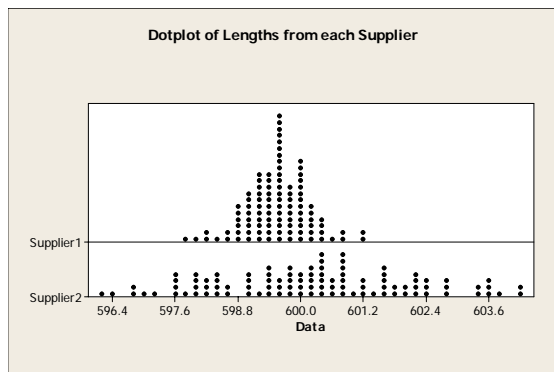


Understanding Variation – ‘seeing the wood from the trees’

The goal of effective data analysis is to gain insight into what the data are telling you – in other words to see the ‘wood from the trees’. The goal of this workshop is to show you how to do this.

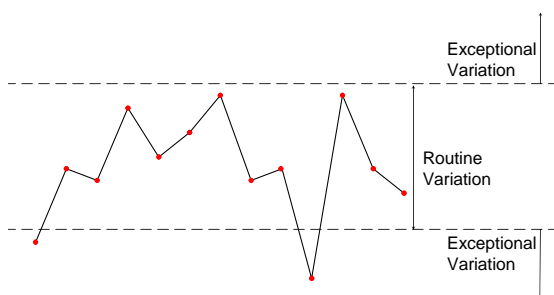
Workshop

This one-day workshop is designed to show you how to use suitable graphical summaries to analyse and interpret process data.



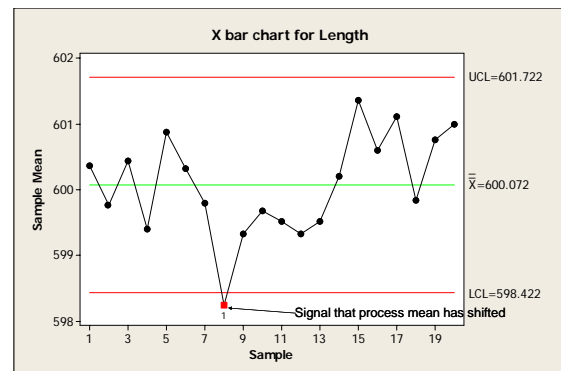
In attempting to analyse and interpret process data, a distinction must be made between two types of variation, i.e.,

- (i) **routine or common cause** variation that is inherent in the process and is always present and consequently is predictable
- (ii) **exceptional or special cause** variation that is not always present, not routine and consequently is not predictable



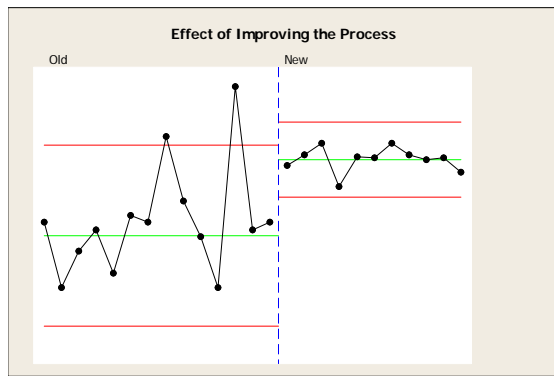
Process behaviour (statistical process control) charts are the simplest and most

effective tool available to filter out routine variation and allow you to see potential signals in a process. They provide an objective way to separate probable noise from potential signals so that you can focus interest on the signals and ignore the noise.



The objectives of the workshop are:

- to demonstrate how process behaviour charts enable you to detect signals that the process has changed by filtering out routine variation
- to clearly distinguish between (i) ‘the voice of the customer’, i.e., specifications and (ii) the ‘voice of the process’ as demonstrated by the process behaviour chart and understand the consequences of not having both voices aligned.
- to highlight the mistakes of (i) interpreting routine variation as if it were a signal and (ii) failing to detect a signal when it exists and how process behaviour charts minimise the risk of making these mistakes
- to show how process behaviour charts can become an engine for continual improvement by helping you to ask the right questions that will lead to identification of and elimination or control of the causes of changes in the process.



Workshop Format and Options

In the one-day workshop, the aforementioned objectives will be realised through the analysis of a number of case study datasets. You will be shown how to analyse and interpret the data using your preferred statistical software package.

If required, the content and duration of the workshop can be altered to suit your requirements. For example, a short presentation to senior management to demonstrate how process behaviour charts can be used to gain insight into your data and act as a driver for continual process improvement. Alternatively, the workshop can be modified and extended to include your own case studies demonstrating how the tools can be applied to your own data.

Benefits to you

Following this workshop, you will

- understand how to get greater insight into your data using appropriate graphical displays
- understand how to distinguish between routine noise variation and exceptional variation that signals that your process has changed
- be able to use process behaviour charts to screen out routine noise variation and detect signals that your process has changed
- use process behaviour charts to ask the right questions so that you can identify and eliminate or control the sources of exceptional variation in your process