SANDHOLM EXCELLENCE CENTER

Training and consulting in quality management, excellence and continual improvements since 1971.

Applied statistical analysis

A training course that gives an understanding of how to analyze, control, and reduce variations in processes and how to make decisions based on facts

Variations always exist in manufacturing, service, and administrative processes. It could be variations between different products, variations over time, variations between different customers etc. When variations are big relative to specifications and demands, failures, deficiencies, and non-conformities occur. If an organization is to achieve good results, it is important to analyze, control and reduce variations in important processes. To do so good knowledge of statistical methods is needed. Statistical analysis also improves the possibility of making decisions based on facts. Today the need for statistical tools and thinking rapidly is growing as the amount of available data increases. This course trains you in using applied statistical analyses using modern software like Minitab.

Purpose

To provide the knowledge and ability to use applied statistical tools when analyzing data from organizational processes. The participants need to be able to use the basic tools of statistical process control (SPC) and understand more advanced methods.

Aimed at

Persons from different functions that in different ways make decisions, analyze data and/or take part in quality and improvement work.

General information

The lectures will be led by consultants from Sandholm Associates. The course is given in English.

All analyses are done by using the software Minitab. The software has a free 30-day version which the participants are expected to download and install on their computers before the course.

Documentation

Participants will receive the book *Practical Statistics – part 1* which will also be a useful reference after the course.

Length

3 days.

Place

The course is given online through Zoom but can also be given company internally at your location.

CONTENT ➔ **Main parts of the course *Applied statistical analysis*:**

- Introduction to statistical analysis
- Basic statistic theory
- Common and special causes of variations
- Introduction to Minitab
- Normal probability and standard deviation
- Control charts for individuals, estimates, and stages
- Using I-mR and Xbar-R diagrams
- Capability studies
- Confidence intervals
- Normal probability tests
- Analysing non-normal distributed data
- Risks with using aggregated data
- Pareto diagram
- Introduction to more advanced statistical methods