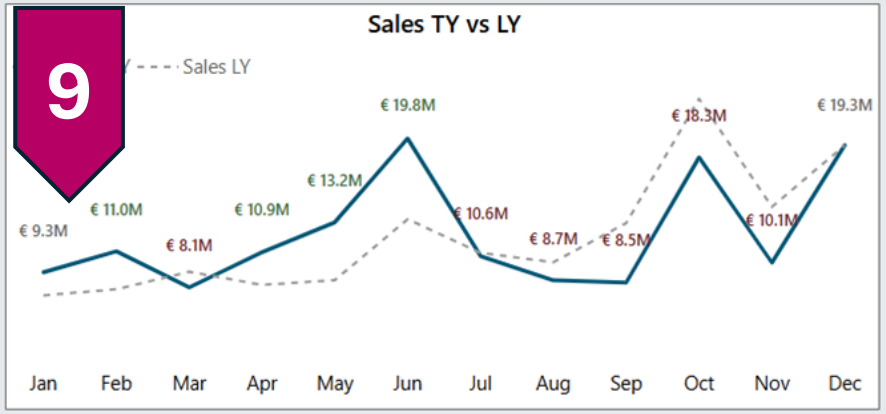

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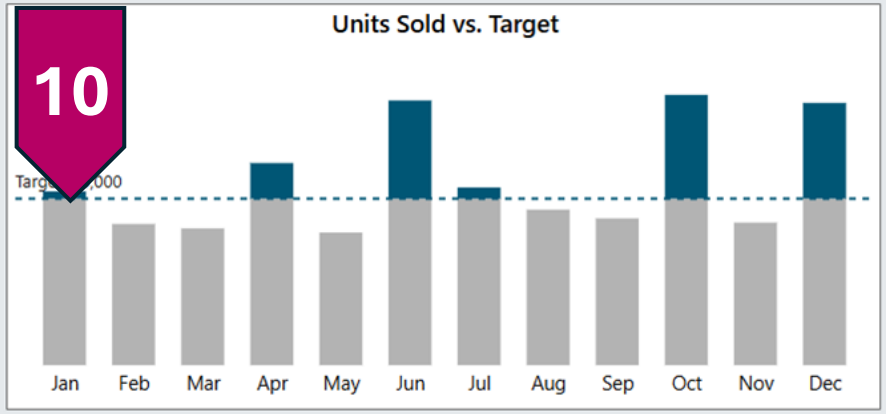

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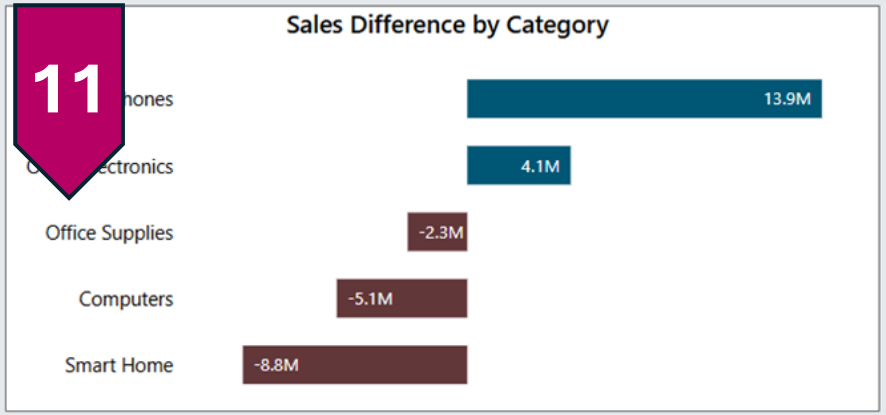

12

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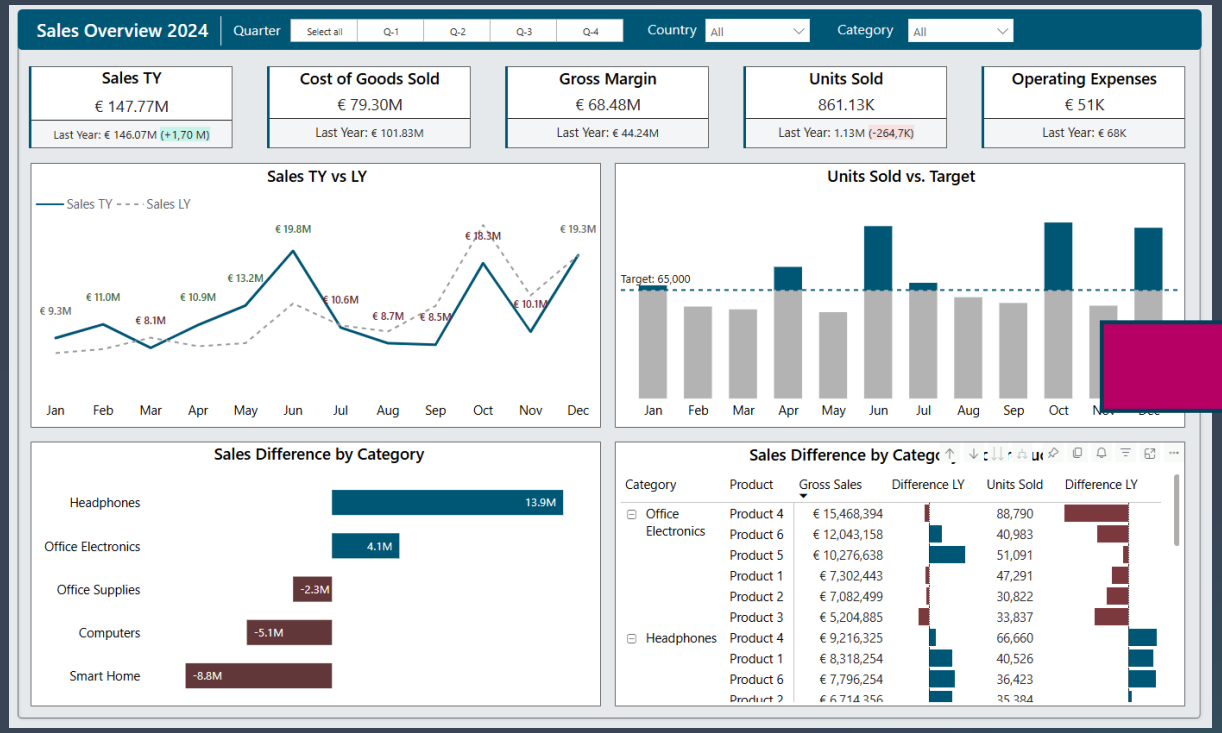
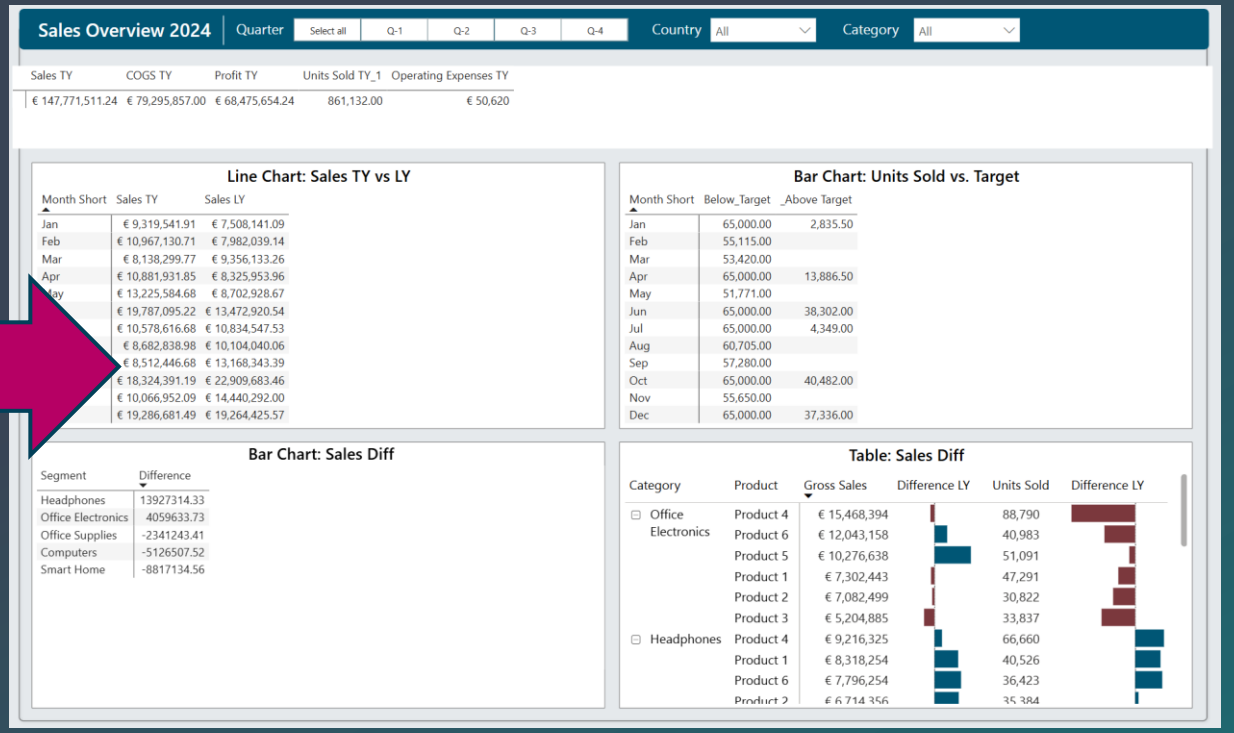
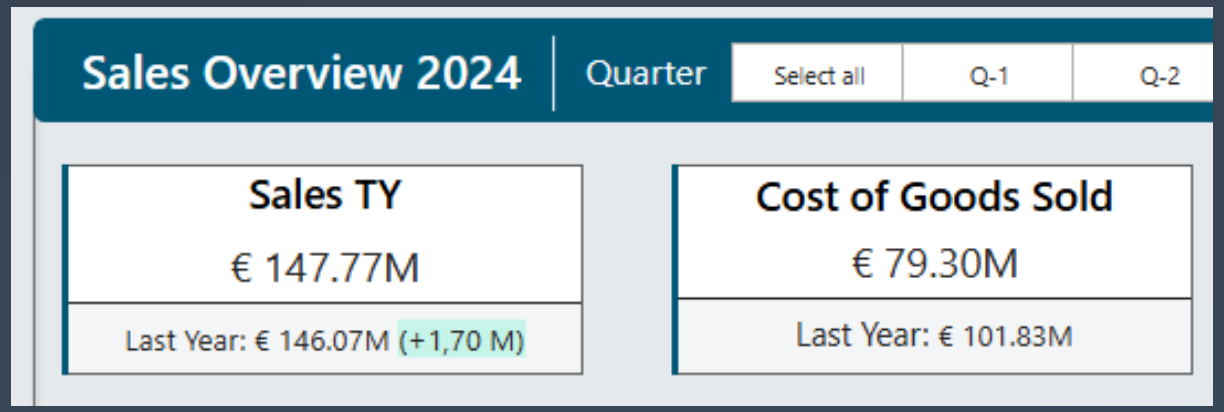
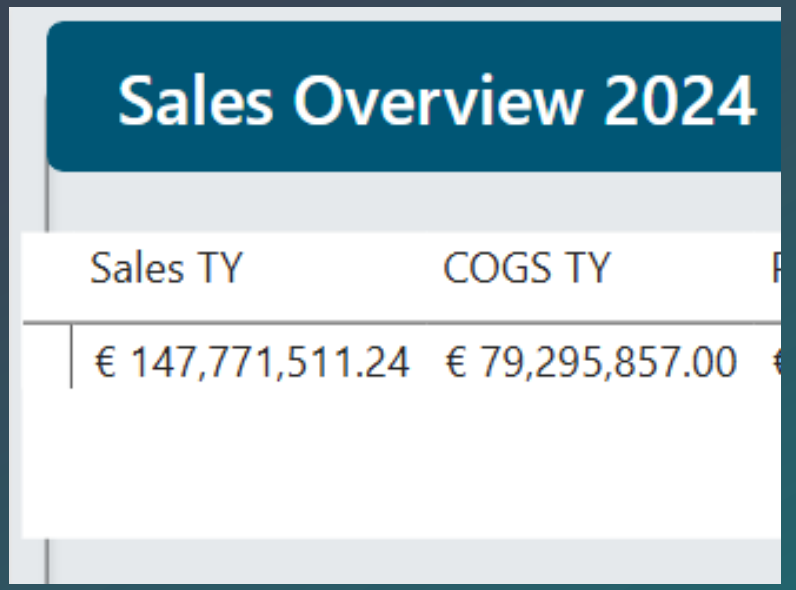




In Preview Visuals





Screen Reader

Screen Reader Compatibility

- When a report consumer navigates to a visual, the screen reader will read out:
  - the title
  - visual type
  - any alt text (if set)

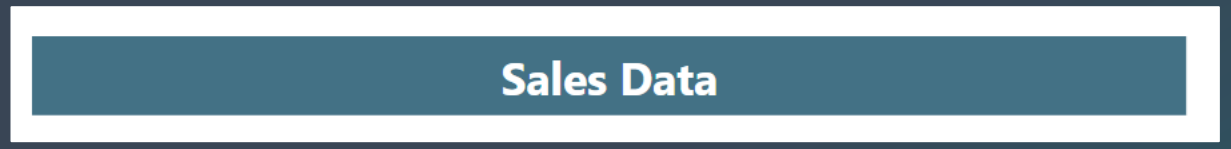
What is read?

Shape with text

→ “img”

Shape and text box grouped

→ “2 items grouping, text box”

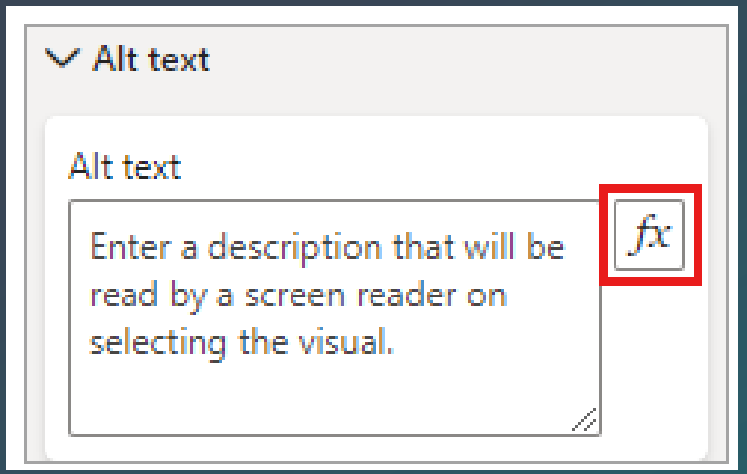


Text box

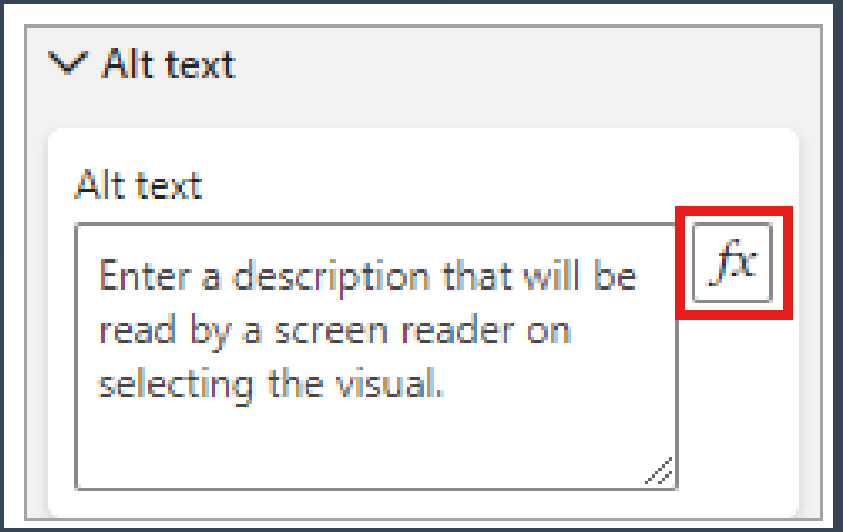
→ “Sales Data”

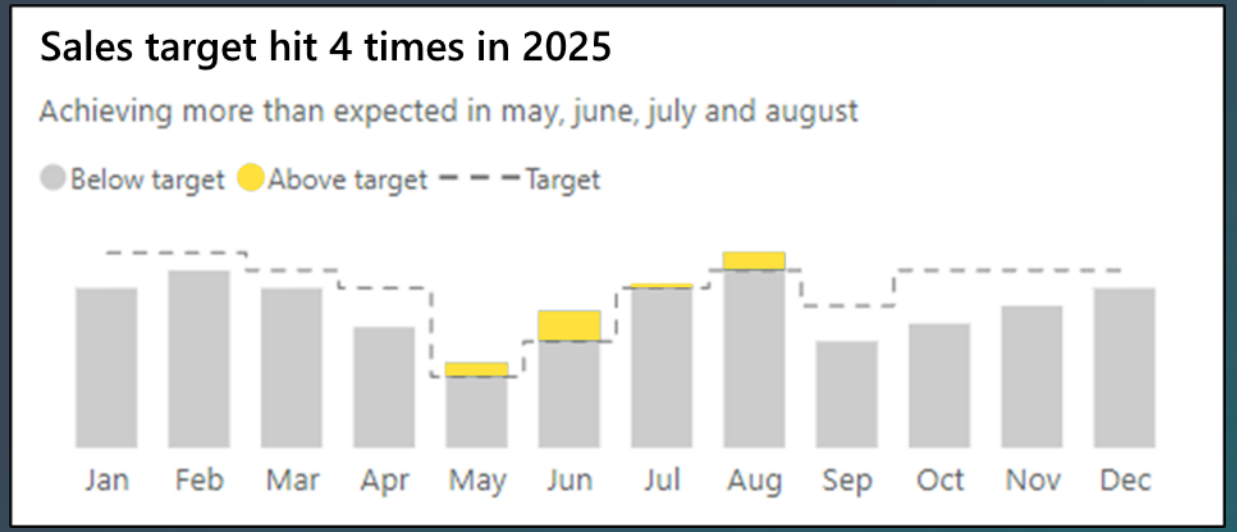
Alternative Text

- Read by screen readers.
- Meaningful information about the element.
- Max 250 characters.
- Use DAX to make it dynamic.



Reuse dynamic (sub)titles

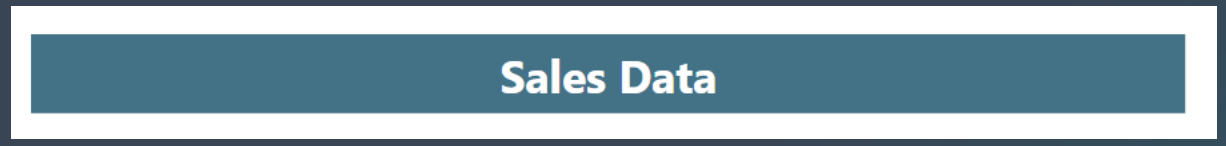




Effect of Alternative Text

Shape with text

“img”



Shape with text & alt text “Sales Data”

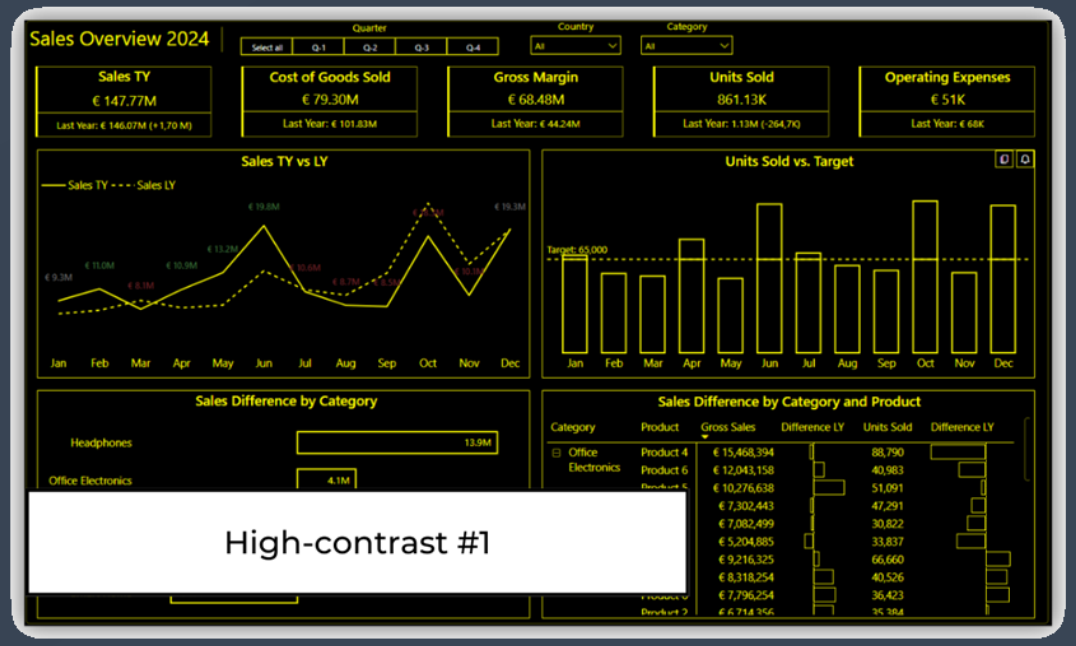
“Sales Data img”

High-contrast Color View

High Contrast View

4 standard high-contrast support for reports

- High-contrast #1
- High-contrast #2
- High-contrast Black
- High-contrast White


Sales Overview 2024
Quarter
Country
Category
Sales TY
€ 147.77M
Cost of Goods Sold
€ 79.30M
Gross Margin
€ 68.48M
Units Sold
861.13K
Operating Expenses
€ 51K
Sales TY vs LY
Units Sold vs. Target
Sales Difference by Category
Sales Difference by Category and Product
High-contrast #1

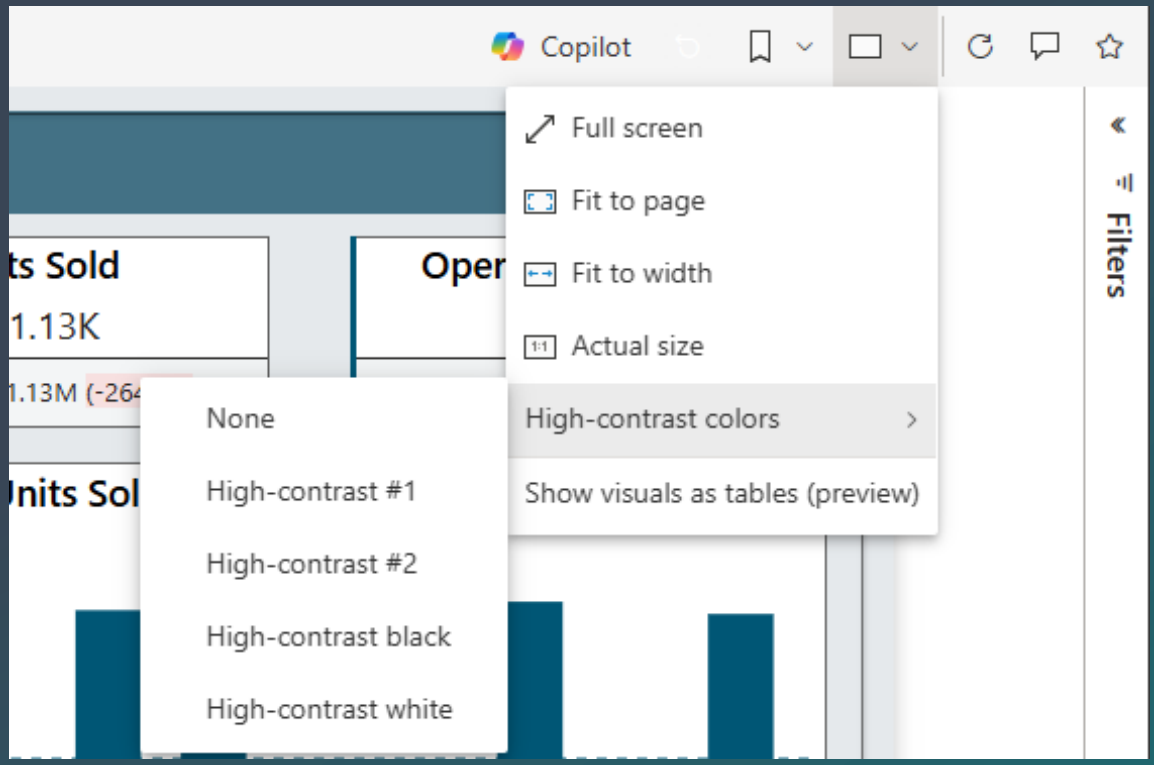
Sales Overview 2024
Sales TY
€ 147.77M
Cost of Goods Sold
€ 79.30M
Gross Margin
€ 68.48M
Units Sold
861.13K
Operating Expenses
€ 51K
Sales TY vs LY
Units Sold vs. Target
Sales Difference by Category
Sales Difference by Category and Product
High-contrast #2

Sales Overview 2024
Sales TY
€ 147.77M
Cost of Goods Sold
€ 79.30M
Gross Margin
€ 68.48M
Units Sold
861.13K
Operating Expenses
€ 51K
Sales TY vs LY
Units Sold vs. Target
Sales Difference by Category
Sales Difference by Category and Product
High-contrast Black

Sales Overview 2024
Sales TY
€ 147.77M
Cost of Goods Sold
€ 79.30M
Gross Margin
€ 68.48M
Units Sold
861.13K
Operating Expenses
€ 51K
Sales TY vs LY
Units Sold vs. Target
Sales Difference by Category
Sales Difference by Category and Product
High-contrast White

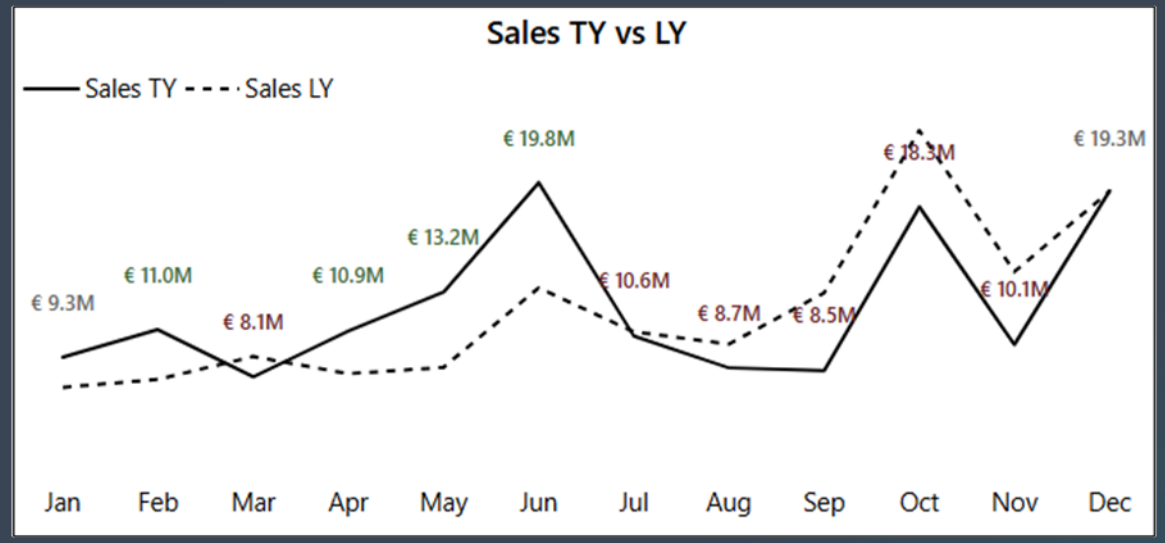
High Contrast View

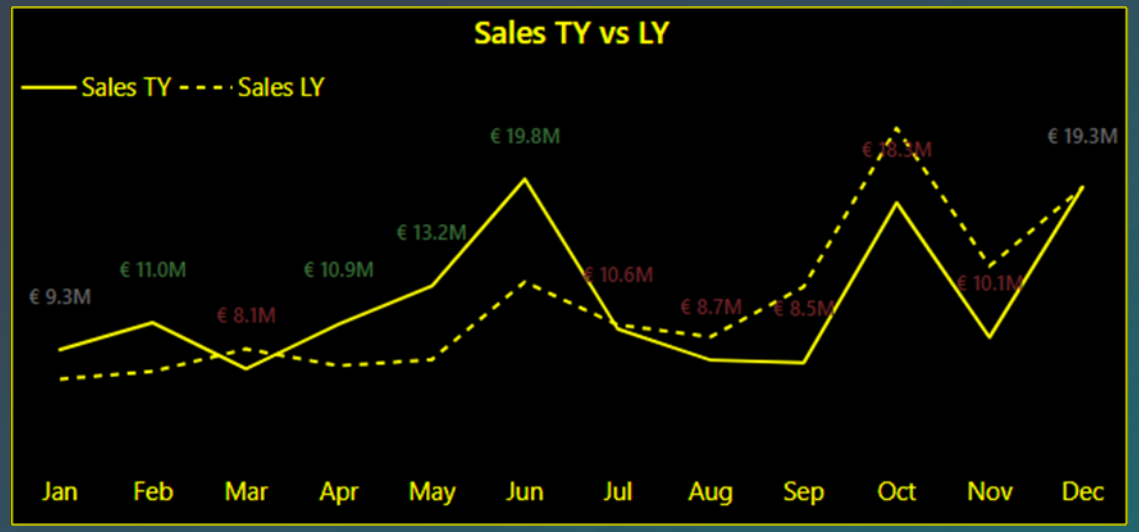
- You can set the view in Power BI (online).
- "View" button -> "High-contrast colors."



Word of Warning

Conditional formatting is not affected!





Spotlight

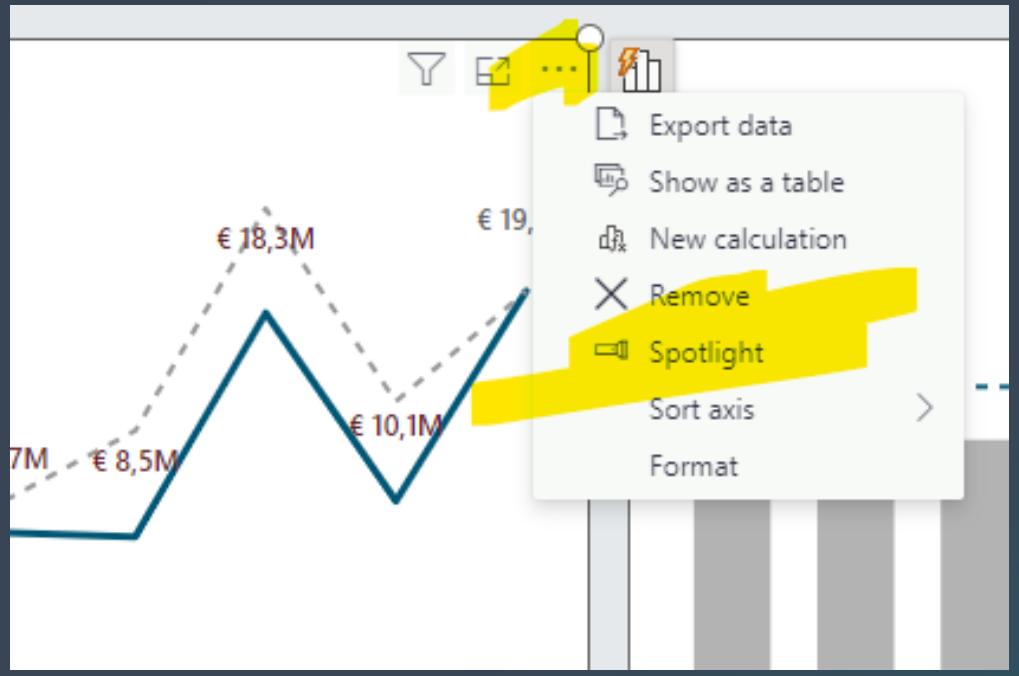
Focus mode

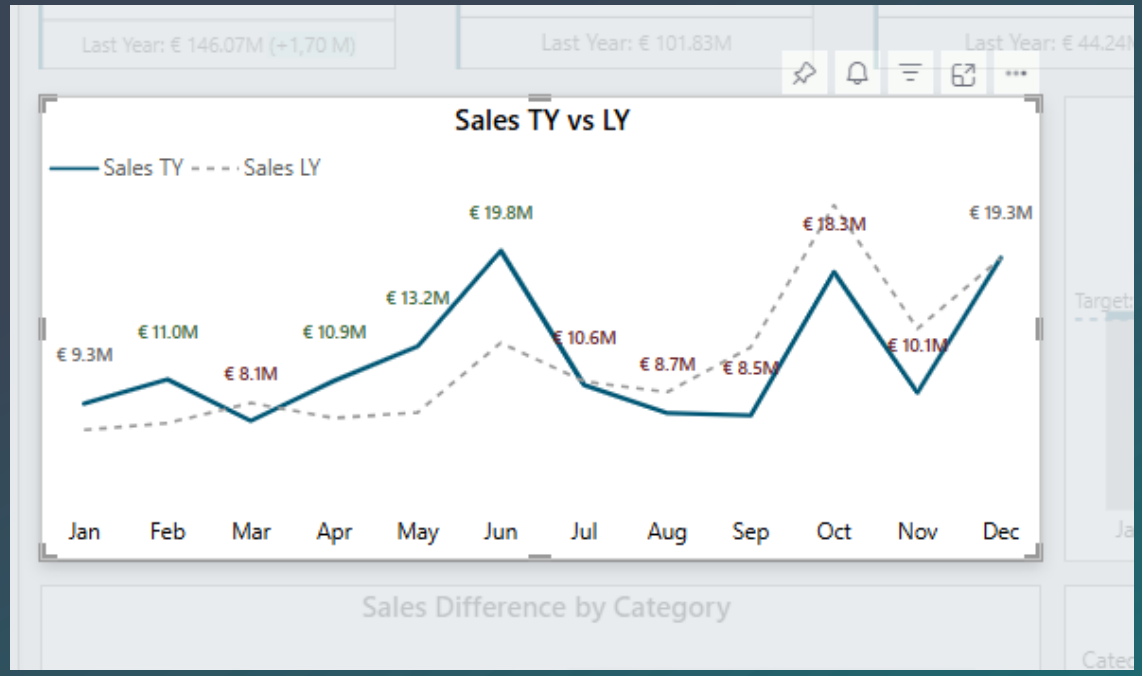
Show data table

Can be done by the user!

Spotlight

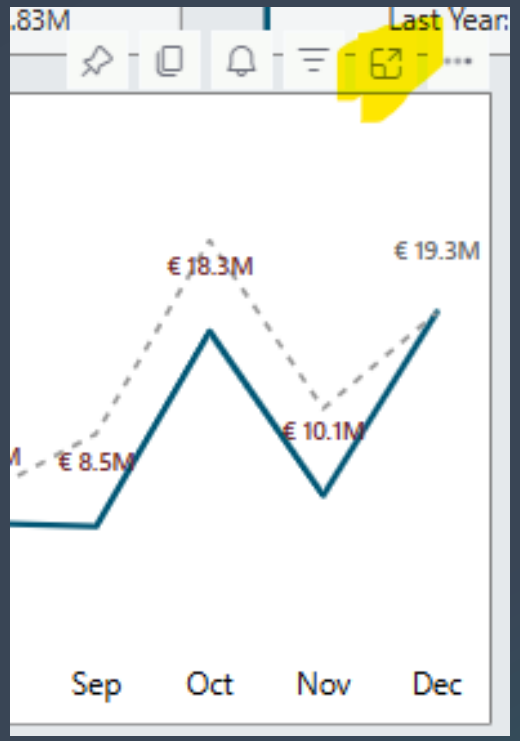
Focus on 1 visual in a report

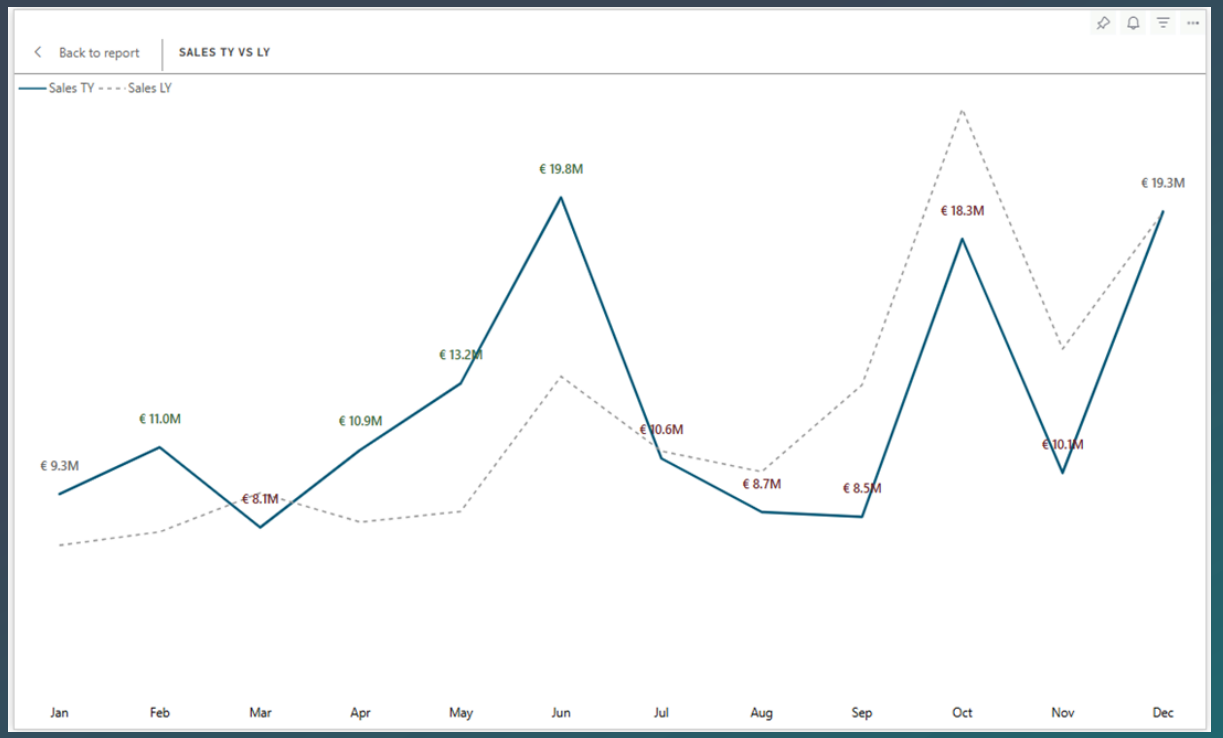




Focus Mode

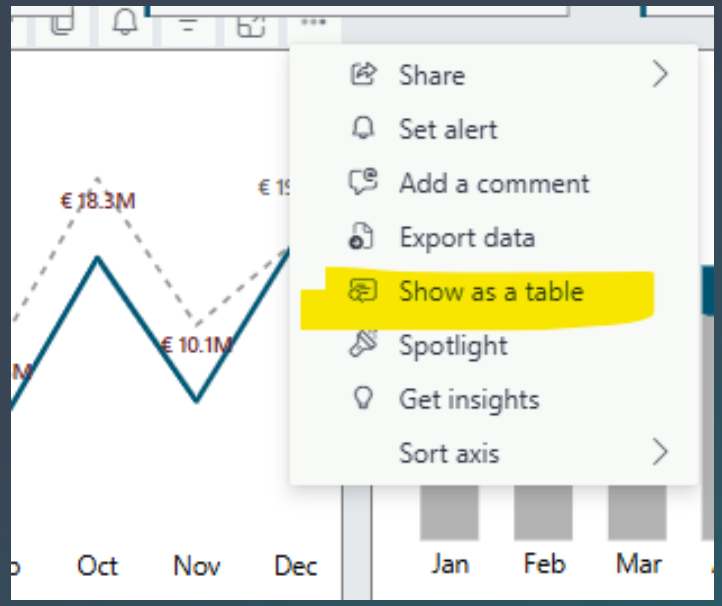
New window to view visual

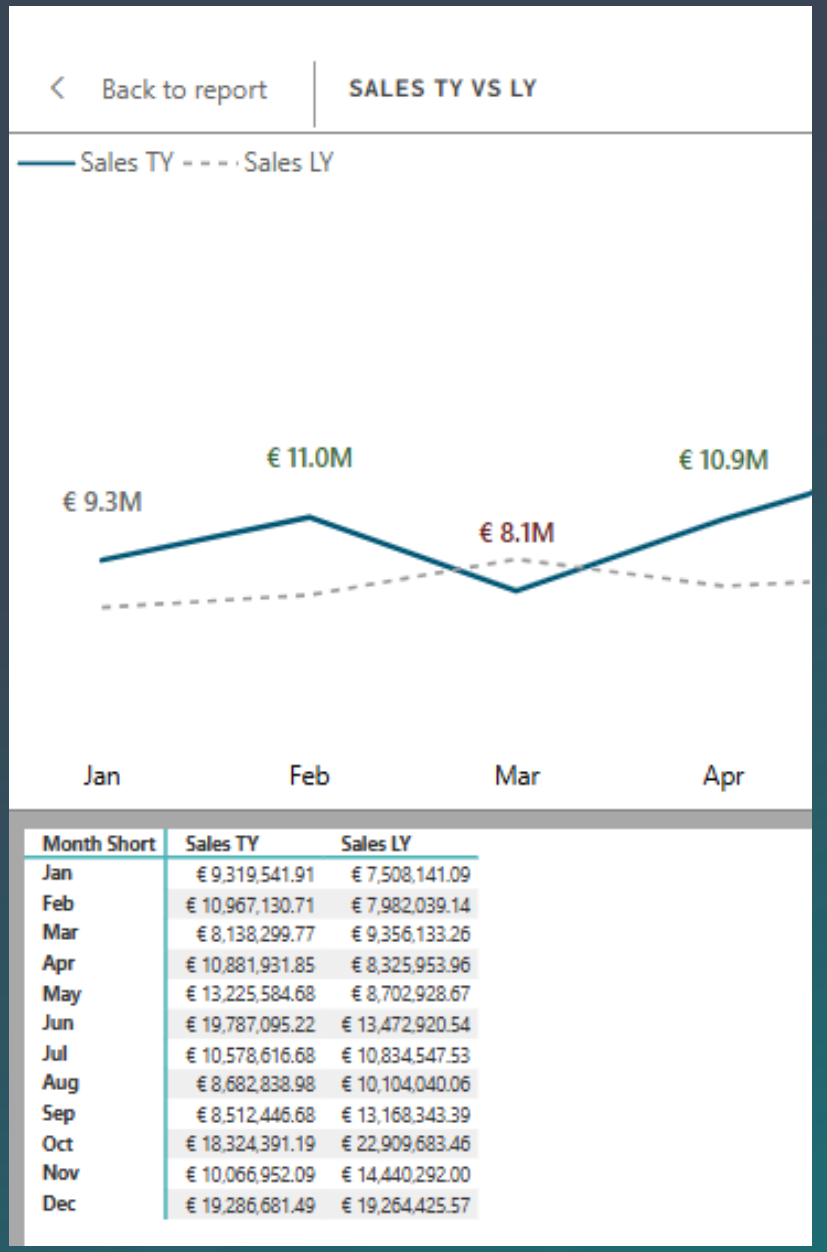




Show as Table

- Visual and table combined
- Alt + Shift + F11 for screen-reader friendly view





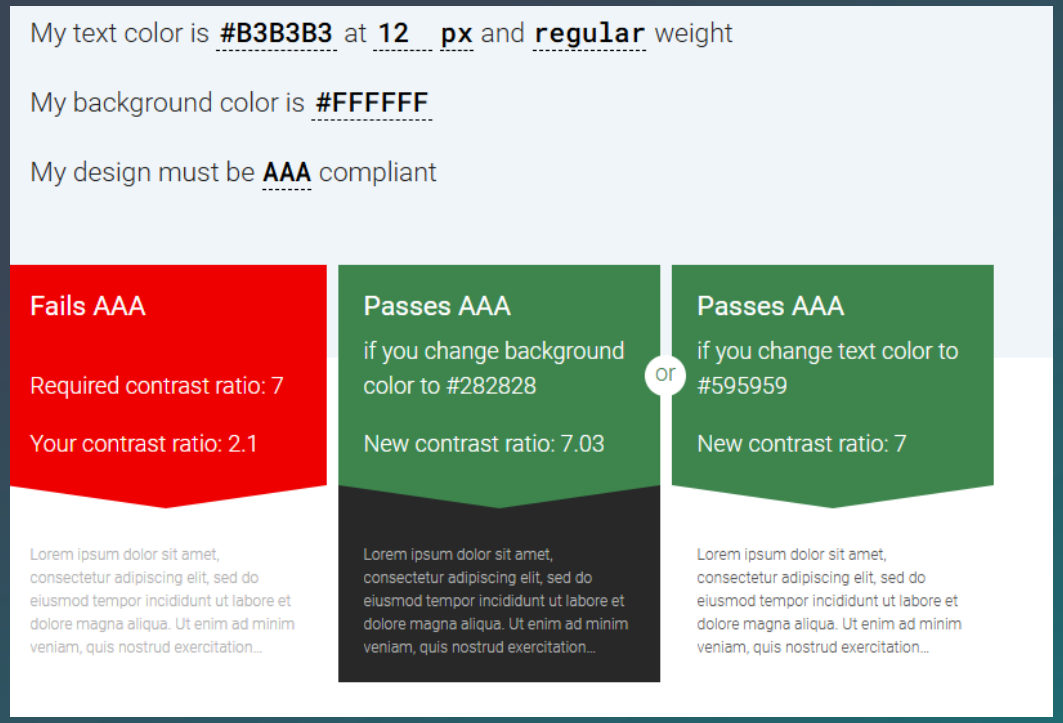
Month Short	Sales TY	Sales LY
Jan	€ 9,319,541.91	€ 7,508,141.09
Feb	€ 10,967,130.71	€ 7,982,039.14
Mar	€ 8,138,299.77	€ 9,356,133.26
Apr	€ 10,881,931.85	€ 8,325,953.96
May	€ 13,225,584.68	€ 8,702,928.67
Jun	€ 19,787,095.22	€ 13,472,920.54
Jul	€ 10,578,616.68	€ 10,834,547.53
Aug	€ 8,682,838.98	€ 10,104,040.06
Sep	€ 8,512,446.68	€ 13,168,343.39
Oct	€ 18,324,391.19	€ 22,909,683.46
Nov	€ 10,066,952.09	€ 14,440,292.00
Dec	€ 19,286,681.49	€ 19,264,425.57

Colors
&
Accessibility Themes

Which colors can I choose?

Background & text contrast ratio at least 4.5:1

- The lighter color (background) is 4.5 times brighter than the darker color (text).
- The text is distinguishable from the background



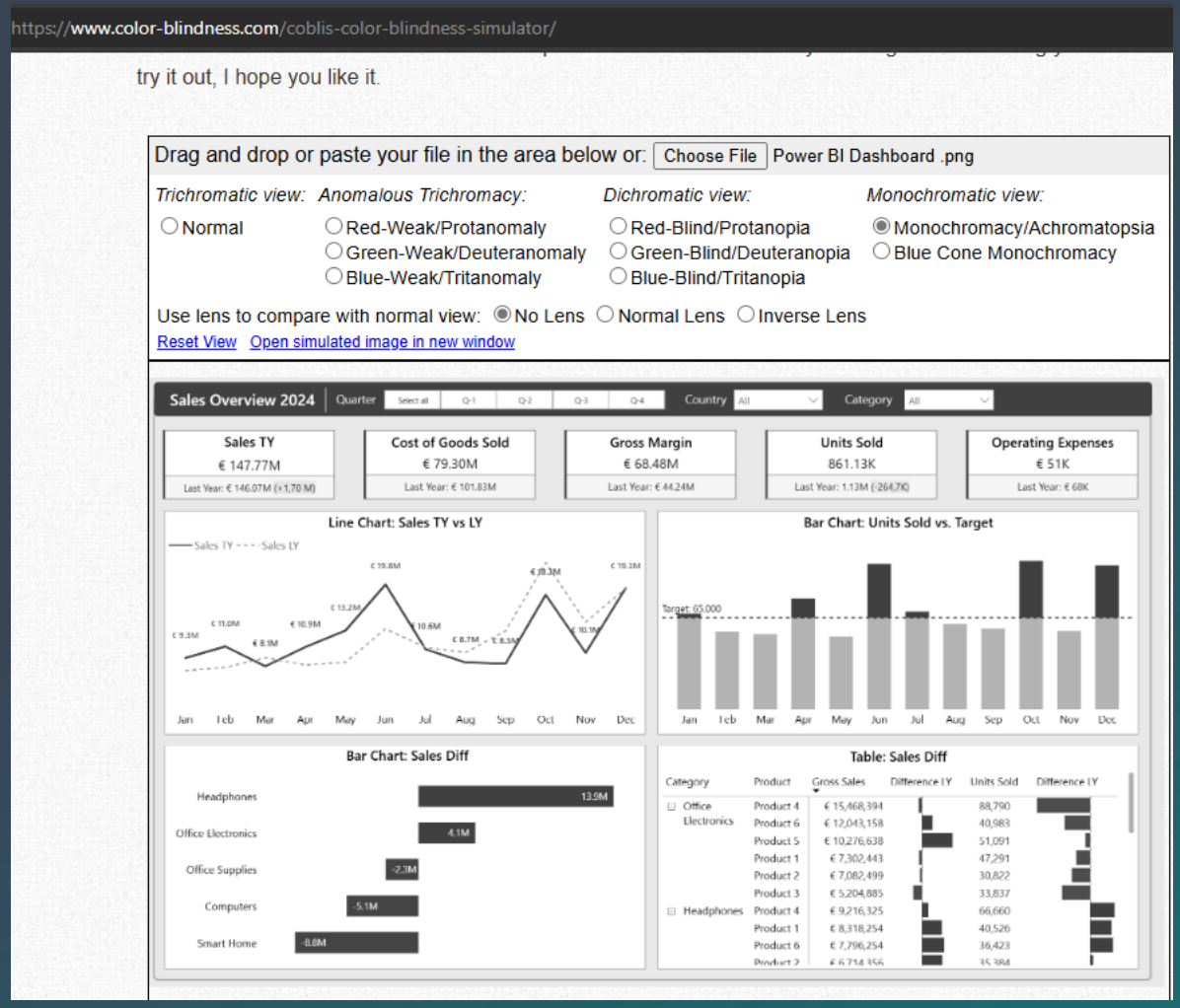
https://accessible-colors.com/

Color check

Squint test

- Turn down the brightness of screen
- Do you still see the most important information?

Check with the end-user

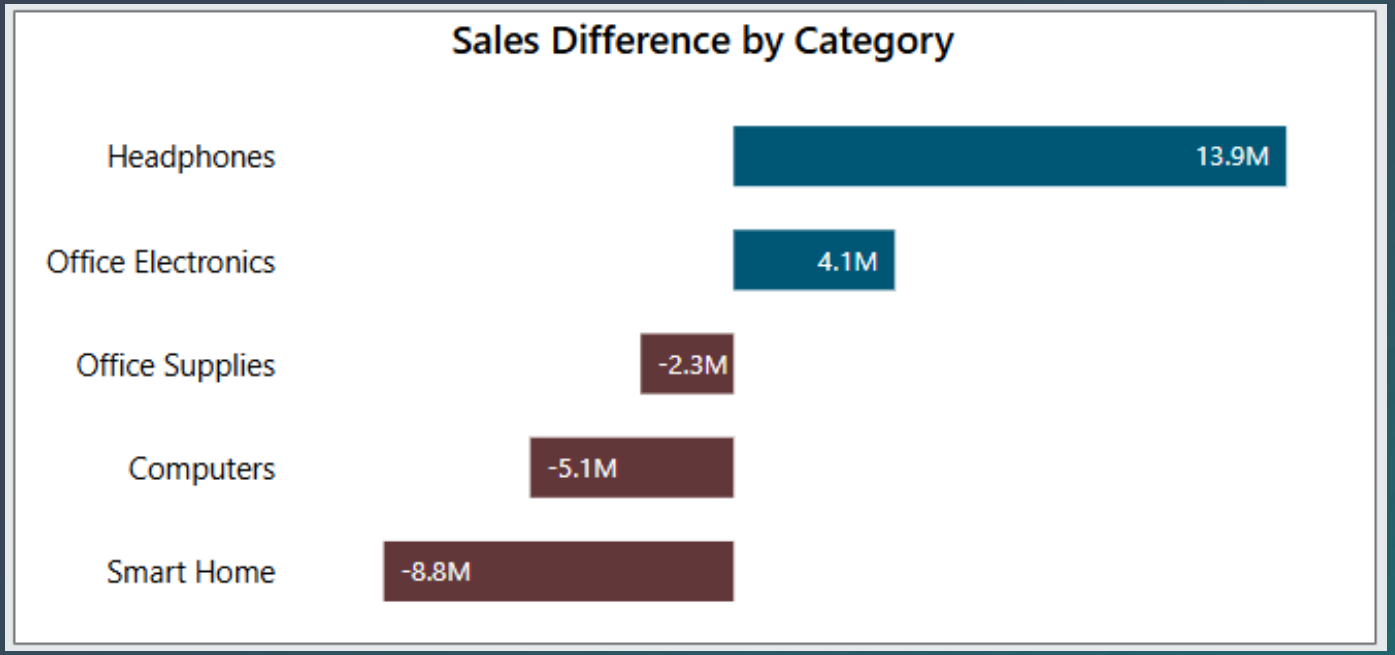


www.color-blindness.com

Don’t rely on color only

Difficult color combinations

- green and red
- green and brown
- blue and purple
- green and blue
- light green and yellow
- blue and grey
- green and grey
- green and black



Accessibility Themes

Takeaway

- Get to know the audience
- Provide context & meaning
- Accessibility is not a buzzword
  - Do not just use color to convey information
  - Check the tab order

Valerie Junk

PorcuBI

Please rate this session!