How to choose the format for your data.

What's the key piece of information you are trying to show?

Small numbers, percentages, frequencies

🕐 Time

☑ Survey Responses

⚖ Comparisons

📍 Place

It's complicated

Big single number

Just text, large, in a nice font.

78

When you really want them to know (and remember) a number.

A single number

Donut Chart

A pie chart with a hole in the center.

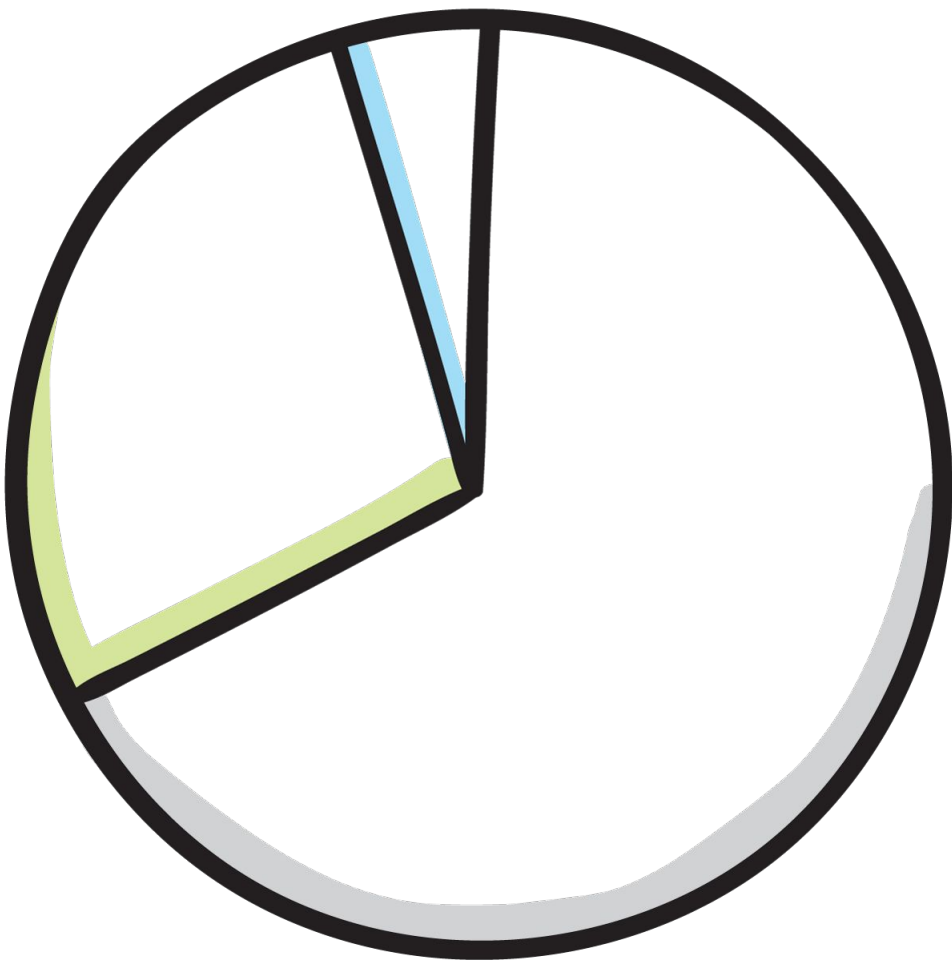Think of it as a visual ornament around your big single number.

A percentage

Pie Chart

A circular graph, in which each 'slice' of the pie represents a portion of the whole.

Especially if one of the slices is very small or very large (for emphasis).
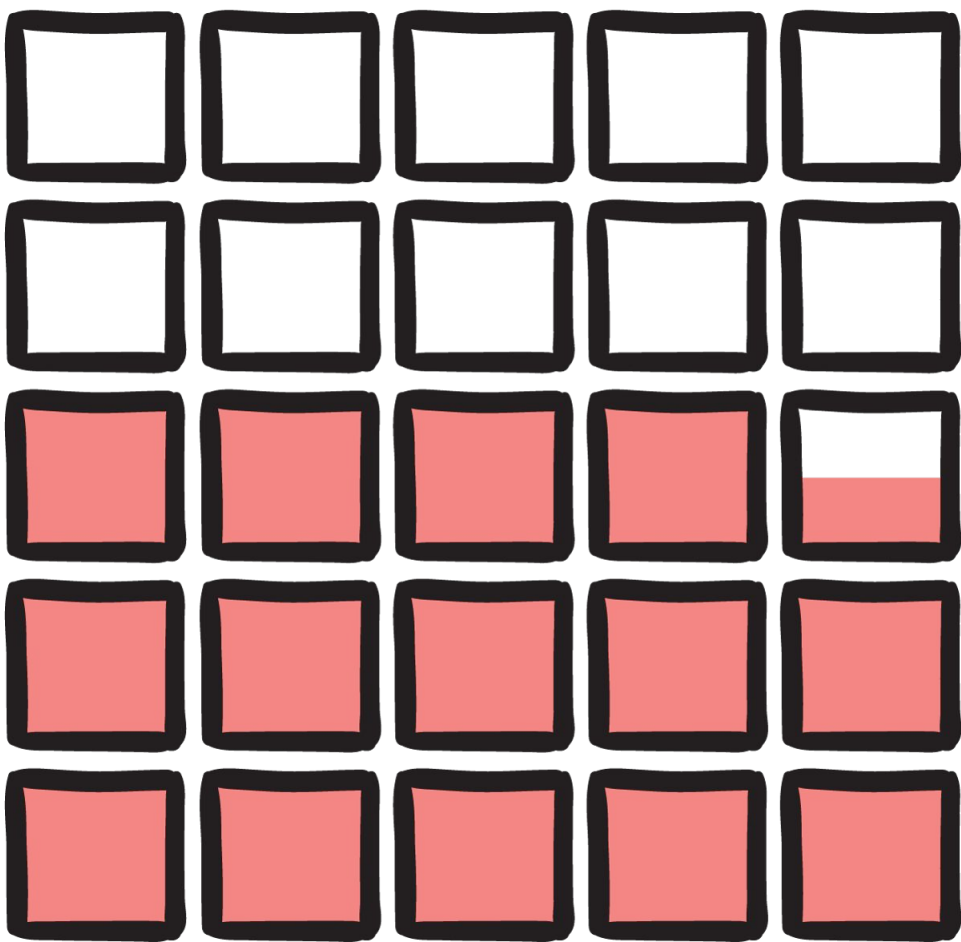
A couple (less than three) of percentages

Small numbers, percentages, frequencies

Icon array

aka: Pictograph. An icon array displays one shape repeatedly. Some of the shapes are altered in some way (usually by color) to represent a proportion.

Easier to interpret than a pie.

A couple (less than three) of percentages

Stacked bar or column

A vertical column, or horizontal bar, divided into subgroups. Each subgroup — usually colored differently — represents a proportion.

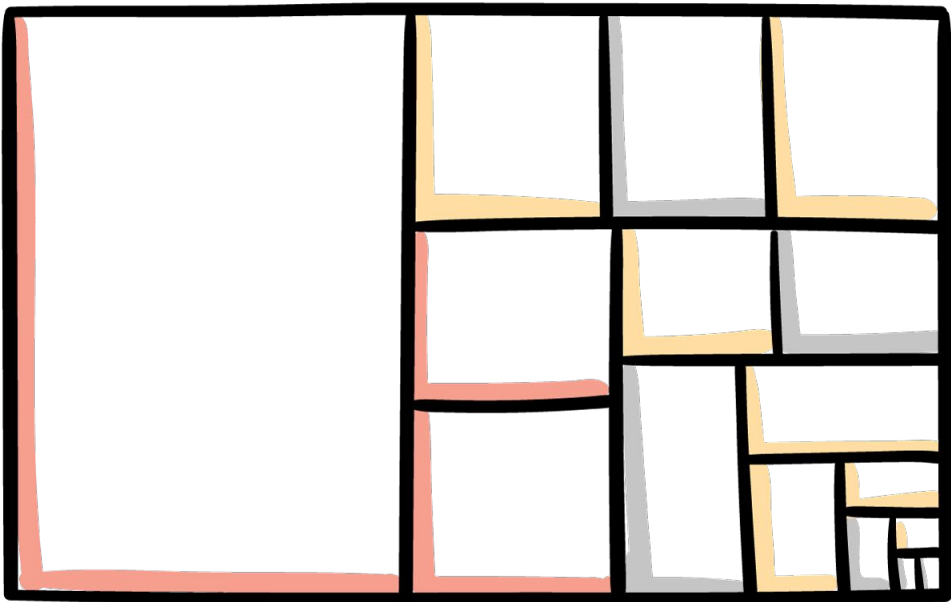Better than a pie, this shows the percentage make-up of the whole.

Even more percentages

Tree map

A breakdown of hierarchical data, represented as a series of rectangles, sized proportionately to the data.

Can be better at showing lots of percentages, especially when some are very small.
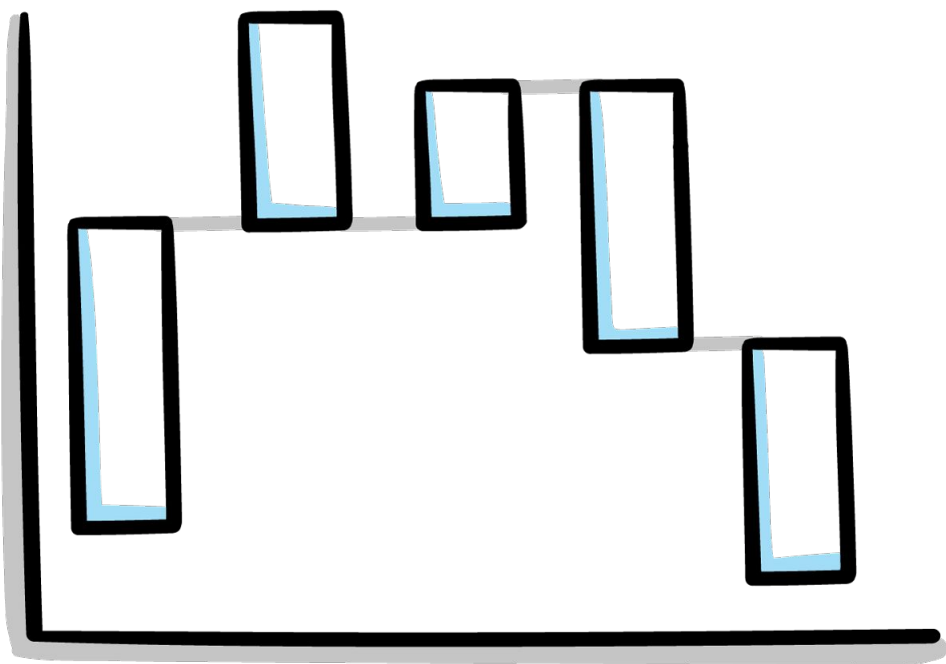
Even more percentages

Waterfall

aka: Flying bricks chart. It shows the cumulative effect of a series of values on a baseline.

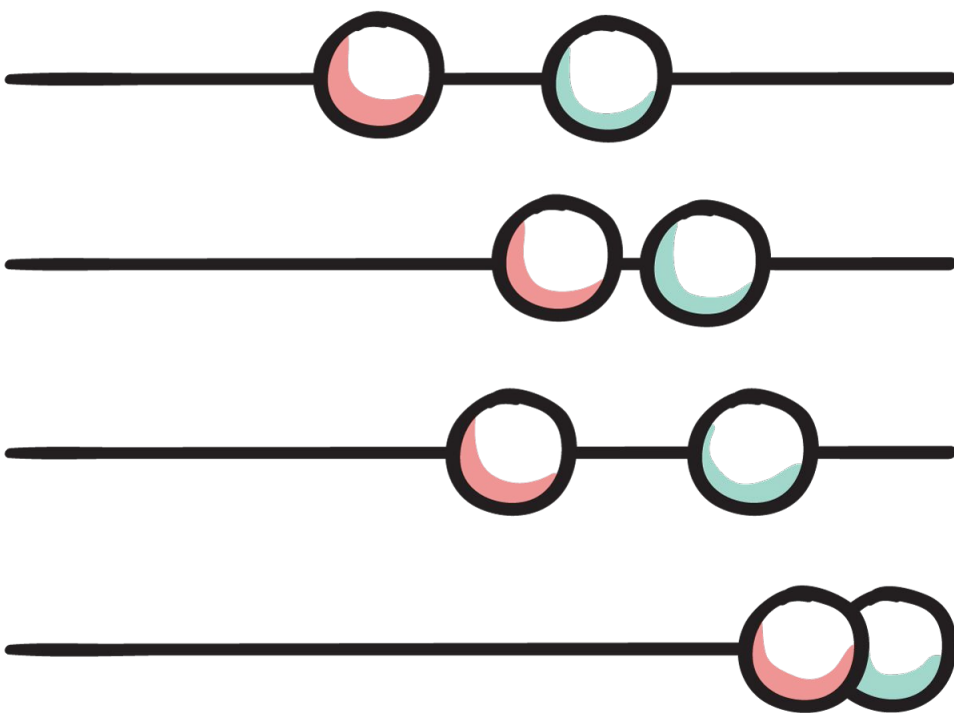Shows the breakdown of data points between two numbers.

Changes in percentages over time

Dot plot

aka: The Cleveland dot plot. Similar to a bar chart, but encoding data through the position of a dot on a scale.

This flexible graph type can compare multiple values across two (maybe more) categories.
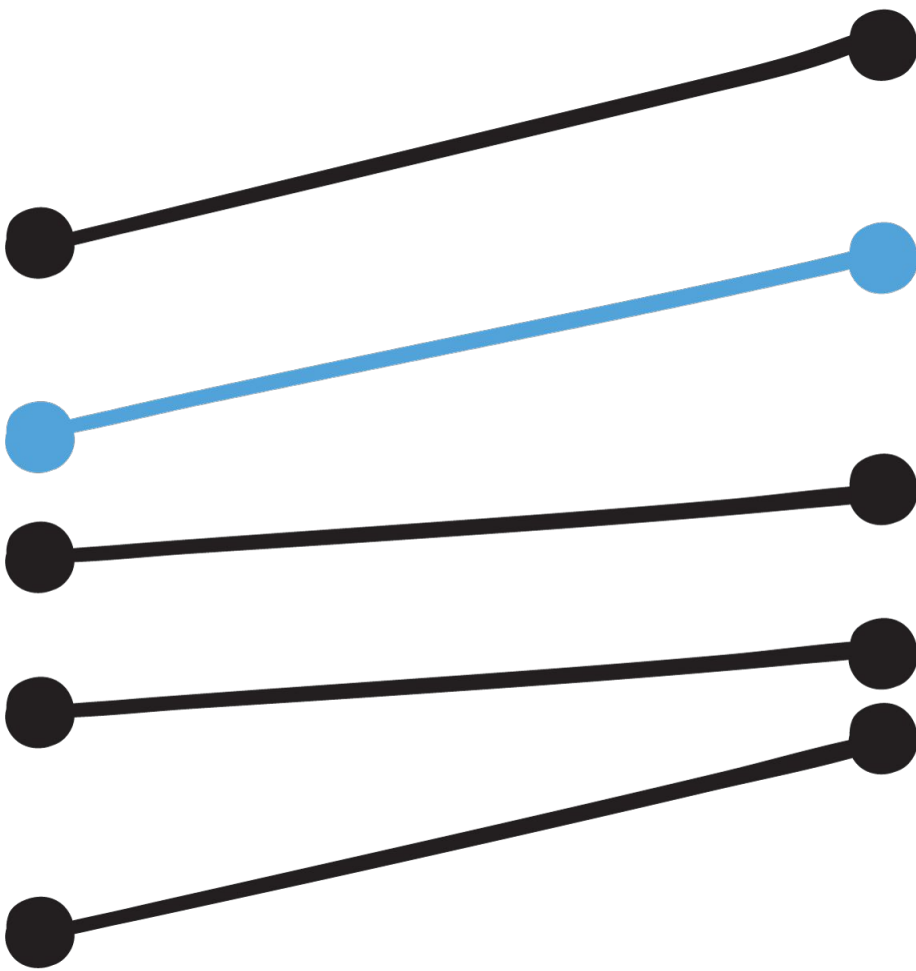
Two data series

Time

Slope graph

Set of lines through two points that encode data through the angle of the slope.

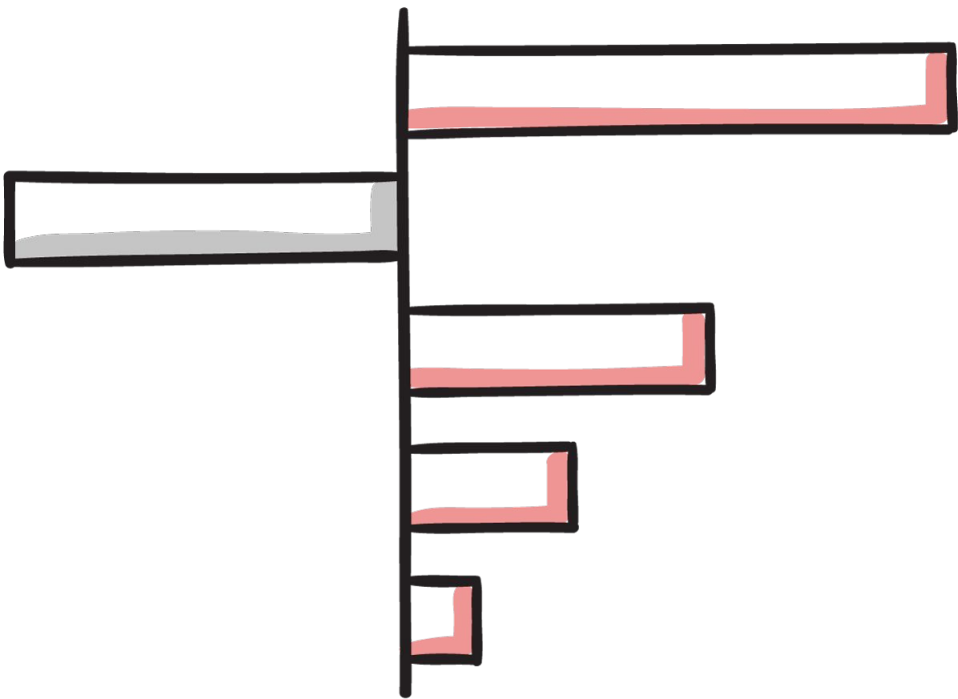Best for comparing two values, with increasing/decreasing categories.

Two data series

Time

Deviation bar graph

A bar graph with bars going in negative and positive directions.

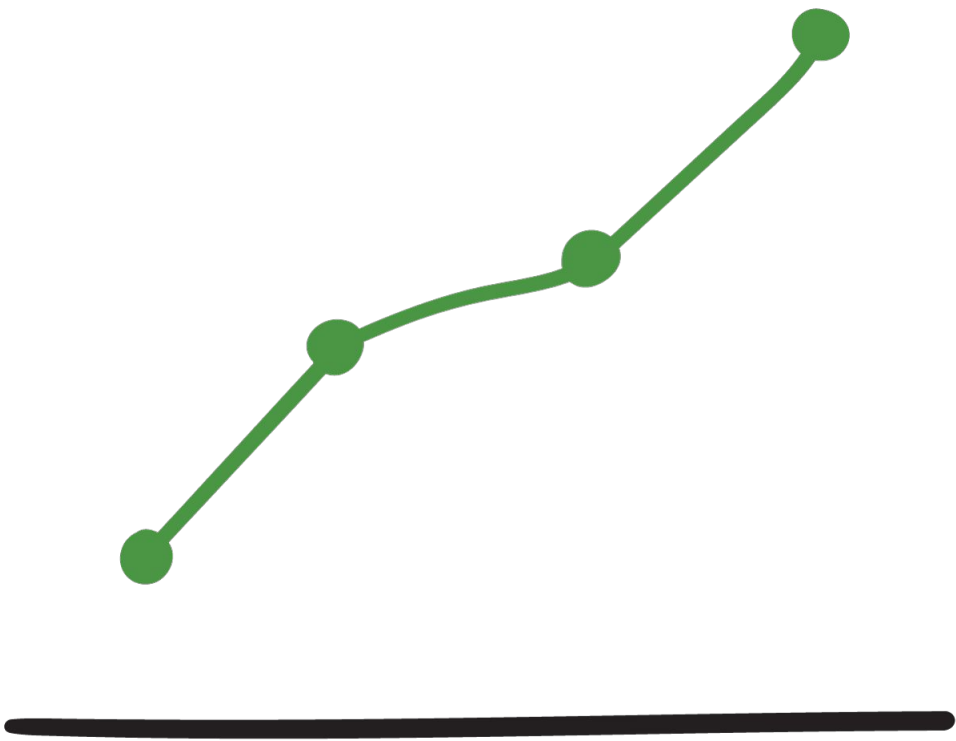To show the change that has occurred, not just the raw values.

Two data series

Time

Line graph

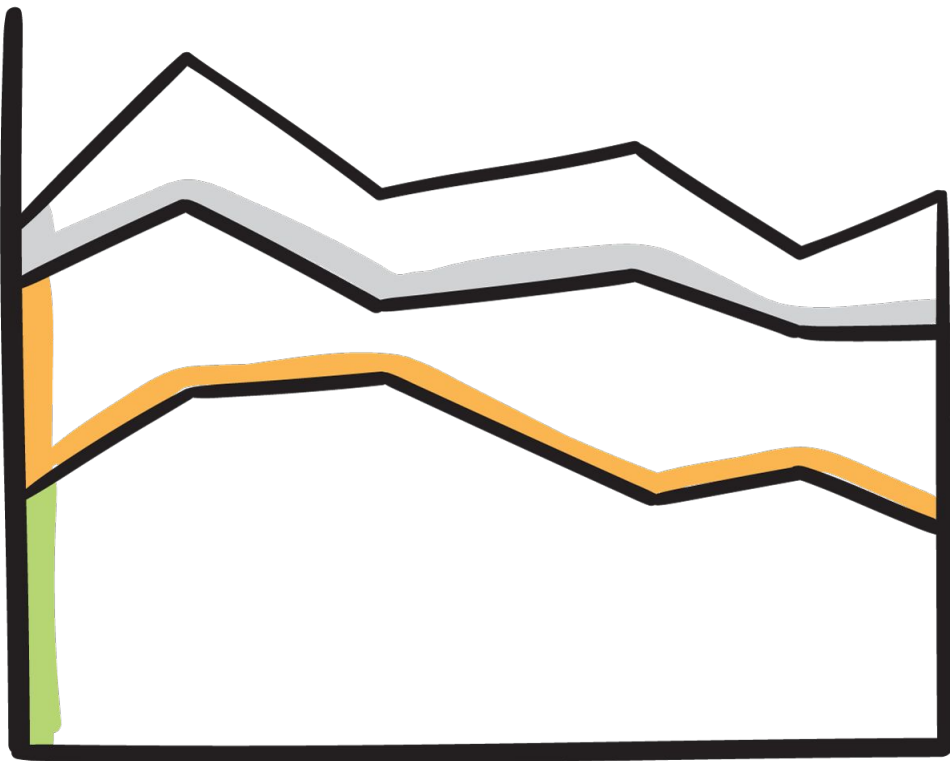The most common way of showing change over time, where data are connected by lines.

For trends & forecasts.

Two data series / three plus data points

Time

Area graph

For plotting one or multiple percentages that change over time.

Like a line graph but the area under the line is filled in, giving it more visual impact.
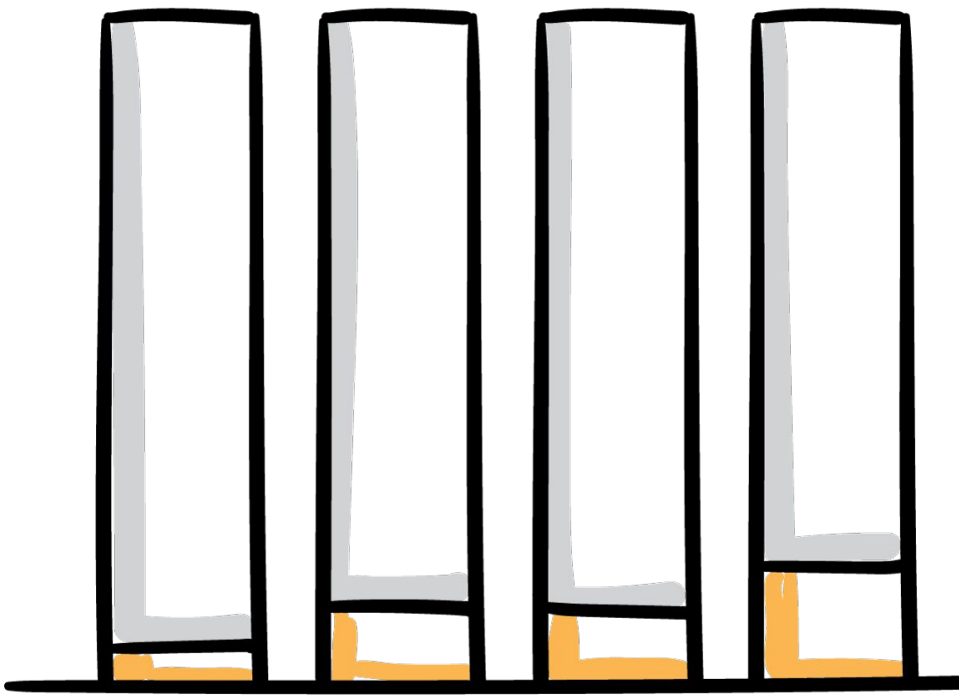
Three plus data points

Time

Stacked column

Representing parts of a whole as segments stacked in a column.

When you have two categories changing over time, and one of those categories is very small.

Three plus data points

Time

Sankey diagram

Encodes data in the thickness of the lines, and shows relationships between data points.

Best for showing flow of lots of categories from multiple start and end points.
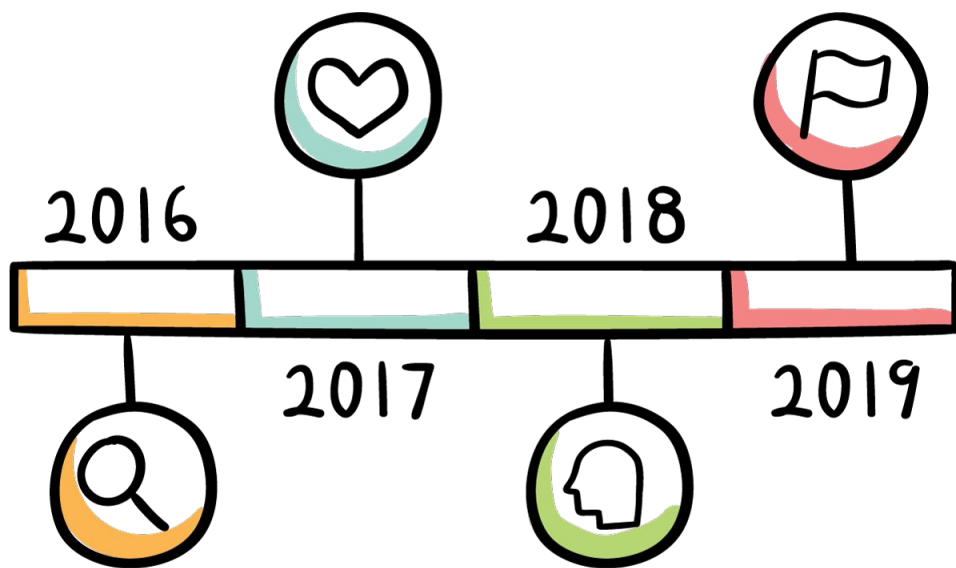
Three plus data points

Time

Timeline

Uses points along a line to identify a chronology.

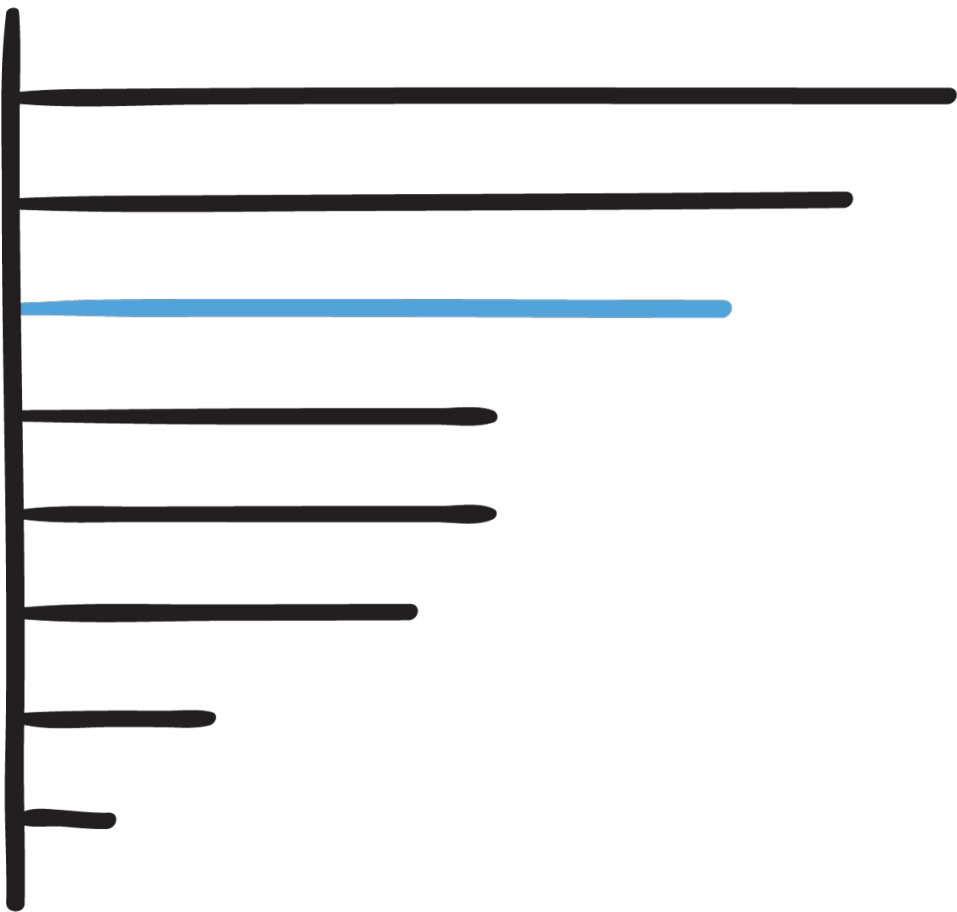When you need to show and detail a sequence of events.

Three plus data points

Time

Bar or column chart

Encodes data by length, an easy form for people to interpret.

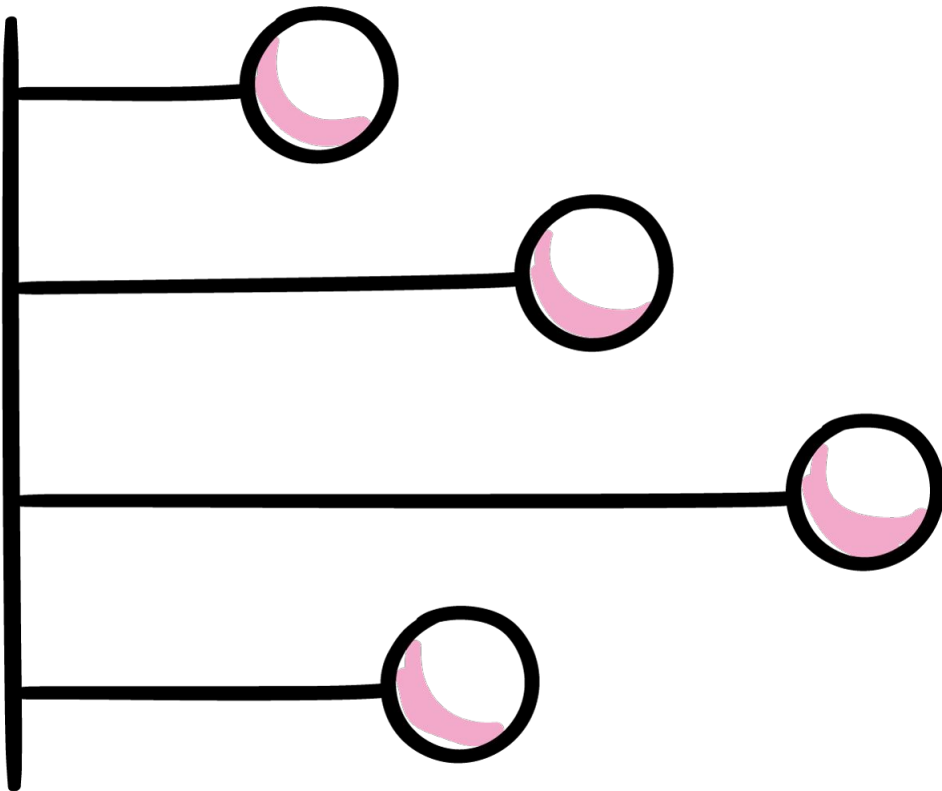Could be bar or column, ordered greatest to least.

Check all that apply or a ranking

Survey responses

Lollipop

Emphasizes interpretation by the position of the lollipop head.

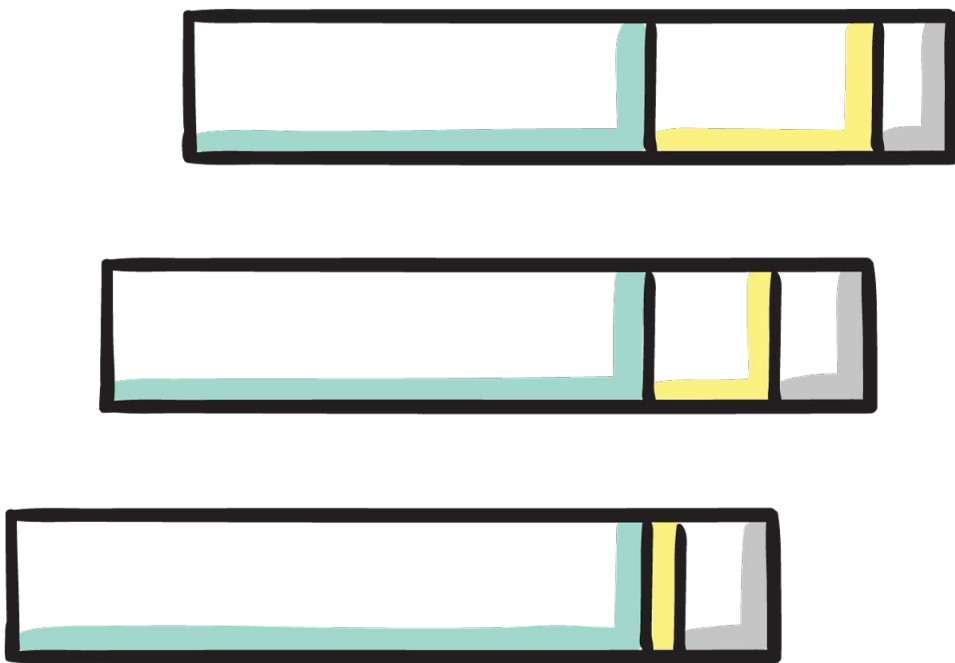Visually less dense alternative to a bar chart, great for displays with a lot of data.

Check all that apply or a ranking

Survey responses

Diverging stacked bar

A series of stacked bars that are split at a midpoint. This split relates to a value-driven decision within the available response options.

Easy to highlight the positive or negative portion of responses.

Diverging datasets, like Likert scales

Survey responses

Stacked bar

Several segments arranged in a row or column to show parts of a whole.
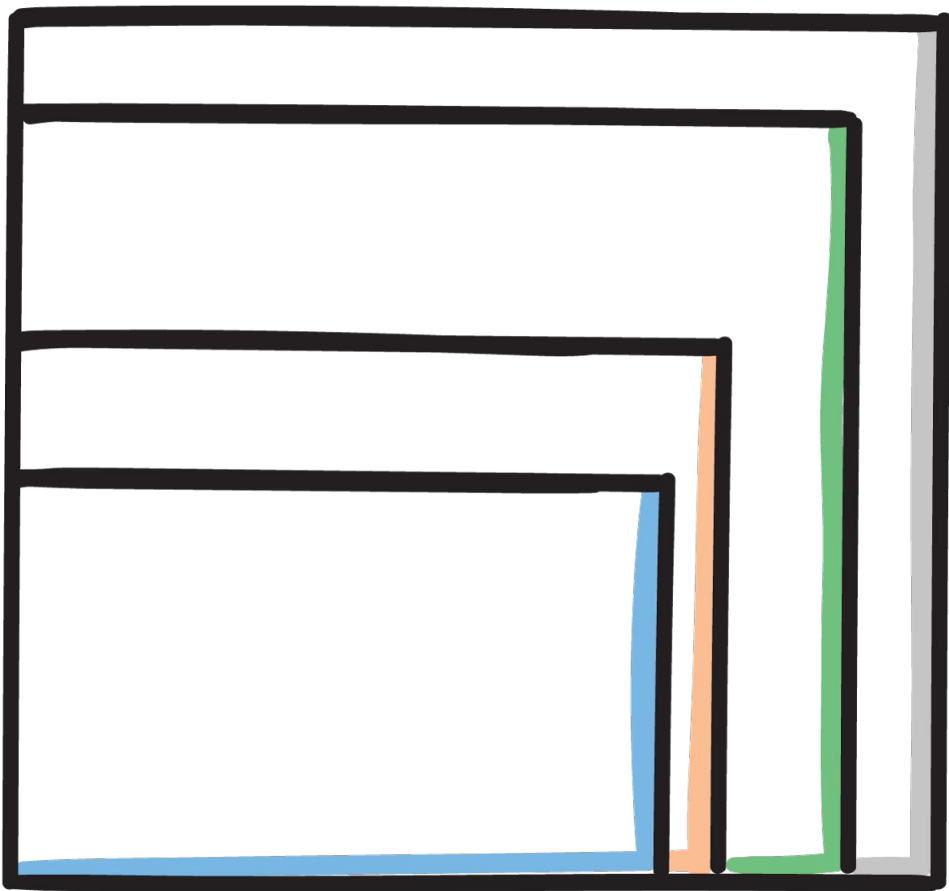
Use sequential colors to emphasize.

Sequential response sets like poor-to-excellent

Nested map

Several segments arRectangles encode the data by area and sit inside one another to visually represent subsets.ranged in a row or column to show parts of a whole.

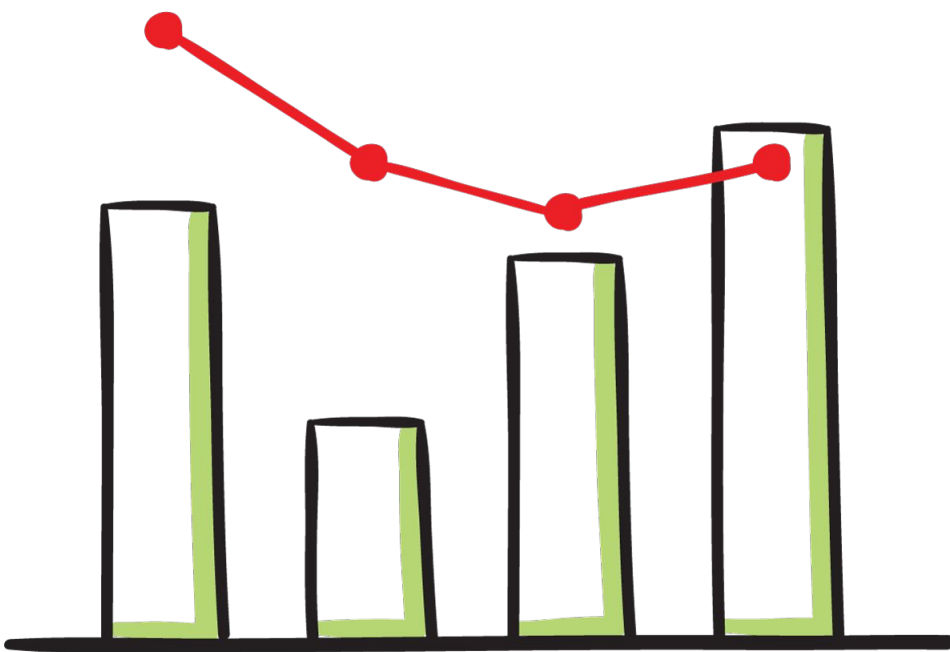When you're dealing with subsets driven by branching questions in a survey.

Survey responses

Bar & line

Two graph types combined to show the relationship to a target.

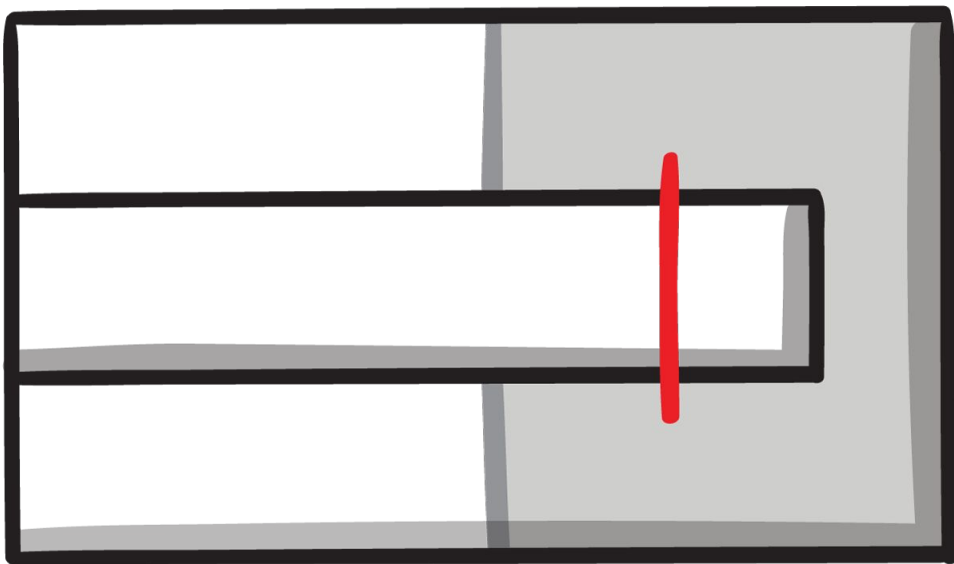Ideally, absolute numbers on the column, and percentages on the line.

Target / benchmark many points

Bullet graph

Segments of gray indicate performance ranges, a line signals the target, and a bar represents the actual performance value.

Typically seen in dashboards.
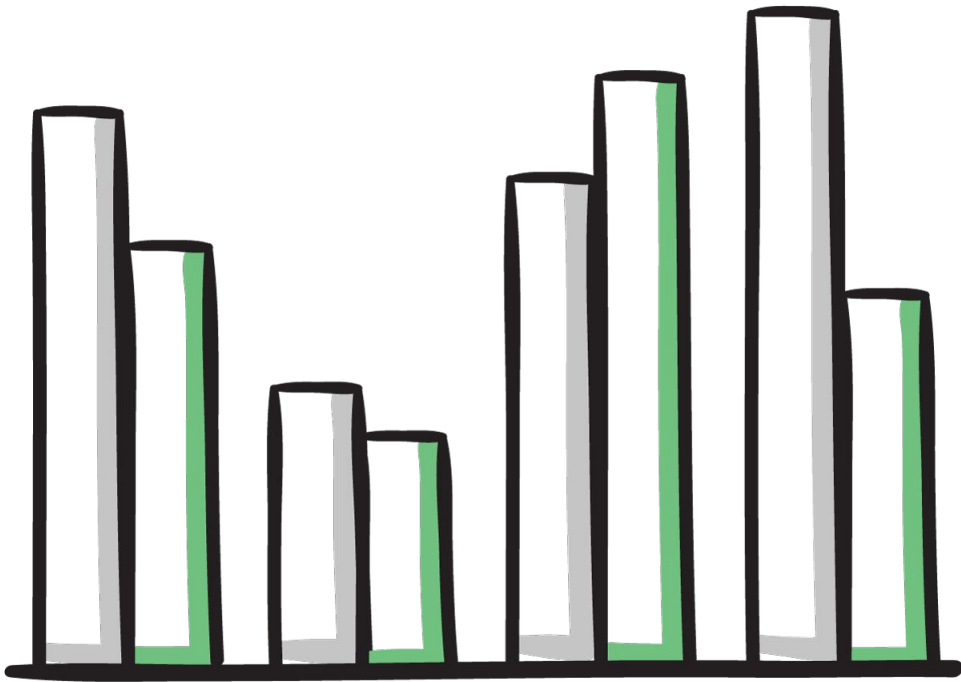
Target / benchmark many points

Side-by-side column

Visualizing data by comparing the lengths of two columns.

Be careful of having too many columns. It can quickly become unwieldy.
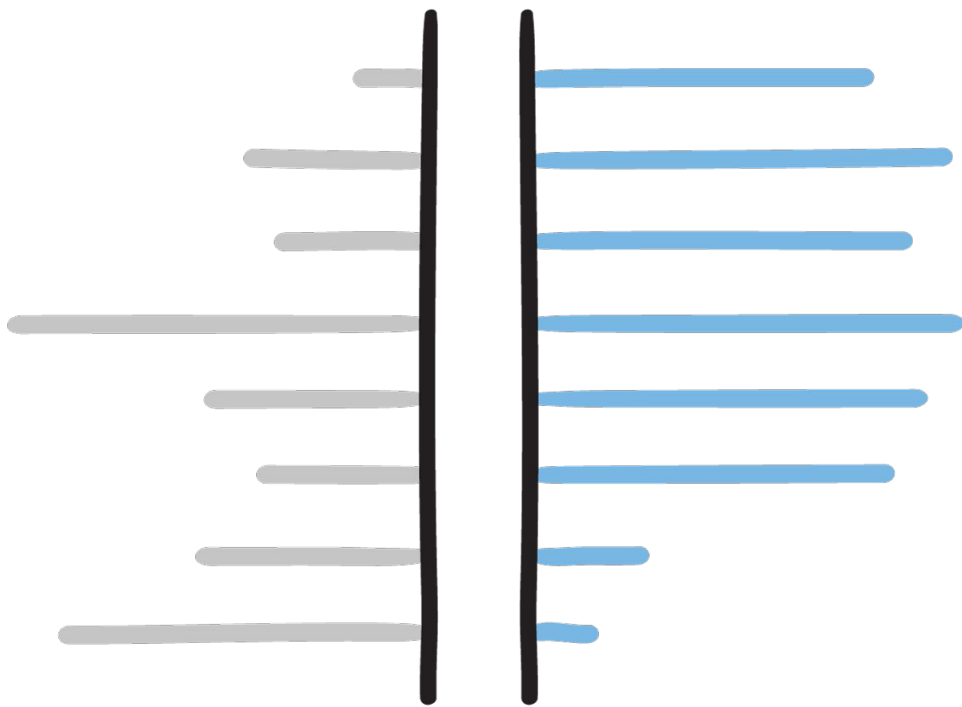
Between groups of two points

Back-to-back bar/population pyramid

Two sets of data that share a spine.

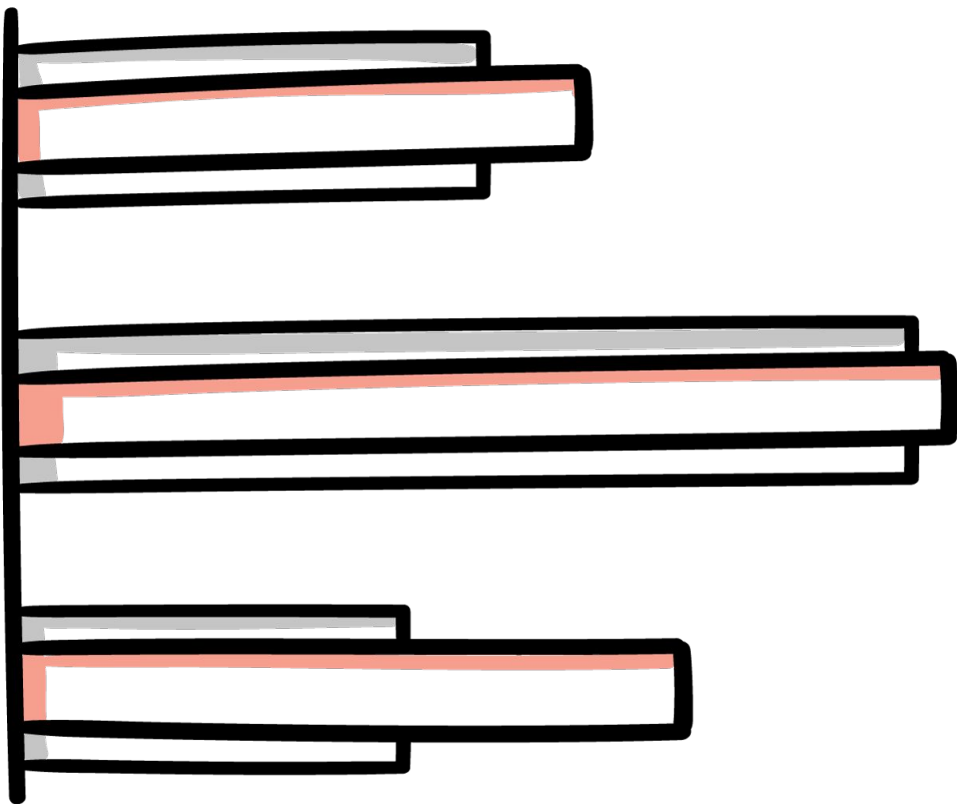When you want your audience to compare the shape of the overall data set.

Between groups of two points

Overlapping bars

One set of bars nested inside another set.

Implies a relationship between the two points.

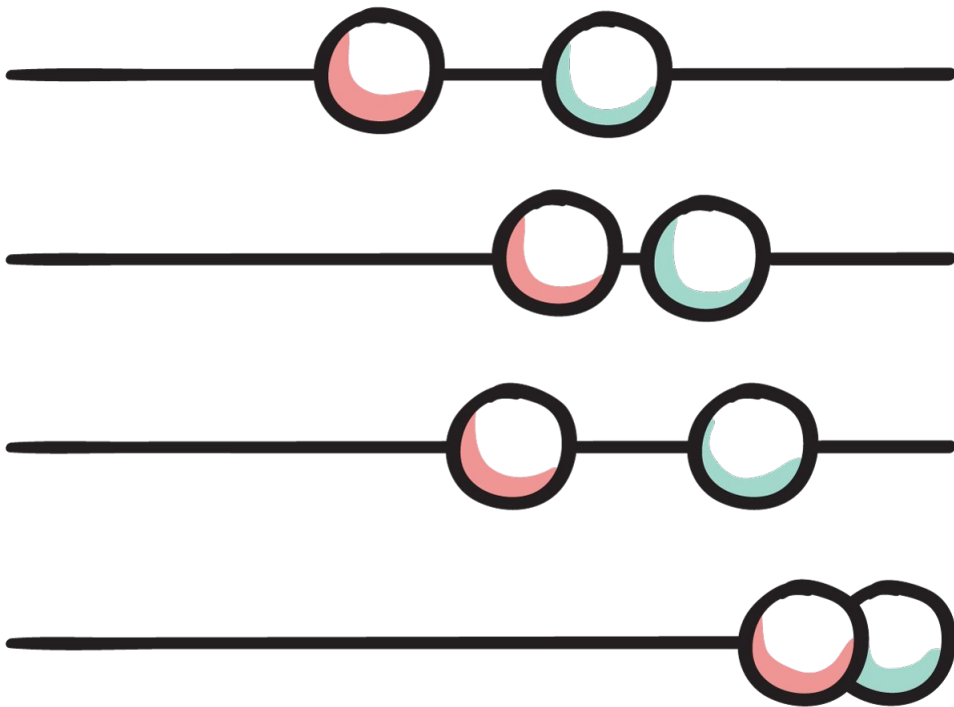Between two groups where one is part of the other

Dot plot

aka: The Cleveland dot plot. Similar to a bar chart, but encoding data through the position of a dot on a scale.

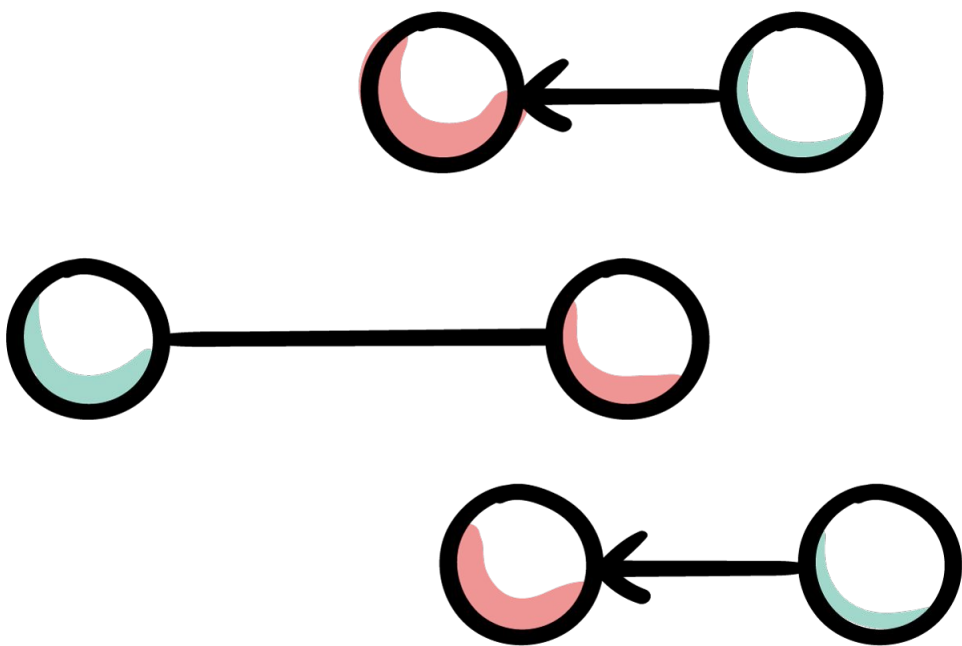Implies a relationship A neat & clean alternative to a bar chart.the two points.

Between two groups up to four points

Connected dot plot

Uses position to encode data with a line between two points that emphasizes their distance.

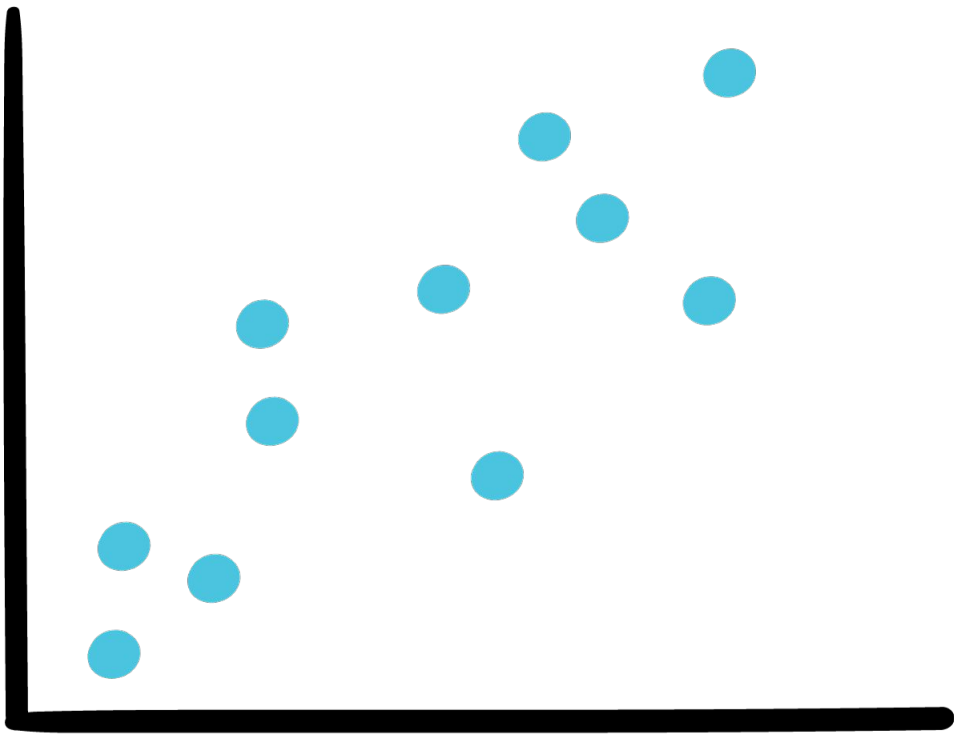Highlights the gap or growth between two categories.

Scatter plot

The most common way to show correlated data, where it is plotted as points.

Shows the relationship between two continuous metrics.
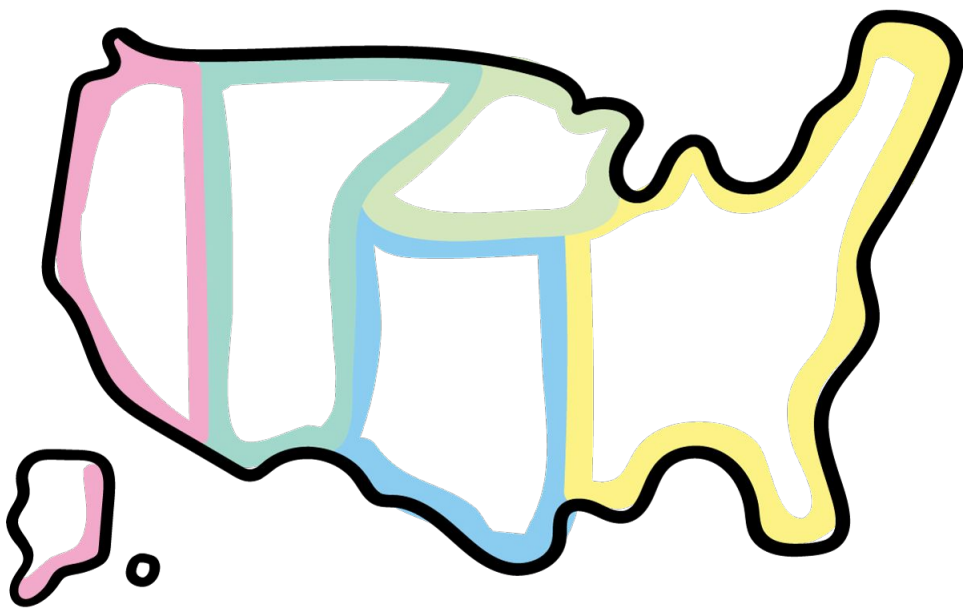
Between two groups

Choropleth maps

Color encodes data on a map that has been marked off in ranges.

To show where something is happening in relationship to geography.
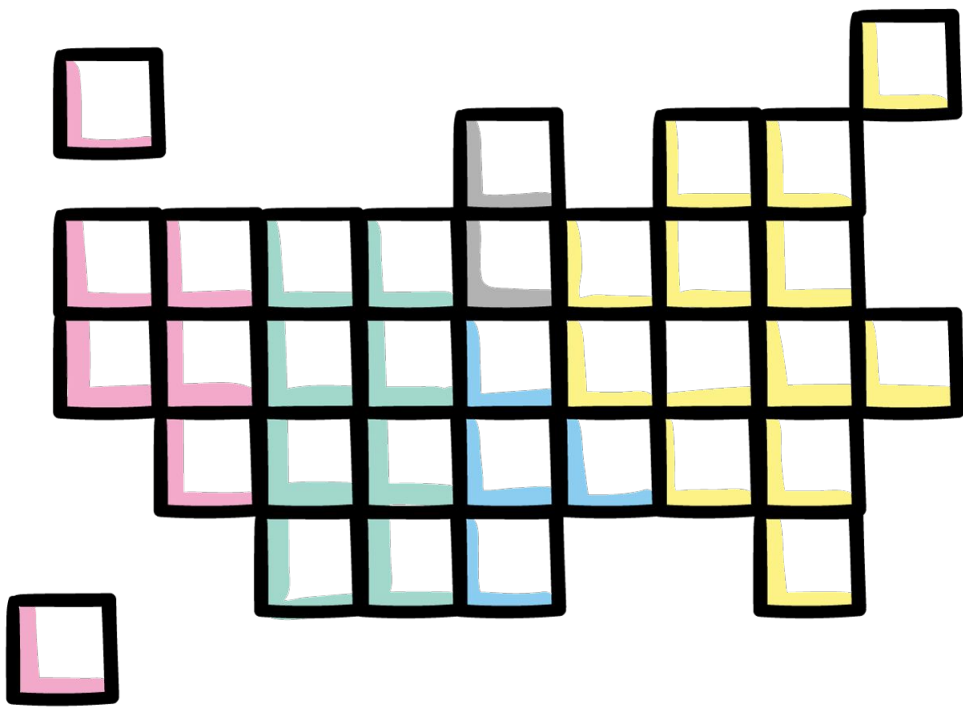
Geographically based data

Place

Hex or tile map

Each region on the map is made into the same shape to equalize its importance.

To give each area equal visual weight.
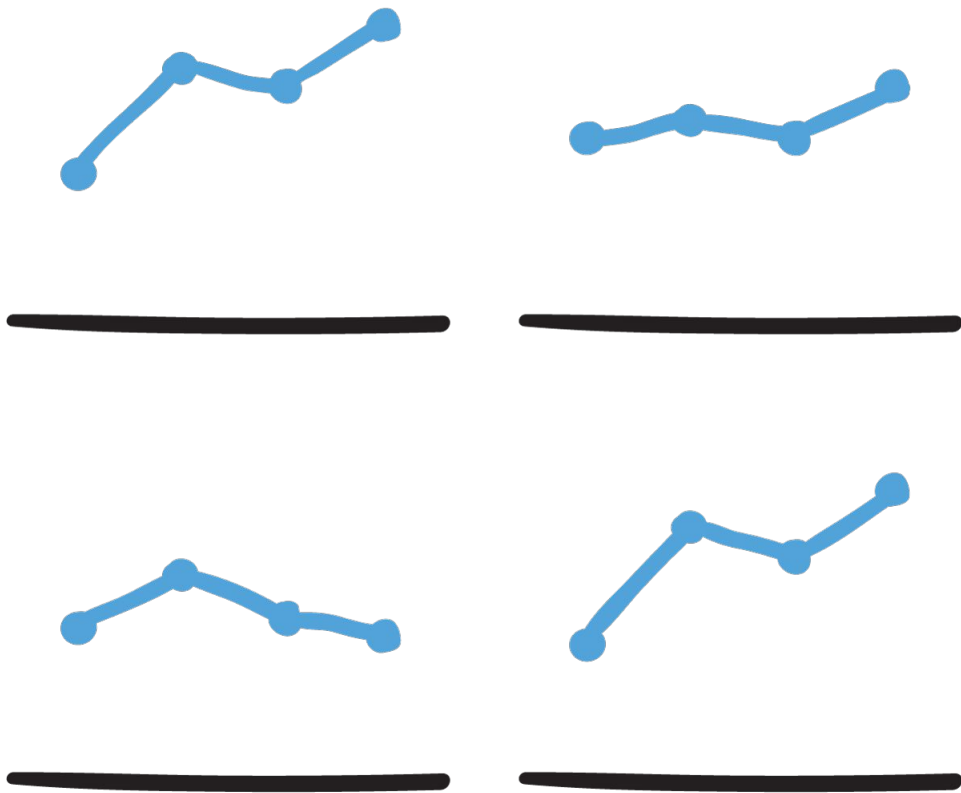
Geographically based data

Place

Small multiples

A set of graphs, all the same graph type and sharing the base in the same variables, arranged in a row or grid to de-clutter a display.

If two of your variables have a close enough range that their x & y-axis can have the same scale.
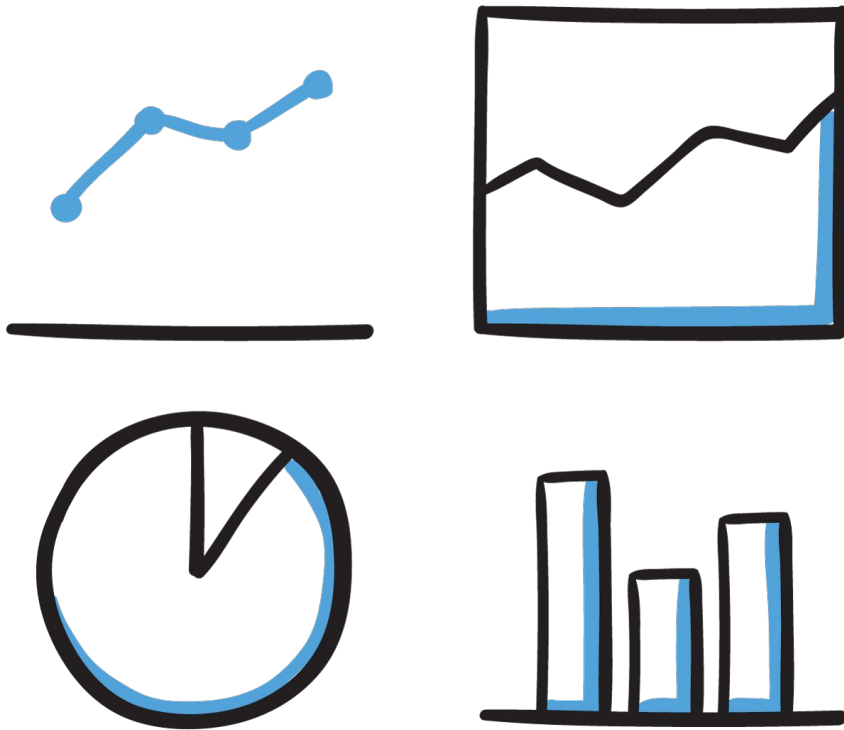
Data are still on the same scale

It's complicated

Dashboard multi-graph display

A set of graphs, using multiple graph types based on different variables.

If you have several things to report that aren't necessarily related and overall trends are important.
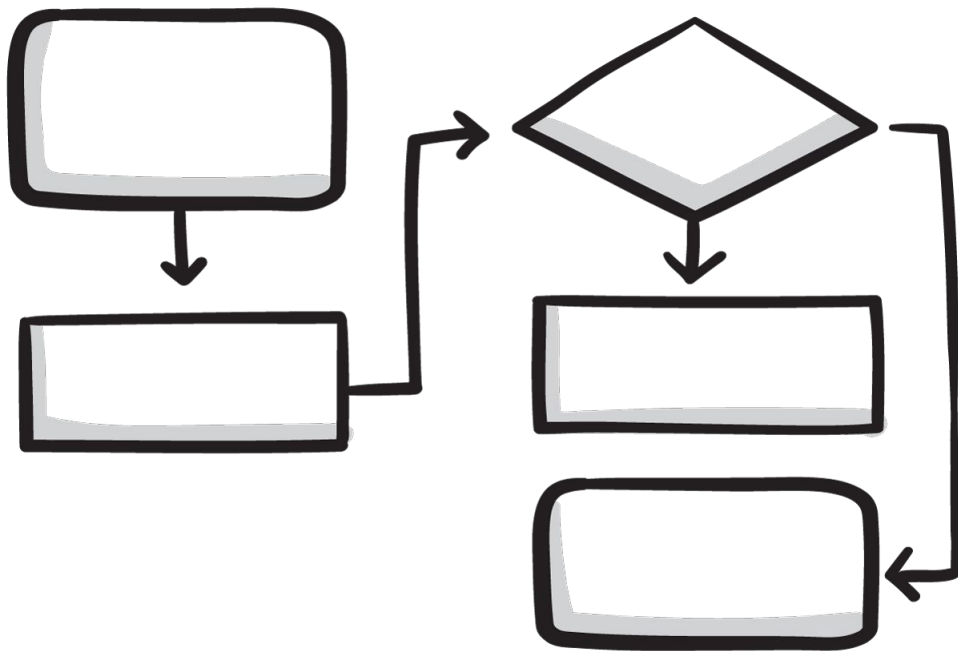
Data are on different scales

It's complicated

Flowchart or process map

A visual that depicts a sequence of events.

If you have logical steps, with decision points or branches in sequence.

A workflow, journey or process

It's complicated

Chart Chooser — How to choose the format for your data.

We are awash in a sea of data. We create it, collect it, analyze it, all to make sense of it.

The human brain isn't built to comprehend rows and columns of numbers. It's made to see patterns and draw ... more

About fassforward.

Over the years, clients have come to call us "The How Company" because we keep it practical, outcome-based, and rooted in neuroscience — all to help our clients learn, lead, and communicate more effectively.

We work in two areas: Business Leadership and Business Storytelling.

Our Coaching is a thinking partnership to help leaders think differently and create outcomes.

Our Training programs focus on closing the "Thursday-Monday gap" — the gap between 'aha' and practical application at work.