



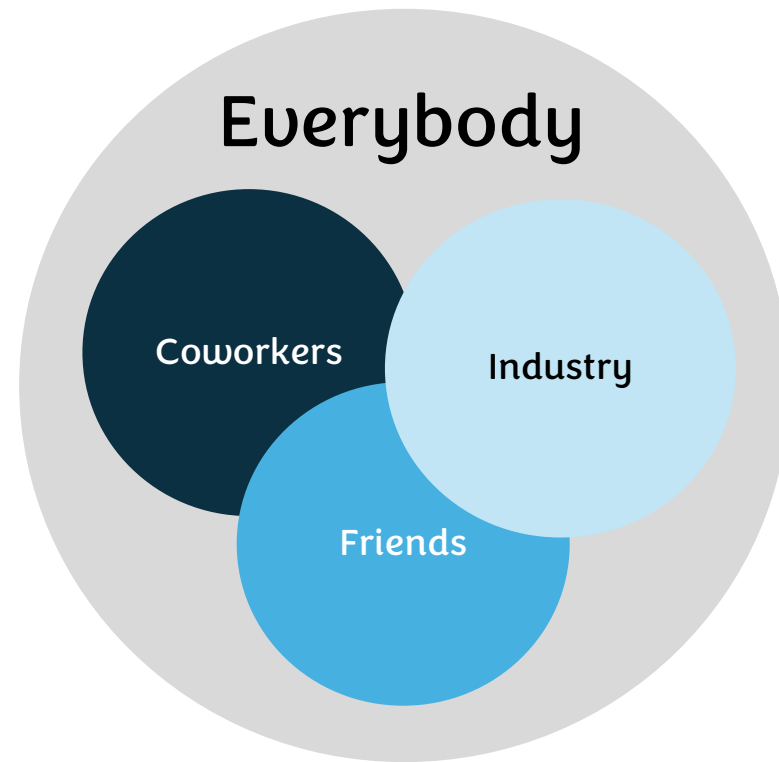
Power BI Design for Accessibility

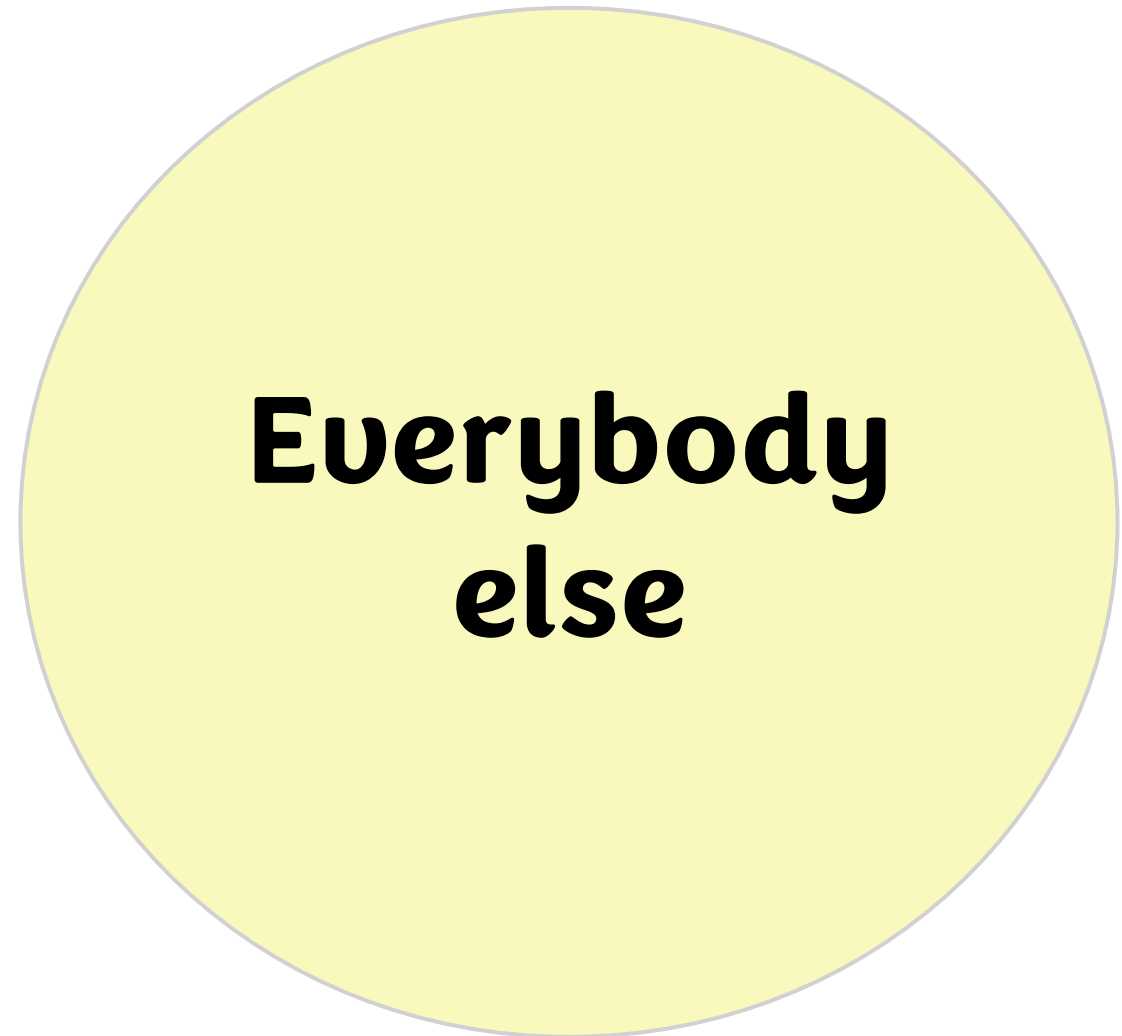
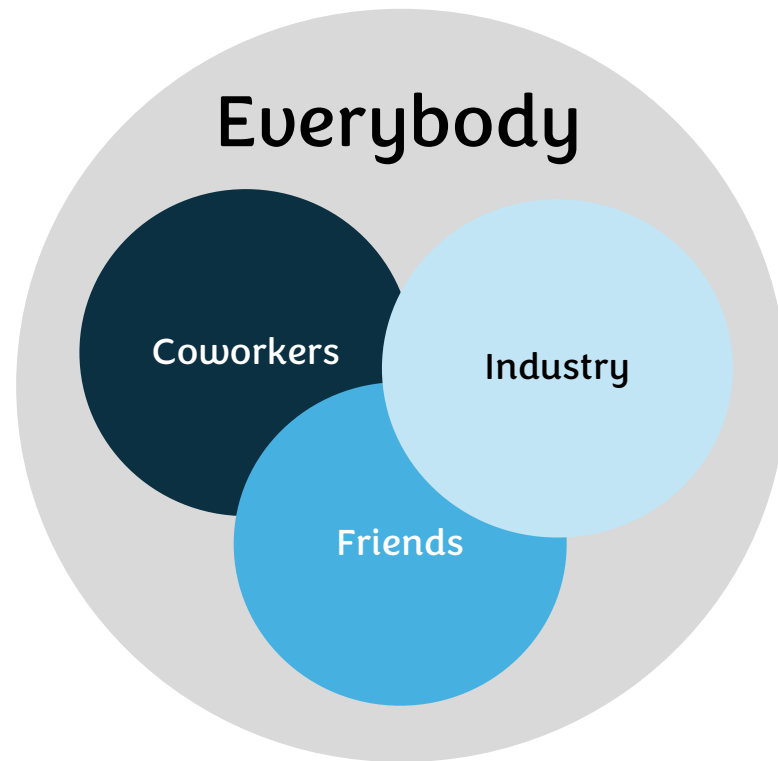
Valerie Junk

PorcuBI

- Data Visualization
- Data-driven Storytelling
- Power BI Architect







Power BI – Design & Accessibility

- **Intuitive Design**
 - End-user oriented
- **Accessibility**
 - Keyboard navigation & tab order
 - Screen reader & alt text
 - High Contrast
 - Focus Mode & Spotlight
 - Color ratio & Themes

Design for the audience

- Who is the audience?
- What is the experience level?
- How are they going to use it?
- What actions do they want to take and why?



Small changes – huge effect

Sales Difference TY vs LY by Product				
Category	Gross Sales	Difference LY	Units Sold	Difference LY
Office Electronics				
Product 4	€ 15,468,394	-583,396.53	88,790	-31,303.00
Product 6	€ 12,043,158	1,804,151.16	40,983	-15,084.50
Product 5	€ 10,276,638	5,093,043.05	51,091	-2,640.50
Product 1	€ 7,302,443	-502,078.43	47,291	-8,067.50
Product 2	€ 7,082,499	-313,509.85	30,822	-10,722.00
Product 3	€ 5,204,885	-1,438,575.67	33,837	-16,389.00
Headphones				

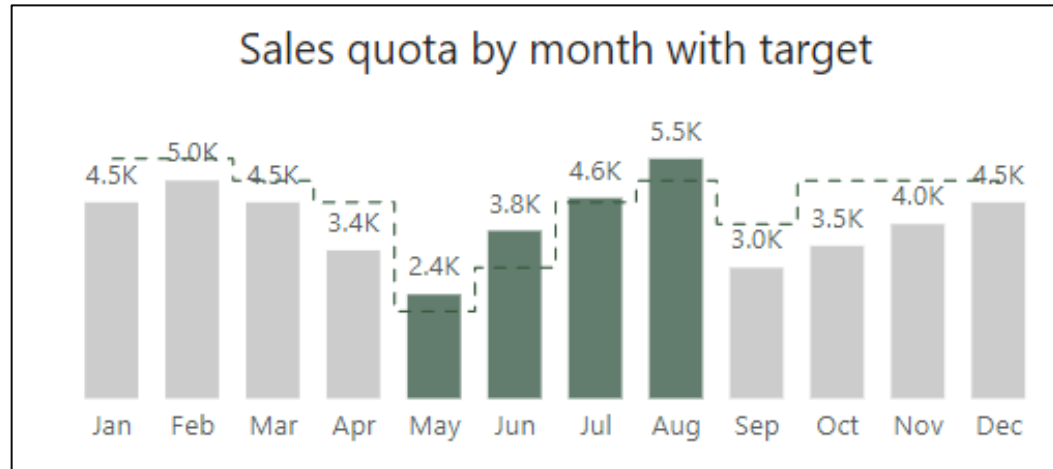
Sales Difference TY vs LY by Product				
Category	Gross Sales	Difference LY		Difference Units
Office Electronics				
Product 4	€ 15,468,394	-€ 583,396.53	▼	-31,303.00 ▼
Product 6	€ 12,043,158	€ 1,804,151.16	▲	-15,084.50 ▼
Product 5	€ 10,276,638	€ 5,093,043.05	▲	-2,640.50 ▼
Product 1	€ 7,302,443	-€ 502,078.43	▼	-8,067.50 ▼
Product 2	€ 7,082,499	-€ 313,509.85	▼	-10,722.00 ▼
Product 3	€ 5,204,885	-€ 1,438,575.67	▼	-16,389.00 ▼
Headphones				

Sales Difference TY vs LY by Product				
Category	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				

Sales Difference TY vs LY by Product				
Category	Gross Sales	Difference LY	Units Sold	Difference LY
Office Electronics				
Product 4	€ 15,468,394	-583,396.53	88,790	-31,303.00 ☆
Product 6	€ 12,043,158	1,804,151.16	40,983	-15,084.50
Product 5	€ 10,276,638	5,093,043.05	51,091	-2,640.50
Product 1	€ 7,302,443	-502,078.43	47,291	-8,067.50
Product 2	€ 7,082,499	-313,509.85	30,822	-10,722.00 ☆
Product 3	€ 5,204,885	-1,438,575.67	33,837	-16,389.00
Headphones				

Adding Context

(Sub)Titles, Legend & Colour coding(?)



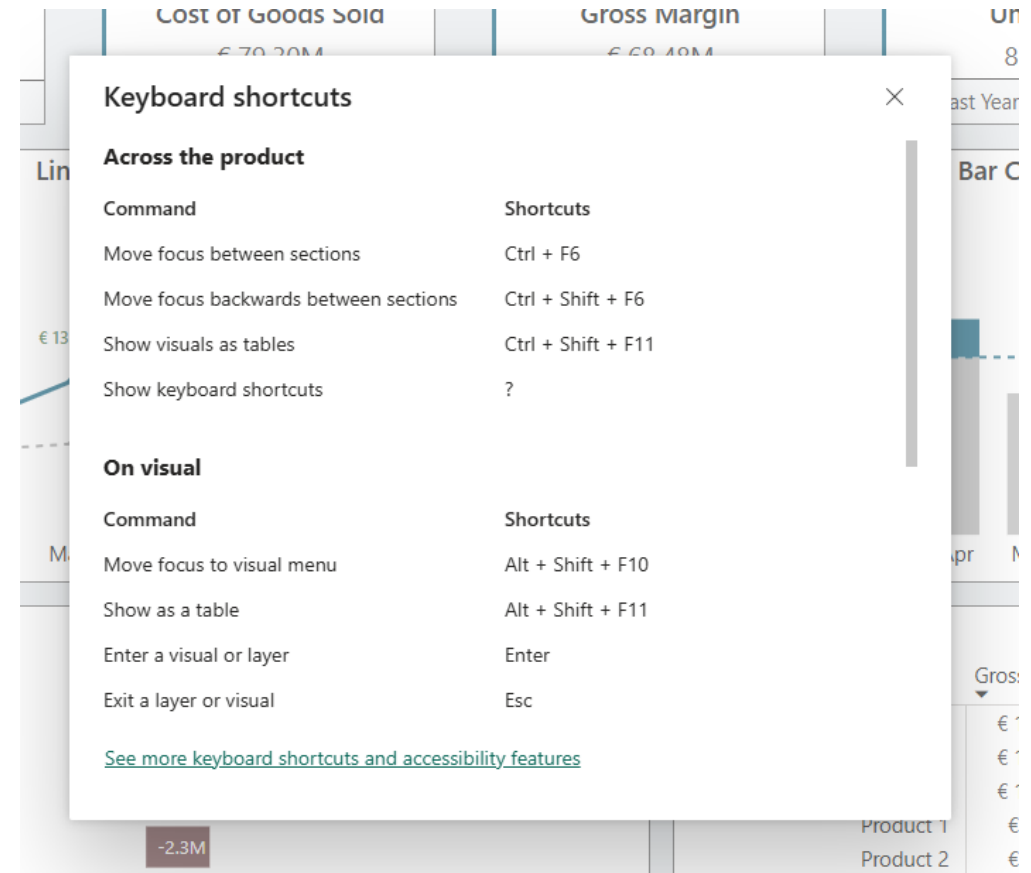
Power BI – Design & Accessibility

- **Intuitive Design**
 - End-user oriented
- **Accessibility**
 - Keyboard navigation & Tab order
 - Screen reader & Alt text
 - High Contrast
 - Focus Mode & Spotlight
 - Color ratio & Themes

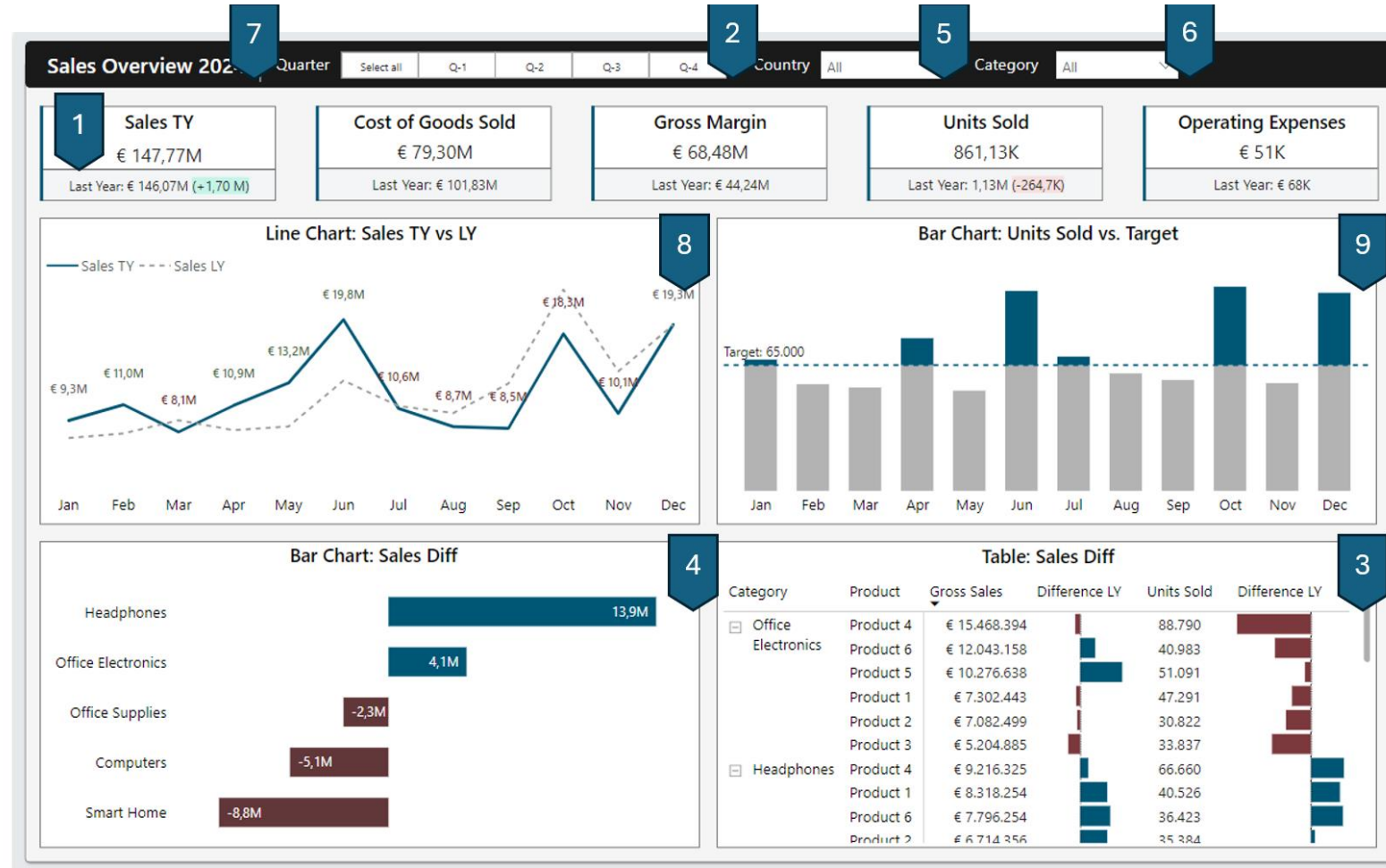
Keyboard navigation

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
- **Ctrl Shift C** = Unselect all filters
- **Ctrl + Shift + F11** = Visuals as tables

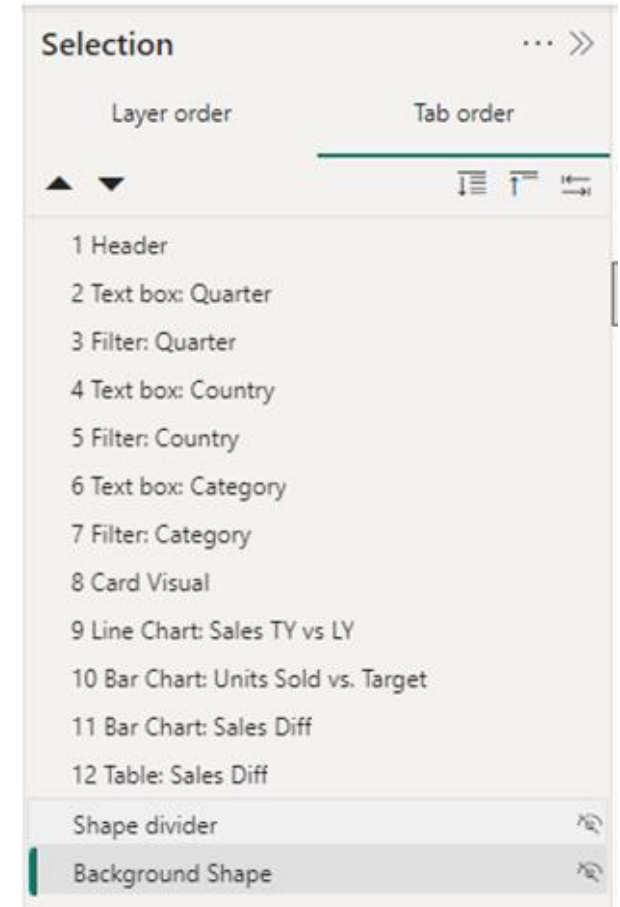


Keyboard navigation

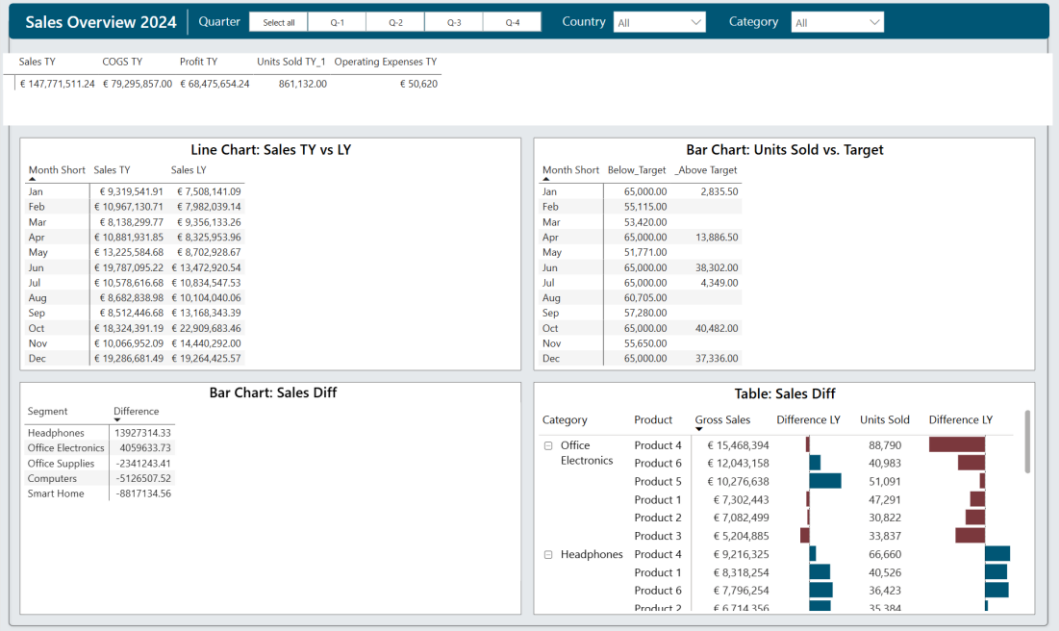
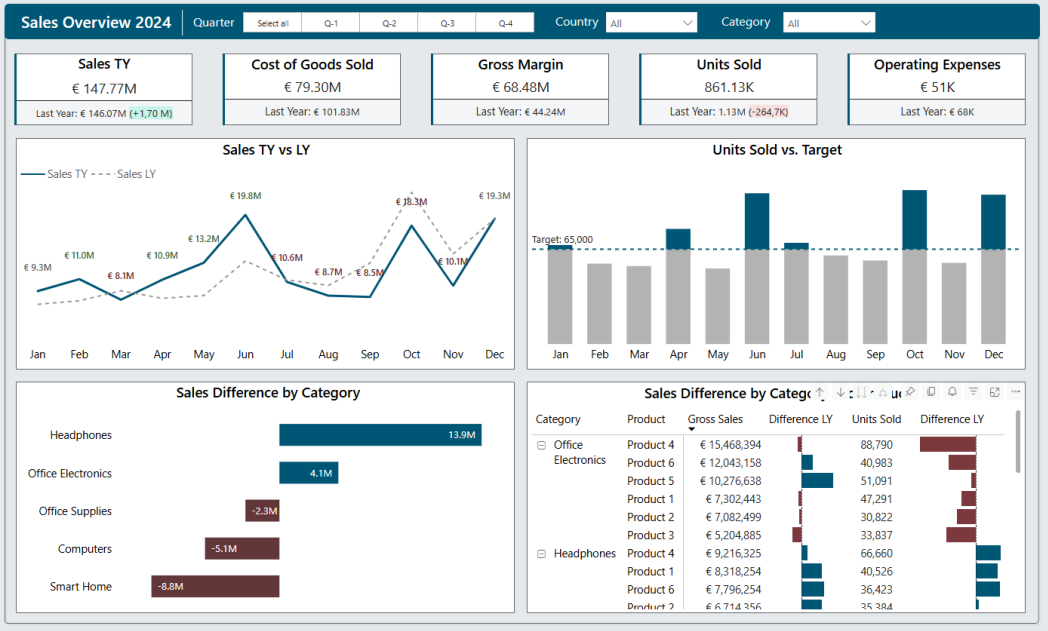


Changing the tab order

- View → Selection → Tab order
- Drag and Drop
- Importance of naming elements.
- Hide everything you don't want to use.



Ctrl + Shift + F11



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)

Screen reader Compatibility

Sales Data

Shape with text



“img”

Sales Data

Shape and text box grouped



“2 items grouping, text box”

Sales Data

Text box

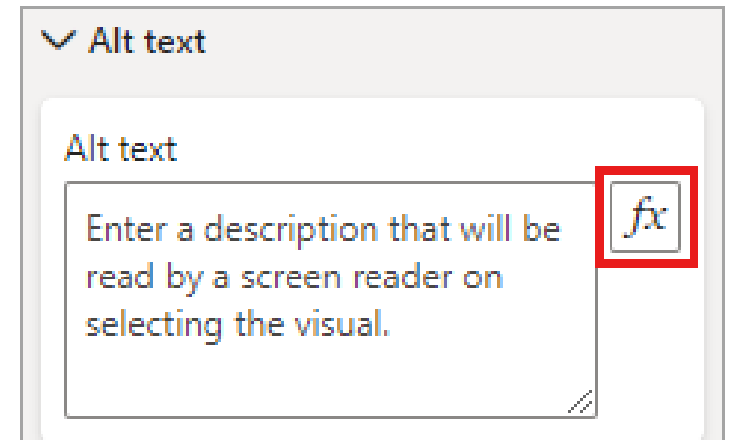


“Sales Data”

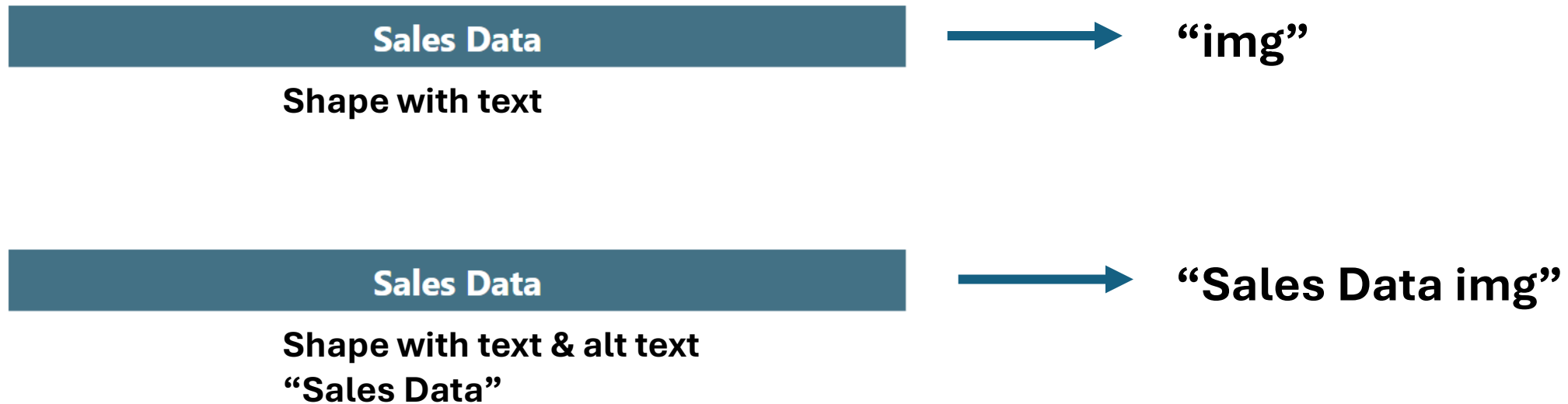
Alt text

Alternative Text

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



Alt text example

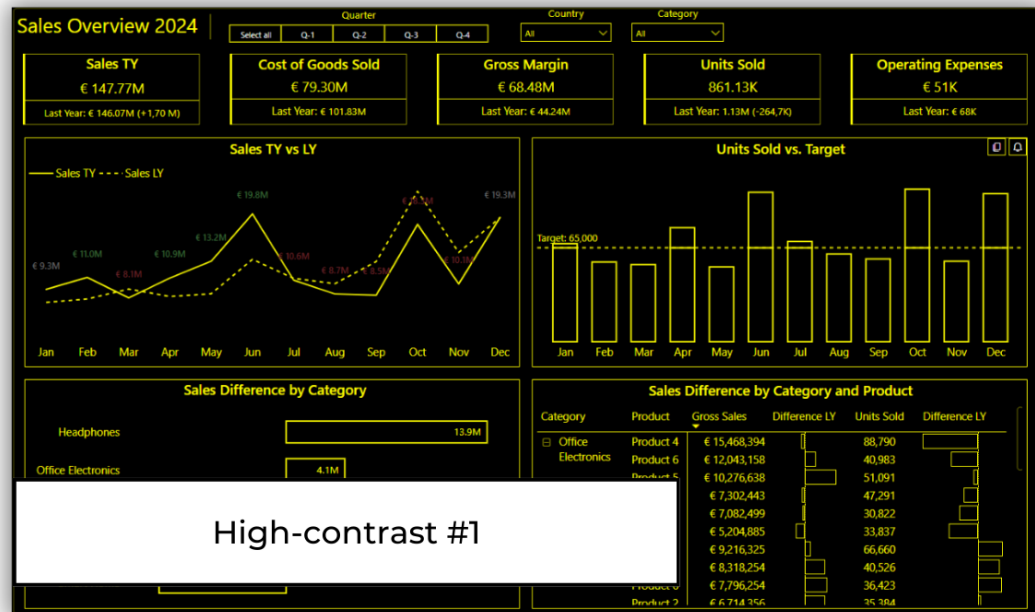


High-contrast Color View

Power BI has standard high-contrast support for reports!

You can choose from 4 options.

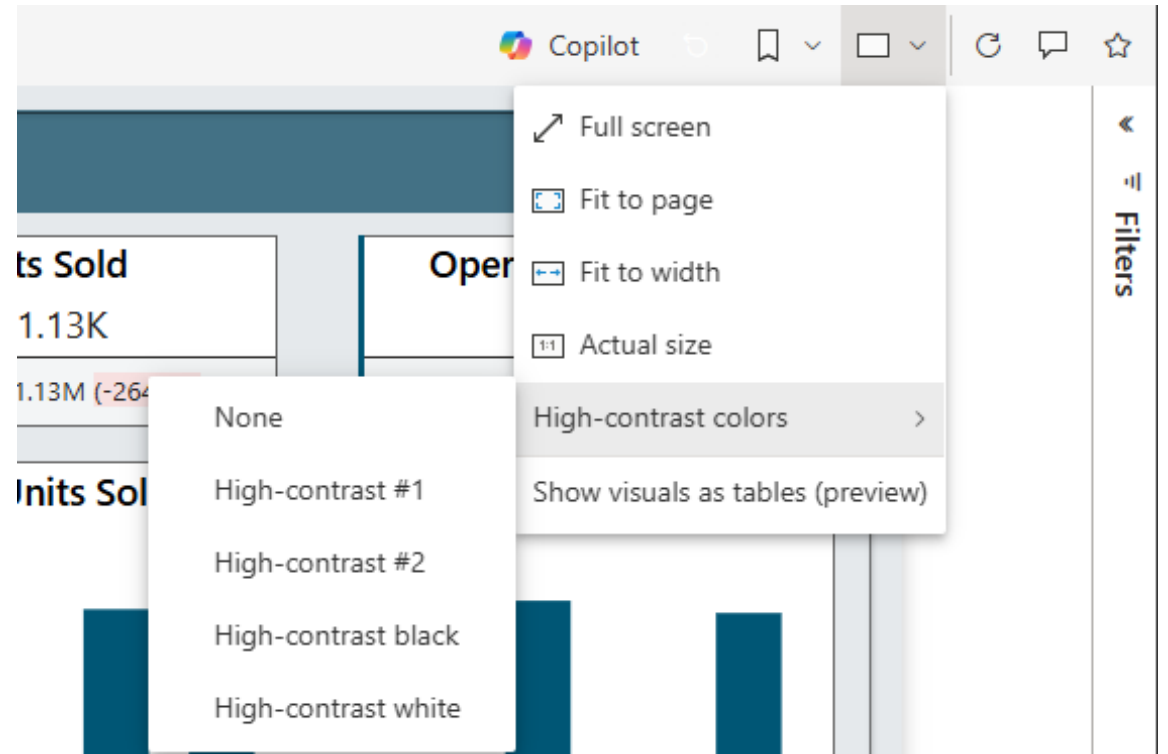
- High-contrast #1
- High-contrast #2
- High-contrast Black
- High-contrast White



High-contrast Color View

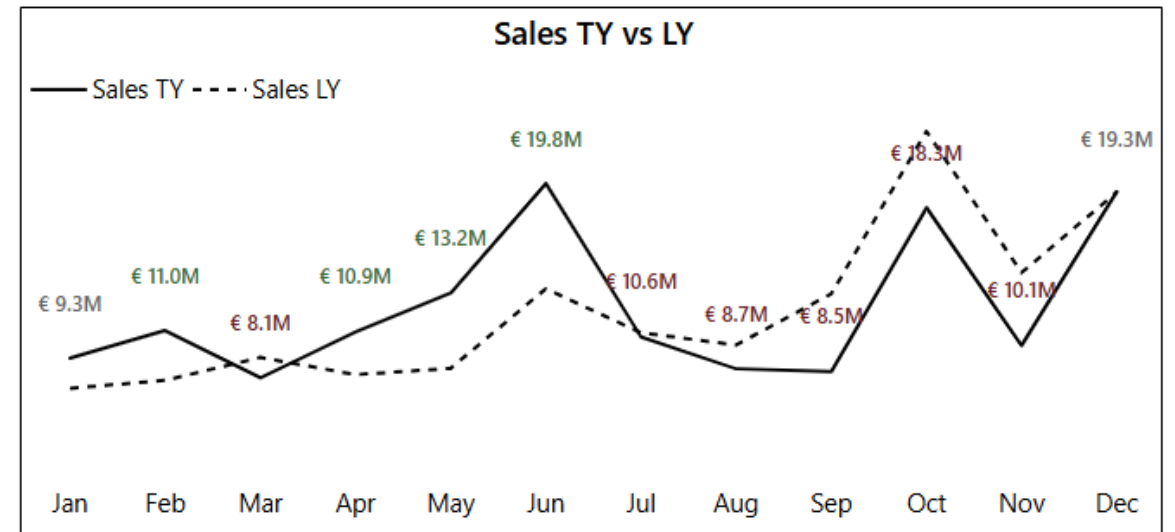
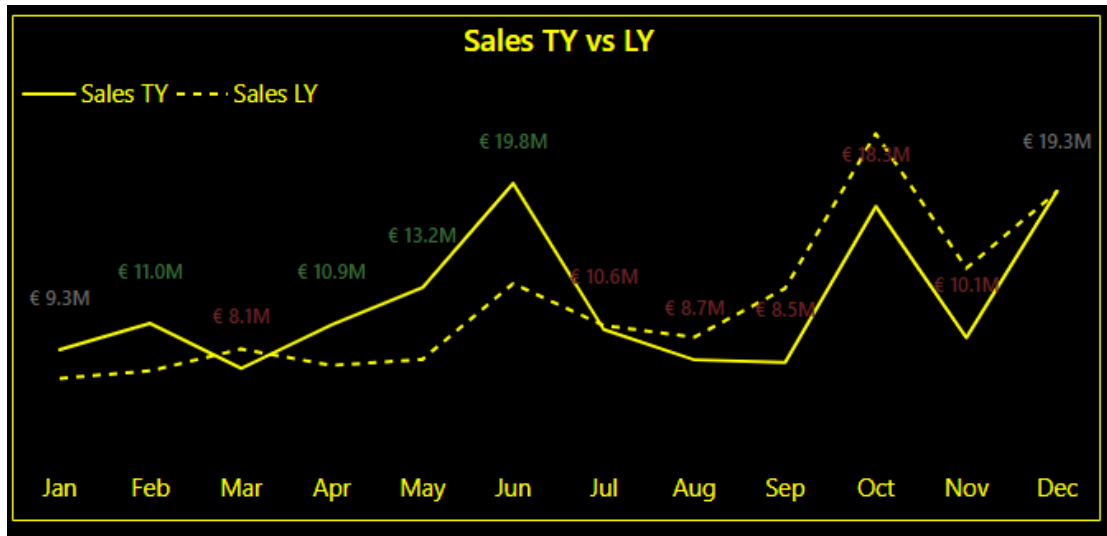
You can set the view in Power BI (online).

- "View" button -> "High-contrast colors"



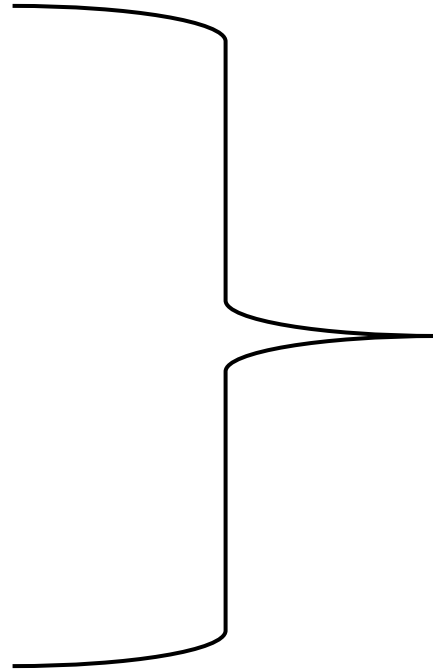
High-contrast Color View

Word of warning: Conditional formatting is not changed!



Spotlight

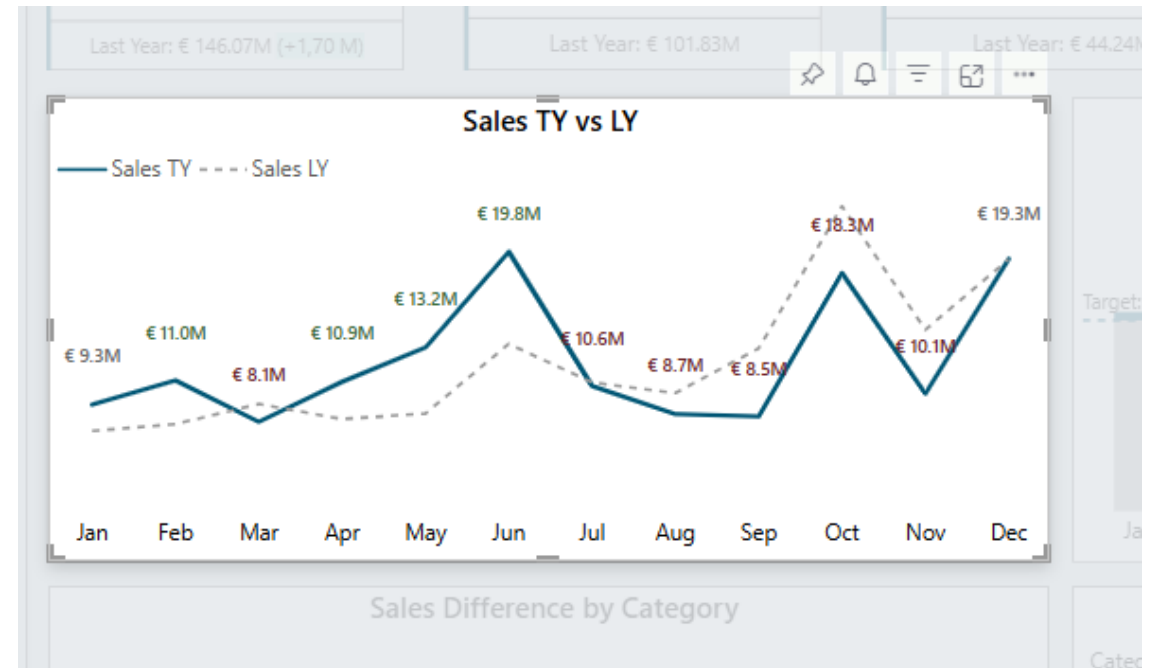
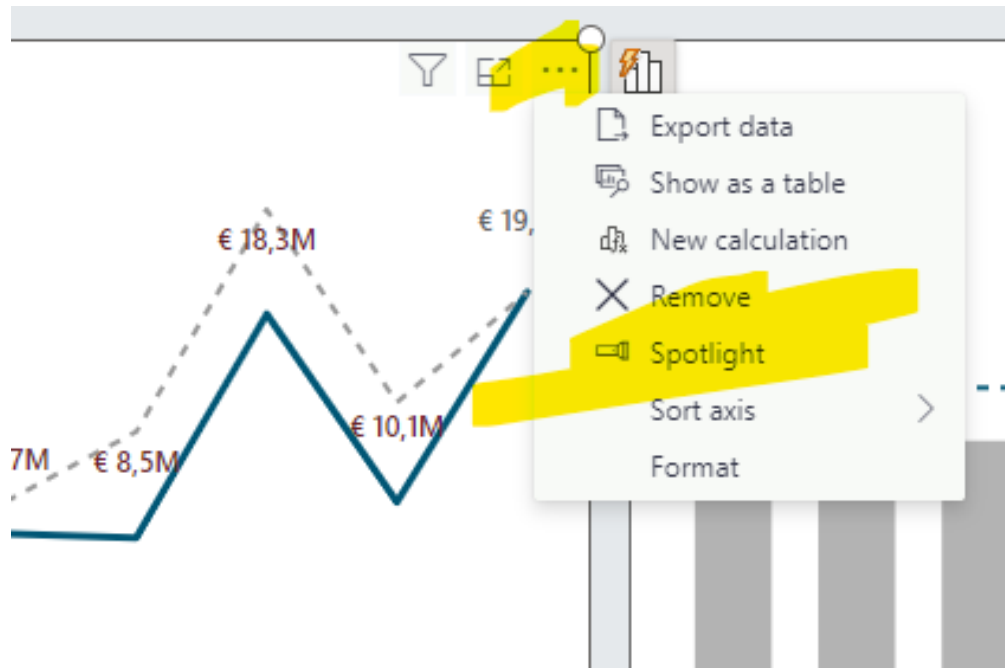
Focus mode



**Can be done
by the user!**

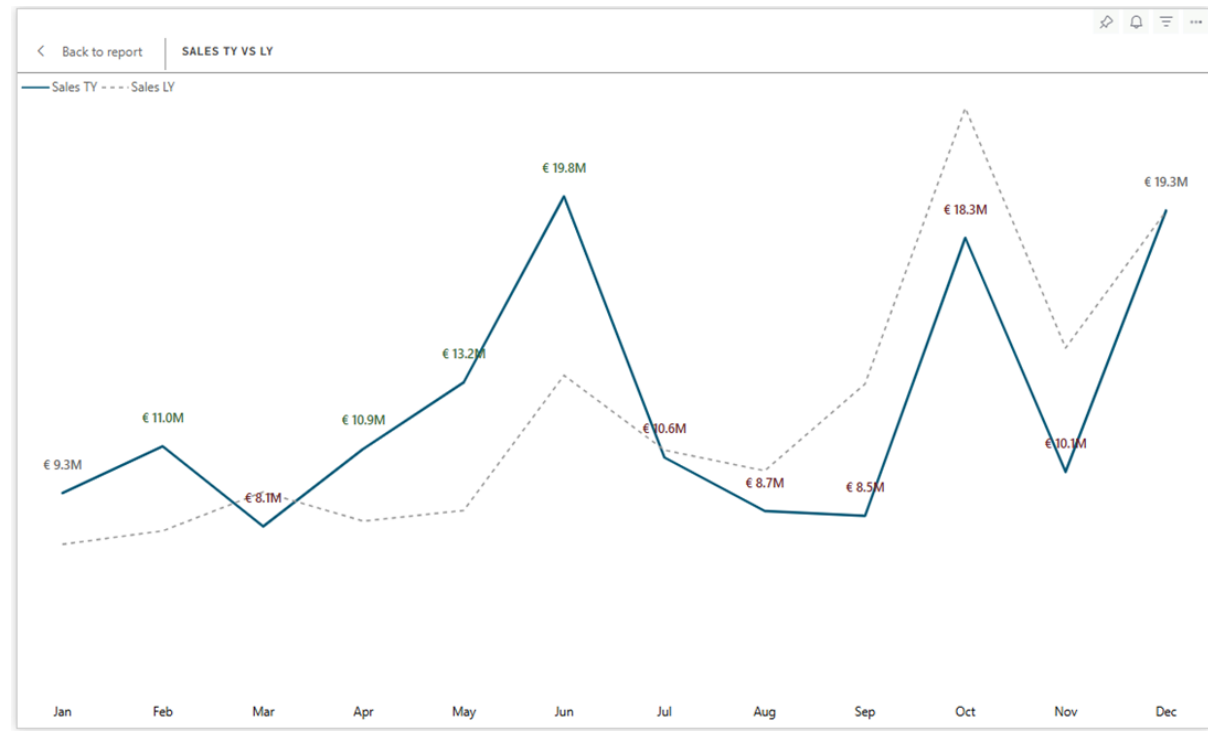
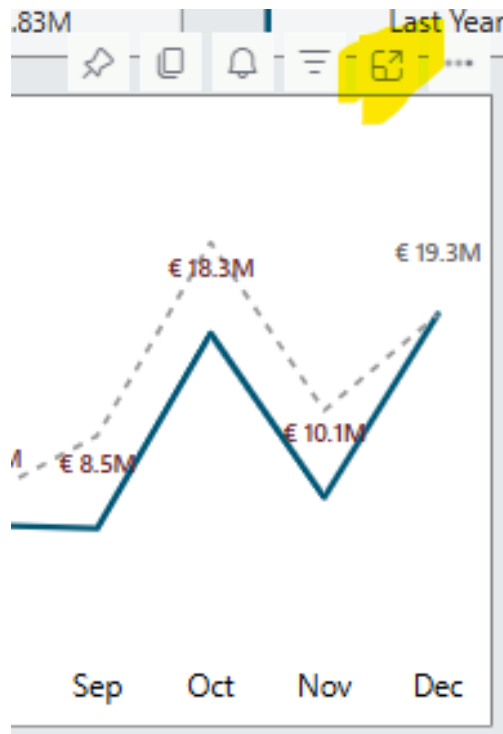
Spotlight

Focus on one visual in the report



Focus Mode

New window to view the visual



Colorblind friendly colors

- 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

My text color is #B3B3B3 at 12 px and regular weight

My background color is #FFFFFF

My design must be AAA compliant

Fails AAA Required contrast ratio: 7 Your contrast ratio: 2.1	Passes AAA if you change background color to #282828 New contrast ratio: 7.03	Passes AAA if you change text color to #595959 New contrast ratio: 7
or		

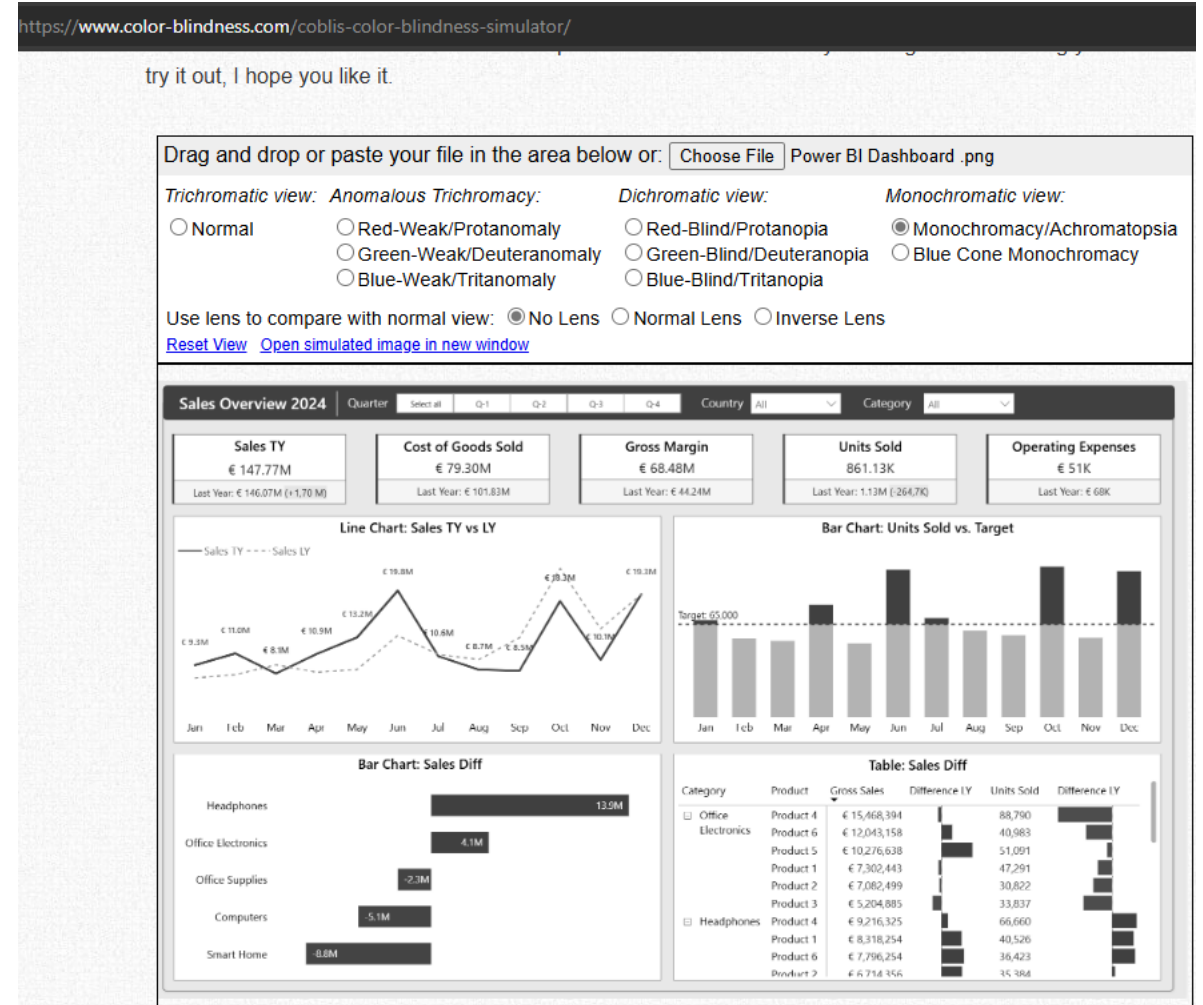
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation...

<https://accessible-colors.com/>

Color check

www.color-blindness.com

- Check with the end-user



Accessibility Themes



Orchid



Tidal



City Park



Neutral



Default

*this only works when you have not set the colors manually (or with conditional formatting)

Takeaway

- Design for the audience
- Provide context & meaning
- Accessibility is not a buzzword
 - Add alternative text
 - Check the tab order
 - Show the user what's possible



/valeriejunk



@porcubi



PorcuBI

<https://sessionize.com/Global-Fabric-VizDesign-Usergroup/>