

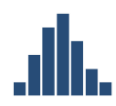
Every chart tells a story. The trick isn't finding the most impressive-looking visual — it's asking what question you're trying to answer, then picking the chart that answers it fastest. Use this guide as a starting point whether you're building a chart in Excel or a visual in Power BI; the thinking is the same in both tools.

## Step 1: Ask what you're trying to show

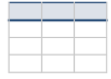
Before opening the Insert Chart menu, decide which of these your data is really about:

- Comparison — how do categories stack up against each other?
- Trend — how does a value change over time?
- Composition — how do the parts make up the whole?
- Ranking — what's on top, and what's on the bottom?
- Distribution — how spread out are the values?
- Relationship — do two numbers move together?

## Step 2: Match the goal to a chart type

| If your goal is...             | Example                                                                             | Use it when                                                                                                                               | In Excel, use...                                                                                                                                                                                                              | In Power BI, use...                                                                                                                                        |
|--------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Comparison (across categories) |   | Comparing values across a handful of distinct categories (sales by region, scores by team).                                               | <ul style="list-style-type: none"> <li>• Clustered Column Chart</li> <li>• Clustered Bar Chart</li> </ul>                                                                                                                     | <ul style="list-style-type: none"> <li>• Clustered Column Chart</li> <li>• Clustered Bar Chart</li> </ul>                                                  |
|                                |                                                                                     |                                                                                                                                           | Stacked column/bar charts are not good for comparing across categories because only the bottom segment shares a common baseline. Comparing the other segments across categories is hard to do accurately with stacked charts. |                                                                                                                                                            |
| Trend over time                |  | Showing how a value changes across a continuous sequence (years, quarters, months, days).                                                 | <ul style="list-style-type: none"> <li>• Line Chart</li> <li>• Area Chart for cumulative trends</li> </ul>                                                                                                                    | <ul style="list-style-type: none"> <li>• Line Chart</li> <li>• Area Chart for cumulative trends</li> </ul>                                                 |
| Part-to-whole (composition)    |  | Showing how pieces add up to a total. Use a pie or donut chart with 5 or fewer slices; switch to a treemap for more categories than that. | <ul style="list-style-type: none"> <li>• Pie or Doughnut Chart (few categories)</li> <li>• Stacked Column (composition over time)</li> <li>• Treemap (many categories)</li> </ul>                                             | <ul style="list-style-type: none"> <li>• Pie or Donut Chart (few categories)</li> <li>• Stacked Bar/Column</li> <li>• Treemap (many categories)</li> </ul> |
| Ranking                        |  | Highlighting order or rank, largest to smallest, rather than raw comparison.                                                              | <ul style="list-style-type: none"> <li>• Bar Chart, sorted descending</li> </ul>                                                                                                                                              | <ul style="list-style-type: none"> <li>• Bar Chart with 'Sort by value' applied</li> </ul>                                                                 |
| Distribution                   |  | Showing how values are spread out — where most data points fall, and where outliers sit.                                                  | <ul style="list-style-type: none"> <li>• Histogram</li> <li>• Box &amp; Whisker Chart</li> </ul>                                                                                                                              | <ul style="list-style-type: none"> <li>• Histogram (via binning)*</li> <li>• Box-and-Whisker (custom visual)</li> </ul>                                    |

\* Power BI has no native histogram visual — "via binning" means grouping a numeric field into bins (right-click → New group) and plotting the result with a Column Chart, rather than using a dedicated histogram tool.

| If your goal is...                | Example                                                                           | Use it when                                                                                      | In Excel, use...                                                                                                          | In Power BI, use...                                                                                                                        |
|-----------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Relationship / correlation        |  | Testing whether two numeric variables move together (advertising spend vs. sales).               | <ul style="list-style-type: none"><li>Scatter (X Y) Chart</li><li>Bubble Chart for a 3rd variable</li></ul>               | <ul style="list-style-type: none"><li>Scatter Chart</li><li>Bubble size for a 3rd variable</li><li>Built-in trend/analysis lines</li></ul> |
| Single KPI / snapshot value       |  | Drawing attention to one number that matters right now (this month's revenue, % to goal).        | <ul style="list-style-type: none"><li>Big Number cell with conditional formatting</li><li>Sparkline for context</li></ul> | <ul style="list-style-type: none"><li>Card / Multi-Row Card visual</li><li>KPI visual with a target trend</li></ul>                        |
| Geography                         |  | Showing values by physical location (sales by state, stores by city).                            | <ul style="list-style-type: none"><li>Map Chart (3D Maps / Filled Map)</li></ul>                                          | <ul style="list-style-type: none"><li>Map</li><li>Filled Map</li><li>ArcGIS Map visual</li></ul>                                           |
| Detailed lookup / many dimensions |  | Letting the reader scan exact values across several categories at once — precision over pattern. | <ul style="list-style-type: none"><li>PivotTable (with light conditional formatting)</li></ul>                            | <ul style="list-style-type: none"><li>Table visual</li><li>Matrix visual</li></ul>                                                         |

## Excel vs. Power BI: what's different

The underlying chart logic above works the same in both tools — but each has strengths worth knowing:

### Excel is best when...

- You need a one-off chart tied to a specific worksheet or report.
- You want full manual control over formatting, labels, and layout.
- Your audience will interact with the chart inside a static workbook or printed page.

### Power BI is best when...

- You want charts that update automatically as new data flows in.
- Your audience needs to filter, drill down, or cross-highlight between visuals.
- You're combining data from multiple sources into one interactive report or dashboard.

## Common mistakes to avoid

- Using a pie chart with more than 5 slices — switch to a treemap or bar chart instead.
- Using a line chart for categories that aren't sequential — that implies a trend that doesn't exist.
- Starting a bar chart's axis anywhere other than zero — it exaggerates differences.
- Adding 3-D effects or extra colors that don't carry meaning — they distract from the data.
- Cramming too many series onto one chart — if it needs a paragraph to explain, split it into two.