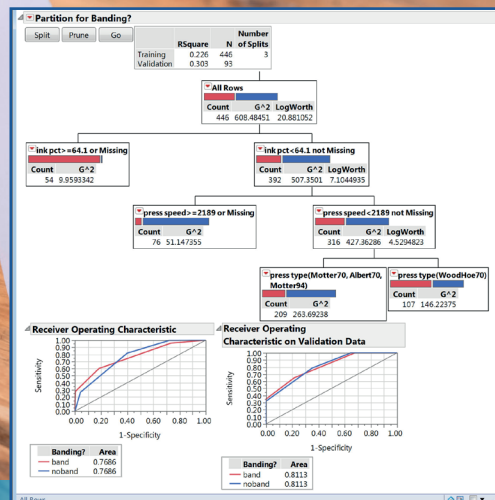# Process Insight

> "*Fantastic trainers,
> fantastic course.
> I was amazed at how
> quickly I was using JMP®
> to solve real and difficult problems*"
>
> *PETE,* **BLACKBELT**

Data Analysis & Statistical Problem Solving Using JMP®

Module 2

Suitable for: Anyone wishing to learn the statistical tools and the underpinning theory. • Green Belts who have understood the DMAIC methodology and the non statistical tools and are now ready to move on to Black Belt.
• People wanting to use JMP® to solve real problems in data rich environments.

3 Day Course

Purpose: To enable delegates to learn how to quickly solve real life variability problems using Visual Six Sigma with JMP statistical software.

On this training delegates will learn: • **Practice using JMP® software** • **Cleanse and manipulate data ready for analysis** • **Use Visual Analysis to identify relationships** • **Understand statistical relationships**
• **Understand types of variability & process capability** • **Conduct Measurement system analyses**
• **Be introduced to statistical modelling.**

Course Content

Getting started with JMP®
• data types, data tables, basic data explorations

Data Collection & Manipulation
• Importing and exporting data
• Join, stack, subset, tabulate, sort
• Formulas, conditions, column properties
• Saving files, Using journals

Basic Stats
• Means, medians, range, IQR
• Standard deviation, normality, SE mean, Box plot
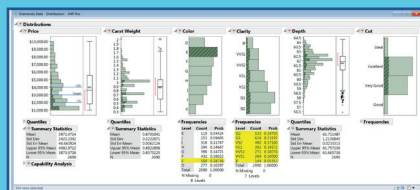• Confidence intervals, sample size, R Sq., P values

Gauge Studies
• Continuous Gauge Studies
• Attribute Agreement Analysis

Visual Analysis
• Distributions, brushing, partitioning
• Run charts & data filters
• Graph Builder- pie, bar, overlay, box plots, grouping variables
• Contour maps, bubble plots
• Data Filters, Column Switcher

Process Capability
• Common cause / Special cause
• Control Charts
• Capability -sigma and Cpk
• Short / Long Term sigma

Statistical Relationships – Fit Y by X
• Hypothesis Tests, Anova,
• Simple regression
• Confidence of fit
• Prediction Intervals
• Residuals analysis
• Multiple regression
• Chi square
• Logistic regression

Course Style
• Very hands on.
• Client specific data sets, scenarios, case studies as well as their own data.
• Delegates need their own PC & JMP® software throughout the course.