

## DESIGN FMEA

### Introduction

#### Programme Overview

Design Failure Mode and Effects Analysis (DFMEA), is a proactive risk management methodology crucial in product development. It systematically anticipates potential failure modes in the design phase, assessing their impact, causes, and likelihood of occurrence. Understanding DFMEA is paramount for product design. It helps prevent and mitigate design-related issues before they manifest, ensuring product reliability, safety, and performance. This programme will equip individuals with the tools to identify, prioritize, and address potential failures early in the design process, ultimately reducing costs, enhancing product quality, and support a culture of continuous improvement within organizations.

#### Audience

This training is practitioner level and suitable for anyone involved in facilitating or participating in DFMEA activity including Programme and Product managers, Design Engineers and members of the cross functional teams involved in the DFMEA process.

No pre-requisites are required to attend the course.

#### Learning Outcomes

- Understand essential DFMEA concepts and terminologies.
- Understand the step-by-step DFMEA process flow and be confident in facilitating its practical application.
- Be able to apply methodologies for risk assessment and mitigation within DFMEA.
- Develop effective facilitation strategies for leading DFMEA sessions.
- Apply DFMEA concepts to real-world scenarios and case studies.
- Understand DFMEA integration with related core quality tools and develop action plans for implementation.

These objectives aim to equip participants with comprehensive DFMEA knowledge, practical application skills, and effective facilitation techniques essential for conducting successful DFMEA sessions. Adjustments can be made based on specific industry needs or participant backgrounds.

#### In Company Training

This programme is delivered in-company and can be tailored where required to align with industry or in-company standards and/or tool templates.

The programme can be delivered on-site or virtually.

The sessions will be bespoke, lively and highly practical, delivering a memorable learning experience for the delegates. For in-company sessions we encourage working on your own live examples in the classroom exercises

We will discuss your objectives prior to the delivery, and help you to plan the most effective training and support to your team of delegates.

The practitioner training is 2 days, with the option to reduce to 1 day for leadership or team awareness or for practitioner refresh training.

For international programmes we can start at any time. For example the format for virtual delivery can be a series of half-day sessions spread over one or more weeks.

## **Content**

### **Introduction to DFMEA**

- Overview of key concepts, terminology, and significance.
- Key steps to conducting DFMEA in product development
- Integration of DFMEA with related methodologies.

### **Step by Step Guide to DFMEA**

- Scoping the DFMEA
- Methods to identify potential failure modes & their effects
- Identifying causes of the failure mode
- Prevention and Detection Controls
- Severity, Occurrence, and Detection Ratings
- Evaluating and Prioritising risk
- Developing mitigating actions
- Strategies to reduce risk

### **Facilitation Skills Development**

- Principles and strategies for effective facilitation.
- Dealing with common implementation challenges

### **Live Application**

- Application of DFMEA tools to delegates' live projects
- Action Planning and Implementation
- Strategies for effective implementation of DFMEA recommendations