

# ■ Fully Expanded Data Visualization Decision Cheat Sheet

| Type of Data              | What You Want to Communicate | End User       | Recommended Visuals  | Notes / Tips  |
|---------------------------|------------------------------|----------------|--|---|
| Time-Series               | Trend / Change Over Time     | Analyst        | Line Chart, Area Chart, Sparklines                               | Use consistent intervals; emphasize patterns and anomalies.     |
| Time-Series               | Trend / Change Over Time     | Manager        | Line Chart, Column Chart, Slope Graph                            | Highlight key turning points; simplify for quick understanding. |
| Time-Series               | Trend / Change Over Time     | Executive      | KPI Line Chart, Trend Indicator, Dashboard Card                  | Focus on overall direction and KPIs; limit clutter.             |
| Time-Series               | Trend / Change Over Time     | General Public | Animated Line Chart, Simplified Area Chart, Infographic Timeline | Use color and storytelling; label key milestones clearly.       |
| Categorical               | Comparison                   | Analyst        | Bar Chart, Column Chart, Lollipop Chart                          | Sort bars by value; use gridlines for context.                  |
| Categorical               | Comparison                   | Manager        | Bar Chart, Stacked Bar, Highlighted Column                       | Emphasize largest/smallest; align to KPIs.                      |
| Categorical               | Comparison                   | Executive      | Bar Summary, KPI Bars, Dashboard Comparison Cards                | Show only top categories; remove minor details.                 |
| Categorical               | Comparison                   | General Public | Infographic Bar Chart, Icon-based Chart                          | Use visuals and color cues; keep to ≤6 categories.              |
| Categorical               | Composition                  | Analyst        | Stacked Bar, 100% Stacked Column                                 | Ensure parts sum to total; label clearly.                       |
| Categorical               | Composition                  | Manager        | Pie Chart, Donut Chart, Stacked Bar                              | Use 3–6 categories; focus on major components.                  |
| Categorical               | Composition                  | Executive      | Simplified Pie, KPI Composition Card                             | Highlight dominant segment only.                                |
| Categorical               | Composition                  | General Public | Infographic Pie Chart, Donut Chart                               | Use icons, color, and text callouts.                            |
| Geospatial                | Comparison by Geography      | Analyst        | Choropleth Map, Bubble Map, Heat Map                             | Use consistent scales; show patterns across regions.            |
| Geospatial                | Comparison by Geography      | Manager        | Bubble Map, Region Summary Chart                                 | Show business regions; highlight changes.                       |
| Geospatial                | Comparison by Geography      | Executive      | KPI Map, Simplified Region Map                                   | Use color-coded performance zones.                              |
| Geospatial                | Comparison by Geography      | General Public | Infographic Map, Heat Map  | Simplify colors; label key locations.                           |
| Hierarchical              | Composition / Drill-Down     | Analyst        | Tree Map, Sunburst   | Enable drill-down; show hierarchy depth.                        |
| Hierarchical              | Composition / Drill-Down     | Manager        | Tree Map, Grouped Bar Chart                                      | Emphasize key branches only.                                    |
| Hierarchical              | Composition / Drill-Down     | Executive      | Summary Tree Map, KPI Breakdown                                  | Aggregate subgroups; keep top-level visible.                    |
| Hierarchical              | Composition / Drill-Down     | General Public | Infographic Tree, Hierarchical Icons                             | Use icons and simple colors for clarity.                        |
| Quantitative / Continuous | Distribution                 | Analyst        | Histogram, Box Plot, Density Plot                                | Show spread and outliers; use consistent bins.                  |

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| Quantitative / Continuous     | Distribution                 | Manager        | Box Plot, Simplified Histogram          | Summarize spread and central tendency.              |
| Quantitative / Continuous     | Distribution                 | Executive      | Simplified Distribution Card            | Use summary statistics, not raw visuals.            |
| Quantitative / Continuous     | Distribution                 | General Public | Infographic Slope or Range Chart        | Show general patterns; minimize math-heavy visuals. |
| Quantitative / Multi-variable | Relationship / Correlation   | Analyst        | Scatter Plot, Bubble Chart, Pair Plot   | Show strength and direction; use trendlines.        |
| Quantitative / Multi-variable | Relationship / Correlation   | Manager        | Bubble Chart, Correlation Heatmap       | Highlight actionable relationships.                 |
| Quantitative / Multi-variable | Relationship / Correlation   | Executive      | Simplified Correlation Summary          | Use colors to show positive/negative impact.        |
| Quantitative / Multi-variable | Relationship / Correlation   | General Public | Infographic Connection Chart            | Show simple cause–effect visuals with icons.        |
| KPIs / Metrics                | Performance vs Target        | Analyst        | Bullet Chart, KPI Table                 | Include target and actual with variance.            |
| KPIs / Metrics                | Performance vs Target        | Manager        | Gauge Chart, KPI Card                   | Use color-coded thresholds.                         |
| KPIs / Metrics                | Performance vs Target        | Executive      | Dashboard KPI Card, Scorecard           | Emphasize success/failure states.                   |
| KPIs / Metrics                | Performance vs Target        | General Public | Infographic KPI, Simple Gauge           | Keep visuals clean; highlight main metric.          |
| Survey or Sentiment Data      | Comparison / Composition     | Analyst        | Diverging Bar Chart, Likert Chart       | Balance positive vs negative; show neutral center.  |
| Survey or Sentiment Data      | Comparison / Composition     | Manager        | Likert Chart, Word Cloud                | Group by sentiment theme.                           |
| Survey or Sentiment Data      | Comparison / Composition     | Executive      | Sentiment KPI Dashboard                 | Show high-level positive/negative ratios.           |
| Survey or Sentiment Data      | Comparison / Composition     | General Public | Emoji Bar Chart, Word Cloud             | Use visual icons and color gradients.               |
| Project or Timeline Data      | Progress / Time Allocation   | Analyst        | Gantt Chart, Milestone Table            | Show dependencies and resource usage.               |
| Project or Timeline Data      | Progress / Time Allocation   | Manager        | Gantt Chart, Progress Bar               | Highlight overdue or completed tasks.               |
| Project or Timeline Data      | Progress / Time Allocation   | Executive      | Milestone Summary, KPI Timeline         | Focus on completion % and critical dates.           |
| Project or Timeline Data      | Progress / Time Allocation   | General Public | Infographic Timeline, Progress Icon Bar | Use visuals to tell a progress story.               |