Dashboard Design
—
The Icing on the Cake

5 Steps to improve your dashboard

Valerie Junk - PorcuBI

- Data Analytics & Visualization

- Data Storytelling

- Process Improvement

- BI Standardization

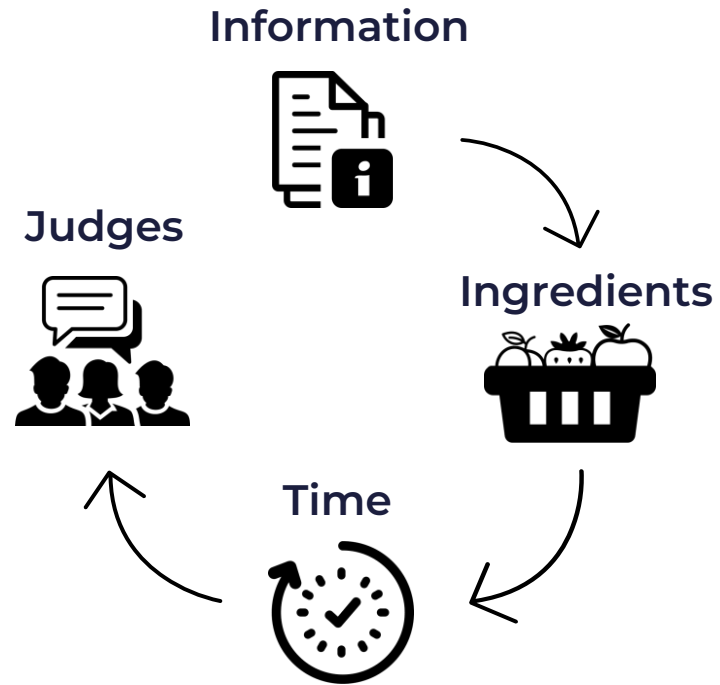# Why Design Matters

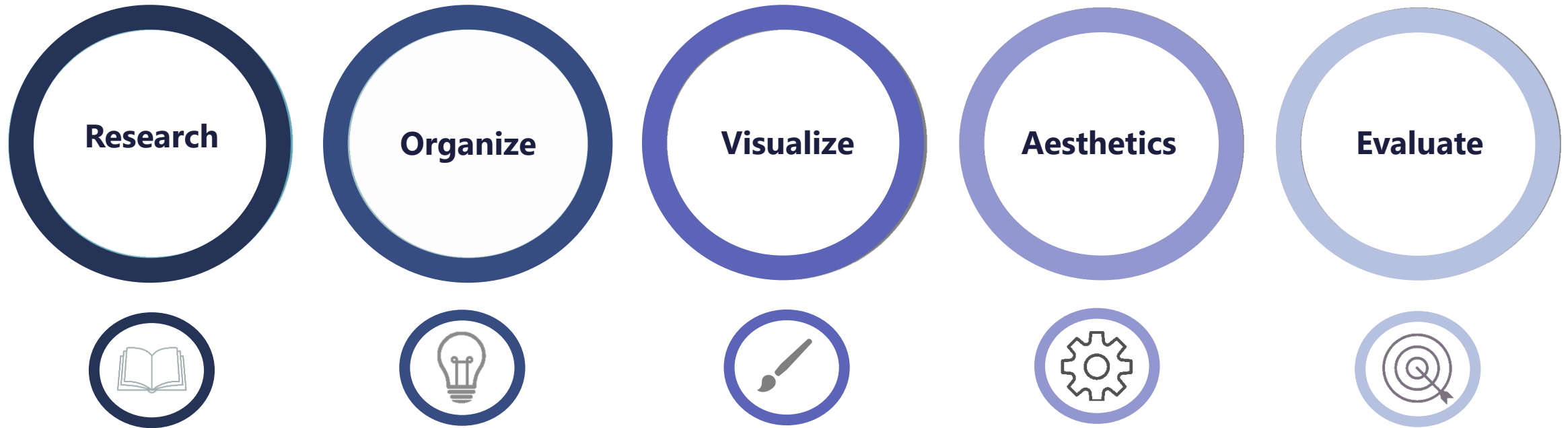Easy to follow and understand

Engaging

Time-saving

Designing a dashboard
-
Taking part in a baking competition

The competition

Information

Judges

Ingredients

Time

5 steps you can take

Research

Organize

Visualize

Aesthetics

Evaluate

Step 1

Research

Who is the audience?

- **Who** is the audience?

- What is the **experience** level?

- How much **detail** is needed?

- What **actions** do they want to take?

- How is the dashboard **used**?

What's the message?

1 key message (sentence)
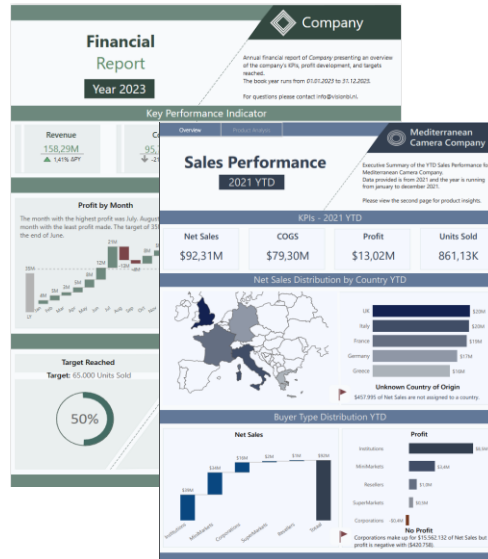
CONTEXT
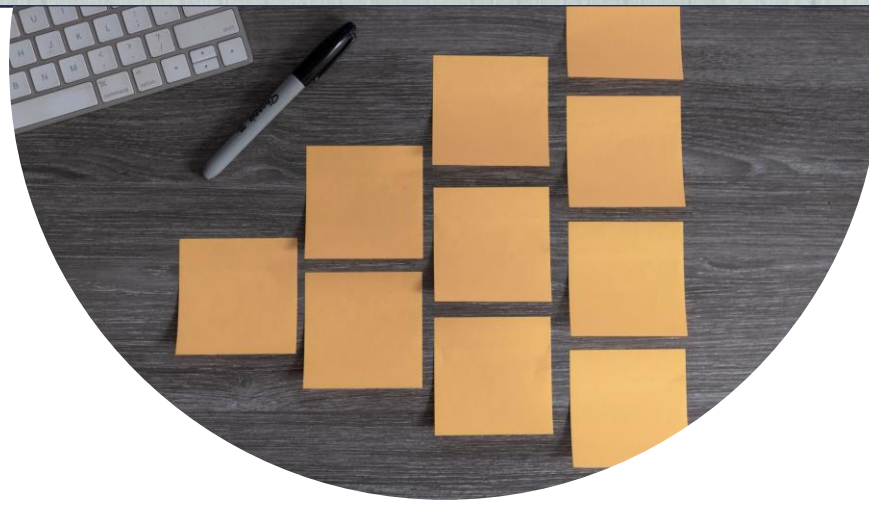
INFORMATION

ACTIONS TO TAKE

**Different Message
=
Different Design**

Different message = Different Design
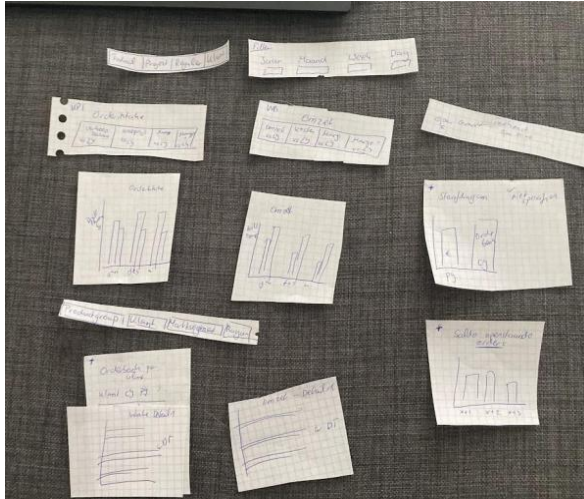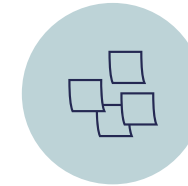
Step 2

Organize

Organizing information
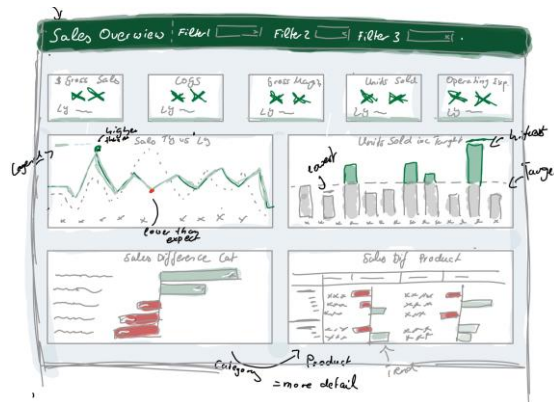

🔍 Gather all the information

▦ Sticky Notes
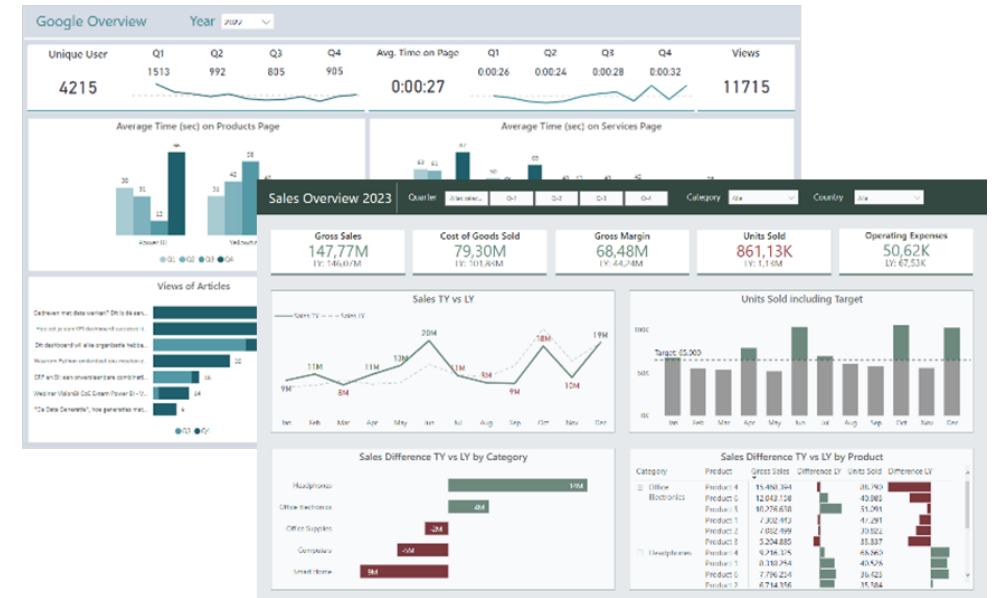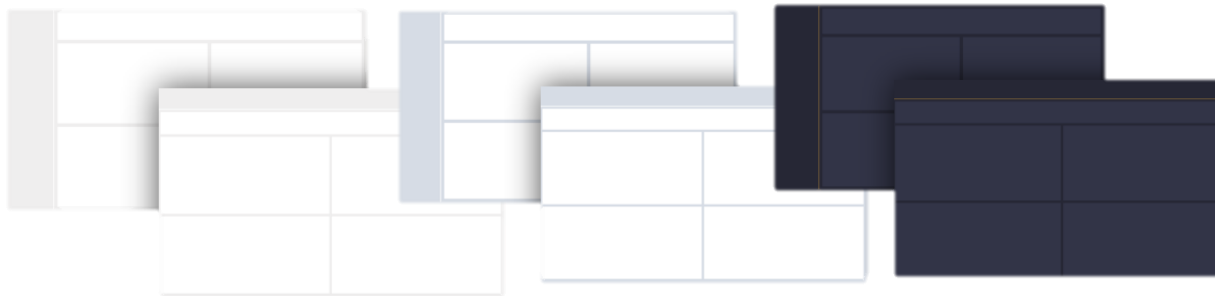(easy to rearrange)

🧩 Translate pieces to design

✏️ Each piece is part of the story

👀 Keep it simple

Using templates

- Guidance (also for you)

- Starting point
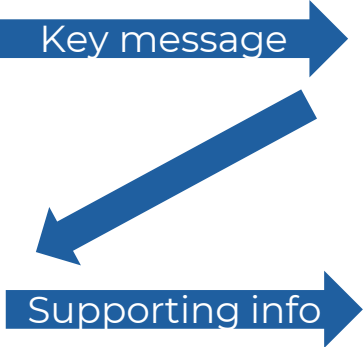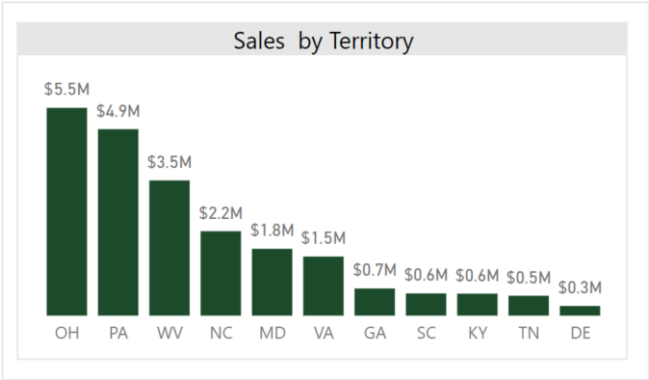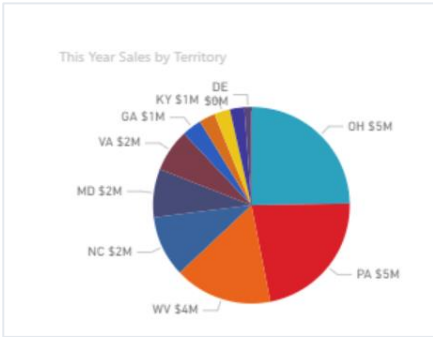
- Check how busy your design is

Step 3

Visualization

Some basics

Reading Direction

Key message

Supporting info

F

Ease of Interpretation

This Year Sales by Territory

DE
KY $1M $0M
GA $1M
VA $2M
OH $5M
MD $2M
NC $2M
PA $5M
WV $4M

Sales by Territory

$5.5M
$4.9M
$3.5M
$2.2M
$1.8M $1.5M
$0.7M $0.6M $0.6M $0.5M $0.3M

OH PA WV NC MD VA GA SC KY TN DE

Visual Cues

Sales Difference TY vs LY by Product

Category	Product	Gross Sales	Difference LY	Units Sold	Difference LY
Office Electronics	Product 4	15,468,394.40	-583,396.53	88,790.00	-31,303.00
Office Electronics	Product 6	12,043,158.08	1,804,151.16	40,982.50	-15,084.50
Office Electronics	Product 5	10,276,638.44	5,093,043.05	51,090.50	-2,640.50
Headphones	Product 4	9,216,325.30	1,011,620.77	66,659.50	14,232.00
Office Supplies	Product 4	8,592,488.50	2,584,096.88	27,705.00	-5,007.00
Headphones	Product 1	8,318,254.37	3,318,314.67	40,525.50	12,470.50
Headphones	Product 6	7,796,253.92	3,730,122.58	36,423.00	13,603.00
Office Electronics	Product 1	7,302,442.70	-502,078.43	47,291.00	-8,067.50
Total		**147,771,511.24**	**1,702,062.57**	**861,132.00**	**-264,674.00**

Sales Difference TY vs LY by Product

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	

Visual Cues

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

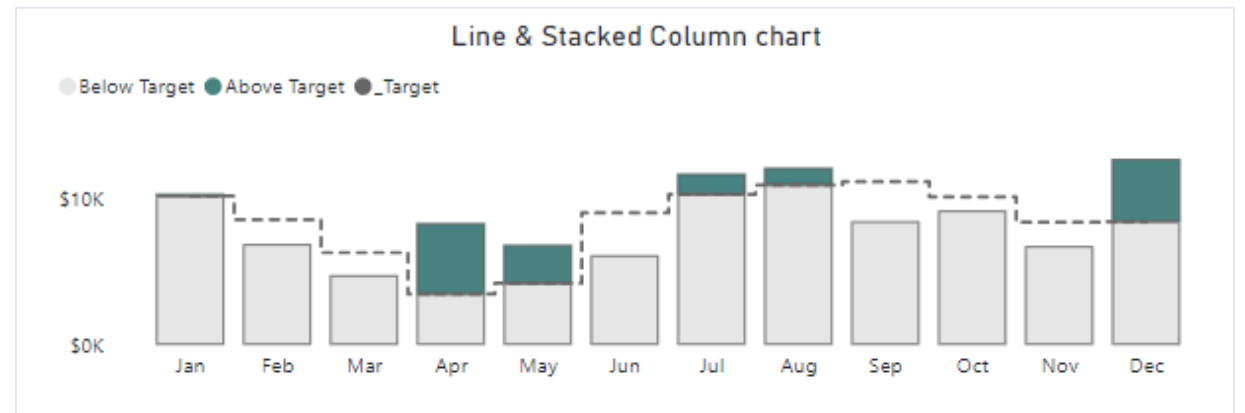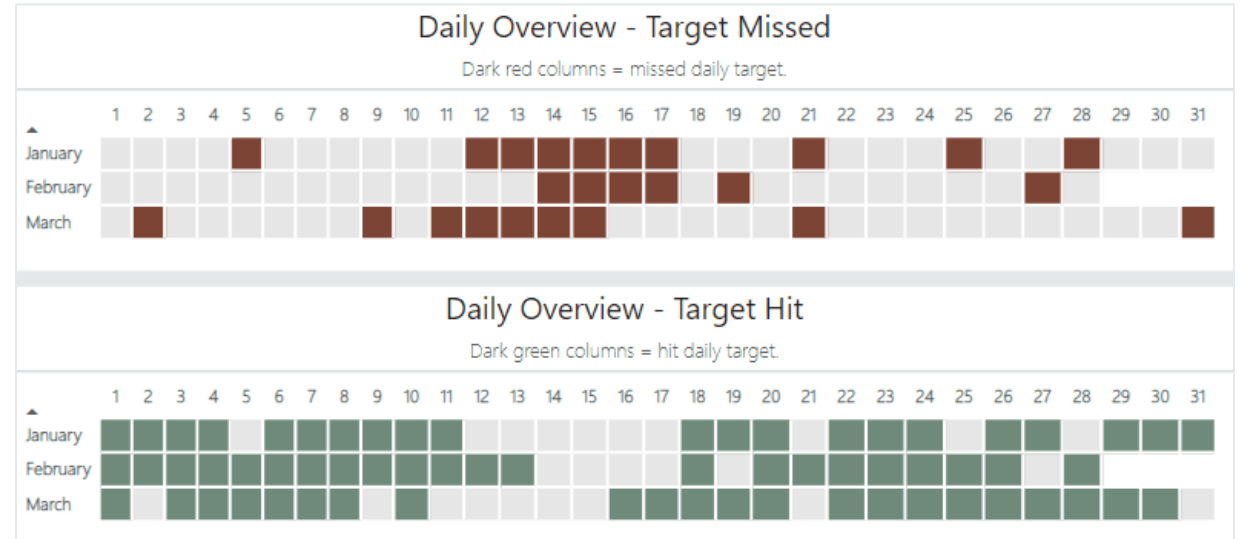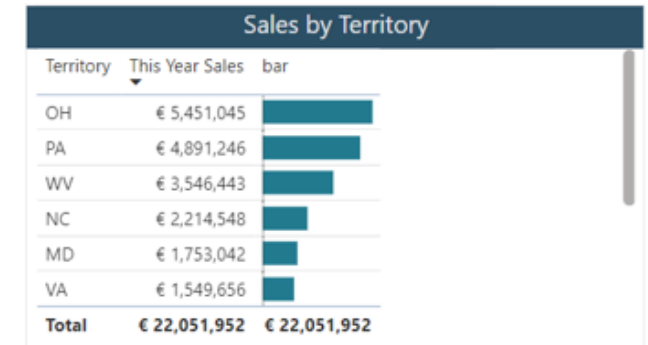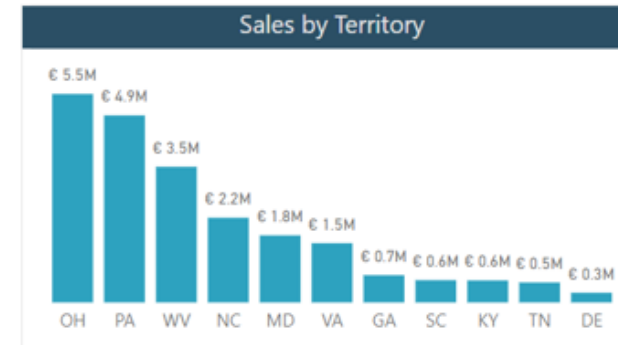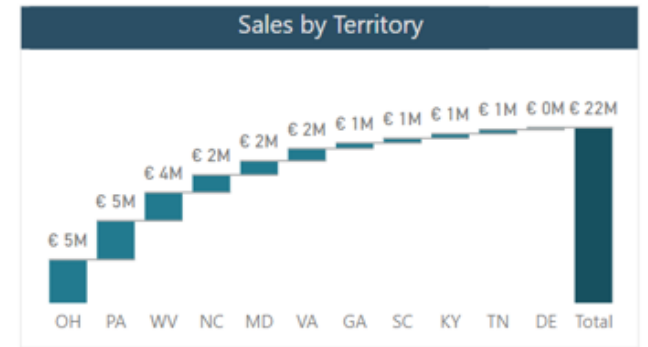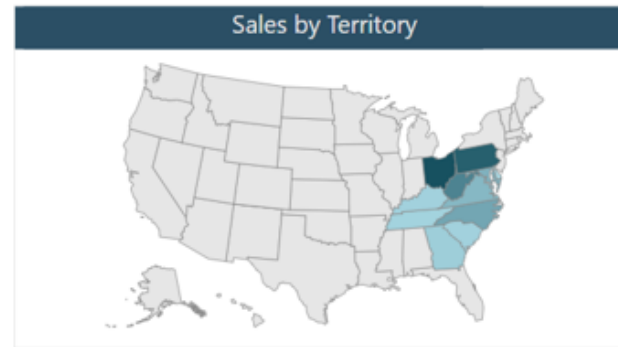| Category	Gross Sales ▼	Difference LY		Difference Units	
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Product 4	€ 15,468,394	-€ 583,396.53	▼	-31,303.00	▼
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Product 5	€ 10,276,638	€ 5,093,043.05	▲	-2,640.50	▼
Product 1	€ 7,302,443	-€ 502,078.43	▼	-8,067.50	▼
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⊟ **Headphones**				

Visual Cues

Provide Guidance

- Labels

- Color Coding

- Title & Subtitle

Daily Overview - Target Missed
Dark red columns = missed daily target.

Daily Overview - Target Hit
Dark green columns = hit daily target.

Line & Stacked Column chart
Below Target ● Above Target ● _Target

Best Visual = Goal + End-user

- Goal (actions to take) & end-user determine the visual.

- Same data can be visualized in different ways.

Visuals have (dis)advantages

Card Visual
+ Simple
+ / - Number speaks for itself
- Can't compare

Table
+ Big amounts of data
+ User is used to it
- What is relevant?

Heatmap
+ Easily see most important information
- Easily cluttered
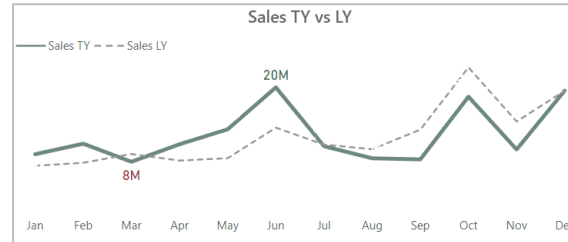
Line chart
+ Easy to compare for example with LY
+ Does not take too much space
- Hard to read with lots of lines
- Labels can be overlapping
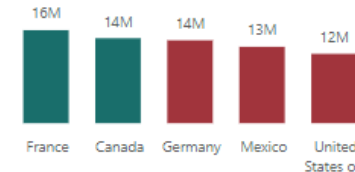
Bar Chart (vertical)
+ Useful to compare categories
+ Easy to compare
- Comparing with for example LY can be difficult
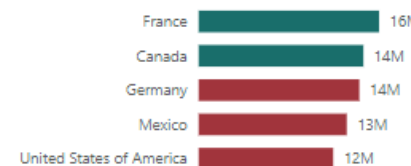
Bar Chart (horizontal)
+ Useful to compare categories
+ Long category names
- Comparing with for example LY can be difficult

Declutter & Enrich

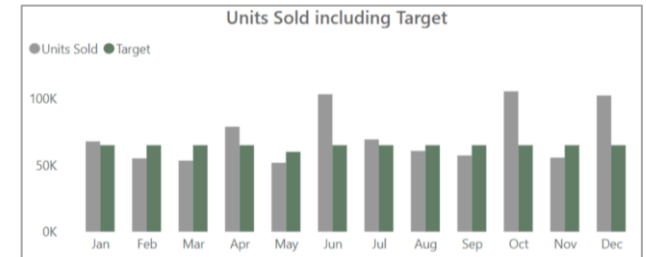Which information do we need? How much guidance is needed?

But how do I start?

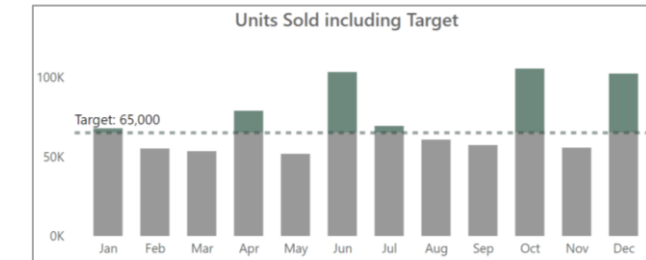# Step by Step – Start with 1 visual

Step 4
Aesthetics
(& Usability)

Aesthetic-Usability Effect

- Users often perceive aesthetically pleasing design as design that's more usable.

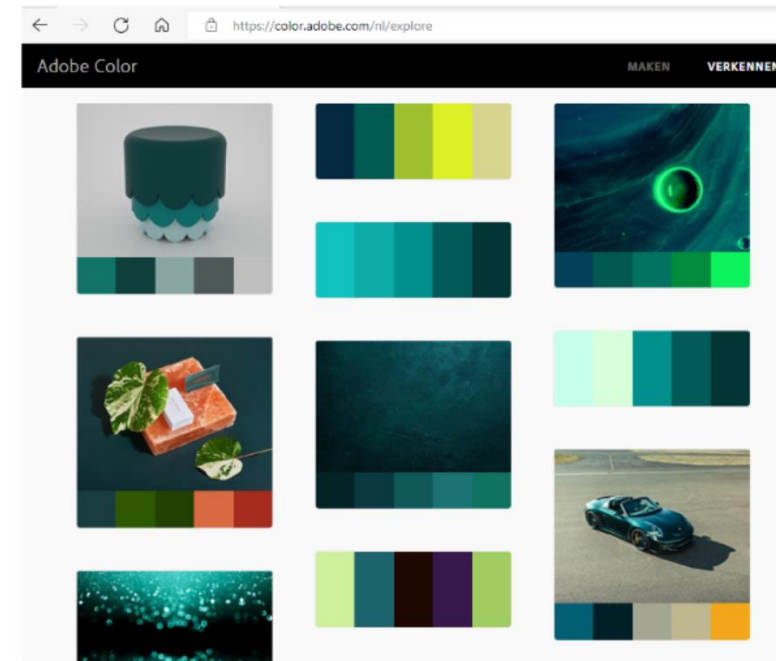- People are more tolerant of minor usability issue.

Creating uniformity

Color schemes

- Easier on the eye

- Use same colors for same

  categories

Layouts

Focus

Don't overestimate the time the users are willing to spend to find information.
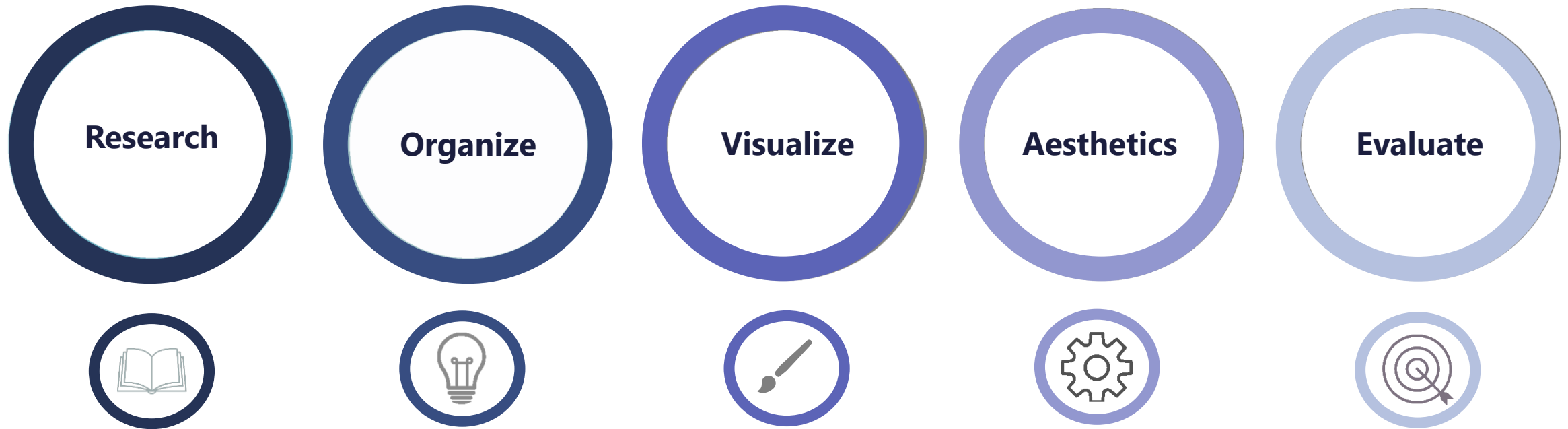
Step 5

Evaluate

Evaluation

- Don't wait till it is too late!
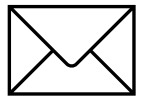
- Don't make assumptions!

Make it easy

- Evaluate together (during a session)

- Anonymous evaluation

- Go through dashboard together
    - Does the user find all the information?

Takeaway - It's a process

Research   Organize   Visualize   Aesthetics   Evaluate

Contact

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