

Participants will have hands on training, enabling them to complete an FMEA.

**Failure Mode & Effects Analysis** provides the skills to **identify** critical product characteristics and process variables, to **prioritise** product and process deficiencies in support of improvement actions and will help your team to **focus** on prevention of product and process problems.

You will have the tool to significantly improve **customer satisfaction** and **lower costs** by improving quality, reliability and safety of products, processes and services.

## Failure Mode & Effects Analysis (FMEA)

FMEA is a systematic method for identifying, analysing, and documenting potential failure modes and their effects on the system, the product and process performance with the possible causes of failure priority ranked for corrective action. This tool is a **globally recognised best practice risk planning tool** widely used by automotive, medical, banking, electronics, industrial, business and food sectors. It is easy to use and yet one of the most powerful tools in identifying and putting into affect counter measures for potential design, process and existing performance issues.

**FMEA is the foundation for process control**, addressing customer and legislative requirements, quality assurance and control, safety, supply and productivity issues using a structured and priority ranking approach for proactive analysis that plans for capability and control for each of your process value stream steps. FMEA analyses potential failure modes, potential effects, potential causes, assesses current process controls and **determines a risk priority factor**.

### WHAT YOU TAKE AWAY!

A full set of course notes and the ability to:

Improve product/process reliability and quality through the use of FMEA.

Identify early and eliminate potential product / process failure modes.

Prioritise product / process deficiencies by using FMEA - RPN.

Capture engineering, operational and process knowledge using documented FMEA's.

Understand problem prevention.

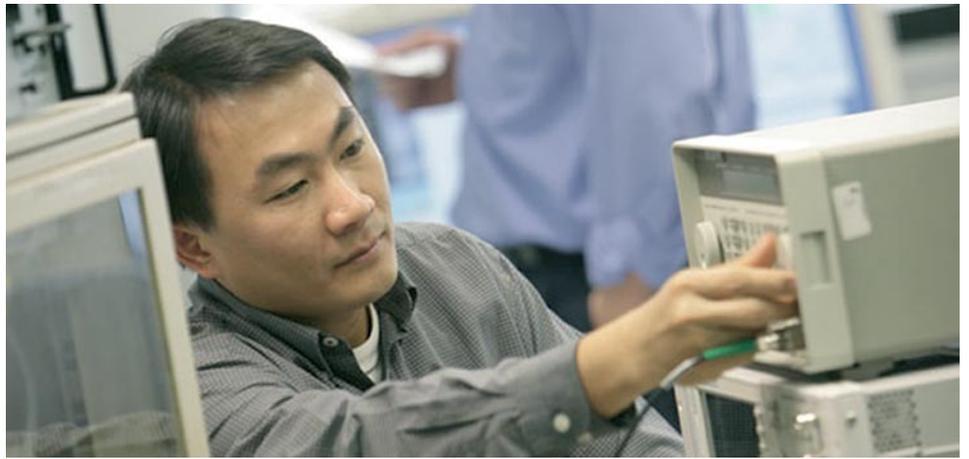
Documente actions to be taken to reduce risk.

Minimise late changes and associated cost.

Understand the importance of cross functional teamwork and idea exchanging between functional areas.

Complete an internationally proven risk analysis tool (FMEA).

Complete the foundation for process assurance planning.



## Workshop Content and Learning Objectives

Customers are placing increased demands on companies for high quality, reliable products. The increasing capabilities and functionality of many products are making it more difficult for manufacturers to maintain quality and reliability. Failure Modes and Effects Analysis (FMEA) presents a methodology for analysing potential reliability problems early in the product, process or service development cycle where it is easier to take actions to overcome issues, thereby enhancing reliability. FMEA is used to identify potential failure modes, determine their effect on the operation, during processing and whilst providing services, and identifies actions to mitigate the failures. The crucial step is anticipating what might go wrong.

### Agenda

What is FMEA ?

Why use FMEA ?

The FMEA Team

Design FMEA / Process FMEA

Identifying the process, service, problem or design.

Process Map - Outcomes arrow diagram  
- Process Intent

Identifying the "Critical to" Quality, Safety, productivity, Service, Delivery, Cost characteristics.

5W's and 2H's

Identifying possible failure modes per process step.

Identifying possible failure effects per process step.

5W's

Identifying possible failure root causes.

Identifying current capability, assurance & control methods.

The FMEA risk scoring guidelines.

Risk priority number (RPN)

ECRS

DMAIC

Determining the Corrective Action Plan.

Recalculation RPN based on planned changes.

Taking action