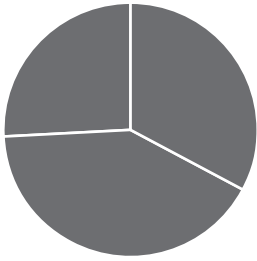


Chart picker

	PIE	BAR	STACKED BAR	DIVIDED BAR	LINE	AREA	STACKED AREA	DIVIDED AREA
Small data set	●	●	●	●	●			
Large data set					●	●	●	●
Compare subsets of a total	●		●	●			●	●
Subsets show percent	●			●				●
Subsets show number			●				●	
Compare real values or totals		●	●			●	●	
Change in single value (rate)					●			
Compare related data sets		●			●	●		
Single point in time	●							
Trend over time		●	●	●	●	●	●	●
Baseline of zero		●	●	●		●	●	●
Baseline not required					●			
Show percent change		●	●	●				
Forecast trends					●			

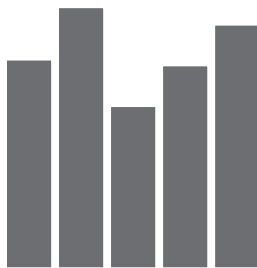
Chart types



Pie chart

Pie charts illustrate the relationships between the parts of a total at a single point in time.

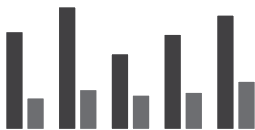
- Use percentages to label the chart
- Limit chart to five slices (use a table, list or treemap if you have more)
- Use something else to...
 - Compare exact values
 - Rank your data
 - Or if your values exceed 100%



Bar charts

Bar charts compare consecutive totals over time to illustrate a trend. Vertical bars, called columns, are the most frequently used.

- If you have a small data set (with a minimum of three data points).
- To compare exact values
- To rank data
- Use real values (a number)
- Use for percent change
- Baseline must start at zero



GROUPED BARS: Compare related sets of data with multiple columns (use sparingly).



STACKED BARS: Compare subsets (numbers) of a total over time.

- Subsets are cumulative.
- Subset on baseline is easiest to compare.
- Other subsets are more difficult to compare.



DIVIDED BARS: Compare relation of subsets (percentage) of a total over time.

- Better than multiple pie charts because portions are easier to understand.



Line chart

Illustrates how a single value changes over time.

- Use for a rate or index
- Baseline does not have to be zero (as long as data is not exaggerated to point of misrepresentation).
- Use to compare trends of several values (multiple lines)
- Straight lines connect real data points.
- Use curves to interpolate data between data points
- Curves "smooth" large sets of data.
- Use if X-axis has sequential or numeric data (years, etc.)
- Use if you must forecast trends in data

NOTE: Lines can be used for very large data sets comprised of totals to improve user understanding. But a scatter plot is usually a better solution for these cases.

Chart types



Area charts

This is a cross between stacked/divided bars, pie charts and line charts.

- Illustrates changes in totals over time.
- Can show multiple data sets



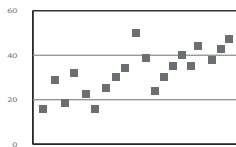
STACKED: Compare subsets (numbers) of a total over time.

- Subsets are cumulative.
- Subset on baseline is easiest to compare.
- Other subsets are difficult to compare.
- Use when actual totals are most important



DIVIDED: Compare relation (percentage) of subsets of a total over time.

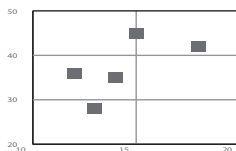
- Uses percentages where the sum always equals 100
- Use when relationship to the whole is more important.



One-dimensional scatter plot

Scatter plots are dots plotted above a baseline that show trends in data

- Use to display large data sets of totals (where bars would be hard to read)
- Use a baseline of zero



Two-dimensional scatter plot

This scatter plot is used to show correlations when a data set has two variables(columns). One variable is plotted on the X-axis and the second variable is plotted on the Y-axis. If the variables are strongly related, the data points will form a shape.

- Use when you have a large data set.
- Use when you need to know the presence of outliers.
- Use to compare variables