

Charts & Graphs

What you'll learn:

1. The benefits of using charts and graphs in presentations

2. How to create charts and graphs for presentations

An easy way to make your presentations more effective is to fix your slides—replace tables and lists of data with effective graphics. In this article, we'll cover how to use charts and graphs to present data.

1. The Benefits of Using Charts and Graphs in Presentations

Data-driven charts allow the audience to perceive your message at a glance rather than puzzling over a list or table of data. Furthermore, it is easier (and more persuasive) for the audience to see trends and comparisons on a chart, rather than to calculate them from the raw data.

With your chart as support, you can then speak to your conclusions, insights, and

2. How to Create Charts and Graphs for Presentations

Four basic types of chart can cover most data visualization tasks: the pie (and its cousin, the relative value chart), the vertical bar chart, the horizontal bar chart, and the line chart.

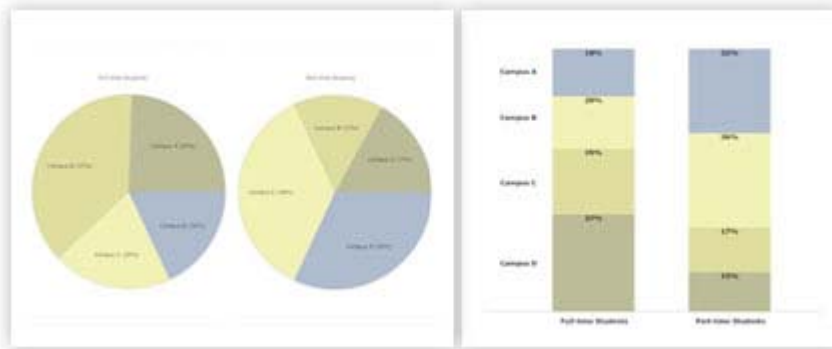
Choosing the Right Chart Depends on the Message

As with any presentation or document, you must first understand the message you wish to convey. After that, you can choose the right data set and chart. Finally, you must make your chart both visually compelling and quickly digestible by your audience.

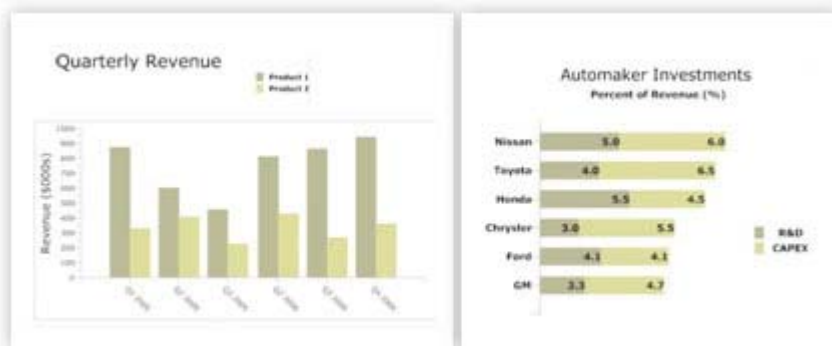
In general, one of the biggest mistakes in creating graphics for a presentation or document is using the wrong visual for your message. This is especially true when presenting data—the wrong chart only serves to confuse the audience or reader.

From Message to Data to Chart

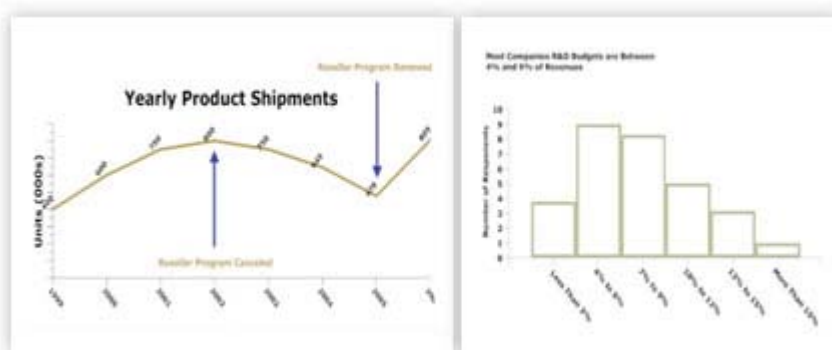
If your message is about a share or distribution of a total, a pie chart or relative value chart is appropriate. If you are comparing shares from different categories, then a stacked bar chart works better than multiple pie charts.



If your message is about a comparison of values, the bar chart is the most appropriate chart. Again, if you have multiple categories, such as years or product lines, a grouped bar chart or a pairing of bar charts work best.



If your message is about a trend over time, the line chart not only shows the values, but also gives a visual feel for the rates of change. To show values from discrete time frames, such as sales total per quarter, a vertical bar chart may work better than a line.



Charts created for frequency distributions and correlations will use line and vertical bar charts.

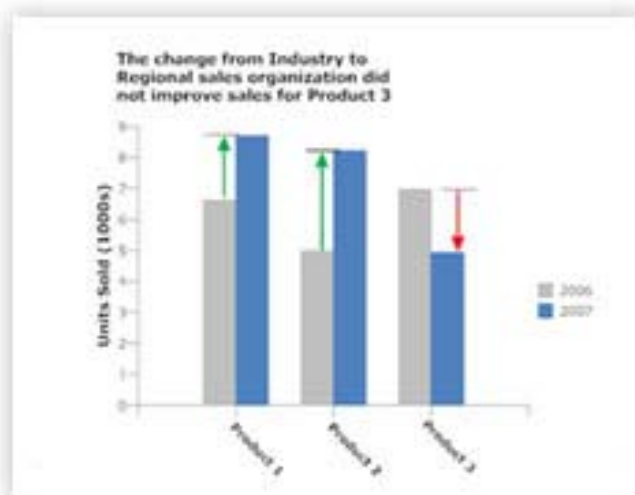
Visual Impact

You've got your message, your data, and the right chart type. But how do you make it persuasive and memorable?

First, consider incorporating images into your charts. Image charts are not only eye-catching and memorable, but also help your audience grasp quantities and relative values quickly.



When not using an Image Chart, you can still follow some guidelines to make sure the chart supports your message as strongly as possible. Use colour (or the absence of colour) to compare, contrast, and highlight the part of the picture that aligns with your message. Don't clutter your chart with too many gridlines, data labels, or axis labels. Only show what is needed to draw the viewer to your message.



What is a Questionnaire ?

A very important aspect of research work is a survey or questionnaire. Marketing companies regularly carry out surveys / questionnaires, on behalf of manufacturers who are developing new products or aiming to improve existing products. When working on your project, a questionnaire will show the examiner that you have produced individual research relating directly to the product you are designing.

A questionnaire is usually composed of one or more questions, answered by a number of people normally called potential clients or the target market. The results can be collected as a table of results and/or a graph or pictogram.

Questionnaires will help you design a product, because they may tell you what the market wants. (What people are prepared to buy).

Also, questionnaires regularly appear on examination papers. Examination questions normally give a table of results from a questionnaire and you are asked to convert the 'written' results into a graphical form of presentation (often called a pictogram).

TABLE OF RESULTS

ALARM TYPE	No OF PEOPLE
BICYCLE	15
BRIEF CASE	20
DOOR	24
PERSONAL ALARM	5
CAR	7
PICK-POCKET	10
WINDOW	29
TOTAL	100

EXAMPLE

If you are designing an alarm system, you need to know what type of alarms people want to buy. You could carry out a survey based on the following question and store the results as a table:

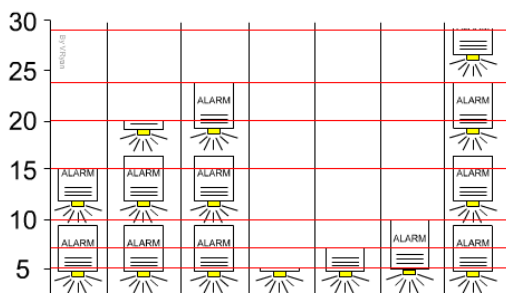
I asked 100 people, which type of alarm they were in most need of ?

Bicycle, brief case, door, personal, car, anti pick pocket or window.

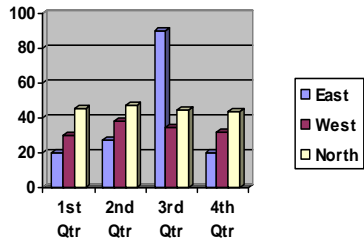
The results are first presented as a table of results and then as a graphical pictogram.

The Table of Results is a plain table, whilst the pictogram should include graphics / images. The pictogram below is built up of alarm boxes, in place of 'bars' in a bar chart.

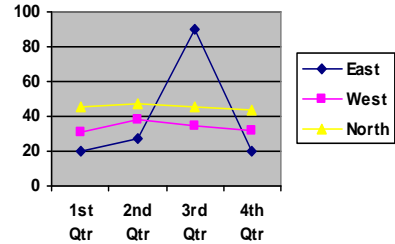
PICTOGRAM



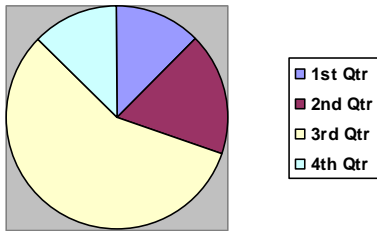
Examples of Graph types.



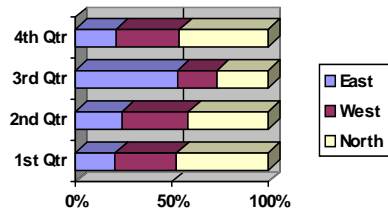
Vertical Column/ Bar Graph



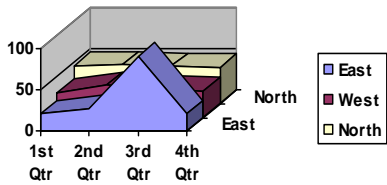
Line Graph



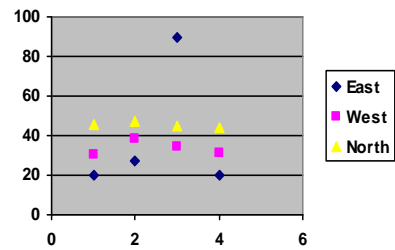
Pie Chart



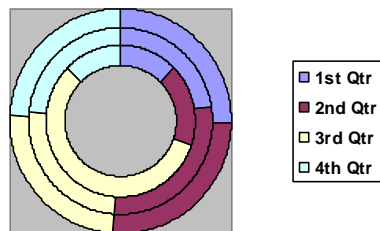
Horizontal Column/ Bar Graph



3D area Graph



Scatter Graph



Doughnut Chart

Examples of Pictographs.

November 2007: Did you make your bed?

