

## INTRODUCTION TO DATA ANALYSIS WITH MINITAB

Two-day workshop

### 1. Introduction

This two-day workshop aims to give participants a solid grounding in data collection, graphing and basic analysis techniques. Participants will be introduced to the statistical software application, Minitab, which is one of the most popular applications in use in companies in Ireland and the UK. Lean Ireland consultants are experienced in the training and coaching of personnel, from a wide variety of sectors, in the use of Minitab for the statistical measurement, analysis and control of process problems.

### 2. Learning Objective and Deliverables

At the end of the course participants will:

- Understand data types and the importance of appropriate data collection methods;
- Understand the importance of validating measurement systems;
- Understand how to assess the statistical influence one or more input variables may have on an output variable;
- Understand when and where each statistical tool is best applied, and
- Be able to use Minitab as an everyday tool in support of data analysis.

Lean Ireland will supply 5 laptops with Minitab preloaded and participants will work in pairs at each laptop. The course is outlined in the agenda below.

### 3. Agenda

Time	Day 1	Day 2
08.30	- Introduction - Data types - Data collection - Measurement Systems Analysis - variable data	- Correlation & simple linear regression - Correlation & causation  - Multivari analysis
12.45	- Lunch	- Lunch
13.00	- Graphing techniques - Run, Pareto, histogram, box - Descriptive statistics: location & spread & the normal distribution	- Statistical process control (SPC) - Control charts for variable data – ImR, XbarR, XbarS - Control charts for attribute data – c, u, p and np charts
16.30	- Review & close	- Review & close

### 4. Who should attend

The course is designed for those with a basic working knowledge of statistics, and who need to use data collection & analysis methods on a regular basis in the workplace.

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