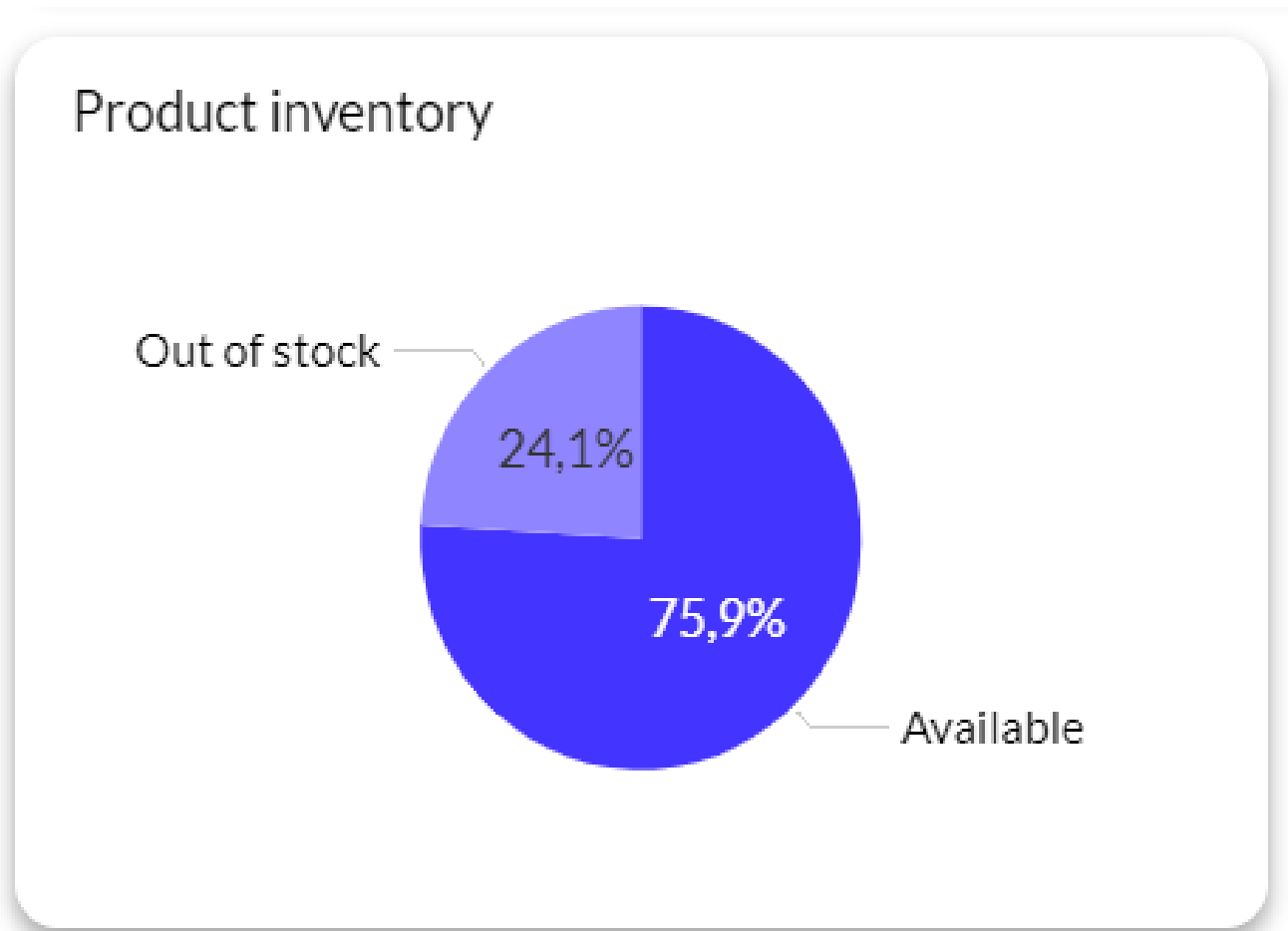# **1** Pie Chart

Product inventory

Out of stock — 24,1%

75,9%

— Available

When to use

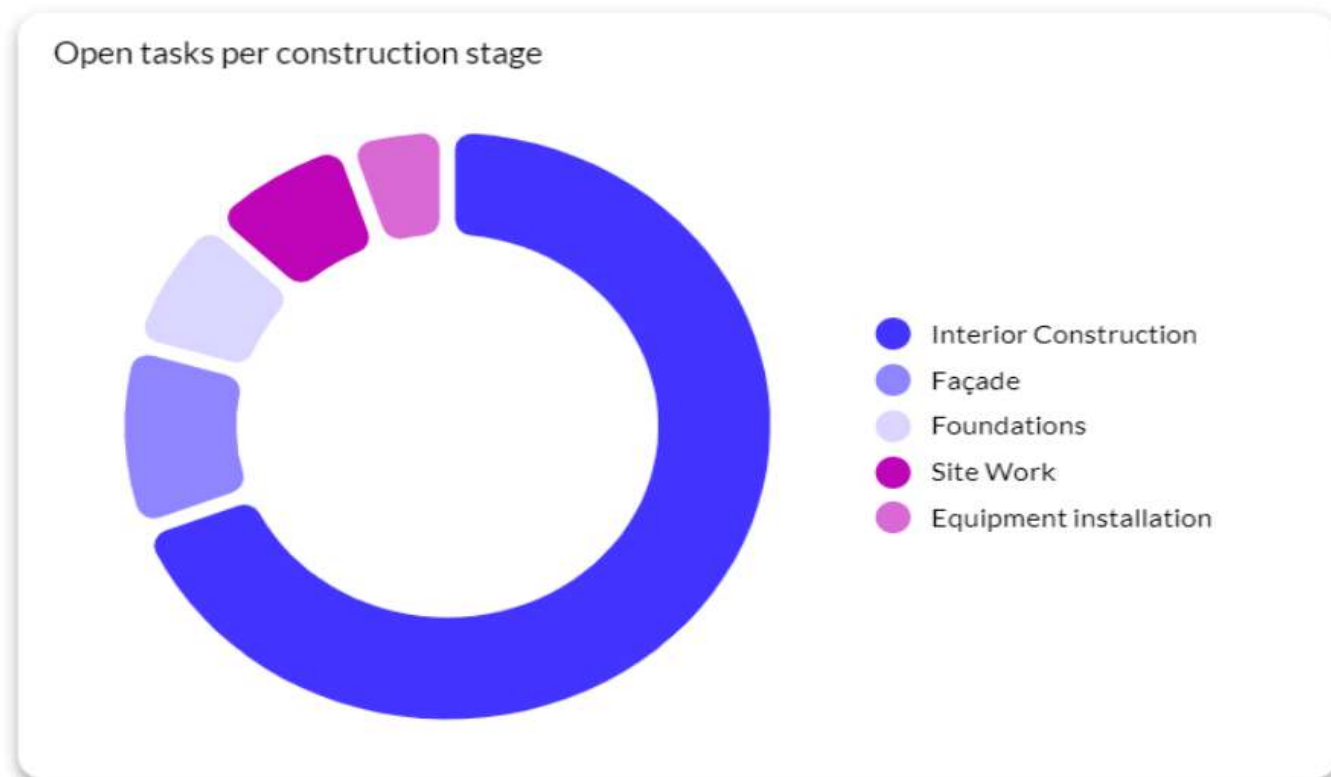When you want to show simple proportions (like 25%,75%).

Use case

Showing how your ₹1,000 monthly expenses are split: 40% food, 30% rent, 30% other

Tips

- Please Don't Use more than 5 slices or it Will gets confusing
- Always start slices at 12 o'clock, going clockwise
- Sort slices from largest to smallest
- Never use 3D pies

2 Donut Chart

Open tasks per construction stage

- Interior Construction
- Façade
- Foundations
- Site Work
- Equipment installation

When to use

When showing parts of a whole, but with a visual focus on the **center number** (like total sales).
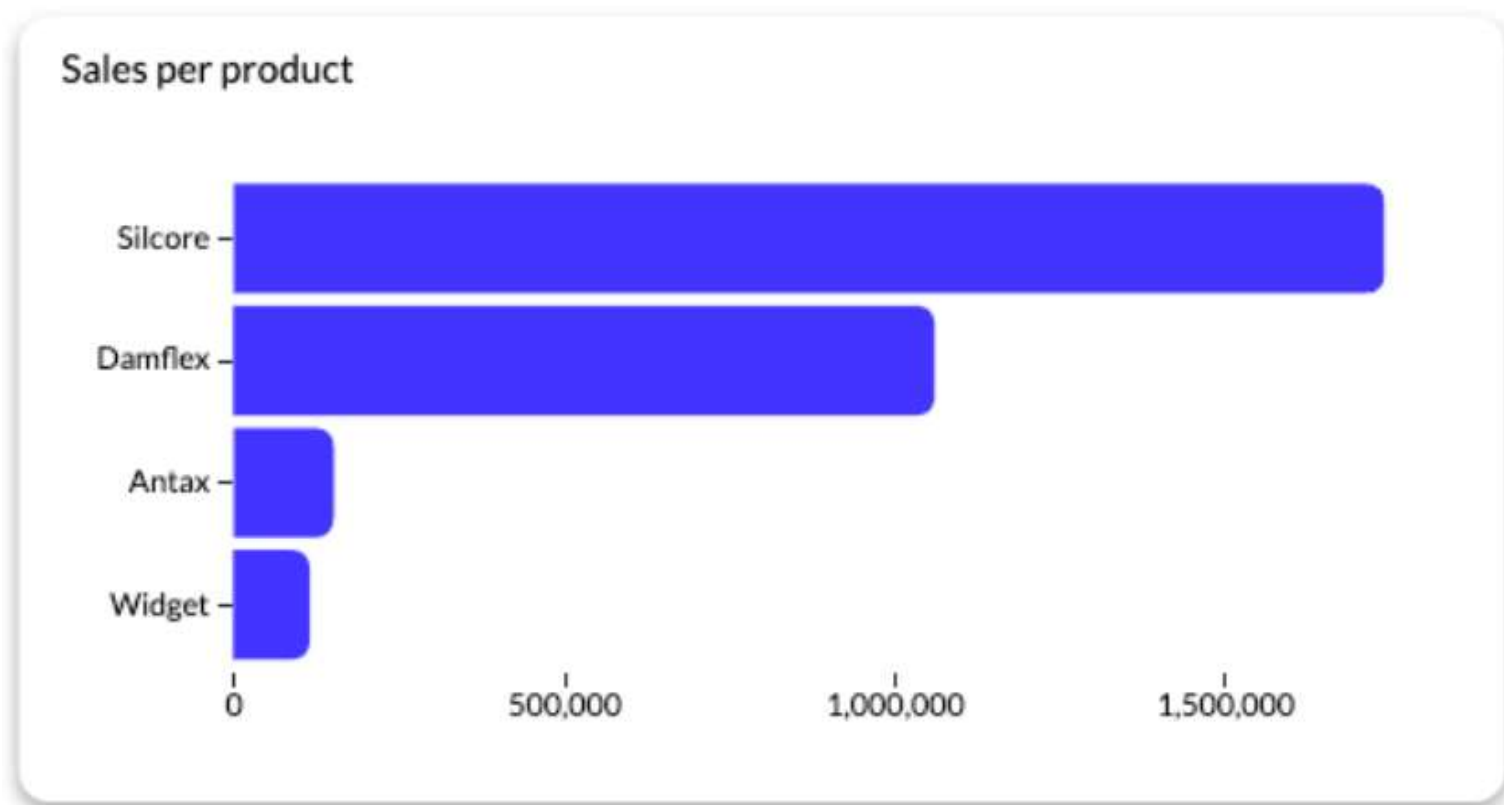
Use case

- Showing market share percentage for 4–5 competing brands.
- To show where most of your website visitors come from.

Tips

- Use the center space to show total value or percent
- Avoid tiny slices (group them under "Others")
- Not good for comparing multiple donut charts side-by-side

3 Bar Chart

Sales per product

Silcore			
Damflex			
Antax			
Widget			

0   500,000   1,000,000   1,500,000

When to use

To compare categories side-by-side, like comparing sales for products, or scores for students.
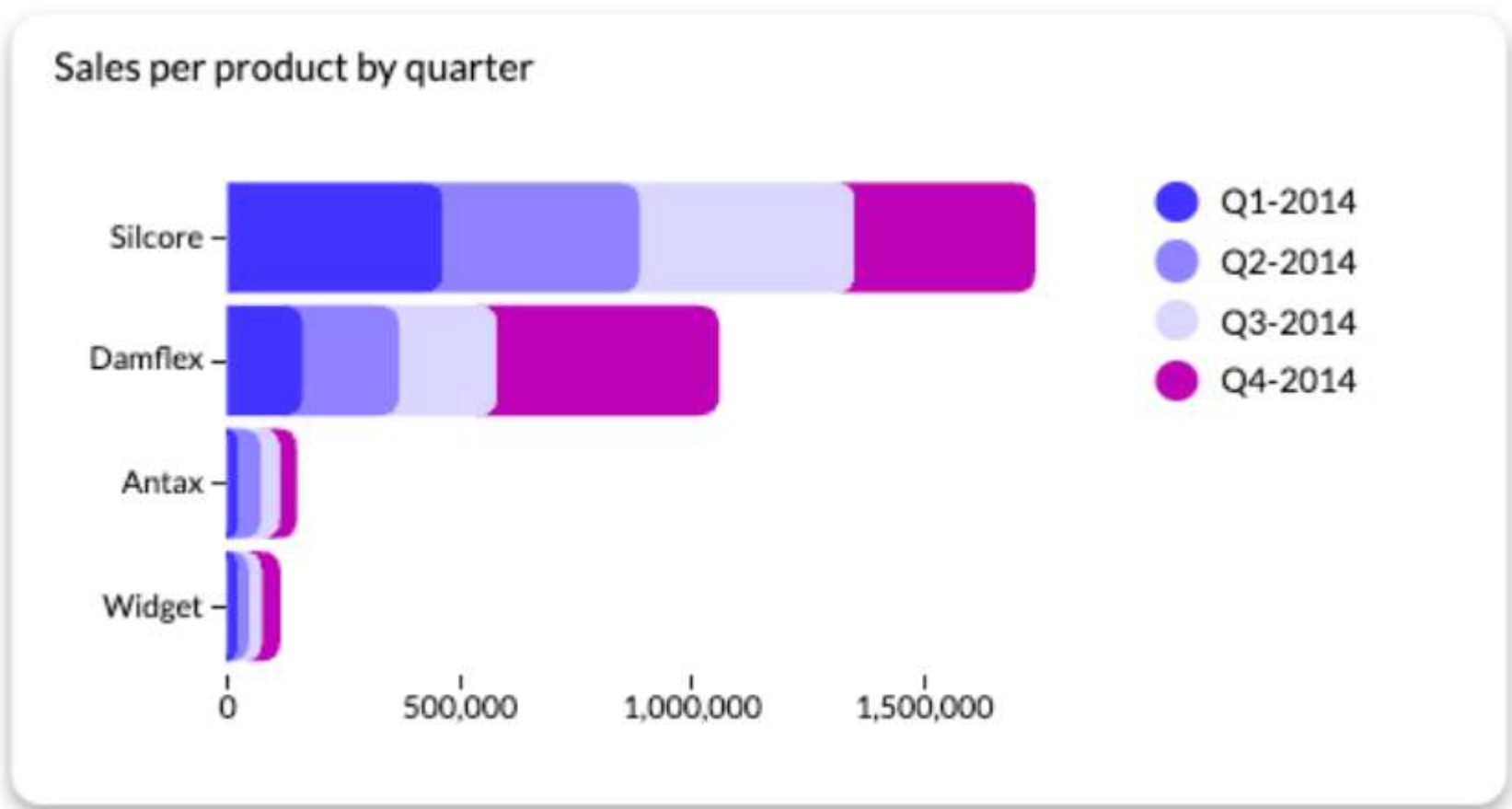
Use case

- Compare sales of T-shirts, jeans, and shoes
- Comparing monthly sales for different stores

Tips

- Sort bars from biggest to smallest, easier to read
- Use the same color unless you want to highlight something
- Please don't skip the Y-axis label (people forget what they're looking at)
- Horizontal bars work better for long labels

4 Stacked Bar Chart

Sales per product by quarter

When to use

When you want to compare overall totals and see what they're made of like total sales split by regions.
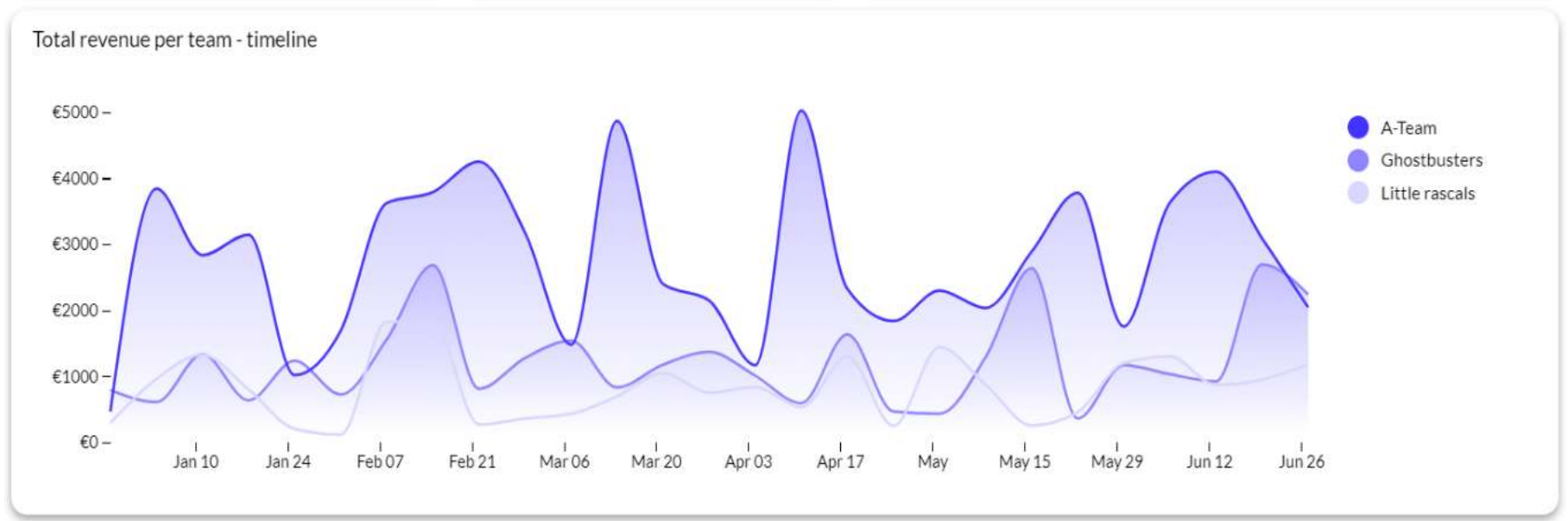
Use case

Comparing total sales across regions with a breakdown by product type.

Tips

- Don't stack more than 4–5 categories becomes hard to compare
- Show total on top of each bar (it's not obvious!)
- Color categories consistently across charts

5 Line Chart

Total revenue per team - timeline

When to use

When you want to show how something changes over time

Use case

- Showing website traffic over 12 months.
- Tracking stock price changes daily.

Tips

- Keep the time order correct (left to right).
- Use markers to highlight important points (such as exams or holidays).
- Don't overcrowd with too many lines it's harder to read.

6   **Area Chart**

Number of orders per month vs number of out of stocks

Available   Out of stock
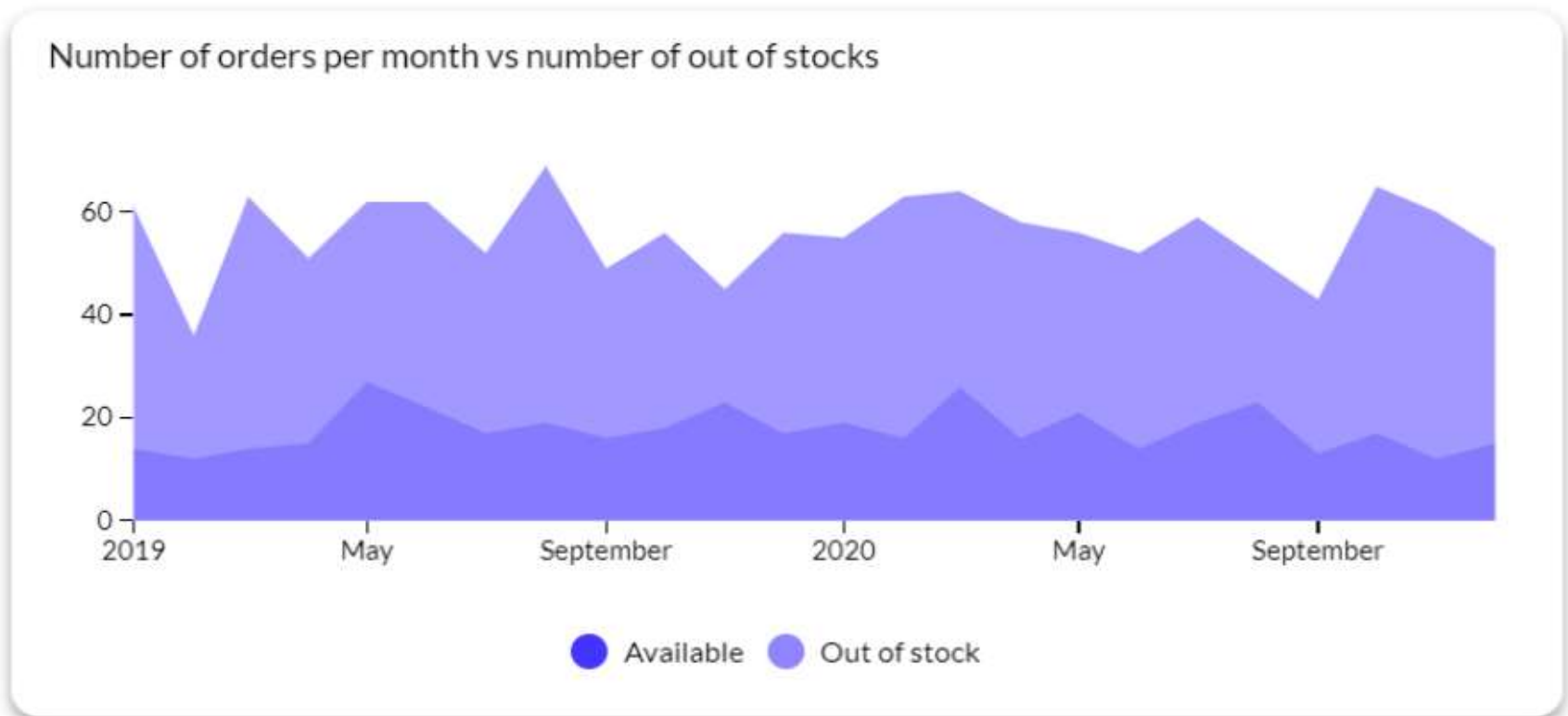
When to use

An Area Chart shows how values change over time, with filled areas making it easy to compare multiple categories.
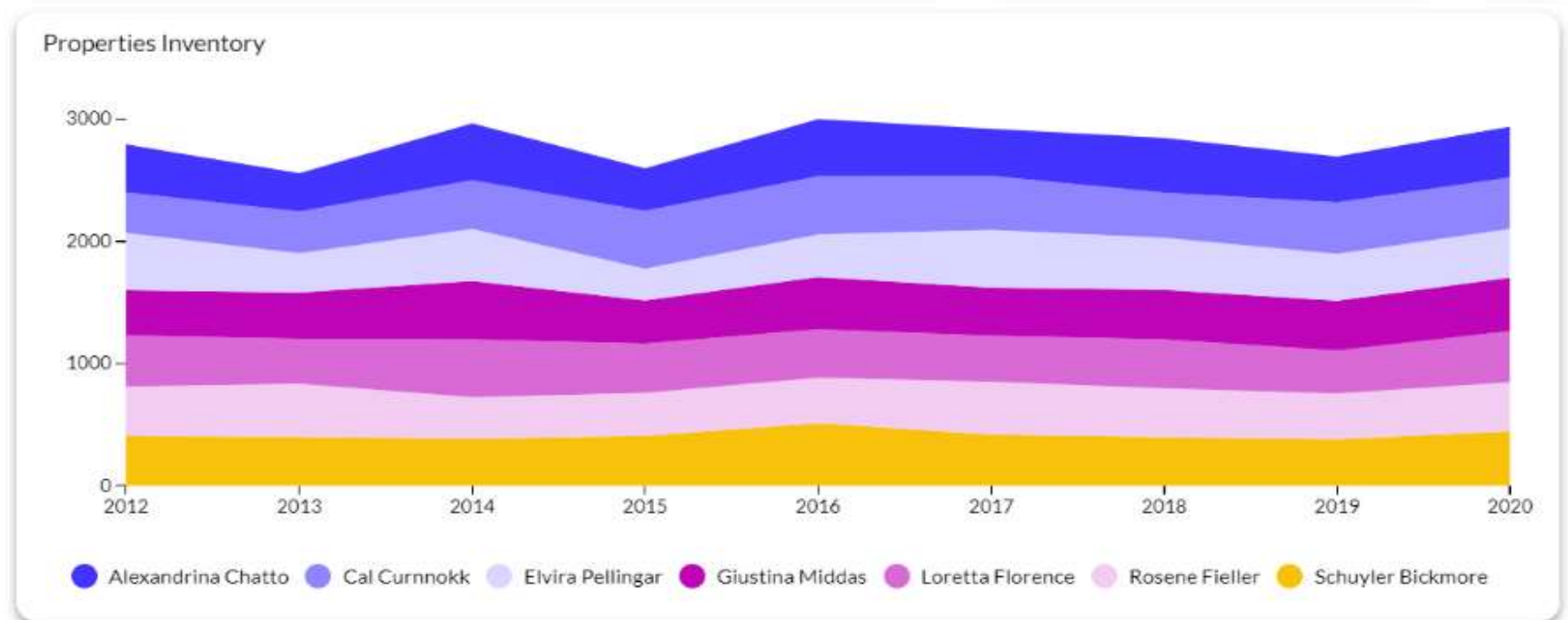
Use case

- Tracking sales growth for different products over the years.
- Showing how each energy source contributes to total power generation.

Tips

- Don't add too many groups, or it gets messy.
- Use see-through colors so overlaps are clear.
- Put the biggest group at the bottom for easy reading.

7 Stacked area chart

Properties Inventory

Legend: Alexandrina Chatto, Cal Curnnokk, Elvira Pellingar, Giustina Middas, Loretta Florence, Rosene Fieller, Schuyler Bickmore

When to use

A stacked area chart shows how each category adds up to the total over time, highlighting both trends and contributions.

Use case

- Showing how different product categories contribute to total sales over years.
- Tracking how energy sources (solar, wind, coal) make up total power generation over time.
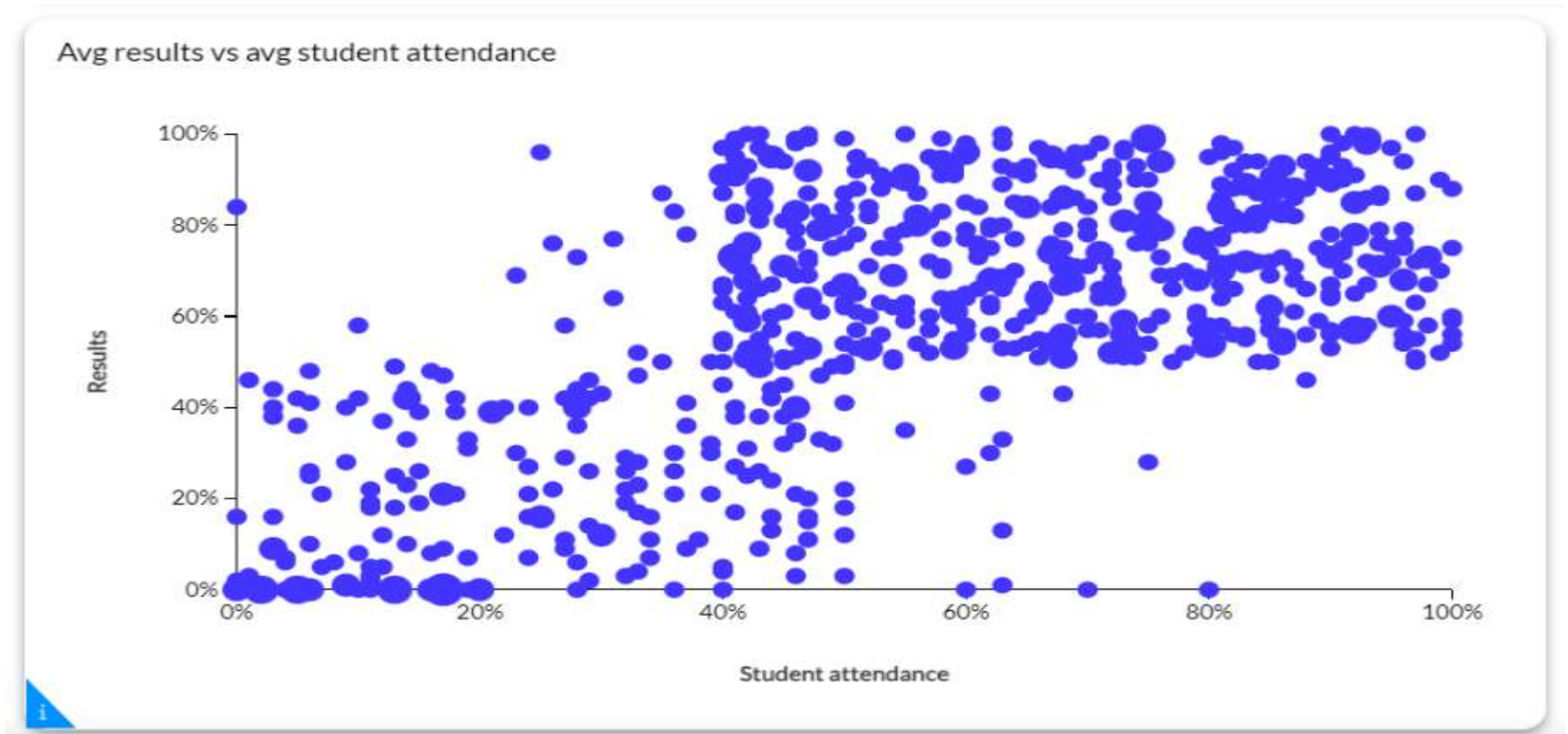
Tips

- Don't add too many groups, or it will look messy.
- Use soft, see-through colors so layers don't hide each other.
- Put the biggest group at the bottom so it's easier to follow.

8 Scatter Plot

Avg results vs avg student attendance

When to use

A scatter plot shows the relationship between two variables

Use case

- Analysing if higher education levels lead to higher salaries.
- Checking the relationship between product price and customer satisfaction scores.
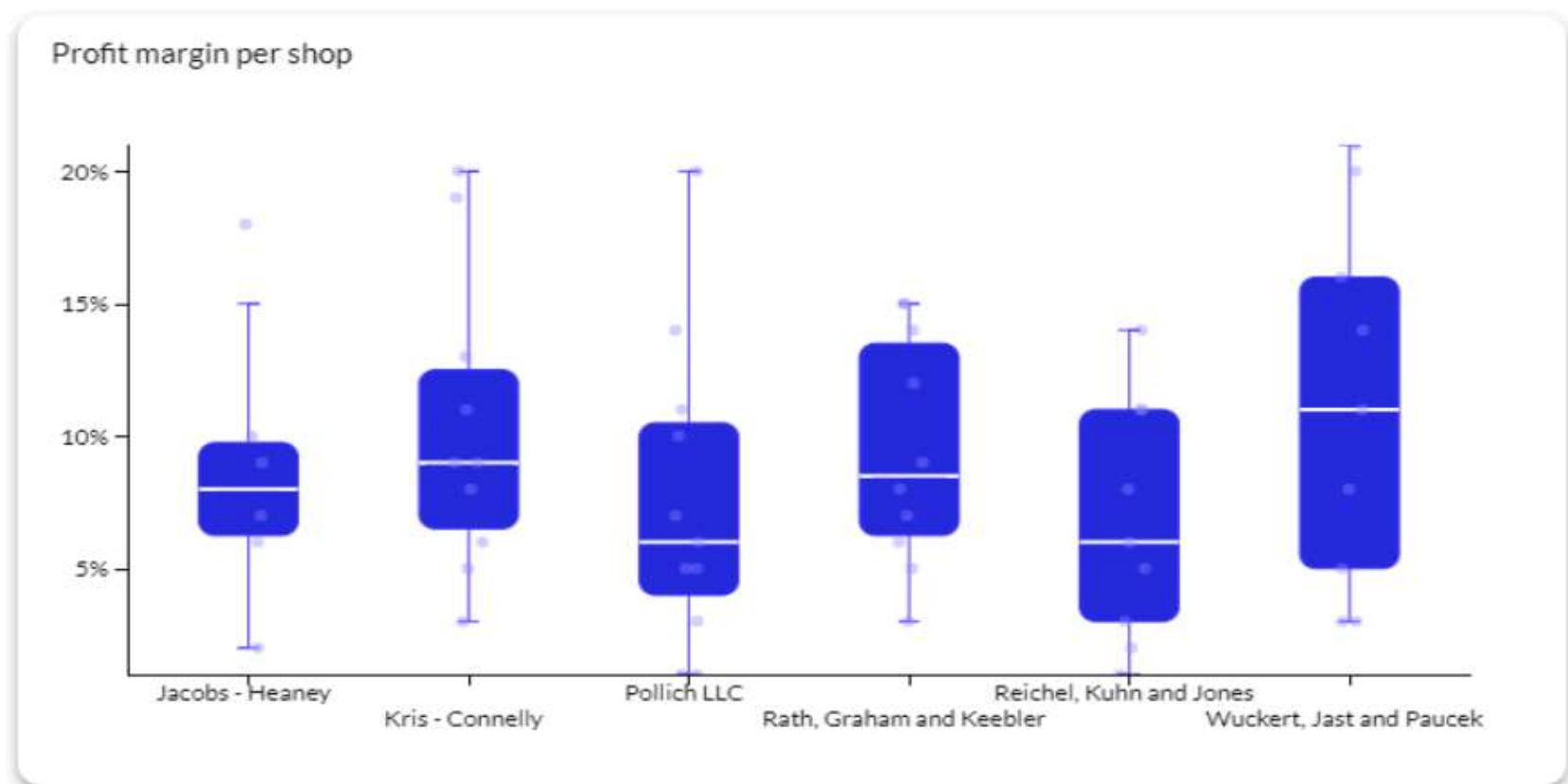
Tips

- Use fewer points or sample the data if you have too many dots, so it's not cluttered.
- Add a trendline to quickly spot patterns.
- Use color or size to show a third variable.

9   **Box Plot**

Profit margin per shop

When to use

When you want to visualize the spread of data, find medians, and identify outliers quickly.
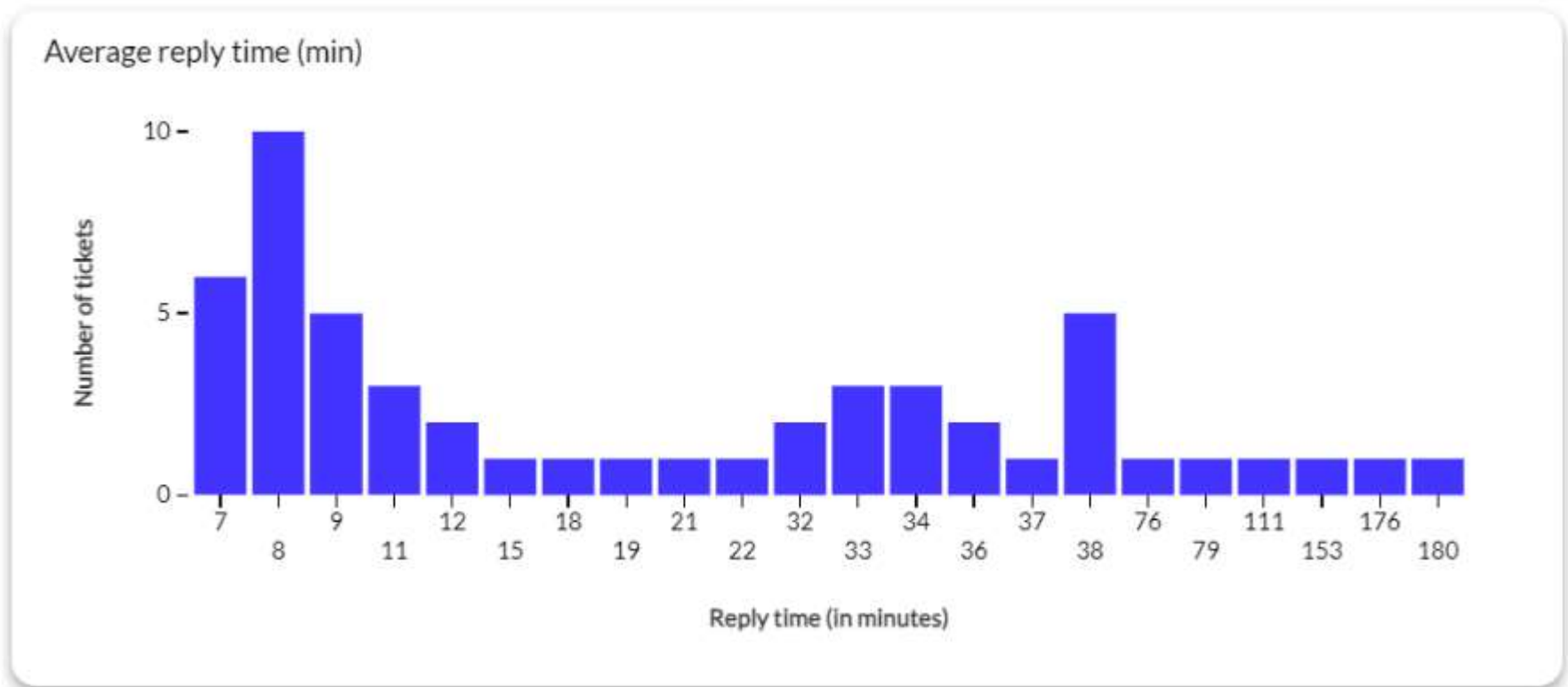
Use case

- Comparing exam score distributions across different classes.
- Checking salary ranges in different job roles.

Tips

- Spot outliers fast they're the dots outside the whiskers.
- Place box plots side by side to compare groups easily.
- Use simple labels so the chart doesn't look messy.
- Works best when you have lots of data, not just a few points.

10 **Histogram**

Average reply time (min)

When to use

Use a histogram to see where most of your data falls and find patterns.
It helps you spot groups, common values, or anything unusual.

Use case

- Checking which age group buys most of a product.
- Seeing common delivery times for online orders.

Tips

- Pick the right number of bins to show clear patterns without clutter.
- Keep bin sizes equal for fair comparison.
- Use colors to highlight important value ranges.
- Avoid using histograms for small datasets

11 Bubble Chart

Top 5 articles by products sold

When to use

when you want to compare multiple categories by size and group them visually using colours.

Use case

- Showing sales volume by product category with bubble size and grouping by region color.
- Comparing social media posts by likes (size) and type (color).

Tips

- Keep bubble sizes balanced to avoid hiding smaller bubbles.
- Use consistent colors to group related categories.
- Add labels or tooltips for clarity.

12 Funnel Chart

Purchase funnel

Website visit

Product view

Product added to cart

Product sold
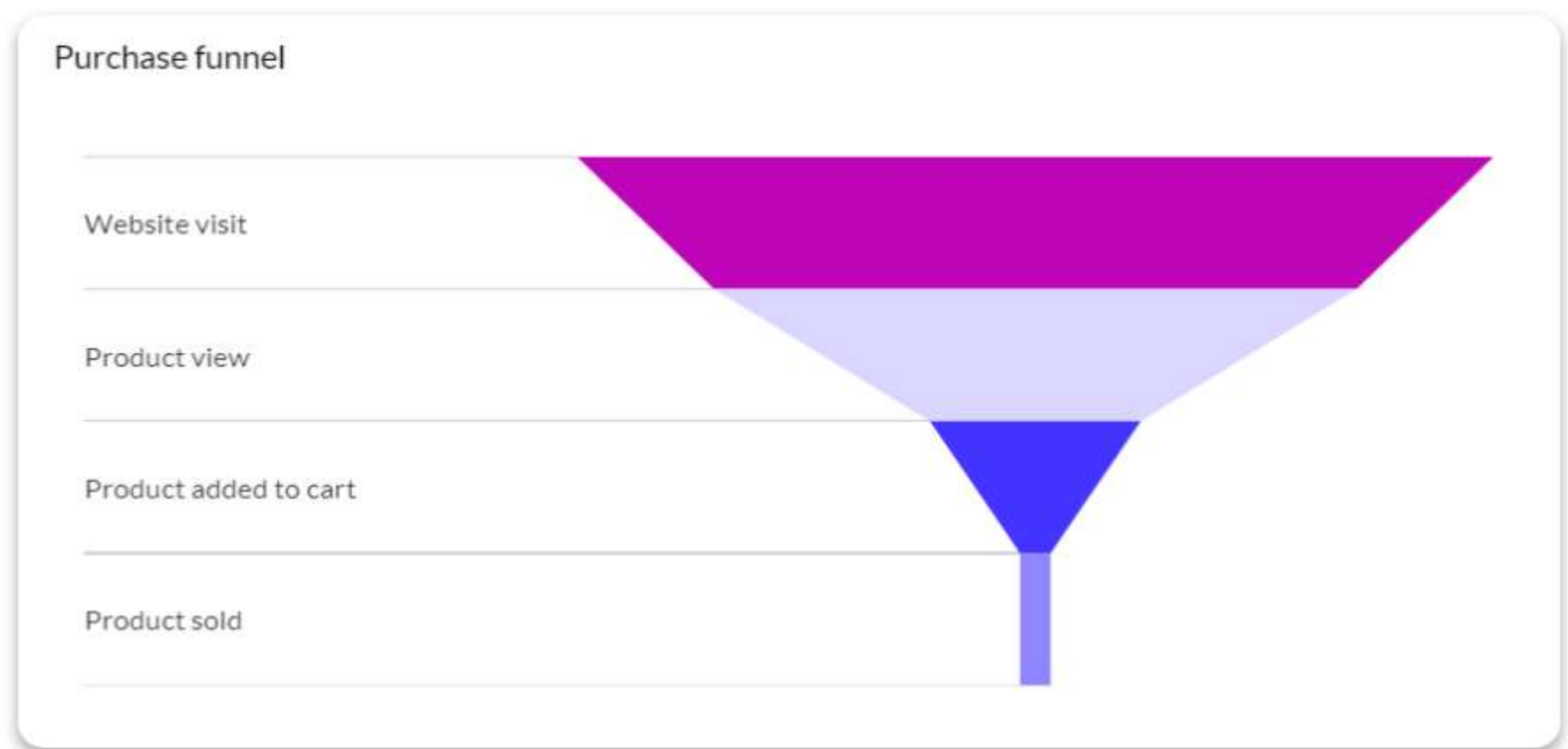
When to use

when you want to track how many items move through different stages of a process, showing where drop-offs happen.
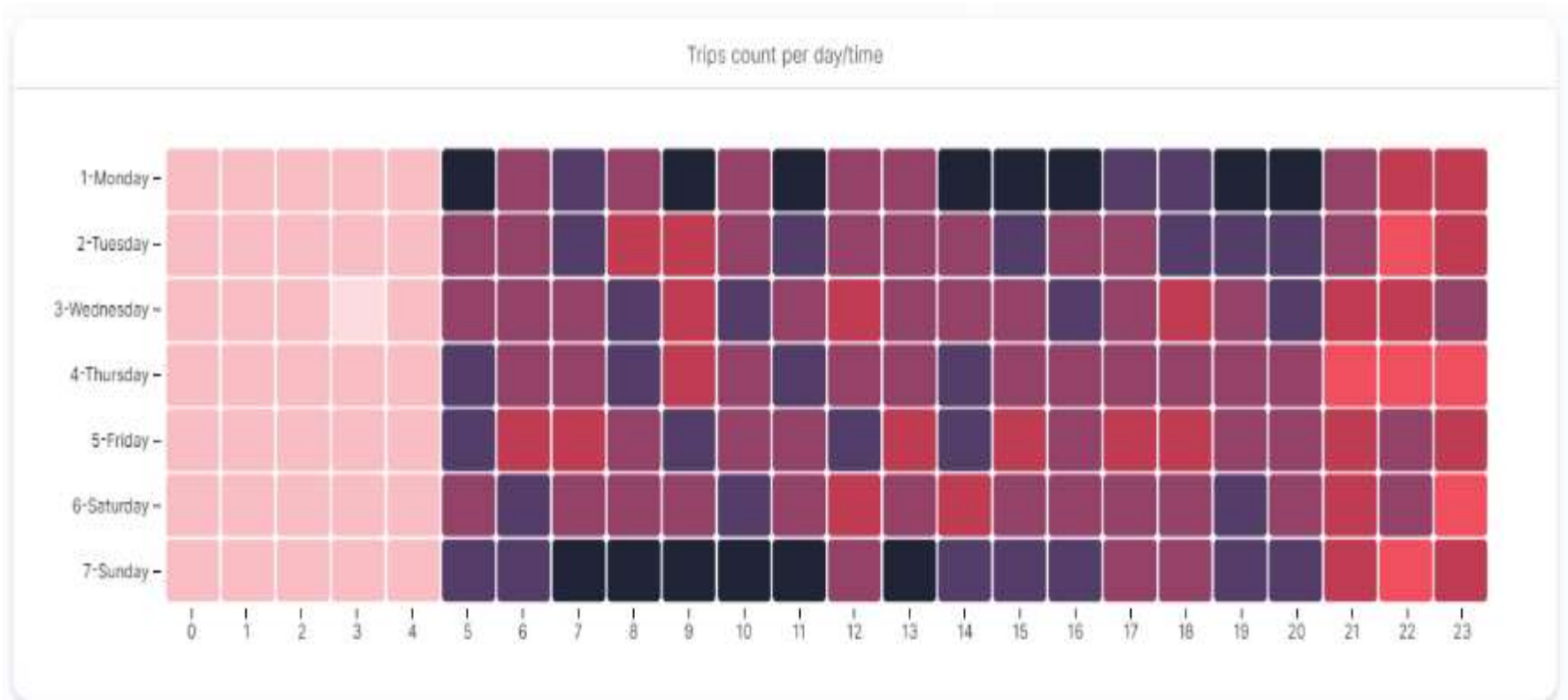
Use case

- Tracking sales leads as they move from initial contact to final purchase.
- Showing how many website visitors progress through steps like visit, signup, and purchase.

Tips

- Keep stage names short and clear for easy reading.
- Use contrasting colors to highlight big drop-offs.
- Avoid too many stages 5 to 7 is ideal for clarity.
- Add percentages to show conversion rates between stages.

13 **HeatMap**

Trips count per day/time

When to use

Use a heatmap to quickly spot patterns, trends, or high and low values across two categories using color intensity.
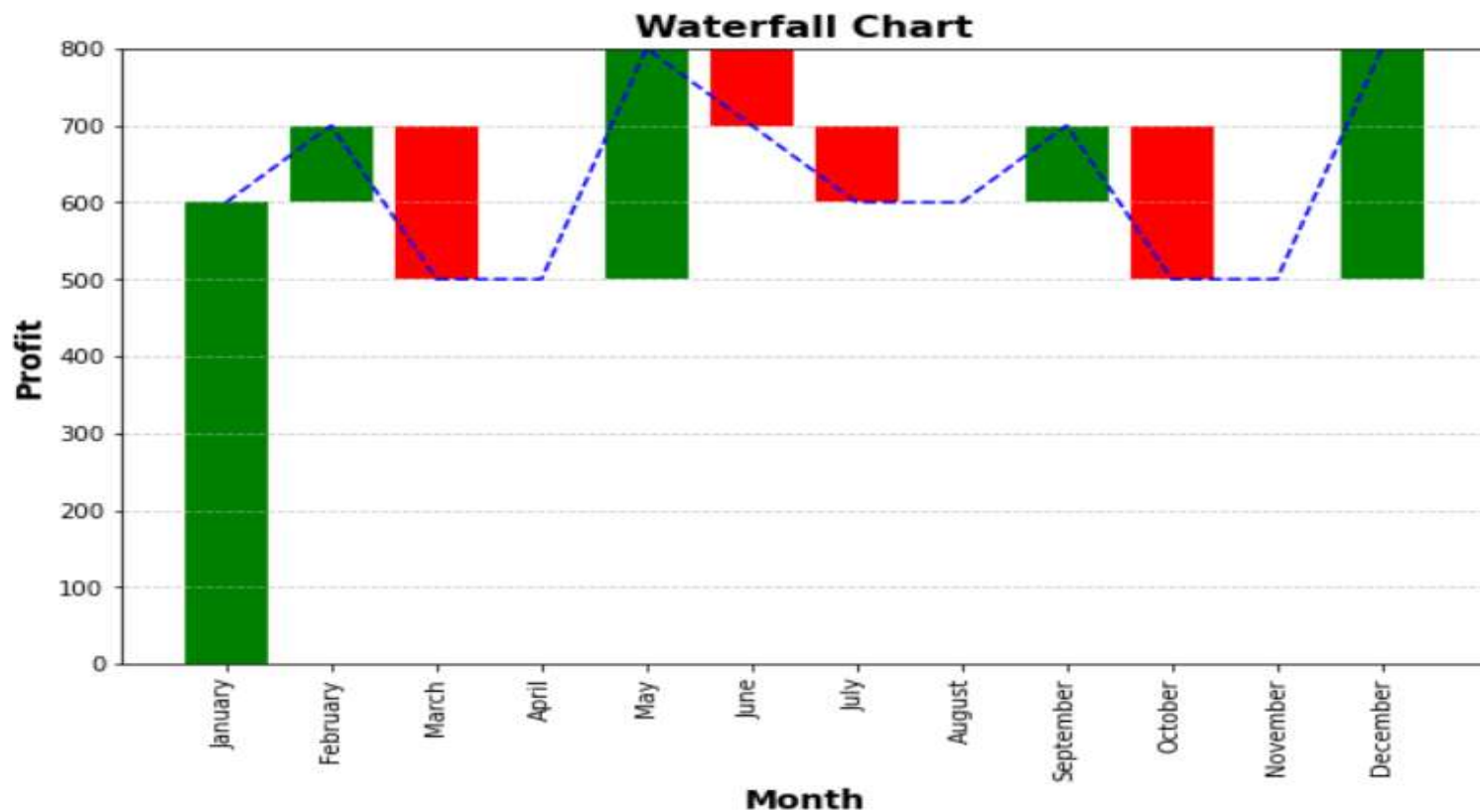
Use case

- Showing sales performance by product and region.
- Visualizing website traffic by day of the week and hour.

Tips

- Use a clear color gradient from low to high to make differences obvious.
- Avoid using too many color shades to keep it simple.
- Label rows and columns clearly for easy understanding.

14   Waterfall Chart

When to use

when you want to show how a value changes step-by-step with positive and negative impacts leading to a final total.
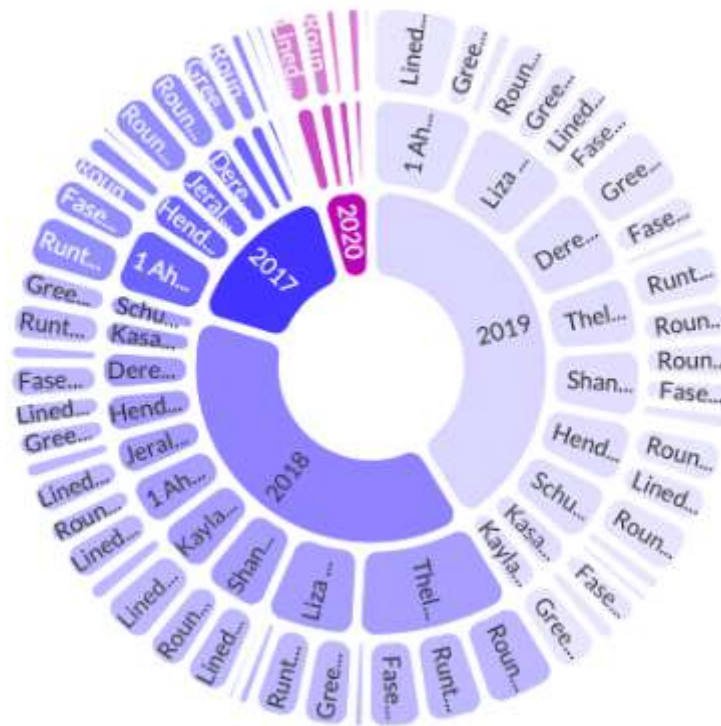
Use case
- Showing how a company's profit changes from revenue, expenses, and taxes.
- Visualizing monthly cash flow changes over a year.

Tips
- Use different colors for positive and negative changes to make them clear.
- Start and end bars should stand out (often bigger or different color).
- Keep the order logical to tell a clear story.

15 Sunburst chart

When to use

Use a sunburst chart to explore and visualize hierarchical data with multiple levels, showing how parts relate to the whole.

Use case

- Displaying a company's organizational structure by department and team.
- Visualizing file storage usage by folder and subfolder.

Tips

- Limit the number of hierarchy levels to avoid clutter.
- Use distinct colors for top-level categories and shades for sub-levels.
- Add labels or tooltips to help identify smaller segments.
- Avoid too many small slices; group minor categories as "Others."