

Problem Management & Pareto Analysis

One of the first issues encountered when implementing an ITIL Problem Management function is determining precisely how to identify which systems or hardware are causing the most customer dissatisfaction or, simply creating the most recurring Incidents.

Responding to the customer who shouts the loudest may not be the best approach. Equally, trying to target all problems in one go usually ends in nothing being resolved. Though some organisations will always focus efforts on the top business critical systems, sometimes, there can be so many business critical systems with problems the issue of 'where to start' can be just as perplexing !

Consequently, the use of the Pareto Principle is used to inform and guide the ITIL practitioner in 'where to begin' with prioritising the systems or hardware causing the most problems.

The Pareto Principle : Pareto Analysis

Vilfredo Pareto was an economist who is credited with establishing what is now widely known as the Pareto Principle or 80/20 rule.

When he discovered the principle, it established that 80% of the land in Italy was owned by 20% of the population. Later, he discovered that the Pareto Principle was valid in other parts of his life, such as gardening: 80% of his garden peas were produced by 20% of the peapods.

Some Sample 80/20 Rule Applications:

80% of process defects arise from 20% of the process issues.

20% of your sales force produces 80% of your company revenues.

80% of delays in schedule arise from 20% of the possible causes of the delays.

80% of customer complaints arise from 20% of your products or services.

The Pareto effect even operates in quality improvement: 80% of problems usually stem from 20% of the causes. Pareto charts are used to display the Pareto principle in action, arranging data so that the few vital factors that are causing most of the problems reveal themselves. Concentrating improvement efforts on these few will have a greater impact and be more cost-effective than undirected efforts.

Things to look for in the Pareto Chart:

In most cases, two or three categories will tower above the others. These few categories which account for the bulk of the problem will be the high-impact points on which to focus. If in doubt, follow these guidelines:

1. Look for a break point in the cumulative percentage line. This point occurs where the slope of the line begins to flatten out. The factors under the steepest part of the curve are the most important.
2. If there is not a fairly clear change in the slope of the line, look for the factors that make up at least 60% of the problem. You can always improve these few, redo the Pareto analysis, and discover the factors that have risen to the top now that the biggest ones have been improved.
3. If the bars are all similar sizes or more than half of the categories are needed to make up the needed 60%, try a different breakdown of categories that might be more appropriate.

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Often, one Pareto chart will lead to another:

- before and after charts
- charts that break down the most important factors discovered in an earlier chart
- charts that use different scales, such as number of complaints and the cost to respond, with the same categories.

For detailed instructions on creating a Pareto Analysis in Microsoft Excel, download the .pdf file from [itilhelp.com](http://www.itilhelp.com) entitled [pareto_exampleSS.pdf](#). If you would like a soft copy of the actual spreadsheet (MS Excel 2002, SP3), please email enquiry@itilhelp.com and type "Request for Pareto Spreadsheet" in the subject.

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