

Data Driven Insights and Decisions 4 days

A four-day hands-on programme to measure, analyse and communicate process performance with confidence.

Using data correctly and confidently is an essential skill in today's organisations. This programme gives you a comprehensive, practical toolset to turn data into genuine business insight, influence stakeholders and drive sound decisions. Working with our intuitive AI enabled CatStat software (there is also a Minitab version of this course) you learn to select the right measures, trust your data, and analyse process behaviour with clarity and confidence.

Data Driven Insights and Decisions is a British Quality Foundation and Lean Competency System accredited programme for anyone who wants to understand their business processes through data. It builds a working knowledge of graphical and statistical techniques, from selecting and defining measures through to control charts, capability analysis, hypothesis testing and regression analysis. It is relevant for any business process management/improvement/transformation practitioner. It is a core component of both the Business Black Belt and Lean Six Sigma Black Belt programmes. Although many participants are Green Belt trained, there are no prerequisites as the tools and techniques are applicable in the wider business context.

What You'll Learn

By the end of this programme, you will be able to:

- Select and operationally define the right measures for a process
- Validate and improve the measurement process so data can be trusted
- Plan data collection using appropriate sampling and sample size approaches
- Turn data into information using statistics and graphical analysis
- Use control charts to visualise and understand process behaviour
- Assess process capability and use capability indices
- Analyse data using hypothesis testing and regression analysis
- Communicate findings to influence key stakeholders and senior leaders

Delivery Format

- Virtual Open Classroom options (two × two-day sessions via Zoom)
- In-company delivery (on-site or virtual)
- Use of statistical software (choose CatStat or Minitab version of the course)

Accreditation

- Standalone module or part of a recognised certification pathway
- Contributes to Advanced Green Belt, Lean Six Sigma Black Belt, or Business Black Belt

Who Should Attend?

- Business improvement and transformation practitioners and leaders using data to drive insights
- Individuals wanting to better understand and analyse business processes, and those working with data who want to interpret and apply it effectively
- Participants on Business Black Belt or Lean Six Sigma Black Belt programmes

Why Choose This Course?

The ability to use data correctly to gain insight, influence stakeholders and guide decisions is increasingly central to improvement and transformation roles. This accredited programme delivers that capability through a robust, practical approach that enhances your ability to use data effectively.

Course Content

The programme delivers a comprehensive toolkit for analysing and understanding process data. You'll develop CatStat or Minitab skills alongside a thorough grounding in graphical analysis, measurement systems, sampling, and process control charts, learning to monitor process stability and assess process capability for both normal and non-normal data. We also cover hypothesis testing and regression analysis. Tools and techniques included:

Introduction to Graphical Analysis (data visualisation)

- Histogram
- Dot Plot
- Box Plot
- Pareto Chart
- Scatter Plot
- Run Chart
- Segmentation

Identifying X and Y Measures

Types of Data

Operational Definitions

Analysing a measurement system for discrete data – Attribute Agreement Analysis (full training on Gauge R&R is covered in the Further Process Measurement and Analysis Techniques course)

Sampling

- Population and process sampling approaches

- Sample size calculations and considerations

Process Control Charts for individual data points, subgrouped data and attributes data

- \bar{X}/mR
- \bar{X}/R
- P/NP
- C/U
- Test for special causes
- Case studies

Process Capability Analysis

- Cp/CpK and Pp/PpK Indices

Hypothesis Testing

- t test
- ANOVA
- Chi Square
- Type 1 and 2 Errors
- Power Analysis

Regression Analysis

- Simple Linear Regression
- Residuals Analysis
- Prediction Model

Why Choose Catalyst?

Catalyst delivers results, not just services. We blend consulting, coaching, training, and AI-powered tools into a seamless support system that meets teams where they are, developing capability at every level.

Thousands trust us to support their learning and Continuous Improvement journeys – we've specialised in Lean Six Sigma Training and Consultancy for over 30 years. We're known for sharing our knowledge in an accessible and interactive way. Look no further for relevant, relatable content, built by experts and accredited by the British Quality Foundation and the Lean Competency System (LCS). We are the BQF's primary Lean Six Sigma partner and recommended by the Chartered Quality Institute.