

PARETOCHART

What it is:

A bar chart used to separate the “vital few” from the “trivial many.” These charts are based on the Pareto Principle which states that 20 percent of the problems have 80 percent of the impact. The 20 percent of the problems are the “vital few” and the remaining problems are the “trivial many.” A Pareto chart can help you:

- Separate the few *major* problems from the many possible problems so you can focus your improvement efforts
- Arrange data according to priority or importance
- Determine which problems are most important, using data, not perception

How to use it:

Identify the possible problems. Use idea-generation techniques from Section 2 to list all the possible problems in a particular process.

Use existing reports, or collect new data on the process. Be sure the units of measure are consistent throughout your data. Group existing data by consistent units of measure. Select attributes to be charted so that any given occurrence will fall into one **AND ONLY ONE** category.

Label the chart. Label the units of measure on the left vertical axis and the categories of problems on the horizontal axis.

Plot the data. Order the categories according to their frequency (how many), not their classification (what kind). Use a descending order from left to right. Categories that appear infrequently, or in comparatively small numbers, can be grouped together in an “other” category.

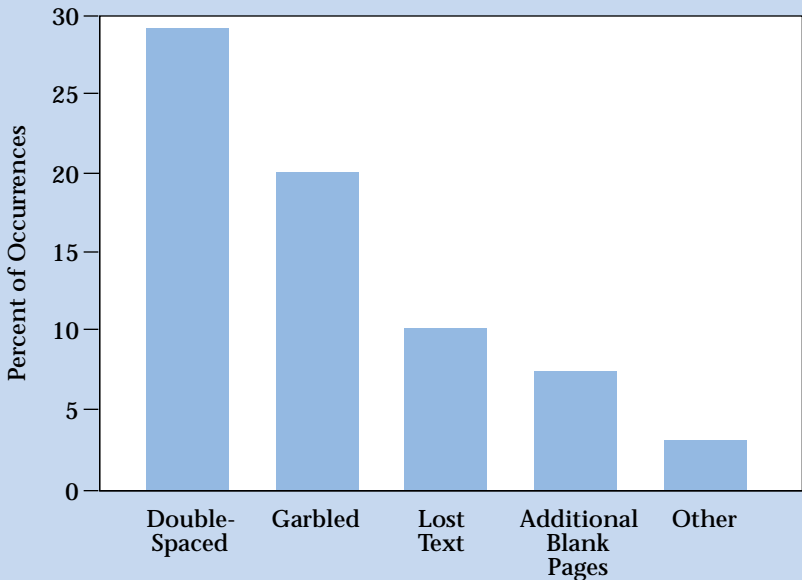
(Optional). You can use the right vertical axis to measure the percentage of total occurrences contained within each category.

Points to remember:

- The measurement units can significantly affect your Pareto chart. In the example shown on page 49, 100 cosmetic-type defects may account for only a fraction of the total cost, while 2 material-type defects may account for a large percentage of the cost. In such a case, you must determine whether cost or number of defects is more important.
- It is essential to use the same units of measure and clearly mark these units on the chart (\$, #, %, etc.).
- Make sure that the “other” category doesn’t become unreasonably large. If the “other” category accounts for more than 25 percent of your problem, you probably should try to break it down.

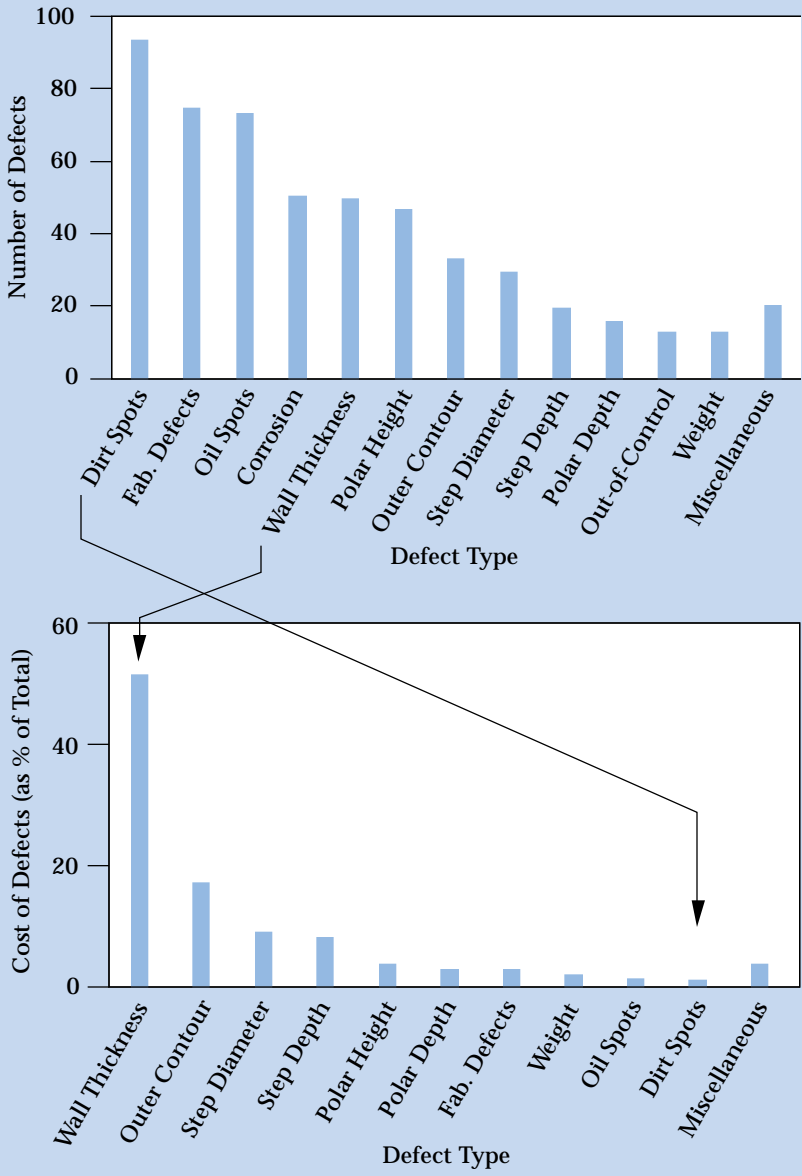
Pareto Chart Example

***Problems Experienced Using Laser Printer
April 1991***



Frequency v.s.. Cost Example

In the following example, the most common defect is dirt spots. However, wall thickness is by far the most costly.



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